

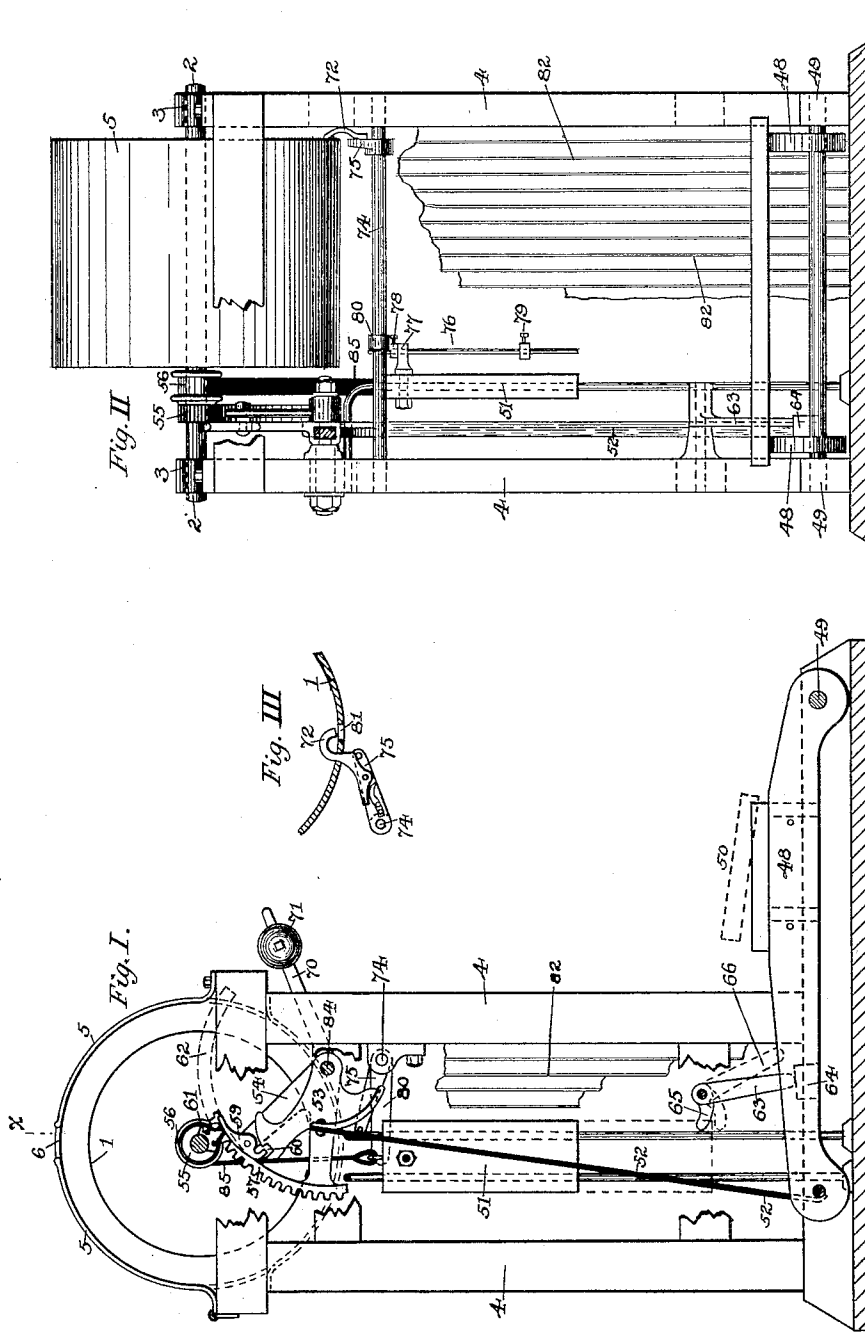
(No Model.)

3 Sheets—Sheet 1.

J. B. CLOT.
VOTING MACHINE.

No. 579,316.

Patented Mar. 23, 1897.



Witnesses:

Edu. S. Cobb.

William D. Bent, Jr.

Inventor:

John B. Clot
By John Richman Atty

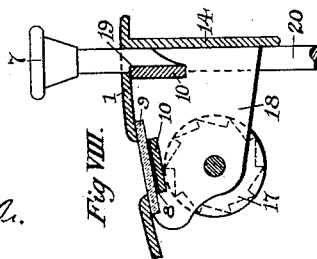
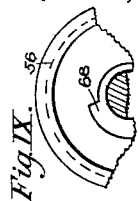
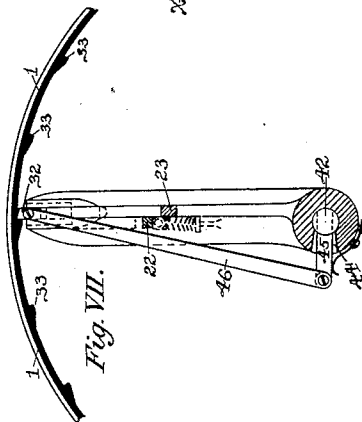
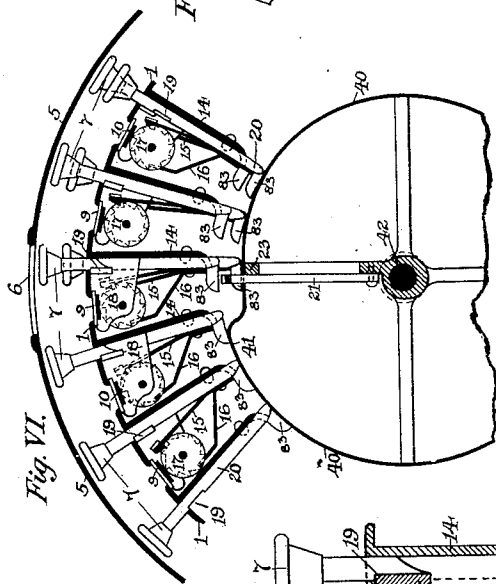
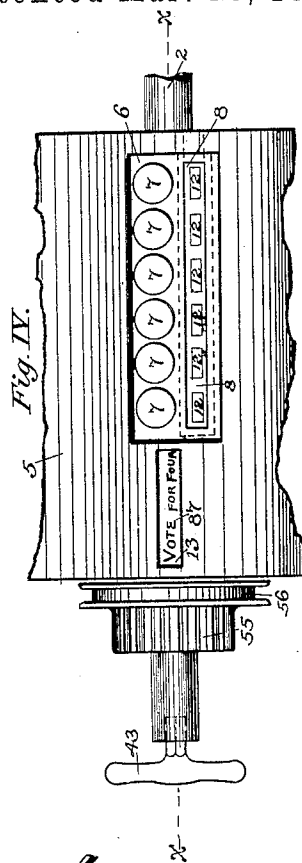
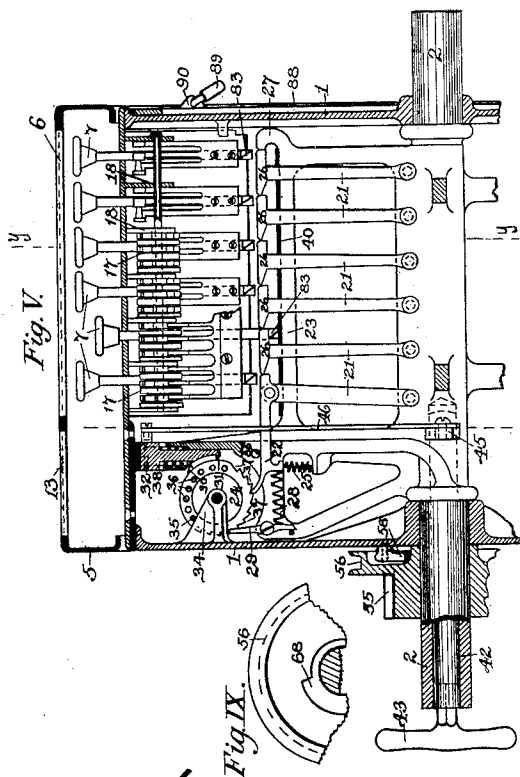
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3 Sheets—Sheet 2.

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No. 579,316.

Patented Mar. 23, 1897.



Witnesses:

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By John Richards

(No Model.)

3 Sheets—Sheet 3.

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Fig. X.

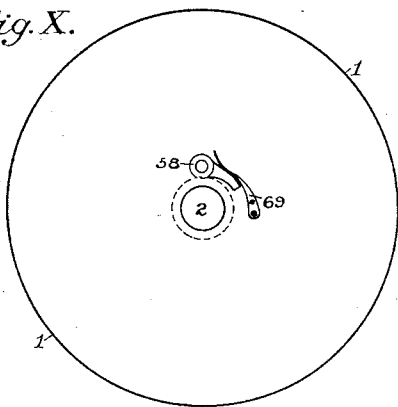


Fig. XI.

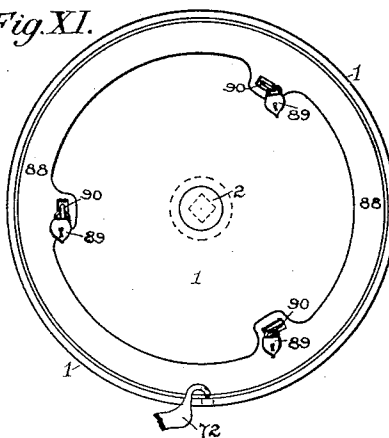
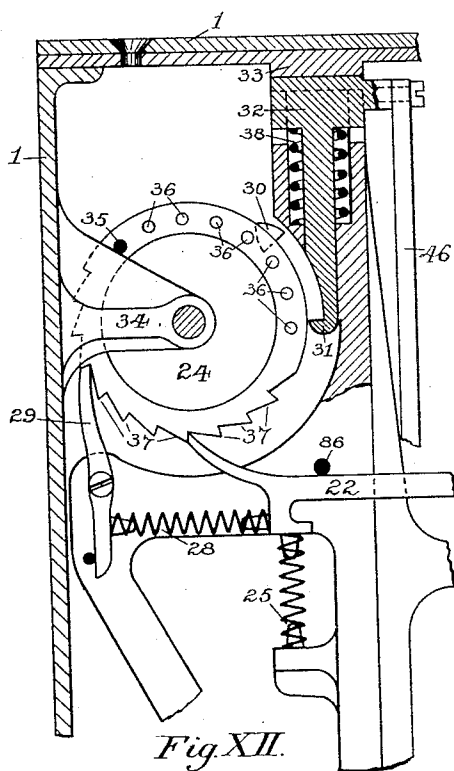
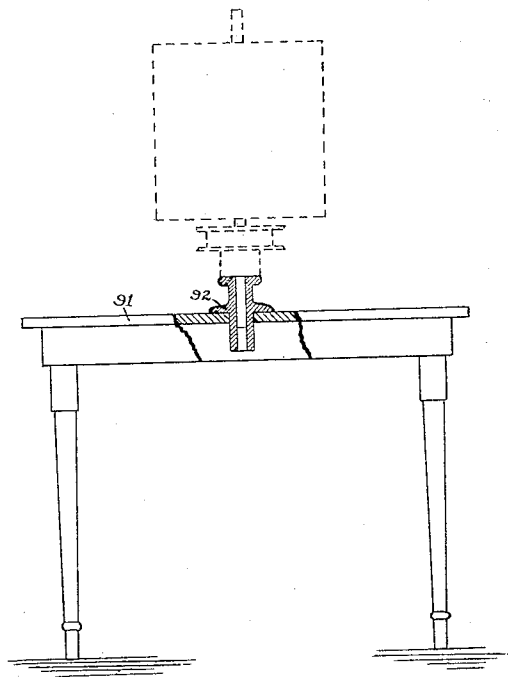


Fig. XIII.



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UNITED STATES PATENT OFFICE.

JOHN B. CLOT, OF SAN FRANCISCO, CALIFORNIA.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 579,316, dated March 23, 1897.

Application filed January 10, 1896. Serial No. 575,008. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CLOT, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented a new and Improved Voting-Machine, of which the following is a specification.

My invention relates to a machine and apparatus whereby votes are registered for several offices and for several candidates for each office under circumstances that prevent repeated or false voting and so that no candidate can receive but one vote from each elector, such votes being counted absolutely by mechanism beyond the voter's sight or control.

My invention consists, essentially, of a series of keys, one tier or row for each office to be voted for, each key corresponding to the name of a candidate, these tiers or rows of keys being mounted upon a revolving drum in such manner that one row at a time is presented to the voter, who presses inward the key opposite the name of the candidate he desires to vote for. These rows of keys are so arranged that they can be operated but once by each voter, and the number of votes cast for each candidate are registered by counting devices, from which the results of the poll can be read by the proper officers when the election is closed.

My invention also consists in apparatus to revolve the drum on which the voting-keys are mounted and set in operation the various devices that perform the functions before named, all operating automatically or independently of any act on the part of the voter except pressing inward the voting-keys.

To these ends I provide apparatus as shown in the drawings, in which—

Figure I is an end elevation of one of my improved voting-machines. Fig. II is a side elevation of the same. Fig. III is a detail of the mechanism shown in Figs. I and II. Fig. IV is an enlarged partial plan view of Figs. I and II. Fig. V is a partial longitudinal section on the line *x x* of Fig. I, showing the voting mechanism. Fig. VI is a partial transverse section on the line *y y* of Fig. V. Fig. VII is an enlarged detail of the mechanism shown in Fig. V. Fig. VIII is an enlarged cross-section showing the bars on which the names of candidates are mounted. Fig. IX

is a detail showing a portion of the clutch mechanism for revolving the main drum. Fig. X shows the end of the main drum and the pawl for turning the same. Fig. XI is an end view of the main drum, showing the manner of securing the covering-plate that permits access to the voting-lists. Fig. XII is an enlarged detail of the mechanism shown in Fig. V, showing the mechanism that releases and arrests the main drum. Fig. XIII shows a method of counting the lists after the poll is closed and the main drum with the voting-lists is removed for that purpose. Similar numerals of reference indicate corresponding parts in the different figures of the drawings.

A revolving drum 1 is mounted on a fixed axis 2, held in the bearings 3 on the supporting-frame 4. Over the drum 1 is placed a shield or housing 5, that incloses the whole, except a rectangular sightway 6, as seen in Figs. I, IV, V, and VI. Around the drum 1 are set radially rows of sliding keys 7, that are exposed successively at the aperture or sightway 6, where these keys can be depressed by a voter, as will be hereinafter described. The number of the rows of keys 7 is made sufficient so there will be one row for each office to be voted for, and the number of keys in each row sufficient so there will be one key for each candidate for the office represented by the row of keys.

The names of the candidates are printed or written on a slip of paper 8, as seen in Fig. VIII, the names corresponding to the spaces 12, (seen in Fig. IV,) each name corresponding to one of the keys 7, and on the ends of the keys 7, where the numerals of reference appear, will be the catalogue-number of each candidate, corresponding to his name opposite at 12. The slip of paper 8 is inserted between a strip of glass 9 and a bar 10, which slides through notches in the brackets 18, formed integral with or attached to the drum 1. The elector in voting depresses the keys 7, giving rise to the following results or functions:

The number of keys pressed must be the same as the number of candidates to be voted for.

The votes are counted by the machine for each candidate.

The drum 1 is released and moves forward

automatically, exposing a new row of keys and the corresponding names at 12 of candidates for another office.

I will now proceed to describe how these results are attained by my invention, first referring to the counting mechanism.

On the exterior of the revolving drum 1, opposite each row of the keys 7, are placed printed directions 87, (seen through the aperture 13,) which directs the elector how many candidates are to be voted for, and he then presses the number of keys 7 accordingly, each key to be used having been provided with a catalogue or list number at 7 and corresponding name at 12, as before explained. The number of keys pressed is, however, not left to choice, because the drum 1 will not revolve until the required number of keys, or those provided with names, are depressed, and when this number is reached all the remaining keys in the row are locked and cannot be moved, as will be hereinafter explained.

The keys 7 slide on suitable seats or ways in the divisions 14 of the drum 1, as seen in Fig. VI.

On the forward side of the stems of the keys 7 are hook-pawls 15, that engage the ratchet counter-wheels 17, of which there is one for each row of keys, turning the first counter-disk one tooth each time the key 7 is depressed, a detent 16 being provided to prevent backward movement of the counting-disks 17. These counters are of the ordinary three-leaf or three-disk kind, capable of counting to one thousand, or, if required, with four disks, counting to ten thousand. Being an article of regular manufacture and their construction well understood, I need not further describe them here.

Projecting forward from the longitudinal divisions 14 of the drum 1 are a series of brackets 18, one for each key 7, and on these brackets are supported the counters 17, also the bar 10, and strip of glass 9, as seen in Fig. VIII, the glass 9 being permanently fixed and the bar 10 removable. These brackets are omitted in front of three rows of keys in Fig. VI to render the drawing more plain.

When the poll is closed, the bars 10 are drawn out and inserted, as shown at 19, Figs. VI and VIII, passing through an indented notch in the stems 20 of the keys 7, locking all the keys, so that no movement can take place.

When the bars 10 are removed or transferred in the manner just described, then the readings on the counters 17 become visible through the strip of glass 9 and the number of votes given for each candidate can be read off and entered upon the record. This constitutes the counting elements of my machine.

I will now proceed to describe the mechanism that controls the number of votes given for each candidate.

Pivoted to the stationary axis 2 of the ma-

chine are a series of wards 21, resting against a bar 23 and abutting one against the other, as seen in Fig. V, the last one against a pawl 22, that is pressed upward against a stop 86 by a spring 25, so as to engage a rack-wheel 24.

On the bottom end of the key-stems 20 are formed at the side wedges 83, that when the keys 7 are depressed enter between the heads 26 of the wards 21, and as these wards abut against a stop 27 they move forward or in the opposite direction, pressing outward the pawl 22 and turning the wheel 24 one notch or tooth for each key 7 that is depressed.

It will be seen that the action is the same whichever of the keys is depressed, and that after the wedge 83 passes below the head 26 the wards 21 fly back to their original position by means of a spring 28 and the wedge 83 is locked beneath the head 26 of the wards 21 and the key 7 cannot be raised again until the drum 1 moves ahead and the wedge 83 is released from the wards 21. Thus it will be seen that every time one of the keys 7 is depressed the wheel 24 is advanced one notch or tooth, a pawl 29 being provided to prevent any backward movement of this wheel 24. The objects of this wheel 24 and the connected elements are to determine the number of keys that can be depressed and the number of candidates voted for, also to release the drum 1 when this number is reached and permit it to move on for another set of keys and another office to be voted for.

The number of votes for any office or row of keys is dependent upon the number of teeth in the wheel 24 exposed to the action of the pawl 22. This is arranged before the poll opens, setting the wheels 24 in such position that when the required number of votes are given the tooth 30 on the wheel 24 will come in contact with the hook 31 on the latch and draw downward this latch or detent 32, which engages the teeth 33 on the interior of the drum 1, as seen in Fig. VII, so the drum 1 will move on, close the poll for that office, and expose another set of keys at the aperture 6.

The wheels 24, of which there is one for each row of keys 7, are mounted on brackets 34 on the interior of the drum 1, as seen in Figs. V and XII. The original position of these wheels 24 is determined by a pin 35, inserted in holes 36 around the periphery of the wheel 24 and to bear against the brackets 34, exposing the required number of teeth 37 to the pawl 22 and action of the keys 7. If, for example, four candidates are to be voted for, the number of teeth 37 exposed to the pawl 22 will be four, and after four of the keys 7 are depressed the tooth 30 will engage the hook 31 on the latch 32 and release the drum 1, which will then move so as to expose a new row of keys 7 at the aperture 6, the wheel 24 in the meantime passing beyond and releasing the latch 32, which by reason of the spring 38 is pressed upward and engages the succeeding tooth 33 on the interior of the drum 1, as seen in Fig. VII. Thus it will be seen that under

no circumstance can the votes be more or less than the number designated or directed at the aperture 13 in the cover 5 and as the wheels 24 are adjusted at the beginning of the poll.

After the keys 7 are depressed and locked in their inward position by the wedges 83 passing beneath the heads 26 of the wards 21 they are again released as soon as the drum 1 begins to revolve and the keys 7 pass beyond the wards 21, and they must be returned to their outward position before coming again beneath the aperture 6 or when the drum 1 has made a complete revolution. This I accomplish by means of a helically-formed drum 40, made integral with or supported by the axis 2. The keys 7 when depressed come in contact with and are stopped by this drum 40, and as the main drum 1 revolves the keys 7 are gradually pushed outward by the volute form of the drum 40 until the keys are again in their original position and ready for use by a voter.

As it may be necessary to revolve the main drum 1 independent of voting for the purposes of adjustment or other reason, I provide a means for this purpose in the following manner: A hole is bored partially through the axis 2 to receive a rod 42, the outer end of which has a square socket to receive a key 43. At the inner end of this rod 42 there is made a perforation 44 in the side of the axis 2 to permit the protrusion of a crank 45, to which is attached a link 46, leading up to the latch 32, as seen in Fig. VII, so that by turning the key 43 the latch 32 is disengaged from the teeth 33 and the drum 1 will revolve without any action of the voting apparatus.

The key 43 is supposed to be in keeping of the officers of election, and the voter to have no control over these last-described elements of the machine.

Having now described the main or voting elements of my machine, I will proceed next to explain a means of controlling the rotative motion of the drum 1, by which the weight of the voter supplies the actuating force required. It is obvious that such force or power can be derived in any suitable manner—for example, by springs or weights—to produce and maintain a torsional or turning strain on the drum 1; but to make the machine integral or self-contained I employ, by preference, the mechanism shown in Figs. I and II, consisting of the levers 48, pivoted at 49, having an upward range from the position seen in Fig. I to that indicated by dotted lines at 50, where the voter stands. The object of this platform is to raise the weight 51 each time a voter steps on the top at 50 by means of a flexible strap 52, attached to a sector 53, mounted on an axis 84, as seen in Figs. I and II. Alongside of this sector 53 is another one 54 of greater radius, having spur-teeth at 57 that engage a pinion 55 at the side of and attached to the small drum or spool 56, which revolves loose on the axis 2 and en-

gages the main drum 1 by means of a pawl 58, as seen in Figs. IX and X. The two sectors 53 and 54 are connected together by a latch 59, that engages a notch 60 in the sector 53.

When a voter steps on the platform at 50, his weight depresses the levers 48, pulling both of the sectors 53 and 54 around to the position seen in Fig. I, turning the spool 56, and winding up the weight 51 by means of the strap 85, which then acts as a turning force on the spool 56 and the drum 1. The drum is thus revolved until a tripping-point 61, attached to the pinion 55, is turned so as to strike the end of the latch 59, disengage it, permitting the toothed sector 54 to be turned back again by revolution of the drum 1 and the pinion 55 to the position shown by dotted lines at 62, Fig. I, the other sector 53 remaining in the position seen in Fig. I. This limits the action of the lever 48 and the strap 52 to one complete revolution of the drum 1. In the meantime, when the levers 48 are depressed, a detent 63 swings into the position seen in Fig. I, engaging a block or stop 64 on one of the levers 48, holding the platform down in case the voter should step off the platform 50 before the drum 1 had made a revolution and presented all the keys 7 for voting. As the drum 1 revolves the weight 51 descends, and at a complete revolution of the drum 1, or when the voting is completed, comes in contact with the tripping-lever 65, which swings the detent 63 back into the position shown by dotted lines at 66 in Fig. I, permitting the levers 48 and platform 50 to rise again ready for another voter. The sector 53 is moved back and the platform 50 raised by means of a lever 70 and weight 71, as seen in Fig. I, the pawl 59 engaging in the notch 60 and locking together the sectors 53 and 54.

The connection between the spool 56 and the drum 1 is, as before mentioned, by means of a pawl 58, attached to the end of the drum 1, that engages a single tooth 68 on the spool 56, the pawl 58 being held in contact by the spring 69, as shown in Figs. V, IX, and X.

To arrest the motion of the drum 1 when a revolution is completed, I employ a pawl or detent 72, as shown in Figs. II and III. This pawl 72 is mounted on a lever 75 on the shaft 74, operated by another lever 80 on the same shaft. This lever 80 is provided with a pendent rod 76, passing through a lug 77 on the weight 51, so that when the latter is at the top of its stroke, as seen in Figs. I and II, the lug 77 comes in contact with the collar 78 on the rod 76, turning the shaft 74 and disengaging the pawl 72, as seen in Fig. III.

When the weight 51 descends, the lug 77 comes in contact with another collar 79 on the rod 76, turning the shaft 74 in the opposite direction, so the pawl 72 will fall into the notch 81, locking the drum 1 until a voter steps on the platform 50 and the weight 51 is again

raised and the pawl 72 is released, as before described.

When the poll is completed, the drum 1 with its axis 2 and all contained parts are removed from the bearings 3. A covering ring or plate 88, held by locks 89, passing through lugs 90, is removed. This permits access to the voting-lists, and the bars 10 are drawn out and inserted at 19, as seen in Fig. VIII, locking all the keys 7.

The strip of paper 8 is removed, so the counters 17 can be seen through the glass covering 9, so the number of votes can be counted for each candidate.

For convenience the drum 1 when thus adjusted can be set on a table 91 in a vertical position, as shown by dotted lines in Fig. XIII, and the end of the axis 2 being inserted in a socket 92, so the drum can be turned around and inspected by the election officers or the public.

The main frame 4 of the machine is inclosed, preferably, with strips of tongue-and-grooved wood, as indicated at 82 in broken section, Figs. I and II.

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

1. In a voting-machine, a revoluble drum, mounted on a horizontal axis, means for revolving said drum, series of depressible keys arranged in rows radially on the said drum, and a shield or cover inclosing the keys and revoluble drum, said shield being provided with an aperture through which the said keys can be seen and operated, substantially as shown and described.

2. In a voting-machine, a revoluble drum provided with rows of keys set radially and arranged in correspondence with the number of candidates to be voted, and depressible by the voter in one row at a time, and counting mechanism to register the number of times each key is depressed, together with an apertured cover through which the keys are shown, substantially as described.

3. In a voting-machine, a revoluble drum provided with rows of radial depressible keys in the manner described, counting mechanism to register the number of times each key is depressed, and a series of pivoted abutting wards and a pawl connected therewith, moved a like distance by each key that is depressed, substantially as described.

4. In a voting-machine, a revoluble drum having rows of radial voting-keys mounted thereon, a row of pivoted wards mounted on a stationary support, a pawl connected therewith, and a ratchet-wheel that will release the drum, permit it to revolve and present a new row of keys when a predetermined number of keys have been depressed and votes given, substantially as described.

5. In a voting-machine, a revoluble main drum having rows of depressible voting-keys thereon, a stationary axis on which the drum revolves and on which is mounted a series of

pivoted wards, a pawl operated by the wards, and a detent or latch that engages the main drum, holding it in one position until a complement of votes is given for each row of keys and for each office to be voted for, substantially as described.

6. In a voting-machine, a revoluble drum having rows of voting-keys in the manner described, a counter for each key that registers each depression or inward movement by the same, a tier or row of hinged wards that abut against and move each other, and lock each key when it is depressed to spread and operate the wards, in the manner substantially as described.

7. In a voting-machine, a revoluble drum having rows of depressible voting-keys in the manner described, a series of abutting wards moved by the voting-keys and locking the same when depressed, a stationary helically-formed drum that will protrude the keys as the main drum revolves after the voting-keys have passed beyond the locking-wards, in the manner substantially as described.

8. In a voting-machine, rows of depressible keys mounted radially on a revoluble drum, counters for each key that register one each time the keys are depressed, a series of ratchet-wheels corresponding in number to the rows of keys, a series of hinged wards abutting one against the other, movable in one direction by action of the voting-keys, the final ward provided with or connected to a pawl to turn the ratchet-wheels one tooth each time a key is depressed, and an apertured cover for the keys, substantially as described.

9. In a voting-machine, a revoluble supporting-drum, rows of depressible voting-keys thereon, counters to register the inward movement or depression of each key, movable wards to lock the voting-keys when depressed, and at the same time turn a ratchet-wheel having a predetermined number of teeth exposed, and a predetermined amount of rotation to release the main drum and permit it to move and expose a new row of keys, substantially as described.

10. In a voting-machine, a revoluble drum, having rows of depressible voting-keys, in the manner described; and around its periphery equidistant teeth or notches that are engaged by a sliding latch, the latter being moved and the drum released by the depression of a predetermined number of the voting-keys, in the manner substantially as described.

11. In a voting-machine, a revoluble drum, provided with rows of depressible voting-keys that are successively presented to a voter as the drum revolves, a counter for each key that registers the number of depressions or votes, a removable guard-bar that covers and conceals the record of the counters, and a transparent cover above the guard-bar through which the votes can be counted when the guard-bar is removed, substantially as described.

12. In a voting-machine, a revoluble drum,

having rows of depressible keys, in the manner described, and counters to register each depression of the keys, the latter having in their stems an indent or notch through which
5 a guard-bar can be passed to lock each row of keys after the voting has closed, in the manner substantially as described.

13. In a voting-machine, a revoluble drum, provided with voting-keys and counters, in
10 the manner described, a removable end plate or ring, annular in form provided with inward-projecting lugs and locking devices that when released permit the removal of the ring or
15 plate and access to the voting-lists and interior of the drum, in the manner and for the purposes substantially as described.

14. In a voting-machine, a revoluble drum, provided with voting-keys, counters and
20 mechanism to register and limit the number of votes given, and in combination therewith a platform operating a winding-weight, so the weight of the voter will revolve the drum, in the manner substantially as described.

15. In a voting-machine, a revoluble drum, having voting-keys, counting and limiting
25 mechanism to show and control the number of votes, in combination with a winding-weight and pawl that automatically engages and releases the drum by means of the voter's weight, substantially as described. 30

16. In a voting-machine, a revoluble drum, provided with voting-keys and mechanism,
in the manner described, a winding-weight to revolve the drum, raised and acting by the
35 voter's weight, a toothed sector and pinion to turn the drum, a separate interlocking sector, strap and platform and returning-weight, in the manner substantially as described.

In testimony whereof I have hereunto affixed my signature in the presence of two
40 witnesses.

JOHN B. CLOT.

Witnesses:

ALFRED A. ENQUIST,
WILSON D. BENT, Jr.