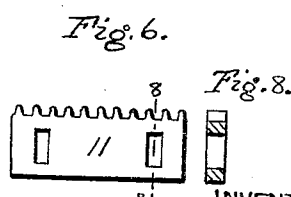
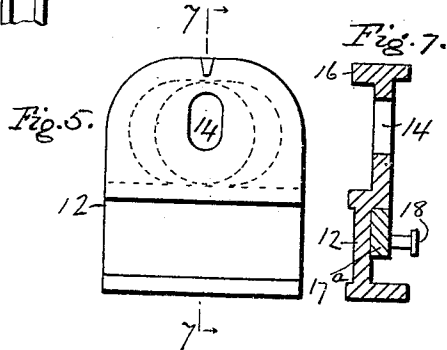
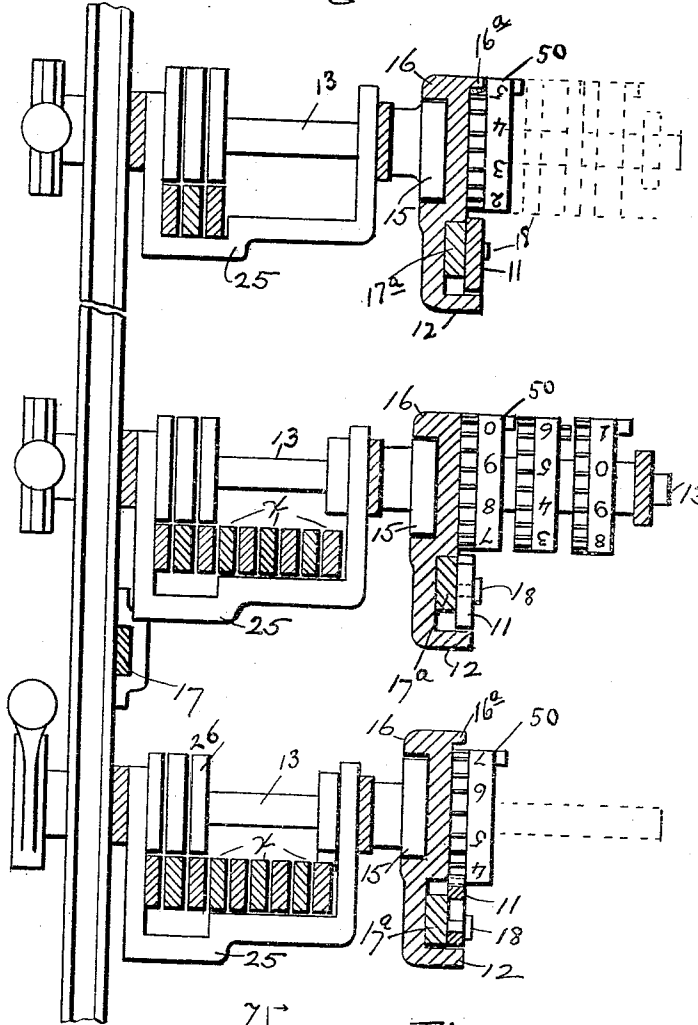


932,915.

S. R. SHOUP.
VOTING MACHINE.
APPLICATION FILED AUG. 30, 1907.

Patented Aug. 31, 1909.
3 SHEETS—SHEET 1.

Fig. 1.



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Fig. 2

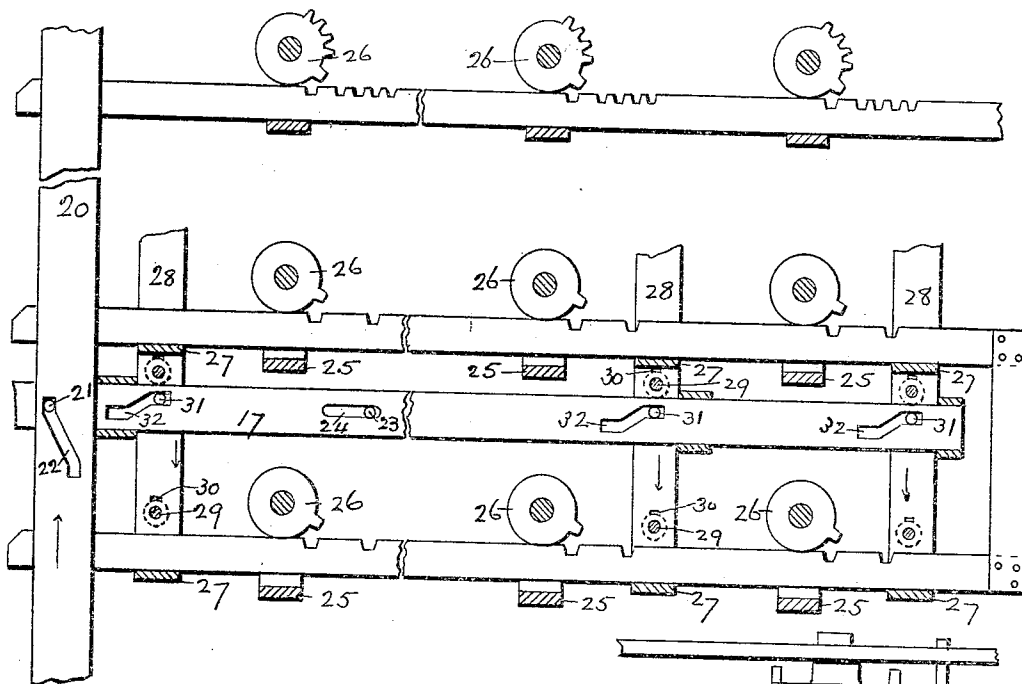


Fig. 4.

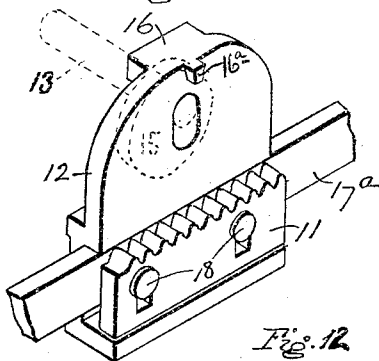


Fig. 12

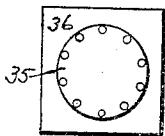
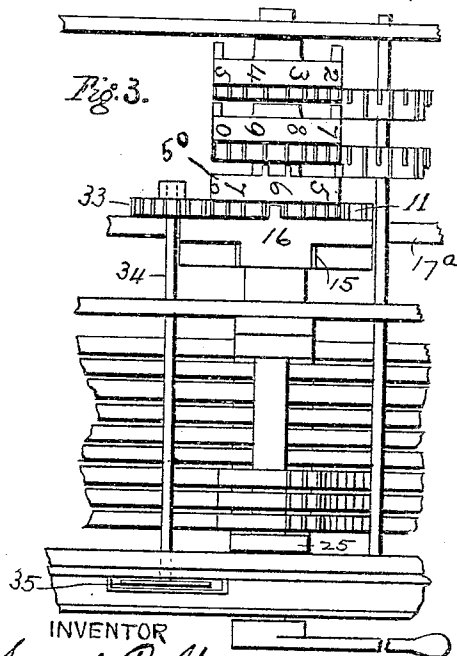


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 11

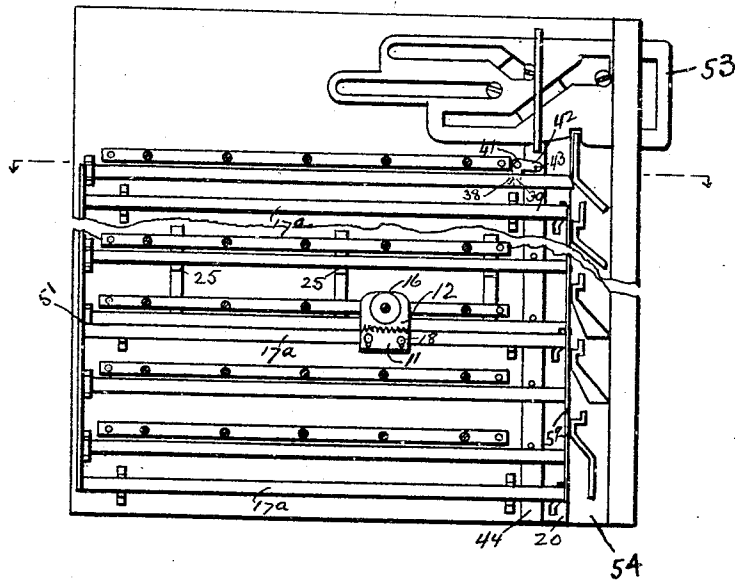


Fig. 9

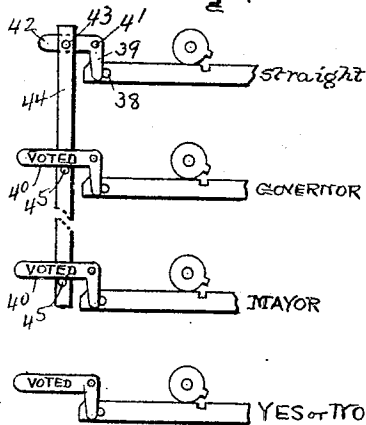
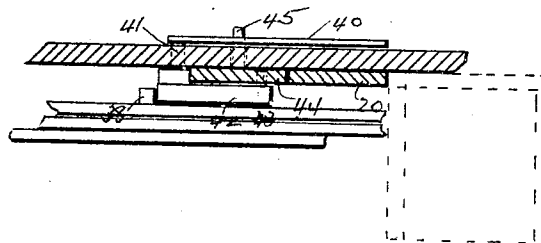


Fig. 10



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UNITED STATES PATENT OFFICE.

SAMUEL R. SHOUP, OF HOBOKEN, NEW JERSEY.

VOTING-MACHINE.

932,915.

Specification of Letters Patent.

Patented Aug. 31, 1909.

Application filed August 30, 1907. Serial No. 390,799.

To all whom it may concern:

Be it known that I, SAMUEL R. SHOUP, a citizen of the United States of America, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

This invention relates to voting machines and particularly to a machine of the character described in my Patents Nos. 852,911 and 853,127 upon which the devices forming the subject of this application are improvements.

In the accompanying drawings: Figure 1 is a vertical transverse elevation through portion of the machine showing my improvement applied thereto; Fig. 2 is a broken vertical section of portion of the machine; Fig. 3 is a broken plan view showing one of the voting spindles and the numbering head mechanism and the indicator; Fig. 4 is a perspective of portion of the device; Figs. 5 and 6 are side elevations of details; Figs. 7 and 8 are cross sections of the same on the lines 7-7 and 8-8 respectively on Figs. 5 and 6; Fig. 9 is a front elevation with the front plate removed illustrating another improvement; Fig. 10 is a plan view of portion of the machine illustrating the same feature; Fig. 11 is a rear sectional elevation of the machine partially broken away; and Fig. 12 is a front elevation of the indicating wheel.

The main improvement which I have made in the machine described in the above mentioned patents has for its purpose the provision of means whereby a voter may change his choice of candidates without spoiling or losing his ballot while I at the same time positively prevent any possibility of double voting. To this end I eliminate from my old machine the ratchet and pawl mechanism for the interlocking bars—thus giving the voter perfect freedom to rotate the voting knob (or lever, which I prefer to use) in either direction, to vote or “unvote” a given candidate and choose another, as often as he will. The interlocking bars meshing with the segmental gearing on the spindle, move backward and forward as the spindle is rotated in one direction or the other, without impediment. I retain however the segmental gearing between the knob spindle and the interlocking bars, and the rest of the mechanism substantially as described in

my earlier patents, to prevent a voter from voting the same candidate twice or more than one candidate in a single group, except where this is called for by the ticket. In connection with this change I eliminate also the gear between the knob spindle and the numbering head, so that the rotation of the spindle has no effect whatever upon the vote registering mechanism, and I substitute a new device by which the vote is not “cast” until the entire ballot has been “marked” to the satisfaction of the voter. This mechanism is readily understood by reference to the drawings.

Below and normally out of gear with the teeth on the first or unit wheel 50 of the numbered head I support a rack section 11 (Figs. 1 and 4) on a carrier or yoke 12. The upper portion of the yoke, which is provided with a boss or shoulder 16, extends above the voting lever spindle 13, which may conveniently pass through a slot in the same and carry the wheels of the numbering head as described in my above mentioned patents. On the lever spindle and working beneath the shoulder 16 I mount a cam 15 adapted, upon rotation of the spindle, to lift the yoke and the rack section 11, carried thereby, so that the latter comes into gear with the teeth on the unit wheel 50 (see lowest spindle Fig. 1). It is thus apparent that the movement of the voting lever in my improved machine does no more than lift the rack 11 into gear with the unit wheel of the numbering head, that is amounts to nothing more than the marking of a ballot which may be changed (by returning the lever to its not-voted position and thereby lowering the rack out of gear with the unit wheel) as often as the voter's fancy dictates. A voter therefore, when he has designated his final choice of candidates on the ticket has not yet voted a single one. His ballot is not yet “cast”.

To secure the register of the ballot I utilize one of the elements of my old machine and add thereto certain new ones which will be readily understood. In my old machine I employed the cam bar 20 (Figs. 2 and 11) for two purposes, (1) on the resetting of the machine to lift the pawls out of engagement with the interlocking bars so as to permit a free return movement of the latter and (2) to actuate the adjusting bar which trues the notches in the interlocking bars beneath the segmental gears

on the voting spindles. For the latter purpose I employed two horizontal bars 17 secured at one end to the adjusting bar 51 and working at their other ends in angled slots in the cam bar 20. The vertical movement of the cam bar 20 imparts a transverse horizontal movement to the bars 17. This movement of the bars 17 I now utilize to actuate the registering mechanism, and employ for this purpose a frame 52 corresponding to the adjusting bar 51 but carried at the other ends of the bars 17. To this frame 52 at one end and to the adjusting bar 51 at the other end I secure horizontal bars 17^a for every tier of voting spindles and place these bars 17^a adjacent to the rack sections 11, a convenient assembling of the parts being shown in Fig. 1 in which the horizontal bars 17^a are located in an offset in the yoke 12. Pins 18 on the bars 17^a working in slots in the rack sections establish an operative connection between the rack sections and the bars 17^a for horizontal motion, while the rack section is free to move vertically into gear with the teeth on the unit wheel 50 under the influence of the cam 15. It is thus apparent that upon the first movement of the resetting mechanism that is upon the pulling out of the slotted handle 53, the cam bar 20, through the bars 17 carrying the vertical pieces 51 and 52 and the horizontal bars 17^a, imparts a horizontal movement to all the rack sections 11 on the machine. Those that have been brought into gear with the unit wheels through the rotation of the spindles by the various voting levers, revolve said unit wheels and thus register the vote. The length of this horizontal movement may be regulated by the length and angle of the angled slot in the bar 20.

Were the rack section 11 to remain in gear with the unit wheel during the completion of the resetting movement, it is obvious that on the return of the bar 17 as the handle is pushed in again, the section would be returned with it, the unit wheel revolved backward and the vote thus nullified. To obviate this difficulty, I employ a device by which an early return of the voting levers to position is secured and thereby the cams on the lever spindles revolve so that the rack section is lowered out of gear with the unit wheel before the return movement of the bars 17^a carrying said sections. For this purpose, I extend the teeth of the segmental gear wheels on the voting spindle partially around the circumference of one or all of the wheels in each set, so that at least one wheel of each set is kept in gear with one of the interlocking bars to the end of the limited angular voting movement of the voting lever. The return of the interlocking bars under the action of the principal cam bar 54 serves to return the levers which have been "voted" and are therefore in gear with the interlock-

ing bars, to their normal position. It will be noted that as in my old machine, the angled slot in the resetting bar gives an earlier movement to the cam bar 20, which actuates the bar 17, than to the cam bar 54 which acts upon the interlocking bars. Consequently the rack sections are first moved horizontally while they are in gear with the unit wheels, during the first portion of the outward stroke of the resetting bar, and then during the latter portion of this stroke, and before the return stroke, are lowered out of gear as the cam bar 54 comes into operation to return the interlocking bars and the voting levers to their original positions.

To prevent any possible tampering with the numbering head, I provide a tooth 16^a on the yoke 12, which engages the teeth on the upper side of the unit wheel as the rack is being lowered out of gear with the teeth on the lower portion. The unit wheel is thus locked against rotation except when the rack alone is geared therewith.

In connection with the return movement of the voting levers to position, a further feature of the device should be pointed out. Inasmuch as the return of the handles is effected through their gear with the interlocking bars during the "voting" rotation, care must be taken to carry the return stroke of the interlocking bars through far enough to throw the teeth of the segmental gears on the spindles out of gear with the interlocking bars. Otherwise upon the rotation of the voting spindle for any candidate in a group, the other spindles, remaining in gear with the interlocking bars, would prevent the movement of the latter. This is obviated by making the return stroke of the interlocking bars longer than is necessary to return the voting levers to position, and then "truing" the bars to position under the segmental gearing by the movement of the truing bar 51. While this return rotation of the voting spindles to normal position by keeping them in gear with the lock bars, as above explained, is thoroughly efficacious when but a single candidate is to be voted for in a single group, it is not possible to utilize this means when two or more in the same group are to be voted for, by reason of the interference of the different combinations of gearing between each spindle of the segmental gears and the interlocking bars. This difficulty is overcome by returning the spindles in such a group through the gear not with the interlocking bars but with the individual bars x for the particular candidates voted. The gear between the various spindles and the bars x may be kept continuous since each one of these bars is subject to the action of only a single spindle. To permit of utilizing these individual bars for the return of the voting spindles to their original position however, it is obviously neces-

sary to throw the interlocking bars out of gear with the voting spindle. This I accomplish by offsetting the supporting bracket 25 beneath the interlocking bars, and normally supporting the latter in gear with the pinions 26 on the spindle by means of arms 27 on vertical bars 28. These bars are held in position by pins 29 in the front frame of the machine working in slots 30 in the bars. The vertical movement of the latter is accomplished through pins 31 working in angled slots 32 in one of the bars 17 which is located at this point. On the resetting of the machine it is thus seen that the preliminary movement of the bar 20 not only effects the record of the vote through the lateral movement of the bars 17, but one of the latter is utilized to drop the interlocking bars out of position when necessary, before the cam bar 51 comes into play to force all the interlocking bars back to their original position.

In addition to the mechanism above described by which I enable a voter to change his choice of candidates as he pleases while still preventing fraudulent voting by the same devices which I previously employed, I have found it desirable to add certain indicating features to the machine to enable the voter to be sure that his vote has been registered.

In Figs. 3 and 12 I have shown a pinion 33 geared to the unit wheel of the numbering mechanism and mounted on a spindle 34 which extends through to the face of the machine where a disk 35 is mounted on the spindle. As the numbering wheel revolves, the disk 35 is revolved so that if the latter is provided with dots the voter can readily observe by the movement of the wheel whether or not his vote is being counted on the numbering wheels. In my old machine this would be observed as the voting knob is being turned; in my new machine not until the machine is being reset. In addition to this I think it wise to provide a device by which a voter, particularly one who splits his ticket, can tell at a glance for what offices he has voted. In Figs. 9 and 10 is shown a series of semaphores pivoted on the front plate of the machine and operated by pins on the interlocking bars. As the interlocking bars are moved by the revolution of the voting knob or lever the pin 38 extending through a slot in the front casing of the machine engages the short arm 39 of the semaphore and thus rocks the long arm 40. A glance at the row of semaphores shows at once whether or not any of the offices has been missed in the voting. An arrangement is also made to actuate all the semaphores for party offices in connection with the interlocking bars for the straight ticket. In a straight ticket this has the advantage of calling the voter's attention to constitutional and other questions not yet voted upon, as the

semaphores for which at once indicate. For this purpose the semaphore actuated by the pin on the interlocking bar for the straight ticket is provided at the end of the long arm with a pin 43. A perpendicular bar 44 carrying pins 45 working through slots in the front plate and beneath the long arms of the semaphores is subjected to the action of the pin 43 so that in the case of a straight vote all the semaphores for party offices will be raised.

While the present invention has been shown applied to the machine described in my patents above mentioned, I do not limit myself to this particular construction but claim the same applied to any machine falling within the scope of the following claims.

I claim as my invention:

1. In a voting machine, a voting spindle provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism, a gear normally out of operative connection therewith, means in connection with the actuation of said voting spindle for establishing said operative connection between said gear and registering mechanism and means for moving said parts with relation to each other to actuate the registering mechanism.

2. In a voting machine, a voting spindle provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism, a gear normally out of operative connection therewith, cam means in connection with the actuation of said voting spindle for establishing said operative connection between said gear and registering mechanism and means for moving said parts with relation to each other to actuate the registering mechanism.

3. In a voting machine, a voting spindle provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism, a gear normally out of operative connection therewith, a cam on said voting spindle and means in connection therewith for establishing an operative connection between said rack and registering mechanism upon the rotation of said voting spindle, and means for moving said parts with relation to each other to actuate the registering mechanism.

4. In a voting machine, a voting spindle provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a registering mechanism normally disconnected from operating means, means in connection with the actuation of

the voting spindle for bringing said registering mechanism into connection with operating mechanism and means for actuating said operating mechanism.

5 5. In a voting machine, a voting spindle provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering
10 mechanism, a sectional rack normally out of operative connection therewith, means in connection with the actuation of said voting spindle for establishing said operative connection between said sectional rack and registering
15 mechanism and means for moving said parts with relation to each other to actuate the registering mechanism.

6. In a voting machine, a voting spindle provided with gear, a series of interlocking
20 bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism, a gear normally out of operative connection therewith, means in connection
25 with the actuation of said voting spindle for establishing said operative connection between said gear and registering mechanism and means for moving said parts with relation to each other to actuate the registering
30 mechanism, together with means for locking said registering mechanism when out of engagement with said rack.

7. In a voting machine, a voting spindle provided with gear, a series of interlocking
35 bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism, a gear normally out of operative connection therewith, means in connection
40 with the actuation of said voting spindle for establishing said operative connection between said gear and registering mechanism and means for moving said parts with relation to each other to actuate the registering
45 mechanism, together with a locking gear and means for engaging the registering mechanism thereby except when the latter is engaged by the actuating means alone.

8. In a voting machine, a voting spindle
50 provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism mounted in a stationary frame,
55 a gear normally out of operative connection therewith, a movable carrier for said gear and means in connection with the actuation of the voting spindle for moving said carrier so as to bring said gear into engagement
60 with said registering mechanism and means to move said gear so as to actuate the latter, substantially as described.

9. In a voting machine, a voting spindle provided with gear, a series of interlocking
65 bars arranged adjacent thereto adapted to

be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism mounted in a stationary frame, a gear normally out of operative connection therewith, a movable carrier connected with
70 lost motion to said gear and means in connection with the actuation of the voting spindle for moving said carrier so as to bring said gear into engagement with said registering mechanism and means to move
75 said gear so as to actuate the latter, substantially as described.

10. In a voting machine, a voting spindle provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism carried by a stationary frame, a sectional rack normally out of engagement therewith for operating the same, a carrier
80 connected with lost motion to said rack, means in connection with the actuation of said spindle for bringing said sectional rack into engagement with said registering mechanism and means for moving said rack while
90 so engaged to actuate the registering mechanism.

11. In a voting machine, a voting spindle provided with gear, a series of interlocking bars arranged adjacent thereto adapted to be engaged by said gear upon the rotation of said spindle, a gear actuated registering mechanism carried by a stationary frame, a sectional rack normally out of engagement therewith for operating the same, a carrier
95 connected with lost motion to said rack, a cam on the voting spindle engaging said carrier whereby said rack is moved into engagement with the registering mechanism upon the actuation of the voting spindle and
100 means for moving said rack while so engaged to actuate the registering mechanism.

12. In a voting machine, a registering mechanism, a sectional rack normally out of engagement therewith, means to bring the
110 same into engagement therewith upon the actuation of the voting lever, in combination with a bar connected with lost motion to said rack, a resetting mechanism, and means in connection with the same for moving
115 said bar while the rack is in engagement with the registering mechanism, whereby the latter is actuated, substantially as described.

13. In a voting machine, a spindle adapted to be rotated by the voter, a slidable bar supported beneath said spindle, means for moving said bar by the rotation of the spindle and a resetting mechanism for the machine adapted to return said spindle to its original position through its operative connection
120 with said bar.

14. In a voting machine, a spindle carrying a gear adapted to be rotated by the voter, a slidable bar supported adjacent thereto and provided with teeth adapted to
130

be engaged by said gear, whereby said bar is actuated upon the rotation of said spindle and a resetting mechanism adapted to return said spindle to its original position through its operative connection with said bar.

15. In a voting machine, a spindle adapted to be rotated by the voter, slidable bars supported beneath said spindle, means for moving said bars on the rotation of the spindle, means to return the spindle to position through its operative connection with certain of said bars, and means for breaking the connection between certain others of said bars and the spindle before the return movement of said bars.

16. In a voting machine, a spindle adapted to be rotated by the voter, slidable interlocking bars engaged by said spindle and adapted to be moved thereby, a cam bar adapted to return said interlocking bars to their original position and means for breaking the engagement between certain of said bars and the spindle before the return movement of the former.

17. In a voting machine, a spindle adapted to be rotated by the voter, slidable interlocking bars engaged by said spindle and adapted to be moved thereby, a stationary support for certain of said bars, a movable support for certain others of said bars, in combination with a cam bar for returning said interlocking bars to their original position, and means in connection with the actuation of said cam bar for moving the support of certain of said interlocking bars, whereby their engagement with the spindle is broken before their return movement begins, substantially as described.

18. In a voting machine, a voting spindle provided with a gear, a series of interlocking bars to gear therewith, means for moving the same horizontally through the actuation of the voting machine, means for returning the same beyond their original position and out of gear with said voting spindle, and means to adjust the same beneath the gear of the voting spindle so that upon rotation of the latter the gears intermesh.

19. In a voting machine, a spindle adapted to be actuated by the voter, a cooperating concealed registering mechanism, an indicating wheel visible to the voter, and means for operating the latter from the unit member of the registering mechanism.

20. In a voting machine, a spindle adapted to be actuated by the voter, a cooperating concealed registering mechanism, a spindle carrying an indicating device visible to the voter and means for operating the latter from the unit member of the registering mechanism.

21. In a voting machine, a spindle adapted to be actuated by the voter, a slidable bar engaged by said spindle, an indicating semaphore and means in connection with said slidable bar for actuating the latter on the actuation of the spindle.

22. In a voting machine, spindles adapted to be actuated by the voter, a group of indicators having a single indicator for each office to be voted and means for operating the indicator for each office in connection with the actuation of the voting spindle for any one of the candidates for said office, substantially as described.

23. In a voting machine, a straight ticket spindle and individual spindles for the offices to be voted, a group of indicators for the said offices and means for actuating said group of indicators in connection with the actuation of said straight ticket spindle.

24. In a voting machine, a spindle adapted to be rotated by the voter, slidable interlocking bars supported adjacent thereto, means for moving said bars by the rotation of said spindle, a gear actuated registering mechanism, a sectional rack normally out of engagement with the same, means in connection with the rotation of said spindle for bringing said rack into engagement with said registering mechanism, means for moving said rack while so engaged to actuate said registering mechanism, means to break operative connection between certain of said interlocking bars and said spindle, means to break operative connection between said rack and registering mechanism, means to return all of said interlocking bars to original position and means in connection therewith to return said rack and spindle to their original positions respectively, substantially as described.

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

SAMUEL R. SHOUP.

Witnesses:

WILLIAM ABBE,
L. H. GROTE.