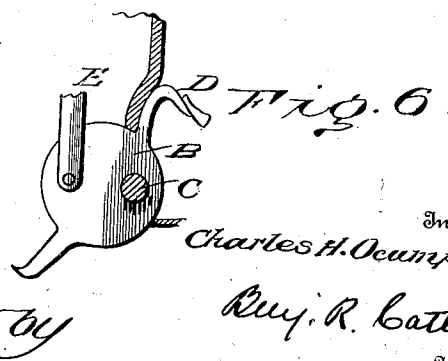
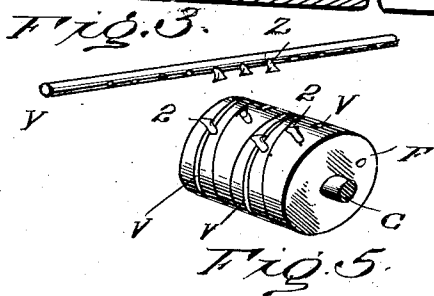
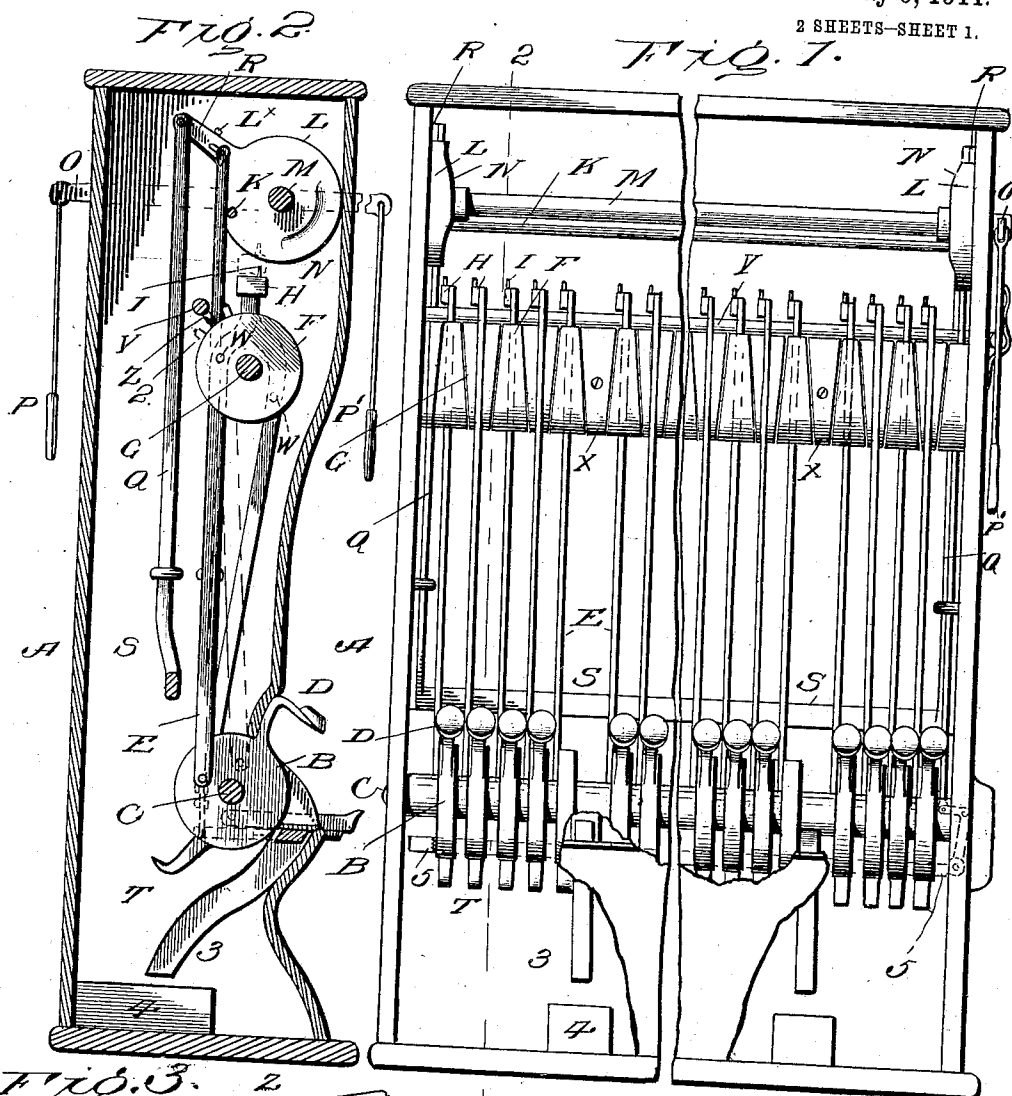


C. H. OCUMPAUGH.
VOTING MACHINE.
APPLICATION FILED DEC. 2, 1899.

991,882.

Patented May 9, 1911.

2 SHEETS—SHEET 1.



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Fig. 8.

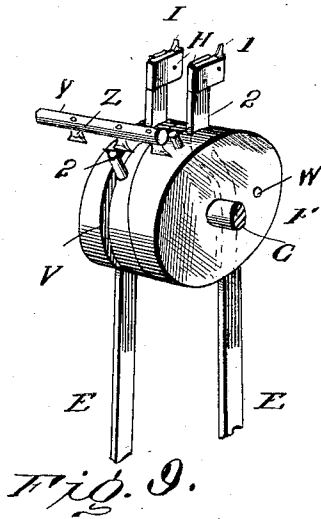
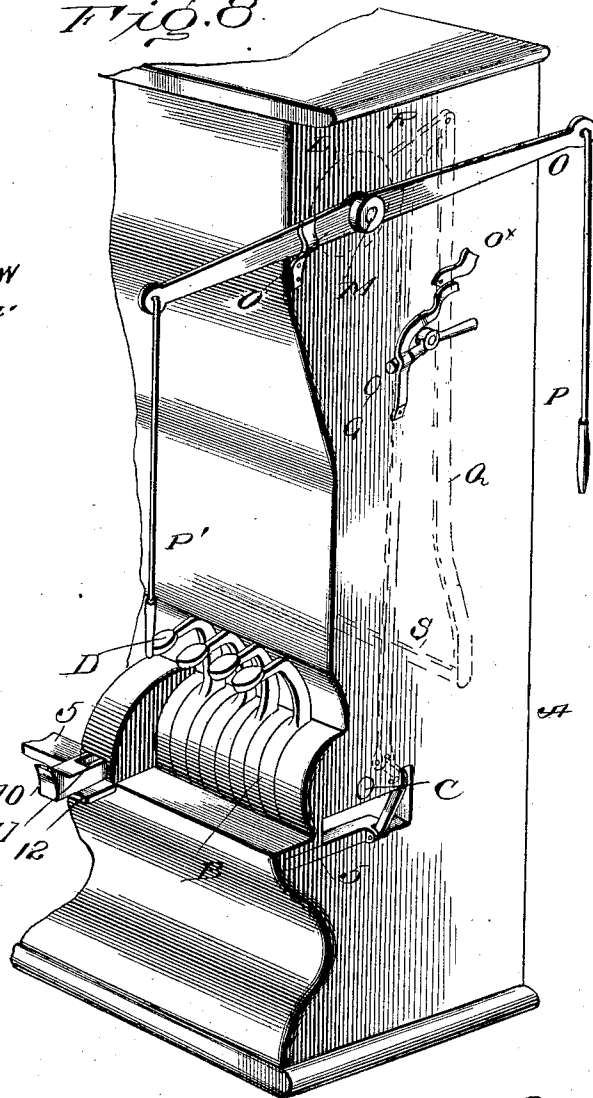


Fig. 9.

Fig. 4.

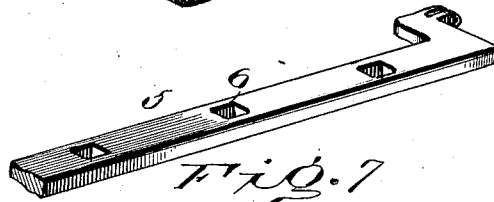
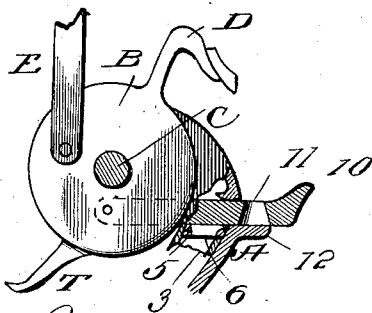


Fig. 7.

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UNITED STATES PATENT OFFICE.

CHARLES HERBERT OCUMPAUGH, OF ROCHESTER, NEW YORK.

VOTING-MACHINE.

991,882.

Specification of Letters Patent.

Patented May 9, 1911.

Application filed December 2, 1899. Serial No. 739,015.

To all whom it may concern:

Be it known that I, CHARLES H. OCUMPAUGH, a resident of 11 Allen street, Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Voting-Machines; and I do hereby 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 pertains to make and use the same.

The invention relates to voting machines and has for its object to increase the simplicity and efficiency of certain important parts of such machines. And the invention consists in the construction hereinafter described and pointed out.

In the accompanying drawing, Figure 1 is a broken elevation of a voting machine the casing being partly removed; Fig. 2 is a section on line 2—2 of Fig. 1; Fig. 3 is a perspective of a locking-out bar; Fig. 4 is a partial section of an irregular-vote device; Fig. 5 is a perspective of interlocking devices for push bars; Fig. 6 is an elevation of a modified device for actuating a push bar; Fig. 7 is a perspective of a bar for opening and closing the admission inlets of irregular votes; Fig. 8 is a perspective of power-transmitting devices for interlocking the irregular-vote push bar; Fig. 9 is a partial perspective showing the situation of a lock-out bar with respect to push-bar interlocking devices.

Letter A denotes the casing of the machine.

B are power-transmitting disks rotatable on a supporting rod C by means of voting handles or levers D, customarily styled indicators or keys and connected by bars E to interlocking disks F, which are rotatable on a rod G. Said disks B are spaced on shaft C according to requirement by sleeves of suitable length on the shaft beside the several disks, as shown in Fig. 1. The disks F are virtually rotating wedges, as indicated. The handles D and disks B are rocking levers connected to disks F by the bars E to operate them.

Each bar E supports or carries a register H comprising a unit counting wheel or counter of usual character provided with a pin I connected to one of the register wheels, those commonly known as counters being

of any known form and adapted in any usual or desired manner to indicate a vote when moved by a bar K coming in contact with said pin I. Said bar K connects two wheels L on a rod M supported in the casing and said bar is normally held inoperative by the counter weights N of the wheels L.

The register pins I are out of the path of the bar K except when elevated by the depression of the lever D and the consequent partial rotation of disk B, the handle, bar, and register being at such time in the position indicated by broken lines.

The wheels L are turned and the bar K moved against the pins I to actuate the registers including counters by means of a bar-operating or bar-moving lever O fixed to a wheel L (or its shaft) and conveniently provided with a handle P which the voter operates upon leaving the voting booth in order to register his vote.

The lever O being fixed to a wheel L, or to its axis in case the wheel and axis are fixed together, said wheel is in effect a part of the lever. Its circular form is not essential. It has an arm R pivotally supporting resetting devices which are counterbalanced by the weight N. The path of the arm is limited upwardly by a stop pin L^x.

By operating with handle P the registers that have been moved into the path of the bar K by the indicators are actuated and the pendent bars Q pivoted to arms R carried by the wheels L are lowered and carry a cross bar S connected to their lower ends against arms T fixed to the disks B with the effect to turn them back and reset the bars E and return the before selected registers. The bars Q and cross bar S can be reciprocated by the voter to lock or unlock the vote indicators either before or after the indication of his vote. This operation locks the voting mechanism since the bar S holds the registers and their supporting bars down and the handles D up. The friction of the parts may render this condition of the mechanism sufficiently stable, or a positive supplementary locking device of any suitable character may be used, such as the spring catch indicated at O^x in Fig. 8. The bar S is raised to its normal position by returning the bar O and wheels L, which is conveniently effected by means of a handle P' suitably manipulated by the voter on

entering the booth. The bars E are pivoted alternately on opposite sides to interlocking and approximately wedge-shaped parts F preferably though not necessarily of circular outline.

V denote slots to receive the bars E, and W are pins loosely connecting said bars to the disks F. These disks are arranged in contiguous or closely adjacent groups or series between adjustable blocks X fixed by set screws to the disk supporting rod G, and their relative size and form are such that the partial rotation of one or more in each group, as predetermined by the adjustment of the fixed blocks X, locks the group. The disks are partially turned and the connected mechanism of the group temporarily interlocked by the before described depression of a handle D. The bars E are oppositely connected to disks F to avoid accidental movement by friction. Further the manipulation of a handle or lever B shifts the bar E to the power arm side of the fulcrum of the lever (see Fig. 2), thereby preventing return by gravity or gravity and friction of the actuated wedge, bar and handle.

Any desired number of interlocking disks F together with their actuating bars E and handles D are rendered inoperative or locked by means of a bar Y having detachable stops Z and supported in the case. Stops Z being readily applied to or removed from the bar coöperate with one or more of a series of pins 2 suitably arranged, one on each disk.

Since the alternate disks are oppositely moved in operation the pins are arranged in staggered order and the bar Y situated between them as indicated in Fig. 9 and provided with suitably selected stops Z is adapted to lock one, two or more of the said disks as desired to meet different conditions. By inserting stops Z in the path of pins 2 the disks F to which such pins are fixed will be stopped from rotation and by this means any disk or any number of disks with their corresponding registers can be rendered inoperative.

Respecting the operation of other parts of the machine, as for example the registers, the novel form of interlocking devices is not essential and others may be employed.

The term push bar is herein used for convenience to indicate any suitable power-transmitting device whereby a voter interlocks the mechanism and selects a register, whether the power be transmitted by intermediate pushing or by other movement.

Obviously a barrier such as a lever or turnstile can be connected to the resetting and other mechanism in any known manner and other known devices not inconsistent with the improvements herein pointed out can be utilized.

The irregular vote devices comprise a ballot box 4 and chute 3 as usual and a cover bar 5 having as many openings 6 as there are offices or propositions to be voted upon. This bar 5 is moved to cover all the chutes by handle P' and to uncover them by handle P through the medium of a bell-crank lever and a bar pivoted to one arm of said lever and connected to the bar O as indicated in Figs. 1 and 8.

10 denotes a slide having a vote-receiving opening 11 enlarged as indicated toward its bottom. A vote being deposited in said opening and the slide pushed in and along the upper surface of a table 12 supported in the plane of the cover bar the opening 11 registers with the chute and permits the vote to drop therein whenever the cover bar is suitably moved as by the out-going voter using handle P to cause the bar openings 6 to also register with the chutes. The operation of the slide bar immediately moves a push bar to interlock other voting devices and to select a register as do the handles or bars for regular voting. The inner situation of a slide or push bar 10, or the depressed situation of the indicator 1, enables the voter to note for which office he has cast a ballot.

A curved periphery is not essential to the operation of the disks B. In some cases eccentrically pivoted disks, having a curved periphery if desired, as in Fig. 6 may be employed.

In series of contiguous rotating interlocking parts heretofore proposed in cash registers, said parts have been provided with shoulders or ribs to engage corresponding grooves or recesses in the proximate parts. By the present improvement the interlocking parts are made in wedge form without transverse interlocking projections, one side of each part being made comparatively thin, and the thickness of the part regularly increased toward the opposite side, the contiguous faces of the adjacent parts being situated parallel to each other in straight planes oblique to the common axis, whereby a slight rotary movement of either part may instantaneously cause it to press on adjacent parts and without the necessity of overcoming the resistance of transverse interlocking projections.

It has been proposed to use in voting machines interlocking cams each comprising a rotatable and a non-rotatable part, and in cash registers to use interlocking hubs provided with lugs movable into and out of corresponding recesses on adjacent hubs. By the present improvement every interlocking part has plain faces parallel throughout with similar faces of adjacent parts, and all are rotatable. The interlocking parts are of a wedge form and are therefore arranged with the thick part of each between the thin parts of the two adjacent ones

whereby they can be arranged virtually in contact and rotatable on a straight rod. By avoiding the use of projections and corresponding recesses I reduce the power required in operation and diminish wear and also avoid the clicking sound liable to be produced by the striking of a projection against the shoulder of a recess. I also avoid all tendency of the rotating part to bind on the supporting rod as in case of projections situated at one side only of a hub rotating on such rod.

Having thus described my invention what I claim is:

1. In a voting machine, the combination with a series of registers, of a series of ballot indicators forming part of the permanent structure, each moving an independent register freely into and out of coöperative relation with its actuator, interlocking devices for preventing the operation of more than a predetermined number of indicators, and means for causing a simultaneous operation of all the registers which are in operative position.

2. In a voting machine, the combination of a voting handle movable about an axis, registers, and intermediate mechanism comprising a connection movable to opposite sides of the said axis and resisting by its gravity the movement of the handle in either direction.

3. In a voting machine, a plurality of registers each freely and independently movable to bring it into and out of vote counting position, means for simultaneously actuating those that have been moved into and left in such position, and interlocking devices made effective by the movement of a predetermined number of said registers whereby operation of more than the predetermined number is prevented.

4. In a voting machine, vote indicators, interlocking devices for the same, separately movable registers, a plurality of bars for moving said registers to a vote counting position, said bars attached one to each register, and mechanism distinct from the indicators for actuating the registers to count the votes, said mechanism comprising a part adapted to be moved against such registers as have been moved to vote counting position subsequently to the movement of the registers.

5. In a voting machine, the combination of registers freely movable into and out of voted position, a series of vote indicators, a series of bars each carrying one only of said registers and adapted by such connection to move the register without actuating its counting devices, and an actuator for the registers to effect counting in such as have been shifted by indicators into position to be operated by said actuator.

6. In a voting machine, a series of regis-

ters, an actuator common to the registers, a series of ballot indicators forming part of the permanent structure, each indicator being freely and separately movable to shift its register into and out of coöperative relation with the actuator, all other registers remaining at rest, interlocking devices for preventing operation of more than a predetermined number of indicators, and means for causing the simultaneous operation of all the registers whose indicators are in operated position.

7. In a voting machine, the combination of an actuator, a series of registers, a series of indicators forming a part of the permanent structure, one for each register, the indicators being freely movable to shift the registers into and out of coöperative relation with the actuator, indicators for an irregular ballot mechanism, and means for causing the simultaneous operation of all the registers whose indicators are in operated position, and interlocking devices common to both classes of indicators.

8. In a voting machine, the combination of a series of vote indicators, corresponding registers separately movable into and out of voted position, all other registers remaining at rest during such separate movement of one register, mechanism for actuating each register to effect counting, a separate connection between each vote indicator and the corresponding register whereby the action of the indicator shifts said register without actuating it, and means for simultaneously resetting such vote indicators as have been moved to shift the corresponding registers.

9. In a voting machine, a series of registers freely movable into and out of voted position without actuating the registers, a series of vote indicators positively connected one to each register, and an interlocking mechanism, in combination with a reciprocating part movable by the voter to unlock the vote indicators, the interlocking mechanism of said machine being alone operable by a voter when he is permitted access to the former, and said registers being operable only by and after the operation of said indicators and interlocking mechanism by a voter.

10. In a voting machine, the combination of a plurality of registers freely and separately movable into and out of selected position without actuating the registers, vote indicators, an individual connection between each register and a corresponding indicator, and an interlocking mechanism common to said connections, the registers being moved to voted position and the interlocking mechanism positively actuated by the same movement of the indicator.

11. In a voting machine, the combination with two or more vote indicators, of a plurality of interlocking mechanisms each hav-

ing an actuating part in engagement with one of said vote indicators and operated by the voter's movement of either of said indicators, registers attached to said indicators and freely movable into and out of voted position without actuating the registers, and means for accomplishing complete movements of the said registers, said means permitting the simultaneous return of the indicator and interlocking devices.

12. In a voting machine, the combination of two or more registers, vote indicators one attached to each register, each register freely movable into and out of selected position without actuating the register, of independently movable means common to both registers and vote indicators for shifting the same to normal position, said means consisting of a resetting part attached to a reciprocating bar, and said reciprocating bar.

13. In a voting machine, the combination of a register and register-actuator, with interlocking mechanism and vote indicators one attached to each register and moving it independently, each register freely movable into and out of voted position without actuating the register, all other registers remaining stationary in normal position during such movement of a selected register, and means preventing the actuation of a register until the interlocking mechanism has been moved.

14. In a voting machine, the combination of a plurality of vote indicators, a plurality of registers, each freely movable into and out of vote counting position, register supports and a pivoted connection between each register support and an indicator, and independent means for operating the registers moved into vote counting position.

15. In a voting machine, the combination of a vote indicator, a register mechanism moved by the indicator without actuating the register, a resetting part, and an actuator which the voter operates to actuate the register, said resetting part having two relative movements independent of the voter's movement of the vote indicator, one to operate the actuator and the other to return the parts to normal position.

16. In a voting machine, the combination with a series of voting indicators freely movable into and out of voted position, of a series of corresponding registers one only attached to each register and moved by it independently, an operable device for releasing the indicators to permit voting, interlocking devices for preventing the operation of more than a predetermined number of indicators in the series, and means for simultaneously operating the registers whose indicators are left in voted position, operation of said latter means automatically returning operated indicators to normal position.

17. In a voting machine, the combination of a plurality of registers, a single register actuator actuating a plurality of registers, selected registers being separately movable by the voter into and out of operative relation with the actuator, all other registers remaining at rest during such movement of the selected register, a plurality of indicators, and means for producing a relative movement between the register actuator and the selected registers which have been moved into coöperative relation with said actuator.

18. In a voting machine, the combination of a plurality of registers, a single register actuator actuating a plurality of registers, selected registers being separately movable by the voter into and out of coöperative relation with the actuator, a plurality of indicators, means for producing a relative movement between the register actuator and selected registers which have been moved into coöperative relation with said actuator, and interlocking devices operated by movement of a register to voted position.

19. In a voting machine, the combination of a register support, with a plurality of registers individually secured to a plurality of independently movable ballot indicators one for each register, and moving it independently, each indicator being movable into a position to bring its register to coöperate with an actuator when the actuator and support are moved relatively, said actuator, means for moving the actuator and support relatively, and interlocking devices between the indicators and operated by movement of the indicators to voted position for permitting the operation of a predetermined number to the operative position.

20. In a voting machine, the combination of a register actuator, a register support, a plurality of registers secured to a plurality of ballot indicators thereon, one for each register and moving it independently, and each register adapted to be moved into operative relation with the actuator, interlocking devices operated by movement of an indicator to voted position for permitting the operation of a predetermined number of indicators only, means for causing positive relative movement of the actuator and support, and resetting devices for the indicators.

21. In a voting machine, the combination of a register actuator, a support therefor, a plurality of registers secured to a plurality of ballot indicators, one for each register, and moving it independently, and each register freely movable into and out of a position to coöperate with the actuator without actuating the register, interlocking devices between the indicators operated by movement of an indicator to voted position for preventing the movement of more than a predetermined number of them to coöperative

position, and means for moving the actuator and support relatively to cause the registers of the actuated indicators to be operated.

22. In a voting machine, the combination
5 with a plurality of registers mounted in movable relation to each other, of a register actuator, a plurality of freely movable regular ballot indicators corresponding in number with the registers and at all times attached one to each register, and each adapted
10 to be placed to bring its register into or out of operative connection with the actuator without actuating the register, an irregular balloting device embodying a ballot-receiving mechanism, interlocking devices between
15 the ballot indicators and the irregular balloting device, whereby indication of a predetermined number only of regular and irregular ballots is permitted, means for causing
20 the operation of the registers of the ballot indicators moved, and a resetting device for returning the regular indicators and the irregular device to normal position.

23. In a voting machine, indicators, interlocking devices to prevent the operation of
25 more than a predetermined number of indicators to operative position, a plurality of registering devices, each register freely movable into and out of voted position without actuating a register, one only attached
30 to each indicator, a resetting device for the indicators, and an actuator to register the ballots indicated, a reciprocating lever and connections between it and operating devices
35 and the resetting device, whereby the indicated ballots will be registered, the indicators reset to normal position, and the lever returned at a single operation.

24. In a voting machine, the combination
40 with a plurality of registers, a plurality of ballot indicators, one attached to each register and each register adapted to be freely moved into and out of operative position with relation to an actuator without actuating the register, mechanism for operating
45 the registers of the selected indicators, an indicator resetting device connected to said mechanism, a reciprocating lever, and devices between said lever and mechanism for
50 operating the latter in both directions, said resetting device forming a locking device for the indicators, and connections between the locking device and the operating lever for moving the former toward and away from
55 the indicators.

25. In a voting machine, the combination with a series of movable ballot indicators, a series of ballot registers corresponding to the indicators, an indicator attached to each
60 register, the register being freely movable by the indicator without being actuated, the register having a member to cooperate with an actuator, a register actuator, and means for actuating the register and actuator relatively toward and from each other, of the

interlocking parts connected to the indicators having the thickened parts thereon, and stops between which the parts extend and arranged to permit the operation of a limited number of the enlargements of the parts
70 between them.

26. In a voting machine, the combination with a support and a ballot receptacle therein, of a series of movable ballot indicators having interlocking devices provided with
75 thickened parts, a series of registers independently movable without actuation arranged to be actuated by an actuator, a ballot-receiving device embodying a cover for the receptacle and operated directly by the
80 voter to deposit a prepared ballot in the cover into the receptacle, an interlocking device connected to the cover having an enlargement thereon, stops cooperating with
85 the enlargements on all the interlocking devices to permit the operation of a single indicator, and the resetting device for returning the indicators and ballot receptacle cover to normal position.

27. In a voting machine, the combination
90 of a support, an irregular ballot receiver therein, registers, a plurality of regular movable ballot indicators one attached to each register, independently and freely movable to carry its attached register into
95 and out of voted position without actuating the register, adjustable interlocking devices between the regular indicators and the irregular ballot-depositing device for preventing the operation of more than a predetermined
100 number, and means whereby the regular and irregular indicators may be formed into a multicandidate group.

28. In a voting machine, the combination of a plurality of registers each freely movable into and out of vote counting position,
105 series of regular ballot indicators, one attached to each register separately and freely movable to carry its attached register into and out of voted position without actuating
110 the register, an irregular ballot device for prepared ballots, one for a series of indicators, adjustable and extensible interlocking devices for preventing the operation of more than a predetermined number of regular
115 or irregular balloting devices in any series, and means whereby the regular and irregular indicators may be formed into a multicandidate group.

29. In a voting machine, the combination
120 of registers with a plurality of series of regular ballot indicators, one attached to each register, separately and freely movable to carry its attached register into and out of voted position without actuating the register, the register actuator, an irregular balloting device for prepared ballots, one for a series of indicators, and each embodying
125 devices actuated by the voter to prevent the deposit of more than one ballot therein at a
130

time, adjustable interlocking devices to prevent the operation of more than a predetermined number of regular or irregular balloting devices in a series, and means for locking any of the balloting devices from operation.

30. In a voting machine, the combination with an irregular ballot receptacle, of an irregular ballot-receiving device covering said receptacle, means for moving the receiver after the ballot has been placed therein into and out of alinement with the receptacle when actuated, and without depositing the ballot in the receptacle, a plurality of regular ballot indicators, registers attached thereto, the registers being freely movable into and out of voted position without actuating the registers, and interlocking devices between the irregular ballot receptacle cover and the regular indicators.

31. The combination with registers, and regular ballot indicators, one attached to each register and freely movable to carry its attached register into and out of voted position without actuating the register, of an irregular ballot receptacle, a ballot receiver therefor, interlocking devices between the regular indicators for permitting the operation of either a regular indicator or the receiver, and a resetting device cooperating with the connections to release and return the receiver to normal position.

32. The combination with a series of regular ballot indicators and registering devices therefor, an indicator attached to each register and freely movable to carry its attached register into and out of voted position without actuating the register, and interlocking parts connected to the indicators, of an irregular ballot receptacle, the receiver for the receptacle, interlocking parts cooperating with the receiver, means with which the interlocking parts cooperate to prevent the operation of more than a predetermined number, and a resetting device cooperating with the interlocking parts to return all the parts to normal position.

33. The combination with registers, an actuator, a support, a series of movable ballot indicators on the support, one attached to each register, freely movable to carry its attached register into and out of voted position without actuating the register, and means for moving the actuator and support relatively to cause the registers of the selected indicators to be operated, of interlocking devices connected to the indicators, an irregular ballot receptacle, the receiver therefor, interlocking mechanism cooperating with the receiver and indicator, stops with which the interlocking devices cooperate to limit the number operated, and a resetting device cooperating with the interlocking devices to return the parts to normal position.

34. The combination of a voting machine

casing, voting mechanism in the casing comprising a register-actuator, registers normally disconnected from said actuator and movable to and from voted position, freely movable ballot indicators, a plurality of the registers when moved to voted position being adapted to be operated by the actuator when it is moved, a receptacle for irregular ballots, a manually operated ballot-receiver for the receptacle, interlocking devices between the regular indicators and the irregular ballot-receiver, and an indicating part connected to the receiver, whereby the voter may determine at a glance for which office he has cast a ballot.

35. In a voting machine, the combination of registers normally disconnected from the actuator, the actuator common to a plurality of registers, ballot indicators, one attached to each register and freely and separately movable into and out of voted position without actuating the registers, but placing the registers in relation to be operated by said actuator, interlocking devices, a movable shaft extending to the exterior of the machine and adapted when moved in one direction to lock the indicators.

36. In a voting machine, the combination of an actuator, a series of registers, a series of ballot indicators devoted to regular candidates, one attached to each register, the registers being freely movable into and out of cooperative relation with the actuator by the indicators without actuating the registers, an irregular voting device embodying a casing having an aperture, a movable receiver having an opening through it, a movable cover plate having an aperture adapted to register with the opening in said receiver, interlocking devices between the regular indicators and the receiver of the irregular balloting device to prevent the operation of more than a predetermined number, said interlocking devices being actuated either by the movement of the indicators or by movement of the receiver, and operating devices for causing the simultaneous relative movement of the indicators and their registers with the actuator and returning the operated cover-plate to normal position with its opening out of register with the opening in said receiver.

37. In a voting machine, the combination of grouping mechanism, registers, interlocking devices, ballot indicators connected to said devices whereby a voter may indicate his vote and lock out other indicators in the same group, each of said indicators when operated moving a separate register into operative position without moving any other register and without operating the counting mechanism of the moved register to permit the voter to take back his selected vote and change his vote.

38. The combination in a voting machine,

of voting indicators, separately movable counting mechanisms normally out of operative position, an indicator attached to each counting mechanism to move it into operative position, whereby the counting mechanisms are controlled but not actuated by movement of said indicators, locking mechanism operated by actuation of any one of said indicators, said indicators being movable to voted position and withdrawn without actuating the counting mechanisms, to enable a voter to change his selected vote, and said withdrawal operating to restore the locking mechanism to its normal position.

39. In a voting machine, the combination of a case furnished at one end with slots,

levers pivoted in the case and furnished with candidate-indicating means and with means extending through the slots for the operation of said levers respectively, registering mechanism on said levers respectively, and means within the case for actuating the registering mechanism when the levers are in determined position.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

CHARLES HERBERT OCUMPAUGH.

Witnesses:

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J. FRED. KELLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
