No. 816,066.

PATENTED MAR. 27, 1906.

W. F. BOCKHOFF & E. J. VON PEIN.

CASH REGISTER.

APPLICATION FILED JULY 6, 1903.

4 SHEETS—SHEET 1.

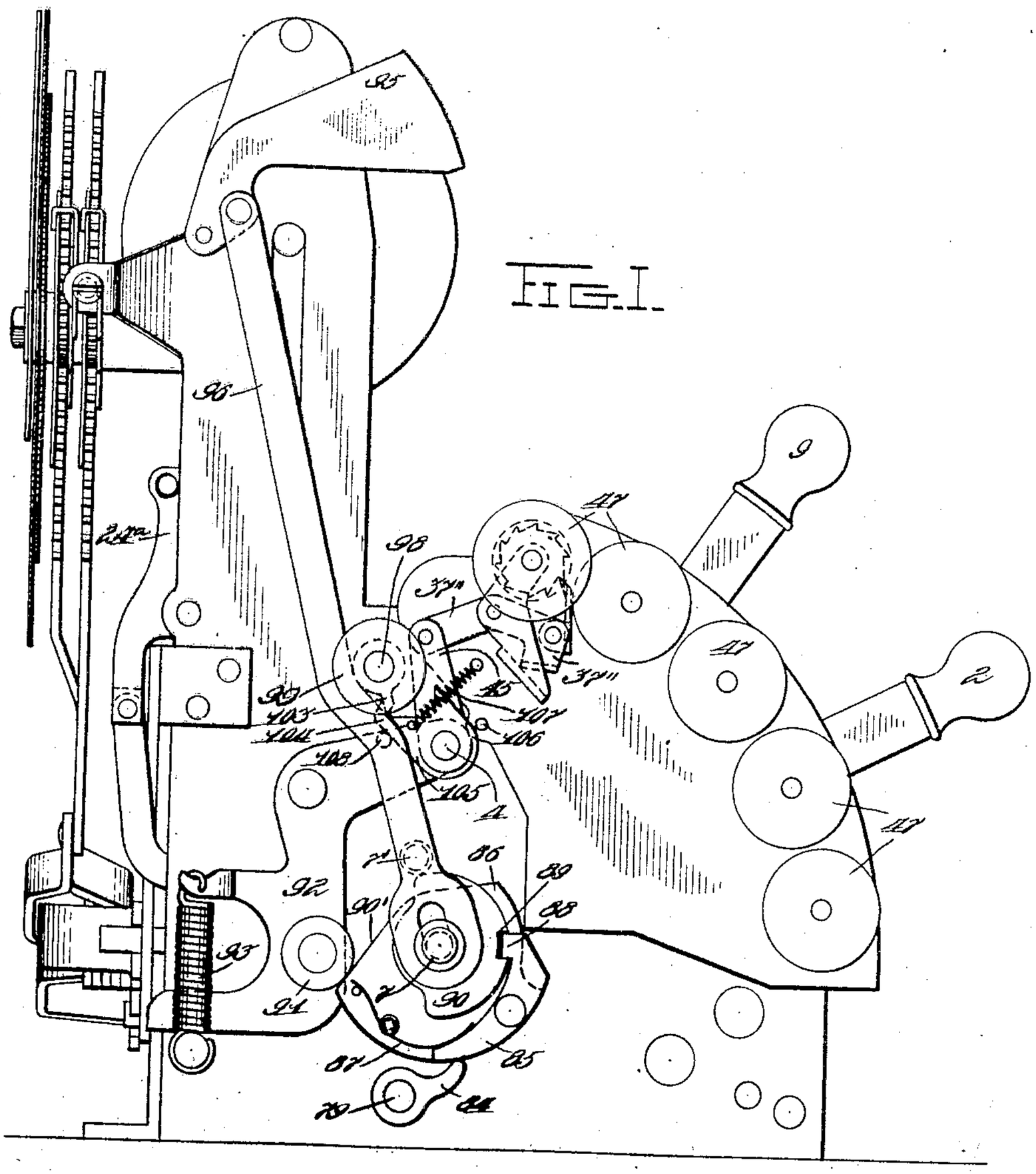

FIG. I.

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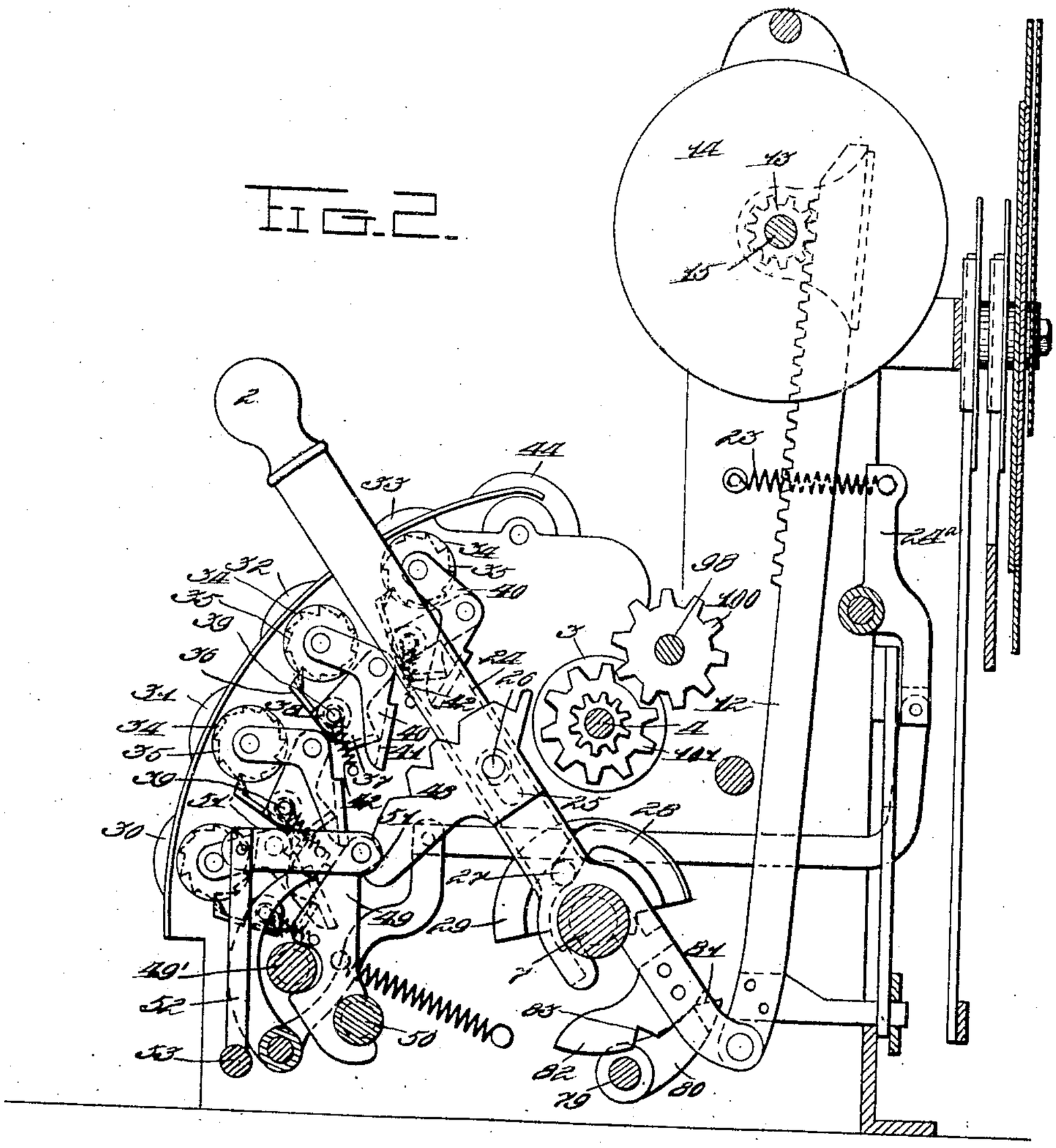
4 SHEETS—SHEET 2.

FIG. 2.



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4 SHEETS—SHEET 3.

FIG. 3.

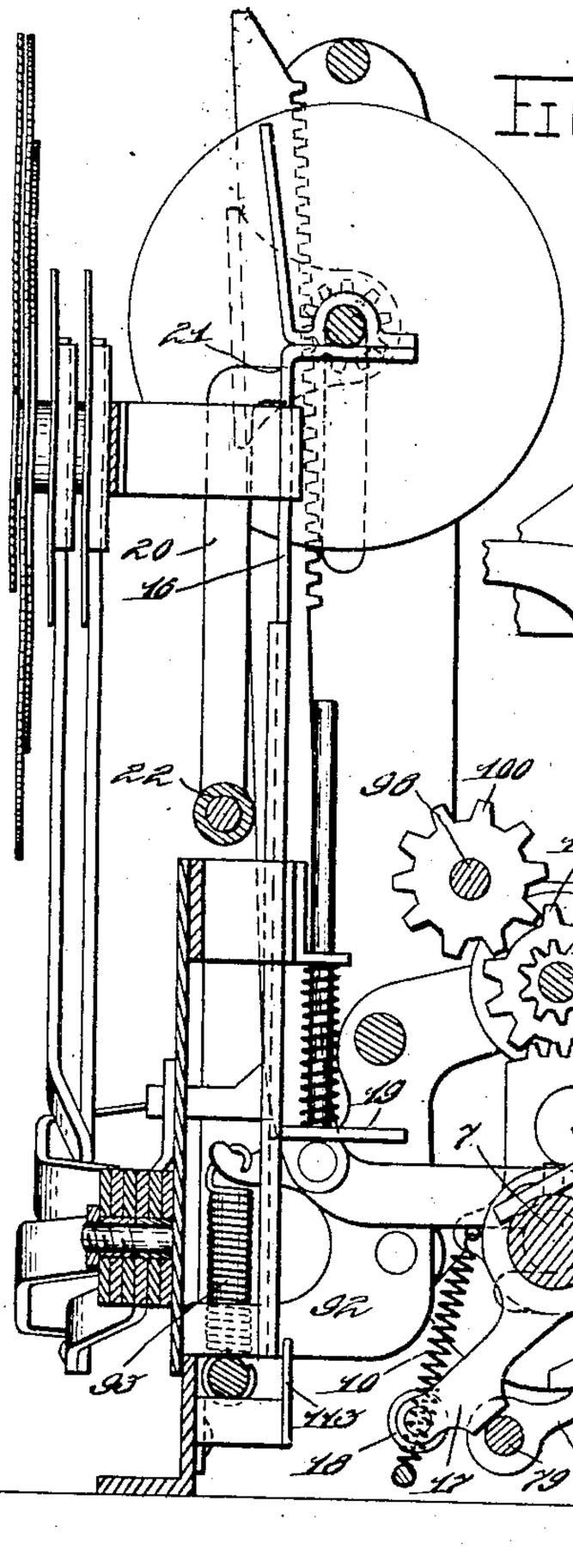


FIG. 4.

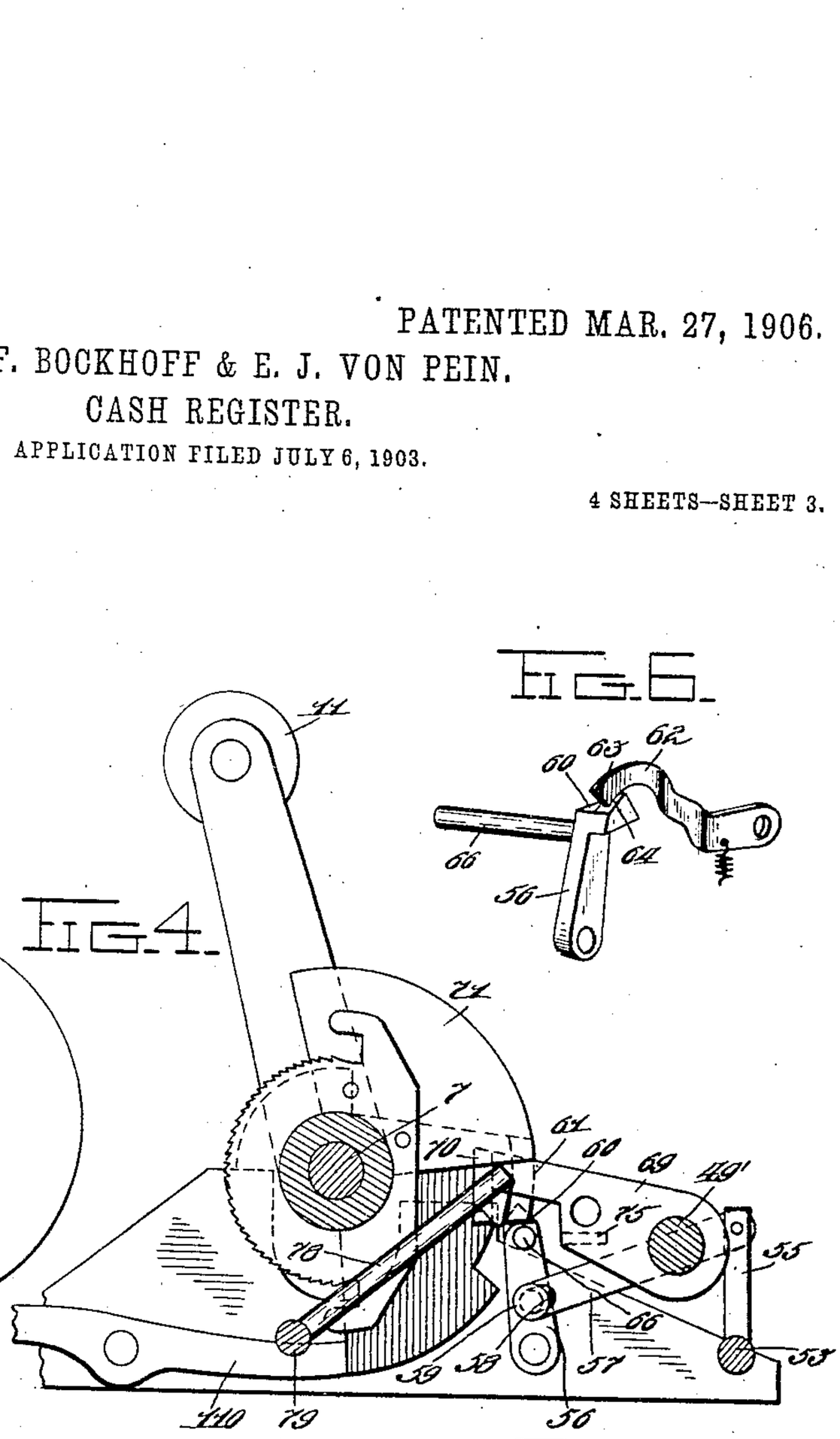
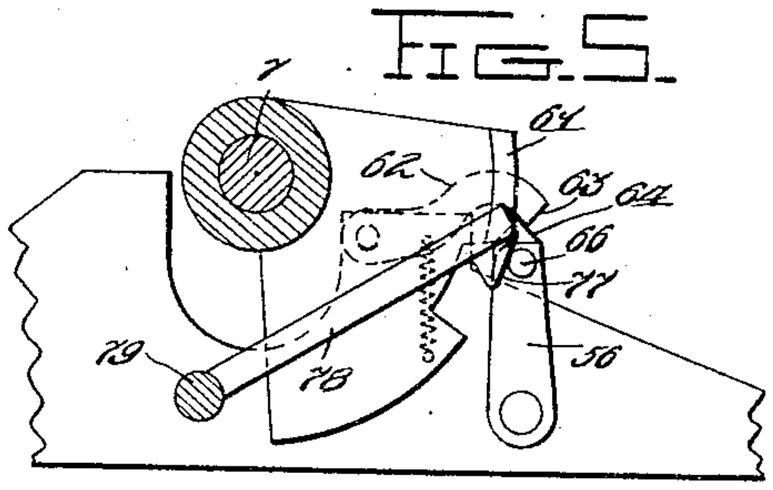


FIG. 6.

FIG. 5.



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4 SHEETS—SHEET 4.

FIG. 7

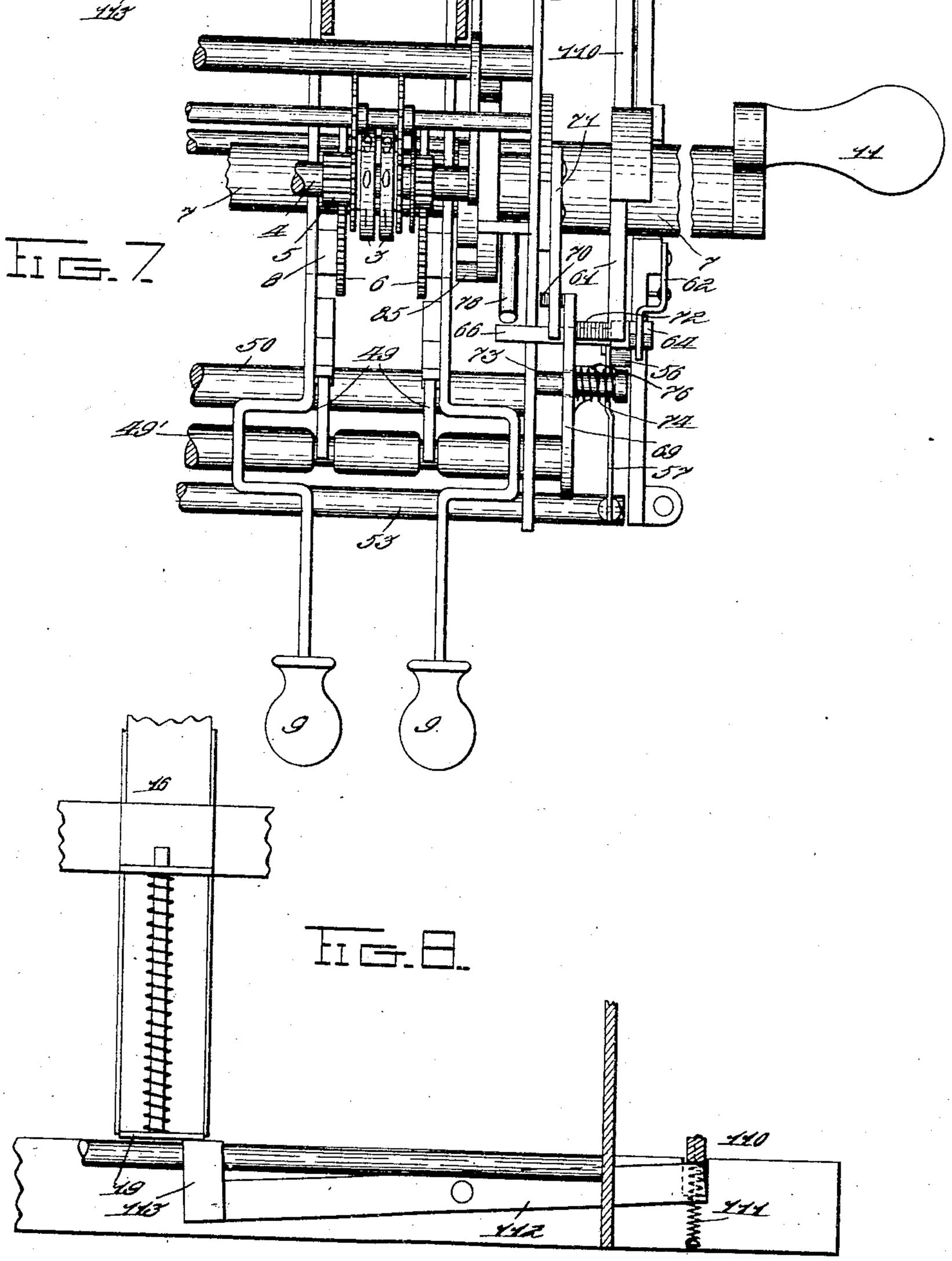

FIG. 8

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UNITED STATES PATENT OFFICE.

WILLIAM F. BOCKHOFF, OF INDIANAPOLIS, INDIANA, AND EDWARD J. VON PEIN, OF DAYTON, OHIO, ASSIGNORS TO NATIONAL CASH REGISTER COMPANY, OF JERSEY CITY, NEW JERSEY, AND DAYTON, OHIO, A CORPORATION OF NEW JERSEY.

CASH-REGISTER.

No. 816,066. Specification of Letters Patent. Patented March 27, 1906.

Application filed July 6, 1903. Serial No. 164,403.

To all whom it may concern:

Be it known that we, WILLIAM F. BOCKHOFF, residing at Indianapolis, county of Marion, and State of Indiana, and EDWARD J. VON PEIN, residing at Dayton, in the county of Montgomery and State of Ohio, citizens of the United States, have invented certain new and useful Improvements in Cash-Registers, of which we 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 Smith and Giles, No. 677,896, July 9, 1901; Giles and Fleming, No. 677,864, July 9, 1901; Albert Pfaff, No. 721,916, March 3, 1903, and Smith and Susstrong, No. 705,619, July 29, 1902.

One of the several objects of the invention is to provide devices for throwing out the counter when it is desired to indicate and print certain transactions without registering the same.

Another object of the invention is to provide counting devices for registering the number of sales of different classes.

A further object is to provide devices to prevent the operation of the machine until the indicators have moved to positions in which they are hidden from view.

The invention also has certain other objects, which will be hereinafter more particularly set forth.

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

In the accompanying drawings, forming part of this specification, Figure 1 represents an end elevation of a machine embodying our invention, the cabinet and the cash-drawer being omitted and the parts set for a cash transaction. Fig. 2 represents a transverse vertical section through the same, taken just to the right of the special counters, the parts being in one of the positions for a special transaction. Fig. 3 represents a similar section through the machine, taken to one side of one of the setting-levers. Fig. 4 represents a detail side elevation of the operating-handle and the locking devices for the same. Fig. 5 represents an enlarged detail side elevation of a portion of said devices in a different position, in which one of the locks is rendered ineffective. Fig. 6 represents an enlarged detail perspective view of one of the locking-pawls and its latching devices. Fig. 7 represents a detail top plan view, partly broken away, of the right-hand end of the machine, illustrating the relative arrangement of the locking devices and operating-handle. Fig. 8 represents an enlarged detail front elevation, partly in section, of the devices for tripping the machine-lock when the indicators move to their lower positions.

In illustrating our present invention we have shown no printing mechanism; but it will be readily understood that any desired form—such, for instance, as that shown in the above-mentioned patent to Pfaff—may be employed.

As many of the parts of the present machine are fully described and illustrated in the aforesaid patents, we will refer to the same for any detail description of the parts that is desired. Described in general terms, however, the machine may be said to comprise a series of setting-levers which when operated set the indicators and registering devices and any suitable type-carriers. After these levers have been set as desired a crank-handle is operated, which results in the indicators being exposed to view, the amounts being printed, and the registration effected.

In our present invention we provide such a machine with an additional setting-lever or element 2, which may be moved to different positions for different transactions and by such movements determine the operation of a series of special counters and also control the movements of the special indicator provided for said lever or element.

The totalizing-counter in the class of machine mentioned comprises a series of counting-wheels 3, journaled upon a transverse shaft 4 of a rock-frame and provided with suitable operating-pinions 5, which are arranged to be brought into mesh with a series of independently-movable rack-segments 6. These segments are journaled upon a transverse shaft 7 and are provided with lugs or lips 8, arranged to engage their respective ad-

justing-levers 9, which are pivoted on said shaft. Coil-springs 10 connect the segments to the main frame and cause them to follow the levers 9 when the latter are adjusted. An operating crank-handle 11 is mounted upon one end of the shaft 7 and when operated causes the shaft to rock, and thus returns all of the displaced rack-segments 6 to their normal positions to effect the registration in a manner fully described in said patents.

The aforesaid special setting-lever 2 is pivoted upon the shaft 7 substantially in the same manner as the regular amount-levers 9 and is connected at its rear end to an oscillating rack-bar 12, as best shown in Fig. 2. This bar 12 in turn meshes with a pinion 13, fast to the rotary special indicator 14, which is mounted upon a transverse shaft 15. This shaft 15, as fully described in the aforesaid patents, is carried by a vertically-movable slide 16, which is suitably mounted in the main frame. The slide 16 is arranged to be raised and lowered by an arm 17, operated by the shaft 7 and provided at its rear end with an antifriction-roller 18, which when the shaft is rocked by the crank-handle engages a horizontal arm 19, mounted on the slide 16, and thus elevates the slide to a position in which the indicators will become visible through suitable windows or apertures formed in the cabinet or casing of the machine. The slide 16 is latched in its upper or elevated position by a latching-lever 20, formed with a latching-nose 21, which engages a suitable aperture formed in the slide 16. This latching-lever 20 is fast upon a rock-shaft 22, as best shown in Fig. 3, and this shaft normally tends to rock forward because of a coil-spring 23, which connects the upper end of a lever 24^a, fast on said shaft, to the main frame. The lever 24^a is rocked to disengage the latch 20 from the slide 16 by the movement of any of the setting-levers and in a manner fully disclosed in said Smith and Susstrong patent. The adjusting-lever 2 carries a sliding plate 24, which is formed with an elongated slot 25, through which a guiding-pin 26, mounted on said lever, passes. The lower end of the slide 24 is bifurcated to straddle the shaft 7, and thus form an additional guide. A pin 27, mounted on the plate 24, projects laterally into a cam-groove 28 of a mutilated box-cam 29, which is fast upon the rock-shaft 7. The formation of the cam-groove 28 is such that the slide 24 is reciprocated each time the shaft 7 is rocked upon the operation of the crank-handle. A number of special counters 30, 31, 32, and 33 are located in proximity to the special adjusting-lever 2, and each of the same comprises a series of counter-wheels 34, a series of ratchet-wheels 35, secured thereto, and an operating-pawl 36. This pawl is formed with a plurality of tines of different lengths, arranged to engage the ratchet-wheels of its respective counter and move them forward a distance equal to one numeral upon each operation in the manner well known in the art. Each of the pawls 36 is pivotally mounted in a yoke-frame 37 and is normally forced into engagement with its ratchet-wheels by a coil-spring 38, which surrounds its pivot-pin 39 and engages with its opposite ends against said pawl and the frame 37. This latter frame is in turn pivotally mounted in a stationary frame 40, formed with a stop-flange 41, against which the frame 37 abuts to limit its downward movement. Each of the frames 37 is normally drawn into its lower position by one of a series of coil-springs 42, which connect the respective pins 39 to the main frame.

By reference to Fig. 2 of the drawings it will be seen that the upper end of the slide 24 will be moved with the lever 2 into positions directly in line with the projecting ends of the several pins 39, so that when said slide is reciprocated by the subsequent operation of the crank-handle the frame 37 in line with said slide will be operated and the corresponding counter thus advanced one number. The regular amount-recording levers of the type of machine shown in the present drawings usually have nine degrees of movement; but the special lever above described is arranged to be moved to but five different positions only, these positions representing, respectively, "Cash," "No sale," "Received on account," "Charge," and "Paid out." The four counters 30, 31, 32, and 33 represent, respectively, "Paid out," "Charge," "Received on account," and "No sale." We have provided, however, a special cash-counter 44, which is operated substantially in the same manner as the remaining counters, with the exception that its pawl-carrying frame 37′ is formed with a rigid operating-arm 37″, which is connected by a pivoted link 45 with a pivoted bell-crank lever 92, hereinafter more particularly described. When said lever 92 is operated for each cash transaction, the cash-counter will advance one number for each transaction. Each of the special counters is provided with a turn-to-zero nut or knob 47, fast to its shaft, said shaft being arranged to pick up and turn the counter-wheels to zero in a manner well known in the art.

The special adjusting-lever 2 is provided with an alining and locking segment 48, formed with five notches, representing the different positions of the lever for different transactions. These notches, as best shown in Fig. 2, are arranged or grooved with three of the same near the middle of the segments 48 and one near each end. This construction permits the special lever to be moved the same distance as the regular amount-levers and still only have five setting positions. A pivoted locking and alining pawl 49, mount-

ed loosely upon a transverse shaft 50, is formed at its upper end with a nose 51, which is arranged to project into the respective notches of the plate 48 when the lever 2 is in proper adjusted positions. This pawl is of substantially the same construction as the pawls described in the aforesaid patent to Pfaff and is locked against movement upon the operation of the crank-handle by a longitudinally-movable notched shaft 49′ in the same manner as described in said patent. This locking-pawl 49 is connected by a link-bar 51′ to an arm 52, fast to a transverse rock-shaft 53. The shaft 53 is provided at its opposite end, as shown in Fig. 4, with an arm 55, which is connected to the pivoted locking-pawl 56 by a pivoted link 57. This link is formed with an elongated slot 58, through which projects a pin 59, whereby the shaft 53 may have a slight independent rocking movement. When the shaft 53 is rocked forward, however, by the movement of the special setting-lever 2, the latching-pawl 56 is also drawn forward sufficiently to move the locking-shoulder 60, formed thereon, out of the path of the segment 61, fast to the shaft 7. After the pawl 56 is drawn forward into this position it is held so by a spring-drawn latching-pawl 62, mounted on the main frame and arranged to engage with its beveled nose 63 on one of the other of two inclined faces 64 and 65, formed on the upper end of the said pawl 56. (See Figs. 5 and 6.)

It will be seen from the above that the pawl 62 will engage the locking-pawl 56 to hold it in either one or the other of its shifted positions, but will permit of said locking-pawl being readily moved from one position to another. The pawl 56 is also provided with a laterally-projecting pin 66 for a purpose to be presently described.

It will be seen from the above description that whenever the special operating-lever 2 is actuated or moved from one of its set positions its respective pawl 49 will be forced forward in passing from one notch to the other of the segment 48, and the shaft 53 will be thus rocked forward. This rocking of the shaft draws the locking-pawl 56 from its locking position (shown in Fig. 4) forward from under the lower edge of the segment 61, and thus leaves the operating-handle 11 free to be moved. When the pawl 56 is drawn forward in this manner, it is latched in its forward position by the pawl 62. It therefore becomes necessary to return the pawl 56 to its locking position upon each operation of the machine, as its office is to compel the operation of the special setting-lever before the machine can be operated except when such setting-lever is in the position representing "cash." This return of the pawl 56 to its locking position is accomplished by means of the laterally-movable shaft 49′, which is provided with an arm 69, having a cam-flange 70, which is engaged by an arm 71, fast to the shaft 7, and thus forced to the right when said shaft is oscillated. The segment 61 also carries a cam projection 72, (see Fig. 7,) which is arranged to return the arm 69 to its normal position as the shaft 7 rocks back to its normal position. A headed pin 73, mounted on the main frame, projects through the arm 69 and is provided with a coil-spring 74, which engages the head of said pin and the side of the arm to normally force the latter toward the left. The arm 69 is also provided with a nose 75, having a camming edge 76 which when the shaft 49′ is moved to the right engages the pawl 56 and forces the same partly rearward, the latch 62 then coming into operation to force it completely to the rear to again lock the machine. By this means the machine is locked after each operation and can only be unlocked by the movement of the special setting-lever 2. There is, however, one exception to this operation and that is that when the special lever 2 is in a position representing cash the pawl 56 is held partly forward in the intermediate position (shown in Fig. 5) against the stress of the latch 62, and the machine is thus free to be operated. The pawl is held in this position against the tendency of the pawl 62 to draw it to locking position by a cam-nose 77, formed on the arm 78, which is rigidly mounted upon a transverse rock-shaft 79. (See Figs. 4 and 5.) The shaft 79, as best shown in Fig. 2, is provided with an arm 80, having a laterally-projecting beveled lug 81. This lug is forced into engagement with the periphery of a segmental arm 82 by suitable spring means hereinafter described. The arm 82 is mounted upon the special setting-lever 2 and is formed with a notch 83. When the lever 2 is moved to a position representing cash, the notch 82 is brought into alinement with the lug 81, and the shaft 79 is thus permitted to spring forward, which action moves the arm 78 to bring the nose 77 in the path of the pin 66 of the pawl 56, and thus prevents said pawl being moved to its locking position by the latch 62, the operation of the cam 75 only being sufficient to move the pawl 56 to cause the nose 63 of the pawl 62 to engage the forward incline surface of said pawl 56. The left-hand end of the shaft 79 (see Fig. 1) is provided with an arm 84, which is normally engaged by the tail of a pivoted pawl 85, which is mounted upon a disk 86. This disk is journaled upon the outer end of the shaft 7 and is provided with a suitable coil-spring 87 near one end, which engages the pawl 85 to normally force the same against the arm 84, and thus rock the shaft 79 forward when the same is free to move in this direction, as when the lever 2 is moved to the cash position. The stress of the spring 87 also tends to normally force a nose 88, formed on the

pawl 85, into a recess 89, formed in a cam-disk 90, which is fast to the shaft 7. When the special setting-lever is moved to a position in which the notch 83 is brought into alinement with the lug 81, the shaft 79 rocks forward, as before described, and thus releases the pawl 85, which is then operated by the spring 87 and the nose 88 moved into the notch 89, as shown in Fig. 1. When the cam 90 is now operated, the disk or segment 86 is moved therewith. This segment is formed at its rear with a cam edge 90′, which engages an antifriction-roller 91, mounted upon one of two pivoted bell-crank levers 92, supporting the opposite ends of the counter-shaft 4, said roller being normally drawn against the cam edge 90′ by a coil-spring 93, which connects said bell-crank to the main frame.

We have described above one set of devices for supporting and operating one end of the counter-shaft 4. A similar set of devices is provided near the opposite end of the machine to support and move the opposite end of the shaft 4. The rocking of the bell-cranks 92 depresses the counter-shaft 4 and brings the pinions 5 of the counter-wheels into mesh with the segments 6.

It will be seen from the above that the bell-cranks 92 are only actuated when the disks 86 are coupled to the cams 90 by the movement of the special lever to the cash position. When this special lever occupies any of its other positions, the arms 84 are rocked upward sufficiently to hold the noses 88 out of the notches 89, thus leaving the cams 90 free to move without moving the disks 86. The counter will thus not be thrown into engagement with the operating devices.

As before stated, the rocking movements of the bell-cranks 92, which occur only when a cash transaction is registered, is utilized to operate the special cash-counter 47. To accomplish this result, the rear end of the lever 37″ is connected to one end of the shaft 4 by the pivoted link 45. The left-hand cam 90 also acts to operate a pivoted flash 95, which is arranged to obscure the indicators in indicating position. For this purpose the flash is provided with a link-bar 96, which is slotted at its lower end to permit the passage of the shaft 7 therethrough and is provided with an antifriction-roller 7′, which rests upon the periphery of said cam. When the operating-handle 11 is moved forward, the flash is dropped to a position between the indicators and the indicator-windows in the cabinet and is not again raised to expose the indicators until the operating-handle has returned to its normal position.

In order to turn the counter to zero, an independent rotary shaft 98 is provided. This shaft is suitably mounted in the main frame and is provided at one end with a milled knob, whereby it may be rotated. A series of pinions 100 are mounted on this shaft and are arranged to engage with pinions 101, mounted on the counter-wheels to turn the latter to their zero positions in a manner well known in the art and fully described in the aforesaid patents. In order, however, to positively arrest the shaft 98 when the same has made a complete revolution to return the counter-wheels, I provide said shaft with a stop-nose 103, which is arranged to contact with a nose 104 of a stop-pawl 105, pivoted upon the left-hand end of the shaft 4, as shown in Fig. 1. The pawl 105 is normally drawn forward against a stop-pin 106, mounted on the main frame, by means of a coil-spring 107, which connects said pawl to the main frame. When the nose 103 engages the nose 104, it rocks the pawl 105 on its fulcrum until said pawl engages a stop-pin 108, mounted on the left-hand bell-crank 92. The first time the bell-crank is operated to throw in the counter the pawl 105 is moved downward bodily, and the nose 104 is thus disengaged from the nose 103, thus allowing the pawl to assume its normal position and leaving the shaft 98 free to again be rotated.

As before stated, the indicators are mounted upon the vertically-movable carriage 16 and it is desirable to prevent the operation of the machine until after the carriage 16 has returned to its lower position. To accomplish this result, the rear edge of the segment 61 coöperates with a pivoted lever 110, mounted on the main frame, as shown in Fig. 4. The rear end of the lever 110 is normally drawn downward by a coil-spring 111, which connects it with the main frame. The said lever 110 rests at its rear end upon a pivoted lever 112, which is formed at its inner end with an angular projection 113, extending into the path of the projection 19 of the carriage 16. When the carriage descends, the projection 19 contacts with the arm 113, rocks the lever 112 on its fulcrum, lifts the rear end of the lever 110, and unlocks the machine, all of which is best illustrated in Fig. 8. After the indicators have been elevated, as heretofore described, the lever 110 is allowed to assume a position in which it will automatically lock the machine when the handle 11 returns to its normal position.

By the above-described device it is impossible to operate the machine until the carriage 16 is first moved to a position to withdraw all of the indicators from view.

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

1. In a cash-register, the combination with a counter mounted in a movable frame, of a series of registering elements, means for moving said elements when in engagement with the counter, setting-levers for said registering elements, a special setting-lever, an operating-handle, means for connecting the oper-

ating-handle and the counter-frame controlled by the special setting-lever, and an indicating mechanism permanently connected to the special setting-lever.

2. In a cash-register, the combination with an operating mechanism including a crank-handle, of a counter mounted in a movable frame, a cam for operating said frame, coupling means between the operating mechanism and said cam, and a special setting-lever controlling said coupling means.

3. In a cash-register, the combination with an operating mechanism including a rock-shaft, of a counter mounted in a movable frame, a cam for actuating said frame, means for coupling said cam to the rock-shaft, and a setting element controlling said coupling means.

4. In a cash-register, the combination with an operating mechanism including a rock-shaft, of a counter mounted in a movable frame, a cam for operating said frame, coupling means between the shaft and cam, and a special setting-lever controlling said coupling means arranged to be moved to different positions for different transactions.

5. In a cash-register, the combination with an operating mechanism including a power-shaft, of a counter mounted in a movable frame, a cam mounted on the shaft, coupling means between the shaft and cam, and a setting element controlling said coupling means.

6. In a cash-register, the combination with an operating mechanism including a power-shaft, of a counter mounted in a movable frame, a throwing device for said counter-frame, coupling means between the throwing device and the power-shaft, and a special setting element controlling said coupling means.

7. In a cash-register, the combination with an operating mechanism including a rock-shaft, of a counter mounted in a movable frame, a cam for operating said frame, a pivoted pawl-clutch for coupling the cam to the shaft, and a special setting element controlling the pawl-clutch.

8. In a cash-register, the combination with a series of setting-levers, of a series of racks arranged to follow the movements of said levers but movable independently of the same, a counter mounted in a movable frame, an operating-handle and connections for bringing the counter and the registering-racks together, a special setting element, and means controlled by said element for preventing the counter and registering-racks from being brought together upon the operation of the handle.

9. In a cash-register, the combination with a series of setting elements, of a series of registering-racks movable with said elements but constructed to be actuated independently of the same, a counter, an operating-handle, means controlled by the handle for bringing the counter and the registering-racks together, a special setting element, and means controlled by said element for preventing the registering-racks and counters being brought together upon the operation of the handle.

10. In a cash-register, the combination with a series of setting-levers, of a series of registering-segments controlled by said levers but movable independently of the same, a counter arranged to be actuated by the registering-segments, an operating-handle for moving the registering-segments after they have been set by the levers, a special setting element, and means controlled by said element for preventing the counter being operated by the registering-racks upon the operation of the handle.

11. In a cash-register, the combination with a series of setting-levers, of a series of registering-segments arranged to be set by said levers but movable independently of the same, an operating-handle and connections for moving the counter-frame and for returning the registering-segments to their normal positions, a special setting element, and means controlled by said element for preventing the counter-frame being moved by the operating-handle.

12. In a cash-register, the combination with a series of amount setting-levers, of a series of registering-segments arranged to be set by the same but movable independently thereof, a counter mounted in a movable frame, a crank-handle and connections for throwing the counter-frame and returning the registering-segments, a special setting-lever, and means controlled by said lever when in certain positions for preventing the operating-handle actuating the counter-frame.

13. In a cash-register, the combination with a series of registering elements, of a counter mounted in a movable frame, an operating-handle, a pivoted latching-pawl and connections between the operating-handle and the counter-frame, and a special setting element arranged to control the positions of the latching-pawl.

14. In a cash-register, the combination with an operating mechanism, of a counter mounted in a movable frame, a special counter for counting the number of times the frame is moved, means for coupling the frame to the operating mechanism, a special setting element a certain adjustment of which controls said coupling means, and a series of special counters operatively controlled by other adjustments of said setting element.

15. In a cash-register, the combination with a power-shaft, of a setting element pivoted upon the same and movable to different positions for different transactions, a slide mounted on said setting element, a cam on the shaft for operating the slide, and a series of special counters arranged to be operated by said slide when moved by said cam.

16. In a cash-register, the combination

with an operating mechanism, of a series of indicators, means for concealing the indicators, and devices for locking the operating mechanism until the concealing means is actuated.

17. In a cash-register, the combination with an operating mechanism, including a handle, of counting devices, indicators, means for moving the indicators to their set positions, and a lock for preventing the movement of the operating mechanism until the indicators have been moved to their concealed positions.

18. In a cash-register, the combination with an operating mechanism, of a series of indicators arranged to be moved to set positions by said mechanism, means for holding the indicators in their set positions, and a lock for the operating mechanism operated by the movement of the indicators out of their set positions.

19. In a cash-register, the combination with an operating mechanism, of a series of indicators arranged to be elevated to exposed positions, means for holding the indicators in their elevated positions, and a lock for the operating mechanism operated upon the descent of the indicators to their lower positions.

20. In a cash-register, the combination with an operating mechanism, of a series of indicators arranged to be moved into exposed position, and a lock for the operating mechanism actuated by the withdrawal of the indicators from exposed positions.

21. In a cash-register, the combination with an operating mechanism, of a series of rotary indicators arranged to be elevated to exposed positions, and a lock for the operating mechanism actuated by the movement of the indicators to their lower inexposed positions.

22. In a cash-register, the combination with an operating mechanism, of a special setting element arranged to be moved to different positions, a lock for the operating mechanism controlled by said setting element, and means for preventing the regular operation of the lock when the setting element is in a certain position.

23. In a cash-register, the combination with an operating mechanism, of a setting element, a lock for preventing the movement of the operating mechanism until the setting element has been operated, and means controlled by the setting element for rendering the lock ineffective.

24. In a cash-register, the combination with an operating mechanism, of a special setting element, a lock for the operating mechanism arranged to be moved out of engagement with the operating mechanism upon the movement of a special setting element, means for returning the lock to its locking position, and devices for preventing this return movement when the setting element is in a certain position.

25. In a cash-register, the combination with an operating mechanism, of a lock for the same, a setting element arranged to be moved to different positions for different transactions, means actuated by the setting element for operating the lock, and devices for holding the lock in its inoperative position when the setting element is in a certain position.

26. In a cash-register, the combination with an operating mechanism, of a lock for the same which automatically relocks said mechanism after each operation of the machine, a special setting element arranged to be moved to different positions and whose movement operates the lock, and devices for holding the lock in its inoperative position when the setting element is in a certain position.

27. In a cash-register, the combination with an operating mechanism including a handle, of a special setting element arranged to be moved to different positions for different transactions, a lock for the operating mechanism arranged to be returned to locking position upon each operation of the machine, means connected to the setting element for adjusting the lock to release the operating mechanism, yielding devices for holding the lock in one or the other of its positions, and means connected to the setting element for holding the lock in an intermediate position.

28. In a cash-register, the combination with an operating mechanism, of a pivoted locking device for the same, a latch for securing the locking device both in and out of its locking position, means connected to the operating mechanism for returning the lock to its locking position upon each operation of the machine, and means connected to the setting element to move the lock to unlock the operating mechanism whenever the setting element is operated.

29. In a cash-register, the combination with an operating mechanism, of a counter mounted in a movable frame, turn-to-zero devices mounted independently of the counter-frame, and a movable stop for the turn-to-zero devices carried by the counter-frame and movable therewith out of the path of the turn-to-zero devices.

30. In a cash-register, the combination with a counter mounted in a movable frame, of rotary turn-to-zero devices mounted independently of the counter-frame, and stop means for the turn-to-zero devices controlled by the movements of the counter-frame.

31. In a cash-register, the combination with an operating mechanism, of counter-actuating devices, a counter mounted in a movable frame and arranged to be brought into connection with the counter-operating

devices, turn-to-zero devices mounted independently of the counter-frame but engaged by the counter when the latter is disengaged from the operating mechanism, and stop means for the turn-to-zero devices controlled by the movement of the counter-frame.

32. In a cash-register, the combination with a counter mounted in a movable frame, of rotary turn-to-zero devices mounted independently of the counter-frame, a pivoted stop device mounted on the counter-frame and arranged to be engaged by the turn-to-zero devices and moved out of its normal position; the construction being such that when the counter-frame is moved the stop device is disengaged from the turn-to-zero devices and allowed to assume its normal position.

In testimony whereof we affix our signatures in the presence of two witnesses.

WILLIAM F. BOCKHOFF.
EDWARD J. VON PEIN.

Witnesses:
HERBERT C. WOOD,
LEWIS D. BAKER.