

E. B. PARKHURST & F. HAM.
CASH INDICATOR AND REGISTER.

No. 483,010.

Patented Sept. 20, 1892.

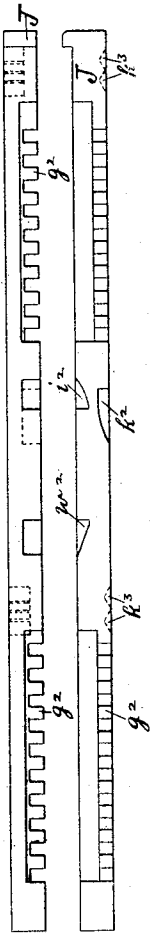


Fig. 8.

Fig. 9.

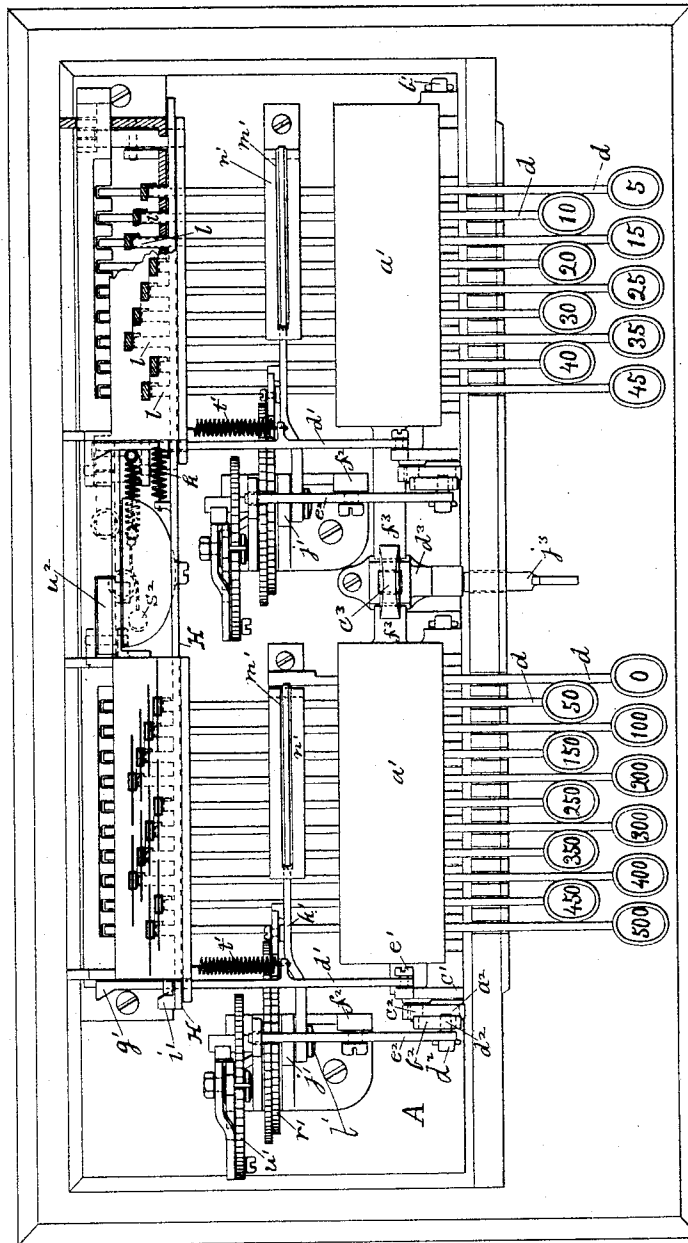


Fig. 1.

Witnesses.
Robert Wallace.
Matthew Clark.

Inventors.
Edward B. Parkhurst
Foster Ham
by J. M. Halladay
their atty

E. B. PARKHURST & F. HAM.
CASH INDICATOR AND REGISTER.

No. 483,010.

Patented Sept. 20, 1892.

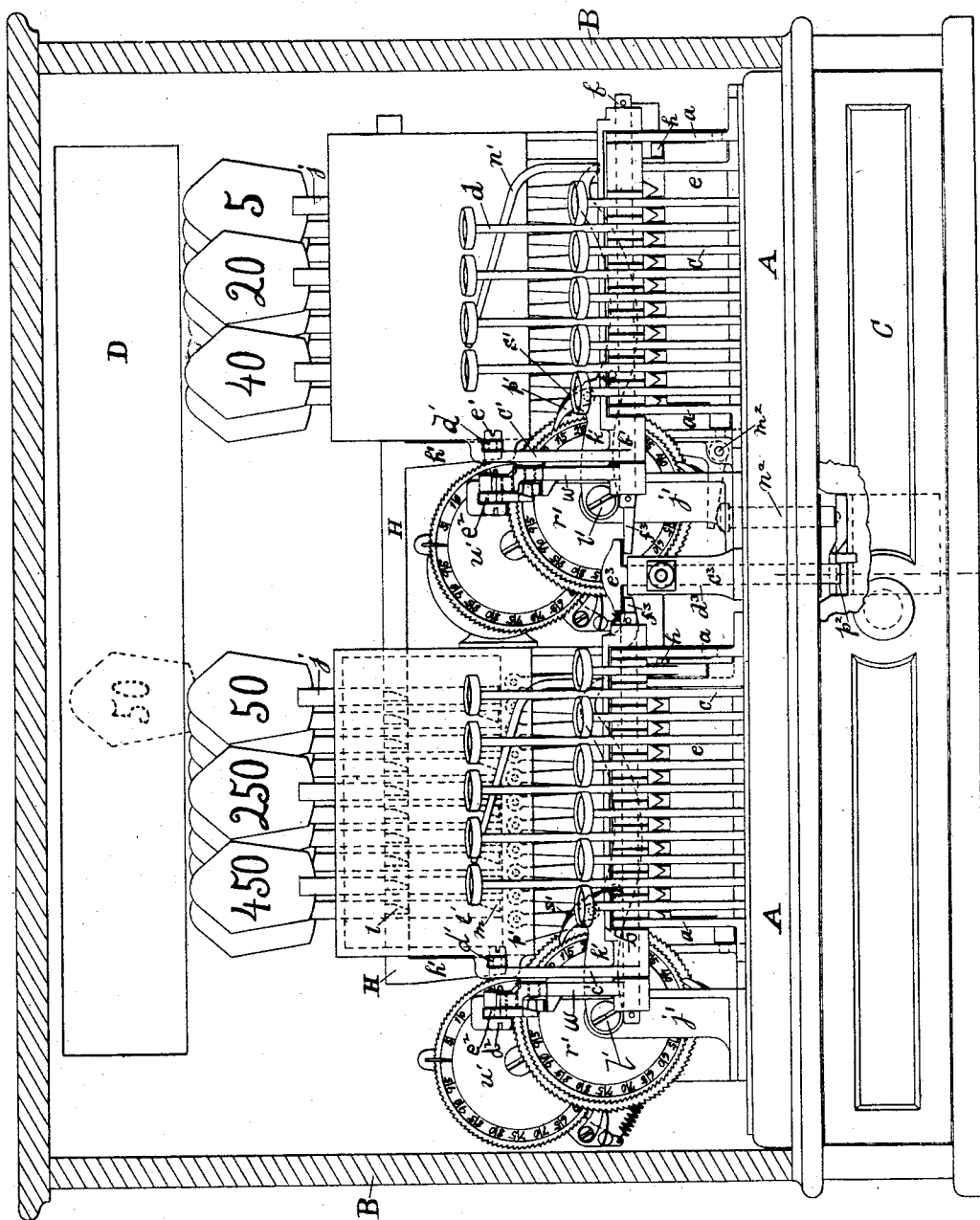


Fig. 2.

Witnesses.
Robert Wallace,
Matthew Clark.

Inventors.
Edward B. Parkhurst
Foster Ham
by *M. A. MacLeod*
their atty

E. B. PARKHURST & F. HAM.
CASH INDICATOR AND REGISTER.

No. 483,010.

Patented Sept. 20, 1892.

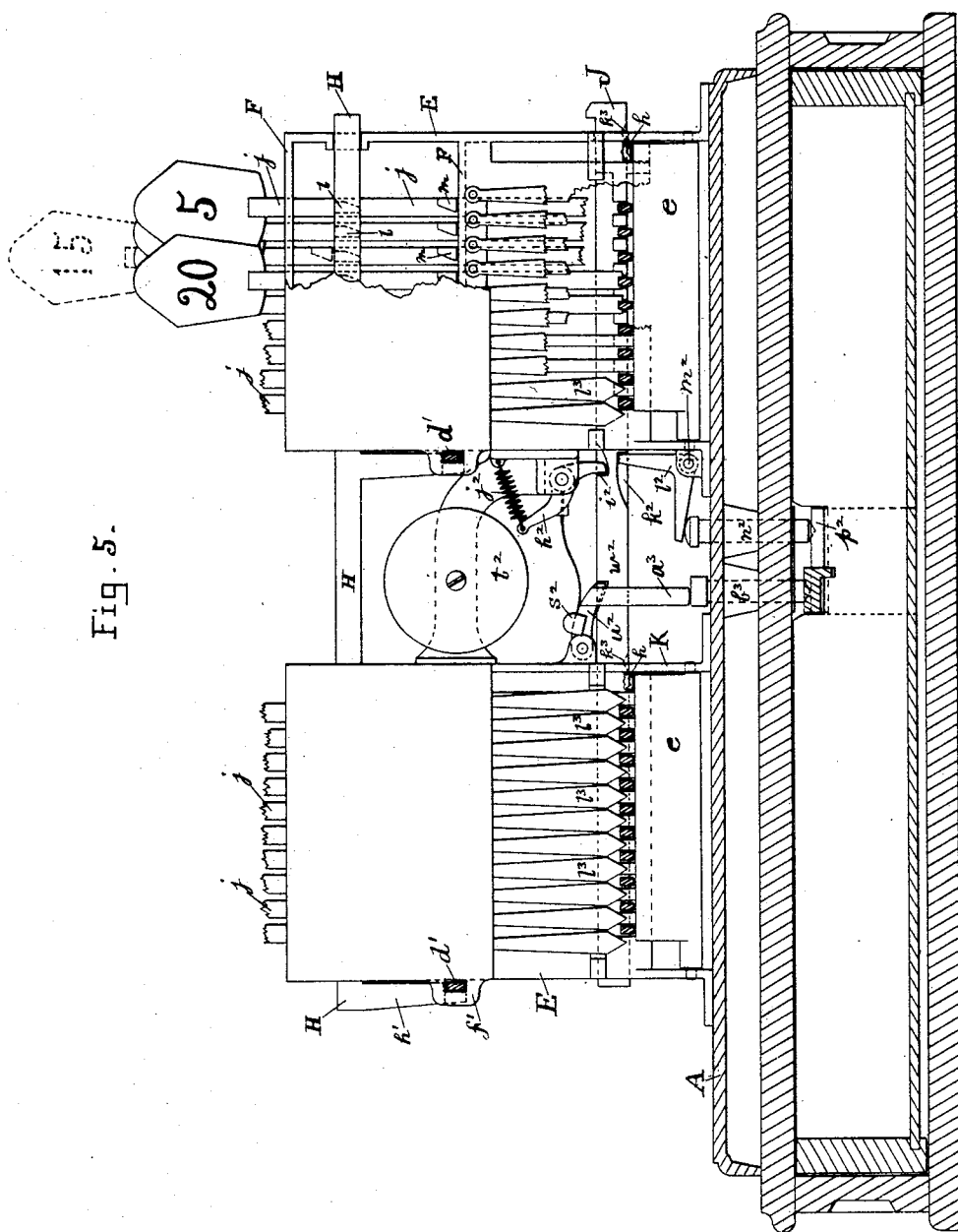


Fig. 5.

Witnesses.
Robert Wallaer.
Matthew Clark.

Inventors.
Edward B. Parkhurst
Foster Ham
by *Wm A. Macleod*
their atty

UNITED STATES PATENT OFFICE.

EDWARD B. PARKHURST AND FOSTER HAM, OF WOBURN, MASSACHUSETTS,
ASSIGNORS TO THE NATIONAL CASH REGISTER COMPANY, OF DAYTON,
OHIO.

CASH INDICATOR AND REGISTER.

SPECIFICATION forming part of Letters Patent No. 483,010, dated September 20, 1892

Application filed July 5, 1888. Serial No. 279,049. (No model.)

To all whom it may concern:

Be it known that we, EDWARD B. PARKHURST and FOSTER HAM, both of Woburn, county of Middlesex, State of Massachusetts, have made certain new and useful Improvements in Cash Indicators and Registers, of which the following is a specification, reference being had to the drawings accompanying and forming a part hereof, in which—

Figure 1 is a plan view. Fig. 2 is a front elevation, the outer case being shown in section and a portion of the front of the drawer being broken away for greater clearness. Fig. 3 is an end view, the drawer being shown in section to expose the drawer-locking mechanism. Fig. 3^a is a detail of the end of the lever for locking the registering-wheel and its connection with the parts which actuate it. Fig. 4 is an end elevation designed to show the key mechanism and with the other parts removed. Fig. 5 is a section on line *y y*, Fig. 3. Fig. 6 is a detail, partly in section, of the device for locking the machine. Fig. 7 is a section on line *x x*, Fig. 6. Figs. 8 and 9 are respectively a plan and side view of the bar which operates to lock the remaining keys while one key is being used.

The object of our invention is the construction of an accurate and efficient machine which cannot be tampered with for indicating the amount of cash deposited in the money-drawer each time it is opened and for registering the total amount deposited in a given time; and it consists of a series of keys provided with numbers corresponding with the amounts of cash to be deposited and arranged to actuate tablets correspondingly numbered which are thrown up into sight as the keys are depressed, each of said keys being also in connection with the registering apparatus, which will show the total amount indicated by the depression of the keys; and it consists, further, in numerous details of construction and arrangement by which the accurate and certain working of the device is insured, all of which will be hereinafter more particularly set forth.

We will describe our invention as it is embodied in the machine shown in the accompanying drawings, using like letters of refer-

ence to indicate like parts throughout the same.

A represents the base, which may be of wood, on which the machine rests.

B represents the outer case, in which the machine is placed, and the lower part of the case B is provided with a cash-drawer C. A strip of glass D is inserted in front and rear of the case near the top, (see Fig. 2,) so that as the tablets are thrown up they will be exposed to view.

On the base A are secured the upright frame portions, which support the keys and other mechanism. The uprights *a* support the pivots or shafts *b*, on which the key levers *d* are mounted. These key-levers are bent at their forward ends, which support the keys so that the keys may be arranged in a bank and yet each be separate from the others and be in a position where it may be readily touched with a finger, as shown, Figs. 1 and 3. The inner ends of the key-levers project inwardly and have a downwardly-projecting rack *c*, against which a pawl *e*, Fig. 4, acts. The pawl *e* is pivoted near the base of the upright E, and has a rearward projection to which a spiral spring *f* is attached, said spring acting to press the engaging end of the pawl *e* into the teeth of the rack *c*. By this arrangement the key cannot be partially depressed and then raised, but must be fully depressed, so as to bring the projection *g* at the lower end of the rack *c* in contact with the pawl *e*. This projection *g* is sufficient to throw the pawl *e* back until it is caught by the hook of the latch *h*, which is pivoted about midway of its length to the upright E. (See Fig. 4.) The latch *h* now holds the pawl *e* clear of the rack *c* and the inner end of the key-lever is free to drop, raising the key to its normal position. A portion of the key-lever *d* extends rearwardly of the rack *c* and as the key is depressed comes in contact with a tablet-rod *j*, forcing up the tablet-rod and exposing the tablet on the upper end of the rod to view. The tablet-rods are arranged to slide in apertures in the cross-pieces F of the uprights E. The tablet-rods are placed rearwardly of the stop-bar H, which is set across the top of the machine, as shown, Fig. 5, and has a slight

lateral movement in the upright supports E. A spiral spring *k*, Fig. 1, which is secured at one end to a stationary part of the machine and at the other to a projection on the stop-bar, tends to pull the stop-bar toward the right, Figs. 1 and 5. At the rear of the stop-bar and projecting therefrom are a series of arms *l*, Fig. 1, of varying lengths, each projecting to the tablet-rod with which it is designed to co-operate. The ends of these projections *l* are beveled in cross-section, as shown by the dotted lines, Fig. 5, and each tablet-rod is provided with a correspondingly-beveled stop *m*, which as the tablet-rod is raised comes in contact with the beveled end of the projection of the stop-bar and forces the stop-bar toward the left against the tension of spring *k*. As soon as the stop *m* has passed above the projection *l* the spring *k* forces the stop-bar H toward the right and the projection *l* is carried under the stop *m* and the tablet-rod is held in its raised position. When a key is depressed the next time the machine is used, the tablet which is up must drop back as another tablet is raised. The tablet-rod is free to drop provided the projection *l* is shifted to the left a sufficient distance to clear the stop *m* on the tablet-rod, but the upward movement of the succeeding tablet-rod will not move the stop-bar H and its projections sufficiently to insure the dropping of the preceding tablet-rod. We have, therefore, devised the following mechanism for giving the stop-bar H an additional movement toward the left, which is as follows: On the rod *b*, which supports the key-levers, a table *a'* is pivoted, said table being provided at either end with downward projections *b'*, through which the rod *b* passes, (see Fig. 2,) forming bearings for the table. From one of these bearings *b'* an arm *c'* projects upwardly, and to the upper end of this arm a horizontal rod *d'* is pivoted at *e'*. (See Figs. 1, 2, and 3.) The rear end of the rod *d'* slides in an aperture cut in a projection *f'* on one of the uprights E. (See Fig. 5.) The rear end of the bar *d'* is enlarged and is beveled at *g'*, as shown, Fig. 1. The end of the stop-bar H passes through the upright E above the projection *f'* and is turned downwardly, as shown at *h'*, Fig. 5, the downwardly-projecting end being beveled, as shown at *i'*, Fig. 1, to correspond with the bevel *g'* on the rod *d'*. The bevel *i'* is in such a position that when the bar *d'* is drawn forward its bevel *g'* will come in contact with the bevel *i'*, thus forcing the projection *h'* and the bar H outwardly, or toward the left, a distance sufficient to carry any of the projections *l* of the bar H out of the path of the stops *m* on the tablet-rods, thus allowing a tablet-rod, which may be up, to drop freely. The bar *d'* is drawn forward each time a key is depressed, since the depression of the key raises the table *a'*, which rests on the key-levers *d'*, (see Fig. 3,) and throws the upright lever *c'*, which is integral with or fast to the table-bearings forward,

thus drawing forward the bar *d'*, as will be clear. The bar *d'* is actuated in the opposite direction, when the key rises, by means of a spring *t'*, Fig. 1, which is fast at one end to a projection on the bar and at the other to a cross piece of the frame. As there are two banks of keys in the machine shown, the one having a unit of "5" and the other a unit of "50," which are substantially separate and are duplicates of each other, the same mechanism for shifting the stop-bar H is provided for each bank of keys, as will be clear from Fig. 2, and a similar downward projection *h'* from the bar H is provided to co-operate with a horizontal bar *d'*, operated by the bank of keys having 5 for a unit, shown at the right. We mention this for the sake of greater clearness, since the description above given had reference more particularly to the mechanism of the bank of keys shown at the left.

For the purpose of registering the total amount of cash deposited a registering apparatus is provided for each bank of keys, the two sets of registering apparatus being substantially the same and being constructed as follows: An upright *j'*, Figs. 1 and 2, is secured to the base A. To the top of this upright a bent lever *k'* is pivoted at *l'* and projects over the key-levers, the free end of the bent lever being received in a slot *m'*, Fig. 1, cut vertically in a bent upright *n'*, which serves as a guide to the bent lever *k'*. A pawl *p'* is pivoted to a projection on the upper edge of the bent lever *k'* and is pressed against the ratchet-teeth of the registering-wheel *r'* by means of a leaf-spring *s'*, which is set behind the pawl on the bent lever *k'*. (See Fig. 2.) It will be clear that as the lever *k'* is raised the registering-wheel will be turned, and the shape of the lever is such that the pawl is raised by the depression of each key a distance sufficient to cause the registering-wheel to register the amount on the key depressed—that is, the key-lever of the key marked "50" will not come in contact with the register-lever *k'* as soon as will the key marked "300," and will not consequently raise the lever as high, and so will not cause the wheel to register as much, while the key marked "500," being nearer the fulcrum of the registering-lever, will raise it higher than will any of the other keys, and consequently will register a greater amount. The register-wheel *r'* is connected with the companion register-wheel *u'* by means of a gear and pawl-and-ratchet mechanism of well-known construction, so that each complete revolution of the wheel *r'* causes the companion wheel *u'* to register one. As the key-levers cannot be pumped—that is, thrown up and down—without operating the machine because of the ratchet *c* and pawl *e* at the rear end of each lever, already described, the key must be fully depressed each time it is used, and consequently the register-lever *k'* will register only the amount indicated on the key which is used. When, however, the key has been fully de-

pressed, throwing up the rear end of the key-lever and forcing back the pawl e into the hook of the latch h , the key-lever is then free to drop, and in that condition that key might be pumped, thus moving the registering apparatus and causing it to register wrongly. To obviate this difficulty, we have provided the following mechanism, by which, after a key has been fully depressed and the pawl e forced back into the hook of the latch h , the registering apparatus will be locked and held stationary until the rear end of the key-lever has again fully descended. This mechanism consists of an upright lever w , Fig. 3, of the shape shown, pivoted at its lower end on the rod b , (see Fig. 2,) and provided at its upper end with two cam-slots $a^2 b^2$. The slot a^2 receives a pin c^2 , set on the arm or lever c' . The cam-slot b^2 receives a pin d^2 , set on the end of the horizontal lever e^2 , which is pivoted to the top of the upright f^2 . The lever e^2 projects at its inner or rear end over the register-wheel r' , and when said inner end is depressed it comes in contact with the teeth of the register-wheel and prevents that wheel from being moved forward. The lever e^2 is depressed at the end of the full movement of a key-lever when a key is depressed and is held in this position while the key is rising again toward its normal position, and until the key has nearly reached its normal position, at which time the pawl e is freed and comes in contact with the ratchet c —that is, the register-wheel is locked by the lever e^2 at all times when the pawl e is out of contact with the ratchet c , thus rendering it impossible for the machine to be so manipulated as to register inaccurately. The rear end of the lever e^2 is thrown down when a key is fully depressed by reason of the movement of the lever c' , already described, which when its pin c^2 has moved through the slot a^2 moves the lever w , causing the pin d^2 to rise in the cam-slot b^2 , thus raising the forward end of the lever a^2 and forcing the rear end against the ratchet on the register-wheel r' . It will be clear that as the key rises again the register-wheel will remain locked until the key has nearly reached its highest position, the pin c^2 , as the key rises, traveling back through the slot a^2 without moving the lever w , thus allowing the lever e^2 to remain in contact with the register-wheel, locking the same.

As it is important that a second key should not be operated until the previously-operated one has been reset to its normal position, we have provided a locking-bar J , (shown in detail, Figs. 8 and 9,) which is provided with a series of teeth g^2 for each bank of keys, said teeth having spaces between them sufficient in size to allow the rear ends of the key-levers to pass up and down between the teeth. Before a key has been used the rear end of its lever lies below one of the spaces between the teeth g^2 ; but after the key has been used and while the tablet which corresponds to it is up the rear end of its lever rests on the top of one of the teeth or projections g^2 , while each of the

other key-levers lies directly below a tooth g^2 . This arises from the lateral movement of the locking-bar J , which slides in apertures in the uprights E at either end of the machine. A lever h^2 , Fig. 5, is pivoted to a projection on the frame and at its lower end bears in a notch i^2 , cut in the locking-bar J , while its upper end is provided with a spring j^2 , secured at one end to the lever and at the other to the frame of the machine. The lever h^2 tends to move the bar J toward the left. On the under side of the bar J another notch k^2 is cut, which receives the end of the bell-crank lever l^2 , which is pivoted at m^2 to a projection on the base of the frame. The other end of the bell-crank lever l^2 rests on a vertical bolt n^2 , which is free to move vertically in an aperture in the base A , and which extends through the top of the drawer-case, as shown, Figs. 3 and 5. The lower end of the bolt n^2 rests on the rear end of an arm p^2 , which is fast to the rear of the drawer C . That portion of the arm p^2 with which the bolt n^2 comes in contact is beveled at the rear end, as shown by the dotted line at r^2 , Fig. 3, so that as the drawer is moved forward or out the bevel r^2 passes under the bolt n^2 , allowing the bolt to drop, freeing the bell-crank lever l^2 and allowing the lever h^2 and its spring to move the locking-bar J toward the left, thus carrying the projections or teeth g^2 over the rear ends of the key-levers which are not in use, and thus preventing these levers from being used or their keys depressed. When the drawer is closed, the bevel r^2 is forced under the bolt n^2 , thus raising the bolt and forcing the locking-bar J back toward the right, thus freeing the key-levers which were locked down and allowing the lever of the key which was used to drop through a space between the teeth g^2 into its normal position. The lever h^2 carries the bell-hammer s^2 , and when the bar J is released, as described, the movement of the lever h^2 causes the hammer to strike the bell t^2 , thus causing the bell to ring each time the drawer is opened.

A pawl u^2 , which is pivoted to a lug on an upright K of the frame (see Fig. 5) just above and at one side of the locking-bar J , is received in a notch w^2 in the said bar J . The pawl u^2 is offset at its free end, (see Fig. 1,) so as to rest in said notch w^2 , and has a downwardly-projecting arm a^3 , which rests on the head of the vertical bolt b^3 , said bolt being free to move in an aperture through the base A and the drawer-case in the same manner as is the bolt n^2 . The lower end of the bolt b^3 also rests on a portion of the arm p^2 , said portion of the arm p^2 being enlarged and beveled, as shown by the full lines, Fig. 3. As the drawer moves out the bolt b^3 is forced upward, thus freeing the pawl u^2 from the notch w^2 and allowing the locking-bar J to move toward the left. The object of the pawl u^2 is to insure the ringing of the bell each time the drawer is opened. The bell will ring whenever the locking-bar J is suddenly freed, al-

lowing the spring-lever h^2 , which carries the bell-hammer, to move quickly. This will occur whenever the pawl w^2 is raised from the notch w^2 , the pin n^2 being already down and the bell-crank lever l^2 being free, and it is impossible by any manipulation of the drawer to open it without first dropping the pin n^2 and then raising the pin b^3 and the pawl w^2 and freeing the bar J. The forward end of the arm p^2 is in contact with the lower end of the vertical bolt c^3 , which moves vertically in a hollow standard d^3 , resting on the base A between the banks of keys, as shown, Fig. 2. The lower end of the bolt c^3 also passes through an aperture in the base A and in the top of the drawer-case, as shown, Figs. 2 and 3. The top of the bolt c^3 is provided with a cross piece or head e^2 , with the under side of which a projection f^3 from each of the tables a' is in contact. (See Figs. 1 and 2.) As the key is depressed and either of the tables a' raised the bolt c^3 is also raised, freeing its lower end from the arm p^2 and allowing the drawer to be opened. A leaf-spring g^3 , Fig. 3, is screwed to the inside of the rear end of the drawer-case and bears against the rear end of the drawer C. The drawer is closed against the pressure of this spring, and as soon, therefore, as the bolt c^3 is raised the drawer is forced out part way by the pressure of the spring g^3 .

It will be clear that if the bolt c^3 be locked down so that it cannot be raised the drawer cannot be opened, the tables a' cannot be raised, and the keys cannot be worked, so that by locking the bolt c^3 the entire machine is locked. To lock the bolt c^3 , we have provided a spring-impelled bolt h^3 , Fig. 6, which is received in a hollow projection i^3 on the standard d^3 . The bolt h^3 is provided with a screw-threaded shank which extends through an aperture in the front of the projection i^3 , and inside the projection i^3 a spiral spring encircles the bolt h^3 and acts to impel the bolt h^3 against the vertical bolt c^3 . The inner end of the bolt h^3 is beveled and is received in a corresponding notch in the vertical bolt c^3 , so that when the bolt h^3 is in the notch in the vertical bolt the vertical bolt cannot be raised and the machine is locked. By applying the key j^3 , which has a threaded aperture to receive the projecting end of the bolt h^3 , to said bolt h^3 and turning the key until the bolt h^3 is withdrawn from the vertical bolt c^3 the machine is unlocked and ready for use, as shown, Fig. 3.

The locking-bar J is notched underneath, as shown at k^3 , Fig. 9, and the rear end of the latch h rests in one of the notches. When the drawer C is open after a key has been depressed the latch rests in the notch toward the right, and when the drawer is closed the bar J moves toward the right until the latch rests in the other notch, this movement acting to depress the rear end of the latch and raising its front end, freeing the pawl e from the latch-hook and allowing the pawl to come in contact with the teeth of the ratchet c .

As a means of preventing more than one key from being used at a time the pendant-pieces l^3 , Fig. 5, may be used. These pieces are pivoted to a cross portion of the frame and project downwardly nearly to the key-levers. As a key-lever rises between them they have play enough to separate sufficiently to allow it to pass up, but cannot separate sufficiently to allow more than one key-lever to pass up at a time. As this arrangement of pendants forms no part of our invention and is not necessary to the operation of our machine, we do not deem it essential to describe it with greater detail.

The key marked O, Fig. 1, is a blank whose lever does not operate the register-lever k' or a tablet-rod and is for convenience in opening the drawer without registering or indicating.

The pawl e consists of a strip of metal which serves as a pawl for all the key-levers in each bank, as will be clear from Fig. 2.

As will be obvious, more than two banks of keys may be employed, if desired, and a bank having a unit of one will often be found necessary or desirable.

We do not claim the combination, with an operating-key, of a key-lock arranged upon the partial operation of a key to lock the unoperated keys and to hold them from operation until the partially-operated key has completed its stroke and to then unlock and release said keys.

What we claim is—

1. The combination, with the key-levers d , having ratchets c , of the pawl e , the hook-latch h , and bar J, provided with notches k^3 , whereby the latch h is operated, substantially as shown and described.

2. The combination, with the pivoted key-levers, of the pivoted table a' , the arm c' , rigidly connected with said table, and the laterally-sliding rod d' , having a beveled end, said rod being arranged to reciprocate in substantially a straight line and to co-operate at its beveled end with the corresponding beveled end of the stop-bolt H, substantially as shown and described.

3. In a cash-register having register-wheels which are moved as a key is depressed, a device for locking the register-wheel at the completion of the stroke of the key, consisting of a locking-lever, as e^2 , its cam-actuating lever w , the arm c' for actuating the cam-lever, and the key-levers which operate said cam-lever when a key is depressed, substantially as shown and described.

4. The combination, in a cash register and indicator, of the pivoted key-levers d and the locking-bar J and its operating mechanism, whereby as a key is depressed the locking-bar is moved over the unoperated keys, locking them from operation, substantially as shown and described.

5. The combination, in a cash register and indicator, of the pivoted key-levers d , the locking-bar J, the bolt w^2 , its actuating-bolt

b^3 , the arm p^2 , and the spring-actuated bell-hammer lever h^2 , substantially as shown and described.

6. The combination, in a cash register and indicator, of the pivoted key-levers d , the locking-bar J, the bell-crank lever l^2 , the pin n^2 , and the arm p^2 , substantially as shown and described.

7. The combination, in a cash register and indicator, of the bolt c^3 , the spring-impelled locking-bolt h^3 , the forward end of which when projected engages a notch in said bolt c^3 , the hollow threaded key j^3 , adapted to be screwed onto the threaded shank of the bolt h^3 , and the arm p^2 , for the purposes and substantially as shown and described.

8. In a cash register and indicator, the combination, with an operating-key provided with a rack having a projection at one end, of a pawl arranged to engage said rack when the key is partially operated and to be disengaged therefrom by the projection at the end of the rack when the key has been fully operated, a latch for holding the pawl out of engagement with the rack while the key is being reset, and a trip for said latch, substantially as and for the purpose described.

9. The combination, with the bar J and the spring-impelled lever h^3 , which carries the bell-hammer, of the pawl v^2 and means, substantially as described, for freeing it from the bar J as the drawer G is opened.

10. In a cash register and indicator, the combination, with an operating-key provided with a rack having a projection at its lower end, of a pawl arranged to engage said rack as the key is operated and the rack lifted and to be disengaged therefrom by the projection at the lower end of the rack when the key has been fully operated, a latch for holding the pawl and rack out of engagement while the key is being reset, and a trip for said latch, substantially as and for the purpose described.

11. In a cash register and indicator, the combination, with an operating-key pivoted between its ends and provided on its lower side in rear of its pivotal point with a rack having a projection at its lower end, of a pawl arranged to engage said rack as the key is operated and the rack lifted and to be disengaged therefrom by the projection at the lower end of the rack when the key has been fully operated, a latch for holding the pawl and rack out of engagement while the key is being reset, and a trip for said latch, substantially as and for the purpose described.

12. In a cash register and indicator, the combination, with a series of operating-keys, each provided with a rack having a projection at one end, of a bar extending across the entire series of keys and arranged to engage and act as a pawl for each one of said racks when its key is partially operated and to be disengaged from said rack by the projection on the latter when the key has been fully op-

erated, substantially as and for the purpose described.

13. In a cash register and indicator, the combination, with a series of operating-keys, each provided with a rack having a projection at one end, of a bar extending across the entire series of keys and arranged to engage and act as a pawl for each one of said racks when its key is partially operated and to be disengaged from said rack by the projection at the end of the latter when the key has been fully operated, a latch for holding said bar and rack out of engagement while the key is being reset, and a trip for said latch, substantially as and for the purpose described.

14. In a cash register and indicator, the combination, with a series of operating-keys pivoted between their ends and each provided on its lower side in rear of its pivotal point with a rack having a projection at its lower end, of a bar extending across the entire series of keys and arranged to engage and act as a pawl for each one of said racks when its key is partially operated and to be disengaged from said rack by the projection at the lower end of the latter when the key has been fully operated, a latch for holding said bar and rack out of engagement while the key is being reset, and a trip for said latch, substantially as and for the purpose described.

15. In a cash register and indicator, the combination, with the registering-wheel r' and registering-lever k' , of the series of pivoted operating-keys d , provided with the racks c , having the projections g , and the pawl-bar e , extending across said keys and arranged to engage their racks when the keys are partially operated and to be automatically disengaged therefrom by the projections g when the keys have been fully operated, substantially as and for the purpose described.

16. In a cash register and indicator, the combination, with the registering-wheel r' and registering-lever k' , of the pivoted keys d , provided with the racks c , having the projections g , the pawl-bar e , a latch for said bar, and a trip for said latch, substantially as and for the purpose described.

17. In a cash register and indicator, the combination, with the registering-wheel r' and the operating-keys d , of the pivoted locking-lever e^2 , actuated at the full operation of each key to engage the ratchet of the registering-wheel and lock the latter from further movement, substantially as and for the purpose described.

18. In a cash register and indicator, the combination, with the registering-wheel r' , the operating-keys d , and the pivoted table a' , extending across the keys, of the pivoted lever e^2 , connected with and actuated by the movement of said table to engage the ratchet of the registering-wheel and lock the latter at the full operation of any key, substantially as and for the purpose described.

19. In a cash register and indicator, the combination, with the registering-wheel r' , the

operating-keys d , and the pivoted table a' , extending across the keys, of the pivoted lever e^2 , an arm projecting from the table a' , and a slot-and-pin connection between said arm and the forward end of said lever, whereby upon the operation of any key the rear end of said lever is caused to engage the ratchet of the registering-wheel and lock the latter from further movement, substantially as and for the purpose described.

20. In a cash register and indicator, the combination, with a registering-wheel and a series of keys for actuating the same, of a locking device medially connected with and actuated by said keys and arranged to lock said wheel upon the full operation of a key and hold it from movement until said key has been reset to its normal position, substantially as and for the purpose described.

21. In a cash register and indicator, the combination, with a registering-wheel and a series of keys for actuating the same, of a locking device medially connected with and actuated by said keys and arranged to engage said wheel upon the full operation of a key and lock it from movement until said key has been reset to its normal position and to be disengaged from and unlock said wheel when the key has been so reset, substantially as and for the purpose described.

22. In a cash register and indicator, the combination, with a registering-wheel actuated by a series of keys, of a device for preventing the turning of the registering-wheel by successive partial operations of a key after the latter has been once fully operated but not reset to its normal position, said device consisting of a pivotal lever medially connected with and actuated by the operating-keys and arranged when a key is fully operated to engage the ratchet of the registering-wheel and lock the latter until said key is reset to its normal position, substantially as and for the purpose described.

23. In a cash register and indicator, the combination, with the registering-wheel r' and the operating-keys d , of the pivoted lever e^2 and the arm w for actuating said lever, said arm being medially connected with the operating-keys and arranged to be moved by the full operation of any one of them to cause the lever e^2 to engage and lock the registering-wheel and upon the resetting of said key to its normal position to disengage said lever from the registering-wheel and unlock the same, substantially as and for the purpose described.

24. In a cash register and indicator, the combination, with the registering-wheel r' and the operating-keys d , of the pivoted lever e^2 , the arm w , and a cam-slot in one and a pin on the other for connecting said arm and lever, said arm w being medially connected with the operating-keys and arranged to be actuated by the full operation of any one of

them and to be reset by the complete resetting of said key, substantially as and for the purpose described.

25. In a cash register and indicator, the combination, with the registering-wheel r' and the operating-keys d , of the pivoted table a' , extending across said keys, the arm c' , moving with said table, the arm w , loosely pivoted by the side of the arm c' and connected thereto by a slot-and-pin connection, and the pivoted lever e^2 , connected to and actuated by the arm w , substantially as and for the purpose described.

26. In a cash register and indicator, the combination, with the operating-keys and the money-drawer, of a locking-bar extending across the keys and mechanism interposed between said bar and money-drawer, whereby said bar is actuated by the movement of the drawer to lock and unlock the keys, substantially as and for the purpose described.

27. In a cash register and indicator, the combination, with the operating-keys and the money-drawer, of a spring-pressed locking-bar extending across the keys, a latch for holding said bar in its normal position against the resistance of its spring, and a trip for said latch operated by the opening of the money-drawer, whereby when the money-drawer is opened the locking-bar is moved over and locks the unoperated keys, substantially as and for the purpose described.

28. In a cash register and indicator, the combination, with the operating-keys and the money-drawer, of a spring-pressed locking-bar extending across the keys, a latch for holding said bar in its normal position against the resistance of its spring, a trip for said latch operated by the opening of the money drawer, and a device actuated by the closing of the drawer to restore the locking-bar to its normal position, substantially as and for the purpose described.

29. In a cash register and indicator, the combination, with the operating-keys, a money-drawer arranged to be partially propelled from the case when released, and a locking device for holding the drawer in its closed position and arranged to be actuated by the operation of the keys to release the drawer, of a locking-bar extending across the keys, and mechanism interposed between the money-drawer and bar for actuating the latter by the movement of the former, whereby upon operating a key the money-drawer is released and partially propelled from the case and the locking-bar is moved to lock the unoperated keys and prevent the resetting of the operated key, substantially as described.

30. In a cash register and indicator, the combination, with the operating-keys, a money-drawer arranged to be partially propelled from the case when released, and a locking device for holding the drawer in its closed position and arranged to be actuated by the operation

of the keys to release the drawer, of a spring-pressed locking-bar extending across the keys, a latch for holding said bar in its normal position against the resistance of its spring, a trip for said latch operated by the opening of the money-drawer, and a device actuated by the closing of the drawer to restore the bar to its normal position, whereby upon operating a key the money-drawer is released and partially propelled from the case and the locking-bar is moved to lock the unoperated keys and prevent the resetting of the operated key until the money-drawer is closed, substantially as described.

31. In a cash register and indicator, the combination, with the operating-keys d and the money-drawer C, of the spring-pressed locking-bar J, the latch u^2 , and the trip for said latch actuated by the drawer C, substantially as and for the purpose described.

32. In a cash register and indicator, the combination, with the pivoted operating-keys d and the money-drawer C, of the spring-pressed locking-bar J, the latch u^2 , the trip for said latch, the bell-crank arm l^2 , the arm p^2 , secured to the drawer C, and the bolts $b^3 n^2$, interposed between said arm and the trip a^3 , and bell-crank arm l^2 , substantially as and for the purpose described.

33. In a cash register and indicator, the combination, with the operating-keys d and the pivoted table a' , extending across said keys, of a bolt having a projection engaging said table and a lock applied to said bolt for lock-

ing the table and keys from operation, substantially as and for the purpose described.

34. In a cash register and indicator, the combination, with the operating-keys d and the pivoted table a' , extending across said keys, of a bolt extending up beside said table and having a hook or head projecting over the same and a lock applied to said bolt for holding it in position with its head over the table a' to lock the latter and the keys d from operation, substantially as and for the purpose described.

35. In a cash register and indicator, the combination, with the operating-keys d and the pivoted table a' , extending across said keys, of the bolt c^3 , having a head e^3 extending over the edge of said table, and the lock h^3 , engaging the bolt c^3 , substantially as and for the purpose described.

36. In a cash register and indicator, the combination, with the registering mechanism and the operating-keys, of a series of stops for preventing the operation of two or more keys simultaneously and a locking device for preventing the operation of a single key until the previously-operated one is reset to its normal position, substantially as and for the purpose described.

EDWARD B. PARKHURST.
FOSTER HAM.

Witnesses:

WM. A. MACLEOD,
ROBERT WALLACE.