

No. 773,090.

PATENTED OCT. 25, 1904.

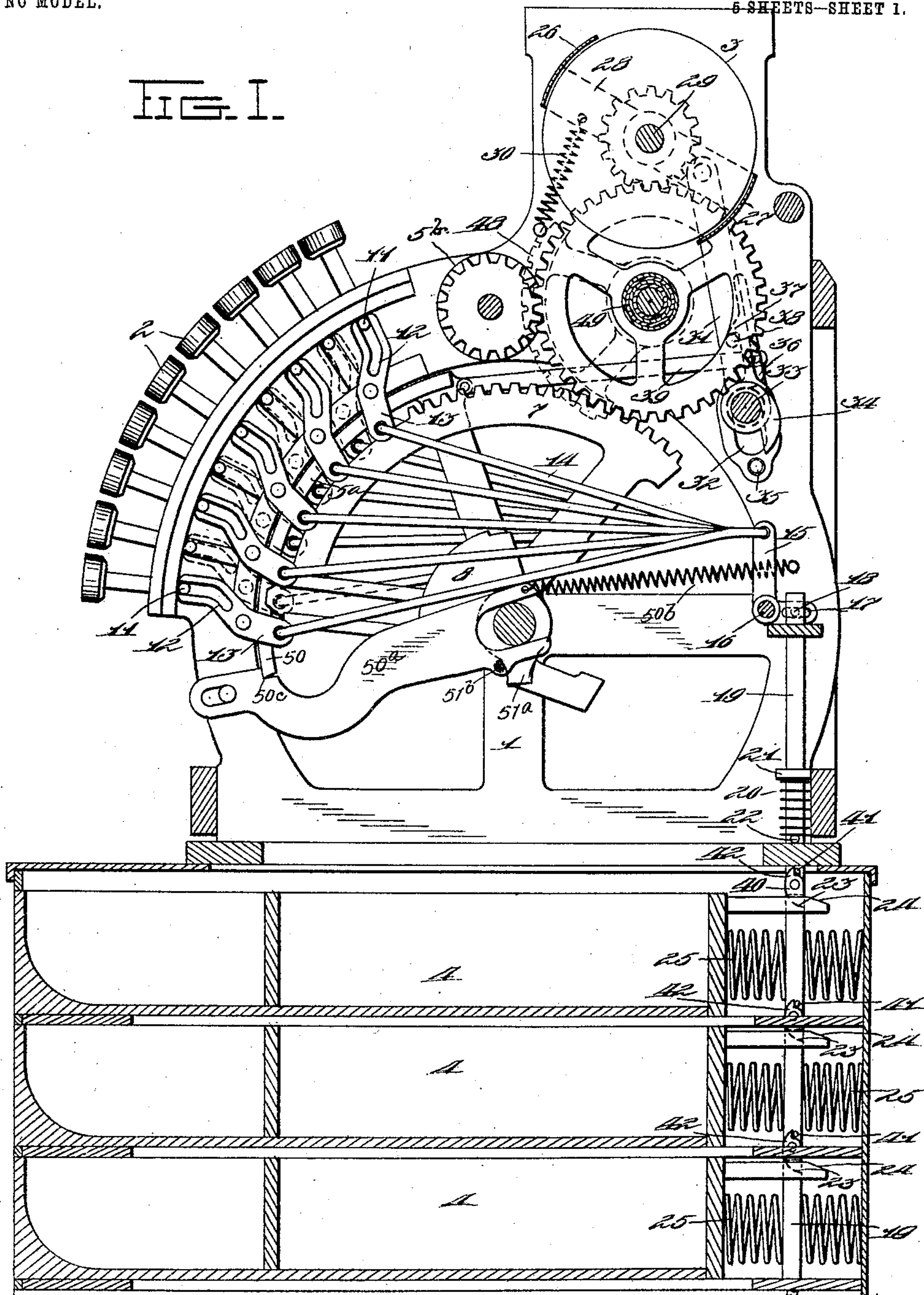
W. H. MUZZY.
CASH REGISTER.

APPLICATION FILED JAN. 10, 1903.

NO MODEL.

~~5 SHEETS~~—SHEET 1.

IIIG.I



Witnesses

W. W. C. Early

L. E. Richardson.

Inventor

St. Mary's

No. 773,090.

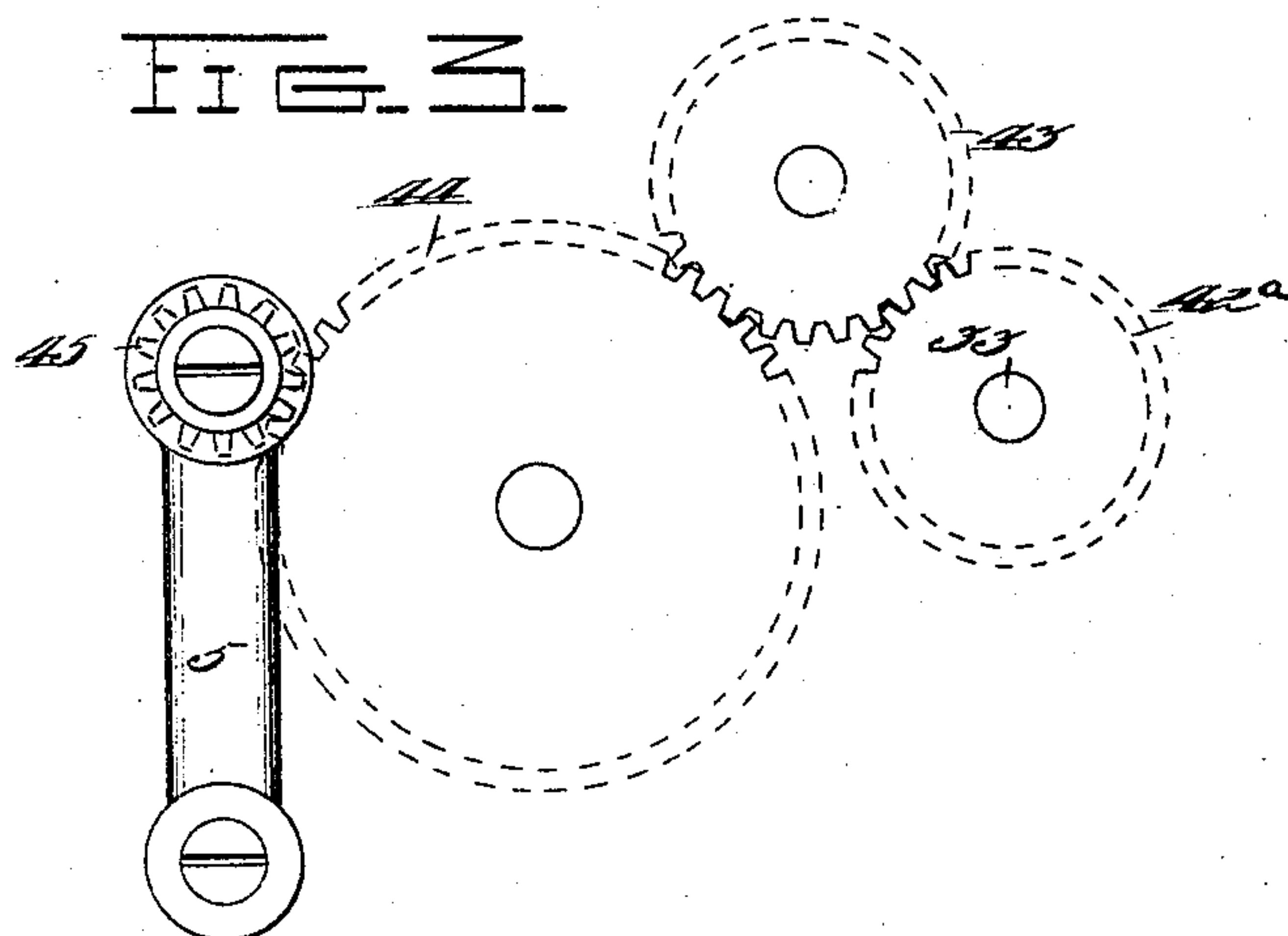
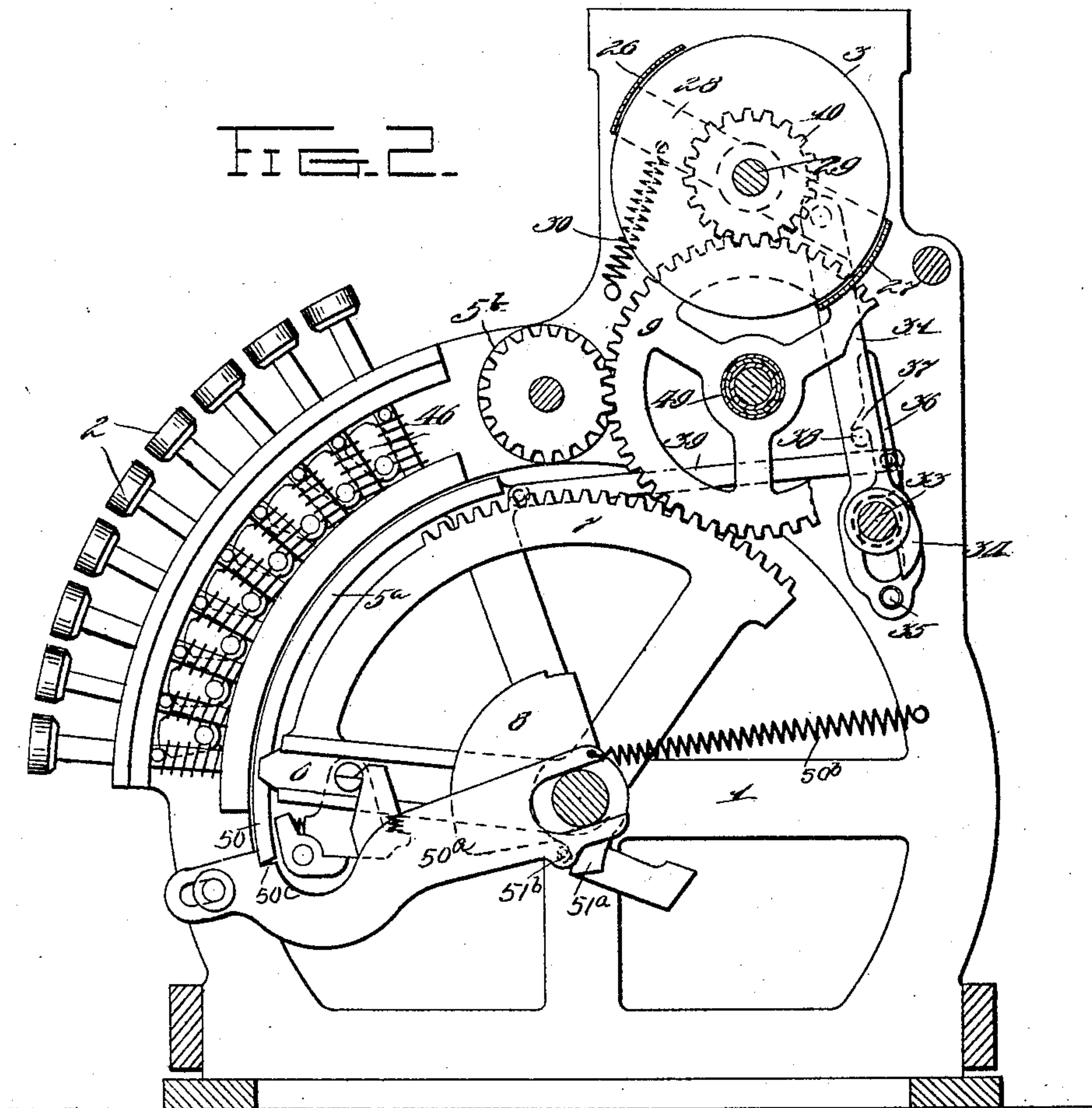
PATENTED OCT. 25, 1904.

W. H. MUZZY.
CASH REGISTER.

APPLICATION FILED JAN. 10, 1903.

NO MODEL.

5 SHEETS—SHEET 2.



Witnesses
W. M. McCarthy
L. E. Richardson

Inventor

W. H. Murray

No. 773,090.

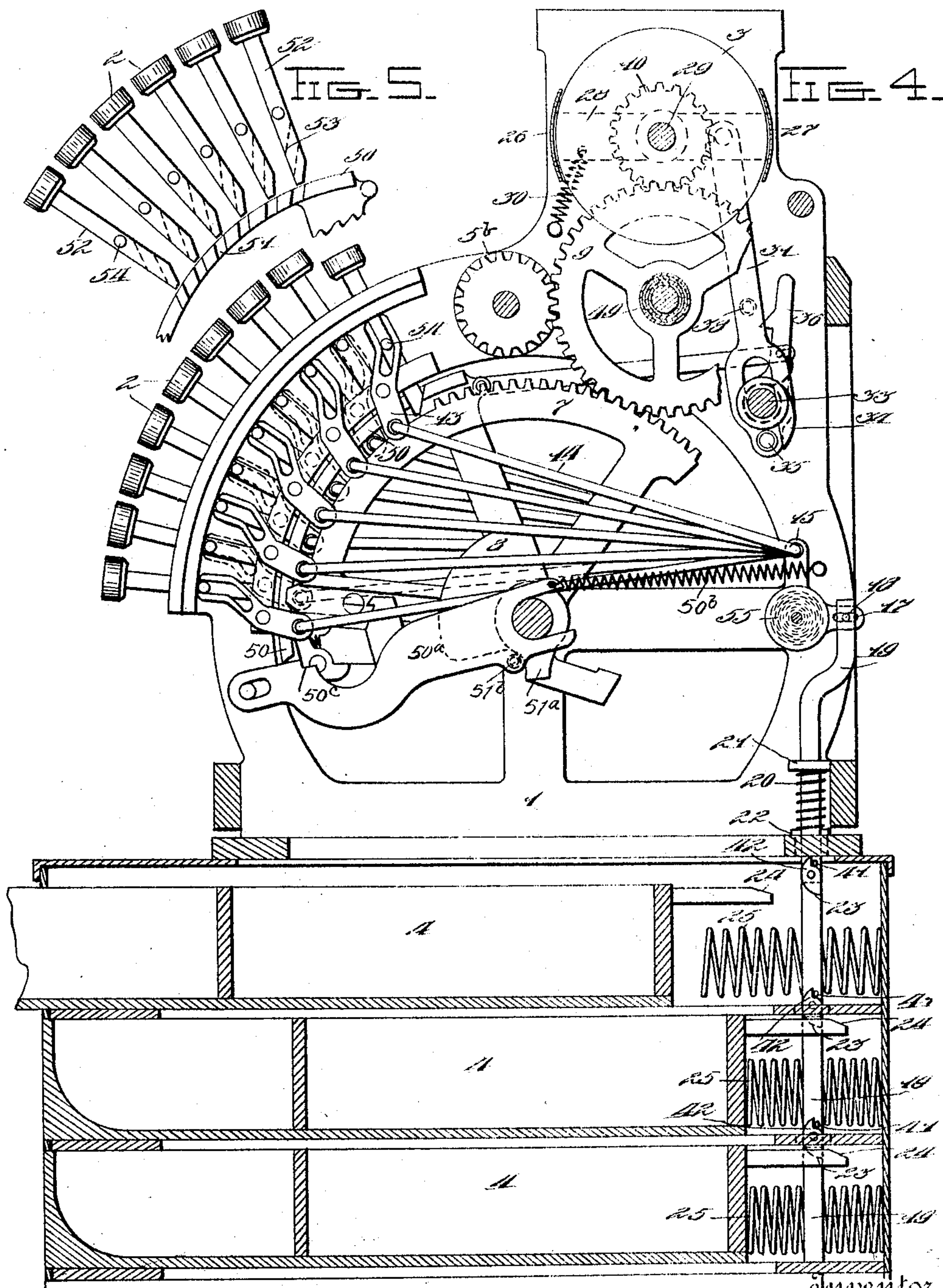
PATENTED OCT. 25, 1904.

W. H. MUZZY.
CASH REGISTER.

APPLICATION FILED JAN. 10, 1903.

NO MODEL.

5 SHEETS—SHEET 3.



Witnesses
W. M. Carthy
L. E. Richardson.

Inventor
W. H. Muzzy

No. 773,090.

PATENTED OCT. 25, 1904.

W. H. MUZZY.
CASH REGISTER.

APPLICATION FILED JAN. 10, 1903.

NO MODEL.

5 SHEETS—SHEET 4.

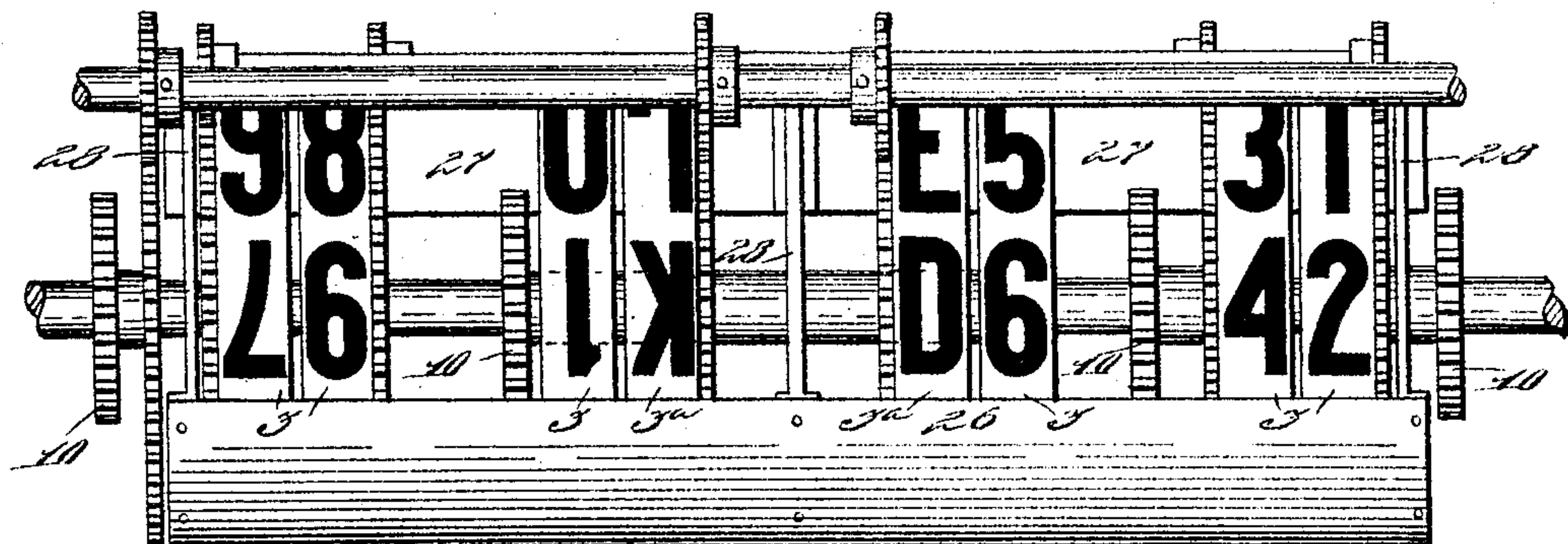
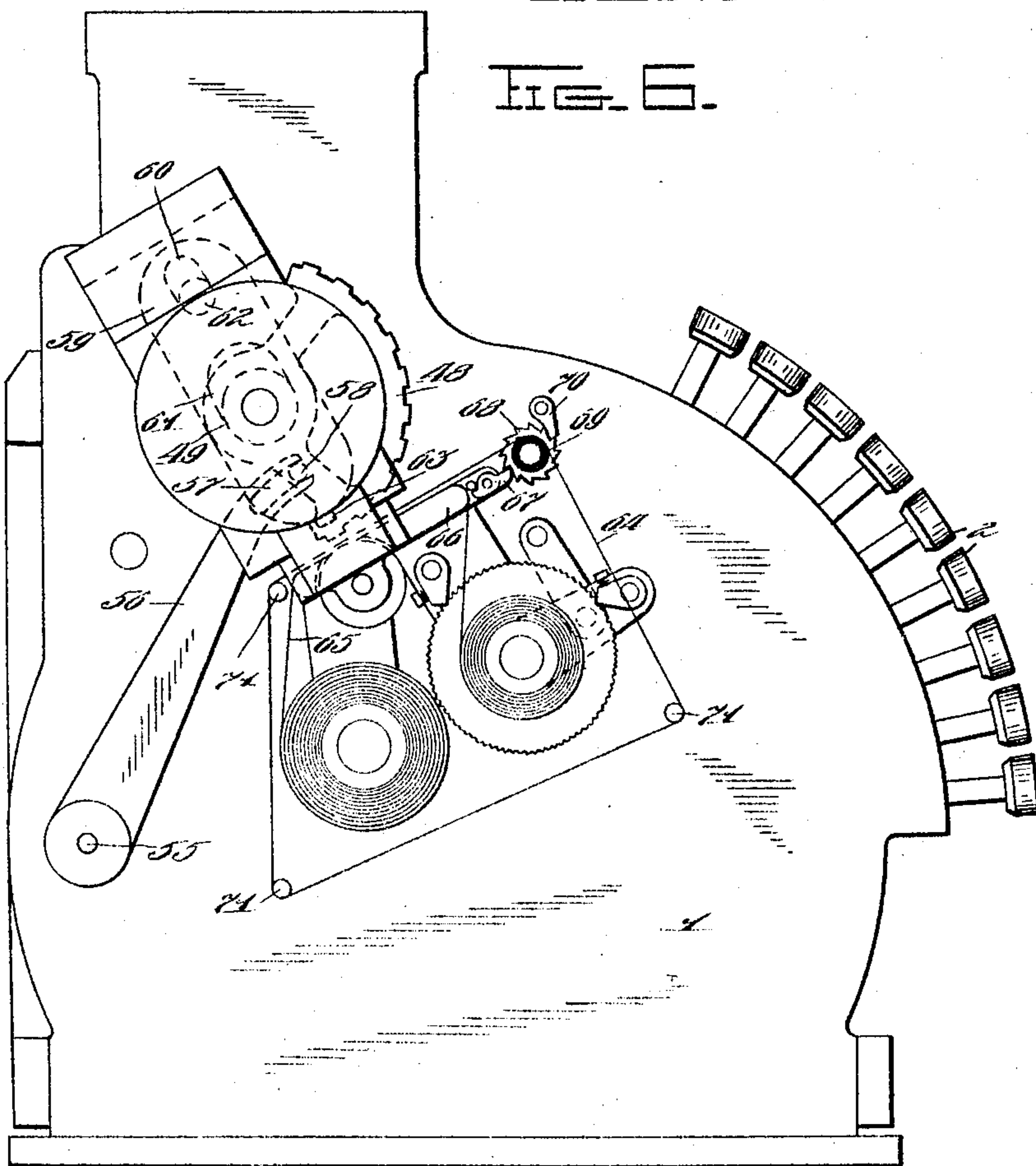


FIG. 7.

FIG. 6.



Witnesses
W. M. Clatney
L. E. Richardson.

Inventor
W. H. Muzzy

No. 773,090.

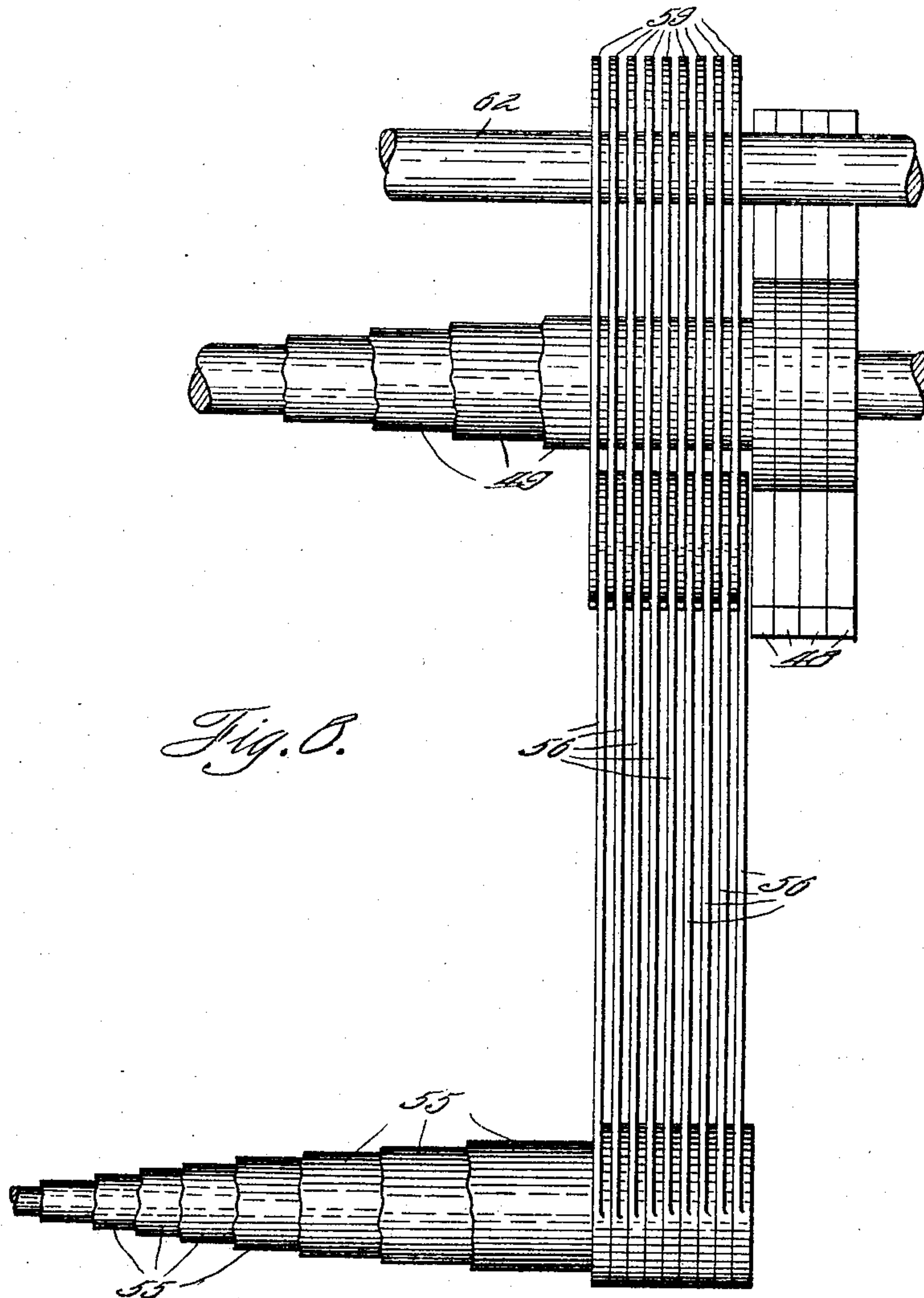
PATENTED OCT. 25, 1904.

W. H. MUZZY.
CASH REGISTER.

APPLICATION FILED JAN. 10, 1903.

NO MODEL.

6 SHEETS—SHEET 5.



Witnesses

W. W. Bentley
John J. Ungváry

Inventor

W. H. Muzzy

UNITED STATES PATENT OFFICE.

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

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 773,090, dated October 25, 1904.

Application filed January 10, 1903. Serial No. 138,514. (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 multiple-receptacle or multiple-drawer type.

The object of the invention is to provide an improved and simplified multiple-receptacle register which may be utilized by different clerks or for different departments or divisions of sales.

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 transverse vertical section through a machine of the class patented to Cleal and Reinhard, No. 580,378, April 13, 1897, with my improvements applied thereto, the six lower drawers and the cabinet being omitted. Fig. 2 represents a similar section taken to one side of the special-key bank, the cash-drawers being omitted. Fig. 3 represents an enlarged detail side elevation of the operating-handle and driving-gears. Fig. 4 represents a view similar to Fig. 1 of a modified form of my invention, one of the cash-drawers being released. Fig. 5 represents a detail side elevation of a number of the special keys and their detent employed in this modified form of my invention. Fig. 6 represents an end elevation of the machine with the cash-drawers omitted, showing the printing mechanism. Fig. 7 represents a detail front elevation of the indicators, and Fig. 8 represents a detail rear elevation of the nested sleeves and the special printing-types and connections.

In the aforesaid drawings, 1 represents the frame of the machine; 2, the special keys; 3, the amount-indicators; 3^a, the special indica-

tor; 4, the cash-drawers; 5, the operating-crank handle, and 5^b the counter-wheels. 50

The keys 2 are mounted in the main frame, substantially as shown in said patent, and cooperate with a detent 5^a, so that when they are pressed inward they will be latched in this inner position in a manner well known 55 in the art and disclosed in said patent. These keys when depressed as above described intercept and operate a latching device 6, (more clearly shown in Fig. 2,) to uncouple the driven segment 7 from the driving-segment 8 60 and bring said driven segment to rest, all of which needs no further description here, as it is well known in the art and is fully set forth in the aforesaid patent. The segment 7 meshes with an intermediate gear 9, which in turn 65 meshes with a pinion 10 upon a special rotary indicator 3^a. When any one of the special keys is operated and the handle 5 rotated, the indicator 3^a will be turned to a position corresponding to the key depressed to indicate 70 which clerk is operating the machine.

Each of the aforesaid keys 2 is provided with a laterally-projecting pin 11, said pins projecting alternately from opposite sides of their respective key-shanks. These pins project 75 into cam-slots 12, formed in pivoted levers 13, which are mounted upon the main frame, as clearly shown in Fig. 1. When one of the keys 2 is pressed inward, its initial movement will have no effect upon its respective lever 13. When the pin 11 has passed inward some distance, it will engage the cam portion of the slot 12, and thus rock the lever upon its pivot. The lever is not fully rocked, however, until after the key has passed far 85 enough in to be latched in its inner position by its detent 5^a. By reference to Fig. 1 it will be seen that the pins 11 are of sufficient diameter to fill the respective slots 12 and that the levers 13 are thus locked against any independent movement or overthrow should a 90 key be violently pressed inward.

Each of the levers 13 is connected by a pivoted link 14 to one of a series of bell-crank levers 15, journaled upon a transverse shaft 95 16. Each of the levers 15 is formed with a

horizontal slot 17, into which projects a pin 18, mounted on a vertical drawer-plunger 19. This plunger is suitably guided in the main frame and is normally forced downward by a
 5 coil-spring 20, which engages one of its guides 21 and a pin 22, projecting from said plunger. The lower end of the plunger is provided with a pivoted pawl 40, which is beveled, as at 23, and coöperates with a beveled apertured flange
 10 24, mounted on the rear of its respective cash-drawer. The pawl is free to rock upon its pivot when the cash-drawer is closed, so that the latter may be relatched without elevating the plunger 19. An arm 42 on the pawl con-
 15 tacts with a pin 41 on the plunger and prevents movement of the pawl in the opposite direction. By means of the above-described devices when any one of the keys 2 is de-
 20 pressed its respective drawer-plunger 19 will be raised and the corresponding cash-drawer released. When the drawer is so released, it is forced out of the casing by a suitable spring 25, interposed between its rear wall and the
 25 rear of the casing. It will be observed that this opening of the selected cash-drawer takes place immediately upon the depression of the key and before the machine proper has been operated at all.

Prior to the time when one of the special
 30 keys is depressed the previous indication is exposed to view, and it therefore becomes necessary upon the opening of any one of the cash-receptacles to obscure this indication, as otherwise it might be fraudulently used to lead
 35 the customer into the belief that it was a new indication just completed when the receptacle was opened. To accomplish this result, I provide two guard or flash plates 26 and 27, con-
 40 nected by arms 28, which are pivoted upon the indicator-shaft 29. A coil-spring 30 connects one of these arms to the main frame and tends to draw the respective plates 26 and 27 over the front and back indicating-
 45 surfaces of the indicators, so as to obscure the same. One of the arms 28 is provided with a pendent pivoted link 31, slotted at its lower end, as at 32, to permit the passage there-
 50 through of the main rotation-shaft 33. This shaft carries a cam 34, which is arranged to coöperate with an antifriction - roller 35, mounted on the link-bar 31, to force said bar
 55 downward against the tension of the spring 30 and expose the indicators, as shown in Fig. 1. As the cam 34 passes out of contact with the roller 35 before the operation of the machine ceases, means must be provided for
 60 latching the bar 31 in its depressed position. This means, as best shown in Figs. 2 and 4, comprises a spring-pressed latch 36, pivoted
 65 on the shaft 33 and provided with a beveled latching-nose 37, which coöperates with a pin 38, mounted on the bar 31. The latch 36 is connected to the detent 5^a by a pivoted link-
 bar 39. When a key is depressed, the detent 5 is rocked upward and rearward in a manner

well understood, and thus forces the link 39 and the latch 36 to the rear and disengages the nose 37 from the pin 38. The bar 31 is thus freed, and the spring 30 elevates it and
 70 rocks the flash-supporting arm 28 and moves the flash-plates over the indicators. This concealment of the indicators takes place immediately when any one of the keys 2 is de-
 pressed.

The flashes 26 and 27 are preferably pro- 75
 vided with lettering such as "Sale not regis-
 tered" or "Registration not completed," so that when they are in an exposed position it will be apparent to the observer that a sale
 80 has not been registered or the machine oper-
 ated. When the machine is subsequently op-
 erated by the actuation of the handle 5, the cam 34 will draw the bar 31 down to expose the indicators, and the latch 36, which has in
 85 the meantime been freed by the release of the
 detent, will again catch over the pin 38 and hold the flash in set position,

After the cash-drawer has been opened its latch-plunger 19 remains elevated, as its par-
 90 ticular key 2 is held by its detent in its de-
 pressed position and the drawer cannot be re-
 latched until the machine has been operated and the key released to permit the latch-plun-
 95 ger to return to its normal position. After the key has been so returned the peculiar con-
 struction of the connections will lock the plun-
 ger 19 against being forced upward when the cash-drawer is closed, and it is therefore nec-
 100 essary to provide the before-described means
 for permitting the lower end of the plunger,
 or rather its pawl, to again engage the aper-
 tured latch-plate 24 without any vertical move-
 ment of the plunger.

The main rotation-shaft 33 is given its ro- 105
 tary movements through the medium of in-
 termeshing gears 42^a, 43, and 44, the former
 of which is mounted on said shaft. The gears
 43 and 44 are suitably journaled on the main
 frame in such positions that the gear 44 meshes
 110 with a pinion 45, fast to the rotary operating-
 crank handle 5, which is suitably mounted
 upon the main frame.

In order to prevent the simultaneous opera-
 115 tion of more than one of the keys 2, I mount
 a series of beveled pivoted stops 46 upon the
 main frame just under the key-pins 11. When one of the keys is depressed, its pin 11
 forces the stops below it to either side, and
 as these stops have a free play equal to the
 120 thickness of one pin only the operation of
 any of the remaining keys is prevented until
 the key first operated is returned to its nor-
 mal position. If an attempt be made to de-
 125 press two keys at the same time, they will
 both become locked, because the pivoted stops
 have not sufficient free play to permit the pas-
 sage between them of two pins at the same
 time, as will be readily understood.

The type-segments 48 (shown in dotted
 100 lines in Fig. 1 and in full lines in Fig. 6) are

mounted on the outer ends of nested sleeves 49, which sleeves are connected at their inner ends to the respective gears 9 of the special and amount banks. By this means the type-

5 segments are adjusted to print the amounts, together with the special clerk's or department designation, upon each operation of the machine in substantially the same manner as disclosed in the aforesaid patent.

10 From the foregoing description it will be observed that while any clerk is free to open his cash-drawer at any time by simply depressing his particular key, yet the depression of the key alone without a subsequent

15 operation of the machine will leave the machine in such a condition as to inform the customer or proprietor that an attempt has been made to misuse or fraudulently operate the register. The cash-drawer, which cannot be

20 relatched, together with the depressed key, becomes a telltale against the particular clerk leaving the machine in this condition, and a turn of the operating-handle would also disclose the special clerk's indication and a

25 printed record of the last operator of the machine. No clerk, however, will care to leave the machine in this condition, as his cash-drawer would remain open and the remaining clerks, if dishonest, could help themselves

30 to its contents.

In the modified form of my invention (shown in Figs. 4, 5, 6, and 8) I provide means for opening the cash-drawer and printing a clerk's designation by the operation of the

35 special key alone. In this construction the key-detent 50, as best shown in Fig. 5, is formed with side grooves 51, while the key-stems 52 are provided with inclined flanges 53 of such length that the keys 52 can have

40 an abnormal inward movement and when released will settle back to an intermediate position and return the drawer-plunger, but still intercept the rock-latch 6 to secure the proper indication for the key operated.

45 The lower end of the detent 50 rests upon the sliding latch-plate 50^a, which is normally drawn rearward by a coil-spring 50^b, which connects it to the main frame. When a key is depressed, the lower end of the detent 50

50 is raised away from the shoulder 50^c, formed on the slide 50^a, and the latter is drawn rearward into the position shown in Fig. 4, which operation latches the detent in its elevated position. It will be seen that should the slide

55 50^a be again forced forward the detent 50 will be allowed to descend and release the operated key. This forward movement of the slide 50^a is effected by a cam-arm 51^a, mounted on the driving member 8 and arranged to

60 engage an antifriction-roller 51^b upon the said slide 50^a to force the same forward, substantially as shown and described in the aforesaid patent to Cleal and Reinhard. If desired, a suitable form of indicator may be set

65 directly by the key and said key allowed to

immediately return to its normal position upon being released. In Fig. 4 the top key is shown in this intermediate position. It will be observed that the pin 54 of this key has passed

70 out of the cam portion of its respective lever 13, but is still retained by the detent 50. As the lever 13 is thus returned to its normal position the latch-plunger 19 also returns to its normal position, and the cash-drawer may be

75 returned and latched before the machine has been operated by the crank-handle to move the detent 50 and release the key. In this form of my invention the key-stop only operates after the keys have been pressed in-

80 ward beyond their intermediate positions, so that any of the drawers may be unlatched and latched any number of times without operating the remainder of the machine. In this modified construction of my invention each

85 of the bell-crank levers 15 is mounted upon the inner end of one of a series of nested sleeves 55, so that when a key is depressed its particular sleeve will be rocked or oscillated. Each of these sleeves is provided at its

90 outer end with a lever 56, as best shown in Figs. 6 and 8. This lever is slotted at its upper end, as at 57, to straddle a pin 58, mounted upon one of a series of type slides or carriers 59. These carriers are formed with elongated slots 60 and 61 and are guided by the

95 outermost of the regular printer-sleeves 49 and a pin 62, mounted on the main frame. The lower end of each of the slides is provided with a type 63, corresponding to its respective key. When one of the levers 56 is

100 operated, it forces its respective slide 59 downward and brings its type 63 against an endless inking-ribbon 64 to imprint the detail-strip 65 by forcing the same against the movable platen 66. When the machine is sub-

105 sequently operated, this platen is elevated to take an imprint from the amount-type carriers 48, substantially as shown and described in the aforesaid patent. This imprint of the amount is made in the same line with the im-

110 print of the clerk's character, which has been previously effected by the key. The platen 66 carries a pivoted pawl 67, which is free to move in one direction, but is unyielding in the

115 opposite direction in the same manner as the pawls 40. This pawl engages a ratchet-wheel 68, fast upon an absorbent ink-roller 69, which is journaled on the main frame and over which the endless inking-ribbon passes. A retaining-

120 pawl 70, mounted on the main frame, engages the ratchet 68 and prevents any retrograde movement of the same. The endless inking-ribbon 64 is guided by a series of pins 71, so as to pass over the platen and the detail-strip 65.

125 The construction for mounting and feeding the detail-strip forms no part of the present invention and, it is thought, needs no further description here, except to say that it is substantially the construction shown in the aforesaid patent. The remaining portions of my

130

invention are substantially the same in this modified form as in the form shown in Fig. 1. By reference to the figures showing this modified form of my invention it will be seen
 5 that upon depressing any one of the special keys the cash-drawer will be released and that when the pressure upon the key is removed the key will return to its intermediate position. The depression of the key will print
 10 the clerk's initial upon the detail-strip besides releasing the drawer and will release the flash, so that the same will descend and obscure the indicators. The clerk may then relatch his drawer, if desired, before first operating
 15 the machine; but he can make no indication whatever until he has first operated the crank-handle to raise the flash, which operation will effect the regular registration and record of the amount.

20 It will of course be understood that the present invention may be applied to any form of machine, whether it be a machine such as shown in the drawings or a machine which is wholly operated by the keys. It is also well
 25 within the spirit of this invention to cause the amounts to be printed upon the depression of the keys in connection with the special clerk's designation.

I do not care to be limited to a series of
 30 sliding cash-drawers such as shown in the drawings, as the invention is also applicable to any form of cash-receptacle, whether the receptacle is exposed by being projected from an inclosing casing or if the receptacle is ex-
 35 posed by moving a slide or other cover away from it. Further, the invention could also be employed in connection with a single cash drawer or receptacle divided into a series of compartments, each of which is provided with
 40 an independent cover. The special keys in such an instance would control the opening of the different covers. In other words, the invention is considered broad enough to include any form of multiple receptacles for the
 45 use of different clerks.

In the present drawings I have shown my invention as applied to a machine having a series of keys for controlling the cash-receptacles and flash; but it will be readily under-
 50 stood that the invention can be employed also in connection with machines having any other means for determining the receptacle to be opened—such, for instance, as a single setting-lever, a slide, or other movable element which
 55 may be actuated or adjusted to different positions.

For the sake of simplicity I have illustrated only the bank of special keys in the drawings; but it will be readily understood that the
 60 amount-keys and their coöperating devices operate substantially like the special keys and as described in the said patent, with the exception, of course, that the amount-keys do not control either the drawer-latches or the
 65 flash-latch. I also contemplate employing

multiple counters in connection with my present invention for keeping the accounts of the different clerks separated.

Any suitable different-toned bells may be used in connection with the several drawers
 70 to indicate audibly which drawer is being opened for any particular transaction.

For the sake of illustration I have shown my present invention as including a flash for the indicators which is controlled by the keys,
 75 so that when the cash-drawer is released the regular function of the indicators will be ineffective until after the machine has been regularly operated. It will be understood, how-
 80 ever, that devices controlled by the special keys might also be applied to the printer or the register to prevent an effective performance of their functions until after the regular operation of the machine. This might also
 85 be extended to the alarms, so that no signal would be sounded after the cash-drawer has been opened until the regular operation of the machine is completed. Therefore if a
 clerk were seen at the machine and no alarm
 90 was sounded it would be at once apparent that he had not effected the operations of registering, indicating, and printing the transaction. In other words, the invention is of
 such breadth as to include any devices which
 95 upon the opening of any one of a series of cash-receptacles will render any of the regular functions of a cash-register ineffective and indicative of fraud until after the regular operation of the machine.

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

1. In a cash-register, the combination with a series of cash-receptacles, of a series of indicators, means for operating the indicators,
 105 mechanism for concealing the indicators when any one of the cash-receptacles is released, and devices for releasing the receptacles independently of the indicator-operating means.

2. In a cash-register, the combination with
 110 a series of cash-receptacles, of a series of indicators, means for operating the indicators, devices for concealing the indicators, and means for causing the opening of the respec-
 115 tive receptacles and the operation of the concealing means independently of the indicator-operating means.

3. In a cash-register, the combination with a series of cash-receptacles, of a series of indicators, means for operating the indicators,
 120 means for concealing the indicators, and devices for releasing the cash-receptacles arranged to control the concealing means independently of the movement of the indicator-
 125 operating means.

4. In a cash-register, the combination with a series of cash-drawers, of a series of indicators, means for operating the indicators, in-
 130 dication-concealing means and devices for releasing the cash-drawers arranged to control

the concealing means independently of the movement of the indicator-operating means.

5. In a cash-register, the combination with an operating mechanism, of a series of cash-receptacles, a series of indicators, means for concealing the indicators, devices for releasing the cash-receptacles and controlling the concealing means independently of the movement of the operating mechanism, and a connection between the concealing means and the operating mechanism.

6. In a cash-register, the combination with a series of cash-drawers, of a series of indicators, means for operating the indicators, a flash for said indicators, and a series of keys for releasing the cash-drawers and controlling the flash independently of the movement of the indicator-operating means.

7. In a cash-register, the combination with a series of cash-drawers, of a series of indicators, indicator-operating mechanism, a flash for the indicators, a series of keys for releasing the cash-drawers, and means intermediate the keys and the flash for causing the latter to conceal the indicators when any one of the keys is operated and independently of the operation of the indicators.

8. In a cash-register, the combination with a series of cash-receptacles, of a series of indicators, indicator-operating mechanism, concealing devices for said indicators, a printing mechanism, a series of controlling elements, and mechanism intermediate said elements and the cash-receptacles, printer, indicators and concealing devices for releasing the receptacles and the concealing devices without operating the indicators.

9. In a cash-register the combination with a series of cash-drawers, of a series of indicators, concealing-flashes for the indicators, a printing mechanism, and a series of keys for controlling the cash-drawers, the printing mechanism and the flashes.

10. In a cash-register the combination with an operating mechanism, of a series of cash-receptacles, a series of indicators, a flash for the indicators, and a series of keys arranged to release the receptacles and drop the flash independently of the regular operation of the machine.

11. In a cash-register the combination with a series of cash-receptacles, of a series of indicators, flashes for the indicators, a latch for holding the flashes away from the indicators, and means for exposing the desired receptacle and tripping said latch.

12. In a cash-register the combination with a series of cash-receptacles, of a series of indicators, flashes for the indicators, a printing mechanism, a latch for the flashes, and a series of keys for releasing the cash-receptacles, tripping the latch and controlling the printing mechanism.

13. In a cash-register the combination with a series of cash-receptacles, of a series of indi-

cators, flashes for the indicators, a printing mechanism, a series of controlling-keys for the printing mechanism and indicators, an operating mechanism for setting the indicators and operating the flash, controlling means intermediate the keys and flash, and devices operated by the keys for releasing the cash-receptacles.

14. In a cash-register the combination with a series of cash-receptacles, of a series of indicators, means for concealing the indicators, and devices for determining which receptacle will be opened, arranged to release the concealing means.

15. In a cash-register the combination with a series of cash-drawers, of a series of indicators, a flash for the indicators, an operating mechanism for setting the flash, and a drawer-selecting mechanism arranged to trip the flash.

16. In a cash-register, the combination with a series of cash-receptacles, of a series of indicators, flashes for the indicators, a printing mechanism, and a selecting means controlling the receptacles and printing mechanism and arranged to release the flash.

17. In a cash-register the combination with a series of cash-drawers, of an indicator, a flash for the indicator, a series of keys controlling the indicator, means for controlling the flash operated by the keys, a printing device also controlled by the keys, and a series of drawer-latches connected to the keys.

18. In a cash-register the combination with an operating mechanism, of printing devices for printing the amounts, a series of cash-receptacles, a series of indicators, a series of special keys for controlling the cash-receptacles, a flash, containing means intermediate the special keys and flash, and a special printing device controlled by the special keys.

19. In a cash-register the combination with an operating mechanism, of a series of cash-drawers, a series of indicators for indicating the amounts and the clerk's designation, a flash for the indicators, a printing mechanism for printing the amounts and the clerk's designation, and a series of keys for releasing the cash-drawers and tripping the flash.

20. In a cash-register the combination with a series of indicators, of a flash, an operating mechanism for raising the flash, a latch for securing the flash in its raised position, a series of keys, means common to said keys for controlling the latch, and a series of cash-receptacles controlled by the keys.

21. In a cash-register the combination with a series of cash-drawers, of a series of indicators, flashes for the indicators, latches for the cash-drawers, a series of keys, independent means connecting the keys to their respective latches, and means operated by the keys for tripping the flashes.

22. In a cash-register the combination with a series of cash-receptacles, of a series of indicators, a flash for the indicators, a series of

keys for controlling the receptacles, means operated by the keys for releasing the flash, and printing devices operated by the keys.

23. In a cash-register the combination with
5 a series of cash-receptacles, of a series of indicators, a flash for the indicators, a printing mechanism including a series of independent type-carriers, a series of keys for controlling the cash-receptacles, means operated by the
10 keys for releasing the flash, and means connecting the keys independently to their respective type-carriers.

24. In a cash-register the combination with
15 a series of cash-receptacles, of a printing mechanism for printing the amounts and the clerk's designation, an operating mechanism for the amount-printing devices, keys for controlling said mechanism and keys for controlling the cash-receptacles and operating the special
20 clerk's designation-printing devices.

25. In a cash-register the combination with
25 a series of cash-receptacles, latches for the same, a series of special keys having projecting pins, a series of pivoted levers having cam-slots into which the pins project, and means connecting said levers to their respective latches.

26. In a cash-register the combination with
30 the main operating mechanism, a series of keys, an indicator controlled by the keys and actuated by the operating mechanism, a detent for the keys actuated by the operating mechanism, a series of cash-receptacles, and latches for said receptacles controlled by the
35 keys alone.

27. In a cash-register the combination with
40 a series of cash-receptacles, an indicator for the same, an operating mechanism for said indicators, and a series of keys which alone control the cash-receptacles and also limit the movements of the indicators.

28. In a cash-register the combination with
45 a series of cash-receptacles, of a series of latches for the same, a series of keys arranged to operate the latches when fully depressed, means for arresting the keys in intermediate positions in which the latches will not be operated, and accounting devices coöperating with the keys when in their intermediate po-
50 sitions.

29. In a cash-register the combination with

a series of receptacles, of a series of latches for the same, a series of keys arranged to operate the latches and again free the same upon being released, an operating mechanism, means
55 controlled thereby for preventing the full return of the keys and accounting devices coöperating with the keys.

30. In a cash-register the combination with
60 a series of cash-drawers, of a series of latches for the same, a series of keys for operating said latches independently of the regular operation of the machine, an indicator, and means controlled by the keys for preventing the completion of the indication until after
65 the regular operation of the machine.

31. In a cash-register the combination with
70 the register proper, including indicating and printing mechanisms, of a series of cash-receptacles, setting means for controlling the printing and indicating mechanisms, latches for the receptacles operated by the setting devices, and means operated by the setting devices for rendering one of the regular functions of the machine ineffective until after the
75 regular operation of the machine.

32. In a cash-register the combination with
80 registering, indicating and printing mechanisms, of a series of cash-receptacles, latches for said receptacles, a series of keys for operating the latches, and means operated by the keys for rendering one of the regular functions of the machine ineffective until after the operation of the machine.

33. In a cash-register, the combination with
85 an operating mechanism, of accounting devices connected thereto, a series of independent cash-receptacles, latches for said receptacles, means independent of the operating mechanism for actuating the latches to open
90 the receptacles, and means intermediate the latches and the operating mechanism for preventing the relatching of any one of the receptacles after it is opened until the operating mechanism has first been operated to ac-
95 tuate the accounting devices.

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

WILLIAM H. MUZZY.

Witnesses:

J. B. PEYTON, Jr.,

L. E. RICHARDSON.

Correction in Letters Patent No. 773,090.

It is hereby certified that in Letters Patent No. 773,090, granted October 25, 1904, upon the application of William H. Muzzy, of Dayton, Ohio, for an improvement in "Cash-Registers," an error appears in the printed specification requiring correction, as follows: In line 103, page 5, the word "containing" should read *connecting*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 3d day of January, A. D., 1905.

[SEAL.]

F. I. ALLEN,
Commissioner of Patents.