

(No Model.)

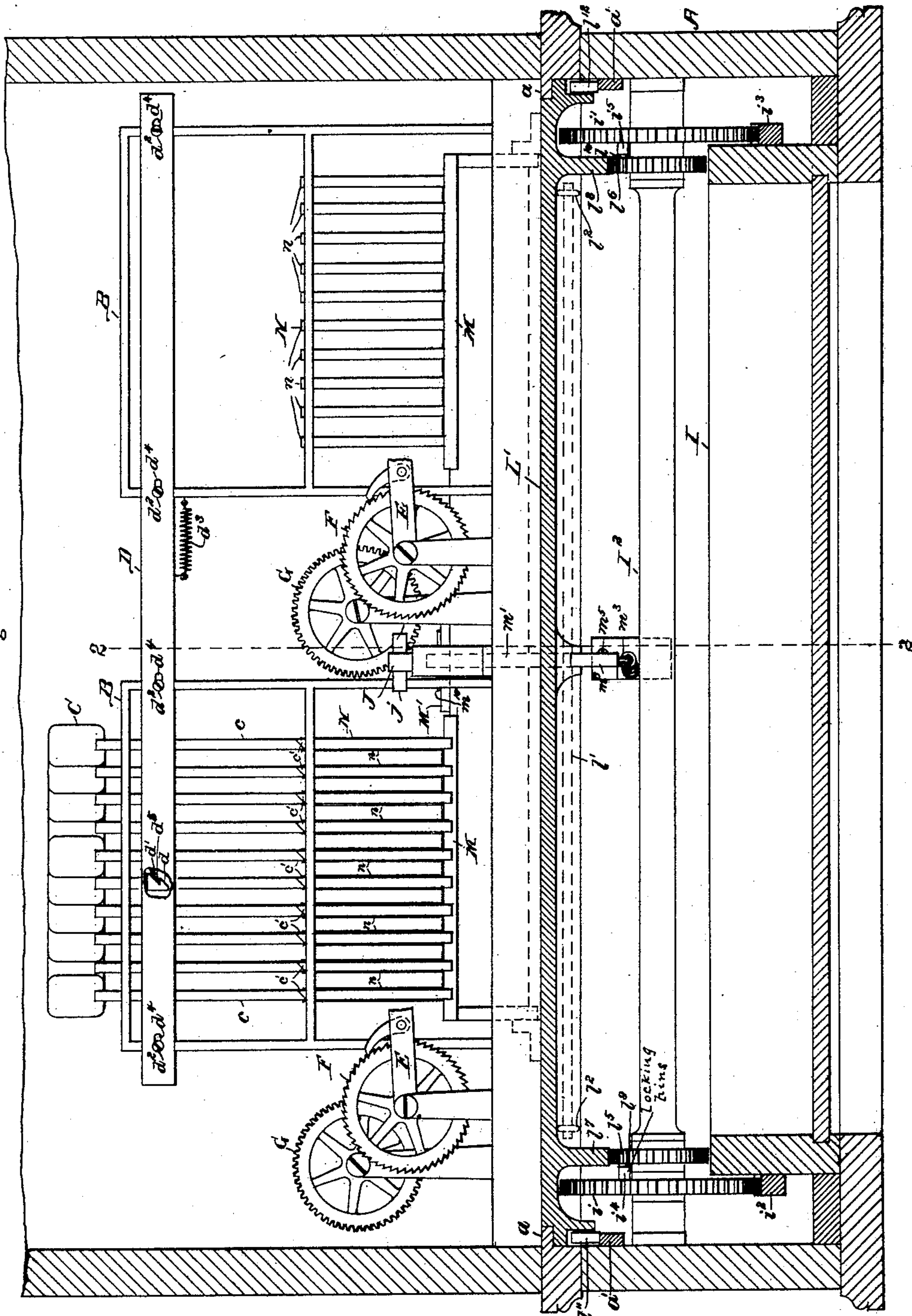
2 Sheets—Sheet 1.

J. J. WEBSTER.
CASH REGISTER AND INDICATOR.

No. 434,616.

Patented Aug. 19, 1890.

Fig. 1.



Witnesses.

Heinkley Hyde.

Myrtie C. Reals.

Inventor.

Jerome J. Webster,
By Albert M. Moore,
His Attorney.

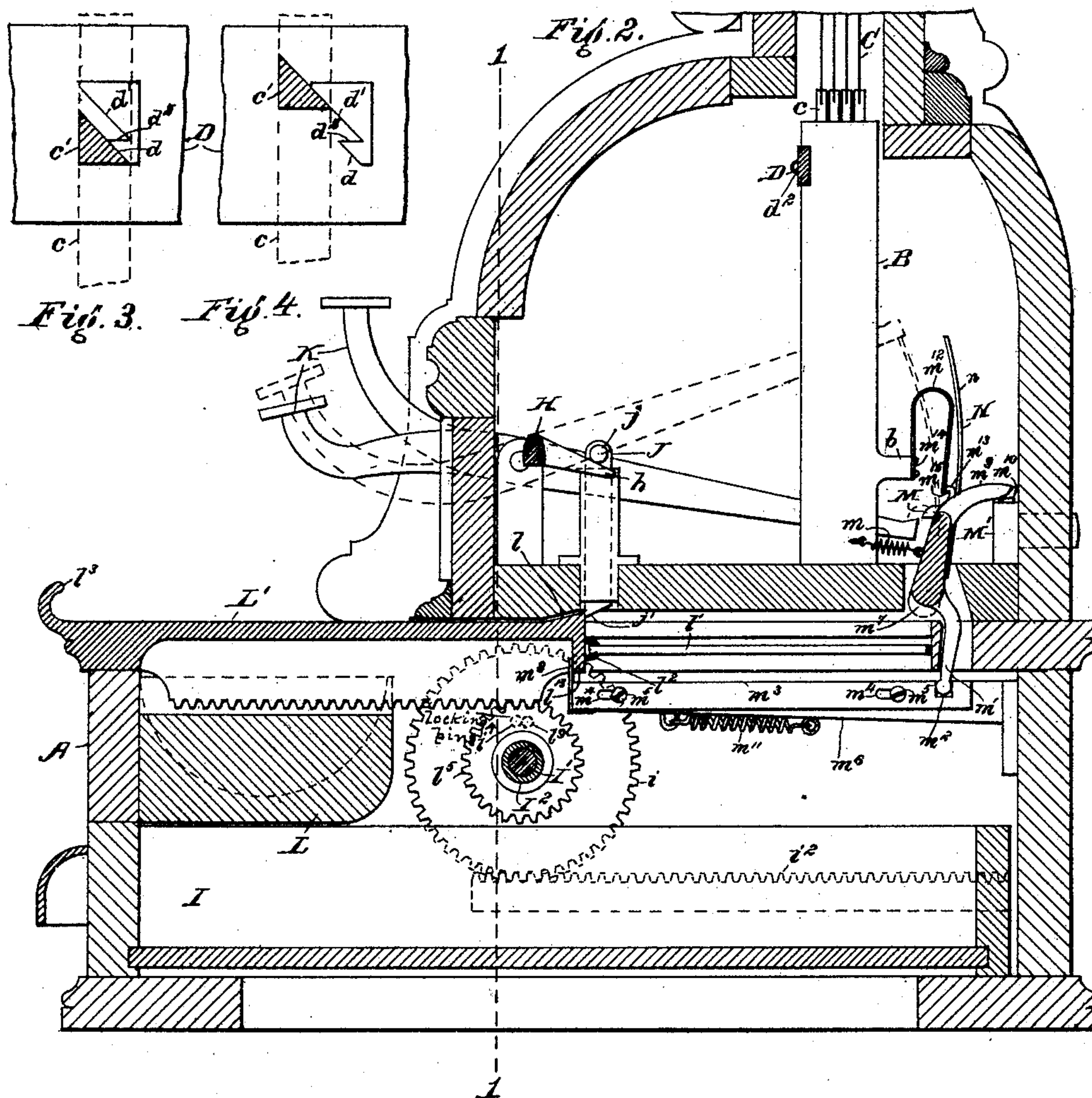
(No Model.)

2 Sheets—Sheet 2.

J. J. WEBSTER.
CASH REGISTER AND INDICATOR.

No. 434,616.

Patented Aug. 19, 1890.



Witnesses—

Heikley Hyde.

Myrtice C. Keale.

Inventor—

Jerome J. Webster,
By Albert M. Moore,
His Attorney.

UNITED STATES PATENT OFFICE.

JEROME J. WEBSTER, OF SOMERVILLE, MASSACHUSETTS, ASSIGNOR TO THE
BOSTON CASH INDICATOR AND RECORDER COMPANY, OF BANGOR, MAINE.

CASH REGISTER AND INDICATOR.

SPECIFICATION forming part of Letters Patent No. 434,616, dated August 19, 1890.

Application filed September 5, 1889. Serial No. 323,054. (No model.)

To all whom it may concern:

Be it known that I, JEROME J. WEBSTER, a subject of Victoria, Queen of the United Kingdom of Great Britain and Ireland, residing at Somerville, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Cash Registers and Indicators, of which the following is a specification.

My invention relates to cash registers and indicators; and it consists in means whereby, in a machine having two separate receptacles for money, upon the movement of a key one receptacle will be opened and the other will be unlocked; in means whereby, in a machine having two receptacles, one of which is stationary and is provided with a movable cover, and the other of which is a drawer, the closing of said cover will close said drawer; in means whereby any key when operated is prevented from returning to its normal position until the closing of said receptacle; in means, herein described, whereby a signal displayed will be held in sight until another signal is displayed.

In the accompanying drawings, on two sheets, Figure 1 is a section on the line 1 1 in Fig. 2 of a part of a cash register and indicator provided with my improvement, showing some of the operative parts in front elevation, but omitting the keys shown in Fig. 2. Fig. 2 is a vertical section on the line 2 2 in Fig. 1, omitting the registering mechanism, showing some of the operative parts in side elevation; Figs. 3 and 4, rear elevations of a portion of the locking-bar and its inclines and an adjacent portion of a signal-rod and its incline, the incline on the signal-rod being in contact with the lower incline on the locking-bar in Fig. 3 and in contact with the upper incline on said locking-bar in Fig. 4, the signal-rod being shown in dotted lines.

The case A, the upper portion of which is omitted, frame B, signals C, signal-rods c, registering-levers E, registering-ratchets F, registering-gears G, rocking plates H, and keys K are all of the usual construction, and as shown in Patent No. 393,089, to myself and William W. Drew, dated November 20, 1888.

The drawer I slides in the lower part of the case A in the usual manner, but is not opened

automatically upon the depression of a key, and when unlocked is opened or closed by hand applied directly to the drawer.

Within the case, above the drawer I, is a stationary money-receptacle or change-till L, intended to hold small coins, the paper money and coins of a large denomination being kept in the drawer I. The change-till L is closed by a sliding cover L', which is drawn forward over said change-till and is there retained by a bolt j', having a cross-head or ears j, under which an arm h on each rocking plate reaches, so that the depression of any key rocking said plate, as described in said patent, raises said bolt and allows said slide to be moved backward or opened, the lower end of the bolt when the slide is closed reaching down beyond an incline l secured to the top of said slide at the rear edge of the same, the rear of the incline being its highest part, and the top of said incline raising said bolt by running under the same when the slide is being closed, the lower end of said bolt being beveled downward and forward to slide easily over said incline. When the slide L' is unlocked by the raising of the bolt, it is opened or thrown backward by a spring, represented as a sheet-metal spring l', secured at its middle to the back of the case in the usual manner of drawer-opening springs, and at its ends connected to said slide by staples l², driven into the rear of said slide, in which staples the end portions of said spring may slide when the spring is bent by drawing forward or closing the cover, and when the spring straightens out in opening the cover or slide. The slide is closed by the hand grasping the handle or pull l³, similar to a drawer-pull, secured to said slide at or near its front edge, and drawing said slide forward until the falling of the bolt locks the slide, as above described.

The drawer I and slide L' are so connected by means hereinafter described that the opening of the slide unlocks the drawer and the closing of the slide closes the drawer, if the same be open, and in any case locks the drawer so that it cannot be opened until the slide is again opened. A shaft I' is journaled in the sides of the case A, and extends above the drawer I and has fastened upon it

two pinions $i\ i'$, which engage racks $i^2\ i^3$, secured to opposite sides or ends of the drawer, so that the sliding of the drawer rotates the shaft and pinions.

5 Surrounding the shaft I' , between the pinions $i\ i'$, is a sleeve or hollow shaft I^2 , adapted to turn freely on the shaft I' . To said hollow shaft are secured two equal pinions $l^5\ l^6$, which engage racks $l^7\ l^8$, secured to the under
10 side of the slide L' , so that the movement of the slide rotates said hollow shaft and the pinions secured thereto. Each of the pinions $i\ i'$ is provided on its inner side with a lateral projection $i^4\ i^5$, and each of the pinions
15 $l^5\ l^6$ is provided with a lateral projection $l^9\ l^{10}$, said last-named lateral projections being so arranged as to be in contact with the projections $i^4\ i^5$ when the slide is closed to prevent the rotation of the shaft I' , and thereby to
20 prevent the opening of the drawer I ; but when the slide is opened, as above described, the drawer may be pulled out until the projections $i^4\ i^5$ strike the projections on the pinions operated by the slide, and the drawer
25 may be again closed, or repeatedly opened and closed without moving the slide; but when the slide is closed, rotating the pinions $l^5\ l^6$, the lateral projections on said last-named pinions will come in contact with the projec-
30 tions on the pinions $i\ i'$ and rotate said last-named pinions and close the drawer, if the same be open, or if the drawer is closed will lock the drawer. The slide L' runs between two ledges $a\ a'$ at each side thereof, and is
35 preferably provided with anti-friction rolls $l^{11}\ l^{12}$, which run upon the lower ledges a' at each side of said slide. A hook M extends back of all the keys, and is caused by gravity or by a spring m to swing over all of said
40 keys when the slide L' is open to prevent the depression of any key except the one already depressed to open the slide. The hook M is provided with a down-hanging arm m' , which is jointed to or enters a notch m^2 in a hori-
45 zontal rod m^3 , said rod having horizontal longitudinal slots m^4 , through which screws m^5 are driven into a bracket m^6 , secured to the inside of the back of the case A , said slots allowing a forward movement of said rod to
50 rock said hook upon its journals m^7 in said case to throw the hook proper or upper part of the hook M backward and out of engagement with the teeth, but the rod m^3 being drawn backward by a spring m^{11} , which as-
55 sists the spring m when the slide L' is open. Obviously by making either of the springs $m\ m^{11}$ of sufficient strength the other of said springs may be dispensed with, owing to the connection of the hook M and the rod m^3 .
60 The forward movement of the rod m^3 is caused by an upward projection m^8 at or near the frontend of said rod, being struck by a downward projection l^{13} , secured to the slide L' at the rear thereof just before the slide is com-
65 pletely closed; hence when the slide is closed any key may be operated, but when the slide is open no key can be operated.

To the back of the hook M is secured a comb N or connected series of spring-fingers n , there being as many spring-fingers as there
70 are keys, and each finger n being so arranged behind a key as to reach forward within the are described by the rear end of such key
75 when said hook M is in position to engage said keys, it follows that when any key is de- pressed and the slide is opened, as above de-
80 scribed, and the hook M swings forward, one of the springs n will bear against the rear end of the depressed key, and when said key is fully depressed will spring under said rear
85 end of said depressed key and there remain, as shown by dotted lines in Fig. 2, thus preventing the return of the key to its normal position until the hook M is again thrown
90 out of engagement with the keys by the closing of the slide. Each signal-rod c rests upon a key, as described in said patent, so that as long as a key is depressed the signal-rod re-
95 mains raised and the signal displayed, as described in said patent.

The hook M is provided with a backward projection m^9 above its journals, which extends nearly to the inside of the back of the case, and a lock M' is secured to the inside
95 of the back of the case just below the free end of said last-named projection, the bolt m^{10} of said lock being arranged vertically below said projection. By means of a key in-
100 serted in a key-hole in the back of the case the bolt m^{10} of said lock may be shot upward against the projection on said hook and throw
105 said hook forward into engagement with all of said keys and prevent the operation of said keys by unauthorized persons. Sometimes it is desirable to leave the slide open
110 to save the time required to close the slide, and at such times the hook may be held out of engagement with the keys by means of a bent leaf-spring m^{12} , shaped like an inverted
115 U , and secured at one end, at m^{14} , to the frame B , or to a bracket b projecting therefrom, as shown in Fig. 1, and at the other end bent backward into a hook m^{15} , which may
120 be held by the fingers when the case (which is locked in the usual manner by a key carried by the proprietor) is opened be caught under a hook
125 m^{13} projecting upward from the hook M , said spring m^{12} being strong enough to overcome the force of the springs $m\ m^{11}$. When the spring m^{12} engages the hook m^{13} , the keys
130 may be operated when the slide is open, and will, when let go, return to their normal position by their own weight and the pressure of the rocking plates thereon. Other means
135 than those above described are, however, used to hold up the signals, as it is usually desirable to allow the displayed signal to remain in sight after the slide is closed and the key is restored to position.

The locking-bar D is arranged horizontally
135 above the rear arms of all the keys and slides on the frame which guides the signal-rods, being supported thereon by screws d^2 , which pass through longitudinal slots d^4 in said bar

into said frame, the length of said slots limiting the amount of movement of said bar, and a spring d^3 drawing said bar to one side to the right in Fig. 1. The locking-bar is provided with as many sets of inclines or cams, each set consisting of two cams d d' , arranged one d below the other d' , as there are signal-rods c , each set of cams d d' being arranged immediately in front of a signal-rod, and the upper cam d' of each set overhanging the lower cam d of the same set and having a longer inclination or cam-surface than such lower cam d , and the top of the lower cam having a horizontal top surface adapted to support the horizontal under surface of a similarly-shaped and inclined but inverted cam c' , projecting forward from the corresponding signal-rod and arranged vertically below said cams on the locking-bar. When any key is sufficiently depressed, the signal-rod, guided vertically, as shown in said patent, is raised until the inclined upper surface of its cam c' strikes the inclined under surface of the lower cam d on the locking-bar and crowds the locking-bar endwise against the resistance of the spring d^3 , until the cam c' rises above the lower or locking cam d , when the locking-bar is returned to position by the contraction of said spring d^3 , carrying the upper surface of said locking-cam d under the lower surface of the cam c' and holds the signal-rod from falling. A further or complete depression of the key, however, carries the cam c' against the inclined under surface of the upper or unlocking cam d' and high enough on said unlocking-cam d' to push the locking-cam d from under said cam c' , and when the key is let go the spring d^3 will restore the locking-rod D to position before the signal-rod can fall far enough to carry the bottom of its cam c' below the top of the locking-cam d .

As all the locking-cams d move at the same time an equal amount in the same direction, it follows that any signal-rod previously raised and supported by one of said locking-cams will be allowed to fall by the complete depression of any key other than the one which raised said signal-rod, and that any signal once raised will remain up until another signal is raised.

I claim as my invention—

1. In a cash register and indicator, two receptacles for money, in combination with a key, and means whereby upon the movement of said key one of said receptacles will be opened and the other will be unlocked, as and for the purpose specified.

2. In a cash register and indicator, two receptacles, one of which is stationary and is provided with a movable cover, and the other of which is a drawer, in combination with means whereby the closing of said stationary receptacle will close said drawer when the latter is open, as and for the purpose specified.

3. The combination of the case, a money-receptacle, the keys, a pivoted hook arranged

to engage all of said keys and to prevent the operation of any of said keys when said money-receptacle is open, and connections between the hooks and a movable part to the receptacle for throwing the hooks out of engagement with all of said keys when said money-receptacle is closed, as and for the purpose specified.

4. The combination of the case containing a stationary receptacle, a slide movable to close or open said receptacle, a rack secured to said slide, a pinion engaging said rack, a drawer sliding in said case, another rack secured to said drawer, another pinion engaging said last-named rack, said pinions being concentric with each other, each of said pinions being provided with a lateral projection, the projection on said first-named pinion being adapted to strike the projection on the other pinion when said drawer is open and said slide is being closed to close said drawer by the closing of said slide, as and for the purpose specified.

5. The combination of the case containing a stationary receptacle, a slide movable to open or close said receptacle, racks secured to said slide near the sides thereof, equal concentric pinions engaging said racks and secured to each other and provided with lateral projections, a drawer sliding in said case, racks secured to said drawer at opposite sides thereof, other equal pinions connected to each other and concentric with each other and with said first-named pinions and engaging said last-named racks and provided with lateral projections adapted to be struck by said first-named projections in the closing of said slide, as and for the purpose specified.

6. The combination of a series of keys, a case having a receptacle opened upon the operation of any key, a pivoted hook engaging said keys to prevent the operation of any key when said receptacle is open, but disengaged from said keys upon the closing of said receptacle, as and for the purpose specified.

7. The combination of a series of keys, the case having a receptacle adapted to be opened by the operation of any key, a hook arranged back of said keys and adapted to engage said keys to prevent the operation of the same when said receptacle is open, and a spring-hook arranged to hold said first-named hook out of engagement with said keys, as and for the purpose specified.

8. The combination of a series of keys, the case having a receptacle, a slide adapted to close said receptacle, a pivoted hook adapted to engage said keys to prevent the operation of the same when said receptacle is open, a sliding rod connected to said hook and having a projection adapted to be struck by a projection with which said slide is provided, to move said hook out of engagement with said keys when said slide is moved to close said receptacle, as and for the purpose specified.

9. The combination of a series of keys, a

case having a money-receptacle, a pivoted hook arranged to engage said keys when said receptacle is open and to be swung out of engagement with said keys when said receptacle is closed, and a series of spring-fingers supported on said hook and movable therewith and equal in number to the number of said keys and adapted to swing into the path of said keys when said hook swings into engagement with said keys, said money-receptacle being normally closed but opened upon the depression of any key, whereby the depression of any key will prevent the subsequent depression of any other key and the return of the depressed key to its normal position until the closing of said receptacle, as and for the purpose specified.

10. The combination of a series of keys, a case provided with a receptacle adapted to open upon the depression of any key, a series of spring-fingers connected together and turning upon a common pivot and adapted to swing into the path of said keys when said receptacle is opened, whereby any depressed key is prevented from returning to its normal position until said receptacle is closed, as and for the purpose specified.

11. The combination of a series of signal-rods, each provided with a cam or incline, a locking-bar extending past all said rods and provided with as many locking-cams and with as many unlocking-cams as there are signal-rods and arranged at equal intervals with said signal-rods, said unlocking-cams being arranged above said locking-cams, and a spring to draw said locking-bar in one direction and normally to hold said locking and said unlocking cams over the cams on said signal rods, whereby the raising of any signal-rod will first move said locking-bar aside and allow the signal-rod cam to pass above such locking-cam, and the further movement upward of said signal-rod will move said locking-bar still further aside, moving the locking-cams out from under the signal-rod cams of any signal-rods previously raised, as and for the purpose specified.

In witness whereof I have signed this specification, in the presence of two attesting witnesses, this 23d day of August, A. D. 1889.

JEROME J. WEBSTER.

Witnesses:

ALBERT M. MOORE,

JOHN I. COGGESHALL.