

No. 773,096.

PATENTED OCT. 25, 1904.

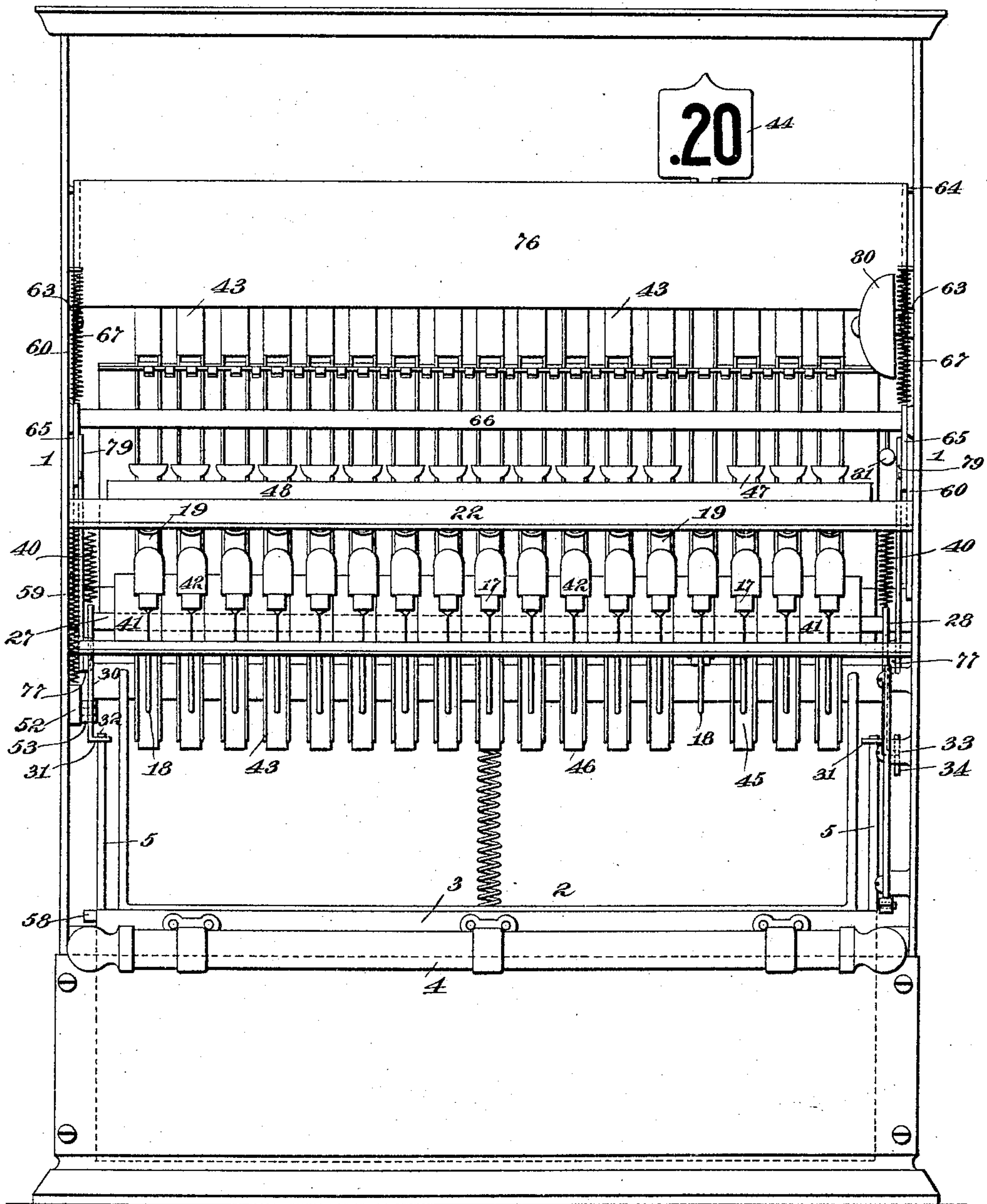
F. C. OSBORN.
CASH REGISTER.

APPLICATION FILED NOV. 18, 1898.

NO MODEL.

5 SHEETS—SHEET 1.

Fig. 1



Witnesses:

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Inventor:

*Francis C. Osborn
 By Rich. H. Ayer*

Att'y.

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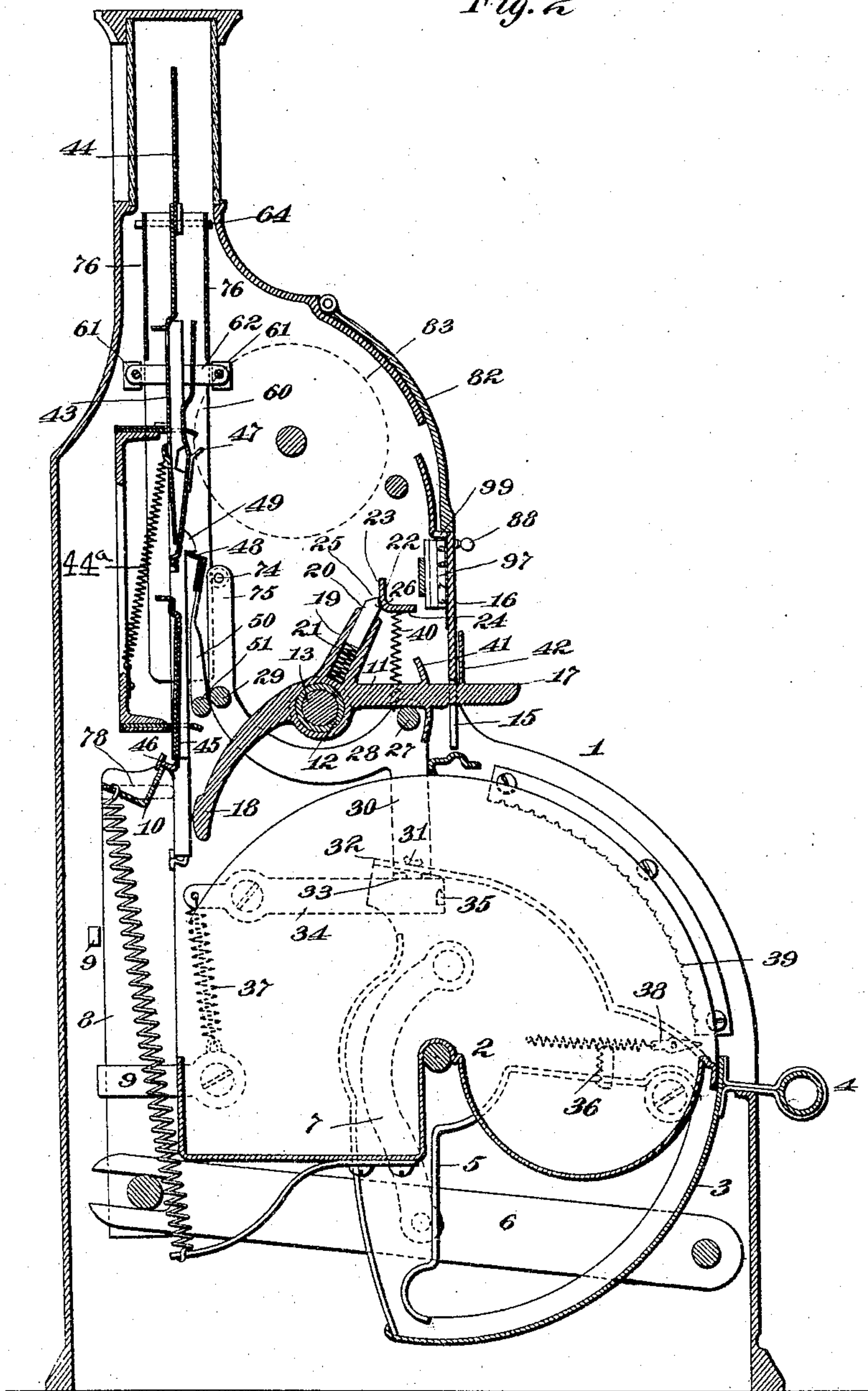
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5 SHEETS—SHEET 2.

Fig. 2



Witnesses:

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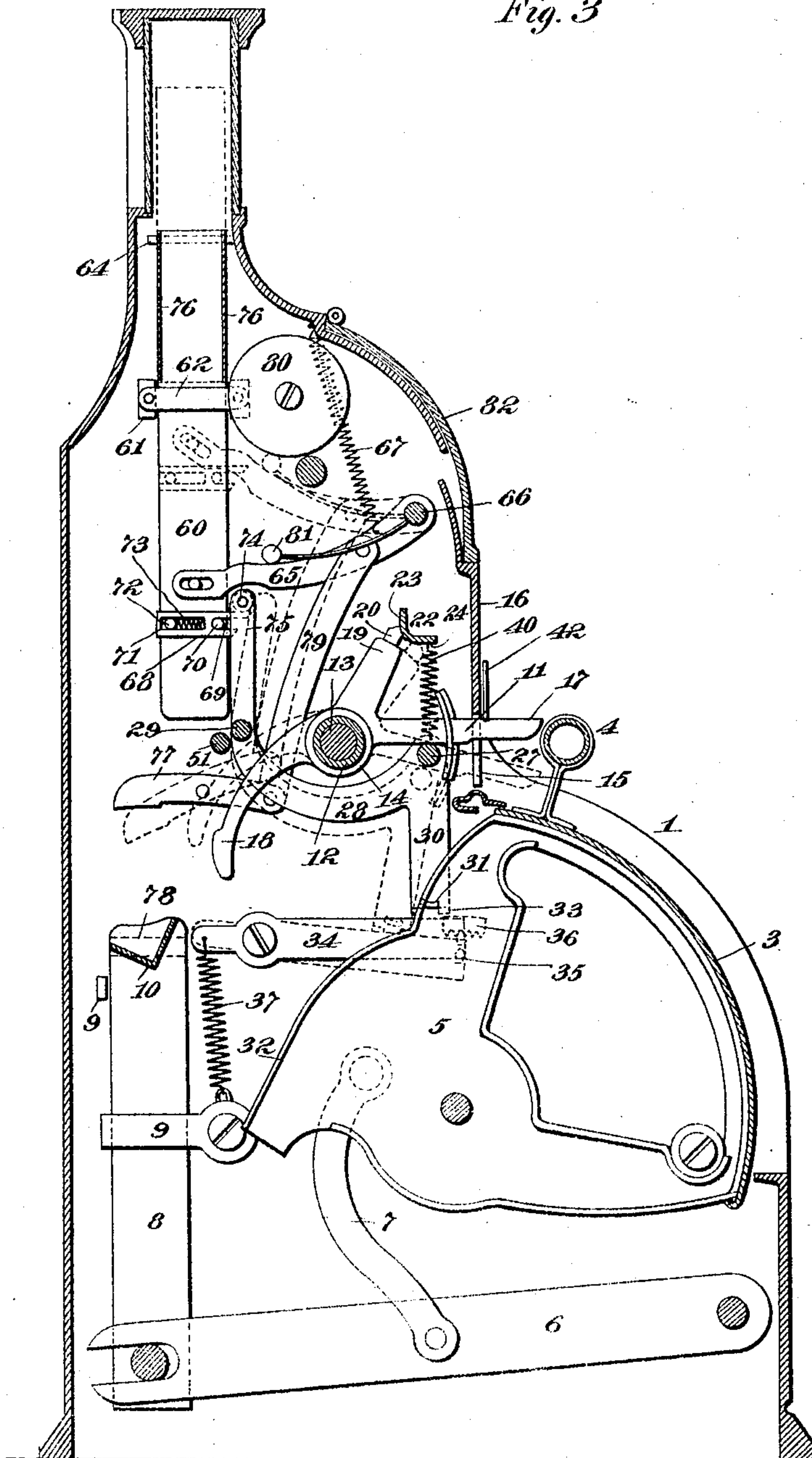
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APPLICATION FILED NOV. 18, 1898.

NO MODEL.

6 SHEETS--SHEET 3.

Fig. 3



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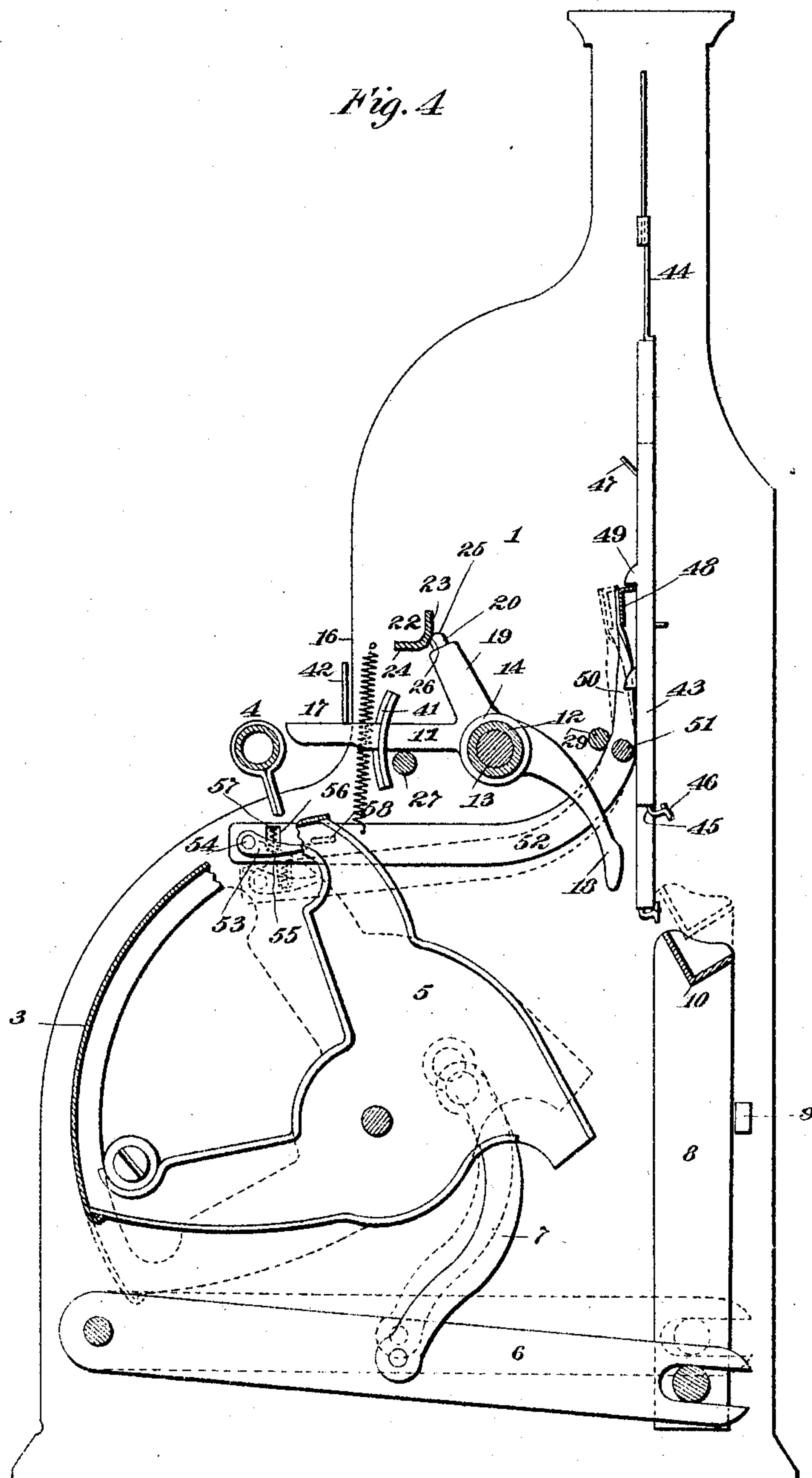
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APPLICATION FILED NOV. 18, 1898.

NO MODEL.

5 SHEETS—SHEET 4.



Witnesses:

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NO MODEL.

5 SHEETS—SHEET 5.

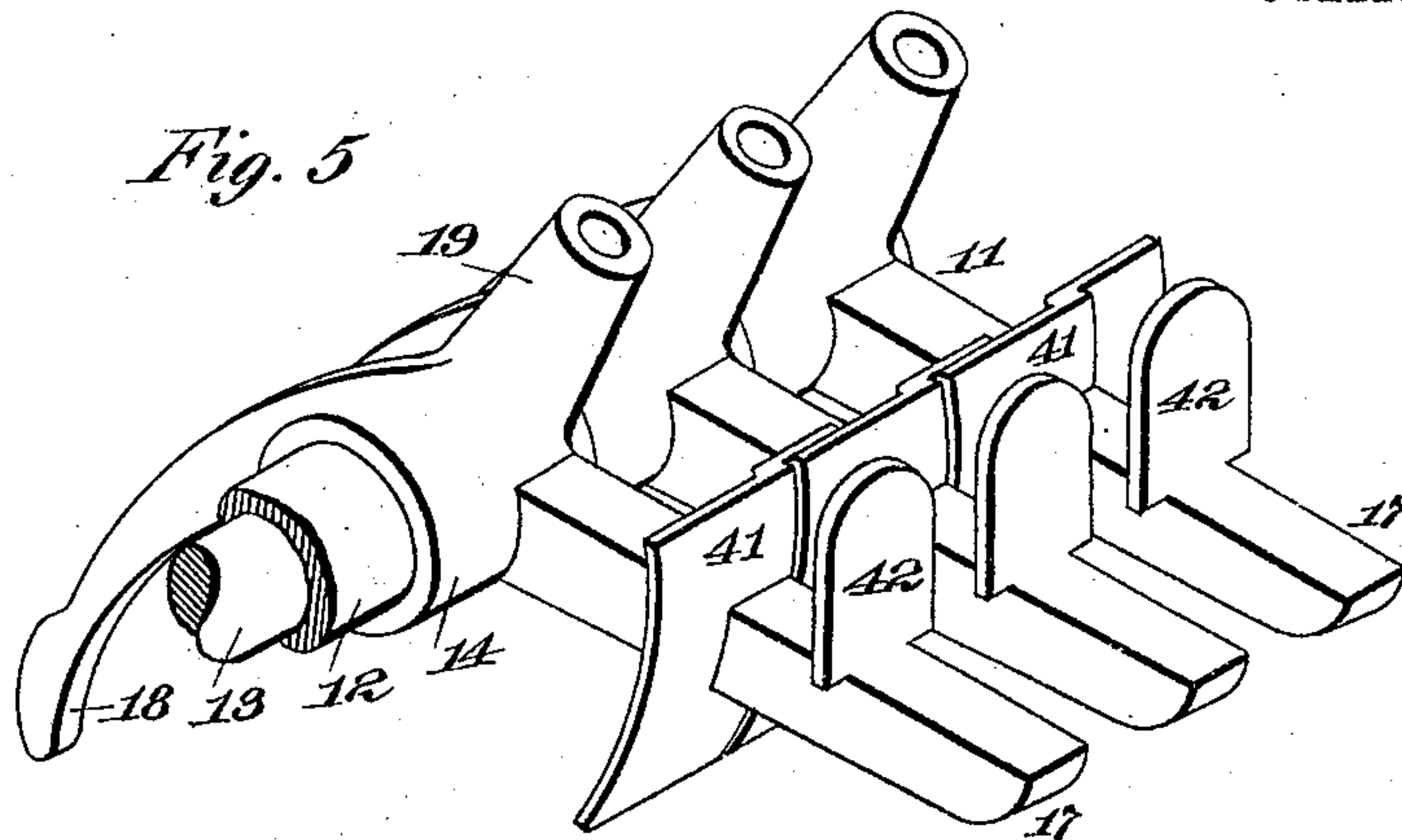


Fig. 6

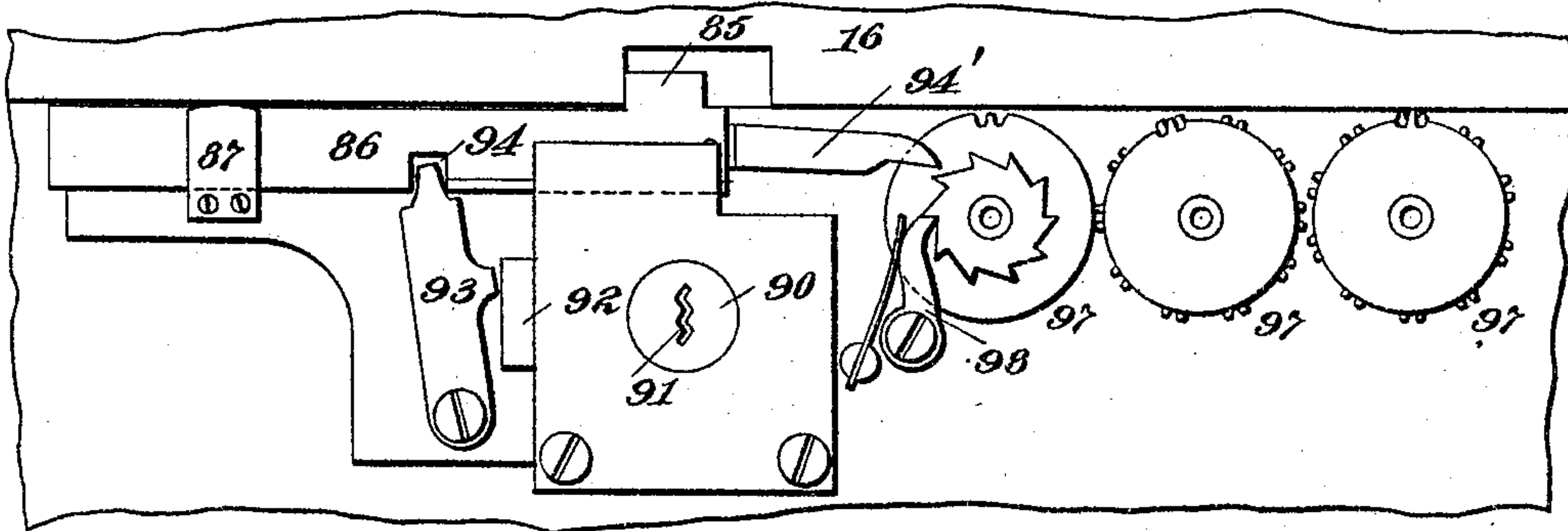


Fig. 7

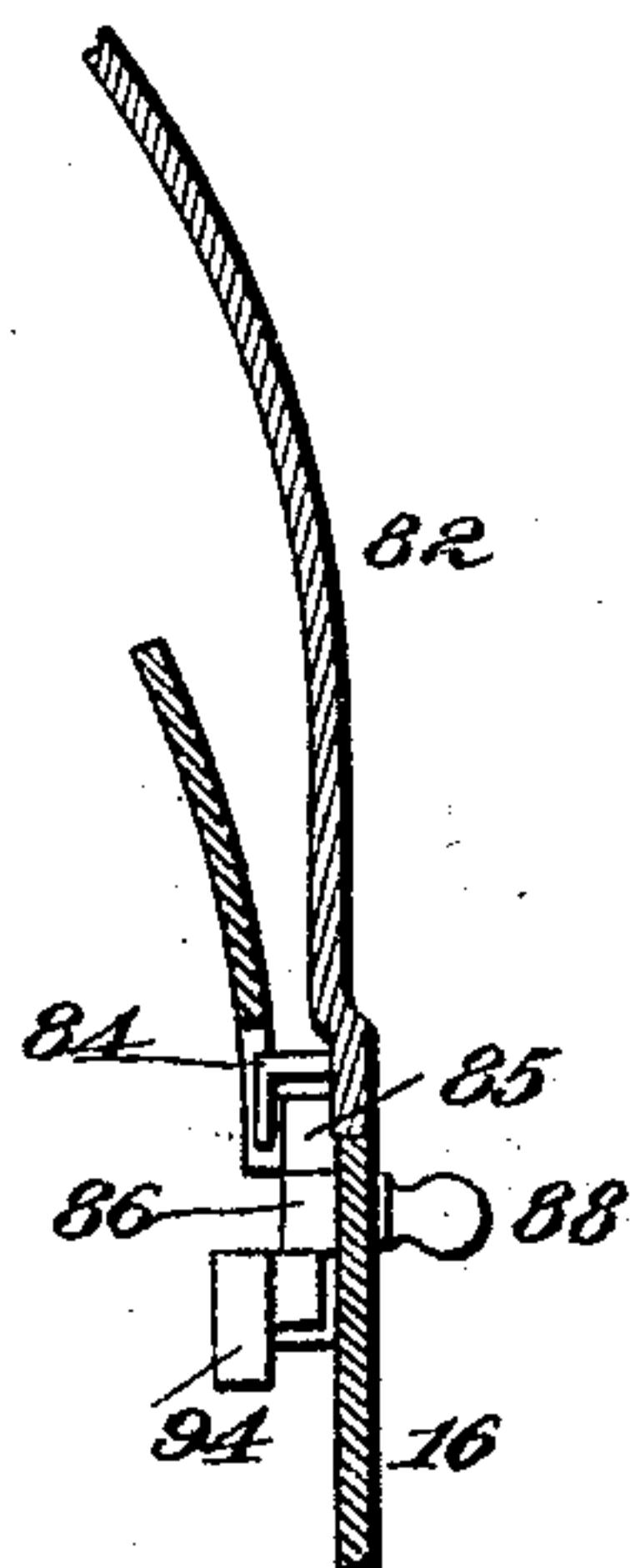
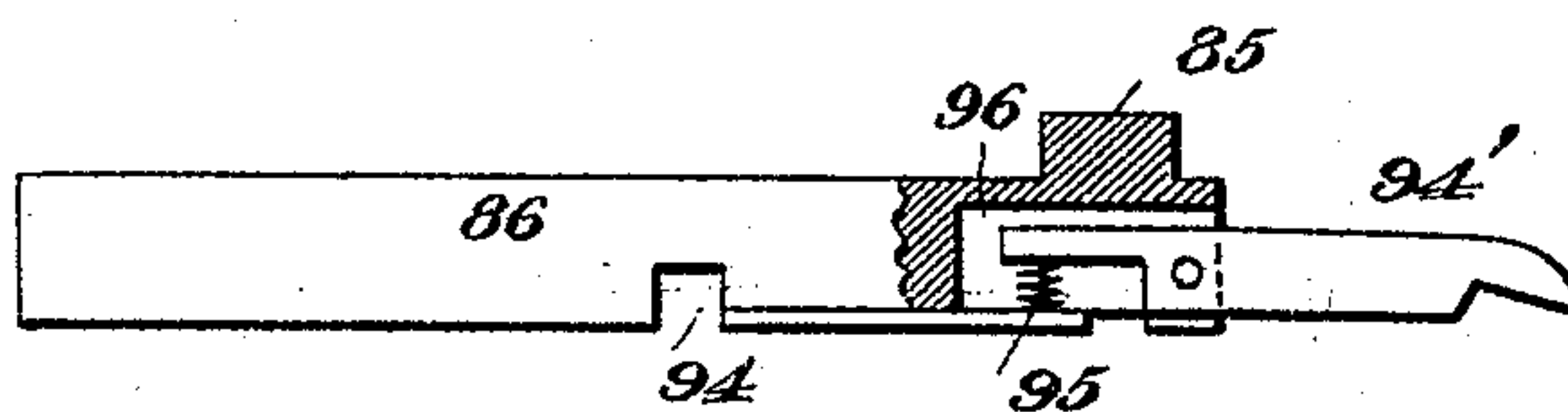


Fig. 8



Witnesses:

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Inventor

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UNITED STATES PATENT OFFICE.

FRANCIS C. OSBORN, OF DETROIT, MICHIGAN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE NATIONAL CASH REGISTER COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 773,096, dated October 25, 1904.

Application filed November 18, 1898. Serial No. 696,760. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS C. OSBORN, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Cash-Registers, of which the following is a specification.

My invention relates to various new and useful improvements in cash-registers, which improvements are especially adapted for use in connection with cash-registers of the type invented by me and forming the subject of patents and applications.

The present improvements are designed to increase the efficiency and simplify the construction of cash-registers.

In my improved cash-registers as they have been heretofore constructed a stationary till was employed having a movable cover adapted to disclose or conceal the till. The movement of this cover operated a tablet-elevating bar by means of which any tablet or indicating-rod corresponding to a depressed key would be moved into an exposed position. With the devices heretofore invented by me the exposed tablets are returned to the concealed or unexposed position upon the depression of any key, the latter operating a universal bar connected with the tablet-locking bar.

In my present improvements I provide for the release of an exposed tablet, whereby it may be moved to a concealed position by the movement of a part independent of the key and operating subsequently to the key movement, which part is preferably the movable till-cover. When, therefore, a key is depressed, it may be returned to its former position without the tripping of an exposed tablet, and by reason of this construction it will in consequence be possible in case an erroneous key is depressed to return that key and to depress the correct key without in any way obliterating the indication of the preceding sale. With my devices as heretofore constructed the depression of a key released the exposed tablet or tablets, so that in case a key is erroneously or inadvertently depressed the

indication of the preceding sale is obliterated. When the machine is so constructed that the exposed tablets will be released by the movement of the till-cover, as is preferable, the parts will be so proportioned that the exposed tablets will be released immediately after the till-cover has commenced to move and when the latter is prevented from returning to its closed position unless a full stroke thereof is made, the release of the exposed tablets taking place also previously to the engagement of the tablet-elevating bar with the tablet or indicating rod or rods which may have been operated by the depressed key or keys, whereby in case a key corresponding to an exposed tablet is depressed the said exposed tablet may be allowed to drop upon the preliminary movement of the till-cover and will then be immediately engaged by the tablet-elevating bar and moved and returned again to its exposed position.

In my present improvements I also provide a novel form of trapping mechanism for maintaining the operated keys in their depressed or other active position, whereby the corresponding tablet rod or bar will be maintained in position to be engaged by the tablet-elevating bar. When this mechanism is used in connection with a cash-register of the Osborn type, the keys will be untrapped or released from their depressed position when the till-cover is completing the final stages of its opening movement and after the tablet-elevating bar has engaged with the proper tablet or tablets. The trapping mechanism which I have invented is simple in its construction and operates to lock the keys positively in their inactive or active positions.

My improved cash-register, in common with most of the cash-registers with which I am familiar, makes use of a universal bar arranged in conjunction with the keys and adapted to be depressed upon the movement of a key to unlock the till-cover or money-drawer. Since the keys project through slots or openings in the casing of the register, there is possibility in previous machines of the till-cover being dishonestly opened by the

introduction of a thin implement through the opening or slot and by which the universal bar which controls the lock for the till-casing or money-drawer may be operated without the effecting of the proper registration.

My present improvements contemplate the employment of devices carried by the keys and effectively concealing the universal bar which operates the lock for the till-cover or money-drawer whereby the said bar cannot possibly be operated in any other way than by the depression of a key. These devices in their preferred form comprise a shield carried by each of the keys, the said shields overlapping the shields of adjacent keys so as to form an impassable barrier between the said universal bar and the slots or openings in which the keys are located.

My present improvements also contemplate the provision of a flash-blind by means of which upon the depression of a key a light screen will be moved to conceal any tablet or tablets which may be moved into view, the said shield also concealing the exposed tablets when the latter are tripped by the operation of a device independent of the keys, as is preferable. This flash-blind is withdrawn from position to conceal the tablets by the movement of a device independent of the keys and operating subsequent to the key movement to complete the operation, either to disclose the till by the movement of its cover or by the opening of the money-drawer or to effect a proper registration or printing. In my improved type of register this flash-blind is withdrawn from position to conceal the tablets by the movement of the till-cover, and in every instance the essential purpose of such a device is to compel a complete operation of the register, since unless the operation is completed the tablets indicating the sale will not be exposed. I am aware that flash-blinds have heretofore been proposed; but to my knowledge such devices have not been arranged to be moved into position to conceal a tablet to be exposed upon the depression of the key and returned so as to expose that tablet by the operation of a device independent of the key and operating subsequently to the key movement. The improved flash-blind mechanism which I have invented is simple in construction and effective in operation and is particularly adapted for use in connection with cash-registers of the Osborn type. Preferably the bell mechanism coöperates with the flash-blind devices, whereby upon the depression of the key and the immediate subsequent movement of the flash-blind the bell will be sounded. This enables me to somewhat simplify the mechanism.

My present improvements also contemplate important changes in the locking mechanism for the lid which normally conceals the register. These lids have heretofore been provided with a small independent register by

means of which it may be indicated if the lid has been moved or tampered with by an unauthorized person. Heretofore it has been proposed to operate the lid-register by the movement of the lid itself or by the movement of the key by which the lid will be normally locked. With the first type of device there is possibility of the connection between the movable lid and its register being tampered with, while with the latter devices it is always necessary that the locking-key shall be available.

In my present improvements I arrange to operate the lid-register by a separate latch, which requires to be moved before the lid can be opened and which will effect a registration of its movement. This latch will be provided with a suitable lock operating in conjunction therewith and by means of which the latch may be locked when desired in its locking position. With this device, therefore, it is not necessary to keep the register lid locked at all times, as it may be simply latched, being thus always available for opening, although each opening movement, or rather the preceding operation of the latch, will be indicated on the register.

My improved cash-register also includes various improvements in the details of construction and arrangement, which will be more fully hereinafter described and claimed. While these details, as well as the important features of the device, are especially adapted for use in connection with the cash-registers which I have invented, they may be employed in other forms of cash-registers and analogous devices.

In the accompanying drawings, which form a part of this specification, I illustrate my present improvements in connection with a cash-register of the Osborn type, illustrating in each instance what I deem the preferable form of the invention.

In the drawings, Figure 1 is a front view with the front of the casing removed; Fig. 2, a vertical section through one of the keys and tablet-rods; Fig. 3, a vertical section taken at one side of the machine to illustrate the mechanism for tripping and resetting the flash-blind; Fig. 4, a vertical section taken at the other side of the machine, illustrating the mechanism for operating the tablet-locking bar by the movement of the till-cover; Fig. 5, a detail view of several of the keys, illustrating the shields; Fig. 6, a rear elevation of a portion of the casing-front, illustrating the latch and lid-register; Fig. 7, a section through the lid and casing-front, and Fig. 8 a detail view of the latch.

In all of the above views corresponding parts are represented by the same numerals of reference.

The cash-register illustrated in the drawings is in many respects similar to the cash-registers which I have heretofore invented,

and most of the parts therefore do not require to be described in detail.

1 represents a suitable casing provided with a stationary money receptacle or till 2 therein. This till is adapted to be closed or disclosed by a cover 3, operated by a handle 4, said cover being pivoted at each side on a swinging frame 5. Pivoted to each side of the register is a lever 6, which connects by a link 7 to the swinging frames 5. Each of the levers operates a vertically-reciprocating bar 8, sliding in guides 9 9, which bars are connected at their upper ends by a tablet-elevating bar 10, made, essentially, right angular in cross-section.

11 11 represent the keys, mounted side by side on a sleeve 12, carried on a rod 13. By means of this construction the keys may be all placed on the sleeve 12 before being assembled in the machine. Each key is provided with a collar 14 thereon, the collars of the adjacent keys abutting together, so as to occupy the entire length of the sleeve 12 and prevent side play. The keys project through and work in slots 15 in the front 16 of the device and at their forward ends are provided with finger-pieces 17, by which they may be depressed. The rear end of each key is extended to form a curved foot 18, which engages with and operates the tablet-bars, as will be explained.

In order to trap the keys and to lock them in their uppermost or in their depressed positions, I make use of the mechanism illustrated particularly in Fig. 2. Each key is provided with a cast hollow lug 19 thereon, in which is mounted a plunger 20, normally maintained in an elevated position by a spring 21 beneath it. The plungers of all the keys cooperate with a bar 22, rigidly connecting the side frames of the register and provided with an essentially vertical face 23 and an essentially horizontal face 24. The forward end of each of the plungers 20 is provided with two faces 25 and 26 thereon, which engage, respectively, with the surfaces 24 and 23 of the locking-bar 22. In order to allow the plungers 20 to be moved easily with respect to the locking-bar, the inner edge of the latter is preferably faceted, as shown, so as to present a wider angle to said plunger. It will be seen that each key will be normally locked in an essentially horizontal or elevated position by the engagement of the faces 25 and 23 and will be locked in a depressed position by the engagement of the faces 26 and 24.

Located beneath the keys 11 is a universal bar 27, connected to the levers 28 at each side of the machine, said levers being mounted on a bar 29, extending across the machine, whereby the movement of both levers 28 will be the same. Each lever 28 is provided with an integral pendent extension 30, having an intumed finger 31, adapted to be engaged by a cam-surface 32, formed on the swinging frames

5 of the till-cover, so that when the till-cover is moved downward to the full extent of its movement the cam-surfaces 32 will engage the fingers 31 to elevate the universal bar 27, returning any key or keys which may have been depressed. One of the extensions 30 is also provided with one or more outturned fingers 33 at its lower end, adapted to engage with a locking-lever 34, so as to depress the latter upon the return of any one of the keys. The locking-lever is provided with a latch-tooth 35, which is adapted to engage with the serrated locking-plate 36, carried on one of the swinging frames 5, such engagement locking the till-cover in its closed position. The locking-lever 34 is normally elevated by means of a spring 37. The till-cover is preferably provided with a double-acting pawl 38, engaging a rack 39, as is common, whereby a full throw thereof is necessary. The universal bar 27 tends to be elevated normally by means of a spring 40.

In order to prevent the introduction of a thin instrument through any of the slots 15 to depress the universal bar 27, and thereby unlock the till-cover, I provide each key 11 with a curved shield 41 thereon, which is arranged directly in front of said universal bar. The portions of each of these shields on both sides of each key are arranged out of line, whereby the shields of the several keys will overlap and will form a practically continuous barrier in front of the universal bar, so that the lock cannot possibly be reached and operated in any other way except by the depression of a key. For a similar purpose each key-lever may be provided with a shield 42, arranged to work in front of the slots 15.

Mounted behind each of the keys is a tablet-bar 43, arranged to travel vertically in a suitable frame and carrying an indicating-tablet 44 at its upper end, said tablet bearing a number or other designating matter corresponding to the key. Each tablet-bar is provided with a spring-actuated arm 45, having a hooked lower end 46 arranged normally out of the path of movement of the tablet-elevating bar 10. The arms 45 are adapted to be engaged by the curved feet 18 of the keys to move the hooks 46 into the path of movement of said tablet-elevating bar, whereby the tablet-rods thus operated may be moved to expose the tablets 44. Each tablet-rod is also provided with a pawl 47 for operating a registering mechanism of any suitable type. In order to lock the tablets in an exposed position when the same have been moved, I employ a tablet-locking bar 48, extending across the machine in front of the row of tablet-rods. Each tablet-rod is provided with one or more teeth 49, adapted to engage the tablet-locking bar. The locking-bar 48 is carried on arms 50, connected to a universal pivot 51, mounted in the side frames of the machine. Connected to the universal pivot 51 at one side of the

machine is an arm 52, arranged between the side of the machine and the adjacent swinging frame 5. This arm carries near its extremity a pivoted cam-pawl 53, carried on a pin 54 and provided with a stud 55, which works in a slot 56, formed in said arm. Mounted in said slot above the stud 56 is a small spiral spring 57 for holding said stud normally in the bottom of said slot. The adjacent swinging frame 5 of the till-cover is provided with a stud 58 thereon, so arranged as to pass beneath the cam-pawl 53 upon the closing movement of the cover to elevate said pawl against the tension of the spring 57. When the stud 58 leaves the said pawl in this closing movement, the inner end of the pawl will be brought to a position below the plane of movement of said stud, whereby when the cover is again opened the stud will engage the upper surface of said cam-pawl, so as to depress the arm 52, swinging the universal pivot 51 and withdrawing the tablet-locking bar 48 from its engagement beneath any of the teeth 49 of the elevated tablets and allowing the tablets to drop under the tension of the springs 44^a. (See Fig. 2.) This engagement between the stud 58 and the cam-pawl 53 takes place immediately upon the commencement of the opening movement of the till-cover. The arm 52 is moved to a normally elevated position by means of a spring 59.

As I have stated, I prefer to make use in my improved cash-register of a flash-blind adapted to conceal a tablet to be exposed, but to be withdrawn to expose the said tablet upon the completion of an operation subsequent to the depression of the key—such, for example, as the movement of the till-cover—thereby compelling the completion of the entire cycle of operations, and the character, construction, and operation of my improved flash-blind mechanism will be described.

Mounted on each of the side plates of the machine is a slide 60, adapted to be movable vertically between guides 61 and being held in place by a cross-strip 62. Each slide 60 is provided with a bent shoulder 63 therein adapted to engage a shoulder 64, cast with the side frame, when the slides have moved to their uppermost position. The slides 60 are caused to move simultaneously by being connected with the two arms 65, secured to the universal pivot-bar 66, extending across the machine. The connection between each arm 65 and its corresponding slide 60 is a pin and slot to accommodate the movements. The slides 60 are elevated when released by means of a spring or springs 67 engaging one or both of the arms 65. One of the slides 60 is provided with a small latch 68 thereon by which the slides will be locked in their normally depressed position to maintain the flash-blind concealed. This latch is provided with an open slot 69, in which a stud 70 works, and with a closed slot 71, in which works a

stud 72. The spring 73 is mounted in the slot 71, working against the pin 72, and tends to maintain the latch 68 normally in the position shown in Fig. 3. The forward end of the latch 68 is inclined downward and rearwardly, as shown. Engaging normally over the latch 68 is a stud 74, carried on an arm 75, which may be and preferably is an extension of the arm 28. When now one of the keys is depressed to move the universal bar 27, the arm 75 will be moved, withdrawing the stud 74 from the latch 68 to allow the slides 60 to be simultaneously moved upward under the influence of the spring 67. When the slides are moved downward, as will be explained, the latch 68 will engage the stud 74, and by reason of the inclined forward surface of said latch it will be moved inward to pass beneath said stud to again lock the slides in their depressed position. The slides 60 carry at their upper ends the flash-blinds 76, which are two parallel strips of thin material, such as sheet metal, adapted to be elevated to conceal the tablet to be exposed and in the case of the present machine to conceal also the already-exposed tablet, which has not been returned to its unexposed position by the movement of the till-cover. It is of course obvious that when the tablets are not observable from both sides of the machine only one of the flash-blinds 76 need be used to cut off the view. Obviously the flash blind or blinds require to be moved downward to allow the elevated tablets to be exposed when the operation of the machine has progressed so far that the cycle of movements must be completed. The flash-blinds are therefore lowered by a part operating not only subsequently to the depression of the key, but also subsequently to the preliminary movement of the cover. Preferably this part is the tablet-elevating bar 10. I therefore arrange a lever 77 with its forward end in the path of movement of a shoulder 78, carried on one of the slides 8, which lever 77 is connected at its other end to the arm 65 by a connecting-arm 79, so that when the tablet-elevating bar 10 is moved upward the lever 77 will be tilted, drawing down the arm 65, lowering the slides 60 and the flash-blinds 76 and locking the slides by the engagement of the latch 68 beneath the stud 74.

Preferably the device is provided with a bell, which is sounded upon the depression of a key to indicate to the purchaser that proper recognition is being taken of his purchase. A convenient arrangement is to place a bell 80 on one of the side frames of the machine between one of the slides 60 and the universal pivot 66 and to carry the hammer 81 of the bell either from said pivot or from the adjacent arm 65, so that the preliminary movement of the key not only releases the slides 60, but the upward movement of said slides causes the hammer 81 to sound the bell 80.

I have referred herein to the registers which are operated by the upward movement of the tablet-bars, as is very common in this art. These registers are normally concealed by a swinging lid 82, arranged immediately over the register-wheels 83 and provided at the lower end of said lid with a finger 84. This finger is adapted to be engaged by a latch 85, carried on a horizontally-sliding bolt 86, mounted in the front 16 of the casing immediately below the lid 82. The said bolt 86 is carried in suitable guides 87 on the back of the casing-front and is provided with a finger-piece 88, working through a suitable slot 89, formed in said front.

90 is a lock mounted immediately below the bolt 86, said lock being adapted to be operated by a key introduced in a keyhole 91 in the front of the machine. The bolt 92 of said lock is adapted to engage a lever 93, the upper end of which works in a recess 94, formed in the bolt 86. It will be observed that when the lock-bolt 92 is withdrawn the latch-bolt 86 is free to be moved back and forth by the finger-piece 88 engaging and disengaging the finger 84 and locking or unlocking the lid 82. When, however, the lock-bolt 92 is thrown, the latch-bolt 86 cannot be moved, and the lid 82 will thus be locked in its closed position. Furthermore, it will be seen that if the latch 86 is placed in an unlocked position the operation of the lock 90, causing its bolt 92 to be moved outward, will operate the lever 93 to shift the latch-bolt 86, and thereby lock the lid 82. The forward end of the latch-bolt 86 carries a pawl 94', the end of which is normally impelled downward by a spring 95, working in a recess 96, formed in said bolt. This pawl engages with and operates a set of register-wheels 97 of any suitable type, return movement of which is prevented by a pawl 98. The wheels of the register 97 are observed through an opening 99, formed in the front 16 of the register-case.

The operation of the device is as follows: The depression of one of the keys 11 or the simultaneous depression of a plurality of such keys moves the universal bar 27 downward, causing the finger or fingers 33 on the extension 30 to engage the lever 34 and withdraw the tooth 35 from the serrated plate 36. This unlocks the cover. The key in moving causes the plunger 20 thereof to be forced inward as it passes the corner of the locking-bar 22, and after passing said corner the plunger will be moved outward, whereby the surface 25 thereof will engage with the surface 24 of said locking-bar. This engagement will hold the depressed key in that position. The movement downward of the universal bar 27 swings the arms 28, partially rotating the universal pivot-bar 29 and causing the stud 74 to be withdrawn from the latch 68 of the flash-blind slide 60. Both flash-blind slides being thus released, the spring 67 elevates the arm 65, to

which it is connected, and through the universal pivot-bar 66 the slides 60 will be elevated, bringing the flash-blind 76 into the line of vision and cutting off the view of the tablet or tablets to be exposed. The depression of the key also causes the spring-arm 45 of the corresponding tablet-bar to be moved, carrying the hooked lower end thereof into the path of movement of the tablet-elevating bar 10. The till-cover is now swung open by the handle 4, moving the swinging plates 5 on their pivots and elevating the arms 6. The movement of these arms causes the slides 8 to be lifted, carrying the tablet-elevating bar 10 upward into engagement with the hooks 46 of any tablet-bars which may have been operated. The continued movement of the tablet-elevating bar 10 will therefore elevate all the tablets corresponding to the depressed key or keys, and said tablet-bars will be elevated until the teeth 49 engage over the tablet-locking bar 48, when they will be held in their exposed position. As the tablet-elevating bar 10 moves upward the shoulder 78 thereof engages the lever 77, tilting the latter and operating the arm 65, carrying the slides and flash-blinds downward out of view and exposing the elevated tablets. The release of the slide 60 by the operation of the universal bar 27 under the effect of the depressed key causes the hammer 81 to strike the bell 80 and sound the latter. As the till-cover completes its downward movement the cam-surfaces 32 on the swinging plates 5 engage the fingers 31 of the extensions 30, elevating the universal bar 27 and returning the depressed key or keys to its or their normal position, in which movement the plungers 20 of the depressed keys will ride over the corner of the locking-bar 22 and resume the position shown in Fig. 2, with the surfaces 26 and 23 in engagement. Upon the return movement of the cover no operation takes place, except, of course, the engagement of the double-acting pawl 38 with the rack 39 and of the tooth 35 with the serrated plate 36 to lock the cover in its closed position. When a second sale is made, a key is depressed and the operations referred to are repeated. The preliminary movement of the till-cover, however, causes the stud 58 to engage the upper surface of the cam-pawl 53, depressing the arm 52, swinging the universal pivot 51, and withdrawing the tablet-locking bar 48, whereby the previously-exposed tablet or tablets will be returned by the effect of gravity or the aforesaid spring tension. This returning of an exposed tablet takes place during the time the flash-blinds are elevated and the tablets are concealed from view. Upon the return movement of the till-cover the stud 58 moves beneath the cam-pawl 53, elevating the lock and not in any way affecting the engagement between the tablet-locking bar and any elevated tablet or tab-

lets. When it is desired to examine the register-wheels 83 for any purpose, the lock 90 is operated, withdrawing the bolt 92 from engagement with the lever 93. The finger-piece 5 88 may now be moved to disengage the latch 85 from the finger 84, whereby the lid 82 may be elevated to expose the register-wheels. In this movement of the latch-bolt 86 the pawl 94 will engage the register-wheels 97, advancing said wheels one step. If desired, the lid 10 82 may be thus locked by means of the latch 85 alone, since the said latch cannot be operated to unlock the said lid without changing the positions of the register-wheels 97. 15 If the lock-bolt 92 is operated, when the latch 85 is disengaged from the finger 84 the movement of said lock-bolt forces the lever 93 to one side, thereby moving the latch-bolt 86 and causing the latch 85 to engage the said 20 finger. In this way it will be impossible to lock the latch 85 in any other than the proper position thereof.

Having now described my invention, what I claim as new, and desire to secure by Letters 25 Patent, is as follows:

1. In a cash-register, the combination with a key, of a tablet, means operated by the key to set the tablet for exposure, means for exposing the tablet, a device for concealing the 30 tablet arranged to be released by the key, and means for automatically moving the concealing device to conceal the indicator when it is so released.

2. In a cash-register, the combination with 35 a key and tablet, means operated by the key to set the tablet for exposure, means for exposing the tablet, and means released by the key and automatically operating after a partial movement of the key to conceal the tablet.

40 3. In a cash-register, the combination with a series of keys, of tablets arranged to be set for operation by said keys, means for moving the set tablets to indicating position independently of the keys, a latch for holding the indicators in exposed positions, and means inde- 45 pendent of the keys for releasing the indicators so that they may return to their normal positions.

4. In a cash-register, the combination with 50 a money-receptacle, a key and a tablet, of means operated by the key to allow for the exposure of said tablet, and means controlled by the preliminary exposure of said money-receptacle to effect the concealment of said tablet, 55 substantially as set forth.

5. In a cash-register, the combination with a money-receptacle, of a series of keys, a series of tablets arranged to be set for operation by said keys, means for raising the tablets to indicating position, a device for concealing the 60 indicators, and means controlled by the money-receptacle for moving the concealing device to expose the indicators.

6. In a cash-register, the combination with 65 a fixed money-receptacle, a movable cover

therefor, a key and a vertically-movable tablet, of means controlled by the key for allowing for the exposure of the tablet, and means controlled by said movable cover for concealing the tablet, substantially as set forth. 70

7. In a cash-register, the combination with a fixed money-receptacle, a movable cover therefor, a key and a vertically-movable tablet, of means controlled by the key and operated by the movable cover for exposing the 75 tablet, and tablet-concealing means controlled by the cover, substantially as set forth.

8. In a cash-register, the combination with a money-receptacle, a movable cover therefor, a key and a tablet, of means controlled by the 80 key and operated by the movement in one direction of the cover to expose the tablet, and tablet-concealing means controlled by the same movement of the cover, substantially as set forth. 85

9. In a cash-register, the combination with a fixed till, a swinging cover, a key and a vertically-movable tablet, of means controlled by the key and operated by the swinging cover to expose the tablet, and tablet-concealing 90 means controlled by the cover, substantially as set forth.

10. In a cash-register, the combination with a till, a movable cover therefor, a series of keys and a series of tablets corresponding to 95 the keys, of means controlled by the keys and operated by the movement in one direction of the cover to expose a tablet, and tablet-concealing means controlled by the same movement of the cover, substantially as set forth. 100

11. In a cash-register, the combination with a stationary till, a movable cover therefor, a key, a vertically-movable tablet and a tablet-locking bar, of means controlled by the key and operated by the movable cover for exposing 105 the tablet, and means operated by the cover for actuating said locking-bar to allow any exposed tablets to be concealed, substantially as set forth.

12. In a cash-register, the combination with 110 a stationary till, a swinging cover, a key, a vertically-movable tablet and a tablet-locking bar, of means controlled by the key to allow for the exposure of the tablet, and means controlled by the cover for operating the lock- 115 ing-bar to conceal exposed tablets upon the commencement of the movement of said cover, substantially as set forth.

13. In a cash-register, the combination with a till, a swinging cover keys, tablets and a 120 locking-bar common to all of said tablets, of an arm carried by said locking-bar, a cam-pawl on said arm, and a stud on the cover for engaging said cam-pawl, substantially as set forth. 125

14. In a cash-register, the combination with a key, a tablet, a flash-blind, a till and a movable cover, of means operated by the key for allowing the flash-blind to conceal the tablet 130 when exposed, and means operated by the

cover to conceal the flash-blind and expose the tablet, substantially as set forth.

15. In a cash-register, the combination with a key, a tablet, a flash-blind, a till and a movable cover, of means controlled by the key for exposing the flash-blind, and means controlled by the cover for subsequently concealing the flash-blind and exposing the tablet, substantially as set forth.

16. In a cash-register, the combination with a money-receptacle of a key, a tablet arranged to be set for operation by said key, means for moving the tablet to exposed position independently of the key, and means controlled by the initial exposure of the money-receptacle for returning the tablet to its normal concealed position.

17. In a cash-register, the combination with a key and a tablet, of a locking-bar for the key having two surfaces disposed in different planes, and a lock on the key for engaging successively the surfaces of said locking-bar to hold the key in one or the other of its positions, substantially as set forth.

18. In a cash-register, the combination with a key and a tablet, of a locking-bar for the key having two surfaces disposed in different planes, and a reciprocating plunger carried by the key for engaging successively the surfaces of said locking-bar, substantially as set forth.

19. In a cash-register, the combination with a registering mechanism, of a lid for concealing said mechanism, a latch for locking said lid, a register operated by said latch, and means for locking the latch against unauthorized operation.

20. In a cash-register, the combination with a registering mechanism, of a lid for normally concealing the same, a latch for locking said lid, a key-lock for locking said latch against unauthorized operation, and means for recording the number of times the latch is operated.

21. In a cash-register, the combination with a registering mechanism, of a lid for normally concealing the same, a latch for locking said lid, means for recording the number of times the latch is operated, a lock, including a lock-bolt, and means intermediate the lock-bolt and latch, whereby the latter may be locked against unauthorized operation.

22. In a cash-register, the combination with a series of keys, a series of tablets, a flash-blind, a till and a movable cover, of means operated by one or all of the keys for allowing the flash-blind to conceal a tablet or tablets when exposed, and means operated by the cover to conceal the flash-blind and disclose an exposed tablet or tablets, substantially as set forth.

23. In a cash-register, the combination with a series of keys, of a series of tablets, a flash

flash up in front of the tablets, means for holding the flash down and means for releasing the flash upon the operation of any one of the keys.

24. In a cash-register, the combination with a series of keys, of a series of guards attached to the respective keys and each comprising a guard proper, and an angular extension arranged to project back of the adjoining guard, whereby the guards overlap but the front faces of the same remain in substantially the same plane.

25. In a cash-register, the combination with a series of keys, indicators for the same, a flash for automatically concealing the indicators when released, means operated by any key for releasing the flash, a cash-receptacle, and means for resetting the flash when the cash-receptacle is exposed.

26. In a cash-register, the combination with a series of keys, of a series of indicators for the same, a cash-receptacle having a movable lid, means operated by said lid for elevating the indicators, a flash arranged, when released, to automatically conceal the indicators, means operated by any one of the keys for releasing the flash, and devices operated by the indicator-elevating means for operating the flash.

27. In a cash-register, the combination with a money-receptacle having a movable lid, of a series of keys, a series of tablets arranged to be set for operation by said keys, means for raising the tablets to indicating position, a flash for concealing the indicators, and means controlled by the movable lid for operating the flash to expose the indicators.

28. In a cash-register the combination with a money-receptacle arranged to be exposed at will, a series of keys, a series of indicators, a flash for said indicators controlled by the keys, and means for moving the flash to expose the indicators when the cash-receptacle is exposed.

29. In a cash-register, the combination with a cash-safe having a movable member, a series of keys, and indicators for said keys, of a flash for said indicators controlled by said keys, and means for moving said flash by said movable member to expose the indicators.

30. In a cash-register, the combination with a cash-safe having a movable member, a series of keys, and indicators controlled by said keys, of a flash for said indicators controlled by said keys, and means connected with said movable member for moving said indicators to proper indicating position and moving said flash to expose the indicators.

This specification signed and witnessed this 7th day of November, 1898.

FRANCIS C. OSBORN.

Witnesses:

ANNIE M. GREGORY,
BURT E. KNAPP.