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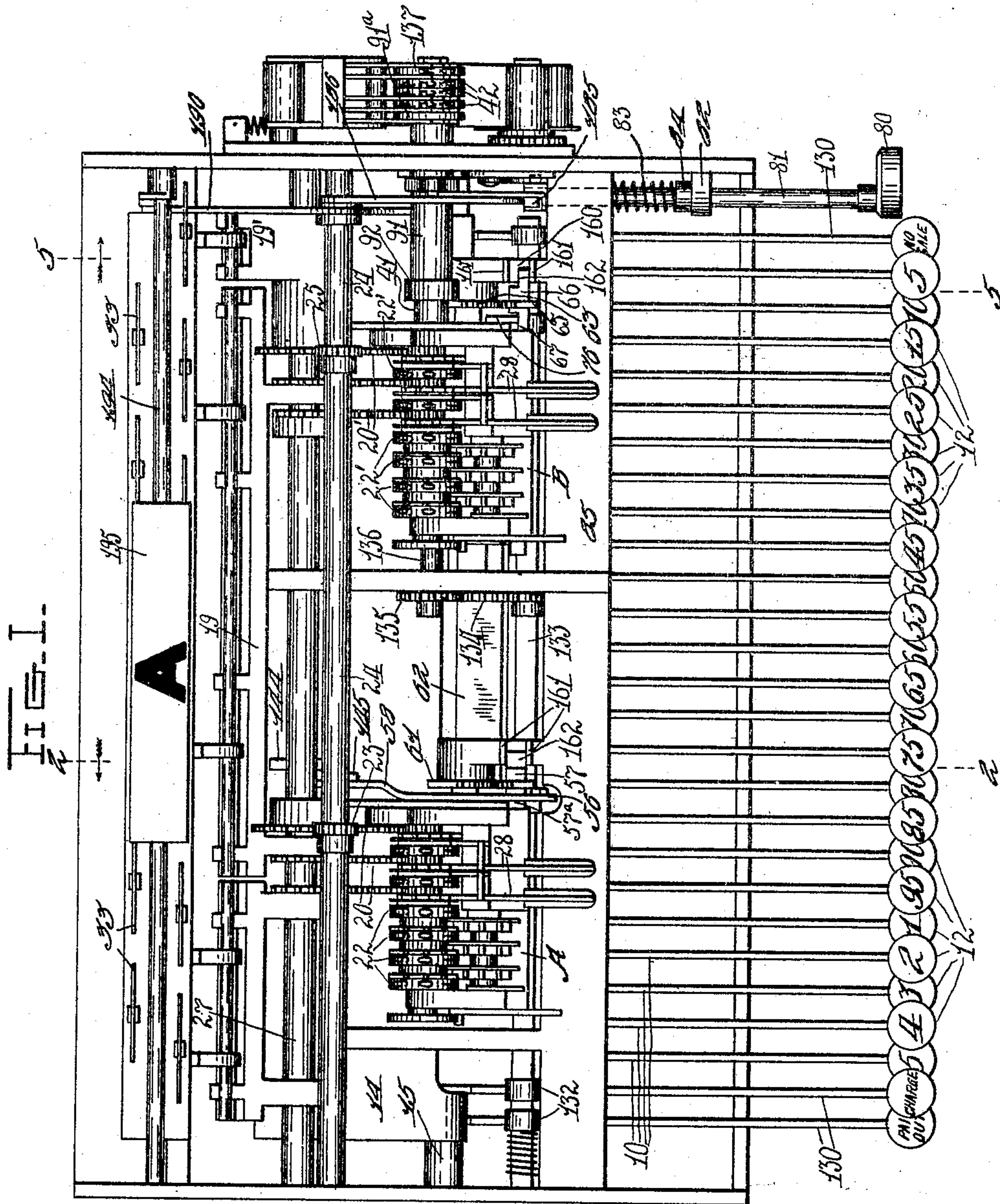
PATENTED OCT. 25, 1904.

J. A. WERNER.
CASH REGISTER.

APPLICATION FILED MAY 4, 1904.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses

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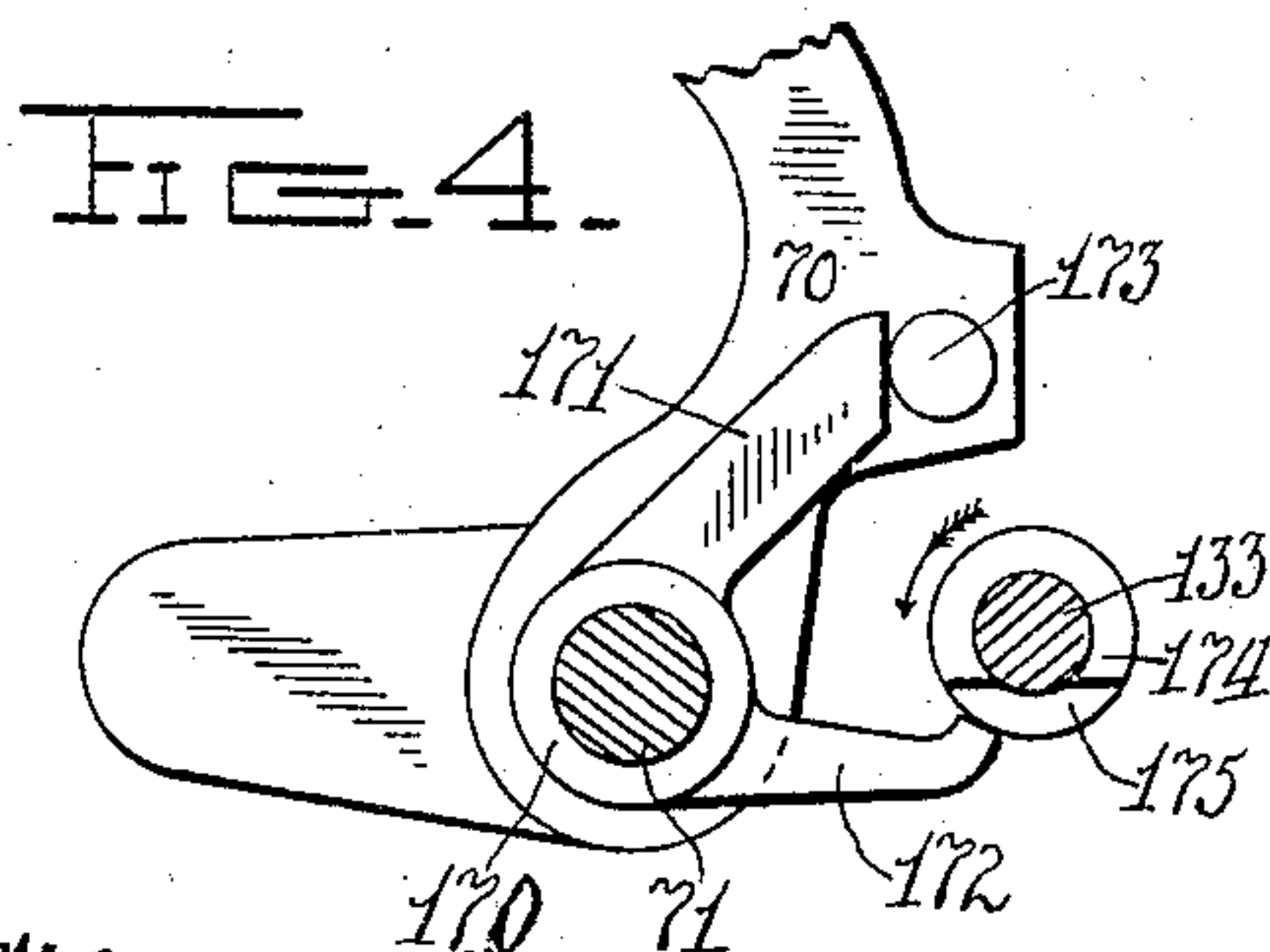
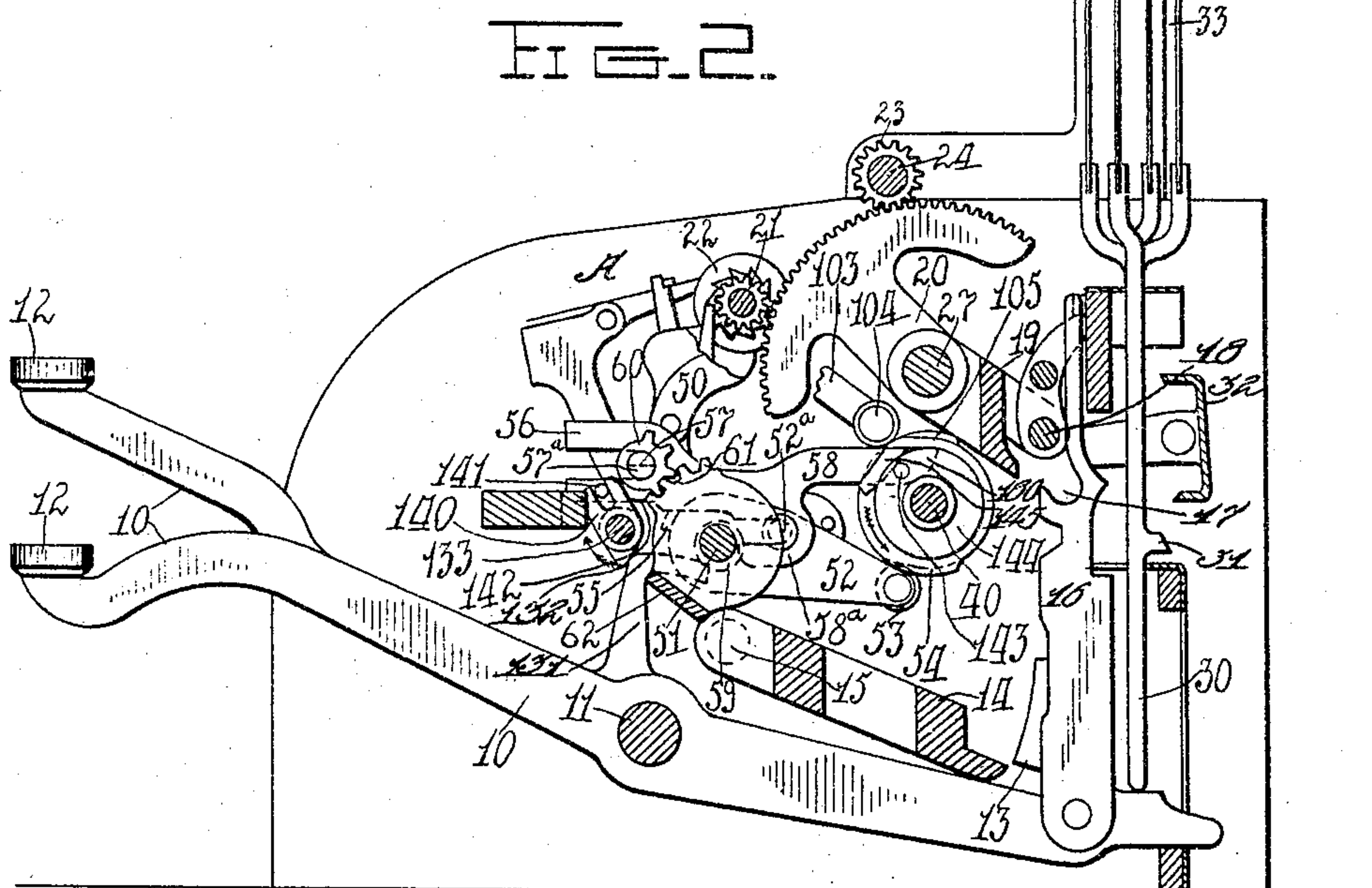
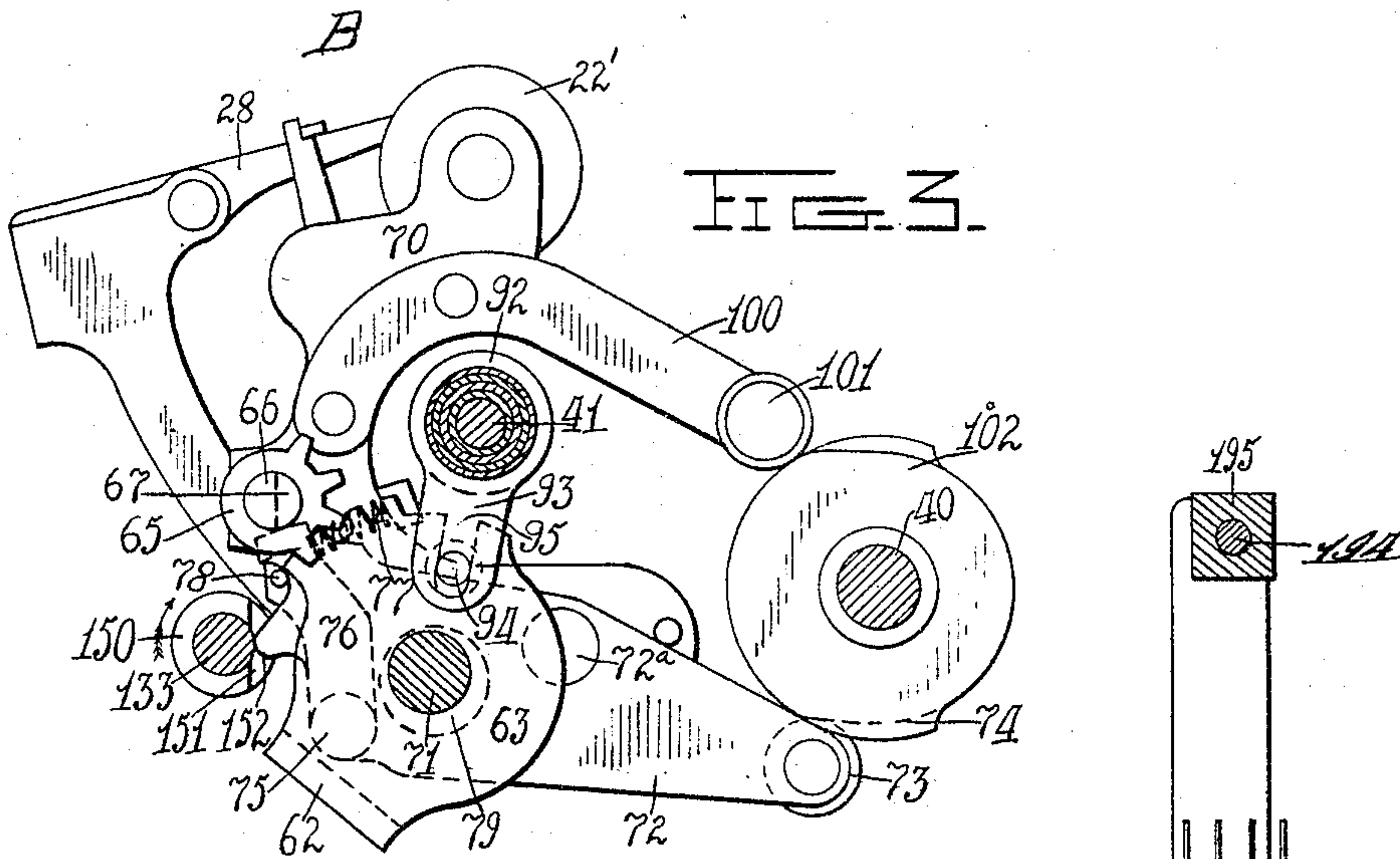
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3 SHEETS—SHEET 2.



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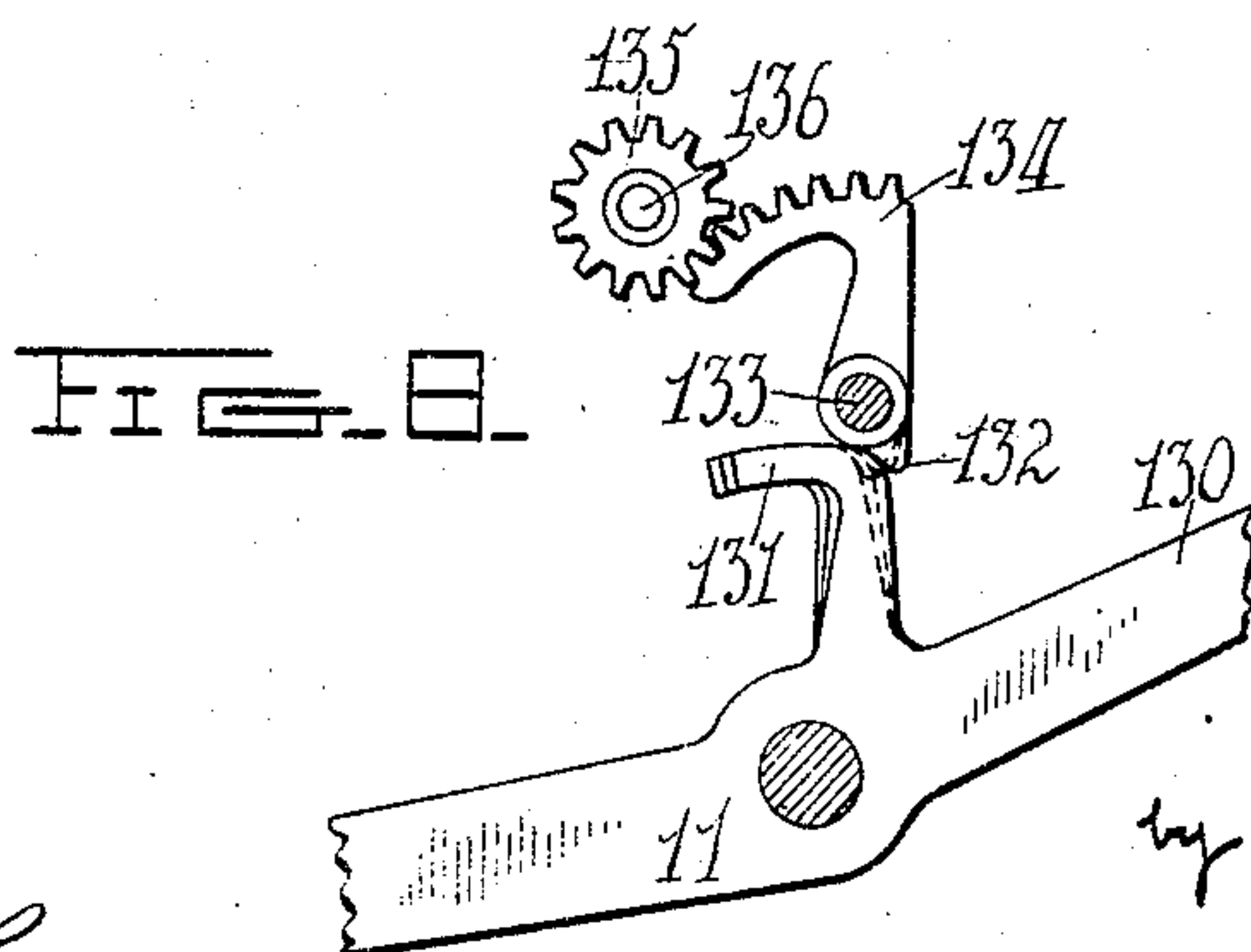
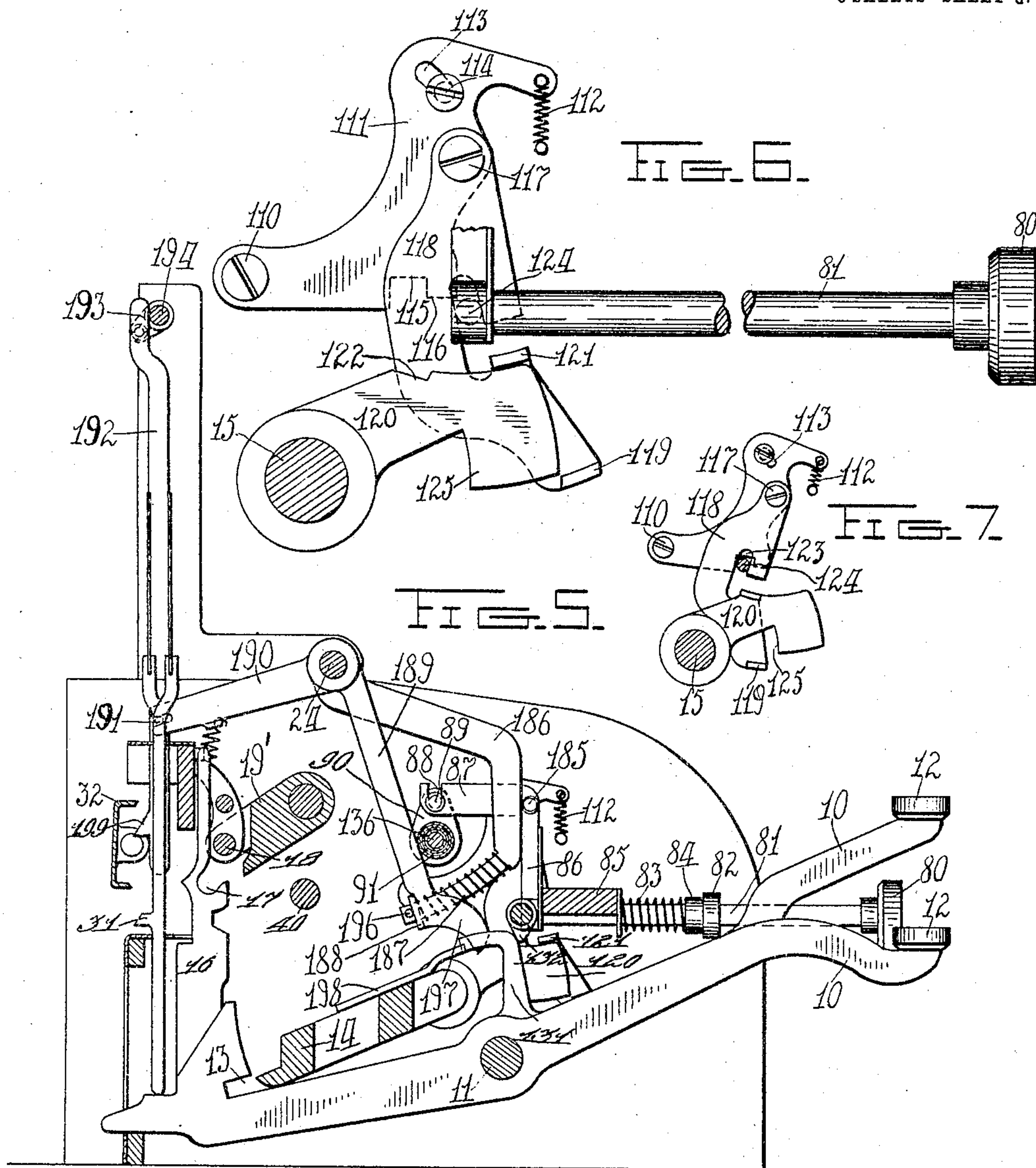
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J. A. WERNER.
CASH REGISTER.

APPLICATION FILED MAY 4, 1904.

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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

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CASH-REGISTER.

SPECIFICATION forming part of Letters Patent No. 773,108, dated October 25, 1904.

Application filed May 4, 1904. Serial No. 206,377. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. WERNER, 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.

My invention has more particular relation to improvements in cash-registers of the so-called "multiple - counter" type, and has among its various objects the construction of a machine in which there are a plurality of accounting devices each under the common operative control of a single series of keys, and I have provided means for predetermining which of said accounting devices shall be operated, and I have devised a form of so-called "throw-out" mechanism by means of which when certain keys are operated the accounting device which has been predetermined for operation will be prevented from operation.

With these and incidental objects in view the invention consists in certain novel features of construction and combinations of parts, the essential elements of which are set forth in appended claims and a preferred form of embodiment of which is hereinafter specifically described with reference to the drawings which accompany and form part of this specification.

Of said drawings, Figure 1 represents a top plan view of a machine containing my improvements. Fig. 2 represents a vertical cross-section on the line 2 2 of Fig. 1 looking in the direction of the arrow crossing said line. Fig. 3 represents an enlarged detail view, partly sectionalized, of the counter-controlling mechanism. Fig. 4 represents a detail view of the device for locking the movable counter in inoperative position. Fig. 5 represents a vertical cross-section on the line 5 5 of Fig. 1 looking in the direction of the arrow crossing said line. Fig. 6 represents an enlarged detail side elevation of the push-button and its locking mechanism, and Fig. 7 represents another detail view of the afore-

said locking mechanism. Fig. 8 represents a detail view of a portion of the special keys, together with the connecting mechanism for setting the special printer-wheel.

The machine which I have chosen for the embodiment of my invention is of a type at present well known in the art, the general construction of which is set forth in Letters Patent to Thomas Carney, No. 497,860, dated May 23, 1903, and I have selected a construction with two independent counters with a single series of keys common to both of said counters, such as is shown and described in Letters Patent to Joseph P. Cleal, No. 739,649, dated September 22, 1903. Machines similar in general functions to that described in the above-mentioned Cleal patent are at present well known in the art and are arranged with one of the counters normally in operative position, but by means of a push-button or other suitable adjustable means this normally operative counter is disabled from operation and another counter is predetermined for operation, it being more common in this exact style of machine simply to use two such independent counters, although, of course, more than two could be used in a similar manner, and in cases where only two counters have been used it has been customary to use the same to totalize separately either different classes of transactions or else the various sales of two clerks or operators. In those machines in which these two counters have been used for two separate clerks the counter of one clerk is normally set for operation, but upon the adjustment of the push-button this counter is disabled from operation and the other clerk's counter is set for operation whereby to totalize separately the transactions of each clerk, and such machines have been provided with special keys for denoting the three classes of special transactions, such as "Charge," "Paid out," and "Received on account." In order, however, to have the clerks' counters totalize only cash transactions, it is essential that these special keys throw out the counter when they are operated in connection with the amount-keys; but it has hitherto been

possible to throw out only the normally operative counter, with no provisions for throwing out the other counter upon the operation of a special key after this other counter has
 5 been set for operation. Therefore the special keys could be utilized with their throw-out function only in connection with the normally operative counter, thus preventing the identification of these special transactions
 10 with the different clerks. The present invention obviates this difficulty by providing means controlled by the special keys for throwing out either the normally operative counter or the other counter after the same has been
 15 set for operation, together with identification means to show which counter was set for operation.

For the general construction of this machine reference may be had to the above-mentioned
 20 patents, for a detailed description of the various parts and I shall give herein only so much of a description as is necessary for a clear understanding of the principle of my invention.

Referring to the accompanying drawings,
 25 a series of keys 10 (see Fig. 2) are pivoted at their central portions about a transverse shaft 11 and upon their forward ends have the usual finger-buttons 12, which are appropriately marked with the various denominational
 30 characters, being arranged in the ordinary manner of units, tens, and hundreds banks, together with special keys for "Paid out," "Charge," and "No sale." At the rearward portions these keys have the usual form of
 35 notches 13 for engaging the key-coupler 14, which is pivoted upon a shaft 15, suitably journaled in the main frame of the machine. A lifting-bar 16 is pivoted at the rear end of each key and is formed with a recess portion
 40 17, which engages a transverse bar 18, carried by a registering-frame 19, which frame also carries a registering-segment 20, the teeth of which engage the pinion 21 of the counter-wheel 22, and the graduated heights of the
 45 slots 17 will cause the registering-segment 20 to give the counter-wheel graduated movements according to the key depressed, there being one of these segments 20 for each of the banks of keys, this being a well-known
 50 construction. As shown in Fig. 1, there are two independent sets of counter-wheels 22 and 22', the former at the left and the latter at the right of the machine, and for convenience I shall hereinafter designate the left-hand
 55 counter 22 as counter A and the right-hand counter as counter B. By well-known means, which will hereinafter be described, each of these counters is mounted in a movable frame and is adapted to be thrown into engagement
 60 with its respective set of operating-segments. The operating-segment 20, which actuates the units-wheel in counter A, gears into a pinion 23, fast upon a shaft 24, which shaft has fast upon it another pinion, 25, which meshes with
 65 an operating-segment 20', which operates the

units counter-wheel 22' of the counter B, said operating-segment 20' for this units-wheel being actuated from the keys by means of the registering-frame 19'. The registering-frame
 19, which operates the dimes counter-wheel 70 22 of counter A, is also made fast to the corresponding operating-segment 20' for the dimes-wheel of the counter B, and, similarly, both the dollar-operating segments of the two independent counters are coupled together to
 75 operate simultaneously, each of the same being fast to the shaft 27, this coupling construction between the two counters being set forth in the before-mentioned Cleal patent, so that the operation of any key will simul-
 80 taneously operate the two sets of operating-segments, and thereby operate whichever counter is thrown into engagement with these segments in a manner to be described. Each counter is provided with transfer-pawls 28,
 85 which operate in a well-known manner, as described in the previously-mentioned patents.

An indicator-stem 30 rests upon the rear end of each key and carries at its upper end a tablet 33 to indicate the denomination of
 90 the key depressed, and these tablets are retained in operative position by means of projections 31, which engage an oscillating frame 32 and are held elevated by said frame, which is operated automatically from the operating
 95 mechanism to successively support and release said indicators.

The key-coupler is oscillated upon the operation of any key, and by means of the well-known form of double rack-bar connected to
 100 said key-coupler a complete rotation at each operation of the machine is given to the main operating-shaft 40, this double rack-bar not being shown herein, but is described in full in the patents above mentioned.
 105

The operating-segments 20' of counter B mesh with suitable pinions, (not shown,) which pinions are by means of suitable nested sleeves 41 connected with the printing-wheels 42
 110 upon the right-hand side of the machine, thus providing for the printing of the amounts in connection with each transaction.

The mechanism hereinbefore described, including the indicator mechanism, the double rack for rotating the main operating-shaft,
 115 and the printing mechanism, are all old in the art, being set forth in the aforesaid patents.

I will now describe the mechanism for throwing the counters into engagement with the respective operating-segments, together
 120 with the means for predetermining which counter shall be operated by the keys, and the means used for the different counters is somewhat different in each case and will be described separately, Fig. 2 showing the means
 125 for throwing in counter A and Fig. 3 showing the means for throwing in B. I will first describe the means for throwing in counter A, as shown in Fig. 2. The said counter A, having the counter-wheels 22, is mounted upon a
 130

rock-frame 50, which is pivoted to rock upon a transverse shaft 51, this rocking movement being transmitted by means of a throwing lever 52, pivoted to said counter-frame at 52^a and carrying upon its rearward end an anti-friction-roller 53, which is engaged by a cam 54, (shown partly in dotted lines in Fig. 2,) said cam being so shaped that upon the initial movement of the operating-shaft 40 by means of the depression of any one of the amount-keys said cam will act upon the roller 53 to force the rearward end of the throwing-lever 52 downward. The forward end of said throwing-lever is provided with a lug 55, which rests beneath the under side of an adjusting-slide 56, which adjusting-slide is bifurcated at its forward end to straddle a revoluble shaft 57 and extends backward with an arm 58, the purpose of which arm will be later described, and the lower portion of the slide 56 is also formed with a curved arm 58^a, which surrounds the pivot-pin 52^a and serves as a guide for the slide 56 and also for the added purpose to be described. The aforesaid revoluble shaft 57 has formed in it directly above the said slide 56 a cut-away portion 57^a, as indicated in dotted line on said shaft, the entire lower half of said shaft being cut away so as to form a notch of such a nature that when the shaft is in the position shown in Fig. 2 the slide 56 may be given an upward movement without coming in contact with the shaft 57. However, when the shaft 57 is revolved through an angle of ninety degrees in the manner to be described the full portion of said shaft is then brought into the path of the slide 56, (the dotted line on said shaft then standing vertically and at right angles to the position shown in Fig. 2.) In such position of the shaft 57 if any key is operated the aforesaid cam 54 forces downward the rear end of the throwing-lever 52 and causes the lug 55 to rise and force upward the slide 56, and since said slide is in contact with the shaft 57, which shaft is revolubly mounted in the counter-frame itself, the counter-frame will thereupon be rocked rearward slightly to carry its counter-pinions 21 into engagement with the operating-segments 20 to permit of the rotation of the counter-wheels to an amount corresponding to the value of the key depressed. The throwing-lever 52 is formed with an enlarged aperture 59, which surrounds the shaft 51, so as to permit this rocking movement of the throwing-lever about its pivot 52^a. Now, however, when the shaft 57 occupies its other position, with the dotted line in position shown in Fig. 2, the movement of the throwing-lever and the forcing upward of the slide 56 by means of the lug 55 will not have any effect upon the counter-frame, since the slide 56 merely rides upward into the notch 57^a, formed in the shaft 57, and therefore the counter will not be rocked into engagement with its operating-segments. This revolving of

the shaft 57 for producing this disabling effect is brought about by means of a four-toothed pinion 60, which is fast on said shaft 57 and engages a four-toothed disk 61, which is mounted revolubly upon the shaft 51 and is connected at its lower side with a yoke-bar 62, which extends transversely across the machine to the other counter, where said bar is connected to a similar disk 63, (see Fig. 3,) having four teeth which engage with a pinion 65, fast upon a revoluble shaft 66, which has a cut-away portion 67, (see also Fig. 1,) similar to the cut-away portion of the shaft 57, this shaft 66 being arranged to control the throwing in and out of the other counter, B. This counter B is also mounted in a movable frame 70, which is pivoted upon the shaft 71 and is rocked by means of a throwing-lever 72, similar to the throwing-lever of the counter A, as hereinbefore described, said throwing-lever 72 being provided with an anti-friction-roller 73, engaged by a cam 74, which cam is fast upon the main revoluble shaft 40 and is shown partly in dotted lines in Fig. 3. This throwing-lever 72 is pivoted to said rocking frame at 72^a and is formed with an enlarged aperture 79 to permit the rocking of said lever about the stationary shaft 71. Pivoted at 75 upon the forward end of the lever 72 is an adjusting-pawl 76, which is spring-pressed forward by a spring 77 into engagement with a stop-pin 78, formed on a throwing-lever 72. The upper end of said pawl 76 rests under the aforesaid shaft 66, and when said shaft is in the position shown in Fig. 3 (with the dotted line vertical) the aforesaid notched portion 67 is revolved out of the path of said pawl 76, and the full portion of said shaft 66 is brought into the path of said pawl, so that when said throwing-lever is operated by the cam 74 to force the rearward end of said throwing-lever downward, and thereby force the pawl 76 upward, said pawl will lift the shaft 66, and since said shaft is mounted in the rocking counter-frame 70 the entire counter-frame will be rocked slightly rearward about the pivot-shaft 71 in such manner as to bring the counter-wheels 22' into engagement with their respective operating-segments 20', and thereby permit the registration upon this counter corresponding to the value of the keys depressed. If, however, the shaft 66 is revolved through ninety degrees in such manner as to bring the dotted line into horizontal position, thereby bringing the notched portion 67 into the path of the pawl 76, then the reciprocation of the throwing-lever 72 by the cam 74 will not have any rocking effect upon the counter, since the pawl 76 will simply ride upward into the notch 67, and thus the disabling of this counter B is effected by the rotation of the shaft 66 in precisely similar manner to the disabling of the counter A by the revolving of the shaft 57 in the manner hitherto described.

In the normal condition of the machine the shaft 57 stands in the position shown in Fig. 2, with the notched portion 57^a in the path of the adjusting-slide 56, while the shaft 66 of counter B stands with the notched portion 67 in the position shown in Fig. 3, so that the full portion of said shaft is in the path of the adjusting-pawl 76, and thus it will be seen that upon the operation of the machine by any one of the amount-keys counter B will be thrown into operation, but counter A will not be thrown into operation. In order to effect the shifting from one counter to another, so that counter A will be thrown into operation, but counter B will remain out of operation, I have provided a push-button 80, (see Figs. 1, 5, and 6,) which push-button is carried on the end of a shaft 81, which passes through a stationary bracket 82, extending from the side frame of the machine. The button is normally held in outward position by means of a spring 83, which at its forward end presses against a collar 84, fast on the shaft 81, and at its rearward end presses against the stationary portion 85 of the main frame of the machine. At the inner end of the shaft 81 there is made fast an upwardly-extending arm 86, which at its upper end is bent horizontally rearward to form an arm 87, which has a notch 88, which engages a pin 99, fast on a crank-arm 90. This crank-arm 90 is fast to a sleeve 91, (see Fig. 1,) which surrounds the aforesaid printing-sleeves 41, and has fast at its left-hand end a collar 92, which collar has a downwardly-extending arm 93, (see Fig. 3,) which carries a pin 94, engaging in a slot 95, formed in the aforesaid disk 63. Thus it will be seen that when the aforesaid push-button 80 is pushed inward by the operator against the tension of its spring the arm 87 is carried backward, thereby rocking the sleeve 91 and the collar 92 in such manner as to force the pin 94 forward, and thereby rotate the disk 63 in such manner as to rotate the aforesaid pinion 65 through an angle of ninety degrees, thereby bringing the notched portion 67 of the shaft 66 into the path of the adjusting-lever 66, so as to disable the counter B, as heretofore described, and this same rotation of the disk 63 by the inward movement of the push-button acts, through the yoke-bar 62, to similarly rotate the disk 61, and thereby rotate the pinion 60 of counter A, (see Fig. 2,) and thereby remove the notched portion 57^a from the path of the adjusting-slide 56 and bring the full portion of the shaft 57 into the path of said slide, so that said counter will be thrown into operation upon the operation of any key in the manner heretofore described. It will thus be observed that when the push-button remains in its outermost position counter B will be operated, while counter A remains inoperative, and when the push-button is pushed inward the reverse operation takes place—namely, coun-

ter A is now operated, while counter B remains inoperative—and I have provided a latching mechanism, later to be described, whereby when said push-button is once pushed inward it will remain latched in said inward position until released by the operation of the machine, whereupon its spring 83 again forces the push-button to normal outward position.

In order to provide a printed designation of whichever counter is operated upon each operation of the machine, I extend the aforesaid sleeve 91 (see Fig. 1) through the right-hand side frame of the machine and attach thereto the printing-wheel 91^a, which has formed upon its periphery the two designations "A" and "B," so that when the push-button is in its outermost position the type B stands normally ready for printing; but when the push-button is pushed inward the rotation of the sleeve 91 in the manner heretofore described will of course cause the rotation of the printing-wheel 91^a in such manner as to bring the type A into the printing-line, and by this means the proprietor is furnished with a printed record of whichever counter is operated in connection with the amount of each transaction.

In order to provide for positively rocking the counter back again after it has once been thrown into operative position, I have provided an arm 100, (see Fig. 3,) which is made fast to the counter-frame 70 and is provided at its rearward end with an antifriction-roller 101, which is operated by a cam 102, fast upon the main operating-shaft 40 and side by side with the aforesaid cam 74, so that when upon the revolution of the shaft 40 the cam 74 first acts upon the roller 73 to rock the counter into mesh with its operating-segments then the cam 102 will afterward act upon the roller 101 positively to force the counter out of engagement. A similar arm 103, (see Fig. 2,) provided with a roller 104, is made fast to the counter-frame 50 in exactly the same manner as described for counter B in Fig. 3 and coöperates with a cam 105, fast upon the revolution-shaft 40 and side by side with the cam 54 to return the counter A positively out of engagement after the same has been rocked into engagement with its operating-segment, this arrangement of a positive return for the rocking counter-frames being described in the aforesaid patents.

I will now describe the locking mechanism by which when the push-button 80 is pushed inward it will be locked in such inward position until after the operation of the machine. This construction is best shown in Figs. 6 and 7. Pivoted at 110 to the right-hand side frame of the machine and adjacent to the inner end of said push-button is a locking-plate 111, which is spring-drawn downward by a spring 112, but has a limited movement by means of

a slot 113, engaged by a stationary pin 114. The lower portion of said locking-plate 111 is formed with a notch 115, adjacent to which and on the forward side of which is a shoulder 116. Pivoted at 117 to said locking-plate is a swinging latch 118, which at its lower end is provided with a laterally-projecting lug 119, which coöperates with a forwardly-extending arm 120, which is fast to the shaft 15 of the previously-described key-coupler. Also extending laterally from said latch 118 is a lug 121, which coöperates with the upper surface of said arm 120 and also with a notch 122, formed on the upper side of said arm 120. This latch 118 is also formed at its middle portion with a slot 123, and into this slot projects a pin 124, which projects laterally from the aforesaid push-button shaft 81. The normal outward position of the push-button is shown in Fig. 6, and in such position it will be seen that the pin 124 bears against the forward wall of the slot 123, and thereby pulls the latch 118 forward, thus holding the locking-plate 111 against the tension of its spring 112 and in upper position, and upon the operation of any of the amount-keys the ascent of the key-coupler causes the descent of the arm 120, whereupon the forward surface of said arm engages the lug 119 and remains in engagement therewith until the key-coupler is returned to normal position, thus locking the push-button from then being pushed in, since the locking of the lug 119 of course locks the latch 118 from being pushed inward, and thereby prevents the pin 124 from being pushed forward. However, if prior to the operation of any key the push-button is forced inward said pin 124 rides under the shoulder 116 and into the path of the notch 115, thereby allowing the latch 118 to swing forward into the position shown in Fig. 7 and allowing the locking-plate 111 to drop downward slightly, and this slight downward dropping of the plate 111 carries with it the latch 118, and of course thereby allows the lug 121 to drop into engagement with the notch 122, which thereby prevents the return forward movement of the latch 118, and thus the pin 124 is held in this inward position by means of such retention of the latch 118, thus locking the push-button in its inward position. It will be observed that during this inward movement of the latch 118 the lug 119 rides under the lower surface of the arm 120, during which movement the key-coupler of course cannot be operated until the lug 119 has reached the cut-away portion 125 of said arm, and at that point the push-button will be latched in, as just described, and the key-coupler will then be free to be operated. As soon as any key is now operated and with the ascent of the key-coupler the arm 120 moves downward the lug 121 is no longer latched in the notch 122, and the pressure of the spring 83 to force the shaft 81 outward will there-

upon cause the pin 124 to carry the latch 118 slightly forward until said pin strikes the shoulder 116, and the pin will thereby be limited from further movement, the extra width of the notch 115 allowing this slight forward movement of the pin 124 into contact with the shoulder 116 upon the downward movement of the arm 120; but this slight forward movement of the pin 124 is enough to swing the lug 121 forward to such an extent that it no longer is in alinement with the notch 122, so that upon the return upward movement of the arm 120 with the return movement of the operated key the upper side of the arm 120 now strikes the lug 121 just prior to the complete return of the arm 120 to normal position, and thereby forces the lug 121 slightly upward, thereby of course carrying upward the latch 118, and consequently returning the locking-plate 111 to normal upward position, whereupon the shoulder 116 is now withdrawn from the path of the pin 124, and said pin, together with the shaft 81, may spring outward to normal position, as shown in Fig. 6. Thus it will be seen that this provides a means for locking the push-button after the operation of any key has begun and also for latching the push-button in inward position when it is so pushed inward until after the operation of the machine, when it automatically resumes its normal outward position.

I will now describe the throw-out means whereby upon the depression of any one of the special keys neither one of the counters will be operated, regardless of which one has been predetermined for operation in the manner heretofore described.

As shown in Fig. 8, each special key 130 has formed upon it a cam-arm 131, each of which arms engages a downwardly-extending projection 132, all of these projections being fast to a rock-shaft 133, which shaft extends transversely across the machine for the purpose of using its rotation to effect the control of both counters A and B. To the shaft 133 is attached an upwardly-extending segment-arm 134, which meshes with a pinion 135, fast upon a shaft 136, upon which the aforesaid nested sleeves 41 are mounted, said shaft extending through the right-hand side frame of the machine and carrying on its outer end a special printer-wheel 137, (see Fig. 1,) and since the aforesaid cam-arms 131 are set at different angles to the keys these special keys will, through the lugs 132, rock the shaft 133 graduated distances in such manner as to rotate said special printer-wheel 137 to various distances, according to the special key operated, and thereby print the proper designation of the special key depressed. Referring now to Fig. 2, it will be seen that the aforesaid shaft 133 has fast upon it an upwardly-extending arm 140, which is slotted to engage a pin 141, mounted upon the adjusting-slide 56. This adjusting-slide is

formed on its lower side with a cut-away portion 142, the situation of which is such that when any one of the special keys is operated and the shaft 133 is thereby rocked in the direction shown by the arrow in Fig. 2 the arm 140 will carry the slide 56 backward to such an extent that the cut-away portion 142 will be brought into alinement with the previously-described lug 55, carried by the throwing-lever 52, so that upon the operation of the throwing-lever said lug 55 will simply ride upward into the cut-away portion 142 and will not lift the adjusting-slide 56 far enough to cause said slide to act upon the shaft 57 even though said shaft be rotated in such manner as to bring its full portion normally in the path of said slide 56, in which position of said shaft 57 the counter A would normally have been rocked into operation had not the special key been operated. In order to effect a positive return of the adjusting-slide 56 after the same has been forced rearward in the manner described, a pin 143 is formed upon a disk 144, carried by the main operating-shaft 40, which pin engages a laterally-projecting lug 145, formed on the rearward arm 58 of said adjusting-slide 56, and thus it will be seen that upon the operation of any special key the adjusting-slide will be moved rearward; but at the same time the shaft 40 is revolving in the direction of the arrow shown in Fig. 2, and the pin 143 thereupon drops away from the lug 145; but upon the completion of the revolution of the shaft 40 said pin strikes the lug 145 and forces the adjusting-slide 56 forward into normal position.

By referring now to Fig. 3 it will be seen that the aforesaid shaft 133 is formed with a collar 150, which has a cut-away portion 151, into which cut-away portion the nose 152 of the aforesaid adjusting-pawl 76 projects. Therefore when the shaft 133 is rotated by any one of the special keys, as heretofore described, the inner wall of said cut-away portion strikes the nose 152 and thereupon forces the adjusting-pawl 76 rearward, so as to bring its upper end out of the path of the shaft 66, and thus prevent the counter B from being thrown into operative position by the movement of the throwing-lever 72, even though the shaft 66 stands in the position shown in Fig. 3, in which position the counter would normally be thrown into engagement. Thus it will be seen that upon the initial movement of any special key the shaft 133 is rotated, and no matter which of the two counters A or B has previously been set for operation this counter will now be thrown out of operation because of the adjustment both of the adjusting-slide 56 and the adjusting-pawl 76 by means of this rotation of the shaft 133 in the manner described. Where this machine is to be used for two separate clerks, such an arrangement is particularly desirable, since

it permits clerk B to add all of his cash sales upon the counter B by simply leaving the push-button in normal outward position, and whereupon when clerk A wishes to operate the machine he simply pushes in upon the push-button 81, and thereby disables counter B and prepares counter A for being thrown into engagement with the operating-segments, and if either clerk wishes to operate a special key in connection with the amount-keys he may do so, and upon such depression of the special key with the amount-keys his particular counter will be prevented from being operated, and yet the details of such special transactions will be printed upon the detail-strip in connection with the clerk's initial, and thereby the proprietor may tell at a glance the amount of the cash sales of each clerk as shown upon his respective counter and may also have a permanent record of the various special transactions.

Since the counters A and B are mounted in rock-frames, as heretofore described, and are arranged to be moved into engagement with their respective operating-segments, it becomes necessary to provide means whereby when either one of the counters is to remain inoperative such counter may be positively held out of operative position, so that it cannot by its own weight fall into engagement with its operating-segments. I will first describe the means used for this purpose when the counters are selectively used by means of the aforesaid push-button without reference to the use of the special keys, and since the same means is used for counter A as for counter B, I shall describe the means in connection only with counter B.

As shown in Fig. 1, the shaft 66, which is arranged to be revolved by the pressing in of the push-button 80 for the purpose of throwing out counter B, has for a bearing upon its right-hand end a portion 160 of the main frame and rests in between two upwardly-extending lugs 161 which extend upward from the stationary portion 160. The portion of the shaft 66, which constitutes its bearing is cut away at 162 in such manner as to leave only the half portion of the shaft in precisely the same manner in which the shaft 66 is cut away at 67 for the purpose of controlling the throwing in and out of the counter. When the shaft 66 is turned into the position shown both in Figs. 1 and 3, wherein said counter is arranged to be thrown in upon the operation of any amount-key, there is room between the two lugs 161 for the cut-away portion 162 of the shaft 66 to reciprocate enough to permit the counter to be thrown into operation, this cut-away portion simply sliding along on its bearing 160; but when upon the pushing inward of the push-button 80, as heretofore described, the shaft 66 is rotated through an angle of ninety degrees, so as to bring the notched portion

67 into position to prevent the engagement therewith of the adjusting-pawl 76, it will be apparent that the flat surface of the cut-away portion 162 will now be turned into horizontal position and the space between the two lugs 161 will be completely filled by the width of the shaft 66 in the manner shown in Fig. 1 for counter A, and in such position the shaft 66 cannot move forward, and therefore the counter cannot be rocked into engagement with its segments by its own mere weight upon the revolution of the main operating-shaft, but will positively be held out of engagement by means of these lugs 161. The same construction is used upon the shaft 57 for counter A as shown in Fig. 1, no further description for this counter being necessary, since the operation is the same for preventing the engaging of counter A with its segments when the machine is set to have said counter A remain out of engagement.

It will be observed from Fig. 1 that when the shaft 66 is turned in the position shown therein, in which it is intended that the counter shall be rocked in, and this rocking movement is possible because of the play between the cut-away portion 162 and the lugs 161, yet when a special key is now operated the construction, as heretofore explained, is such that counter B is prevented from being thrown into operation by means of the adjustment of the adjusting-pawl 76, as hereinbefore described; but since upon such operation of the special key the shaft 66 still remains in the position shown in Fig. 1, and thereby there is still this same opportunity for free movement of the cut-away portion 162 between the lugs 161, which would allow the counter B to drop into engagement with its segments by reason of its own weight as soon as the operation of the machine had begun, therefore it is necessary to provide an auxiliary locking means positively to hold the counter out of operation when the special key is operated. The arrangement for effecting this for counter B is shown in Fig. 4 and comprises a collar 170, to which are made fast two arms 171 and 172. The arm 171 rests against a pin 173, formed upon the side of the counter rock-frame 70, and the arm 172 is arranged to cooperate with a collar 174, fast upon the aforesaid shaft 133, which is rotated differentially by the special keys in the direction shown by the arrow in Fig. 4. This collar 174 is provided with a cut-away portion at 175, and in the normal operation of the machine when no special key is operated the counter-frame 70 is free to rock, (as far as this locking device is concerned,) since the rocking of said frame 70 will cause the pin 173 to force the arm 171 rearward, and thereby carry the arm 172 up into the recessed portion 175; but if a special key is operated the rotation of the shaft 133 carries the recessed portion 175 out of the path of the arm 172 and brings

the full portion of the collar 174 against said arm 172, and thereby positively locks said arm downward and by the consequent pressure of the arm 171 against the pin 173 prevents the rocking frame 70 from moving rearward, and thereby prevents the counter B from dropping into engagement with its operating-segments even though the aforesaid shaft 66 remains in the position shown in Fig. 1, with the possibility of free play of the cut-away portion 162 between the lugs 161. The mechanism for effecting a similar locking for counter A is slightly different, but is for precisely the same purpose—namely, to prevent the rocking in of the counter A when a special key is operated and the counter A is otherwise free to be rocked in. This device is shown in Fig. 2 and is used in connection with the operation of the aforesaid adjusting-slide 56. The aforesaid rearwardly-extending arm 58 of said slide 56 is formed with a beveled rearward end 180. Upon the normal operation of the machine without the operation of a special key, when the push-button 80 has been pushed inward to cause the throwing in of counter A by means of the rotation of the shaft 57, so as to bring its cut-away portion into the position corresponding to the position of the shaft 66, as shown in Fig. 1, the downward movement of the rearward end of the throwing-lever 52 will, as heretofore described, cause the lug 55 to act against the under side of the adjusting-slide 56, and thereby force said slide upward, also carrying the shaft 57 upward and rocking the counter into engagement, and in such movement the slide 56 turns about the pin 52^a as a pivot, and the arm 58 is of course rocked downward, and in such rocking movement the bevel portion 180 is moved downward until it comes in contact with the operating-shaft 40; but this extent of movement is enough to permit the throwing in of the counter in the manner described. Now, however, when a special key is operated and the slide 56 is forced rearward in the manner previously described the bevel portion 180 now rides up on the shaft 40, and since the arm 58 cannot then drop downward the curved arm 58^a supports the pin 52^a in its normal position and prevents the rocking of the counter-frame about the pivotal shaft 51, the pin 52^a being carried upon the counter-frame, as heretofore described, and in this manner the counter A is prevented from dropping into engagement with its registering-segments when a special key is operated even though the shaft 57 had been turned into the position corresponding to that shown in Fig. 1 for shaft 66 of counter B, wherein there would be sufficient play of the shaft 57 in its bearings between the lugs 161 to permit the shaft 57 to rock forward were it not for this positive locking by means of the arm 58 in the manner just described.

I will now describe the special indicator

which is used in connection with the push-button 80 to designate which counter is set for operation. The arm 86, (see Fig. 5,) attached to the inner end of the push-button 81, carries a pin 185, which abuts against a curved arm 186, pivoted upon the shaft 24, the lower end of which arm has wound around it a spring 187, which presses against a projection 188, which extends laterally from the lower end 10 189 of a bell-crank lever, also pivoted to turn loosely upon the shaft 24, the rearward end 190 of said bell-crank lever being formed with a slot which engages a pin 191, formed upon a lifting-rod 192, which extends upward and 15 is connected to a crank-arm 193, fast upon a shaft 194, which carries the special indicator 195, (see Figs. 1 and 3,) said indicator being square in cross-section and having on two of its opposite faces the designation "A" for 20 counter A and on its other two opposite faces the designation "B" for counter B. The aforesaid laterally-projecting lug 188 has an aperture (not shown) through which the lower portion of the arm 186 projects, so as to permit 25 the spring 187 to press against said lug 188, and said lower portion of the arm 186 also carries a pin 196, which by abutting against the lug 188 limits the forward movement of said arm 186. The downwardly-extending 30 arm 189 of said bell-crank lever is formed with a curved foot 197, which abuts against a plate 198, fast to the key-coupler 14. In the normal operation of the machine when the push-button 80 remains at its outermost po- 35 sition and the counter B is therefore thrown into operation the special indicator remains inactive and shows both at the front and at the back of the machine the special designation "B;" but if the push-button 80 is pushed 40 inward to set the counter A for operation instead of counter B this pushing inward of said push-button causes the pin 185 to press the arm 186 rearward, thereby putting the spring 187 under tension against the lug 188, and 45 thus tending to force the bell-crank lever-arm 189 rearward; but the same is prevented from having this rearward movement by reason of its foot 197 abutting against the plate 198 of the key-coupler. However, as soon as any 50 key is now operated the key-coupler is lifted, and the plate 198 is rocked out of the path of the foot 197, and the arm 189 can spring rearward under the tension of the spring 187, thereby carrying the arm 190 upward and 55 through the lifting-rod 192 turning the shaft 194, so as to rotate the same through ninety degrees and cause the special indicator "A" both at the front and at the back of the machine, and the special indicator is retained in this 60 position until the next operation of the machine by means of a lug 199, formed on the lower portion of the lifting-rod 192, which lug 199 engages the tablet-supporting bar 32 in the same manner in which the tablet-indi- 65 cators engage the same, as heretofore de-

scribed. When the arm 189 moves rearward to shift the indicator, as just described, the extent of movement of this arm is of course such as to carry the foot 197 to such rearward position that it will not be in the path of the 70 plate 198 when the key-coupler returns to normal position.

While the form of mechanism here shown and described is admirably adapted to fulfil the objects primarily stated, it is to be under- 75 stood that I do not care to confine myself to any form of embodiment of the invention here disclosed, for it is susceptible of embodiment in various forms all coming within the scope of the claims which follow. 80

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

1. In a cash-register, the combination with a series of keys, and a plurality of counters one 85 of which is normally operative; of adjustable means for disabling said normally operative counter and setting one of the other counters for operation; and means for preventing the operation of whichever counter is set for op- 90 eration.

2. In a cash-register, the combination with a series of keys, and a plurality of counters one of which is normally operative; of adjustable means for disabling said normally operative 95 counter and setting one of the other counters for operation; a series of special keys; and means controlled by said special keys for preventing the operation of whichever counter has been set for operation. 100

3. In a cash-register, the combination with a series of amount-keys, and a plurality of counters controlled by said keys, one of said coun- 105 ters being normally operative; of adjustable means for disabling the normally operative counter and setting one of the other counters for operation; a series of special keys; type-carriers controlled by said amount-keys and said special keys; and means controlled by 110 said special keys for preventing the operation of whichever counter has been set for operation.

4. In a cash-register, the combination with a plurality of counters each mounted in a mov- 115 able frame, operating devices for said counters, and a series of keys and means connected therewith for first moving the proper counter into engagement with said operating devices and then actuating the counter; of means for 120 predetermining which counter shall be moved into engagement as aforesaid; and means for preventing the operation of the counter thus predetermined for operation.

5. In a cash-register, the combination with a plurality of counters each mounted in a mov- 125 able frame, operating devices for said counters, and a series of keys for first moving the proper counter into engagement with said operating devices and then actuating the coun- 130 ter; of means for predetermining which coun-

ter shall be moved into engagement as aforesaid; a series of special keys; and means controlled by said special keys for preventing the operation of the counter thus predetermined for operation.

6. In a cash-register, the combination with a plurality of counters each mounted in a movable frame, operating devices for said counters, and a series of amount-keys for first moving the proper counter into engagement with said operating devices and then actuating the counter; of means for predetermining which counter shall be moved into engagement as aforesaid; a series of special keys arranged for operation simultaneously with said amount-keys; and means controlled by the initial movement of said special keys to disable the counter predetermined for operation.

7. In a cash-register, the combination with a plurality of counters each mounted in a movable frame, operating devices for said counters, and a series of amount-keys for first moving the proper counter into engagement with said operating devices and then actuating the counter; of means for predetermining which counter shall be moved into engagement as aforesaid; a series of special keys arranged for simultaneous operation with said amount-keys; type-carriers controlled by said amount and said special keys; and means controlled by said special keys for disabling the counter predetermined for operation upon the initial movement of said keys, and for setting the special printer graduated distances during the continued movement of said special keys.

8. In a cash-register, the combination with a plurality of counters each mounted in a movable frame, operating devices for said counters, a series of keys for actuating said operating devices, and means controlled by said keys for moving the counters into engagement with the operating devices; of means for predetermining which counter shall be moved into engagement as aforesaid; a series of special keys; means controlled by said special keys for disabling the counter predetermined for operation; and means for positively preventing the engagement of any of said counters with said operating devices when any one of said special keys is depressed.

9. In a cash-register, the combination with a plurality of counters each mounted in a movable frame, operating devices for said counters, a series of amount-keys for actuating said operating devices, an operating member operated by said amount-keys, and throwing devices cooperating with said operating member to throw said counters into engagement with their operating devices; of a controlling-shaft carried by each of said movable frames; adjustable means cooperating with all of said controlling-shafts for predetermining which counter shall be thrown into engagement with the operating devices; a series of special keys;

and means controlled by said special keys for cooperating with said controlling-shafts and arranged to disable the counter predetermined for operation.

10. In a cash-register, the combination with a series of keys, and a plurality of counters one of which is normally operative; of adjustable means for disabling said normally operative counter and setting one of the other counters for operation; means for preventing the operation of whichever counter is set for operation, and a type-carrier controlled by said adjustable means.

11. In a cash-register, the combination with a series of amount-keys, and a plurality of counters controlled by said keys, one of said counters being normally operative; of adjustable means for disabling the normally operative counter and setting one of the other counters for operation; a series of special keys; type-carriers controlled by said amount-keys and said special keys; means controlled by said special keys for preventing the operation of whichever counter has been set for operation, and a type-carrier controlled by said adjustable means.

12. In a cash-register, the combination with a plurality of counters each mounted in a movable frame, operating devices for said counters, and a series of amount-keys for first moving the proper counter into engagement with said operating devices and then actuating the counter; of means for predetermining which counter shall be moved into engagement as aforesaid; a series of special keys arranged for simultaneous operation with said amount-keys; type-carriers controlled by said amount and said special keys; means controlled by said special keys for disabling the counter predetermined for operation upon the initial movement of said keys, and for setting the special printer graduated distances during the continued movement of said special keys, and a type-carrier controlled by said predetermining means.

13. In a cash-register, the combination with a series of keys and a plurality of counters cooperating therewith, of an adjustable means for predetermining which counter shall be operated; an operating member common to said keys; a locking-plate for said adjustable means; an auxiliary latching-plate carried by said locking-plate, with provisions formed on said latching-plate for cooperating with said operating member and latching the adjustable means in adjusted position.

14. In a cash-register, the combination with a series of keys and a plurality of counters cooperating therewith, of an adjustable means for predetermining which counter shall be operated; an operating member common to said keys; a locking-plate for said adjustable means; an auxiliary latching-plate carried by said locking-plate, with provisions formed on

said latching-plate for coöperating with said
operating member and latching the adjustable
means in adjusted position prior to the initial
movement of said operating member, and
5 with provisions formed on said locking-plate
to hold said adjustable means in adjusted po-
sition after the initial movement of said op-
erating member, said locking-plate being re-
turned to normal position whereby to unlock

said adjustable means by engagement of said 10
operating member with said latching-plate.

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

JOHN A. WERNER.

Witnesses:

W. M. McCARTHY,

WM. O. HENDERSON.