(No Model.)

4 Sheets—Sheet 1.

C. J. PASSICK.

CASH REGISTER.

No. 523,174. Patented July 17, 1894.

Fig. 10.

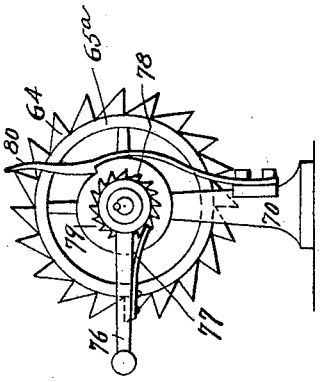
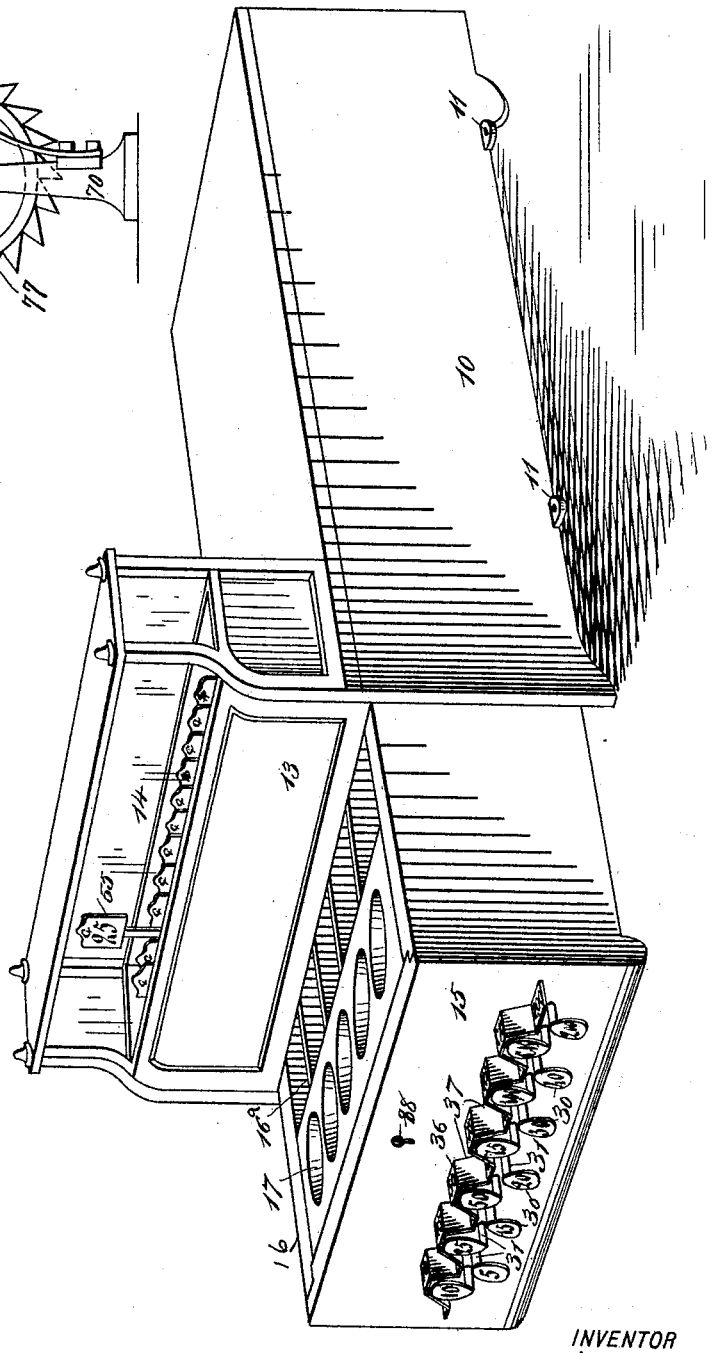


Fig. 1



WITNESSES:

C. Neveux

E. Sedgwick

INVENTOR

C. J. Passick

BY Munn & Co

ATTORNEYS.

(No Model.) 4 Sheets—Sheet 2.

C. J. PASSICK.

CASH REGISTER.

No. 523,174. Patented July 17, 1894.

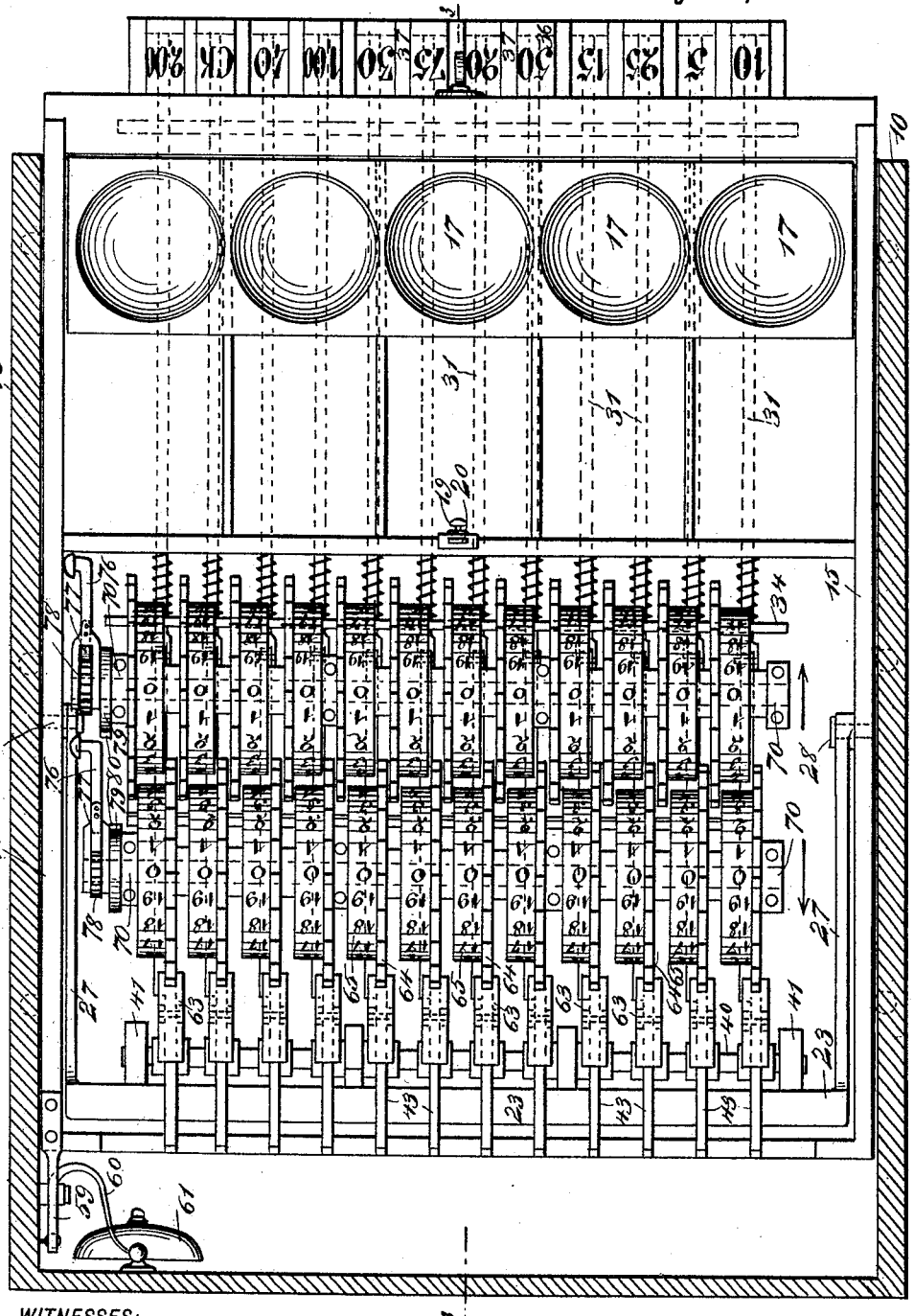


Fig. 2.

WITNESSES:

C. Neveux

G. Sedgwick

INVENTOR

C. J. Passick

BY Munn & Co

ATTORNEYS.

(No Model.)

4 Sheets—Sheet 3.

C. J. PASSICK.

CASH REGISTER.

No. 523,174. Patented July 17, 1894.

Fig. 3

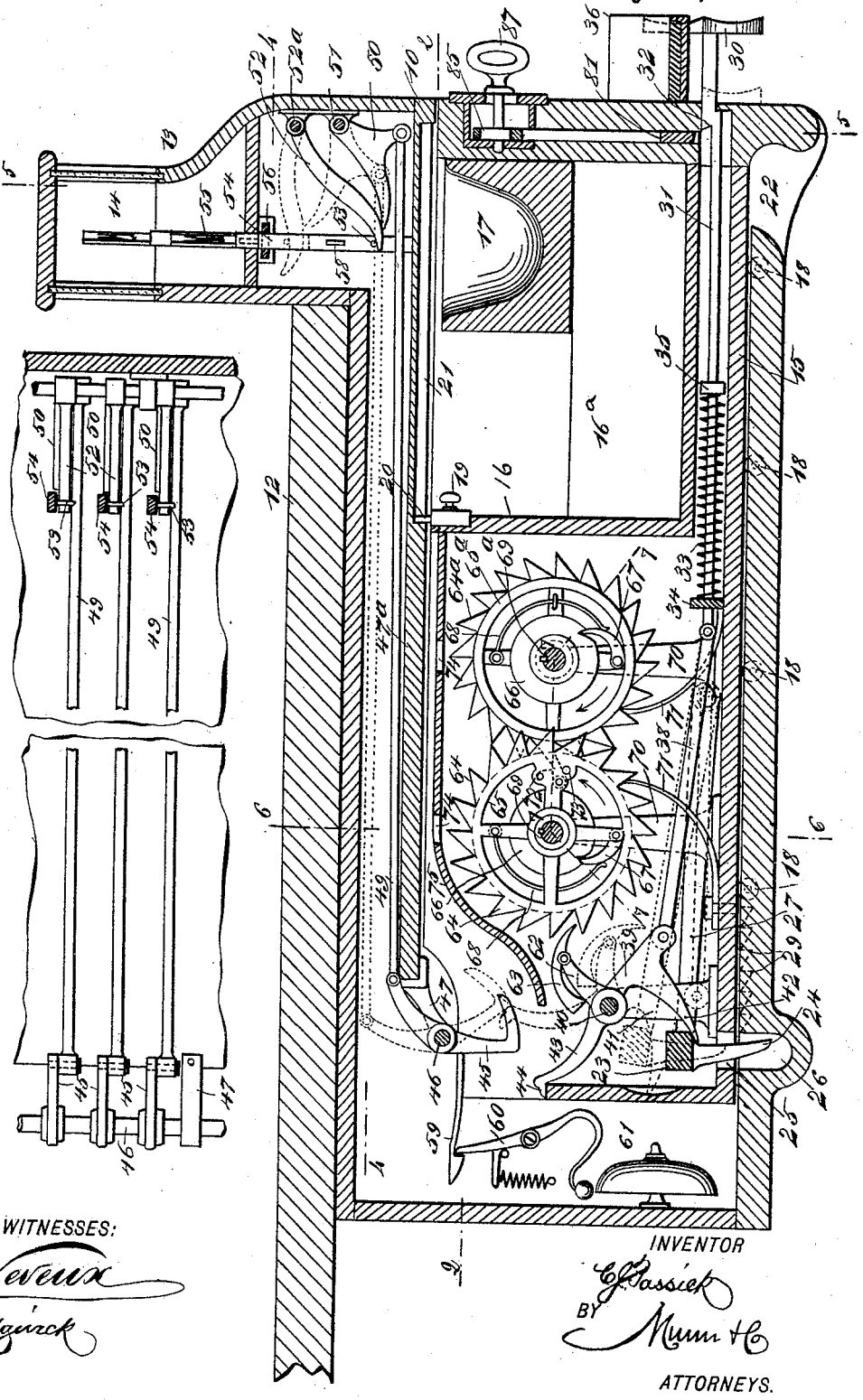


Fig. 4

WITNESSES:

C. Neveux

C. Sedgwick

INVENTOR

C. J. Passick

BY Munn & Co

ATTORNEYS.

(No Model.)

4 Sheets—Sheet 4.

C. J. PASSICK.

CASH REGISTER.

No. 523,174. Patented July 17, 1894.

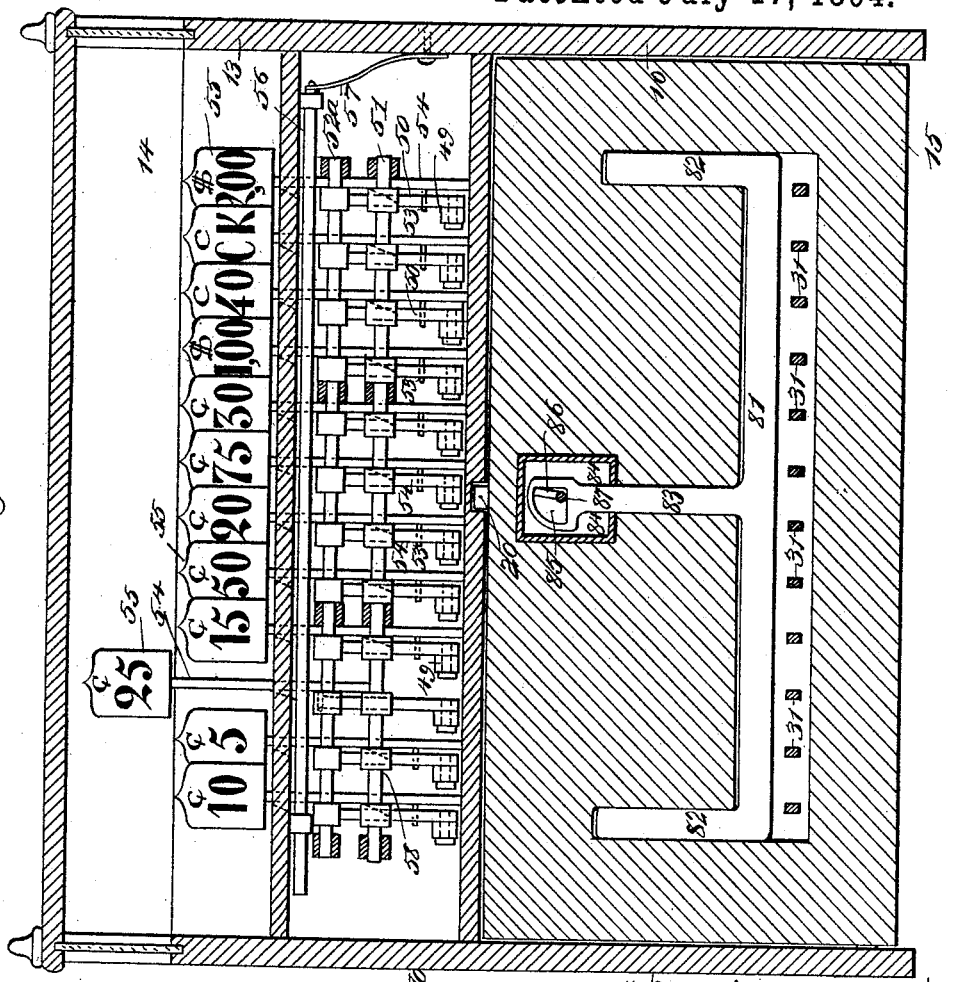


Fig. 5

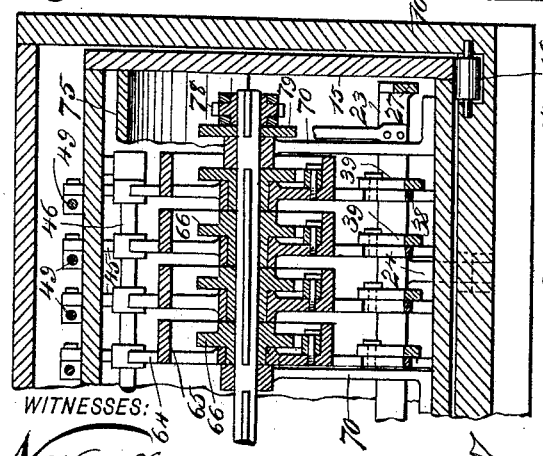


Fig. 6

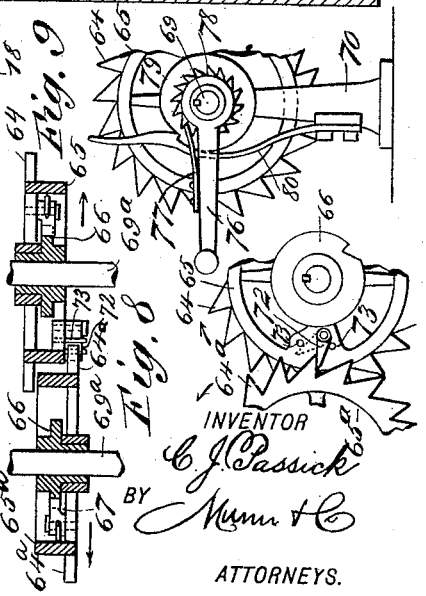


Fig. 9

Fig. 8

Fig. 7

WITNESSES:

C. Neveux

A. Lurcott.

INVENTOR

C. J. Passick

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES J. PASSICK, OF SEWARD, NEBRASKA.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 523,174, dated July 17, 1894.

Application filed December 2, 1893. Serial No. 492,587. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. PASSICK, of Seward, in the county of Seward and State of Nebraska, have invented a new and improved Cash-Register, of which the following is a full, clear, and exact description.

My invention is an improvement in cash registers and is in a general way like a cash register for which I received Letters Patent of the United States, No. 502,580, dated August 1, 1893.

The object of my present invention is to improve certain details of construction of my former invention, and particularly the registering mechanism, to the end that the machine may work more positively and efficiently.

My invention lies in certain details, which will be hereinafter pointed out, but in order that they may be understood, it is necessary to describe the whole machine.

My invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the cash register embodying my invention with the drawer open. Fig. 2 is a sectional plan on the line 2—2 of Fig. 3. Fig. 3 is a vertical longitudinal section on the line 3—3 of Fig. 2 and with the machine fastened beneath a counter. Fig. 4 is a broken sectional plan on the line 4—4 of Fig. 3, and shows in detail the mechanism for hoisting the display signs. Fig. 5 is a cross section on the line 5—5 of Fig. 3. Fig. 6 is a broken cross section on the line 6—6 of Fig. 3. Fig. 7 is a broken sectional plan on the line 7—7 of Fig. 3, illustrating the connection between the adjacent number wheels. Fig. 8 is a broken detail side elevation of two adjacent number wheels looking in the opposite direction from Fig. 3 and illustrates the manner in which one wheel is turned a distance of a tooth or notch at every revolution of the other wheel. Fig. 9 is a detail elevation of a crank mechanism for turning the primary number wheels to set the register, and Fig. 10 is a detail elevation of the crank mechanism for setting the secondary number wheels.

The machine is provided with an inclosing case 10 which is like that shown in my former application, except that it is provided at the bottom with perforated side lugs 11, which are adapted to receive bolts by which the case is secured to the under side of the counter 12. The machine may be used, however, in any other position but this is the preferred arrangement of it; and it has at one end an upwardly-extending portion 14 which has open or transparent sides, as shown at 14, so that the display sign, actuated as hereinafter described and projected upward into this portion of the case, may be distinctly seen by the purchaser as well as by the operator of the machine.

The case 10 is provided with a removable drawer 15, in the front end of which is a money till 16, of substantially the usual kind, having compartments 16^a in the bottom for bills and pockets 17 in the top for change. The drawer is held to run on rollers 18 and its movement is limited by a lock 19 which is provided with a bolt 20 adapted to project upward into a groove or recess 21 in a shelf of the case 10, as shown in my other patent. The drawer is provided with a suitable hand hold 22, to enable it to be conveniently pulled out, and at its rear end is a vertically swinging locking bar 23, having on its under side a bolt 24 which is adapted to drop down through a hole 25 in the floor of the drawer and in a recess 26 in the bottom of the case 10, so that when the bar is dropped, as shown in Fig. 3, the drawer may be locked securely to the case. The bar is provided with side arms 27 which are pivoted, as shown at 28 in Fig. 2, on opposite sides of the drawer, and in the floor of the case, just in front of the recess 26, are notches 29, which are adapted to be engaged by the bolt 24 when the drawer is pushed inward so that, in case the drawer is not quite closed, it will still be held locked. The drawer has projecting from its front end, a series of keys or buttons 30, each representing a certain value and each being appropriately marked, the keys or buttons, as illustrated, representing amounts from five cents to two dollars, but other amounts may be registered, as will appear from the description to follow.

The keys 30 are preferably of an oval shape, as shown in Fig. 1, and are arranged in double horizontal rows so that they will not align vertically, this arrangement being compact and permitting a comparatively large number of keys or buttons to be employed. The buttons or keys have inwardly sliding shanks 31, which move along the bottom of the drawer and each shank has a shoulder 32 to engage a locking bar, as hereinafter described. Each shank and key is normally pressed outward by a spring 33, which is coiled around the shank between an abutment and guide 34 through which the shank extends and a collar 35 on the shank.

All the mechanism above described is like that shown in my former patent, except the arrangement of the keys. The keys are prevented from being accidentally pushed in by a guard plate 36, which is arranged horizontally above them and which is like the guard plate shown in my former patent, except that the plate 36 is curved downward between each pair of the upper row of keys, as shown clearly in Fig. 1, this arrangement enabling the upper keys to be almost embraced by the guard and also causing the guard plate to project low enough to shield, in a measure, the lower keys.

Each shank 31 has pivoted to its rear end a rearwardly extending connecting rod 38, which is also pivoted to a lever 39, this being fulcrumed on the cross shaft 40 which is arranged in the back portion of the drawer and is supported in posts 41. The lever 39 has an arm 42 which extends rearwardly and downwardly and beneath the bar 23, so that when the lower end of the lever is pushed back, the arm 42 will swing rearwardly and lift the locking bar 23 and its bolt 24 so as to permit the drawing out of the drawer 15. The lever 39 has also an arm 43, which extends rearward and upward and terminates in a bent end 44 which is adapted to strike flat on the upper edge of the box back so as to limit the swing in one direction, and the upper end of the arm 43 is rounded, as shown at 44, so that it may strike without injury against the lower end of the swinging lever 45, which is fulcrumed on a shaft 46 supported in brackets 47 on the back end of the shelf 47^a in the case 10, and consequently when the lever 39 is operated to unlock the drawer, the lever 45 will be struck and tilted.

The upper end of each lever 45 is pivoted to a pitman 49 which extends longitudinally through the case 10, above the shelf 47^a, and the front end of the lever is pivoted to a bell crank 50 which is fulcrumed on a cross shaft 51, as in my former patent, and the bell crank is adapted to swing upward against an arm 52 which is pivoted on a cross shaft 52^a arranged above and parallel with the shaft 51. The free end of the shaft 52 is adapted to strike against a pin 53 projecting laterally from an adjacent post 54, which is adapted to move vertically in the part 13 of the main case, this post carrying a sign 55 which is numbered to correspond with one of the keys or buttons 30, and it will be understood that there is a shank 31, lever 39, lever 45, pitman 49, bell crank 50, arm 52, post 54 and sign 55 for each key or button.

Each post 54 moves through a spring bar 56, which is held in suitable guides, as illustrated in Fig. 3, and is pulled endwise by a spring 57, as shown in Fig. 5. The posts are also each provided with a catch 58 which is inclined on its upper edge and which is adapted, when pushed upward through the spring bar, to engage the latter and thus hold up the sign carried by the post. When one sign has been hoisted and another is thrown up, the impact of the second catch on the bar will release the first one and permit the first sign to drop. The hoisting mechanism just described is similar to that shown in my former patent.

The drawer has fastened to its rear end a catch 59, which is adapted to engage the spring-pressed hammer 60 of a gong 61, so that when the drawer is pulled out the gong will be sounded, thus acting as an additional safeguard against thieves, and this arrangement is also shown in my former patent.

Each lever 39 has, besides the arm 43, an arm 62, which projects forward and upward, and to the free end of this arm is pivoted a pawl 63 which is adapted to engage ratchet teeth 64 of a number wheel 65, there being a number wheel for each lever 39 and there are as many teeth on the number wheels as there are numbers. It will be understood that the numbers on the wheels must be multiples of the numbers on the keys or buttons 30 connected with the wheels, and it will be seen that every time a button or key is pushed in, the lever 39 will swing and the pawl 62 will be made to engage the teeth on a number wheel, so as to turn the wheel a distance of one tooth or number. The pawl 63 is hung in such a way that when the wheel is turned back to reset it, the pawl may pitch and allow the wheel to pass. As many numbers as are necessary may be produced on each number wheel, but I find twenty a convenient number.

Each number wheel 65 is mounted on the hub of a ratchet wheel 66 which has a single tooth adapted to engage a pawl 67 on the number wheel, the pawl being pressed into engagement with the tooth by a spring 68. The number wheels 65, ratchet wheels 66, and pawls 67 are arranged in such a way that when the zeros on the number wheels are beneath the sight slots, the pawls will all align horizontally. The ratchet wheels 66 are keyed or otherwise fastened to a transverse shaft 69 which is mounted in posts 70 on the floor of the drawer, and a spring pawl 71 engages the ratchet teeth on each number wheel and prevents the wheel from turning in the wrong direction.

A row of number wheels 65^a is arranged ad-

jacent to and parallel with the wheels 65, these having teeth 64^a like the teeth 64 already described, and being mounted on a shaft 69^a, parallel with the shaft 69 in exactly the manner described above. The object of the second row of number wheels is to enable the register to work up to numbers of large amounts, and the numbers on the second row of wheels represent multiples of those on the first wheels, and a revolution of one of the first number wheels is adapted to turn a second number wheel a distance of one tooth or number. To enable this to be done, each wheel 64 has pivoted on one side and near one edge a pawl 72 which swings between pins 73 on the wheel and which extends into the path of the teeth 64^a of the wheel 65^a. The pawl may thus swing out of the way of the teeth or ride over them when the number wheels are turned back to be reset as shown by dotted lines in Fig. 8, but when the wheel 65 is turned in the direction of the arrow in Fig. 3, the pawl will engage one of the teeth 64^a and turn the number wheel 65^a. The numbers on the wheels may be read through sight slots 74 in the cover 75, which is arranged in the drawer above the number wheels. The number wheels may be turned back by the mechanism shown in detail in Fig. 9 and shown also in Fig. 2.

Each shaft 69 and 69^a has loosely mounted at one end a crank 76 which carries a spring pawl 77 adapted to engage a ratchet wheel 78 on the shaft, and adjacent to this ratchet wheel is a single toothed ratchet wheel 79, like the wheels 66 described above, the wheel 79 being also secured to the shaft and adapted to be engaged by a locking pawl 80 which prevents the shaft from turning when the number wheels are used in registering cash.

As the shafts 69 and 69^a turn in opposite directions and as the pawls 71 which engage the ratchet wheels on the shafts prevent them from turning in but one direction, it is obvious that the ratchet wheels 78 and pawls 77 must be oppositely arranged for the two shafts, and to this end the pawl 77 is on the upper side of the crank 76 which is attached to the shaft 69, as shown in Fig. 9, while the pawl is on the under side of the crank attached to the shaft 69^a, as shown in Fig. 10. The shafts are turned by moving the cranks up and down, and in setting the number wheels they are turned in the same direction as when registering. To set the number wheels the pawl 80, adjacent to the shaft to turned, is pulled out by hand so as to release it from the wheel 79 and the crank 76 is worked up and down, as specified. As the crank moves it turns intermittently the shaft to which it is attached, and the ratchet wheels 66 successively engage the pawls 67, that is, unless the same numbers should be beneath the sight slots on all the wheels, in which case the ratchet wheels would simultaneously engage the pawls, and as the ratchet wheels are fast to the shaft the number wheels are turned to 0 and the pawl 80 again engages the notch of the wheel 79, thus holding the shaft so that it will not turn by the ordinary registering movement of the number wheels.

In a recess in the front of the drawer is a vertically movable locking bar 81, which is adapted to simultaneously engage the shoulders 32 of the several shanks 31 of the keys or buttons 30, and the locking bar is provided with upwardly extending guide arms 82 and with a central arm 83 which projects upward into a casing 84 and terminates in a hollow cam 85 adapted to engage a lug 86 of a key 87, so that by turning the key, the locking bar may be raised or lowered to release or lock the shanks 31, and it will be at once seen that if the shanks cannot be pushed in the machine cannot be unlocked, as it is the movement of one of these shanks that raises the locking bar 23.

The drawer has a key-hole 88 in its front, which registers with the key in the usual manner. To enter the machine, the hand hold 22 is grasped, one of the buttons 30 bearing the amount to be registered is pushed in, and the drawer pulled out. When the button or key is pushed in the locking bar 23 is raised, as specified, the hoisting mechanism actuated to raise the appropriate sign 55, and one of the number wheels turned to register the amount received by the key or button which has been pushed, all of which will be clearly understood from the foregoing description.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

In a cash register, the combination of the sliding key or button shanks, the toothed number wheels, the locking bar, the lever 39 fulcrumed near the center and having one end connected with a button shank, the pawl 63 carried by the lever and adapted to engage an adjacent number wheel, the arm 43 of the lever terminating at one end in a shoulder 44 adapted to engage an adjacent abutment, and means for working the locking bar by the tilting of the lever, substantially as described.

CHARLES J. PASSICK.

Witnesses:
WALTER CATTLE,
C. W. BARKLEY.