

No. 819,684.

PATENTED MAY 1, 1906.

P. YOE.
VOTING MACHINE.

APPLICATION FILED JUNE 7, 1905.

3 SHEETS—SHEET 1.

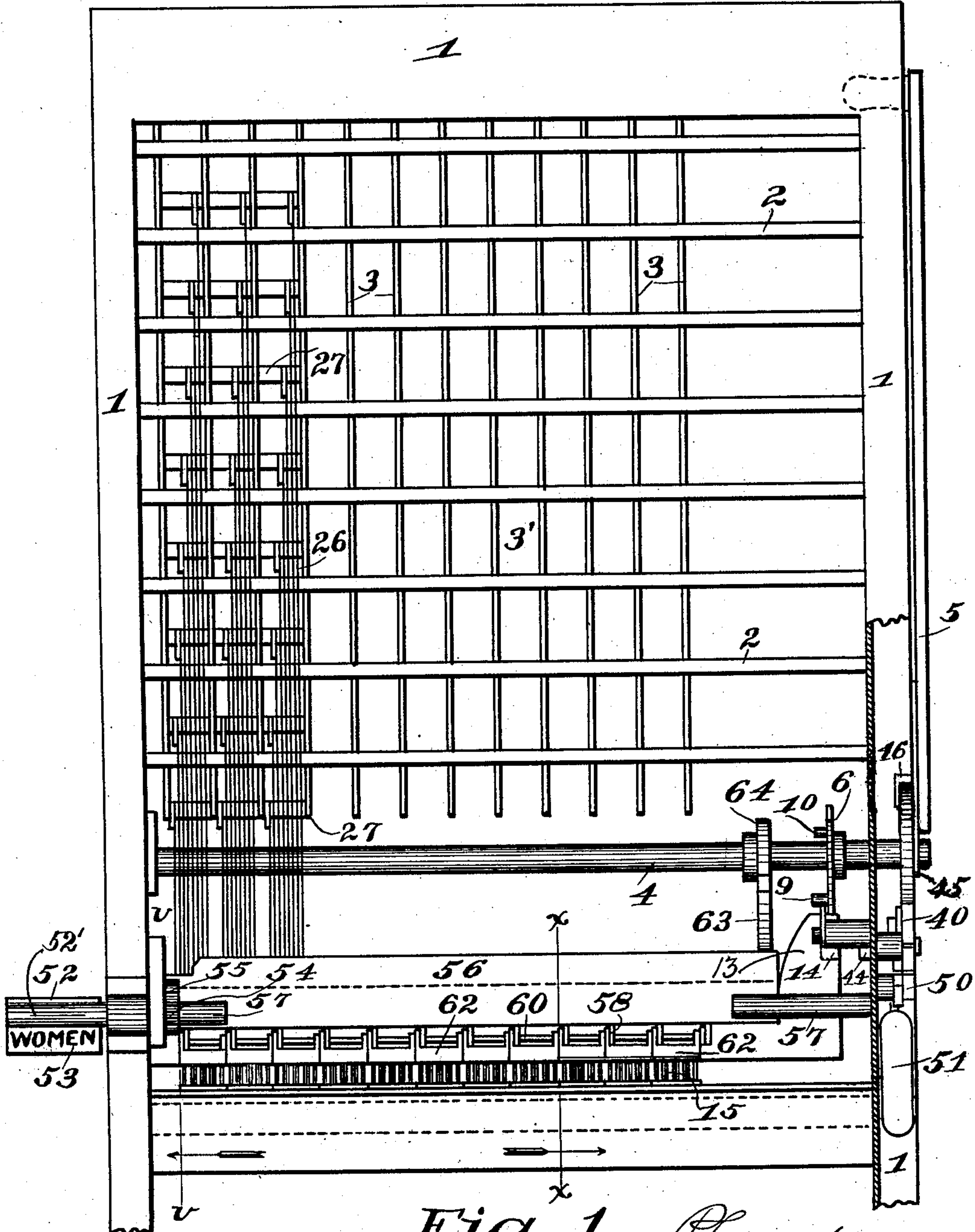


Fig. 1.

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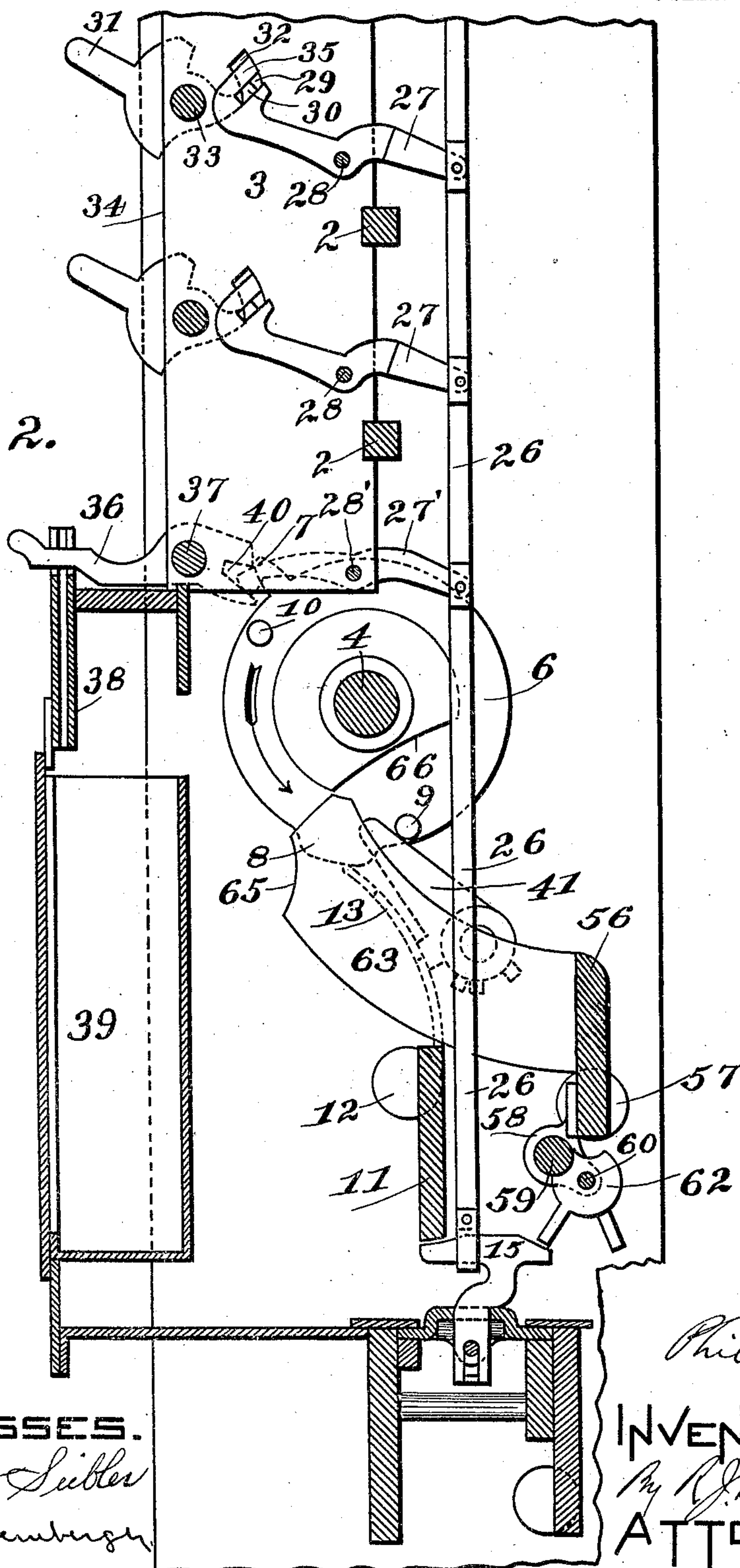
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3 SHEETS—SHEET 2.

Fig. 2.



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3 SHEETS—SHEET 3.

Fig. 3.

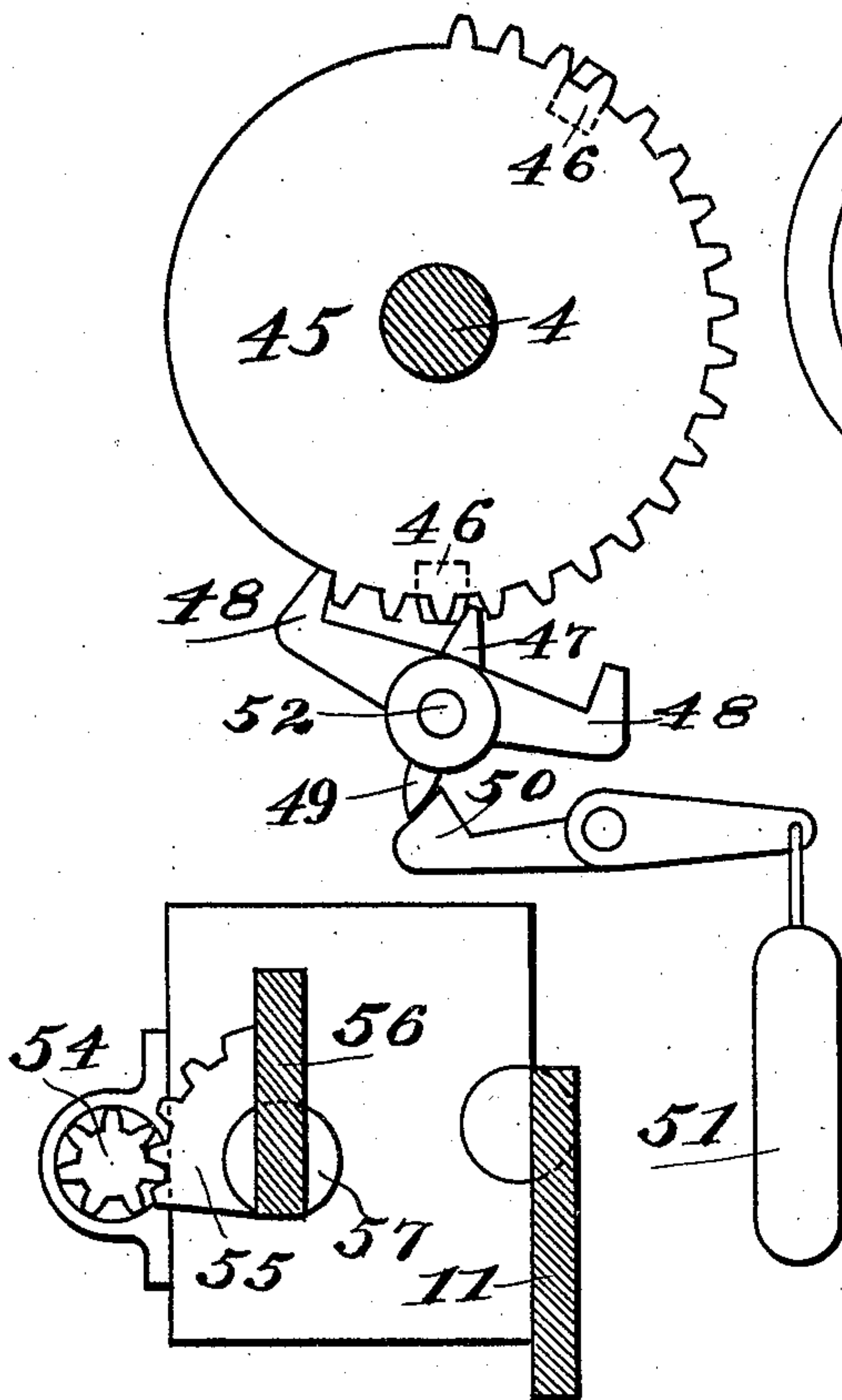


Fig. 5.

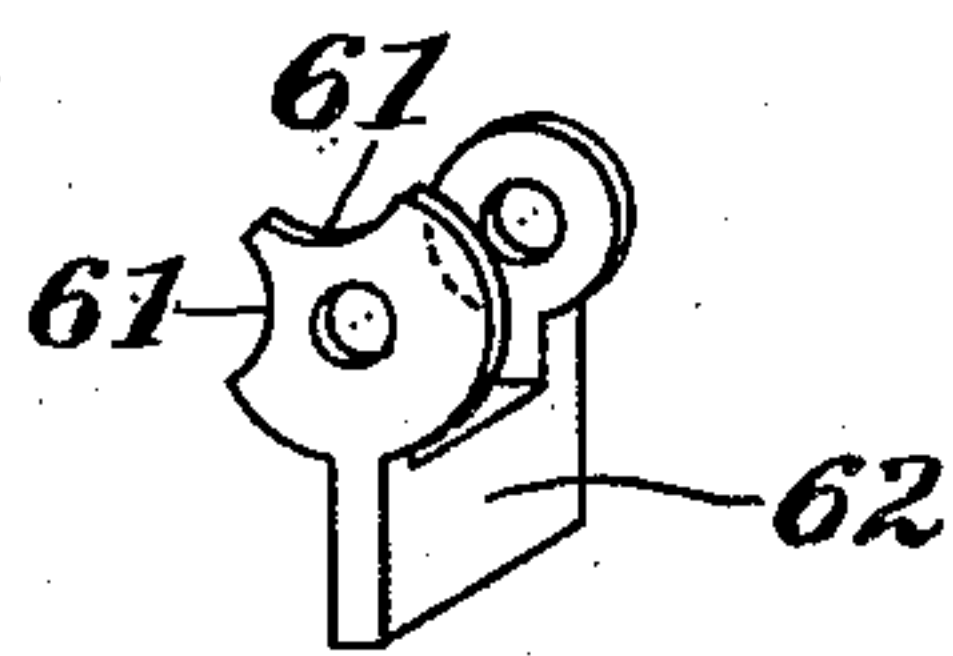
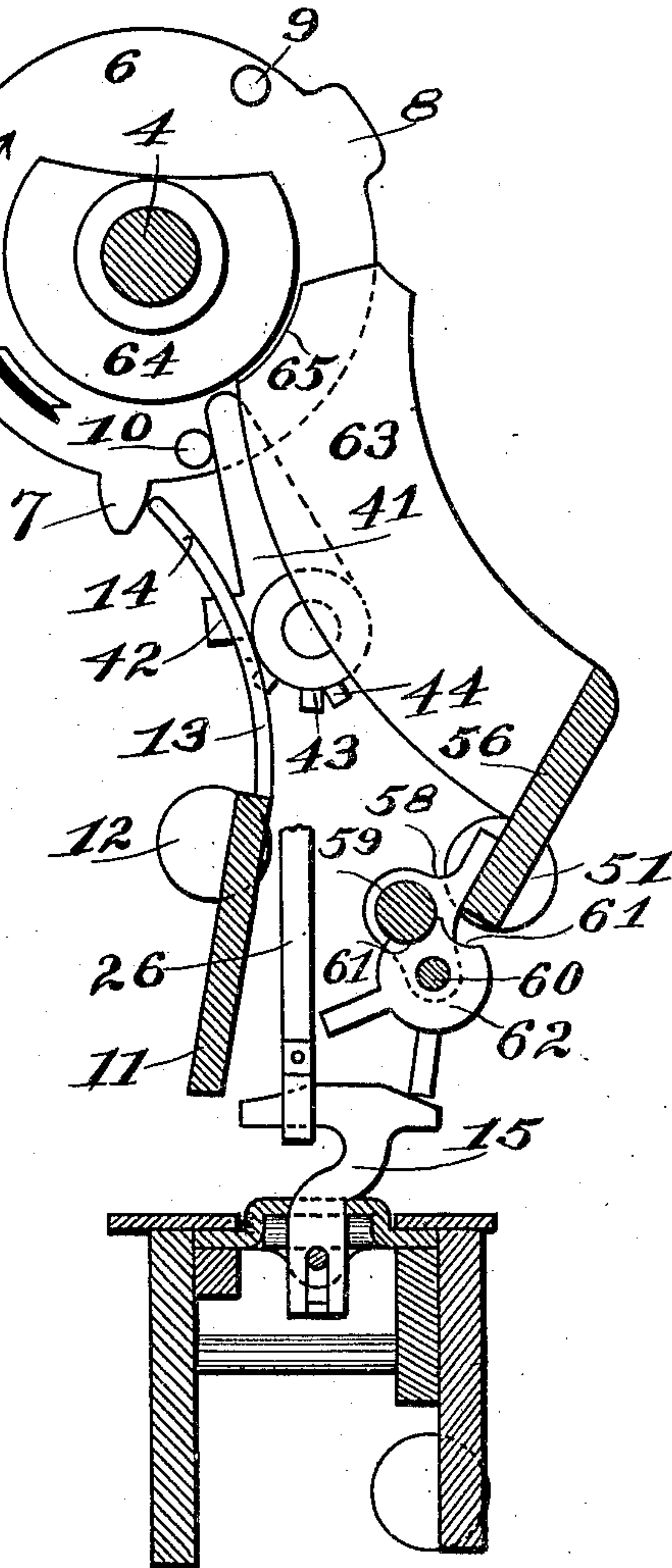


Fig. 6.

Fig. 4.



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UNITED STATES PATENT OFFICE.

PHILIP YOE, OF DAYTON, OHIO, ASSIGNOR TO PHILIP YOE, EDWARD W. HANLEY, AND KERIEN FITZPATRICK, OF DAYTON, OHIO.

VOTING-MACHINE.

No. 819,684.

Specification of Letters Patent.

Patented May 1, 1906.

Original application filed March 9, 1905, Serial No. 249,167. Divided and this application filed June 7, 1905. Serial No. 264,084.

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 figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in voting-machines and comprises locking mechanism by which the keys are locked and unlocked positively in both directions and exclusion mechanism by which the candidate-keys which are votable by women are locked, for example, when a male voter enters the booth, and vice versa.

The present application has been divided from my pending application filed March 9, 1905, Serial No. 249,167, for improvements in voting-machine interlocking mechanism.

Preceding a detail description of the invention reference is made to the accompanying drawings, of which—

Figure 1 is a rear elevation of the machine with parts of the mechanism and the casing removed. Fig. 2 is a vertical enlarged sectional elevation on the line *xx* of Fig. 1. Fig. 3 is a detail view of the full-stroke mechanism. Fig. 4 is a detail view of the locking mechanism, showing it in a different position from that shown in Fig. 2 or in a position which unlocks the machine for male voting. Fig. 5 is a sectional view on the line *vv*, showing the means for changing the mechanism from either class of voting—for example, men or women voting. Fig. 6 is a detail perspective view of one of the locking members instrumental in locking one or the other class of voting mechanism—for example, the men mechanism or the women mechanism.

In a detail description of my invention similar reference characters indicate corresponding parts.

The machine consists of a general framework 1, which is provided with a series of parallel bars 2, connected to the framework, and a series of vertical partitions 3, likewise connected to the top of the framework and to the cross-bars 2. The vertical partitions 3

and the bars 2 provide a series of rectangular spaces 3', each of which is occupied by the voting mechanism of each particular office. For example, each two of said vertical partitions provide a certain number of spaces 3', each of which is occupied with the voting mechanism of a certain candidate to be balloted for for a designated office. The main operating-shaft 4 is mounted in the lower portion of the framework and has connected with it on the exterior of the machine an operating-lever 5, through which said shaft is rocked to the necessary extent to operate the counters after the voting mechanism is set. (These counters are not shown nor will they be further described, as they comprise the subject-matter of another application.) Upon the main shaft 4 there is rigidly secured a disk 6, which has a single tooth 7 and a cam 8, also pins 9 and 10. 11 designates a horizontal locking bar or member which is designed to lock the machine against voting. This bar extends across the machine and is rigidly mounted upon stub-shafts 12 at each side of the machine and upon which it oscillates. Projecting upwardly from one end of said bar is an arm 13, which has a curvature substantially as shown in the drawings and is provided with a slot 14. (Shown in Fig. 1.) This arm 13 lies in the path of or in a position to be engaged by the tooth 7 on the disk 6 to move said locking member 11 in the position shown in Fig. 4.

When the operating-lever 5 is in the position shown in Fig. 1, the bar 11 is in the position shown in Fig. 2, and when in such position said bar lies above a series of interlocking members 15, and in such position the machine is locked against voting. These interlocking members 15 are part of the subject-matter of my pending application hereinbefore referred to and only a brief mention of these features and their connecting mechanism will be made. These interlocking devices 15 are operated from the setting-keys through connecting-rods 26, each of which has a loop on its lower end by which it is coupled to its respective interlocking member 15. These connections between said rods 26 and the interlocking members 15 are made when the ballot is made up. Connected with the rods 26 are a series of actuating-frames 27, having fulcrums 28, extending across the upper portion of the machine.

The forward ends of the frames 27 have slots 29, which receive lugs 30, that extend from the inner ends of the setting-keys 31, said lugs projecting through slots 32 in the partitions 3. The setting-keys 31 are mounted upon rods 33, that extend through the width of the machine, and the outer ends of these keys project on the exterior of the ballot-board 34, where they are accessible to the voter. It will be understood that each key is associated with a particular candidate and that each of the rectangular spaces 3' represents a particular candidate, as hereinbefore stated.

36 designates a single horizontal bank of independent - candidate setting - keys fulcrumed upon a shaft 37. The outer ends of these keys extend across the upper ends of a ticket or card slot 38, which leads to a receptacle 39 and which is the subject-matter of a separate application. Each one of the keys 36 represents a particular office, and in voting for the candidate for such office the respective key 36 is elevated away from its position across the slot 38, and the individual tickets or ballots for the various candidates for such office are deposited in the slot 38 and pass thence into the receptacle 39. When any one of the setting-keys 36 is thus elevated, the slot 40 on the inner end thereof engages the end of its respective actuating-frame 27', and thus elevates its connecting-rod 26. The frames 27' are fulcrumed upon a rod 28' and have their ends suitably formed to enter the slots 40, all as set forth in my pending application hereinbefore referred to.

When the operating-lever 5 is lowered, the disk 6 is moved therewith to disengage the cam-surface 8 from the arm 13, and in the same movement the pin 9 on said disk is moved away from the arm 41. The latter arm is pivoted to the sides of the casing. In the final downward movement of the lever 5 the pin 10 on said disk engages the locking member or arm 41, thereby disengaging projection 42 on said locking member with the lower portion of the arm 13 and enabling said projection 42 to enter the opening 14 in said arm 13. At the same time the projecting tooth 7 on said disk engages the upper end of the arm 13 and holds the locking member or arm 41 out of a locking position. In Fig. 4 the limit of the movement of the disk 6, due to the lowering of the operating-lever 5, is shown, while the other limit of movement is shown in Fig. 2.

43 designates a stop-lug on the side of the casing, and 44 designates two similar lugs projecting from the hub of the locking member 41 in position to be engaged on either side of the stop-lug 43, and thus the said member 41 is limited in its movement in both directions.

The full-stroke mechanism by which a full operation of the operating-lever 5 is com-

pelled is shown in Fig. 3 and consists of a toothed wheel 45, rigid on the shaft 4 and having two lugs 46 at definite points and forming a tooth at the limit of the movement of said wheel in either direction.

48 is an escapement-pawl, which is mounted upon a shaft 52 on the outer side of the casing in position for its engaging ends to meet the teeth of the wheel 45 alternately. Projecting from the hub of this pawl there is a tooth 47, which extends in a position to be tripped by the lugs or teeth 46 on the wheel 45. From the position of the devices as shown in the drawings it will be understood that the pawl 48 engages the wheel at one or the other end during the movement of the wheel in one or the other of its directions, so that the said pawl will lock said wheel against retrograde movement until a complete operation of the wheel has taken place, at which time one or the other of the lugs or teeth 46 will trip the intermediate pawl 47 and cause a reversal of the pawl 48. The pawl 48 is maintained in either of its positions until tripped by the lugs 46 by means of a jump-pawl 49, which projects from the hub of the pawl 48 and engages either side of a retaining-pawl 50, the latter being controlled by a gravity-weight 51.

I will now describe the mechanism for and the manner of placing the machine in a condition for either class of voting—for example, women voting or men voting—it being understood that changes have to be made to conform with the laws of the various States, which provide that women voting must be kept entirely distinct from men voting.

52' designates a shaft, hereinbefore referred to, extending on the exterior of the machine and having a sign or signal 53 indicating on one side men and on the other side women. This shaft is provided with a pinion 54, which meshes with a segment-gear 55, which is on the inside of the casing, said segment-gear being fixed to the end of a bar 56, which is provided at both ends with a stub-shaft 57, by means of which it is suitably journaled.

58 designates a series of bearing-brackets, which are rigidly attached to the bar 56 and extend downwardly to support rods 59 and 60, the former of which engages either one of the recesses 61 on a series of locking members 62, said members being loosely mounted on the rod 60. These locking members 62 are of a construction which permits of their lower ends being moved into and out of position to engage or stop the upper ends of the interlocking members 15, hereinbefore referred to. As shown in Fig. 2, one of these locking devices 62 is thrown into a position to lock the voting mechanism for one particular candidate, and another of said locking devices 62 is thrown out of a position or

is in a position which permits of the voting for the candidate with which it is associated, and so it will be seen that when the machine is placed in a position for women voting the locking members 62 for that particular voting will be moved to a position to disengage the interlocking members 15 and the remaining locking members 62 will be moved to a position to interlock all the other interlocking members 15 of the men-voting mechanism. The locking members 62 are secured in either position by means of the recesses 61 being occupied or unoccupied by the locking-rod 59. The rod 59 is removed from its bearing by drawing the same outwardly whenever it becomes necessary to change the position of any of the locking members 62. As the position of the mechanism appears in Fig. 4, a voter is within the booth, and the mechanism for changing the machine from one class of voting to another—to wit, from men voting to women voting, and vice versa—cannot be changed. This is due to an arm 63, which projects from an end of the bar 56, being in such position relatively to the disk 64 as will not permit said arm to be moved. In this position the rounded portion 65 of said arm lies adjacent to the rounded periphery of the disk 64. When the operating-lever 5 is elevated, the recessed edge 66 of the disk 64 is moved to a position adjacent to the end of the arm 63, and said arm is thereby permitted to be moved to its position shown in Fig. 2, the edge 66 of the disk being radial to the stub-shaft 57. The above is a very important feature of the invention, for the reason that by locking the exclusion mechanism by the voter himself, through the mechanism just described any manipulation or displacement of said mechanism from the outside is prevented while the voter is within the booth, and thus any fraudulent or improper voting or manipulation of the machine is prevented.

I am aware that it is old in this and analogous arts—for example, the cash-register art—to employ in locking a series of actuating-keys, a cross-bar, and a reciprocating operating mechanism. Therefore I do not claim such construction in a broad sense.

Having described my invention, I claim—

1. In a voting-machine, the combination with a suitable supporting-frame, of a series of setting-keys mounted thereon, an oscillating key-locking bar pivoted to said supporting-frame, a positively-actuated locking member adapted to lock said key-locking bar in a key-locking position, and an oscillating operating lever secured to a shaft supported by the supporting-frame, and means on said shaft adapted to actuate said key-locking bar and locking member successively, whereby, upon the upward stroke of the operating-lever, said setting-keys are locked.

2. In a voting-machine, the combination

with a suitable supporting-frame, of an oscillating bar pivoted thereto, a positively-actuated locking member adapted to lock said bar in a key-locking position, a series of setting-keys adapted to be locked by said bar, and an oscillating operating-lever which positively actuates said bar and said locking member at the limit of its movement in either direction, whereby, upon operating said oscillating operating lever to its limit in one direction, the keys are locked, and to its limit in the reverse direction, they are unlocked.

3. In a voting-machine, the combination with a series of setting-keys, of an exclusion mechanism to prevent the operation of more than a predetermined number of setting-keys at a time, a setting member connected to said exclusion mechanism and adapted to actuate said exclusion mechanism into and out of a setting-key-locking position, an operating-lever, and a locking member actuated by said operating-lever, whereby, upon actuating said operating-lever the setting member is locked.

4. In a voting-machine, the combination with a series of setting-keys, of an exclusion mechanism to prevent the operation of more than a predetermined number of setting-keys at a time, a setting member connected to said exclusion mechanism and adapted to actuate said exclusion mechanism, an operating-lever, a locking-arm 63 and a disk 64, arranged and operating, substantially as described.

5. In a voting-machine, the combination with a suitable supporting-frame, of a group of setting-keys, exclusion mechanism comprising a pivoted cross-bar, a rod extending across said bar and secured thereto, a series of locking members adapted to be set in different positions and mounted on said rod, means to actuate said cross-bar from the exterior of the machine, said means having indicator-tablets rigidly secured thereto to indicate the position set, and means operated by the voter to lock the indicator-tablets in the set position.

6. In a voting-machine, a series of setting-keys, interlocking rods connected therewith, locking projections extending from said interlocking rods, a cross-bar having locking members pivotally secured thereto, and capable of being moved from one position to another, locking-hubs on said locking members, one of said locking members and hubs for each series of setting-keys and their interlocking rods, and a rod extending across all of said locking members and their respective hubs to lock them in their set positions.

7. In a voting-machine, the combination with a suitable supporting-frame, of a series of setting-keys supported thereby, a pivoted cross-bar having locking members mounted thereon and adapted to lock a predetermined number of keys, and the projection 56 ex-

tending from said cross-bar, the locking-disk 64, and operating-lever 5, substantially as shown and described.

8. In a voting-machine, the combination
5 of a series of setting-keys and their coöperating interlocking members, a pivoted cross-bar, a series of locking members mounted on said cross-bar, a single means to hold the entire series of locking members in position, a
10 gear-wheel on one end of said pivoted cross-bar, and a further gear-wheel of smaller dimensions attached to the indicator-shaft.

9. In a voting-machine, the combination
15 with a suitable supporting-frame, of exclusion mechanism comprising a series of interlocking members mounted on said frame, a pivoted cross-bar, a rod extending across said bar and secured thereto, a series of locking members adapted to be set in different

positions and loosely mounted on said rod, 20 and a rod to lock said locking members in position.

10. In a voting-machine, the combination
with a suitable supporting-frame, of exclusion mechanism comprising a pivoted cross- 25 bar, a plurality of independently-settable locking members adapted to be set and locked in different positions, said members being mounted on a rod supported by said cross-bar, and a single means to positively unlock 30 and lock said locking members.

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

PHILIP YOE.

Witnesses:

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C. M. THEOBALD.