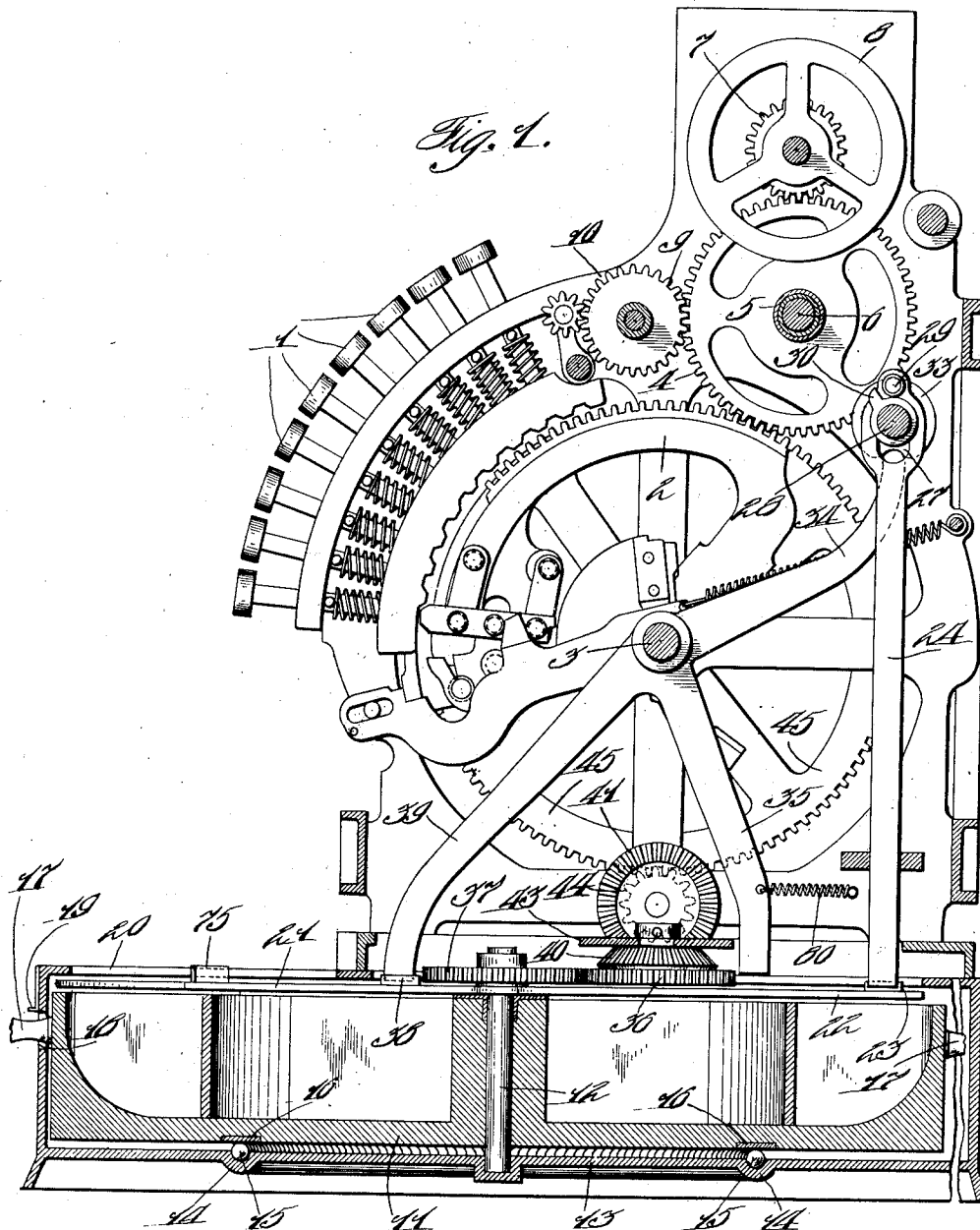


W. H. MUZZY.
CASH REGISTER.
APPLICATION FILED OCT. 26, 1907.

975,061.

Patented Nov. 8, 1910.

4 SHEETS—SHEET 1.



Witnesses
C. Klostermann.

R. A. Fairchild

Inventor

W. H. Muzzy

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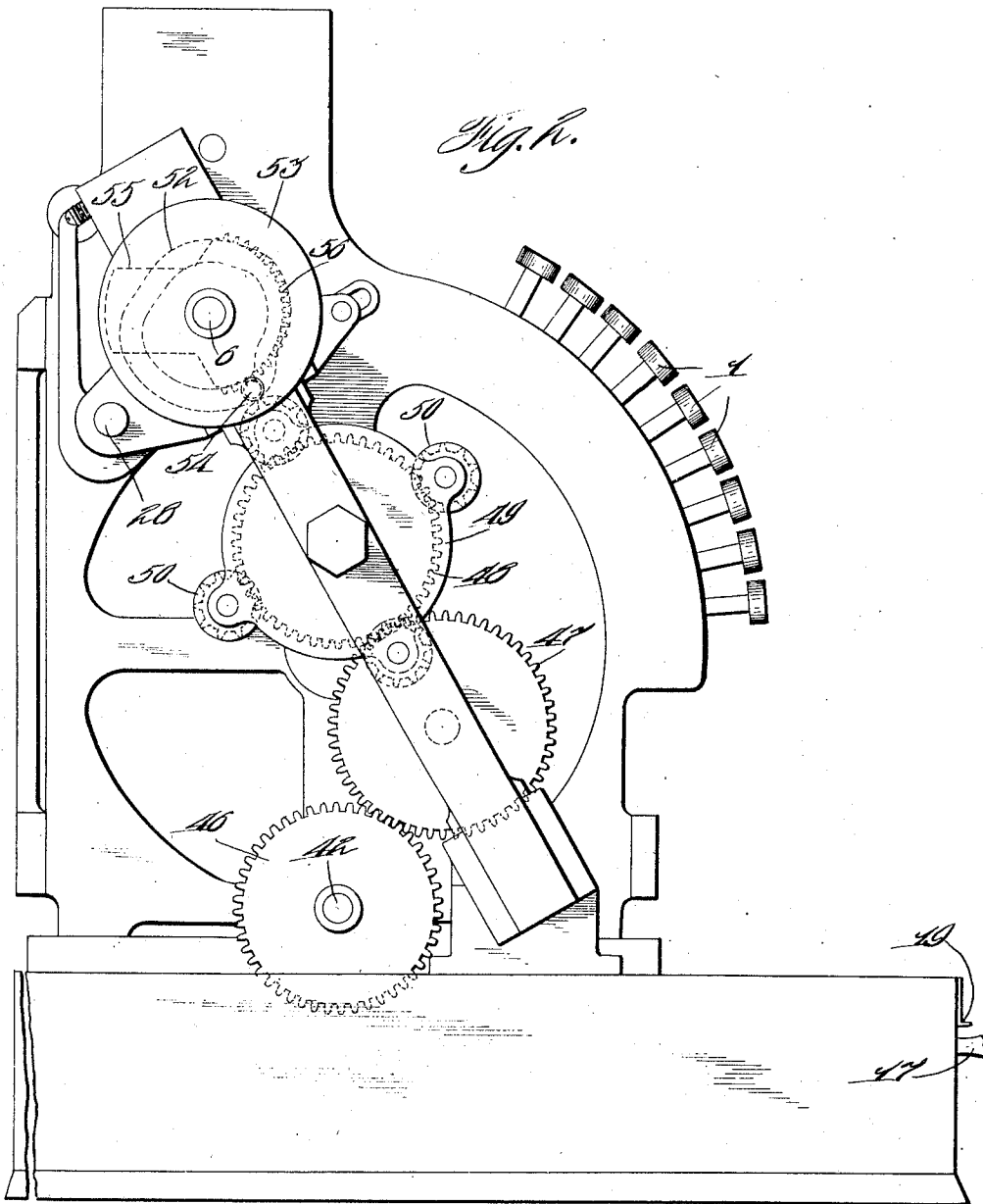
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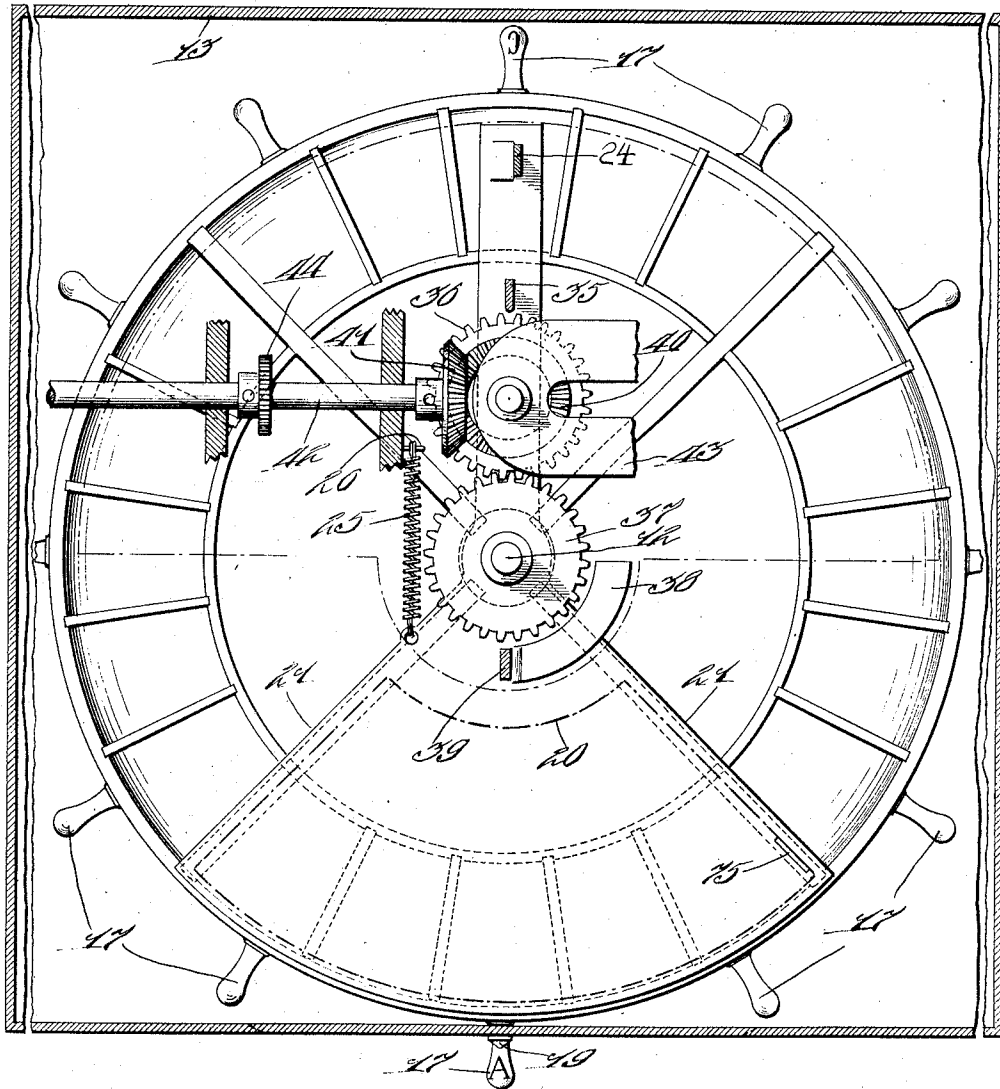
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4 SHEETS—SHEET 3.

Fig. 3.



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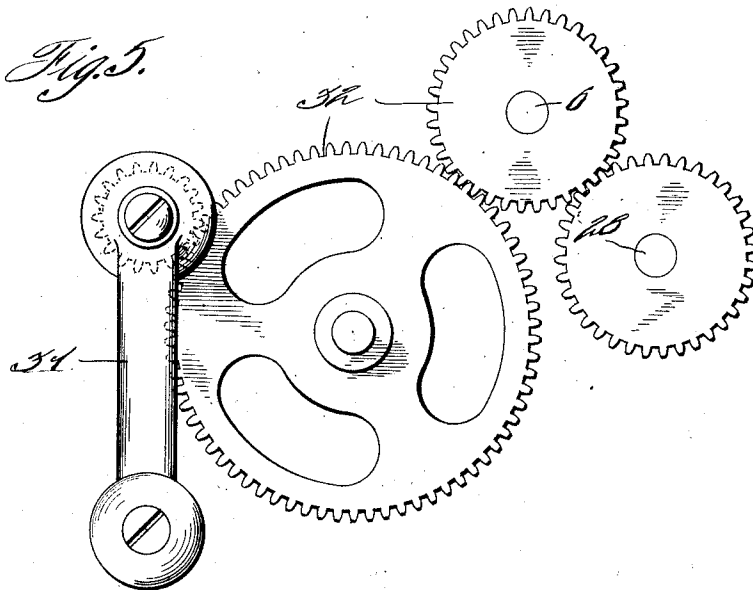
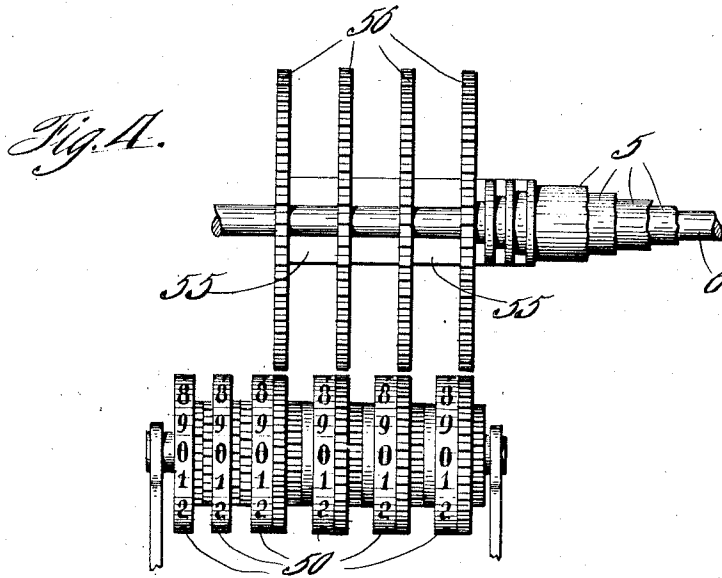
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4 SHEETS-SHEET 4.



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UNITED STATES PATENT OFFICE.

WILLIAM H. MUZZY, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF DAYTON, OHIO, A CORPORATION OF OHIO, (INCORPORATED IN 1906.)

CASH-REGISTER.

975,061.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed October 26, 1907. Serial No. 399,280.

To all whom it may concern:

Be it known that I, WILLIAM H. MUZZY, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Cash-Registers, of which I declare the following to be a full, clear, and exact description.

This invention relates to improvements in cash registers, and has more particular relation to improvements in registers of the so called multiple drawer type in which each clerk is provided with a separate compartment in which to deposit his cash.

The principal object of this invention is to provide mechanism, whereby, cash receptacles are operated by hand to set them for exposure.

A further object is to provide mechanism, whereby, a series of accounting devices are set, or controlled according to the setting by hand of a series of different clerks' cash receptacles.

A further object of this invention is to provide a rotary cash receptacle having a series of independent sections, which may be exposed independently.

With these and incidental objects in view, the invention consists in certain novel features of construction and combinations of parts, the essential elements of which are set forth in appended claims and a preferred form of embodiment of which is hereinafter specifically described with reference to the drawings which accompany, and form part of this specification.

Of said drawings: Figure 1 represents a vertical transverse section through the devices embodying my invention applied to the type of the machine shown in the patent granted to Thomas Carroll, July 1, 1902, Number 703,639. Fig. 2 represents an end elevation of the same. Fig. 3 represents a detailed top plan view of the rotary till, or cash receptacle. Fig. 4 represents a detailed front elevation of one of the counters, and its actuating racks; and Fig. 5 represents a detail elevation of the crank handle and the operating gearing.

Described in general terms this invention comprises a plurality of movable accounting devices anyone of which is arranged to be brought into position by a rotatable cash receptacle, to have entered thereon any suitable record. The said cash receptacle is di-

vided into compartments corresponding to the accounting devices and arranged to be rotated by hand to bring any desired compartment into position to be exposed and simultaneously bring the corresponding accounting device into place to have a record entered thereon.

Described in detail the machine comprises the following:

Registering and indicating mechanism.—A plurality of groups of manipulative devices, such as keys, control the extent of movement imparted to the registering and indicating mechanisms upon the operation of the machine. Each bank of keys 1, as shown in Fig. 1, controls a differentially movable segment 2 which is loosely mounted upon a rock shaft 3. Each segment 2 meshes with a gear 4 fastened to the inner end of one of a series of nested sleeves 5, which surround a rotary shaft 6. The gears 4 mesh with pinions 7 connected to the indicators 8 and to the pinions 9 which are arranged to be connected to the counter wheels 10, all of which is fully shown and described in the patent heretofore mentioned and reference is made to said patent for any further detail description.

Cash receptacle.—This receptacle is rotatably mounted within the casing of the machine and is divided into a plurality of compartments anyone of which may be brought beneath an opening formed in the receptacle casing. Fastened to the cash receptacle 11 and extending through its center is a rod 12 the lower end of which is suitably supported in the casing 13. A channel 14 is formed in the bottom of the casing 13 in which play a plurality of balls 15 that engage a ring 16 fastened in a groove on the underside of the cash receptacle so that the receptacle may be easily rotated. A plurality of operating handles or knobs 17, three for each compartment, extend radially from the edge of the receptacle and are arranged to pass through a slot 18 cut in the front wall of the casing 13. The center knob of each compartment group is lettered, see Fig. 3, so that when this knob of any desired compartment is brought beneath a pointer 19 secured to the front wall of the casing the operator will know that the compartment is in position to be exposed through an opening 20 formed in the upper front portion of the casing 13 shown in Fig. 3 by a heavy dot and dash

line. Beneath this opening is a cover or lid 21 for that part of the receptacle which is below said opening. This lid is loosely mounted upon the vertical rod 12 and has a rearwardly projecting extension 22 which is provided with a beveled lug 23 that normally engages the lower end of a vertical rod or arm and holds said lid between the opening 20 and the compartment below against the tension spring 25, one end of which is connected to the lid and the other end to a pin 26 projecting from one of the frames of the machine. A lug 75 projecting upwardly from the lid 21 contacts with the sides of the opening 20 and thereby limits the movement of said lid. The upper end of the arm 24 is provided with an elongated slot 27, through which a rotary shaft 28 extends, and also with an anti-friction roller 29 with which a cam 30 secured to the shaft 28 contacts near the end of the rotation of said shaft and thereby elevates said rod 24, so as to raise the lower end out of engagement with the lug 23. The shafts 6 and 28 are rotated by an operating handle 31 and suitable intervening gears 32 as shown in Fig. 5. Upon the beginning of movement of the operating handle 31 a cam 33 secured to the shaft 28 will cam the upwardly and rearwardly extending arm 34 of a three arm lever downwardly, the movement of which will carry the lower end of an arm 35 of said lever into engagement with the teeth of a gear wheel 36 and lock said wheel from rotation. This wheel meshes with a similar wheel 37 secured to the upper end of the vertical rod 12 of the cash receptacle and consequently prevents any movement of the latter while the machine is being operated. When the lid 21 is opened the receptacle is locked by the bevel end of a circular strip 38 secured to said lid, passing under the arm 39 of the three arm lever and thereby camming it upward and holding the lower end of the arm 35 into engagement with the teeth of gear wheel 36. A spring 80 returns the three arm lever to normal position when the lid is closed and the cam 33 is at home.

Accounting devices.—These devices are in the form of totalizers and are mounted upon a drum which is arranged to be revolved by the multiple compartment cash receptacle, there being as many totalizers as there are compartments in the cash receptacle. Fastened to the gear wheel 36 is a bevel pinion 40, which meshes with a similar pinion 41 secured to the inner end of a horizontal shaft 42, which is supported in the frame work of the machine, the wheel 36 and pinion 40 being supported by a frame 43 suitably mounted upon the casing. A pinion 44 is fastened to the shaft 42 and meshes with a large gear wheel 45 which is loosely mounted upon the rock shaft 3. This wheel

45 is of the same pitch as the segments 2 and engages with a gear 4 similarly to said segments. The gear 4 with which the gear wheel 45 meshes is arranged to rotate a clerks' indicator (not shown) in a similar manner to the amount indicators, so as to indicate to the customers and clerks which compartment of the cash receptacle is in position to be exposed. This gear 4 does not actuate the main counter and is not fastened to a sleeve 5 like the other gears but is loosely mounted upon the outermost one of said sleeves. The outer end of shaft 42, see Fig. 2, has secured to it a gear 46 which meshes with a similar gear 47 mounted upon the frame of the machine. This latter gear engages a gear 48 secured to the side of a drum 49 carrying four totalizers 50, the unitary drum being mounted in a frame 51, which is reciprocated by a cam groove formed in a disk 53 and in which plays a pin 54 projecting from the said frame. The disk 53 is secured to one end of the shaft 6 which is rotated by the crank handle 31 and the gears 32. As previously described the gears 4 driven by the segments 2 are secured to the inner ends of nested sleeves 5, the outer ends of which are fastened to yokes 55 equipped with segmental racks 56 with which the totalizers 50, mounted in the sliding frame, are brought into engagement, which is fully shown and described in the aforementioned patent.

Having described the invention in detail a brief description of its operation will now be given.

Clerk A having made a sale of \$5 rotates the cash receptacle until the lettered knob 17 of his compartment is beneath the pointer 19, which movement through the previously described gearing will rotate the clerks' indicator to exhibit A and will bring his totalizer 50 into position to be raised into engagement with the segmental racks 56 upon the operation of the machine. He then depresses the \$5 key and turns the handle 31, the first movement of which, will through the gearing 32 rotate the shaft 28 so that the cam 33 mounted thereon will force the arm 34 of the three arm lever downward and the lower end of arm 35 of said lever into engagement with the teeth of the gear 36 thereby locking the latter and consequently the cash receptacle 11 which is geared thereto. The continued operation of the handle 31 will bring the totalizer 50, which has previously been set by the cash receptacle, into engagement with the segments 56 by the cam disk 53, after which one of the segments will be moved to register \$5 upon the totalizer. Just previous to the end of the operation of the machine cam 30 will engage the roller 29 and raise the lower end of rod 24 out of engagement with the lug 24 so that the spring 25 will draw the lid 21 from over

clerk's A compartment; the movement of said lid being limited by the lug 75 contacting with the side of the opening 20. While the lid 21 is open the strip 38 secured there-
 5 to will be under the lower end of the forward arm 39 of the three arm lever, thereby holding the arm 35 in engagement with the teeth of the gear wheel 36, so that if the handle 31 is at home the cash receptacle will
 10 be locked from rotation.

By having the cash receptacle geared to the accounting devices it will be seen that it is absolutely impossible to actuate one accounting device and expose a different cash
 15 receptacle, as would be the case if the cash receptacle and accounting devices were controlled by separate mechanisms.

While the form of device here shown and described is admirably adapted to fulfil the
 20 objects primarily stated, it is to be understood that it is not desired to confine the invention to one form of embodiment here disclosed, for it is susceptible of embodiment in various forms, all coming within the
 25 scope of the claims which follow.

What is claimed is:

1. In a cash register, the combination with a series of accounting devices, of a cash receptacle divided for different clerks,
 30 means for moving the receptacle for exposing different portions thereof, and connections between the receptacle and the accounting devices, for giving said accounting devices movement corresponding to that
 35 given the receptacle.

2. In a cash register, the combination with a series of independent accounting devices, of a series of cash safes manually adjustable to positions exposing the contents
 40 of any desired safe, and connections for setting the accounting devices by the exposing movement of said safes.

3. In a cash register, the combination with a series of totalizers, of a rotary cash
 45 receptacle divided for different clerks, and means controlled by the cash receptacle for selecting the proper totalizers.

4. In a cash register, the combination with an operating mechanism, of a movable
 50 cash drawer divided into compartments for

different clerks and arranged to be operated independently of the operating mechanism, a lid covering the compartment to be exposed, and a lock for the receptacle controlled by the lid.

5. In a cash register, the combination with an operating mechanism therefor, of a plurality of totalizers actuated thereby and mounted to be shifted as a unit, and a manually operable cash receptacle divided
 60 into compartments, with permanent connections from said receptacle to said unit of totalizers.

6. In a cash register, the combination with an operating mechanism, of a unitary
 65 drum and a plurality of totalizers supported thereby, a manually operable cash receptacle, and permanent connections between said receptacle and said unitary drum for bringing any desired totalizer into oper-
 70 ative relation with said operating mechanism by manual operation of said receptacle.

7. In a cash register, the combination with a series of independent accounting de-
 75 vices, of a cash receptacle divided for different clerks and arranged to have a differential movement for exposing different portions thereof, and means controlled by the cash receptacle for setting the accounting
 80 devices according to the movement of said receptacle.

8. In a cash register, the combination with a cash receptacle having a plurality of compartments, and mounted to be manu-
 85 ally rotated to bring any desired compartment to a desired position; of a guarding plate normally preventing access to the receptacle compartment at said desired position, and connections from said guarding
 90 plate constructed to prevent movement of said receptacle while the plate is out of its normal position.

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

WILLIAM H. MUZZY.

Witnesses:

R. W. FAIRCHILD,

J. K. PLESSINGER.