

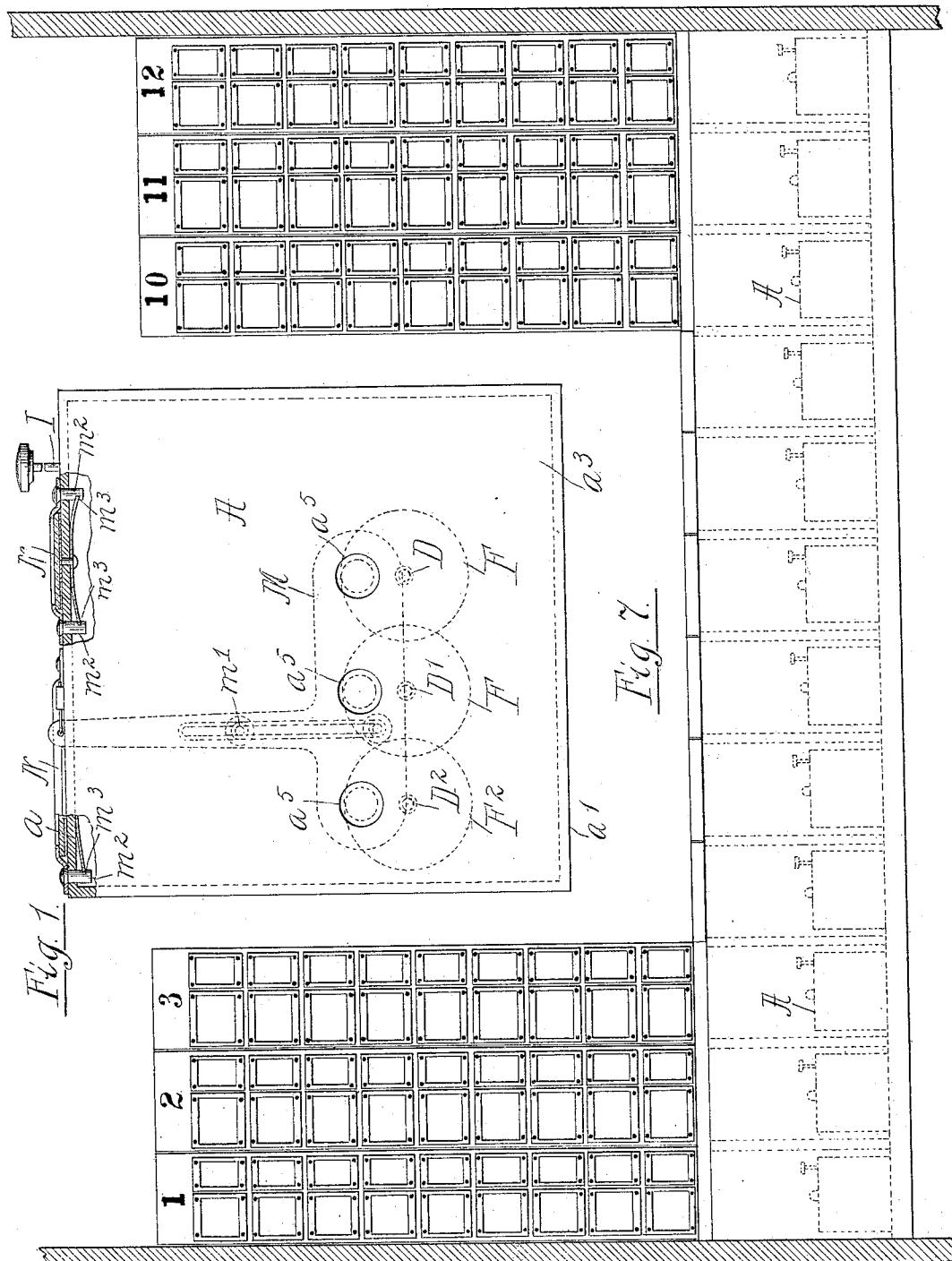
(No Model.)

C. A. STITZER.  
VOTING MACHINE.

4 Sheets—Sheet 1.

No. 543,816.

Patented July 30, 1895.



Witnesses.  
John N. Adams.  
Albert H. Graves.

Inventor.  
Charles A. Stitzer.  
by Dayton, Pooler & Brown  
his Attorneys.

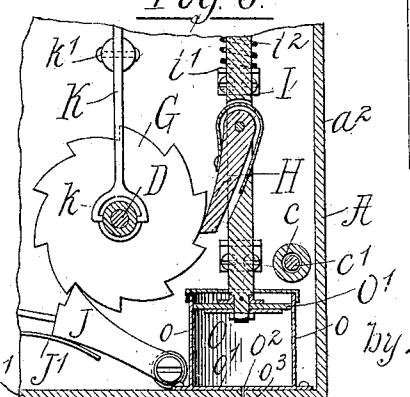
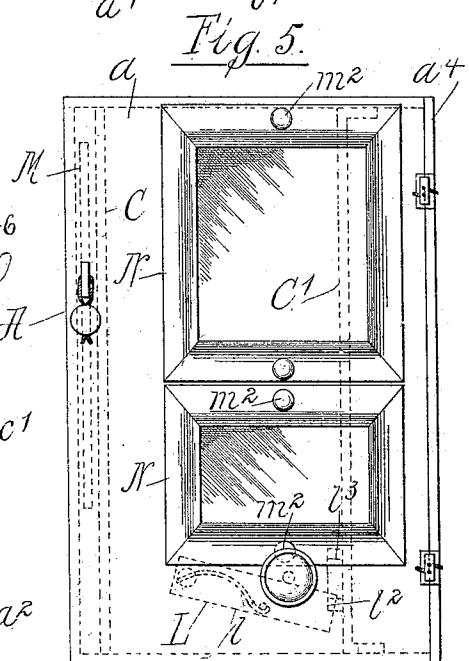
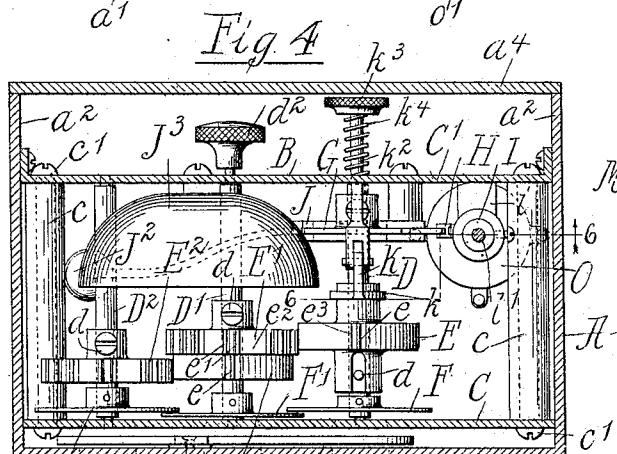
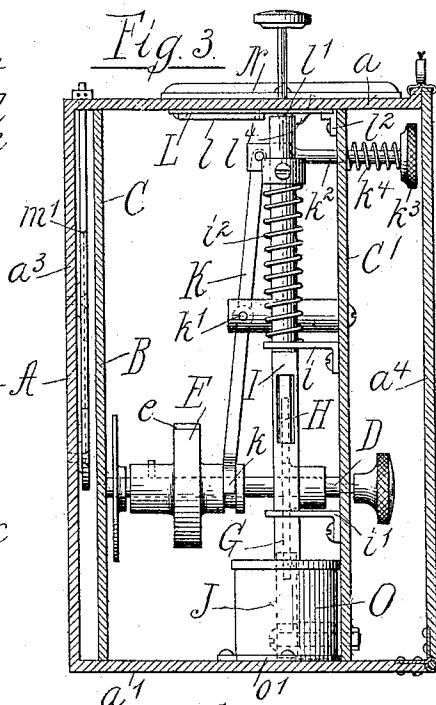
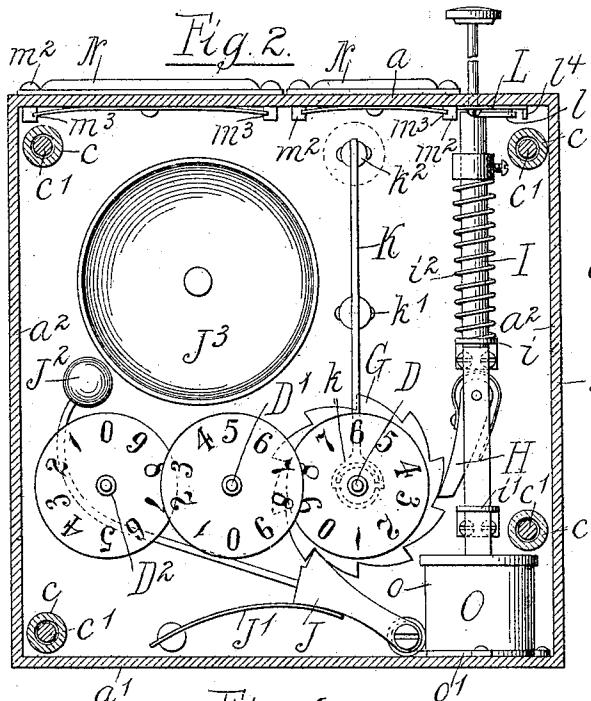
(No Model.)

4 Sheets—Sheet 2.

C. A. STITZER.  
VOTING MACHINE.

No. 543,816.

Patented July 30, 1895.



Witnesses.

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*a1*

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(No Model.)

4 Sheets—Sheet 3.

C. A. STITZER.  
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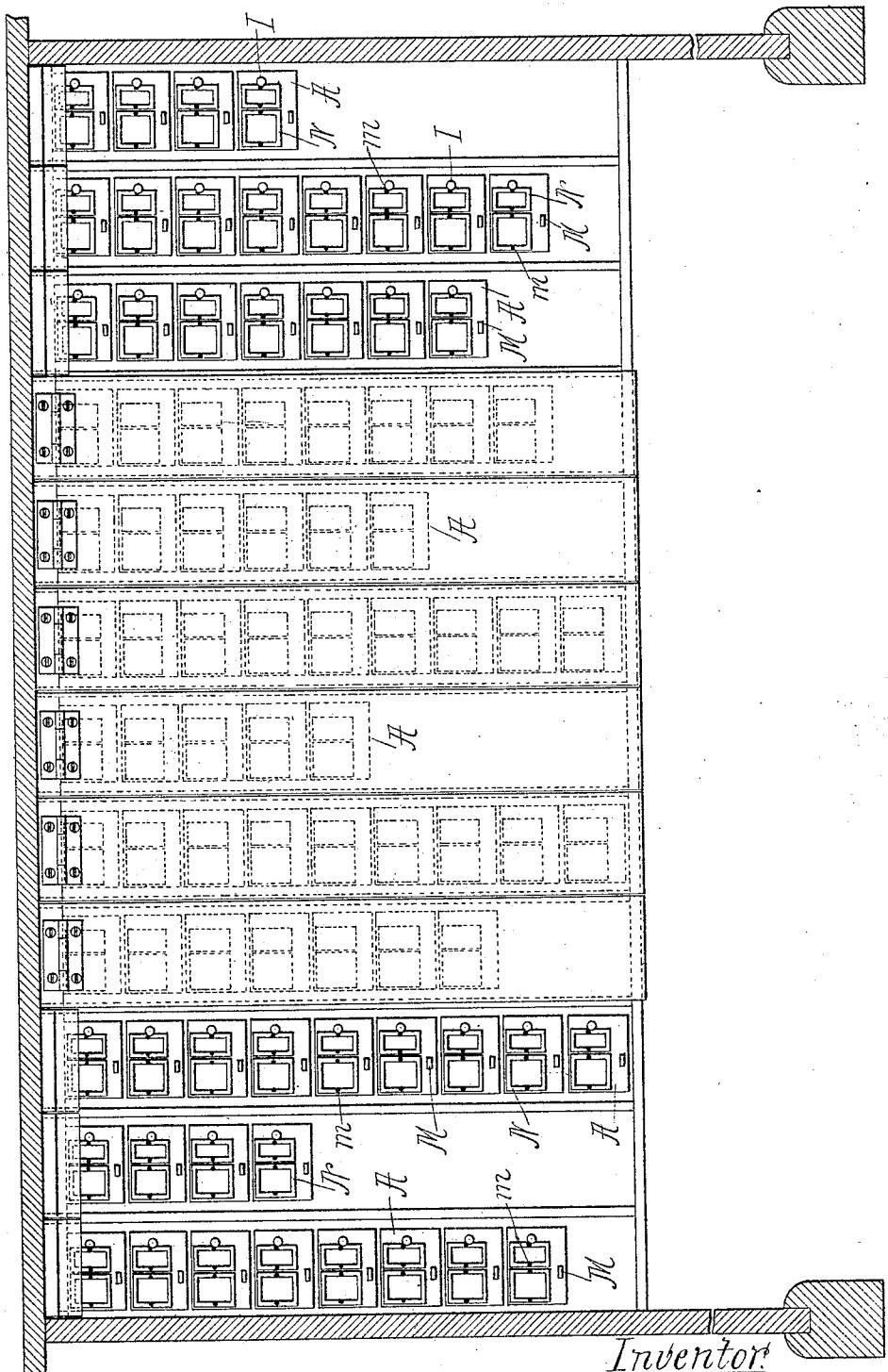


Fig. 8.

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(No Model.)

4 Sheets—Sheet 4.

C. A. STITZER.  
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Fig. 9.

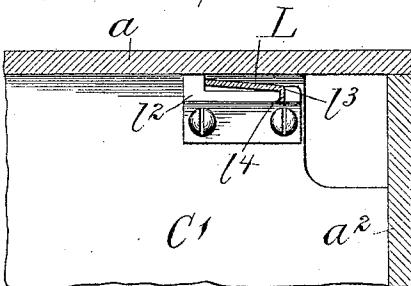
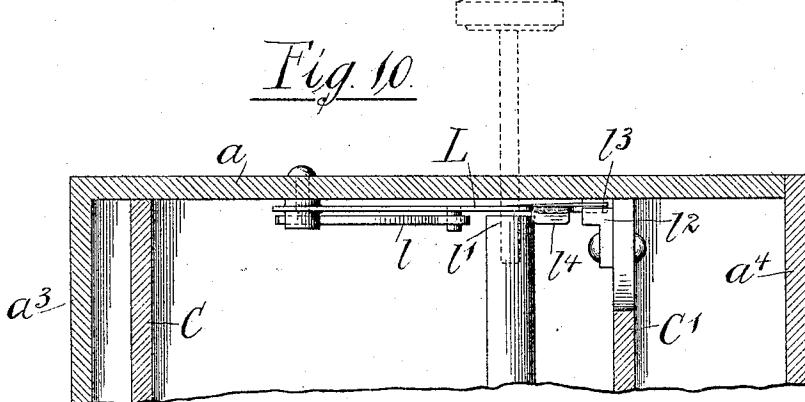


Fig. 10.



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# UNITED STATES PATENT OFFICE.

CHARLES A. STITZER, OF CENTRAL CITY, NEBRASKA.

## VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 543,816, dated July 30, 1895.

Application filed November 27, 1893. Serial No. 492,121. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. STITZER, of Central City, in the county of Merrick and State of Nebraska, have invented certain new and useful Improvements in Voting Apparatus; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in voting apparatus of that class in which the voter registers his choice of candidates by operating a registering or counting device representing that candidate, and wherein a separate register is employed for each candidate to be voted for.

The objects of the invention are, among others, to expedite the operation of balloting for the various candidates, to avoid the errors incident to filling out a paper ballot or voting by any of the methods heretofore practiced, and to minimize the possibility of fraudulent balloting.

The invention consists in the various novel features of construction, combination, and arrangement, as hereinafter set forth, and particularly pointed out in the appended claims, and the same may be readily understood by reference to the following description and accompanying drawings, in which—

Figure 1 is a front elevation of a register designed for use in carrying out the present invention, a part of the front casing being broken away to show the card-holder in section, and the registering-dials and guard-plate therefor being shown in dotted lines. Fig. 2 is a front elevation of the register with front casing removed to show interior arrangement of parts. Fig. 3 is an end elevation with end casing removed. Fig. 4 is a top plan view of the register with top casing removed. Fig. 5 is a top plan view of the register, showing the arrangement of the spring-actuated plate for closing the operating-rod aperture in dotted lines. Fig. 6 is a vertical longitudinal section through the operating-rod I and dash-pot thereon taken on the line 6 6 of Fig. 4. Fig. 7 is a plan view of a voting-booth, showing the arrangement of the compartments and registers therein. Fig. 8 is a side elevation

thereof, showing positions of registers in compartments in dotted lines. Figs. 9 and 10 are enlarged details showing the construction of 55 the pivoted plate which automatically closes and locks the push-rod aperture.

To first refer to the registering or counting mechanism forming part of an apparatus embodying my invention, it will be understood 60 that this may be of any suitable construction adapted to correctly register successive movements of a part operated by the voter in the act of balloting from one upward to as high a number as may be the greatest number of 65 votes likely to be cast for on candidates in any single election; but as herein shown such counting mechanism is constructed as follows:

An outer casing or box A for the registering device is preferably made in the form of 70 a metal box of rectangular form, the top a, bottom a', ends a<sup>2</sup> a<sup>2</sup>, and front a<sup>3</sup>, being, in this instance, shown as cast integral with each other, and the back a<sup>4</sup> being hinged at its lower margin to the bottom of the box and 75 provided at its opposite margin with suitable apertures arranged to register with corresponding apertures formed in the top wall of the box when the latter is closed. Through these apertures a wire or metal strand may 80 be passed and suitably sealed to prevent opening of the box by unauthorized persons. A series of apertures a<sup>5</sup> a<sup>5</sup> a<sup>5</sup> is provided in the front wall of the box through which the registering-dials hereinafter described may be 85 seen.

The main operative parts of the register are shown as all mounted upon a suitable frame B, composed of front and back plates C and C', secured together by posts c c c and 90 removably secured within the outer casing by means of bolts c' c', as shown. Revolubly mounted in this frame are three transversely-arranged parallel shafts or arbors D D' D<sup>2</sup>, each carrying a gear-wheel E, E', and E<sup>2</sup>, secured against rotation thereon by means of set-screws d d d, said gear-wheels being arranged to intermesh so as to form a train of gearing by which numbered disks or dials F F' F<sup>2</sup>, mounted on the shafts D, D', and D<sup>2</sup>, 95 respectively, are actuated. The construction of this train of gearing by which the several dials are actuated so as to bring the proper figures carried thereon opposite the apertures 100

$a^5 a^5 a^5$  is as follows: The gear E is provided with a single tooth e, which is adapted to engage and intermesh with gear-teeth  $e' e'$ , arranged in pairs with intermediate spaces  $e^2$  around the perimeter of the gear E', said gear E' being provided with ten pairs of teeth and corresponding spaces. The gear E is cut away or recessed adjacent to the single tooth e, as shown at  $e^3$ , and is so adjusted with relation to the gear E' that after having carried said gear forward one step in its rotation its outer perimeter will fit and travel within the space  $e^2$  between the last engaged pair and the following pair, thus positively locking and preventing the further rotation of the gear E' until the gear-tooth e has reached the point at which it will intermesh with the succeeding pair of teeth  $e$  of the gear E', when the latter will be again carried forward a step, as before. The shaft D', carrying the gear E', is also provided with a gear E<sup>3</sup>, having a single tooth like the gear E, and arranged to intermesh with and actuate the gear E<sup>3</sup>, which is provided with alternate pairs of teeth and spaces like the gear E'. Thus arranged it will be obvious that the several dials, each of which bears on its face numerals from 0 to 9, will be carried forward in such manner as to bring the proper numerals before the apertures  $a^5 a^5 a^5$ , so as to correctly indicate succeeding numbers from 0 to 999, in the same manner as other counting devices or registers.

As a means of actuating the train of gearing, a ratchet-wheel G is rigidly secured upon the shaft D, and said ratchet-wheel is engaged by a spring-pressed pawl H, pivotally mounted within an operating rod or lever I, in this instance arranged to reciprocate vertically within guides or brackets i i', secured upon the frame-plate C', the pawl being so arranged as to carry the ratchet-wheel forward one notch at each time the rod is actuated. A detent J, pivotally mounted on the frame-plate C' and held yieldingly against the ratchet-ward by a spring J', serves to prevent back-wheel movement of said wheel G, in the usual manner. A coiled expansion-spring i<sup>2</sup> surrounds the operating-rod I and is interposed between the guide or bracket i and a collar secured on said rod I, said spring serving to automatically return the rod to its normal upward position after it has been depressed.

As a means of announcing, both to the person who is voting and to the proper officials in charge of the election, that the operating-rod has been depressed sufficiently to actuate the registering device, and thereby register a vote, the detent J carries a hammer or clapper J<sup>2</sup>, arranged to strike a gong or bell J<sup>3</sup>, mounted upon the frame-plate C', when the said detent drops into one of the ratchet-notches at the end of each downward stroke of the operating-rod I, the said spring J' being made of sufficient strength to insure proper action of the hammer J<sup>2</sup>.

As a means of delaying the return of the operating-rod I to its normal upward position,

so as to prevent an immediate repetition of the vote for the same candidate, I provide a retarding device adapted to act upon said rod I in such manner as to retard its return to a position to engage the next ratchet-notch during a determinable period of time. This retarding device may be of any desired construction adapted to prevent the return of some operative part of the register to a position in readiness for a succeeding operation during a desired period of time, but as herein shown is conveniently made in the form of a dash-pot arranged at the lower end of the operating-rod I. Said dash-pot is in the form of a cylinder O, arranged vertically in suitable supports o and having a closed lower end or head o'. A valved piston O', secured on the lower end of the operating-rod I, is arranged to reciprocate within this cylinder, the valve being arranged to open upwardly, thus acting to exhaust the air from the cylinder. A small inlet-aperture o<sup>2</sup>, regulable by a screw-plug o<sup>3</sup>, serves to admit air to the cylinder slowly, and thus controls the rate of movement or time consumed by the operating-rod I in returning to its upward position.

In order that the register-dials may be conveniently set at zero before the beginning of the balloting, one of the gears—in this instance the one on the shaft D—is arranged to slide longitudinally of the said shaft, being for this purpose provided with a slotted hub, within which slot the set-screw d is inserted, so that it may be shifted out of gear with the adjoining gear E', thus releasing the remaining gears of the train from the ratchet mechanism and allowing them to be rotated in either direction. For the purpose of thus rotating said gears E' and E<sup>3</sup> the shaft D' is extended through the plate C' and provided on its outer end with a milled thumb-nut d<sup>2</sup>. As a convenient means of thus shifting the gear E, I have provided a shipping-lever K, having at one end a fork or yoke k, engaging an annular groove formed in the hub of the gear E and pivoted upon the frame-plate C, as shown at k', together with an actuating-rod k<sup>2</sup>, which is secured to the opposite end of said lever and extends approximately at right angles therefrom through the plate C', said rod being provided at its outer end with a thumb-piece or button k<sup>3</sup>, and being surrounded by a coiled spring k<sup>4</sup>, interposed between the plate C' and a shoulder on said rod in such manner as to normally hold the gear E in mesh with the adjoining members of the train.

In order that the register may be rendered positively inoperative after the voting at an election has been completed until after the returns of election have been finally made, the operating-rod I is made in two parts or sections separable at a point within the casting conveniently by having the outer section threaded into a socket formed in the other, so that said outer end may be unscrewed and removed. Means for preventing its reinser-

tion after having been once removed are provided as follows: Pivoted against the inner face of the top wall of the box is a plate L, (shown in dotted lines in Fig. 5,) so arranged as to be automatically rotated by a spring l, secured on said plate into a position to close said rod-aperture l' when the rod has been removed, the end of said plate L being in this position supported by a rib or cleat l<sup>2</sup>, secured on the adjacent side wall of the casing beneath the same. In order that this plate may be automatically locked in position to close the aperture, it has its outer end or that end remote from its pivot twisted slightly out of a flat plane in such manner that its forward edge, referring to its direction of rotation, shall press against the inner face of the top wall, while its rear edge will ride upon the cleat l<sup>2</sup>. Said cleat is provided with a notch or recess l<sup>3</sup>, within which the rear edge of the plate L is adapted to drop and rest when it has reached its most advanced position, in which latter position it is prevented from further movement by striking against a stop formed on the opposite end of said cleat. A suitable lip or turned-down portion l<sup>4</sup> is provided on the rear edge of the plate L, by means of which when access is had to the interior of the register it may be lifted out of the notch l<sup>3</sup> and drawn back to permit the reinsertion of the rod l.

Inasmuch as it is desirable, if not necessary, that the dials of the register should be concealed from inspection during the progress of the balloting, a plate M, having the general form of an inverted T, one of the arms thereof being slightly longer than the other, as shown in Fig. 1, is interposed between said dials and the inner face of the casing, said plate being conveniently mounted so as to slide into and out of register with the dial-apertures by means of two screws or rivets inserted through a slot m', formed vertically in said plate and extending into the front wall of the casing, as shown in Fig. 1. That part of the plate M having the slot m' is extended upward through a vertical aperture formed through the top of the box in the plane of the inner face of its front side and is transversely pierced by an aperture adapted to receive a seal wire or strand when said plate is in its upward position or in that position in which the dial-apertures are closed thereby. When it is desired to inspect the dials, the seal is broken and the plate M moved or allowed to drop, so as to expose the faces of the dials.

As a means of identifying each register with the candidate whom it represents, one or more card-holders N, having glass-covered faces are suitably secured to the top of the register, such holders being designed to contain the candidate's name, political party, office for which he is a candidate, and other desirable data. These card-holders are shown as made in the form of metal frames, so arranged as to be accessible for the insertion or

removal of the card only by removal of the holder from the box, the glass face (which is larger than the inner opening of the frame) being inserted within the frame from the back, the card next placed with its face to the glass, and the frame then securely attached to the register. As a convenient means of securing the holder to the box in such manner that it can be removed by access to the interior of the register only, a short lug or bolt m<sup>2</sup> is provided at each of its ends, which lug or bolt is adapted to fit within a corresponding aperture formed through the top of the box. Said lugs are long enough to extend a short distance within the box and are transversely slotted on their proximate sides adjacent to the inner face of said top wall. Pivoted to the inner side of said top at a point midway between the lugs is a flat strip or bar, preferably of spring steel, of proper length to fit within the slots m<sup>3</sup> m<sup>3</sup> at each end when so turned as to rest on a line between them. Preferably this spring-strip will be slightly curved flatwise with its convex side against the inner face of the box, so that when its ends are forced back and turned within the slots m<sup>3</sup> m<sup>3</sup> it will hold the card-receptacle closely against the top of the box.

From the foregoing description it will be seen that each register is complete in itself and that the registers composing a set for an election may be arranged or grouped in any desired manner, but as an additional precautionary means for preventing fraudulent voting, other than that afforded by the alarm device and the retarding mechanism provided for each register, said registers are herein shown as arranged in a booth having inclosed sides and back and subdivided into compartments, each compartment being adapted to contain a register for each of the candidates for any one office. These compartments are herein shown as extending from front to back of the booth and of a width sufficient to hold a single row of registers. Each compartment is also provided with a lid hinged at its rear margin. In order that the officials in charge of the election may see which compartment is open, or that not more than one compartment at a time is open, each of the lids thereof is provided on its inner face, adjacent to its forward end, with an identification-mark—such as a number, letter, or the like—of sufficient size to be plainly distinguishable at some distance. Preferably, also, the names, political parties, and office for which the candidates comprised in a single compartment are running, will be posted on the inner face of said lid, for the more convenient inspection of the voter.

It will be obvious that various modifications may be made in the details of my invention without departing from the spirit thereof. I do not therefore desire to be limited to precise details. It will be further obvious that I have devised a simple and efficient apparatus for securing the desired re-

sults, and that by having one or more extra registers for use in case of accident to any one comprised in the regular set, a substitution of a perfect one for the one that is disabled may be accomplished without delay or trouble and the election proceeded with as before; a result not heretofore attained as far as I am aware.

I claim as my invention—

- 10 1. A voting register and its casing, comprising a train of registering or counting gears, a ratchet wheel operatively connected with said train, an operating rod or lever for actuating said ratchet wheel, said operating rod extending through an aperture in the register casing and consisting of two sections separable at a point within the casing, and a locking closure for said aperture, comprising a spring actuated plate pivoted on the inner 15 face of the casing, an inner support for said plate with which the free end thereof engages when in closed position, said closure being so arranged as to be accessible for unlocking from the interior only, substantially as set forth.
- 20 2. The combination with a register or counting device, of an operating member, mechanism actuated by said operating member acting to render the registering mechanism inoperative for a succeeding operation until said operating member has returned to its normal position, and a retarding device acting on said operating member to delay its return for a limited time to its normal position, 25 substantially as set forth.
- 30 3. The combination with a register or counting device, of an operating member, mechanism actuated by said operating member acting to render the registering mechanism inoperative for a succeeding operation until said operating member has returned to its normal position, and a dash pot acting on said operating member to delay its return for a limited time to its normal position, substantially as set forth.
- 35 4. The combination with a voting register and its operating rod, of mechanism actuated by said operating rod acting to render the registering mechanism inoperative for a suc-

ceeding operation until said operating rod 5 has returned to its normal position, and an air dash pot acting directly upon said operating rod to delay its return to its normal position, substantially as set forth.

5. The combination with a locking receptacle, of a card holder secured to its outer surface by means of transversely slotted lugs extending through the wall of said receptacle, and a bar or strip pivoted on the inner wall of the receptacle between and arranged to engage said slotted lugs within the receptacle, substantially as described.

6. The combination with a register comprising a train of registering gears or counters, a ratchet wheel operatively connected therewith, an operating rod acting on said ratchet wheel, an alarm device arranged to indicate each operation of the register, a casing provided with apertures arranged opposite the registering gears, said casing being provided with a lid or cover protected by a seal, and with a shifting plate for closing said apertures, also protected with a seal, substantially as described.

7. The combination of a voting booth having inclosed sides and back and an open front, a plurality of register receptacles within said booth, each provided with an independent cover constituting an indicator when open and each receptacle identified with a single one of the different offices to be voted for, a separate independent register for each candidate, all of the registers of candidates for any one office being arranged within the receptacle identified with that office, and an alarm actuated by the operation of each register, whereby the voter must open a register receptacle for each office in order to vote therefor, and will sound an alarm each time he votes, substantially as set forth.

In testimony that I claim the foregoing as my invention I affix my signature in presence of two witnesses.

CHARLES A. STITZER.

Witnesses:

ALBERT H. GRAVES,  
HENRY H. CARTER.