

No. 748,406.

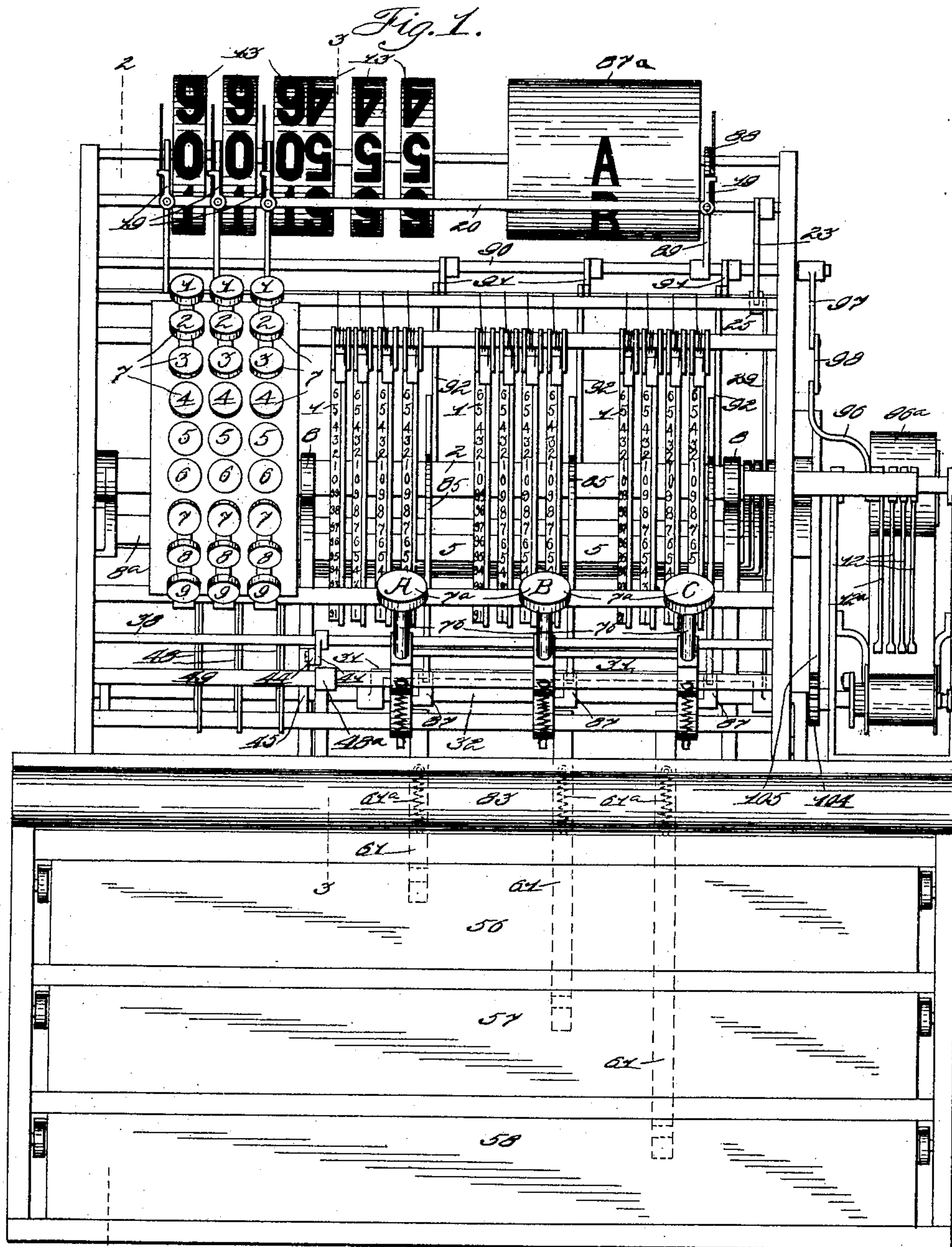
PATENTED DEC. 29, 1903.

W. H. MUZZY.
CASH REGISTER.

APPLICATION FILED JULY 24, 1903.

NO MODEL.

6 SHEETS—SHEET 1.



Witnesses
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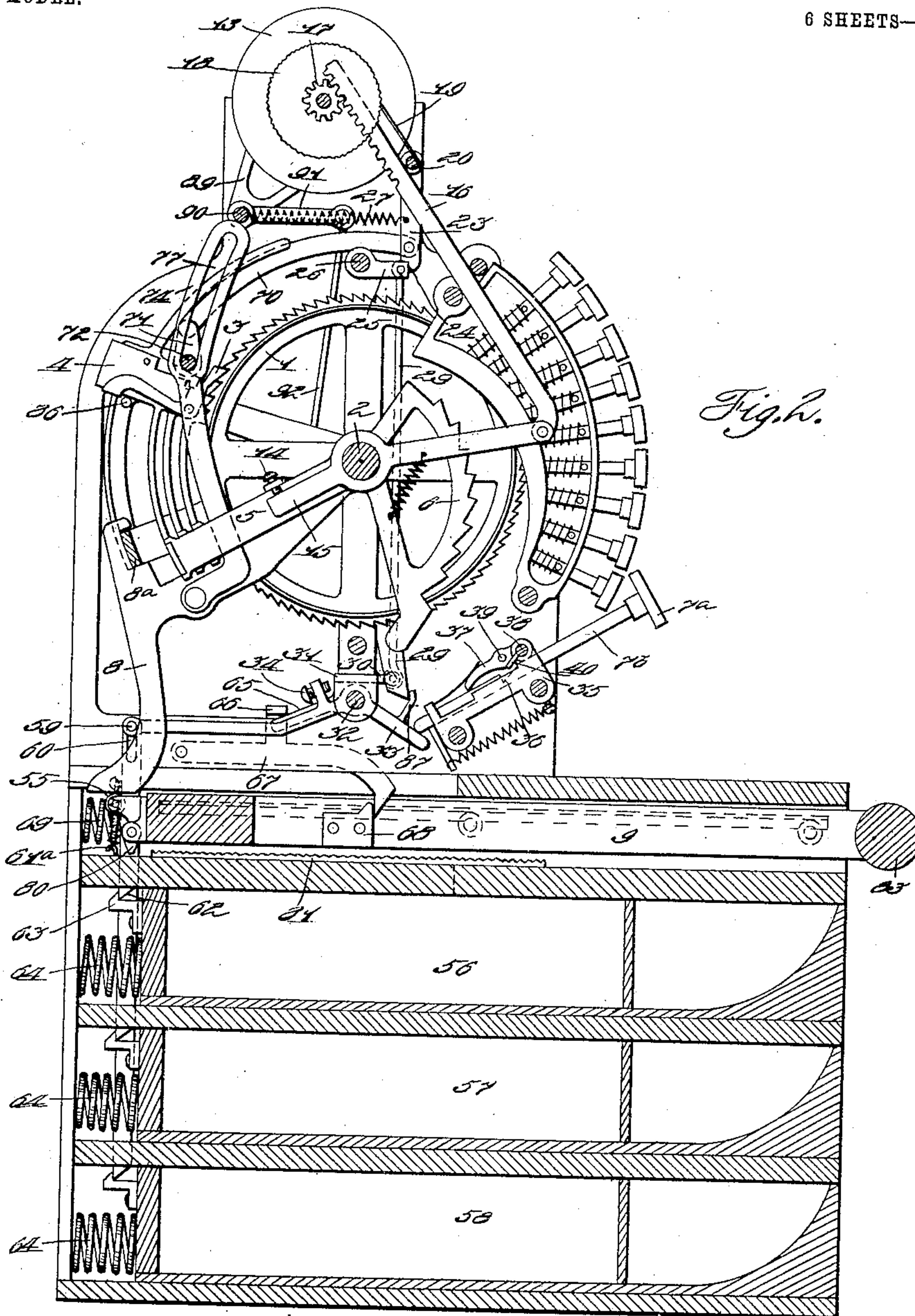
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6 SHEETS--SHEET 2.



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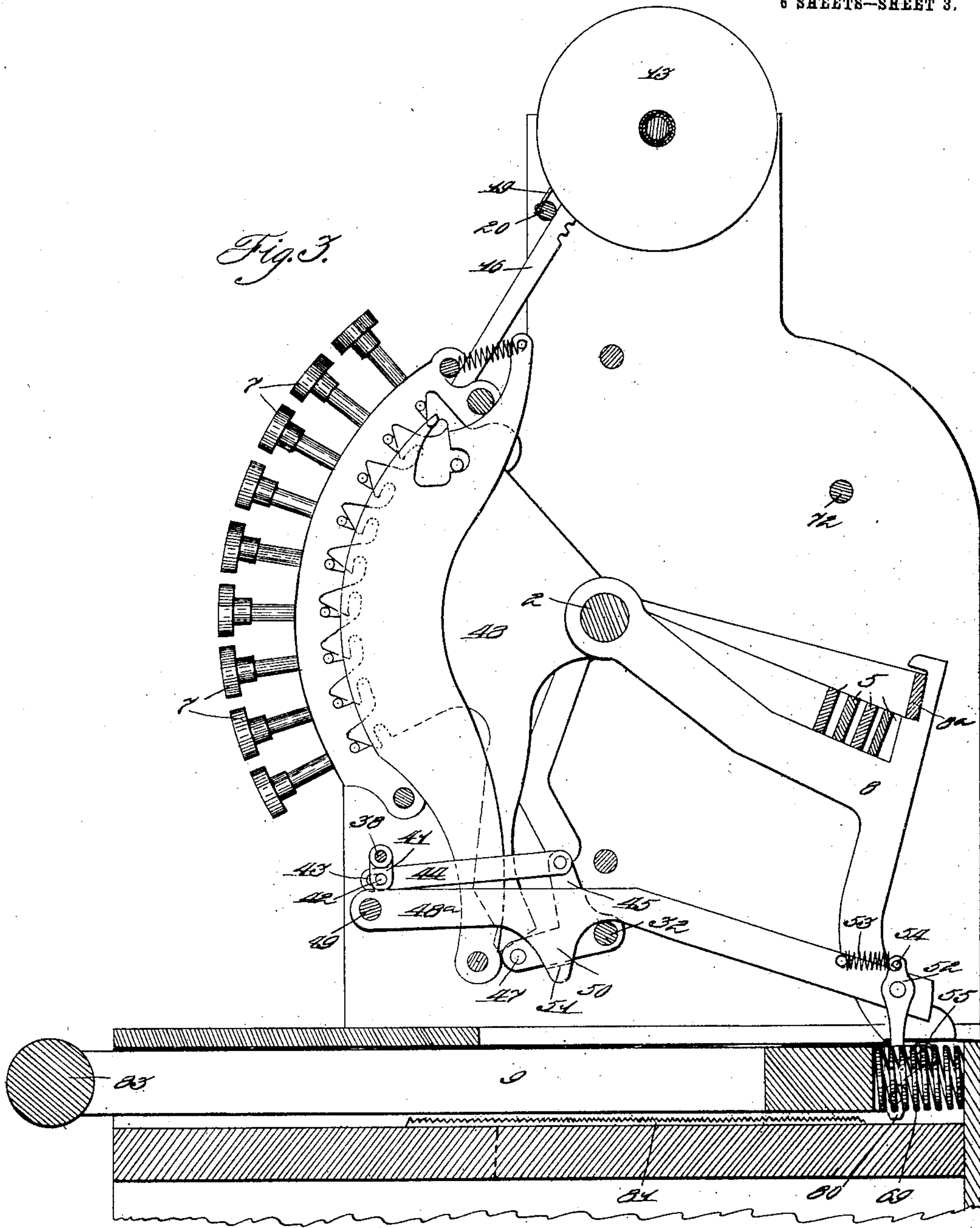
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6 SHEETS—SHEET 3.



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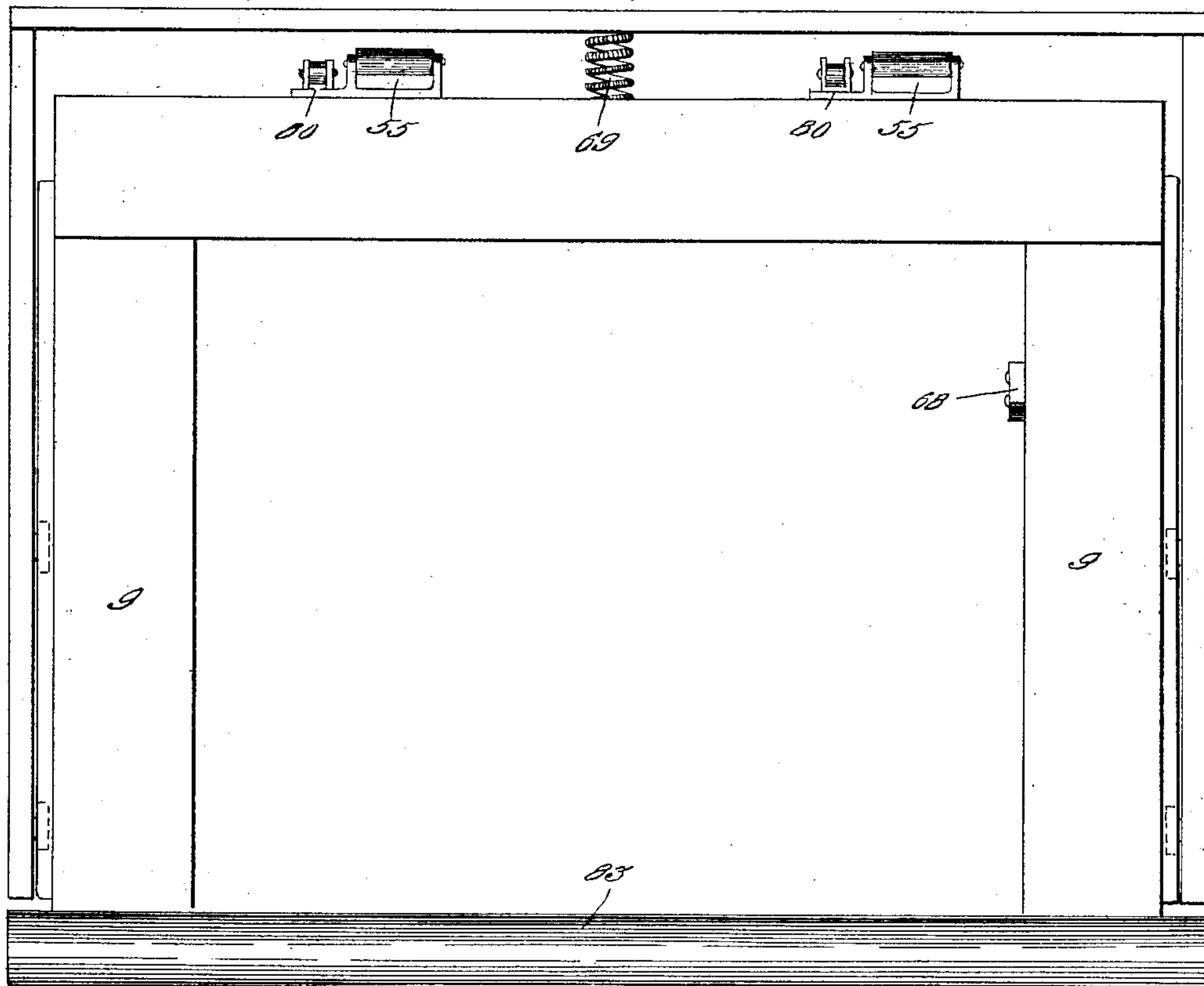
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6 SHEETS—SHEET 4.

Fig. 4.



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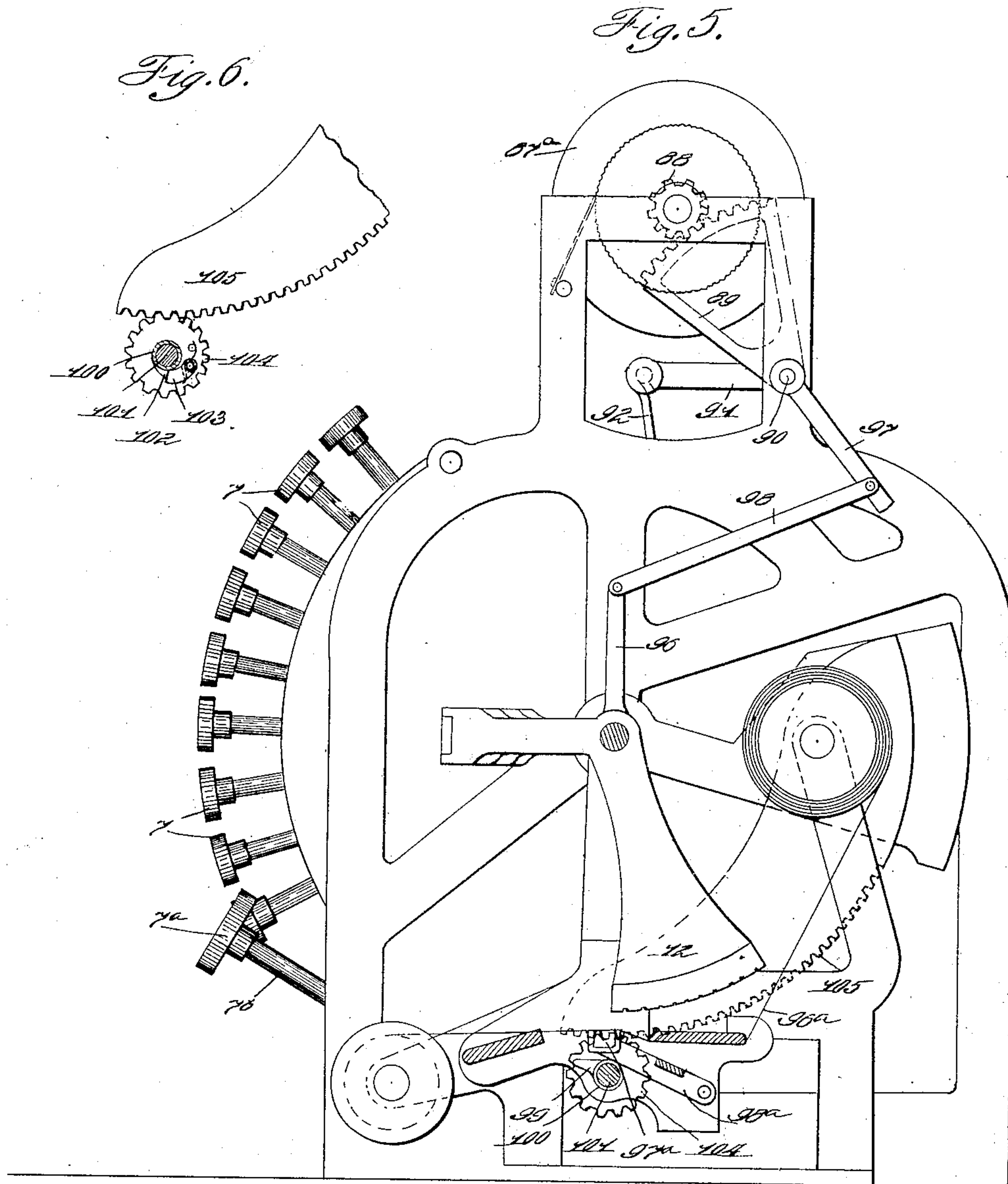
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APPLICATION FILED JULY 24, 1903.

NO MODEL.

6 SHEETS—SHEET 5.



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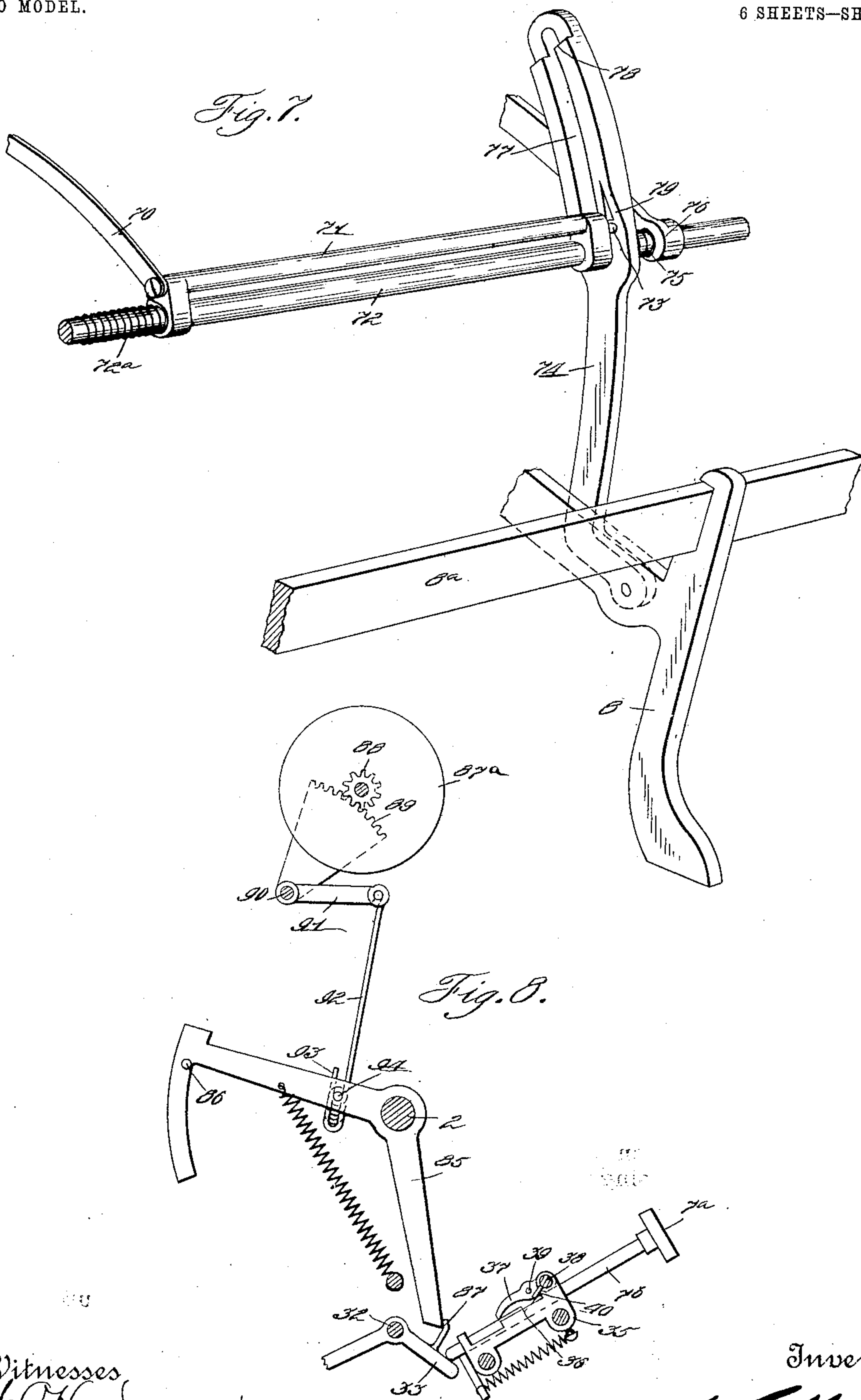
PATENTED DEC. 29, 1903.

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APPLICATION FILED JULY 24, 1903.

NO MODEL.

6 SHEETS—SHEET 6.



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UNITED STATES PATENT OFFICE.

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

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 748,406, dated December 29, 1903.

Application filed July 24, 1903. Serial No. 166,848. (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 patented to Henry S. Hallwood, No. 704,795, dated July 15, 1902.

One of the several objects of the invention is to provide the type of machine mentioned with a series of improved independent cash safes, drawers, or receptacles.

A further object is to provide the type of machine mentioned with actuating devices not dependent upon the movements of the drawers or receptacles.

Further objects of the invention will be apparent from the following description of said invention, which latter consists of certain novel constructions, combinations, and arrangements of parts.

In the accompanying drawings, forming part of this specification, Figure 1 represents a front elevation of a machine of the class mentioned with my improvements applied thereto, the cabinet of the same being omitted. Fig. 2 represents a transverse vertical section through the same on the line 2 2 of Fig. 1. Fig. 3 represents a similar section looking in the opposite direction on the line 3 3 of Fig. 1, the cash-drawers being omitted. Fig. 4 represents a top plan view of the operating slide or frame and the surrounding casing. Fig. 5 represents an end elevation of the machine, showing the printing devices. Fig. 6 represents a detail side elevation, partly in section, of the platen-operating devices. Fig. 7 represents a detail perspective view of the devices for operating the indicator-retaining pawls, and Fig. 8 represents a diagrammatic view of the counter and the special indicator-operating mechanism.

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 cooperates 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 the main actuating-levers 8, which are journaled upon the shaft 2 and extend rearwardly and downwardly. These levers 8 are connected to a main operating-yoke 8^a, so that they will move together.

In the type of machine shown in the aforesaid patent the operating-lever is actuated and controlled by the cash-drawer. In the present instance, however, I provide means whereby the control and operation of the levers 8 are altogether independent of the movements of the cash-drawers and are accomplished by an operating slide or frame 9, hereinafter more fully described. 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-levers and their connected yoke are utilized to secure the movement for the platen and the paper-feeding devices, as hereinafter described. A series of rotary indicators 13 are mounted at the top of the machine and are suitably connected to their respective auxiliary yokes, so as to be set by said yokes and left in set positions while the yokes are returned by the main actuator to their normal positions.

It will be seen from the foregoing descrip-

tion that the auxiliary yokes and the counter-operating devices, as well as the indicators and printing segments, are set according to the keys operated upon the descent of the main actuators 8 and that when said actuators are subsequently elevated by the movement of the slide or frame 9 the auxiliary yokes are returned to their normal positions, thus also returning the type-carriers and register-actuating devices to their normal positions, but leaving the indicators in their set positions. The devices for setting the indicators I will now describe more in detail.

Each of the auxiliary yokes carries an 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 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 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 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 18 and a suitable corresponding number of pawls 19 is mounted on the shaft 20.

In the present drawings I have shown a series of independent register mechanisms, one for each of the cash drawers or receptacles. These mechanisms are arranged to be released by a series of keys 7^a, which are lettered respectively "A," "B," and "C," as shown in Fig. 1. It is desirable when any one of these keys is operated to release its respective cash-drawer and to trip the indicators and allow the same to return to their normal "zero-indicating" positions. To accomplish this 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 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 shaft 20 is rocked forward by a coil-spring 27, which connects the arm 23 pendent from the shaft to the main frame. The disengagement of the pawl 25 from the

arm 23 is accomplished by a link-bar 29, which connects said pawl to an arm 30, projecting from a rock-frame 31, which is loosely mounted upon a transverse shaft 32. The shaft 32 also supports a series of bell-crank levers 33, one for each of the special keys 7^a. When any one of these bell-crank levers is operated by the depression of its respective key, an adjustable screw-bolt 34, carried by the particular lever operated, engages the yoke-frame 31 and rocks the same on the shaft 32, thus drawing down the link 29 and disengaging the pawl 25 from the arm 23. When the frame 31 is subsequently released by the release of the special key, as hereinafter described, the pawl 25 will be forced upward by its spring against the lower end of the arm 23, so that when the shaft 20 is subsequently rocked to bring the pawls 19 into engagement with the toothed wheels 18 said pawl 25 will again engage the arm 23 to lock the pawls in position.

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 Fig. 7. These devices comprise a link 70, pivotally connected to the arm 23 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 78. 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. 7) ready for the next operation of the machine. The frame is forced forward when thus released by a coil-spring 72^a, mounted
 5 on the shaft 72 and connected at its opposite ends to the frame and the shaft.

Each of the keys 7^a comprises a shank 7^b, having a suitable marked head. These shanks are mounted in guiding-frames 35, and each of the same is formed with a locking-notch 36. When a key is depressed, a spring-pressed pawl 37, pivoted on a rock-shaft 38, is arranged to fall into the notch 36, and thus lock the key in its depressed position. Each of the pawls 37 is provided with a laterally-projecting pin 39, and the shaft 38 is provided with a series of pins 40, arranged to engage the pins 39, and thereby elevate the pawls to release the keys, which
 20 are automatically returned to their outer positions. The shaft 38 receives its rocking movements to release the keys through the mechanism illustrated more clearly in Fig. 3. This mechanism comprises of an arm pendent from the shaft 38 and provided with a pin 42, which projects into an elongated slot 43, formed in the forward end of a link-bar 44. The rear end of this bar is pivotally
 30 connected to a rock-frame 45, which is mounted upon a transverse shaft 32. The forward end of this frame is provided with a transverse bar 47 for elevating the key-detents 48 to release the keys. The frame 45 is operated by a lever 48^a, pivoted, as at 49, and provided with a pendent lug 50, having a horizontal flange 51, which projects under the frame 45. It results from this construction that when the lever 48^a is elevated at its rear end the frame 45 is rocked, which elevates
 40 the detents 48 and also rocks the shaft 38 to elevate the pawls 37 to release the special keys. To accomplish the rocking of the lever 48^a, the rear end of the same is provided with a pivoted pawl 52, which is normally drawn into a vertical position by a spring 53, which connects it to said lever. The pawl is limited in its movement on the lever by a pin 54, projecting laterally from the upper end of the pawl and arranged to contact with the upper
 50 surface of the lever. The pawl 52 is arranged to be engaged and operated by one of the rollers 55, mounted upon the rear of the slide or frame 9. When the slide or frame 9 passes outward, the pawl 52 is simply rocked upon its pivot; but when the slide is forced back to its normal position the pawl is forced upward, together with the lever 48, as said pawl is unable to turn upon its pivot in this reverse direction.

60 As before stated, each of the keys 7^a when depressed releases one of the independent cash-drawers 56, 57, or 58. To accomplish this result, each of the pivoted bell-crank levers 33 is extended to the rear and is provided with a pin 59, which projects into an elongated slot 60, formed in a vertically-movable latch-plunger 61, suitably mounted

and guided in the main frame. The lower end of this plunger is beveled, as at 62, and engages a beveled latch-bracket 63, secured
 70 to the rear wall of its respective cash-drawer. When one of the keys 7^a is depressed, the latch-plunger 61 corresponding thereto is elevated to disengage its lower end from the latch-bracket 63 on its respective cash-
 75 drawer to release the latter. The drawer when so released is projected from the casing by a suitable coil-spring 64, interposed between the rear wall of the drawer and the rear wall of the casing. Each of the plun-
 80 gers 61 is connected to a part of the main frame by a coil-spring 61^a, whereby it normally tends to spring downward when released. The drawers are mounted in the casing by suitable guiding-flanges and sup-
 85 porting-wheels. As long as the key 7^a remains depressed it is impossible to relatch the open drawer in its closed position, as its latch-plunger will be held elevated as long as the key remains in this position. The
 90 slot-and-pin connections 59 and 60 between the levers 33 and latch-plungers 61 are necessary, because after the latch-plungers have been allowed to descend by the release of the special key the closing of a drawer will again
 95 elevate the plunger, and this latter movement must be independent of the levers 33, as said levers have other functions, which are properly performed by a single move-
 100 ment only during each operation of the machine.

The frame 31 is provided with a rearwardly-projecting arm 65, which when the frame is rocked by the operation of any one of the special keys engages a horizontal arm
 105 66, formed on a pivoted locking-pawl 67, and raises said pawl to disengage its forward end from the locking-block 68, mounted on the slide 9, as plainly shown in Fig. 2. When the slide is so released, it is partly projected
 110 from the casing by a coil-spring 69 substantially in the same manner as the cash-drawer shown in the patent above mentioned. The lower ends of the levers 8 rest upon anti-friction-rollers 55, secured to the rear of the
 115 slide or frame 9, and the outward movement of said slide or frame therefore permits the levers to drop, and the different parts of the machine to take up their positions according to the amount-
 120 keys operated. In order to prevent any partial opening or closing movement of the slide 9, I provide the same with a pendent pivoted pawl 80, which coöperates with a stationary rack 81 to limit the move-
 125 ments of the slide in opposite directions in a manner well known in the art. After the slide has been allowed to pass out of the casing it is returned by pressure upon a horizontal round bar 83, which is mounted at the front of the slide. This operation returns
 130 the slide to its normal position, in which it is again latched by the latch-pawl 67.

In the present drawings I have illustrated a multiple-counter form of machine substan-

tially similar to that shown in the patent to John H. McCormick, No. 610,366, dated September 6, 1898. With this construction of machine the depression of any one of the special keys releases devices which control its corresponding counter, so that only the counter pertaining to the key depressed will be operated. These devices comprise a series of pivoted levers 85, mounted on the shaft 2 in proximity to the respective counters. Each of these levers is provided with a laterally-projecting rod 86, which projects under the rear ends of the operating-levers 4 of its respective counter, so as to normally support the levers of this counter in their upper positions. Each of the levers 85 is of bell-crank formation. The downwardly-projecting arm of each of these bell-cranks is arranged to engage a latching-flange 87, mounted upon its respective lever 33, and thus normally prevent the falling of the rear end of the lever unless the special key pertaining to said lever has been first operated to disengage the flange 87 therefrom, as shown in Fig. 8. As only the lever 85 pertaining to the counter which is to be operated falls upon each operation of the machine, the movements of said levers are utilized to secure the proper special indication for the counter operated. The special indicator 87^a is mounted beside the regular indicators and is provided with a pinion 88, which meshes with a segmental rack 89, fast to a rock-shaft 90, as best shown in Fig. 8. The shaft 90 is provided with a series of forwardly-projecting arms 91, each of which is provided with a pendent operating-link 92, having a lower hook end 93. The links 92 are of varying lengths and are arranged to be operated by headed bolts 94, mounted on the respective levers 85 and operating in the hooks 93 of said links. When any one of the levers 85 is released and descends, the headed bolt 94 will engage the hook 93 of its respective link, and thus rock the shaft 90 and move the indicator a sufficient distance to bring the proper indication into view. The special printing-segment 12^a for printing the character representing the counter which is operated is connected to the shaft 90 by arms 96 and 97, mounted on said segment and shaft, respectively, and connected by a pivoted link 98, as clearly shown in Fig. 5. After the type-carriers 12 and 12^a have been set an impression is taken from the same upon the detail-strip 96^a by an impression-platen 97^a, mounted on a pivoted frame 98^a and arranged to be operated by a cam-arm 99, fast to a shaft 100, which is journaled upon a rigid shaft 101, as best shown in Figs. 5 and 6. The sleeve 100 is provided with a nose 102, against which a spring-pressed pawl 103 is arranged to operate to rotate the sleeve and cause the cam-arm to force the platen upward against the type-carriers. The pawl 103 is carried by a pinion 104, which is journaled upon the shaft 101 and meshes with a segmental rack 105,

mounted on the main yoke of the machine. Any suitable paper feeding and inking devices may be employed in connection with this type of printer.

It will be seen from the foregoing description that upon depressing any one of the special keys 7^a the corresponding cash-drawer is opened, the indicators released and allowed to return to their normal positions, the selected counter put in operative condition, and the operating-slide released. The opening of the cash-drawer, however, is not dependent upon any movement of the operating-slide 9, and the same may be held in its inner position without affecting the opening movement of the drawer. In other words, the opening of the cash-drawer is wholly independent of any operation of the cash-register for the transaction about to be registered. It will of course be understood that after a cash-drawer has been released it will be impossible to secure an indication to release either the amount-keys or the special key or to relatch the cash-drawer until the slide 9 is first permitted to pass out of the casing and then returned to its normal position.

The several conditions above stated constitute a thorough safeguard against any clerk simply opening his cash-drawer and then neglecting to operate the machine, as in such an event the indicators would indicate "zero," the clerk's key would remain depressed as a telltale against him, and his particular cash-drawer would remain open and accessible to any of the other clerks, who might help themselves to its contents.

I do not care to limit the present invention to use in connection with a plurality of cash-drawers, as my improved devices are also applicable to different types of independent cash receptacles or safes having some movable part which may be released to expose or permit access to the receptacles or safes.

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 an operating mechanism including accounting devices and a series of oscillatory members, means for limiting the movements of the members in one direction, a main actuator for moving the members in the opposite direction, a series of cash-safes having movable members which may be operated to expose the safes independently of the movement of the main actuator, and selective manipulating devices for opening a desired safe and releasing the main actuator.

2. In a cash-register, the combination with an operating mechanism including accounting devices and a series of oscillatory elements, keys for limiting the movements of the elements in one direction, a main actuator for moving said elements in the opposite direction, a series of cash-receptacles constructed to be opened independently of the

movement of the main actuator, and selective manipulating means for opening a desired receptacle and releasing the main actuator.

3. In a cash-register, the combination with
5 a series of oscillatory operating elements, of a plurality of independent counters controlled by the same, means for limiting the movements of the oscillatory elements in one direction, a series of cash-safes, a main actuator for returning the elements to their normal
10 positions independently of the movements of the cash-safes, and selective manipulating means for releasing the desired counter, and the main actuator, and opening a corresponding cash-safe.
15

4. In a cash-register, the combination with an operating mechanism including accounting devices and a series of oscillatory members, of means for limiting the movements of
20 the members in one direction, a main actuator controlling the movements of the elements in this same direction and moving them positively in the opposite direction, a series of cash-receptacles constructed to be opened
25 independently of the movement of the main actuator, and selective manipulating means for opening a desired receptacle and releasing the main actuator.

5. In a cash-register, the combination with
30 an operating mechanism including accounting devices and a series of oscillatory operating members, means for limiting the movements of the members in one direction, a reciprocatory main actuator for operating the
35 oscillatory members, a series of cash-safes constructed to be opened independently of the movement of the main actuator, and selective manipulating means for opening any desired safe and releasing the reciprocatory
40 actuator.

6. In a cash-register, the combination with an operating mechanism including accounting devices and a series of oscillatory members, means for limiting the movements of
45 the members in one direction, a reciprocatory frame for moving the members in the opposite direction, a latch for holding the frame normally in a retracted position, a series of cash-safes constructed to be opened independently of the movement of the main actuator, and selective manipulating means for
50 releasing the reciprocatory member and opening a desired cash-safe.

7. In a cash-register, the combination with
55 an operating mechanism including accounting devices and a series of oscillatory operating elements, means for limiting the movements of the elements in one direction, a horizontal slide for returning the elements to their normal positions, a series of cash-safes
60 constructed to be opened independently of the movement of the slide, and selective manipulating means for controlling the opening of the cash-safes and the release of the actuator-slide.
65

8. In a cash-register, the combination with an operating mechanism including account-

ing devices and a series of oscillatory members, of means for limiting the movements of the oscillatory members in one direction, a
70 horizontal slide for moving the oscillatory members in the opposite direction, a series of cash-drawers which may be opened independently of the movement of the slide, and selective manipulating devices for releasing
75 a desired drawer and releasing the slide.

9. In a cash-register, the combination with an operating mechanism including accounting devices and a series of oscillatory members, of a series of keys for limiting the move-
80 ments of the elements in one direction, a horizontal slide for moving the elements in the opposite direction, a latch for the slide, a series of cash-drawers which may be moved independently of the movement of the slide, 85
latches for the cash-drawers, and selective manipulating devices for operating the desired drawer-latch and the slide-latch.

10. In a cash-register, the combination with an operating mechanism, of setting devices
90 therefor, a reciprocatory actuator for the operating mechanism, a series of cash-safes constructed to be opened independently of the movement of the actuator, and means for releasing any desired safe and the actuator. 95

11. In a cash-register, the combination with an operating mechanism including a series of oscillatory members, keys for limiting the movements of the members in one direction, a main actuator for moving the members in
100 the opposite direction, a plurality of independent counters cooperating with the operating elements, a plurality of independent cash-safes having movable members which may be opened independently of the move- 105
ment of the main actuator, and selective manipulating means for releasing the main actuator and determining which of the counters will be operated and which cash-safe will be opened. 110

12. In a cash-register, the combination with an operating mechanism including a series of oscillatory members, keys for limiting the movements of the members in one direction, a main actuator moving said members in the
115 opposite direction, a series of independent accounting devices arranged to be brought into connection with the operating elements, a series of independent cash-safes having movable members which may be opened in- 120
dependently of the movement of the main actuator, selective manipulating devices for determining the cash-safe which will be opened, and the accounting devices which will be operated, and means controlled by 125
said selective devices for releasing the main actuator.

13. In a cash-register, the combination with a series of oscillatory elements, keys for limiting the movements of the elements in one
130 direction, a main actuator for moving said elements in the opposite direction, a printing mechanism, a series of cash-safes having movable members whereby they may be

opened independently of the movement of the main actuator, selective manipulating devices for opening a desired safe and setting the corresponding counter and printing mechanism for operation, and means controlled by said selective devices for unlatching the main actuator.

14. In a cash-register, the combination with a series of oscillatory members, of keys for limiting the movements of the members in one direction, a main actuator for moving the members in the opposite direction, a series of independent counters arranged to cooperate with the oscillatory members, a special indicator, a series of cash-safes having movable members arranged to be opened independently of the movement of the actuator, selective manipulating devices for opening a desired cash-safe and controlling the proper counter and indicator, and means controlled by the selective devices for unlatching the main actuator.

15. In a cash-register, the combination with an operating mechanism, of an operating-slide for the same, a latch for the slide, a series of cash-drawers, independent latches for the drawers, and a series of selective devices and connections for operating any one of the drawer-latches and the slide-latch.

16. In a cash-register, the combination with an operating mechanism, of an operating-slide and latch for the same, a series of cash-drawers, independent latches for the same, a series of release devices connected to the drawer-latches, and means arranged to be operated by any one of the release devices for operating the slide-latch.

17. In a cash-register, the combination with a series of nested yokes having graduated stop-segments, accounting devices cooperating with the yokes, a series of keys for limiting the movements of the yokes in one direction, an operating-lever for said yokes, a slide for said lever, a series of cash-drawers constructed to be opened independently of the movement of the slide, and selective manipulating devices for opening any desired drawer and releasing the slide.

18. In a cash-register, the combination with a series of oscillatory elements, of keys for limiting the movements of the elements in one direction, a slide and connections for moving the elements in the opposite direction, accounting devices cooperating with the elements, a spring for operating the slide, a series of cash-safes having movable members which may be opened independently of the movement of the slide, a latch for the slide, and means for opening any desired safe and operating the slide-latch.

19. In a cash-register, the combination with a series of oscillatory elements, means for limiting the movements of the elements in one direction, a main actuator for moving said elements in the opposite direction, indicators connected to said elements, a series of cash-safes arranged to be opened independ-

ently of the movements of the main actuator, and a common means for releasing the indicators, the main actuator, and the selected cash-safe.

20. In a cash-register, the combination with a series of oscillatory elements, of keys for limiting the movements of the same in one direction, a main actuator for moving said elements in the opposite direction, a series of indicators arranged to be set by said actuators, means for automatically returning the indicators to their normal positions when they are released, a series of cash-safes arranged to be opened independently of the movement of the main actuator, and means for opening the desired cash-safe and releasing the main actuator and the indicators.

21. In a cash-register, the combination with a series of nested yokes carrying graduated stop-segments, of keys cooperating with said segments, accounting devices controlled by the yokes, a lever for operating said yokes, a slide for operating said lever, a latch for the slide, a series of independent cash-drawers, independent means for operating said slide and drawers when they are released, and selective manipulating devices for releasing the desired drawer and the slide.

22. In a cash-register, the combination with a series of oscillatory operating elements, of accounting devices controlled by said elements, means for limiting the movements of the elements in one direction, a main actuator for moving the elements in the opposite direction, a series of independent cash-safes, independent means for operating said actuator and safes when they are released, and selective manipulating devices for releasing the desired safe and the main actuator.

23. In a cash-register, the combination with an operating mechanism, of accounting devices, a reciprocatory actuator for the same, a series of cash-receptacles, means for latching the receptacles in their closed positions, and devices for preventing the relatching of a cash-receptacle after it has been opened until the reciprocatory actuator has been first moved.

24. In a cash-register, the combination with a series of oscillatory elements, of accounting devices cooperating therewith, means for limiting the movements of the operating elements in one direction, a main actuator for returning the elements to their normal positions, a series of cash-receptacles and latches, and means for preventing the relatching of a cash-receptacle after it has subsequently been operated to return the operating elements to their normal positions.

25. In a cash-register, the combination with a series of oscillatory elements, of accounting devices cooperating therewith, means for limiting the movements of the elements in one direction, a main actuator for returning the elements to their normal positions, a series of cash-drawers, latches for said drawers, and means for preventing the relatching of a

drawer when opened until the main actuator has thereafter returned the elements to their normal positions.

26. In a cash-register, the combination with
 5 a suitable casing, of a series of oscillatory elements, accounting devices cooperating therewith, means for limiting the movements of the elements in one direction, a main actuator
 10 for moving said elements in the opposite direction, a series of cash-drawers, latches for said drawers, springs for normally projecting the drawers from the casing, and means for preventing the relatching of the drawers in the casing after they have been opened until the
 15 main actuator has thereafter returned the operating elements to their normal positions.

27. In a cash-register, the combination with

a series of oscillatory operating elements, of accounting devices cooperating therewith, means for limiting the movements of the elements in one direction, a reciprocatory actuator for moving the elements in the opposite direction, a series of cash-drawers, latches for said main actuator and said drawers, and means for preventing the relatching of any
 25 opened drawer until the main actuator has first been reciprocated.

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

WILLIAM H. MUZZY.

Witnesses:

JOHN J. UNGVÁRY,
 W. O. HENDERSON.

Corrections in Letters Patent No. 748,406.

It is hereby certified that in Letters Patent No. 748,406, granted December 29, 1903, upon the application of William H. Muzzy, of Dayton, Ohio, for an improvement in "Cash-Registers," errors appear in the printed specification requiring correction, as follows: On page 2, line 119, the reference numeral "78" should read 75, and on page 6, line 124, after the word "has" the words *been opened until the main actuator has* should be inserted; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 5th day of November, A. D., 1907.

[SEAL.]

E. B. MOORE,
Commissioner of Patents.