

No. 754,082.

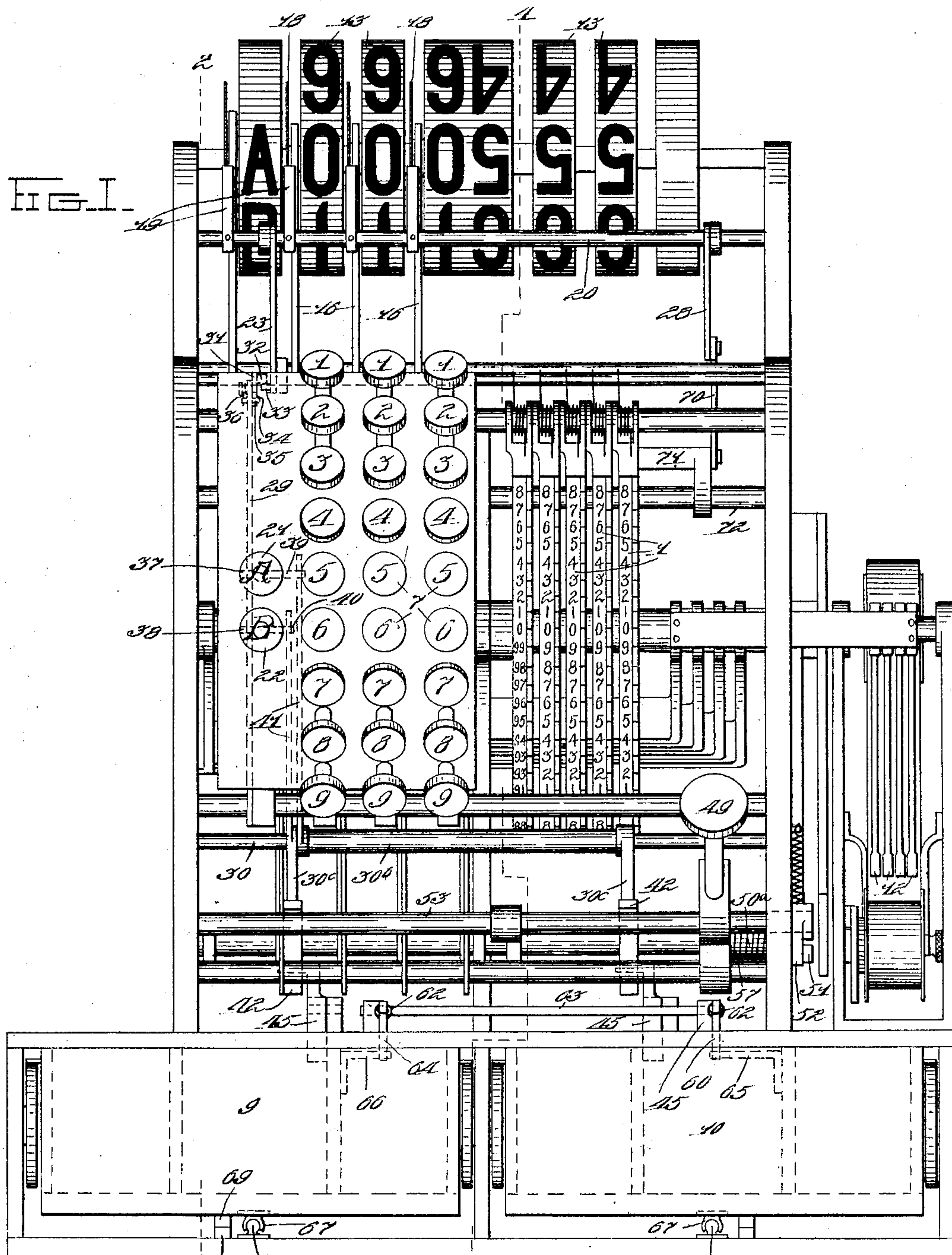
PATENTED MAR. 8, 1904.

W. H. MUZZY.
CASH REGISTER.

APPLICATION FILED JULY 18, 1903.

NO MODEL.

6 SHEETS—SHEET 1.



Witnesses

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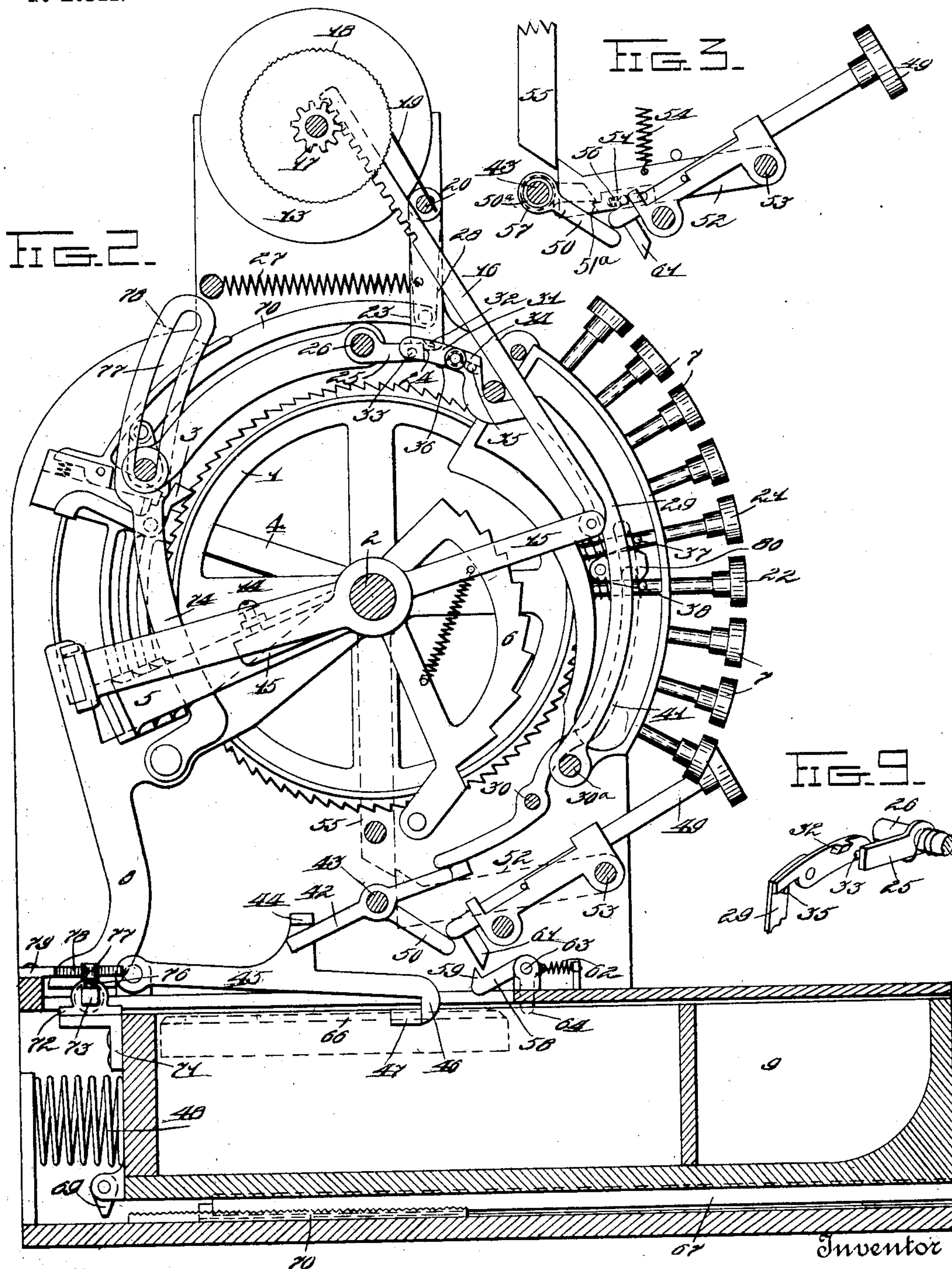
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6 SHEETS—SHEET 2.



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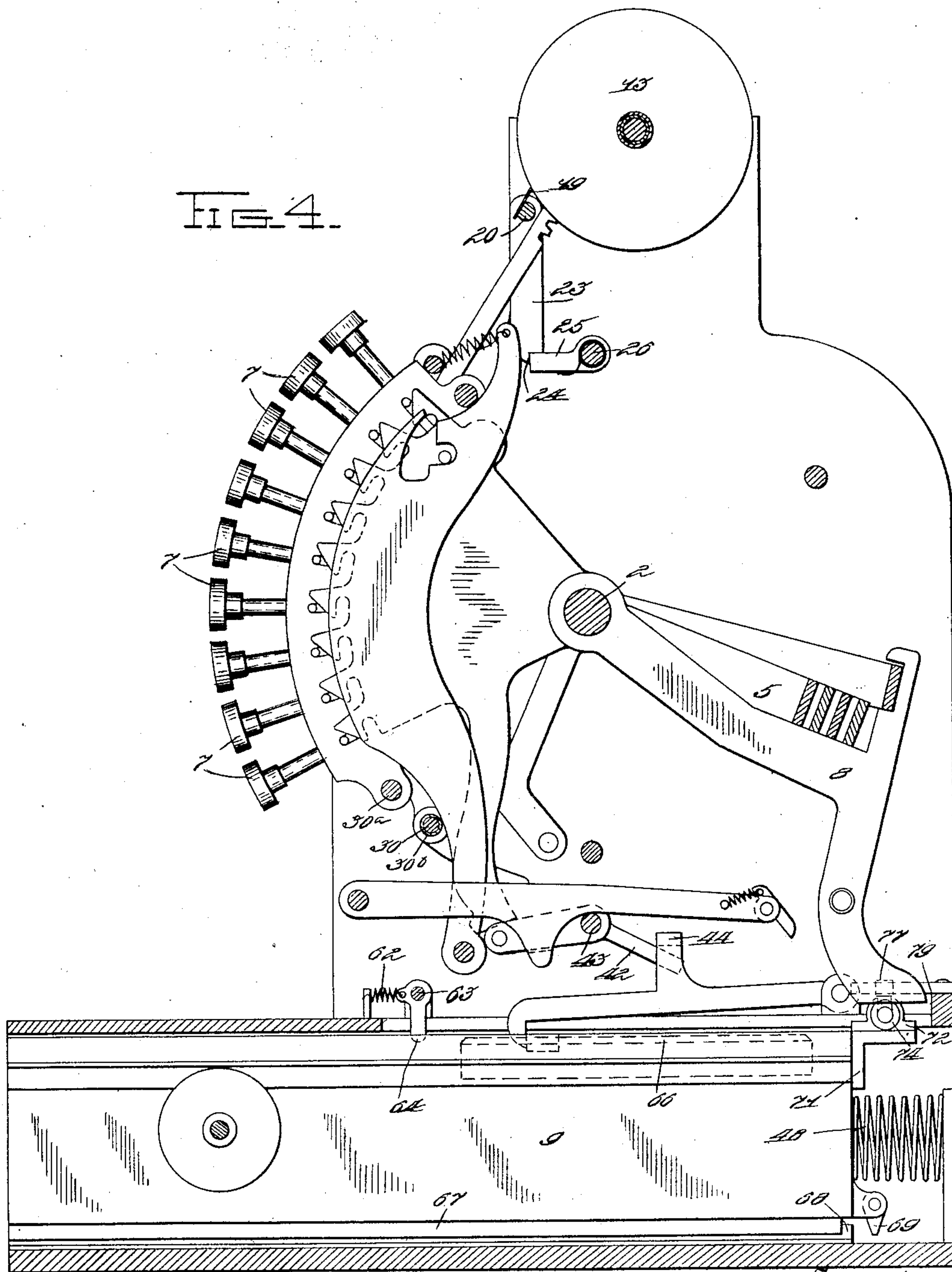
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6 SHEETS—SHEET 3.



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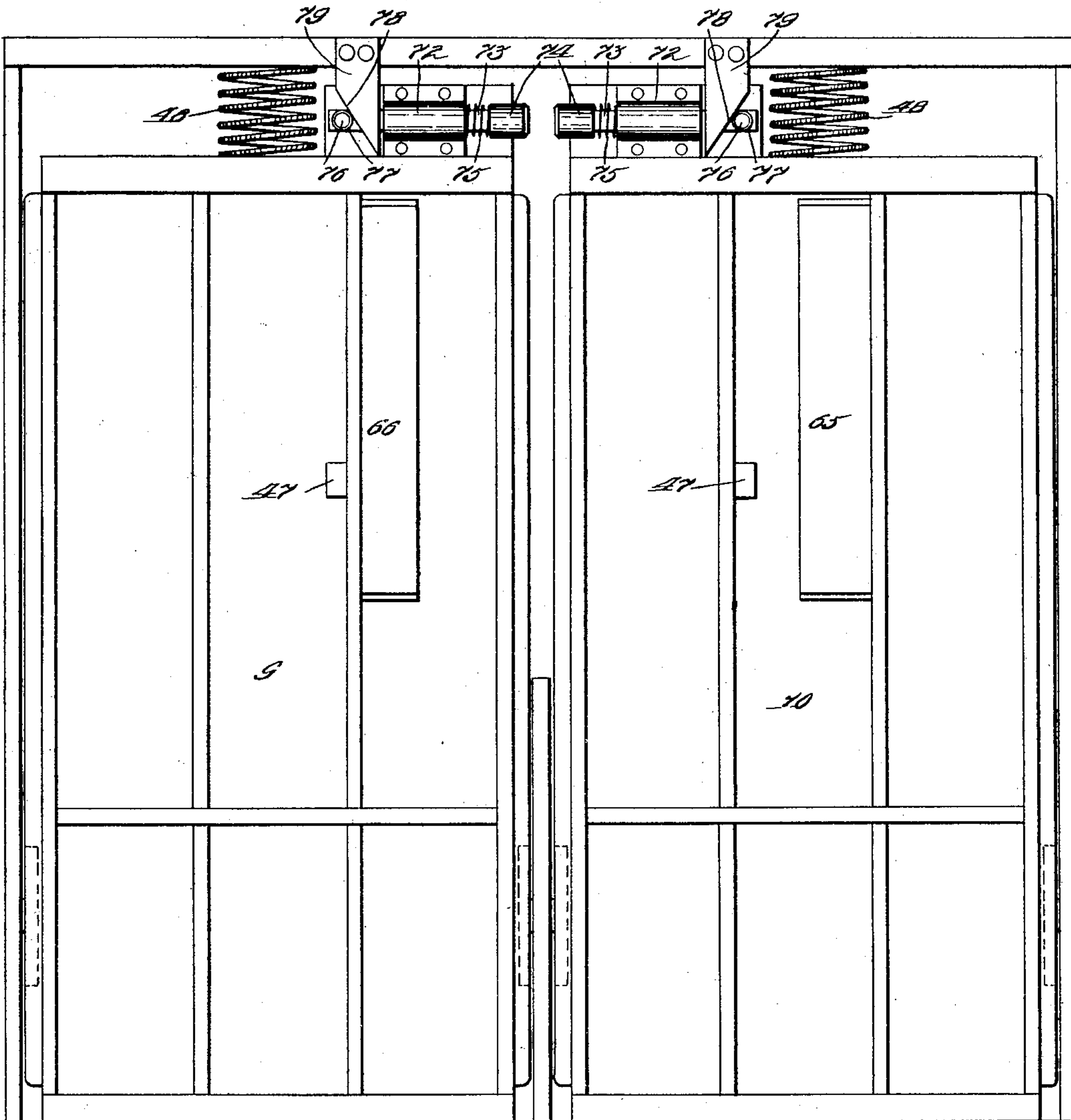
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6 SHEETS—SHEET 4.

FIG 5.



Witnesses

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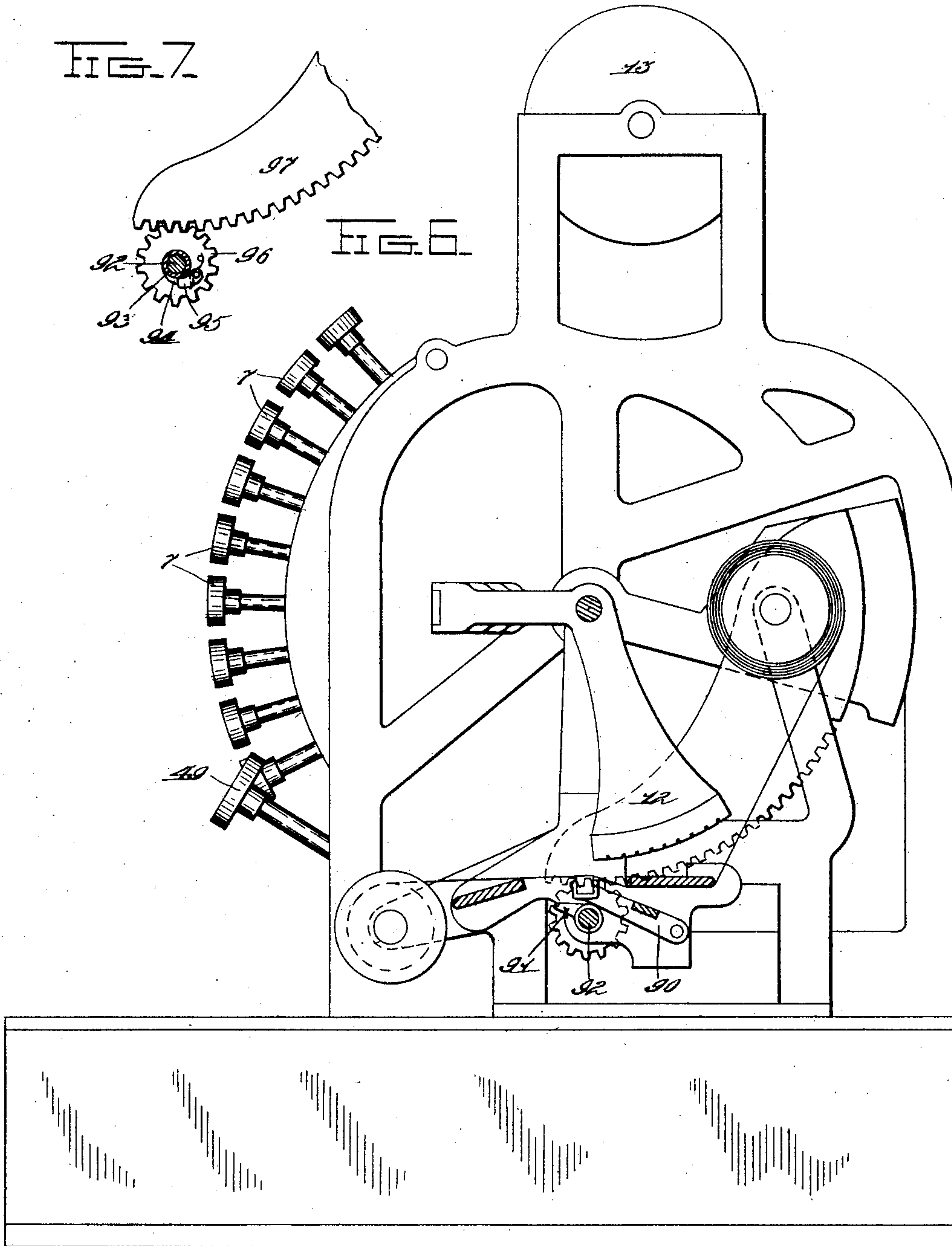
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NO MODEL.

6 SHEETS—SHEET 5.



Witnesses

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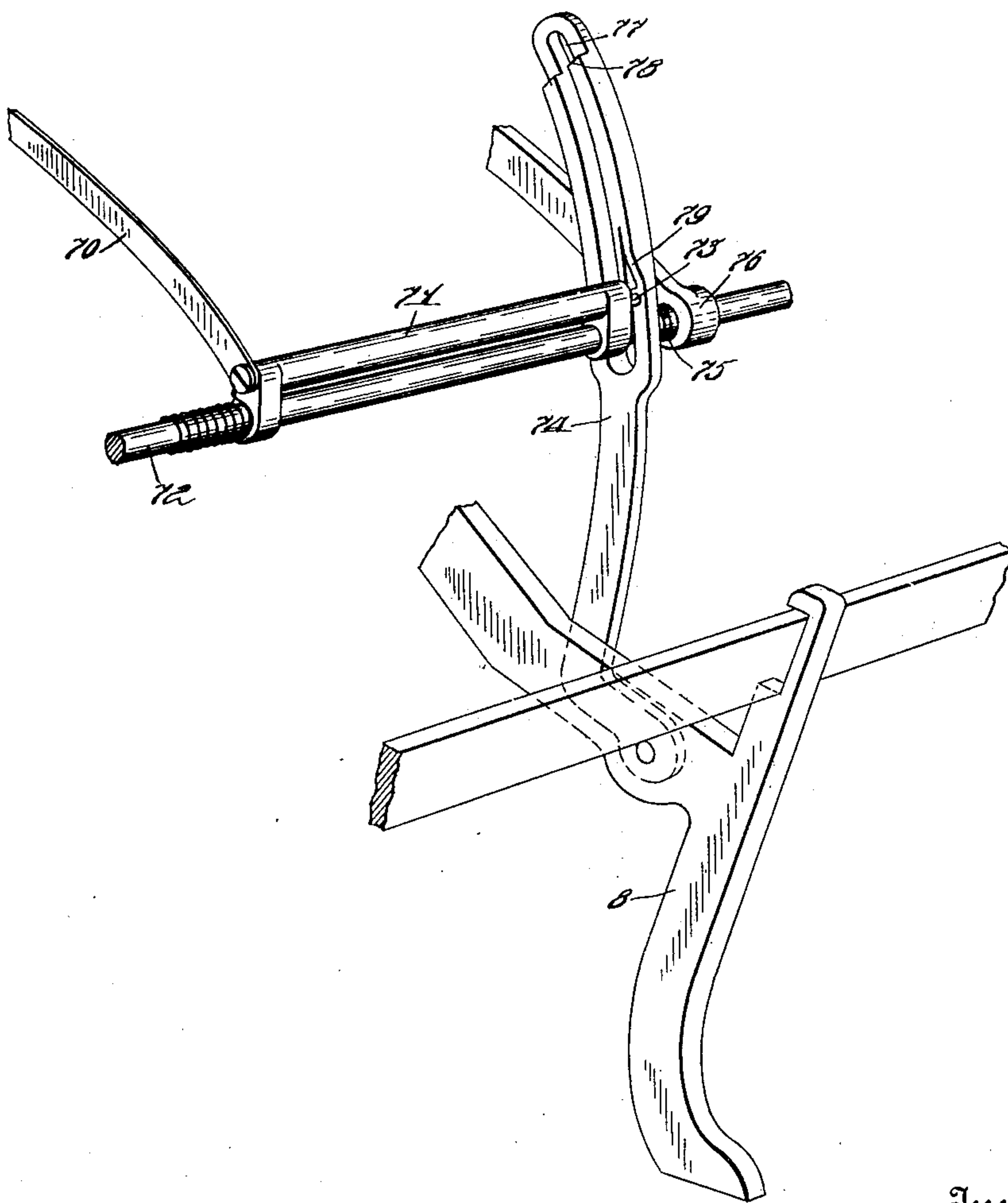
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APPLICATION FILED JULY 18, 1903.

NO MODEL.

6 SHEETS—SHEET 6.

FIG. 8.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM H. MUZZY, OF DAYTON, OHIO, ASSIGNOR TO NATIONAL CASH REGISTER COMPANY, OF JERSEY CITY, NEW JERSEY, AND DAYTON, OHIO, A CORPORATION OF NEW JERSEY.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 754,082, dated March 8, 1904.

Application filed July 18, 1903. Serial No. 166,171. (No model.)

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 type in which a number of independent cash-receptacles are employed for keeping the cash of different clerks or departments separate.

One of the objects of the invention is to provide means for operating a registering mechanism by any one of a series of independent cash drawers or receptacles.

A further object is to provide devices for accomplishing the registering and printing operations in the type of machine shown by means of any one of a series of independent cash-receptacles.

The invention also has other objects which will hereinafter more fully appear.

The invention consists of certain novel constructions, combinations, and arrangements of parts, all of which will be hereinafter more particularly set forth and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 represents a front elevation of a machine of the type patented to Henry S. Hallwood, July 15, 1902, No. 704,795, with my improvements applied thereto, the cabinet of the same being removed to more clearly expose the mechanism. Fig. 2 represents a vertical transverse section through the same on the line 2 2 of Fig. 1. Fig. 3 represents a detail side elevation of the special release-key and coöperating parts. Fig. 4 represents a section similar to Fig. 2, taken on the line 4 4 of Fig. 1, looking in the opposite direction. Fig. 5 represents a detail top plan view of the cash-drawers. Fig. 6 represents a side elevation of the machine, taken from the end on which is located the printing mechanism. Fig. 7 represents a detail side elevation of the gearing for operat-

ing the platen from the main yoke. Fig. 8 represents a detail perspective view of the mechanism employed in the Hallwood type of machine for rocking the shaft carrying the register locking-pawls, and Fig. 9 represents a detail perspective view of the upper end of the indicator-tripping lever and coöperating parts.

As many of the parts shown in the present drawings are old and well known in the art and are fully shown and described in the aforesaid patent, I will refer to said patent for such detail descriptions of the parts as are not here given.

Described in general terms, however, the machine of the type herein shown may be said to comprise a series of registering-wheels 1, mounted upon a central shaft 2 and formed about their peripheries with groups of numerals from "1" to "9." These wheels 1 are arranged to be operated by a series of pawls 3, carried by pivoted levers 4, which are also loosely mounted upon the aforesaid shaft 2. These levers 4 are in turn operated by a series of nested or auxiliary yokes 5. Each of these yokes carries a step-segment 6, which coöperates with the ends of the shanks of the keys 7, and thus arrests the auxiliary yokes in positions corresponding to the values of the keys depressed. After the auxiliary yokes have been set in the manner above described they are returned to their upper normal positions by a main actuating-lever 8, which is journaled upon the shaft 2 and extends rearwardly and downwardly. In the type of machine disclosed in said patent this lever 8 is operated by a single cash-drawer. In the present instance, however, two cash-drawers 9 and 10 are employed, each one of which is designed to operate the main actuator or lever 8. The auxiliary yokes are connected rigidly to a series of segmental type-carriers 12, which are thereby set to positions for printing amounts corresponding to the values of the keys depressed. The main actuating-lever and its connected yoke are utilized to secure the movement for the platen and the paper-feeding devices. A series of rotary indicators 13 are

mounted at the top of the machine and are suitably connected to the auxiliary yokes, so as to be set thereby and left in set positions, while the yokes are returned by the main actuator
5 to their normal positions.

It will be seen from the foregoing description that the auxiliary yokes and counter-operating devices, as well as the indicators and printing-segments, are set according to the
10 keys operated upon the descent of the main actuator 8 and that when said actuator is subsequently returned by the closing of a cash-drawer the auxiliary yokes are moved to their normal positions, thus returning the type-carriers and register-actuating devices to their
15 normal positions, but leaving the indicators in their set positions. The devices for securing this result I will now describe more in detail. Each of the auxiliary yokes carries an
20 adjustable stop-bolt 14, which is adapted to contact with the rear end of a lever 15, pivoted on the shaft 2 in proximity to its respective yoke. This lever 15 is pivotally connected at its forward end to the lower end of
25 a rack-bar 16. The upper end of this bar is suitably guided and continually meshes with a pinion 17, fast to its respective indicator.

It will be seen from the above that when one of the yokes descends the lever 15 will be
30 forced downward at its rear end and its front end elevated, thus rotating the indicator 13 to a corresponding degree. As the bolt 14 only engages the upper edge of the lever 15, the return of the auxiliary yoke to its upper normal position will have no effect upon the indicator if the same is held in its set position. This holding of the indicator in the position to which it has been adjusted is accomplished by means of a ratchet-wheel 18, fast to the
40 indicator, and a pawl 19, mounted on a rock-shaft 20 and thrown into engagement with the ratchet-wheel after the indicator is set. It will of course be understood that each of the indicators is provided with one of the ratchets
45 18, and a suitable corresponding number of pawls 19 is mounted on the shaft 20.

As the two independent cash-drawers comprising part of the present invention are preferably controlled by two special keys 21 and
50 22, respectively, it is desirable when either one of these keys is operated to release its respective cash-drawer that the indicators be also released and allowed to assume their normal zero-indicating positions. To accomplish this
55 result, the shaft 20 is provided with a pendent arm 23, formed at its lower end with a locking-shoulder 24. A pivoted latch-pawl 25, mounted on the shaft 26 and spring-pressed upward, is arranged to normally engage the shoulder 24
60 and hold the spring-locking pawls 19 firmly in contact with the ratchets 18 to prevent the indicators from running backward to their normal positions. Whenever the pawl 25 is forced downward, the arm 23 is released, and its
65 shaft 20 is rocked forward by a coil-spring 27,

which connects an arm 28, pendent from the shaft to the main frame. The disengagement of the pawl 25 from the arm 23 is accomplished by a lever 29, journaled on a shaft 30^a. This lever is provided at its upper end with a pivoted
70 pawl 31, formed with a beveled lug 32, which is arranged to contact with a pin 33, mounted on the pawl 25, to depress the latter, and thus allow the pawls 19 to be disengaged from the indicators. The pawl 31 is provided with a nose
75 34, which contacts with a pin 35, mounted on the lever 29, and thus locks the pawl to movement with the lever in one direction, but permits independent pivotal movement of the pawl in the opposite direction. When the
80 lever 29 is operated, the lug 32 engages the pin 33 only long enough to disengage the pawl 25 from the shoulder 24 and then passes free of the pin, allowing the pawl 25 to snap up into engagement with the lower end of the arm 23,
85 so that when the shaft 20 is subsequently rocked to move the pawls 19 into engagement with the wheels 18 the arm 23 will become automatically locked in position shown in Fig. 2. When the lever 29 is allowed to return
90 toward its normal position, the lug 32, contacting with the under side of the pin 33, causes the pawl 31 to turn on its pivot against the tension of a spring 36 until it passes free of the pin 33, when the pawl will again assume
95 its normal position under the influence of said spring. The lever 29 is operated to release the indicators, as above described, by pins 37 and 38, mounted on the respective special-key
100 shanks. After the indicators have been released, as above described, upon the opening of any one of the cash-drawers they are set to positions representing the amounts to be registered by the falling of the auxiliary yokes. The indicators are not locked until the parts
105 are returned to their normal positions by the closing of the cash-drawer, as will hereinafter be more fully described.

In addition to the pins 37 and 38 each of the special keys is provided with pins 39 and
110 40, respectively, which may be continuations of the pins 37 and 38, as shown in dotted lines in Fig. 1. When the key 22 is depressed, the pin 40 engages a pivoted lever 41, mounted on the shaft 30, and forces the same inward. This
115 lever, as stated, is journaled upon the transverse shaft 30 and at its lower end is arranged to engage and operate a pivoted lever 42, mounted on a transverse shaft 43, so that its rear end projects under a horizontal arm
120 44 of a pivoted latch 45 of the left-hand cash-drawer. The forward hook end 46 of this latch engages a lug 47, mounted on the cash-drawer, and holds the drawer closed against the tension of a spring 48, which is interposed
125 between the back wall of the drawer and the rear wall of the casing. When the key 22 is operated, as above described, the cash-drawer 9 is released and passes forward out of the cabinet or casing, so that the clerk may have
130

access thereto. The remaining cash-drawer, which is controlled by the key 21, is operated substantially in the same manner as the drawer above described, except that its lever 41 is mounted on a sleeve 30^b, journaled on the shaft 30, as shown in Fig. 1. The sleeve 30^b is provided with a pendent arm 30^c, so located as to be brought into the proper position to operate its respective latch-raising lever 42. As before stated, this release of the drawer is accompanied by the release of all the indicators, which are simultaneously returned to their zero-indicating positions. Up to this period of the operation the amount-keys may or may not have been operated. If they have been operated or are now operated, the next operation is a pressing of the special release-key 49. This key, which is substantially of the same construction and operation as that shown in the aforesaid Letters Patent, contacts with and operates a pivoted bell-crank lever 50, comprising two arms and a connecting-sleeve 50^a. This lever is also mounted upon the shaft 43, so that one of its arms will engage a slide 51, which is mounted upon a latch 52, which is pivoted upon a transverse shaft 53 and is normally drawn into its upper or elevated position by a coil-spring 54. (See Fig. 3.) When this latch 52 is depressed by the operation of the key 49, it is moved out of the path of a pendent arm 55, which is attached to the main operating-lever 8. The main lever is thus released to allow the machine to be operated. The bell-crank pawl 50 does not continue to hold the latch 52 depressed, but simply depresses the same and then lets go, because of the operating-arm of the bell-crank 50 passing free of the operating-nose 51^a of the slide 51. This slide is suitably mounted by a slot-and-pin connection upon the latch 52 and is normally forced into its latching position by a coil-spring 56. When the key 49 is finally released, as hereinafter described, the upward movement of the bell-crank 50 under the impulse of the spring 57, with which it is provided, forces the slide 51 forward until the parts again assume the positions shown in Fig. 3.

By the above-described devices it is possible to relatch the main lever in its elevated position even though the release-key 49 were held in its depressed position, and the main actuator cannot be again released until the release-key has been permitted to first assume its normal position, in which position it will become automatically latched unless one or the other of the cash-drawers is opened. This latch of the release-key is plainly shown in Fig. 2 and comprises a pivoted latching-pawl 58, having a beveled locking-nose 59 and a pendent operating-arm 60. This pawl engages a beveled arm 61, pendent from the shank of the key 49, and normally locks the key against operation, as shown in Fig. 2. A coil-spring 62 connects the pawl 58 to the main frame,

and thus holds it in its normal position. The pawl 58 is fast to a transverse shaft 63, which is further provided with a pendent arm 64, as shown in Fig. 4. The two arms 60 and 64 cooperate, respectively, with horizontal flanges 65 and 66, projecting from the cash-drawers 9 and 10. When either one of the cash-drawers is opened, its flange will engage either one of the arms 60 or 64, and thus rock the shaft 63 to disengage the latch 58 from the special release-key and permit the same to be operated.

It will be seen from the above that unless one or the other of the cash-drawers has been released the release-key 49 cannot be operated. The object of this construction will appear from the following description.

Each of the cash-drawers 9 and 10, which are suitably mounted by supporting-wheels within the casing, is guided against any lateral displacement by an inverted channel-bar 67, which operates over a headed rail 68, secured to the base of the machine. Each of the drawers is further provided with a full-stroke pawl 69, which operates over a rack 70 to compel full opening and closing movements of the cash-drawer in a manner well known in the art.

By reference to Fig. 5 it will be seen that the drawers are so placed within the casing as to leave a narrow open space between them, within which the main-operating lever 8 may move. The rear wall of each drawer is provided with an angular bracket 71, (best shown in Fig. 2,) which bracket supports a bearing-box 72, in which is mounted a spring-pressed plunger 73, which is preferably rectangular in cross-section to prevent it turning in its bearing-box. Each of these plungers is provided at its inner end with an antifriction-roller 74 and normally tends to spring forward because of a coil-spring 75 placed thereon and interposed between the roller and the bearing-box 72. The end of each of the plungers is provided with a vertical stud 76, having an antifriction-roller 77. When the cash-drawers are in their closed positions, as shown in Fig. 5, the rollers 77 are engaged with the inclined edges 78 of cam-plates 79, which are secured to the main frame to the rear of the cash-drawers.

By reference to Fig. 5 it will be seen that when the drawers are in their normal positions both of the rollers 74 are held retracted and out of the path of the main actuating-lever, which is so placed as to traverse the path between them. When one of the cash-drawers is released, however, as above described, its outward movement will free the plunger 73, as the roller 77 will pass free of the cam edge 78. This operation will permit this particular plunger to spring forward, so that its rollers 74 is brought directly into the path of the main operating-lever 8. As this lever cannot be released until the cash-drawer has

passed far enough forward to permit the plunger 74 to pass into the path of said lever, it is not possible for the plungers to ever occupy any positions other than in front of said lever. After the cash-drawer has been opened and the lever 8 permitted to descend against the roller 74 the cash-drawer is again forced into its closed position, thus returning the lever 8 to its elevated position. As the lower end of the lever 8 is so constructed as to permit a slight movement of the cash-drawer without moving the lever, it will be seen that the lever will have come completely to rest before the roller 74 is drawn laterally sufficiently to be disengaged from it. When the lever has reached this position, it becomes latched vertically in position by the pivoted latch 52 and cannot again pass down and forward until one or the other of the cash-drawers has been first opened and the release-key operated. In order to prevent any wear on the edges of the rollers 74, the ends of the same are slightly beveled, so that the disengagement between the rollers and the lever 8 will be gradual as the final separation takes place.

It will be seen from the foregoing description that the operating mechanism which is controlled by the main actuating-lever 8 is operated by either one or the other of the cash-drawers, according to the one that is released, and that the making of the connection between the lever and the drawer is an operation incidental to the opening of the drawer itself. If a cash-drawer were not permitted to open when it was released, it would not be possible to release the lever 8, as the release-key would remain locked. As the lever 8 may be dropped with some little force when released, I contemplate employing any suitable form of buffer or dash-pot to cushion the shock of the lever and bring it properly to rest without any jar or concussion to the parts.

As before stated, the indicator-pawls 19 after being disengaged from the indicator ratchet-wheels are subsequently engaged with the same after the indicators are set to hold the indicators in their set positions, while the operating parts return to their normal positions. The devices for rocking the shaft 20 to effect this result are plainly shown in Figs. 2 and 8. These devices comprise a link 70, pivotally connected to the lower end of the arm 28 and also to a rock-frame 71, mounted upon the transverse shaft 72. The rock-frame 71, which disengages the locking devices from the operating-pawls, is provided at one end with a laterally-projecting stud 73. This stud is arranged to form a stop for a pivoted operating-link 74, which is normally forced laterally against said stud by a coil-spring 75, mounted upon the shaft 72 intermediate the link 74 and a supporting-arm 76. The lower end of the link 74 is pivotally connected to the lever 8, and its upper portion is formed with a curved slot 77,

through which the shaft 72 passes. The upper end of the link 74 is formed with an incline shoulder 78 for operating against the stud 73. When the lever 8 descends upon the opening of the cash-drawer, a cam-face 79, formed on the link 74, engages the stud 73, and the link is thus forced laterally against the tension of its spring 75. When the link has descended a sufficient distance, it is released by the stud 73, passing above the incline shoulder 78. When the link is so released, it automatically assumes its normal position, with the shoulder 78 under the stud 73. When the link 70 is now elevated, the camming action of the shoulder 78 will force the stud 73 forward until it finally passes into the slot 77. This operation will rock the frame 71 and the shaft 20 and will permit the latch 25 to again engage the arm 23 to hold the indicator-pawls in engagement with the indicator-ratchets. When the link reaches the upper end of its movement, the stud 73 passes free of the wall of the slot 77 and assumes its normal position (shown in Fig. 8) ready for the next operation of the machine. The frame is forced forward when thus released by a coil-spring 72^a, mounted on the shaft 72 and connected at its opposite ends to the frame and the shaft.

For the purpose of operating the pivoted platen 90 a cam 91, mounted upon a sleeve 92, is provided. This sleeve is journaled upon a shaft 93, as plainly shown in Figs. 6 and 7, and is provided with a nose 94, with which a spring-pressed pawl 95 contacts to rotate the sleeve, and thereby cause the cam 91 to force the platen upward and make an impression on the detail-strip. The pawl 95 is carried by a pinion 96, which is journaled on the shaft 93 and meshes with a segmental rack 97, fast to the main yoke.

It will be seen from the above that the sleeve 92 is only rotated in one direction upon the upward movement of the segment 97. Upon the reverse movement of the segment the pawl 95 rides over the sleeve 92 without operating it, as will be readily understood.

I do not care to limit my invention to two cash drawers or receptacles, as the same may be equally well applied to a greater number of drawers arranged side by side and arranged to contact with a series of operating-levers, such as the lever 8, or the drawers might be equally well arranged in tiers one above the other and have their plungers projected into the path of a common operating-lever. Neither do I care to limit myself to the operation of the machine by the drawer itself, as the operating-plungers might be equally well mounted upon slides or covers the movements of which would expose relatively stationary cash receptacles or safes.

It will of course be understood that the special clerks' keys control special indicators and special type-carriers in substantially the same manner as the regular amount-keys except, of course that in the present instance they

have only a movement of two degrees for the particular bank containing the clerks' keys.

The amount-keys, as well as the special clerks' keys, are latched in their depressed positions when operated by suitable detents and in substantially the same manner as described in the aforesaid patent.

In order to prevent the simultaneous opening of both of the cash-drawers, a pivoted tumbler 80 is mounted in proximity to the special keys and is adapted to be actuated by the pins 37 and 38 of the same in a manner well known in the art. This is only one form of device that may be employed for this purpose. There are many others well known in the art which might be equally well applied to these special keys.

As an additional protection against one clerk opening the cash-drawer of another clerk I contemplate providing each of the cash-drawers with a suitable distinguishing alarm or bell mechanism, which is operated upon the opening of the drawer.

It will of course be apparent that the present invention could be employed in connection with multiple counter-machines, in which event the special keys which control the cash-drawers would also control the respective independent counters.

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

1. In a cash-register, the combination with a series of operating elements, means for limiting the movements of the elements in one direction, a plurality of cash-safes having movable members, mechanism whereby any one of the movable members can return the operating elements after they have been set, and an accounting device cooperating with the operating elements.

2. In a cash-register, the combination with a series of operating-yokes, means for limiting the movements of the yokes in one direction, a main actuator for moving the yokes in the opposite direction, an accounting device and connections operated by the yokes, a series of cash-safes having movable members, and mechanism whereby any one of the movable members may be brought into cooperative relation with the main actuator.

3. In a cash-register, the combination with a series of operating-yokes, of a series of keys for limiting the movements of the same, an accounting device and connections controlled by said yokes, a main actuator for said yokes, a series of cash-safes having movable members, and mechanism whereby any one of said movable members may be brought into cooperative relation with the main actuator.

4. In a cash-register, the combination with a series of oscillatory operating members, of a series of keys for limiting the movements of said members in one direction, a single operating-lever for moving the members in the op-

posite direction, an accounting device and connections cooperating with said members, and a plurality of cash-drawers any one of which may be brought into cooperative relation with the operating-lever for actuating the latter.

5. In a cash-register, the combination with an operating mechanism including a movable member, of a plurality of cash-drawers, and means for establishing a cooperative relation between any particular cash-drawer and the operating member at will whereby any desired drawer may actuate said member.

6. In a cash-register, the combination with an accounting device, of an operating mechanism for the same including a movable member, a series of cash-safes having movable members, and mechanism for establishing a cooperative relation between the main movable member and the movable members of any one of the cash-safes at will whereby any desired drawer may actuate said member.

7. In a cash-register, the combination with an operating mechanism including a single movable member, of a plurality of cash-drawers, and means for establishing a cooperative relation between said member and any desired drawer by the opening movement of the drawer.

8. In a cash-register, the combination with an operating mechanism including a movable member, of a plurality of cash-safes having movable members, and mechanism for establishing a cooperative relation between the main movable member and the movable member of any desired safe by the opening movement of said latter member.

9. In a cash-register, the combination with an operating mechanism, of a series of indicators, means for automatically returning the indicators to normal positions when released, a series of independent cash-safes, and means for opening any desired safe and simultaneously releasing the indicators to allow them to return to their normal positions.

10. In a cash-register, the combination with an operating mechanism, of a series of indicators, a series of cash-safes, and means arranged to limit the movements of said indicators and also to release the same and a cash-safe corresponding thereto, when operated.

11. In a cash-register, the combination with an operating mechanism, of a series of indicators, means for holding the indicators in their set positions, a latch for said holding means, a series of cash-safes, and means for opening any desired safe and tripping said latch to allow the indicators to assume their normal positions.

12. In a cash-register, the combination with an operating mechanism including an operating-lever, of a plurality of cash-drawers, and means for establishing a cooperative relation between any particular drawer and said lever by the opening movement of the drawer.

13. In a cash-register, the combination with

an operating mechanism including a lever, of an accounting device, keys for limiting the movements of the operating mechanism, a plurality of cash-safes having movable members, and connecting means intermediate the movable members of the cash-safes and said lever for controlling the movements of the same in both directions.

14. In a cash-register, the combination with a series of operating elements, of an accounting device, a single lever for returning said elements to their normal positions, a series of keys for limiting the movements of said elements, a plurality of cash-drawers, and means intermediate the cash-drawers and said lever for controlling the movements of the latter according to the movements of the drawer.

15. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-safes having movable members, a lock for the operating mechanism, means for establishing a coöperative relation between the operating mechanism and any one of the movable members of the safes, and devices for preventing the release of the operating mechanism until one of the movable members of the cash-safes has been partly operated.

16. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-drawers, a latch for the operating mechanism, means for establishing a coöperative relation between any desired drawer and the operating mechanism, and devices for preventing the operation of the latch until one of the cash-drawers has been partly opened.

17. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-drawers for controlling the operating mechanism, a latch for the operating mechanism, and means for preventing the operation of the latch when the cash-drawers are in their closed positions.

18. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-drawers, a latch for the operating mechanism, and means for compelling the opening of cash-drawer before the latch can be operated.

19. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-drawers, means intermediate the operating mechanism and the cash-drawers constructed to establish the connection only after a cash-drawer is opened, a latch for the operating mechanism, and means for preventing the operation of the latch until a cash-drawer is opened.

20. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-receptacles, a latch for the operating mechanism, latches for the receptacles, keys for operating the receptacle-latches, a key for operating the main latch,

and devices for preventing the operation of the latter key until a cash-receptacle is opened.

21. In a cash-register, the combination with an operating mechanism, of an accounting device, a lever for controlling the movements of the operating mechanism in both directions, a plurality of cash-receptacles, and means for establishing a coöperative relation between the lever and any desired one of the cash-receptacles whereby the opening and closing movements of the receptacle will control the oscillatory movements of the lever.

22. In a cash-register, the combination with an operating mechanism, of a counter coöperating therewith, a printing mechanism also coöperating with said operating mechanism, indicators controlled by the operating mechanism, a plurality of cash-safes having movable members, and mechanism for establishing a coöperative connection between any one of the movable members of the cash-safes and the operating mechanism whereby the movement of said member will actuate the operating mechanism.

23. In a cash-register, the combination with a series of operating elements, of an accounting device, a lever for controlling the movements of the operating elements, a plurality of cash-drawers, means for bringing the lever into coöperative relation with any desired drawer whereby the drawer will operate the lever, latches for the respective drawers, and keys for operating said latches.

24. In a cash-register, the combination with an operating mechanism, of a series of oscillatory indicators, means for latching the indicators in their set positions, a series of cash-drawers, means for establishing a coöperative relation between any desired drawer and the operating mechanism, latches for the drawers, individual keys for tripping said latches, and means operated by either of the keys for tripping the indicator-latch.

25. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-drawers, means for establishing a coöperative relation between any one of the cash-drawers and the operating mechanism, a latch for the operating mechanism, latches for the cash-drawers, and means for preventing the operation of the latch which controls the operating mechanism until one of the cash-drawers has been opened.

26. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-drawers, a latch for the operating mechanism, a key for operating the latch, means for locking said key when the actuators are in their normal positions, means for establishing a coöperative relation between any one of the cash-drawers and the operating mechanism, and means intermediate the key and the latch for permitting the latter to return to its normal locking position prior to the return of the key.

27. In a cash-register, the combination with an operating mechanism, of an accounting device, a series of cash-drawers, means for establishing a coöperative relation between any desired drawer and the operating mechanism, a latch for the operating mechanism, a key for operating said latch, a latch for said key, and projections on the cash-drawer arranged to operate said latter latch as any one of the cash-drawers is opened.

28. In a cash-register, the combination with an operating mechanism, of a series of indicators, pawls for holding the indicators in their set positions, a latch for holding the pawls in engagement with the indicators, a series of cash-drawers, means for releasing any desired drawer, and devices for operating the indicator-latch when said drawer-releasing means is actuated.

29. In a cash-register, the combination with an operating mechanism, of a series of indicators, pawls for holding the indicators in their set positions, a latch for holding the pawls in position, and tripping means for said latch arranged to operate the same and then allow it to return to normal position prior to the return of said tripping means.

30. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-safes having movable members, automatic plungers mounted on said members and arranged to coöperate with the operating mechanism, and stationary means for retracting the plungers when the cash-safes are closed.

31. In a cash-register, the combination with an operating mechanism, of an accounting device, a plurality of cash-drawers, automatic operating devices mounted on the respective cash-drawers so as to move into coöperative relation with the operative mechanism when released, and stationary means for retracting said operating devices out of their operated positions when the cash-drawers are closed.

32. In a cash-register, the combination with

an operating mechanism, of an accounting device, a plurality of cash-drawers, automatic devices mounted on the cash-drawers and constructed to automatically move into coöperative relation with the operating mechanism upon the initial opening movement of the drawer.

33. In a cash-register, the combination with a series of operating elements, of accounting devices coöperating therewith, a main actuator for said elements, a plurality of cash-drawers, spring-pressed plungers mounted on said drawers and arranged to coöperate with the operating mechanism, and stationary cams arranged to engage the spring-pressed plungers and withdraw them out of coöperative relation with the operating mechanism when the cash-drawers are closed.

34. In a cash-register, the combination with an operating mechanism, of a series of cash-safes having movable members, and means for preventing the operation of said mechanism until after some one of the movable members has been actuated.

35. In a cash-register, the combination with an operating mechanism, of a series of indicators, detents for said indicators, a series of independent cash-safes, and means for opening the desired safe and simultaneously releasing the indicators independently of the regular movement of the operating mechanism.

36. In a cash-register, the combination with an operating mechanism, of a plurality of cash-safes having movable members, and automatic connecting devices mounted on the different members and constructed to automatically move into coöperative relation with the operating mechanism upon the movement of any one of said members.

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

WILLIAM H. MUZZY.

Witnesses:

W. O. HENDERSON,
W. McCARTHY.