

No. 892,489.

PATENTED JULY 7, 1908.

P. YOE.

VOTING MACHINE.

APPLICATION FILED MAY 9, 1906.

6 SHEETS—SHEET 1.

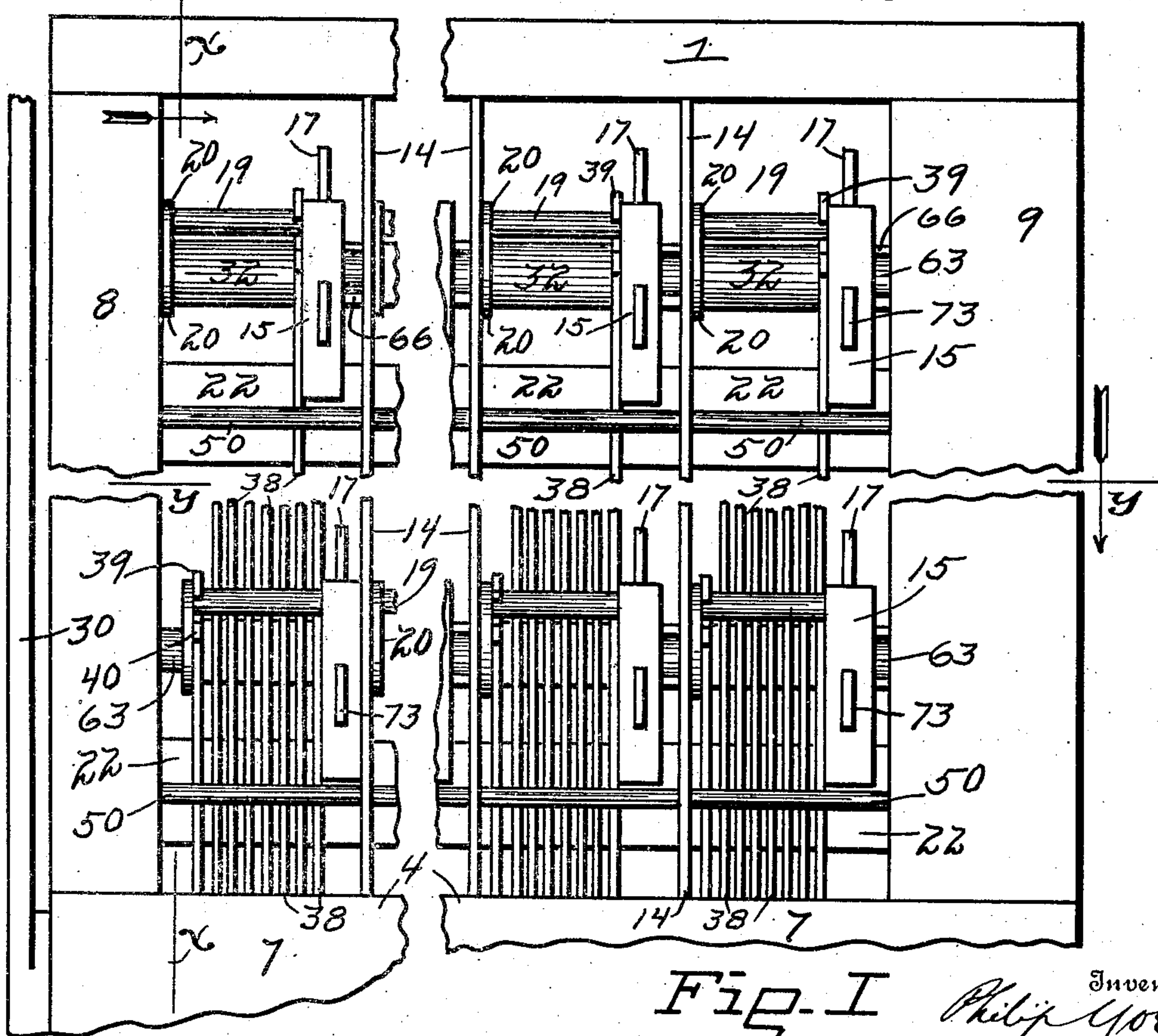
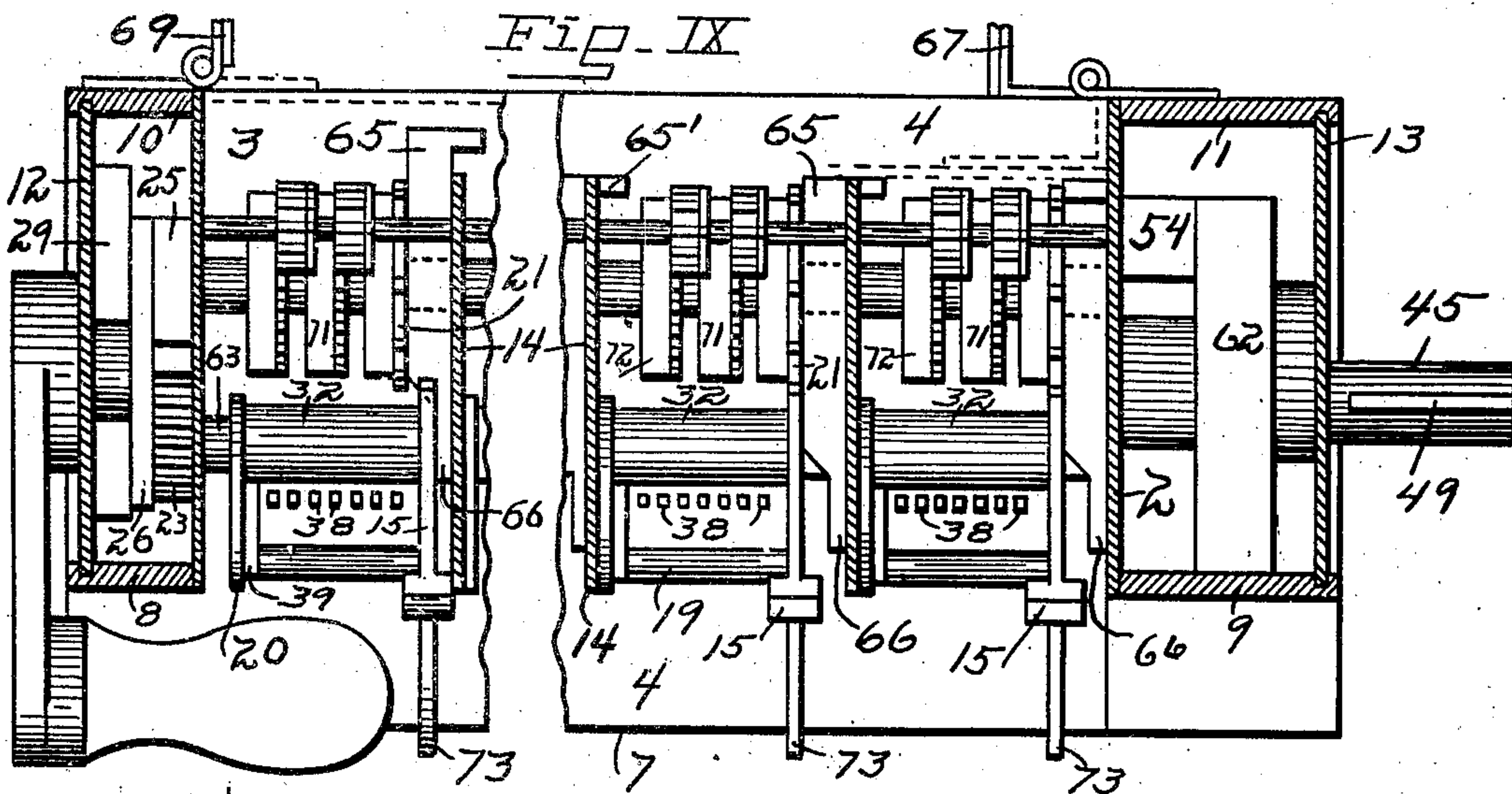


Fig. I

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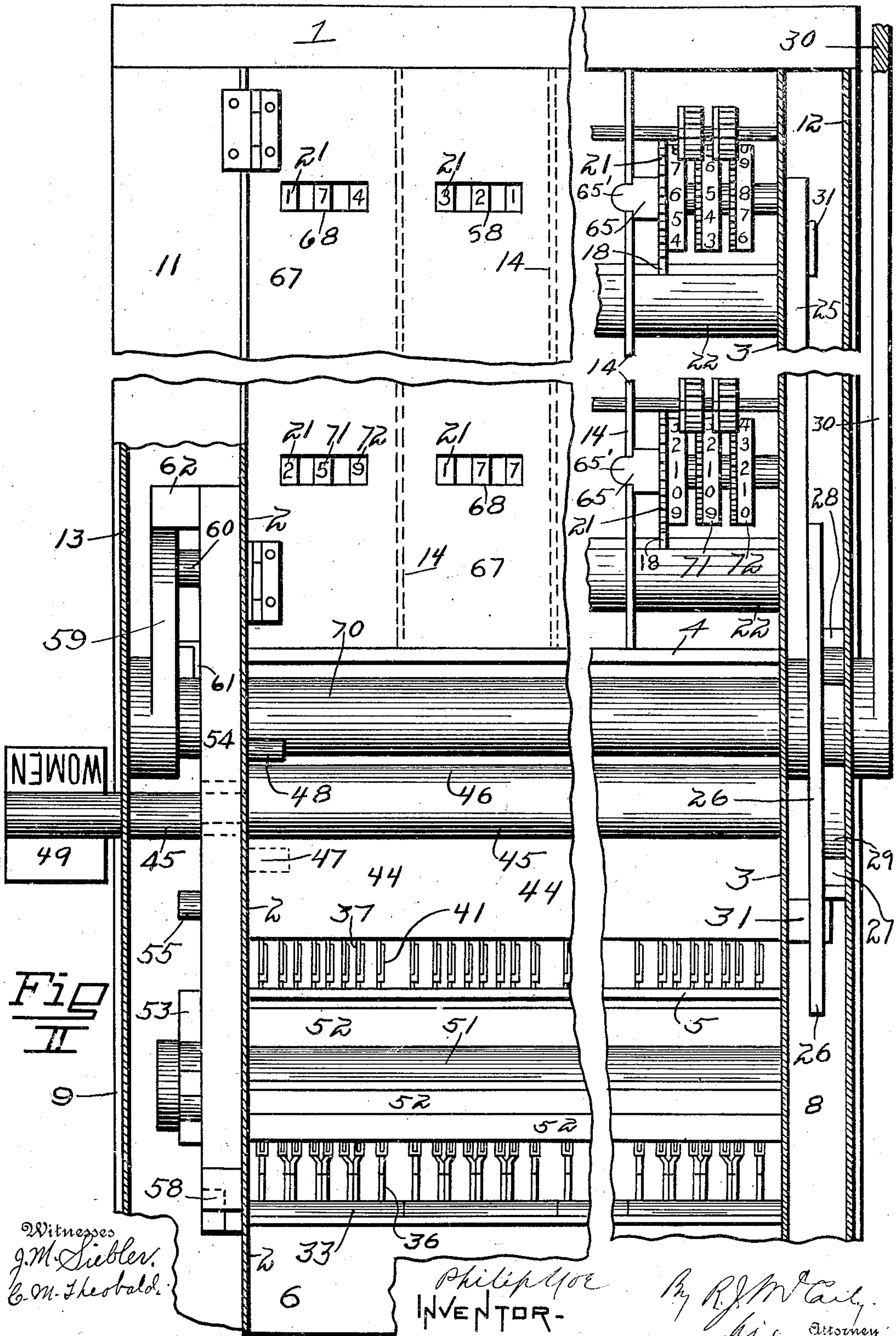
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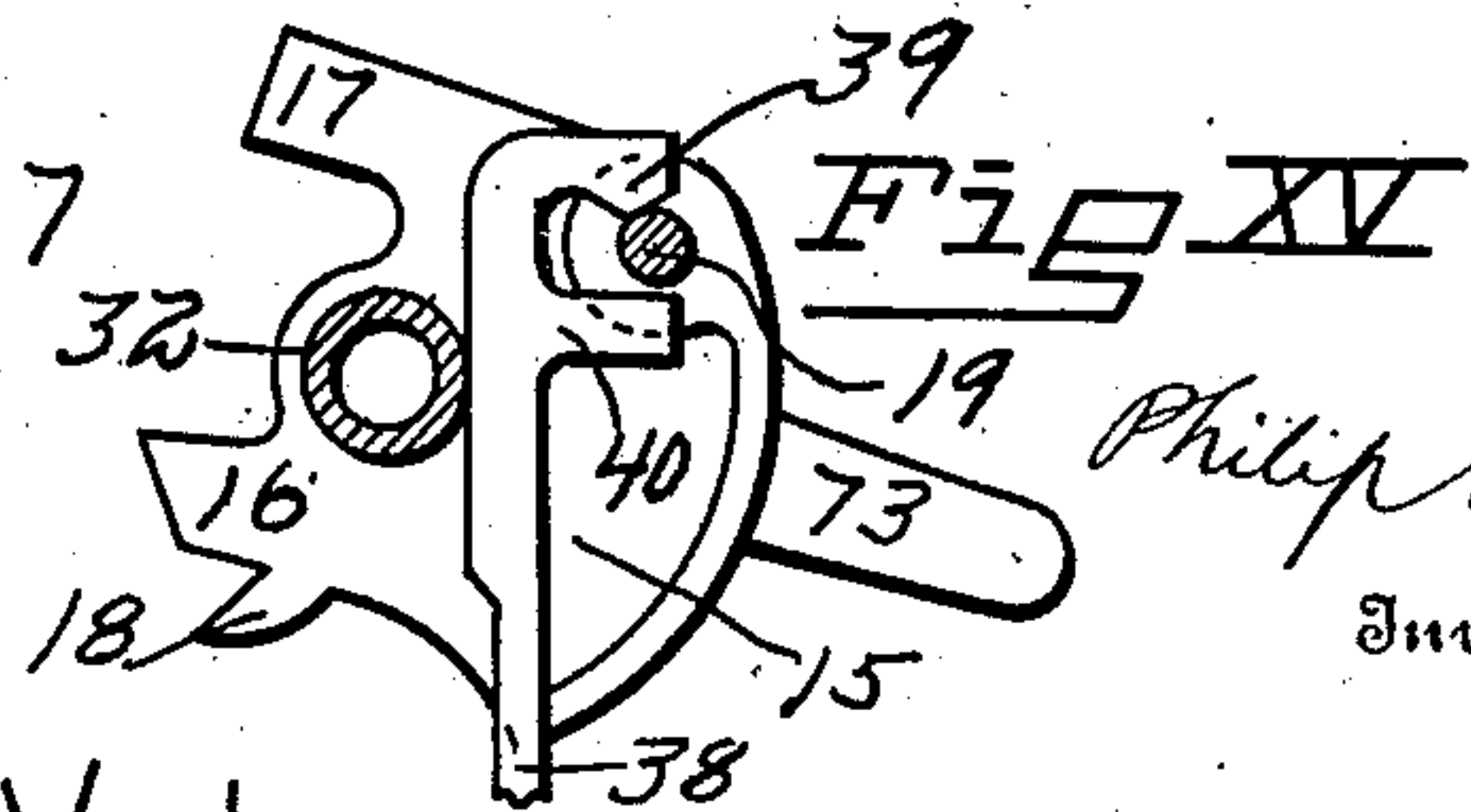
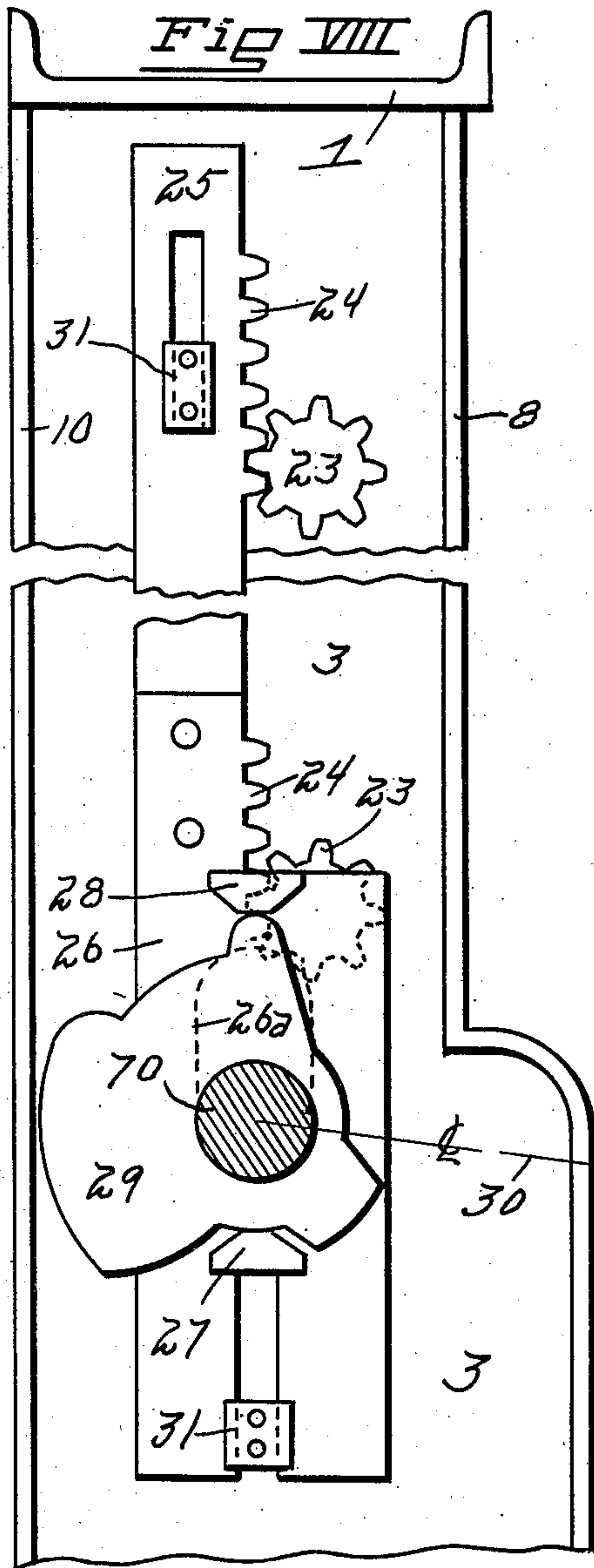
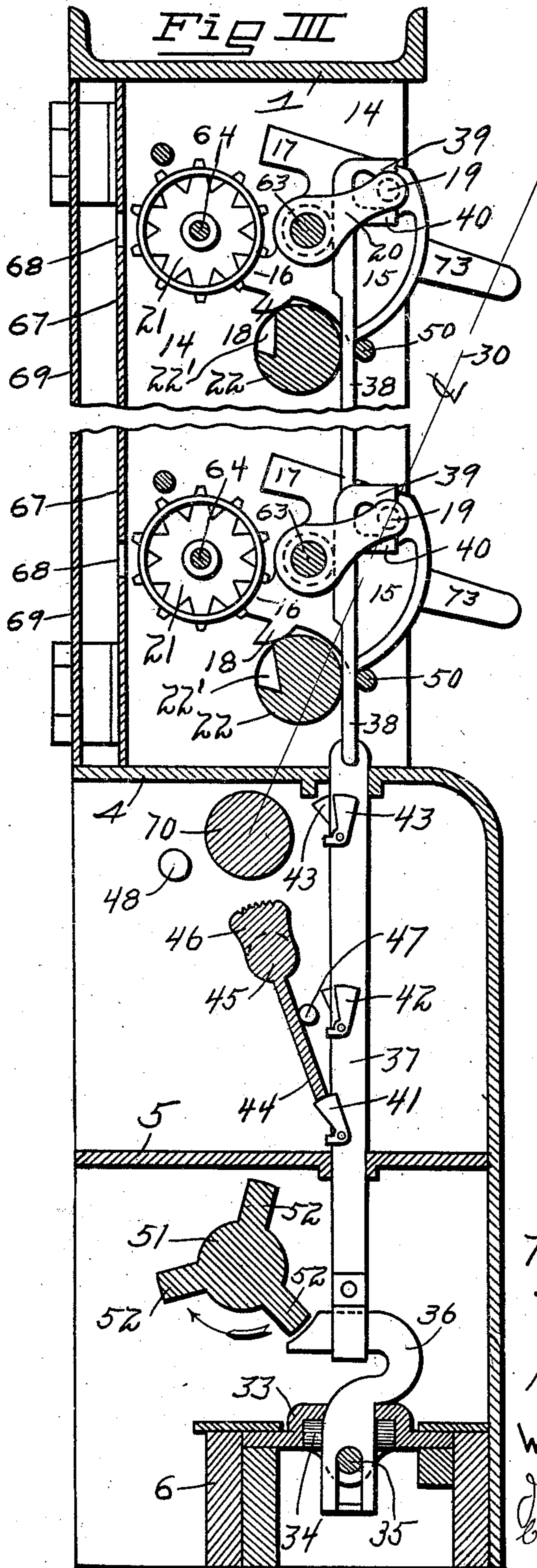
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6 SHEETS—SHEET 3.



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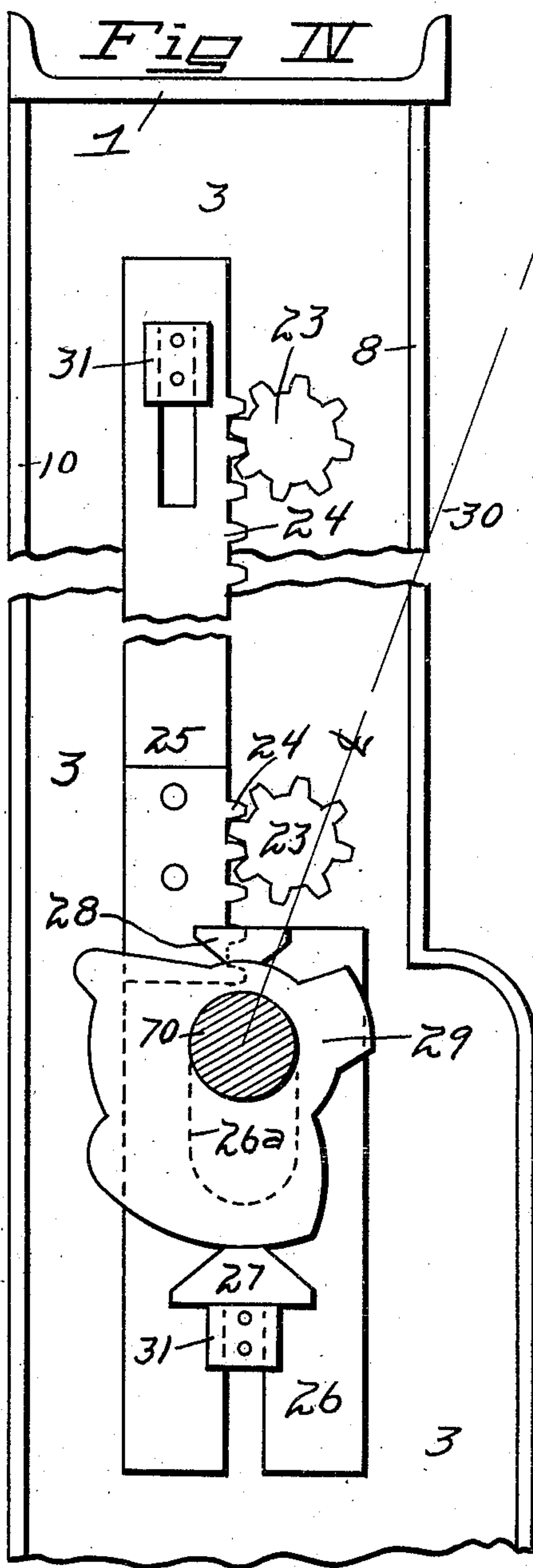
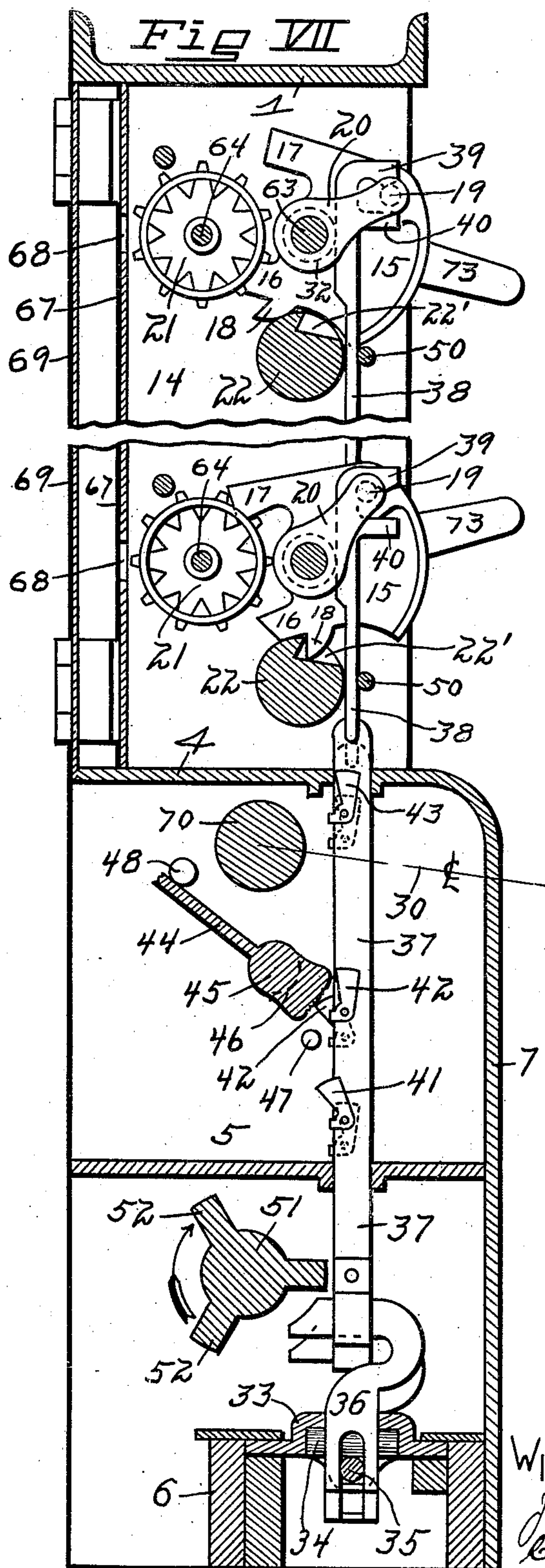
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6 SHEETS—SHEET 4.



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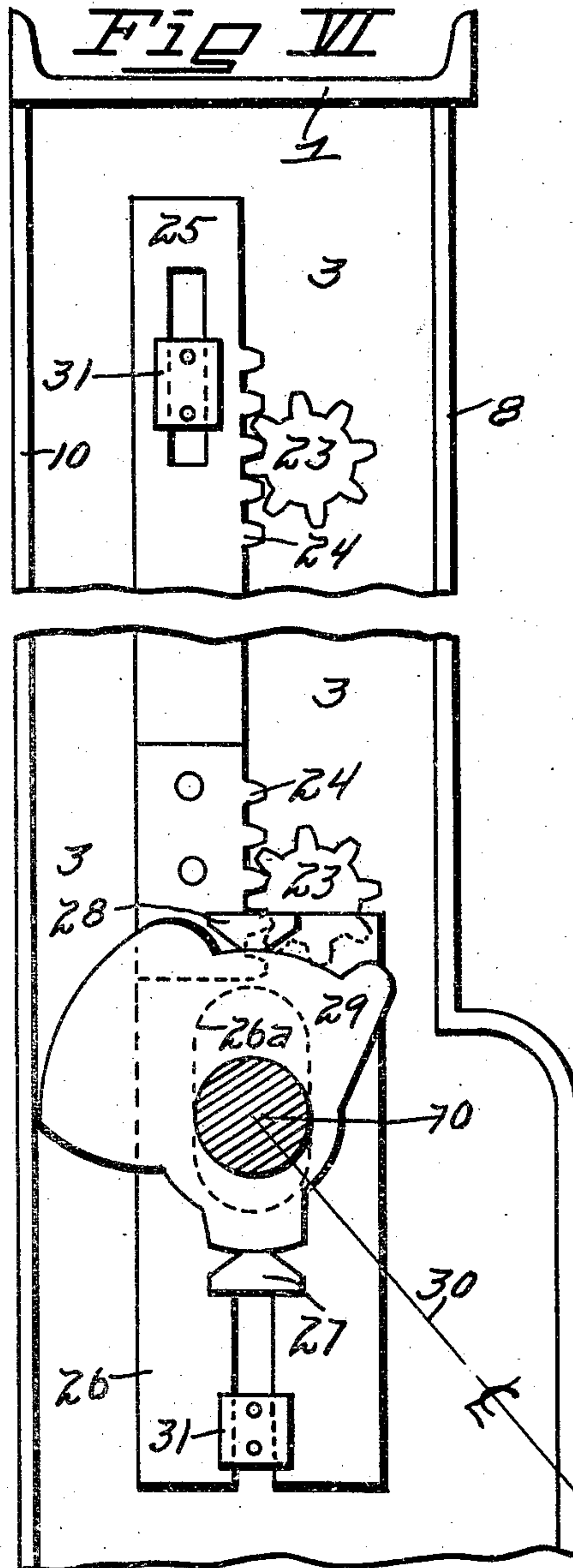
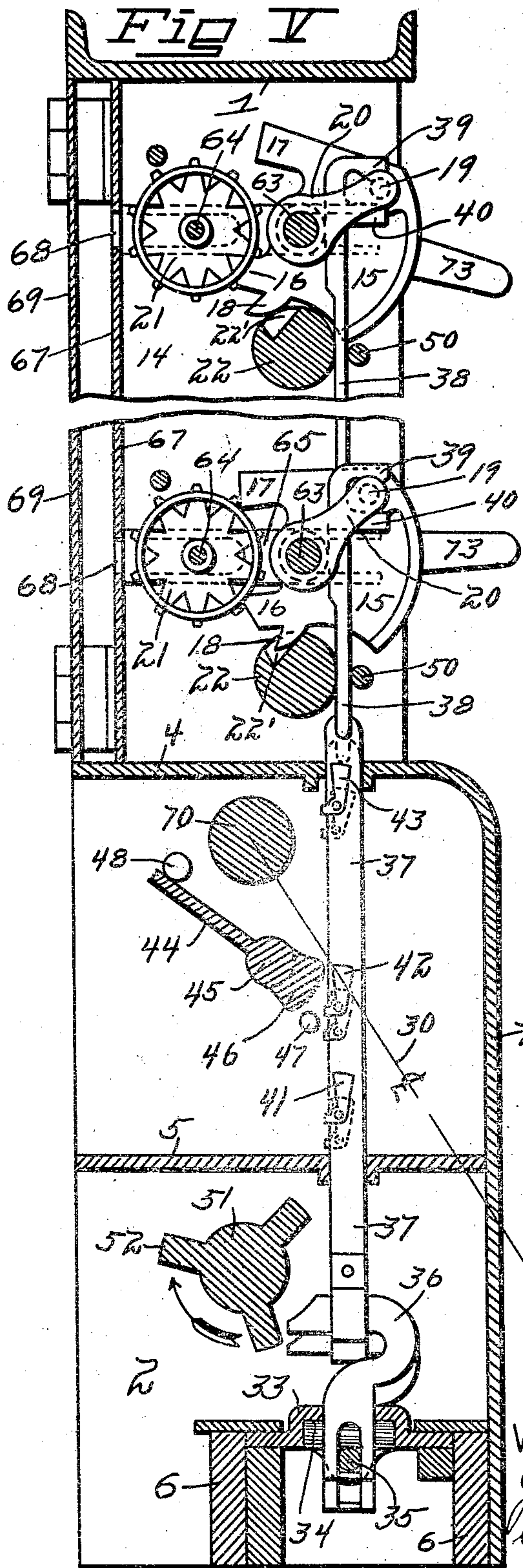
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6 SHEETS—SHEET 5.



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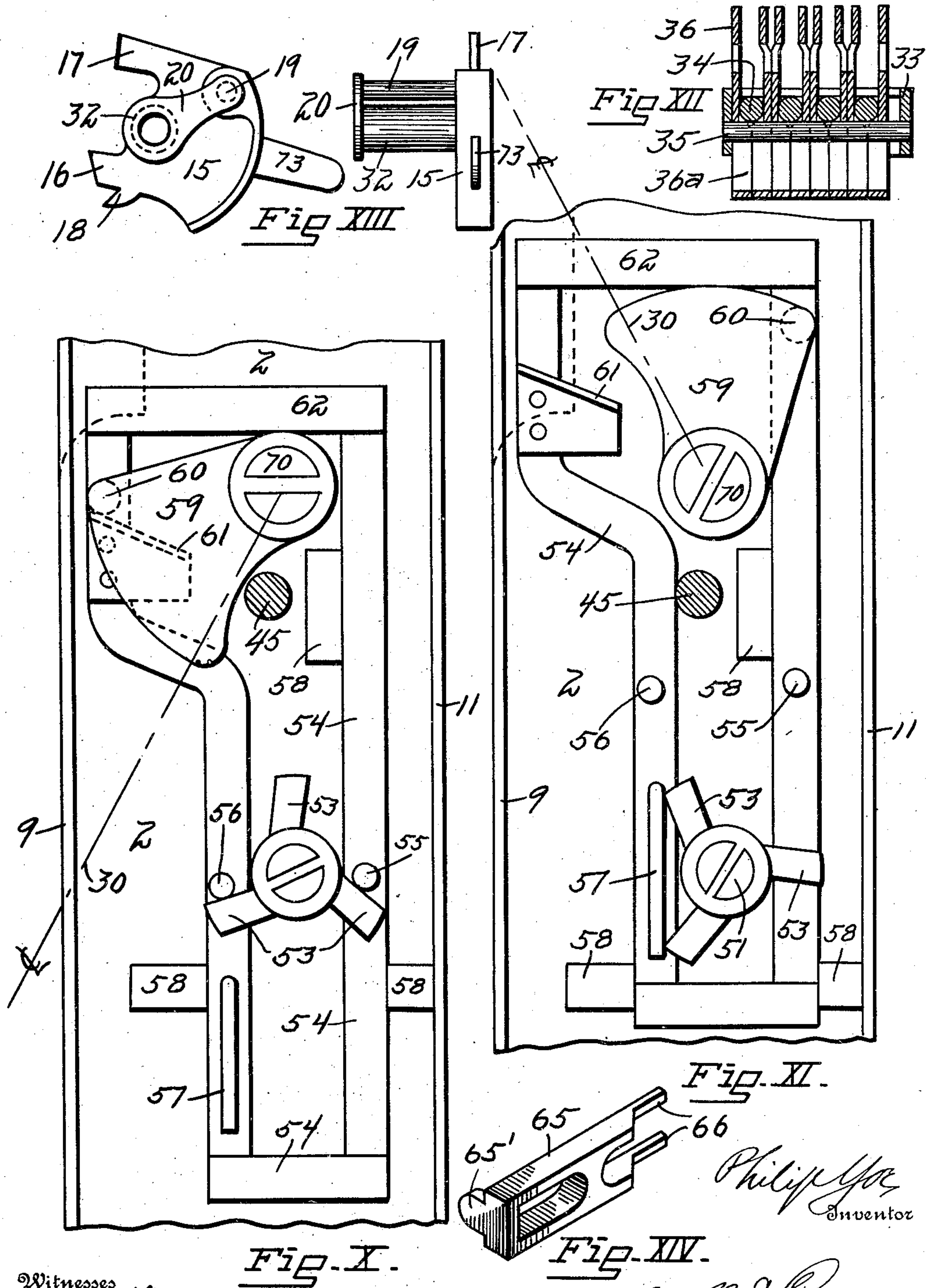
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No. 892,489.

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6 SHEETS—SHEET 6.



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UNITED STATES PATENT OFFICE.

PHILIP YOE, OF DAYTON, OHIO.

VOTING-MACHINE.

No. 892,489.

Specification of Letters Patent.

Patented July 7, 1908.

Application filed May 9, 1906. Serial No. 315,879.

To all whom it may concern:

Be it known that I, PHILIP YOE, 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 Voting-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in voting machines.

The object of the invention is to simplify and reduce to a minimum the necessary operating parts of the register and key-locking mechanism.

Referring to the annexed drawings—Figure I, is a fractional front view of the machine, the operating lever being in its upper position. Fig. II, is a rear elevation of the machine, the operating lever being in the position shown in Fig. I. Fig. III, is a sectional elevation on the line $x-x$ of Fig. I. Fig. IV, is a side elevation of the machine, the operating lever being in an elevated position. Fig. V, is a vertical sectional elevation of the machine somewhat similar to Fig. III, the operating lever being in its lower position. Fig. VI, is a vertical side elevation of the machine somewhat similar to Fig. IV, the operating lever being in the lower position. Fig. VII, is a vertical sectional elevation somewhat similar to Figs. III and V, the operating lever being in the ascending intermediate position. Fig. VIII, is a vertical side elevation somewhat similar to Figs. IV and VI, the operating lever being in the position shown in Fig. VII, or the ascending intermediate position. Fig. IX, is a horizontal sectional view on the line $y-y$ of Fig. I. Fig. X, is a side elevation of the rotary locking bar-actuating frame, the operating lever being in the lower position. Fig. XI, is a side elevation similar to Fig. X, the main actuating lever being in the upper position. Fig. XII, is a detail sectional view of the interlocking mechanism. Fig. XIII, is a detail view of a voting key showing side and front elevations of said key. Fig. XIV, is a detail perspective view of one of the frames through which the counters are

reset to zero. Fig. XV, is a detail view of the connection between a voting key and the interlocking mechanism.

In describing the machine in detail, the various subject matter will be discussed under separate headings—for example, the frame-work will constitute a separate division which will be succeeded by a description of each division in its order—for example, the counters and setting keys; the counter-actuator or key-coupler mechanism; the interlocking mechanism; the exclusion mechanism; the rotating locking bar; and the setting to zero mechanism. The ballot-board and booth are not shown in the drawings nor will they be described owing to their having no connection with the subject-matter of the invention.

Throughout a detail description of the invention, similar reference characters indicate corresponding parts in the several views of the drawings.

Frame-work.—The frame-work of the machine comprises side plates 2 and 3 which stand upright and are mounted upon a suitable base or standards (not shown.) Extending across the top and uniting these side plates, is a suitable channel beam 1. At an intermediate point there extends a transverse plate 4 united to the side plates 2 and 3 and projecting downwardly in the front of the machine in a wall 7. Extending across the machine below the plate 4 is a transverse plate 5 also united to the side plates and to the front portion 7. Mounted below the cross plate 5 is a frame 6 which supports the interlocking mechanism. The plates 2 and 3 are strengthened by plates 8—10—9 and 11 which extend at right angles with said plates 2 and 3 and are united thereto in any suitable manner. On the opposite sides of the machine are compartments which are closed by sliding doors 12 and 13, the purposes of which will be again referred to in connection with the counter-actuator and the rotating locking bar. Extending between and fastened to the channel beam 1 and the plate 4 are a multiplicity of partitions 14 through which extend shafts 22—63 and 64 upon which the keys and the counters are mounted.

Counters and setting keys.—Mounted upon the shafts 64 are counters 21—71 and 72, the former being the unit wheel of each set and

having ten teeth. These teeth are engaged alternately by pallets 17 and 16 on setting key 15 when the key 15 is raised and lowered by the channel 22' in the counter actuator-shaft 22 engaging the projection 18 on said key to rotate the counter. The setting key 15 has a hub 32 which is fulcrumed on shaft 63, said key being set from the extended portion 73. In Fig. III, the counters are shown to be locked against operation which is due to the setting keys 15 engaging the key-coupler or counter-actuating shaft 22. In Fig. V, the key operating in connection with the upper counter is shown in a position for setting, channel 22' in the counter-actuator-shaft being moved to a position which permits the projection 18 to enter said channel; the key 15 operating in connection with the lower counter is shown in its set position, and in which position, the counter may be actuated to record the vote by means of the key-coupler 22.

It will be observed that when a key is set, the lug or projection 18 thereon enters the channel 22' in the key-coupler or counter-actuator shaft 22. The counter-actuator shafts 22 are moved from the position shown in Fig. III, to those shown in Fig. V, by means hereinafter described under the heading of "Counter-actuating mechanism." The keys are set by elevating the exposed ends 73 by the fingers to the position shown in connection with the lower counter in Fig. V; the keys so set are held in that position by the interlocking mechanism hereinafter described under the heading of "Interlocking mechanism." The keys 15 or any of them in a horizontal series may be placed in a voting position as shown at the lower key in Fig. V, or they or any of them may be placed out of an operative position as shown at the upper key in Fig. V at will without recording a vote.

It will be observed that when a key is set, as shown by the lower key in Fig. V, the counter is held against movement by the pallets 16 and 17 engaging teeth at opposite points, and further, when a key is not set as in the upper position in Fig. V, the counter is likewise locked by the lower pallet 16 alone engaging the teeth of the counter; it will therefore be seen that the counters are locked at all times excepting periods in which they are actuated, and that the key and unit counting wheel are in constant mechanical engagement. This is important for the reason that if the machine was not locked, the counters might be moved accidentally, and to avoid this condition means are provided for locking said counters in a manner just described.

Referring to Fig. VII, the upper key not having been set, the movement of the counter-actuator shaft thereof will perform no

function in connection with this key, but the key 15 operating in connection with that counter is locked by the projection 18 being in engagement with the periphery of its key-coupler or counter-actuator shaft; the lower key having been set in an operating position as in Fig. V, is shown in Fig. VII, to have been partially actuated to the extent of imparting an initial movement to the counter from the pallet 17 of the key 15. In such movement of the counter, the butt end of the pallet 17 engages the tooth of the wheel 21 in the path of its movement and moves the same in the direction of movement of said pawl. In this position, the counter-actuator shaft 22 has been moved to the limit of its forward movement; the reverse or return movement of said shaft from the position in Fig. VII to the position in Fig. III, will elevate the lower pallet 16 of the key 15 in contact with the counter and will complete operative movement of the counter to record the vote. This locking or reverse movement of the counter-actuator shaft 22 is accomplished through the main operating lever 30 to be hereinafter referred to under the heading of "Counter-actuating mechanism." It may be stated here that when the counter-actuator shaft 22 is moved from the position shown in Fig. VII to the position shown in Fig. III, there will be a time when the upper or unset key will not be in locking condition with said shaft. During this period, the key so out of operative position with its counter-actuator shaft 22 is controlled or locked by the rotating locking bar 51 to be described more fully under the heading of "Rotating locking bar", so it will be seen that at no time during the operation of the machine by the main lever 30 can a key be actuated. The advantage of this is that the machine cannot be tampered with by unauthorized persons or improperly used. It will be readily understood that the actuating movement imparted to the counters 21 through the alternate engagement and disengagement of the pallets 16 and 17 of the keys 15, is similar to the well known double pallet movement to which I make no broad claim. It will be noted that the channel 22' in the counter-actuator shaft 22 acts as a positive stop for the key 15 when said key is set as the projection 18 on said key engages said channel.

Counter-actuator mechanism.—The key-coupler or counter-actuator shafts 22 have pinions 23 on ends thereof; these pinions being on the same side of the machine at which the main operating lever 30 is located. These pinions 23 engage racks 24 which are on a sliding bar 25, said bar having a slot in its upper portion which receives a guide 31 by means of which the racks are maintained in operative relation with the pinions. The bar 25 extends from a plate 26 which is like-

wise slotted to receive the guide 31 by means of which the plate 26 is maintained in an operative position so that it may be moved freely up and down to impart the necessary movement to the pinions 23 through the necessary racks. It will be understood that other means may be employed for imparting movement to the key-coupler or counter-actuator shafts 22 besides the racks and pinions shown and described; I therefore, do not wish to limit myself to the racks and pinions as the means for imparting such movement. Mounted at opposite points on the outer side of the plate 26 are lugs 27 and 28 through which the said plate is raised and lowered; these lugs 27 and 28 may be replaced by roller or any other suitable device which will enable the plate 26 to be operated. The said plate 26 is provided with an oblong opening 26^a to permit of the main operating shaft 70 being projected there-through to receive the main operating lever 30. Fixed to this main shaft 70 in proximity to the plate 26 is a cam 29 which alternately engages the projections 27 and 28 to impart the necessary movements to the racks 24 in the operations of voting. The cam 29 is shown in the drawings in three different positions—see Figs. IV—VI and VIII. When the main operating lever 30 is in its highest position as indicated by the center line in Fig. IV, the racks and the plate 26 are in their lower position; as shown in Fig. VIII, the racks are in the elevated positions having completed the forward movements of the pinions 23, and when the lever is in its lower position as in Fig. VI, the racks are in their intermediate positions; in this position, the machine is unlocked and the voter is within the booth.

The sliding door 12 shown in Fig. IX, forms the compartment in which the actuating mechanism just described is inclosed; the main operating lever 30 lying on the outside of this door as is clearly shown.

Interlocking mechanism.—This interlocking mechanism is similar to that described and claimed in United States Letters Patent No. 794,914, granted to myself July 18, 1905, therefore, the same will be but briefly described.

Mounted upon the frame-work 6 is a series of abutment frames 33 each of which has a round bar supported therein; these abutment frames have a series of rollers 34 placed within them which rest upon the bars 35. On each side of said rollers and straddling the bars 35, there are a series of interlocking members 36 which are coupled with coupling rods 37.

36^a designates enlargements on the lower portion of the interlocking members 36 which engage the rollers 34 and provide for the operation of only one interlocking member at a time. See Fig. XII, where it is

shown on the extreme right hand side a space that is provided by the rollers 34 being all moved to the left so that any one of the interlocking members may be operated. The coupling rods 37 are guided in their movements by suitable bearings in the plates 4 and 5.

38 designates extension coupling rods which are connected to the upper ends of the lower coupling rods 37 and have bearings between the counter actuator shafts 22, the rods 50 and against the hub 32 of the key 15. Owing to the limited space above the coupling rods 37, it is necessary to reduce the size of the extensions 38, hence, they are provided in separate pieces which are connected as before stated, to the upper ends of the coupling rods 37. It is obvious, however, that the parts 37 and 38 might be made in one piece and still possess the requisite size to accommodate the space or spaces in which they are placed. The upper ends of the coupling rod extensions 38 are provided with two lateral projections 39 and 40, the upper one 39 of which has a double taper on its inner surface.

Connected with each of the keys 15 is a pin 19, which at its other end is connected with a crank arm 20 which is fastened on the hub 32 of the key 15. Each of these pins 19 is adapted to enter the space between the two lateral projections 39 and 40 of the coupling members 38. By this means, the interlocking members 36 are directly connected to the keys 15 and are subject to operation in setting the keys in voting positions. As is illustrated in Fig. XV, the pin 19 lying between the key and the crank arm 20, occupies the outer position within the space between the two projections 39 and 40 on the interlocking extension 38; in this position, said pin 19 is in contact with the outer taper of the upper projection 39. In this position, the key 15 is in its normal or unset position. In setting said key in the position shown in Fig. X, the pins 19 move into the space between the projections 39 and 40, and in the meantime, the interlocking rods 38 are elevated, thereby correspondingly actuating the interlocking members 36. Upon the further upward movement of the keys 15 through the rotation of the counter-actuator shafts 22, the pins 19 move further into the spaces between the projections 39 and 40, but the interlocking devices are not further affected by such movement of the pins 19. The weight of the interlocking mechanism bearing downwardly through the projections 39 on the pins 19 will serve to maintain the keys 15 in their set positions; at this time the inner tapering portions of the projections 39 bear against the upper sides of the pins 19 and the keys are held rigidly in their set posi-

tions. In returning the keys to their normal positions as per the upper key in Fig. V, in the event that a voter wishes to change his vote, the pin 19 engages the lower projection 40 and positively returns the interlocking mechanism to its normal position or the position shown in Fig. III.

Exclusion mechanism.—The laws of some States—for example, Ohio, compel the votes of males and females to be kept separate; in other States, the laws exclude certain persons from voting for certain candidates; this necessitates the employment of means termed “Exclusion mechanism” whereby certain keys may be placed out of operation or locked so that they cannot be manipulated.

45 designates a shaft with an extension 44 and serrated extension 46 lying on opposite sides of the axis thereof. The shaft 45 is journaled in the side frames 2 and 3, and an end thereof projects on the exterior of the machine and supports an indicator 49 upon which may be inscribed any desirable word or sign indicating the voters to be excluded. Figs. III and V, show the extreme positions to which this shaft is moved; the stops 47 and 48 limiting the movements. Upon each of the interlocking rods 37 there are mounted two detainers 41 and 42—one above the other; these detainers have a suitable connection with said interlocking rods which permit of their being placed in positions to engage the extensions 44 and 46 on the shaft 45. In other words, the connections of the detainers 41 and 42, while they should not be so rigid as to prevent their being moved to such positions, it will be understood that their connections should not be sufficiently loose to permit of their dropping out of operative condition of their own accord. As shown in Fig. III, the forward interlocking member 37 is locked against operation by the lower detainer 41 thereon being moved to a position to engage the extension 44 on the exclusion bar 45, said exclusion bar having been moved to a position to be engaged by said detainer 41 through hand movements applied to the indicator end of said shaft 45.

In Fig. VII, the position of the exclusion bar 45 is reversed and the forward interlocking rod 37 is free to move, but the next adjacent interlocking rod 37 is locked against operation by its detainer 42 being in a position which engages the serrated extension 46 of the exclusion bar 45. Whenever it is desired that no candidates are to be excluded, the detainers 41 and 42 on the interlocking rods 37 are moved into vertical positions as in Fig. V, so as to avoid engaging either of the extensions 44 or 46 of the exclusion bar; in this case the exclusion bar 45 performs no function.

In the event that the machine should at any time be not used to its utmost capacity,

the unused interlocking mechanism and the keys and counters associated therewith may be placed out of an operative position, through means of a series of detainers 43, of which there is one attached to the upper portion of each of the interlocking rods 37; these detainers are similar in construction to the detainers 41 and 42 just described and are adapted to be thrown out of a perpendicular position to engage a suitable projection on the plate 4—see Fig. III.

Rotating locking bar.—Mounted in the lower part of the frame-work adjacent to the interlocking members 36 is an intermittent rotating interlocking shaft 51 which is rotatable in one direction only and has bearings in the side frames 2 and 3. This shaft 51 has radially-extended vanes 52 adapted to be placed in positions to engage the interlocking members 36 to lock the interlocking mechanism as shown in Fig. III. Upon the descension of the main operating lever 30 the shaft 51 is rotated from the position shown in Fig. III, to that shown in Fig. V, to unlock the interlocking mechanism by the following mechanism: On the exterior side of the casing or frame-work 2 opposite to the main operating lever, the shaft 51 projects and has fixed to it three radial-extending arms 53 which lie in the paths of projections 55—56 and 57. These projections are on a sliding frame 54 which is guided in its movement between lugs 58 on the outside of the plate or frame 2. This frame 54 is given ascending and descending movement through the main operating lever 30 and shaft 70 by means of a cam 59 which is fixed to said shaft. The location of this cam is shown in Figs. II—X and XI. Upon the ascension of the main operating lever, the periphery of the cam 59 engages the upper transverse portion 62 of said frame and raises the entire frame to its position shown in Fig. XI. During the ascension of this frame 54, the projection 57 engages one of the radial arms 53 and moves the locking bar 51 from the position shown in Fig. V, to that shown in Fig. III, or in other words, from an unlocked to a locked position; this is at the limit of the voting or upward stroke of the operating lever 30. The bar 51 is locked against rotation in this position by two of the radial arms 53 engaging the vertical projection 57. The reverse or downward movement of the operating lever moves the pin 60 on the cam 59 against the tapered projection 61 on the frame 54 and lowers said frame to the position shown in Fig. X. The pin 55 in this movement engages the right hand arm 53 and carries it to the position shown in Fig. X, in which position, it will be seen that two pins 55 and 56 engaging opposite arms 53 lock the bar 51 against rotation when at the extreme limit of the lower movement of the main operating lever; in this po-

sition, the bar 51 is shown in Fig. V. The movement of the rotating locking bar 51 has a movement in the direction of the arrow as indicated in Fig. V, and during its movement, one of the radial arms 52 engaging any of the interlocking members 36 will move such members to their extreme lower positions, for example, see Fig. III. It will be seen that when the lever ascends, the interlocking members 36 are positively returned to their lower or normal positions as shown in Fig. III, and held in a locked position until the lever is lowered to its extreme limit in the reverse direction.

Setting to zero mechanism.—As before stated, the setting keys 15 are always in engagement with their respective counters, therefore, in order to set the counters to zero it is necessary to free them from such engagement. To this end, the following mechanism is provided: 65 designates a sliding frame of which there is one associated with each counter. These frames have oblong openings which fit over the shafts 63 and 64 upon which the counters and setting keys are mounted; said frames are slidingly supported on said shafts. These frames are shown dotted in Fig. VI, and in position in Fig. IX, and in detail in Fig. XIV. The inner end of each of said frames is reduced in thickness or size as at 66 in order to permit of horizontal movement of the setting keys in order that the pallets of the setting keys may be disengaged from the unit wheels 21 as shown in the left hand key in Fig. IX. This horizontal movement is imparted to the keys 15 by hand in preparing the counters for their zero setting. These frames 65 are held in their inner positions as shown in Fig. V by a door 67 which is hinged to the frame direct at one side, said doors having sight openings 68 in line with the counters and by means of which the counters may be read to ascertain the number of votes. The forward end of each of these frames 65 has a finger extension 65' which lies in proximity to the door 67 and may be engaged by the fingers to withdraw the frames to permit the setting keys 15 to be shifted out of engagement with the unit wheel; the unit counters are then rotated by hand to set them to zero after which the setting keys are moved back to their engaging positions and the frames 65 are moved inwardly to maintain the setting keys and counters in operative contact. The sight openings 68 are concealed by an outer door 69 which is likewise hinged to the framework.

Synopsis of operation.—When the voter approaches the front of the machine, the operating lever 30 is in its upper position having been placed in such position by the last voter. The voter then lowers said lever and the machine is thus placed in an operative

position. The machine is then unlocked by a vane 52 of the locking bar 51 being moved away from the interlocking members 36, and the counter-actuator shafts 22 being moved to a position to bring the channels 22' therein to come in a position for the key projections 18 to enter said recesses. The voter then may select his candidates and set the necessary keys 15 in position. In the event of the voter desiring to reset a key before his vote is recorded, this may be done in a manner hereinbefore stated. The keys having been set after the operation of lowering the main operating lever, it is then in a position to record the vote; this is done by the voter elevating the lever; the machine then becomes locked and is in a position for the next voter.

I claim:

1. In a voting machine, a series of interlocking devices, an intermittent rotating locking bar rotatable in one direction only, an operating lever to actuate said locking bar and to lock said interlocking devices when moved to its limit in one direction, and to unlock them when moved to its limit in the reverse direction.

2. In a voting machine, a series of setting keys, a series of interlocking devices actuated thereby, an intermittent rotating locking bar rotatable in one direction only to lock said setting keys, a reciprocating frame to actuate said locking bar, and a reciprocating operating lever to actuate said reciprocating frame and to lock said setting keys when actuated to its limit in one direction and to unlock them when actuated to its limit in the reverse direction.

3. In a voting machine, a series of setting keys, an intermittent rotating locking bar having a plurality of locking projections thereon, each of said locking projections being adapted to lock said setting keys against operation, a reciprocating frame to actuate said locking bar, means on said reciprocating frame adapted to lock said locking frame in its set position, and means to actuate said reciprocating frame.

4. In a voting machine, a series of setting keys, a series of interlocking rods having locking projections thereon and actuated by said keys, an intermittent rotating locking bar having a plurality of longitudinal vanes thereon each of which is adapted to lock all of said setting keys, and means on the exterior of the machine for actuating said rotating locking bar.

5. In a voting machine, the combination with a series of setting keys, of a locking member connected to each of said keys, a rotary locking bar rotatable in one direction only and adapted to engage said locking members to return said keys to normal.

6. In a voting machine, the combination

with a series of setting keys, a locking member attached to each of said setting keys, a rotary locking bar rotatable in one direction only and adapted to engage said locking members, an oscillating operating lever, connecting mechanism between said locking bar and oscillating operating lever and adapted to rotate said locking bar a predetermined distance to lock said keys upon the oscillation of said operating lever in one direction, and to advance said locking bar to release said keys upon oscillating said operating lever in the reverse direction.

7. In a voting machine, a series of setting keys, a rotating locking bar to lock said keys against operation, an operating lever, connecting mechanism between the rotating locking bar and the operating lever adapted to rotate said locking bar a predetermined distance upon the actuation of the operating lever in one direction, and to advance said rotating locking bar upon the operation of the operating lever in the reverse direction.

8. In a voting machine, a series of setting keys, a series of interlocking devices actuated thereby, an intermittent-rotatable locking bar rotatable in one direction only and adapted to lock said interlocking devices from operation when rotated, and means on the exterior of the machine for imparting movement to the intermittent-rotating locking bar.

9. In a voting machine, a series of setting keys, a series of interlocking devices, a plurality of independently-movable detainers on each of said interlocking devices, and a manually-operative locking bar.

10. In a voting machine, a series of setting keys, a series of detachable-interlocking members, connections between said interlocking members and the setting keys, a plurality of detainers mounted upon said connections, and a manually-actuated locking bar adapted to be brought into interlocking relation with said detainers.

11. In a voting machine, the combination with a series of setting keys, and a series of interlocking devices connected thereto, of a plurality of independently-movable detainers mounted upon each of said interlocking devices, and a manually-actuated locking bar having extensions of different dimensions thereon adapted to engage said movable detainers.

12. In a voting machine, the combination with a series of setting keys, a series of interlocking devices actuated thereby, of a movable detainer mounted upon each of said interlocking devices, and a manually-actuated locking bar adapted to be brought in operative relation with said detainer.

13. In a voting machine, the combination with a series of setting keys, and a counter for each key, of an oscillating counter-actuator shaft adapted to engage and actuate said keys and to register all set keys, and to return the set keys to normal when actuated in the reverse direction.

14. In a voting machine, the combination with a counter, of a double-pallet setting key in constant mechanical engagement with said counter, a counter-actuating shaft to prevent said counter from being rotated more than a predetermined distance, means to lock said counter-actuator shaft, and means on the exterior of the machine to actuate said counter-actuator shaft.

15. In a voting machine, the combination with a series of setting keys, and a counter for each key, of an oscillating counter-actuator shaft adapted to engage and actuate said keys, and when oscillated in one direction to register all set keys, and to return to normal all set keys when oscillated in the reverse direction, and means for actuating said counter-actuator shaft.

16. In a voting machine, the combination with a double-pallet setting key, a counter-actuating shaft having a longitudinal channel therein, and means on the setting key cooperating with said channel for preventing the operation of the key for more than a predetermined distance.

17. In a voting machine, the combination with a series of setting keys, a counter for each key, a key-coupler adapted to couple all keys set together during registration, when oscillated in one direction, and to return to normal when oscillated in the reverse direction, means on said key-coupler to limit the stroke of said setting keys, and means to actuate said key-coupler.

18. In a voting machine, a series of setting keys, a series of interlocking devices, a stationary cross frame, and a movable detainer on each of said interlocking devices movable in and out of positions to engage said stationary cross frame.

19. In a voting machine, a counter, a double-pallet setting key having a projection, and a counter-actuating shaft having a longitudinal channel therein cooperating with the projection on said key to lock and unlock the counter.

20. In a voting machine, a series of double-pallet setting keys, a counter for each key, a counter-actuator shaft having a longitudinal channel, means on the setting keys cooperating with said channel for preventing the operation of a key for more than a predetermined distance, and a sliding frame controlling the operative relation between each key and its counter.

21. In a voting machine, the combination of a double-pallet setting key having a projection thereon, a counter for each key, a counter-actuating shaft having a longitudinal

nal channel which coöperates with the projection on said key in preventing the operation of the key for more than a predetermined distance, interlocking members, interlocking
5 rods coupled to said members, and lateral extensions on said interlocking rods engaging the setting keys.

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

PHILIP YOE.

Witnesses:

R. J. McCARTY,
C. M. THEOBALD