No. 614,031. Patented Nov. 8, 1898.

A. SNOECK.

VOTING MACHINE.

(Application filed Oct. 26, 1896.)

(No Model.) 5 Sheets—Sheet 1.

Fig. 1.

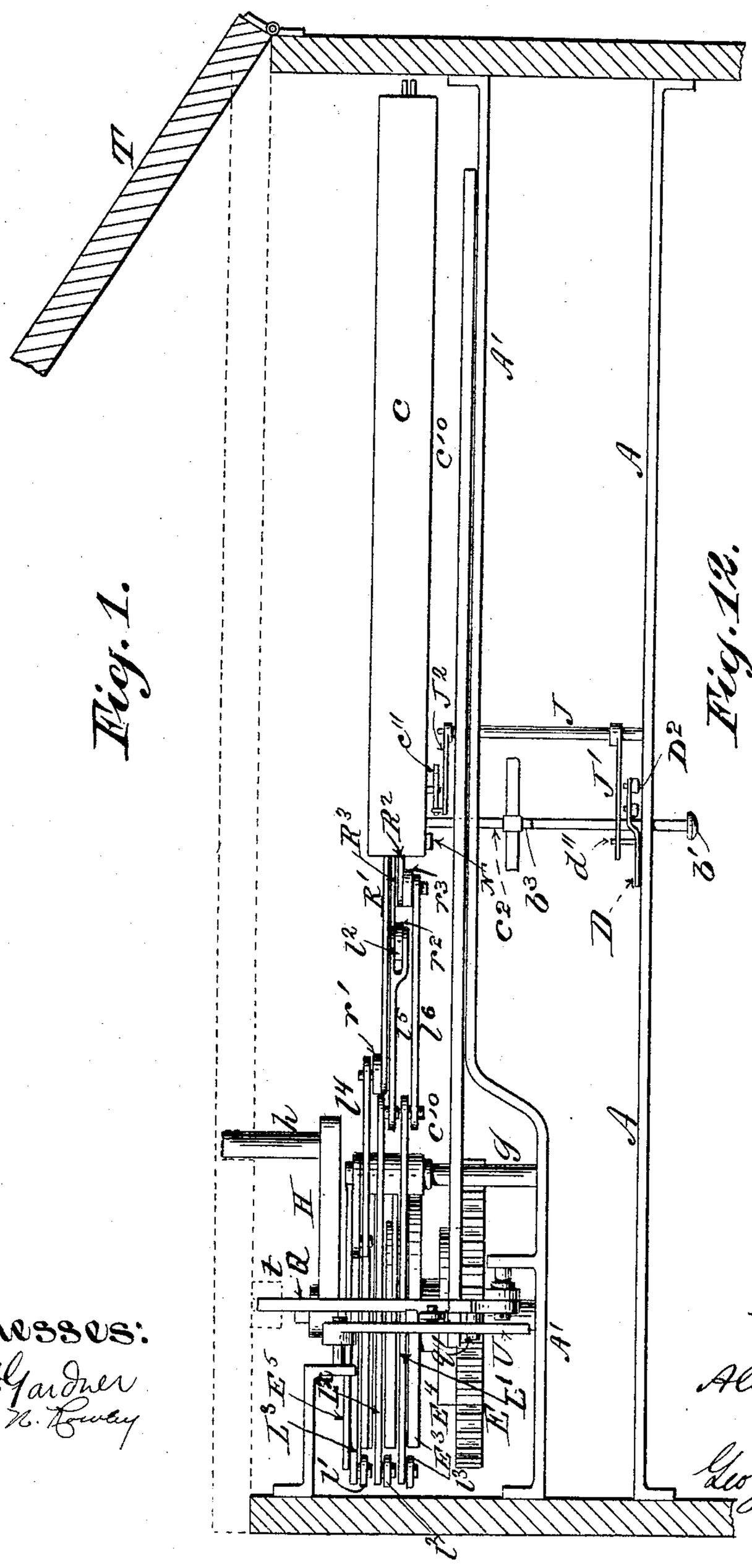
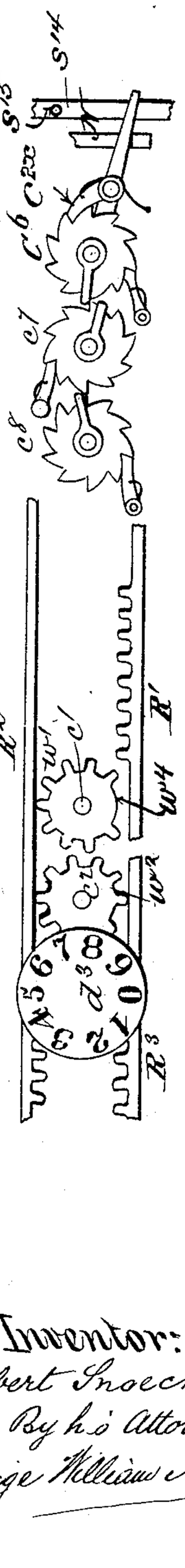


Fig. 12.



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No. 614,031. Patented Nov. 8, 1898.

A. SNOECK.

VOTING MACHINE.

(Application filed Oct. 26, 1896.)

(No Model.) 5 Sheets—Sheet 2.

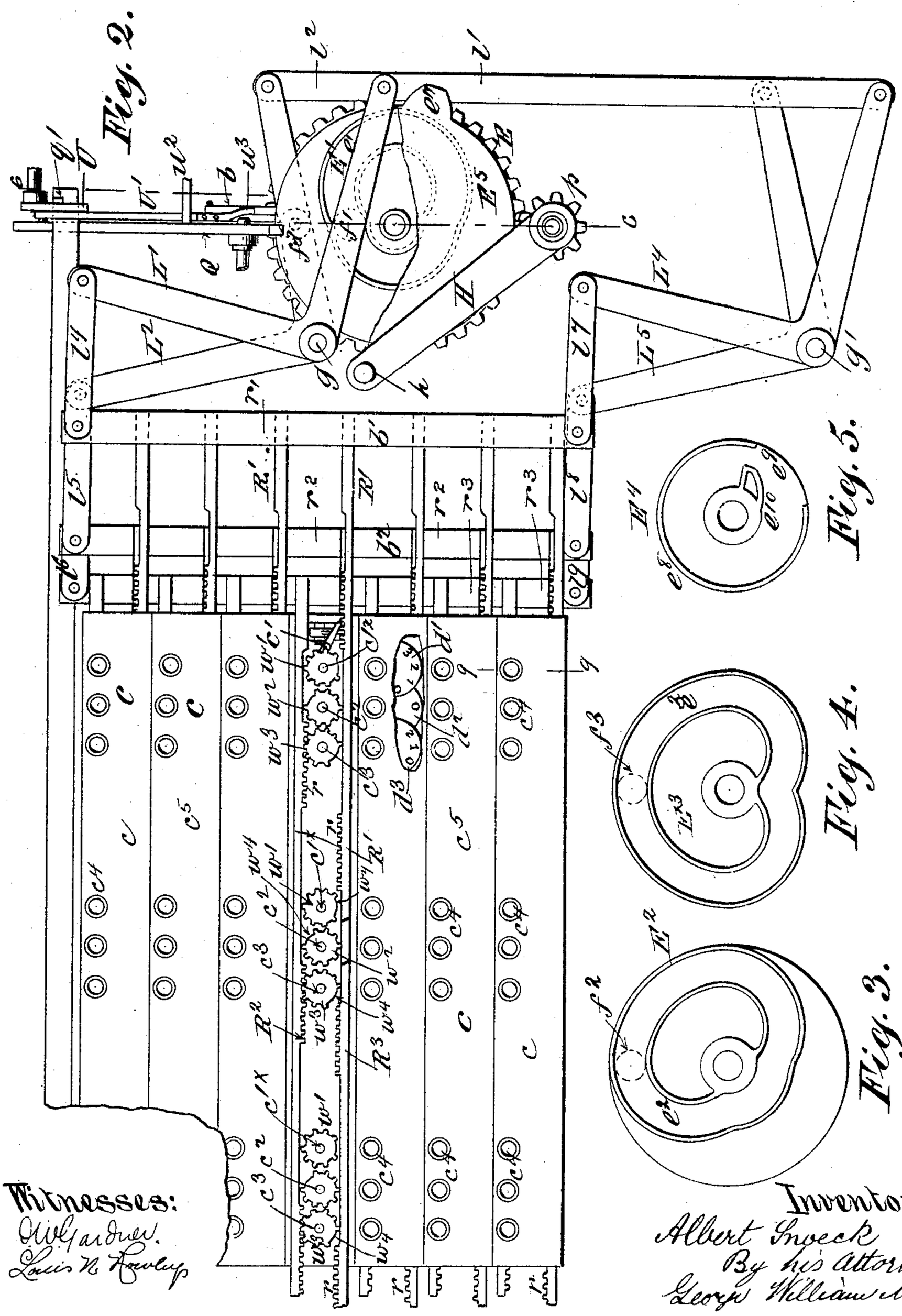

Fig. 2.

Fig. 5.

Fig. 4.

Fig. 3.

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VOTING MACHINE.

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(No Model.) 5 Sheets—Sheet 3.

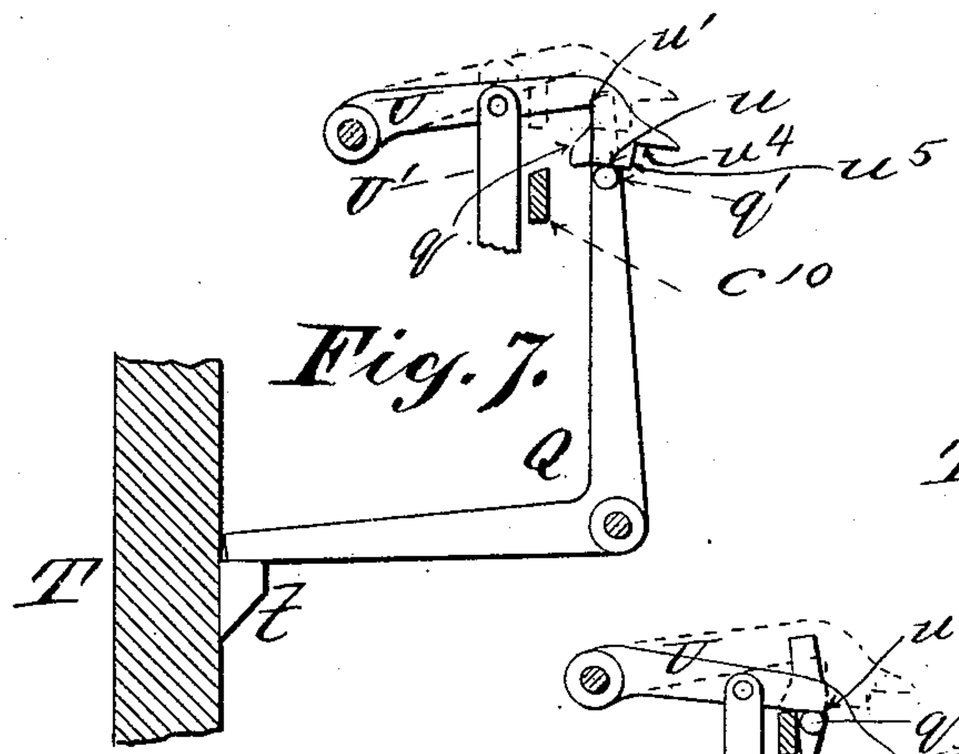

Fig. 7.

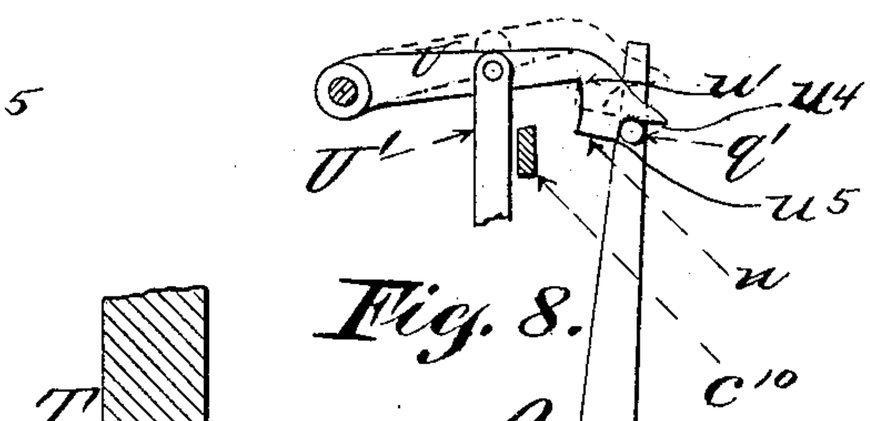

Fig. 8.

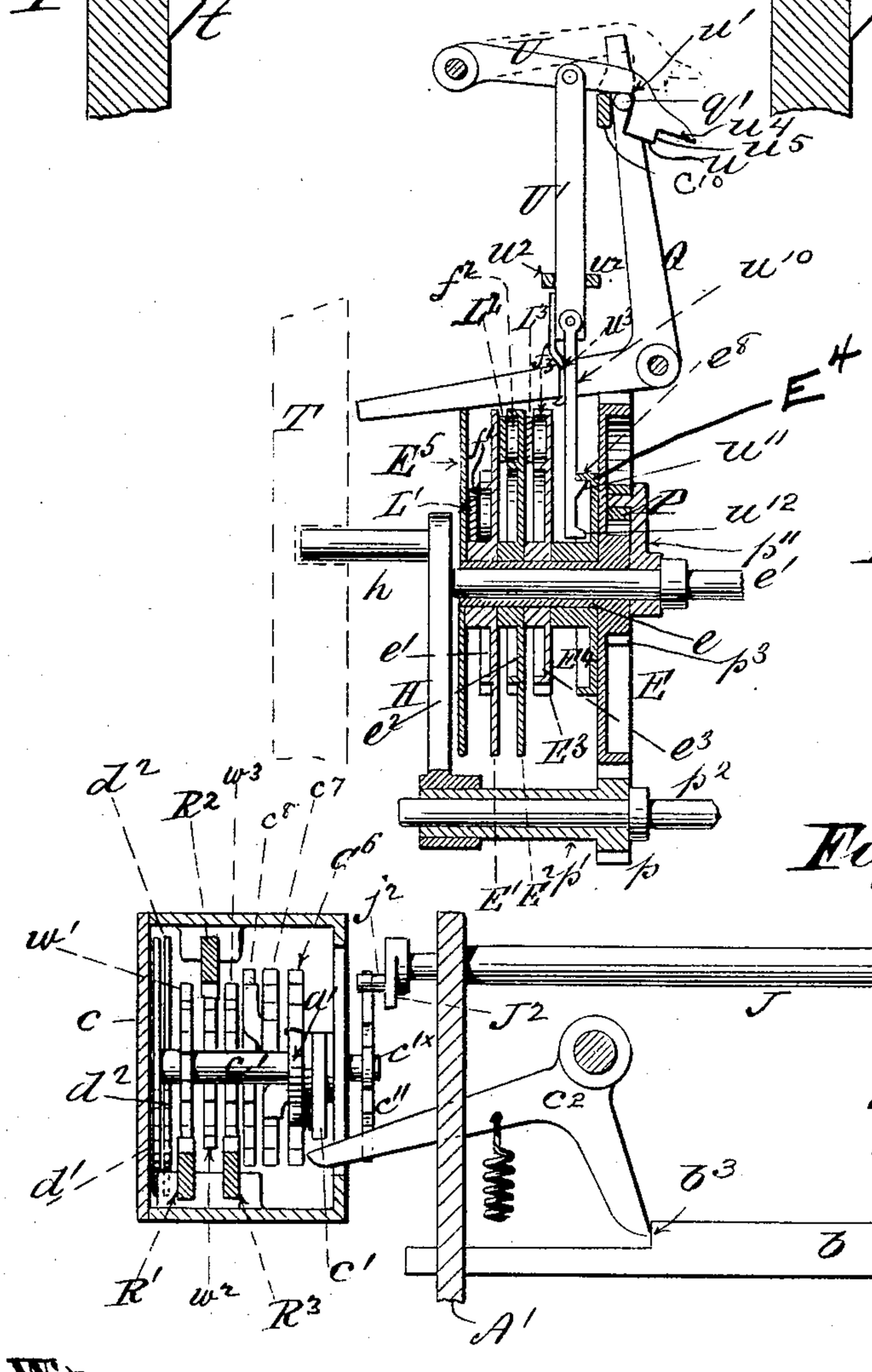

Fig. 6.

Fig. 9.

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VOTING MACHINE.

(Application filed Oct. 26, 1896.)

(No Model.) 5 Sheets—Sheet 4.

Fig. 10.

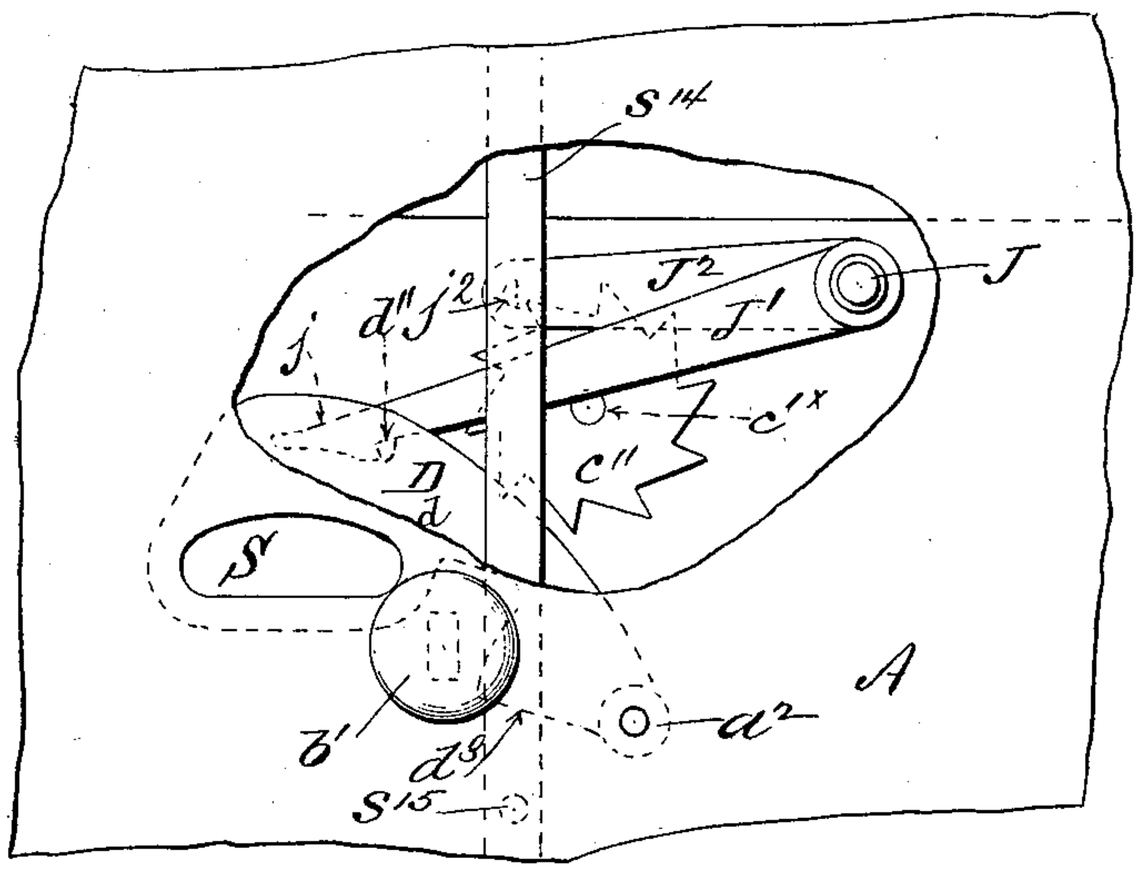
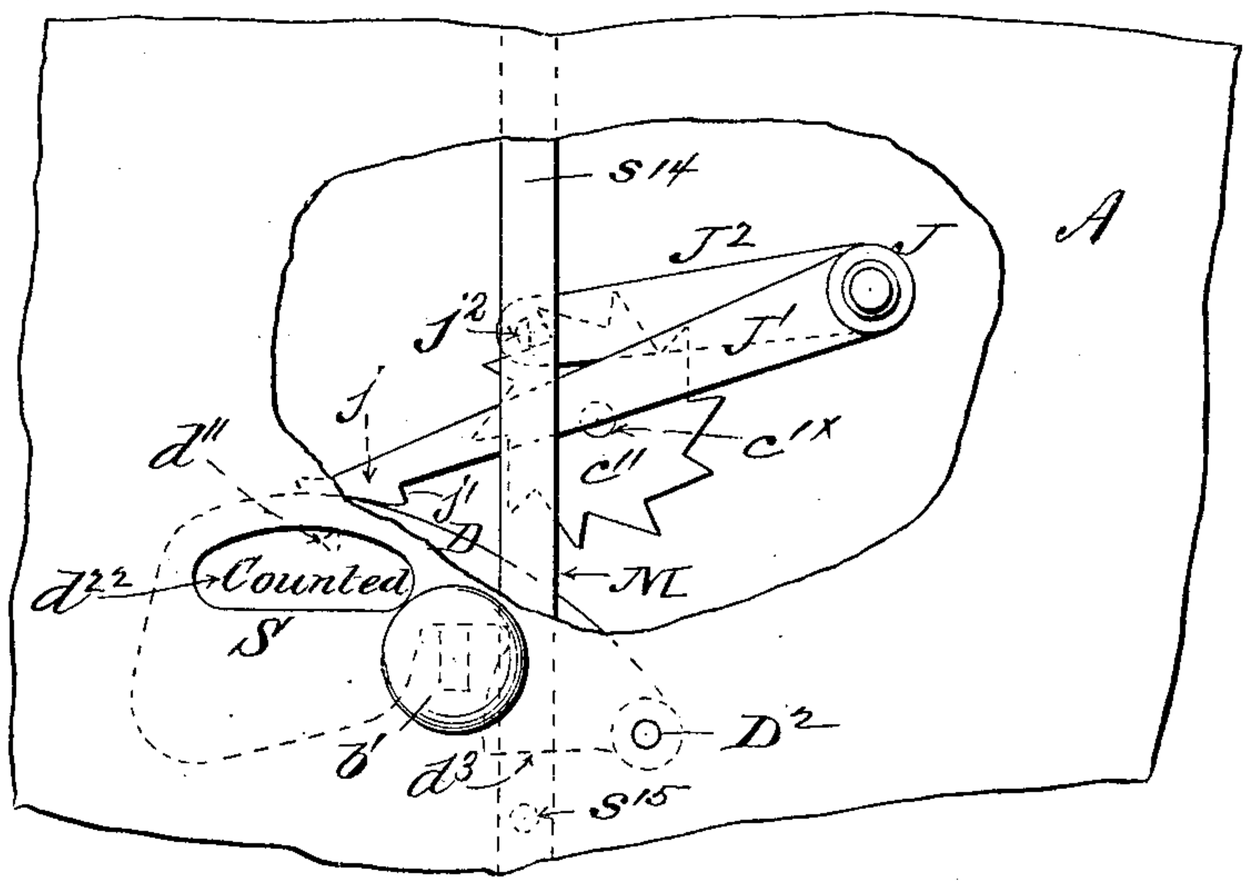


Fig. 11.



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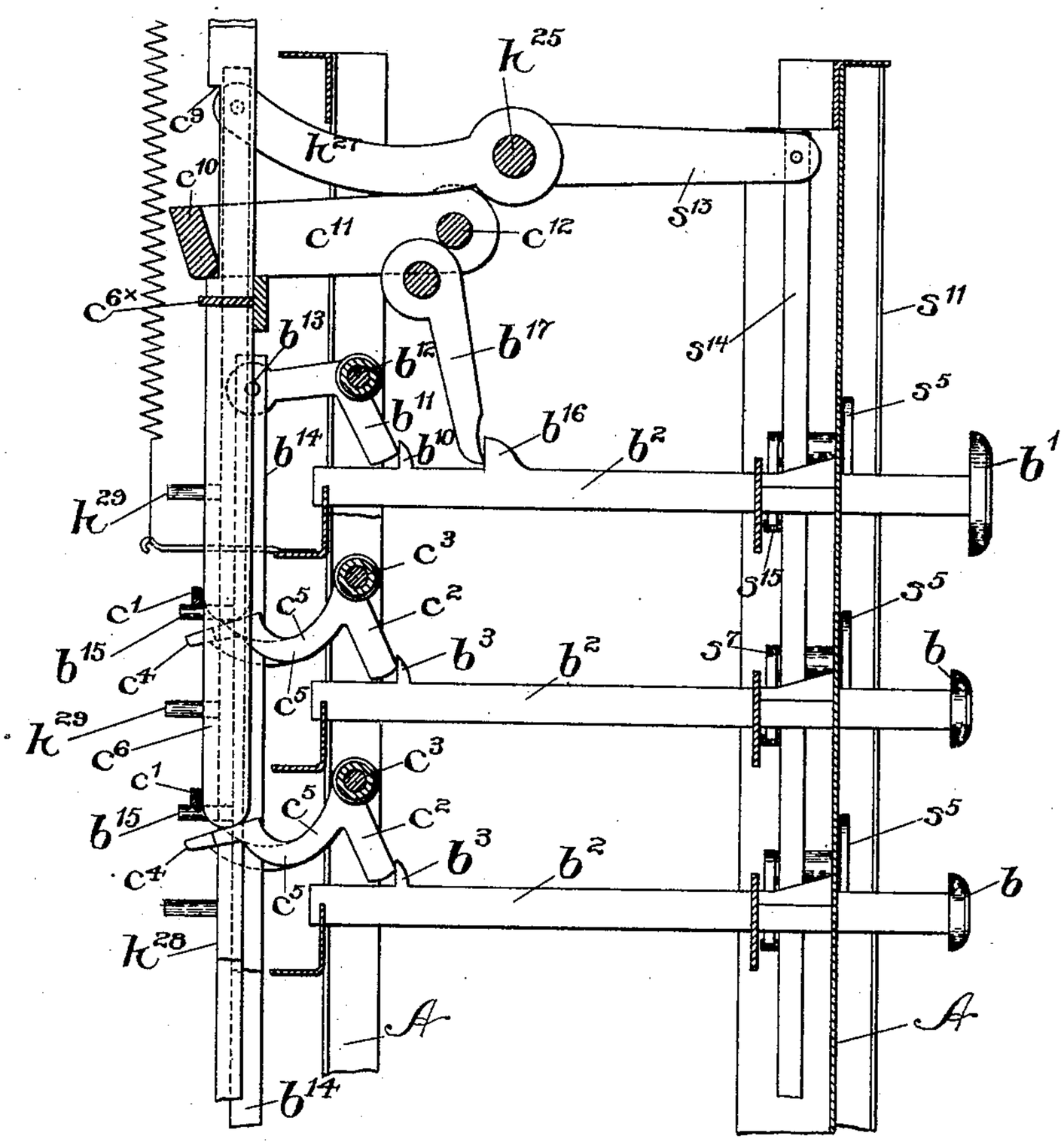
VOTING MACHINE.

(Application filed Oct. 26, 1896.)

(No Model.) 5 Sheets—Sheet 5.

Fig. 13.



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UNITED STATES PATENT OFFICE.

ALBERT SNOECK, OF NEW YORK, N. Y.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 614,031, dated November 8, 1898.

Application filed October 26, 1896. Serial No. 610,065. (No model.)

To all whom it may concern:

Be it known that I, ALBERT SNOECK, a subject of the King of Belgium, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My invention relates to the class of voting-machines set forth in my United States Patents, dated August 9, 1898, Nos. 608,923 and 608,922, in which individual counters are provided for each candidate, operated by registering-keys designated by the name of the candidate.

In order to render mistake or fraud practically impossible, it is essential that all the counters be positively set at zero before the actual voting begins. Heretofore no adequate or positive protection has been afforded against carelessness, accident, or fraud in the setting of the counters, and, as a matter of fact, experience has demonstrated not only the possibility of error, but also that it has actually occurred. It is obvious that error arising from such cause cannot be corrected even if discovered, and a distinguishing feature of my present invention is the novel positive means to insure the setting of all the counters to zero before the apparatus can be used for voting purposes. Another danger attendant upon the use of voting-machines as heretofore constructed is the possibility of their becoming deranged and failing to register the action of the keys without such failure being detected even when the latter are provided with visual indicators, as in my Patent No. 608,922, hereinbefore referred to.

One of the objects of my present invention is to obviate this difficulty, which I accomplish by actuating the visual indicators through the medium of the counters themselves, so that each visual indicator is locked and cannot act until the vote has been registered by the counter. Thus if the counting mechanism or actuating parts become deranged the fact may be readily detected, since the failure is announced automatically and visually.

In the accompanying drawings I show mechanism adapted to carry out my improvements practically, although I do not confine myself to the construction and arrangement of parts shown, since various modifications may be made therein without departing from the spirit and intent of my invention.

Figure 1 is a horizontal section of the rear upper portion of a voting-booth, showing a plan of mechanism embodying the essential features of my invention. Fig. 2 is a rear elevation of the parts shown in Fig. 1, portions being omitted or broken away. Figs. 3, 4, and 5 are detail views of cams used in resetting the counters. Fig. 6 is a section upon plane of line 6 6, Fig. 2. Figs. 7 and 8 show different positions of the locking-levers. Fig. 9 is a sectional elevation, on an enlarged scale, taken upon plane of line 9 9, Fig. 2. Figs. 10 and 11 are elevations of a key and indicating mechanism, the front frame being broken away; Fig. 12, a view showing, upon an enlarged scale, details of the counting mechanism; and Fig. 13, a sectional detail illustrating one manner of actuating the counters by the keys.

I have herein shown and described my invention as adapted to the form of voting-machine set forth in my Patent No. 608,922, dated August 9, 1898, to which reference may be had, although my improvements are not limited to this form of machine.

The front frame A and rear frame A′, which support the voting, registering, and indicating mechanisms, of suitable or desired construction, may be secured to and between the walls of a usual booth.

The mechanisms above referred to as of usual or suitable construction are herein shown as like the corresponding mechanisms shown in my said Patent No. 608,922, I having herein shown the registering and straight-ticket keys $b\,b'$ arranged to act upon the bell-crank levers c^2 and b^{11}, the levers c^2 having arms c^5, which act upon and lift the separators c^6, and with other arms c^4, which act upon and lift the counter-actuators c' of the counters c. These, with the gravity-bar c^{10}, the resetting-lever h^{27}, and the resetting-bar h^{28}, provided with pins h^{29} to engage the counter-actuators and their connected parts, are like the correspondingly-lettered parts in the drawing of

my said Patent No. 608,922, to which reference may be had for a full description of the construction and operation thereof.

It is necessary herein to state simply that pushing in of the keys referred to acts through the bell-crank levers to raise the counter-actuators, one for each inward movement of a key, thereby to count the votes upon the counters, as will be hereinafter referred to, after which the parts are returned to their original positions by operation of the resetting-lever and its connected parts.

Adjoining the name of each candidate I provide an opening or sight S in the front frame A of the machine, through which an indicator is revealed after the voter has pressed inward the key K, as in my prior patent, No. 608,922, hereinbefore referred to; but in the present case I prevent the dropping or exposure of the indicator until the counting mechanism *c* has registered the vote.

The indicator drop-plate D is pivotally supported, as at D^2, on the rear side of the front plate A or other stationary part of the machine and bears the word "Counted," "Registered," or any other sign or mark the exposure of which through the sight S will indicate to the voter that his vote for that particular candidate has been registered. A rock-shaft J is supported between the front plate A and back plate A′ and is provided with two rigid laterally-projecting arms or levers J′ J^2. The free end of one of these arms J′ is in the form of a latch *j*, the shoulder of which, *j′*, engages with the stud or arm *d″*, projecting laterally from the back of the drop-plate D, when the latter is raised, as in Fig. 10, while the free end of the other arm J^2 carries a pin j^2, which projects into the pathway of the teeth of the ratchet-wheel *c″*, mounted on the units-shaft $c'^{\times}$ of the couuter provided for the registering of votes for the particular candidate whose name appears adjacent to the sight-opening S.

The ratchet-wheel *c″* is formed with ten teeth, and consequently is rotated one-tenth or one tooth each time the register-wheel c^6 is forwarded by the pawl *a′* upon the actuating-lever *c′*.

When the key *b* is pressed inward, its shoulder b^3 acts upon one arm of a rock-lever c^2, pivotally supported on a stationary part of the apparatus, causing the other arm of the rock-lever to elevate the outer end of the counter-actuating lever *c′*. The partial rotation of the ratchet *c″*, through the medium of the units-wheel c^6 and shaft $c'^{\times}$, causes the tooth of said ratchet-wheel *c″*, which passes underneath the pin j^2, to slightly raise the latter, thereby rocking the arm J^2, shaft J, and latch-arm J′ sufficiently to release the stud *d″* on the drop-plate D, when the latter will fall until it rests upon the shank of the key *b*, (or any other suitable stop,) thereby bringing the word or signal d^{22} opposite the sight-opening S.

After the key *b* is released it is returned to its normal position, as heretofore, by a spring acting upon the rock-lever c^2 or by equivalent means. The actuating-lever *c′* is also returned to its normal position by the usual resetting mechanism, of which the lever h^{27}, vertical bar h^{28}, and pins h^{29} are herein shown, they operating as shown and described in my said Patent No. 608,922 referred to. I restore the indicator to its normal position in like manner by one of the pins s^{15} on a rod s^{14}, also connected with the resetting mechanism of the machine and by which all the indicators in a vertical row are reset, or by other suitable means by which the drop-plate D may be raised until its stud *d″* engages with the latch-shoulder on the rocker-arm J. Thus in the drawings the upward stroke of the resetting-rod s^{14} first brings the pin s^{15} into contact with the heel d^3 of the drop-plate D, raising its free end and causing its stud *d″* to encounter the latch and raise the rocker-arm J′ until its latch-shoulder j^2 falls over and engages with said stud *d″*, when the weight of the parts will maintain this engagement until the arm J′ is again raised through the medium of the shaft J and arm J^2, as will happen when the stud of the latter is again raised by a tooth of the ratchet-wheel *c″*, before described.

In the arrangement and construction of parts above described for operating the indicators the main object is to insure the immediate detection of any failure of a counter *c* to register a vote, a special feature of my present invention, which, in this respect, consists, essentially, in actuating the indicator through the medium of the counting mechanism to give visual evidence that each registration has been made. Heretofore, as the indicator has been controlled directly by the key, a failure of action on the part of one or more of the counters might not be detected until after the election, and then only if the discrepancy were such as to make it evident that the result was erroneous. It will thus be seen that by operating the indicators through the medium of the counters themselves I insure counting of a vote before the indicator can act and at the same time enable the voter to see at a glance the particular candidate or candidates for whom he has already voted, and thus prevent confusion or mistake, as set forth in my Patent No. 608,922.

Three counters *c c c* are shown as arranged horizontally in a common casing, several of which casings are shown, one with its cover removed to reveal the interior. Each counter is provided with three dials mounted on separate shafts $c'^{\times}$ c^2 c^3 for units, tens, and hundreds, respectively, the numbers appearing through openings c^4 c^4 c^4 in the covers c^5. The shafts $c'^{\times}$ c^2 c^3 also carry the wheels c^6 c^7 c^8, each formed with ten teeth, the first c^6 engaging with a pawl $c^{2\times}$ on the actuating-lever *c′* and having a lateral finger which engages with the second wheel c^7 at each rotation, the latter wheel c^7 recording its rotation

in like manner by moving the third wheel c^8 one-tenth of a revolution, and so on, in the usual way.

The novelty in the construction of the counting device *c* consists in the special mechanism for resetting the wheels and disks to zero positively and simultaneously. Each of the shafts $c'^{\times}$ c^2 c^3 is provided with an additional wheel, (w' w^2 w^3, respectively,) said wheels being preferably duplicates of the registering-wheels c^6 c^7 c^8, with the exception that each lacks one tooth. In other words, each of the resetting-wheels w' w^2 w^3 has nine teeth, occupying nine-tenths of the circumference, and a space w^4, corresponding to the other tenth of the periphery. The resetting-wheels w' w^2 w^3 are so placed upon the shafts $c'^{\times}$ c^2 c^3 that when their toothless spaces w^4 are directly opposed to their respective racks R′ R² R³ the zero-marks on the disks d' d^2 d^3 will appear through the sights c^4 c^4 c^4. When the disk-resetting wheels are in this position with relation to the racks, the teeth *r* on the latter fail to engage with the teeth of the wheels and the counters are set. When the racks R′ R² R³ are at rest in their normal positions, their teeth *r* are beyond the resetting-wheels, so that the said resetting-wheels are free to rotate with their shafts under the action of the registering-wheels c^6 c^7 c^8. Each rack is provided with nine or more teeth for each counter and is susceptible of reciprocatory movement. One of the lower racks R′ is partly broken away in Fig. 2 to show a portion of the rack R³, the dials d' d^2 d^3 and registering-wheels c^6 c^7 c^8 being also omitted from the row of counters in the casing from which the cover has been removed. In said Fig. 2 the racks R² R³ are shown in their normal positions, with their teeth *r* to the left of the registering-wheels w^2 w^3, and the rack R′ is shown as having completed its forward stroke, its teeth having passed beyond and to the right of the resetting-wheel w'. As has been before stated, when any peripheral space w^4 on any of the resetting-wheels w' w^2 w^3 is opposed to its particular rack such wheel cannot be engaged by the teeth on such rack, and consequently the latter can be freely moved in either direction without altering the position of the resetting-wheel or that of its dial, which is then exposing the zero-mark "0." Obviously, then, if any one of the disks d' d^2 d^3 does not expose the zero-mark "0" the peripheral space w^4 of its particular resetting-wheel is no longer opposed to the rack, and the reciprocation of the latter will cause its teeth to engage with the opposed teeth of the resetting-wheel and rotate said wheel until the peripheral space is opposed to the rack. Hence under the conditions shown in Fig. 2, in which the resetting-wheels w^2 (controlling the disks d^2, registering the tens) are in such position that the dials expose the number "1," if the rack R² is moved to the right its teeth *r* will engage the teeth of the resetting-wheels w^2 and their dials will display successively the figures "2" "3" "4," &c., until the zero-mark "0" is exposed. The resetting-wheels w^3 (for the hundreds) are shown in the position in which they would expose the number "9" on their respective dials, so that when the rack R³ is moved to the right the first tooth in each series *r* will engage with the opposed tooth of the resetting-wheel w^3, moving the wheel one-tenth of a revolution and bringing its peripheral space w^4 opposite the succeeding teeth and allowing them to pass, thus leaving the wheel w^3 and its dial d^3 set at zero. It will thus be seen that the movement of the racks R′ R² R³ successively to the right will necessarily bring the three dials d' d^2 d^3 of each counter in each horizontal series or row into position to display the zero-mark "0," no matter what the position of their respective resetting-wheels w' w^2 w^3 may have been prior to the movement of the said racks R′ R² R³ to the right. When the resetting of all the disks d' d^2 d^3 has thus been accomplished, the racks R′ R² R³ are returned to their normal positions, ready for the next resetting operation.

Obviously the racks R′ R² R³ may be operated to effect the resetting of the counters by hand, and I do not confine myself to any special means for reciprocating the said racks, although it is desirable not only that the counters of the same horizontal row but also that all the counters in the machine be reset simultaneously, and I therefore show and describe mechanism adapted to this purpose, although other mechanism may be substituted or modifications introduced with like result.

The toothed wheel E, provided with a long sleeve *e*, (shown in section in Fig. 6,) is mounted upon a stud *e'*, supported by the back frame of the machine. On this sleeve are mounted a peripheral cam-plate E⁵, the three grooved rock-cams E′ E² E³, and the lock-lever cam E⁴. A pinion *p*, engaging with the wheel E and provided with a long sleeve *p'*, is mounted on a stud p^2, supported by the frame of the machine, and on the opposite end of this pinion-sleeve *p'* is mounted the crank H, having the handle *h*. The pinion *p* is one-fourth the diameter of the wheel E, and consequently four revolutions of the crank H are required to obtain a complete rotation of the cams E′ E² E³, mounted upon the cam-sleeve *e* of the wheel E. Two stationary studs *g* *g'* form fulcrums for two sets of bell-crank levers L′ L² L³ and L⁴ L⁵ L⁶, said levers being duplicates of each other in size and shape. The horizontal arms of one set of bell-crank levers L′ L² L³ are pivotally connected by means of the vertical rods l' l^2 l^3, with the corresponding horizontal arms of the other set L⁴ L⁵ L⁶, and the coinciding upright arms at each set of crank-levers are in like manner pivotally connected by means of links l^4 l^5 l^6 and l^7 l^8 l^9 to the upright bars b' b^2 b^3. In the position in which the parts are shown in the drawings in Fig. 2 the bell-crank levers

L^2 L^3 coincide, as do also the levers L^5 L^6 below, while in Fig. 1 the bell-crank levers L' L^4 coincide, as do also the levers L^2 L^5 and the levers L^3 L^6.

The racks R' are all secured to the upright bar r', the racks R^2 to the bar r^2, and the racks R^3 to the bar r^3.

The upper bell-crank levers L' L^2 L^3 carry cam-rollers f' f^2 f^3, (indicated in Figs. 2, 3, and 4 by dotted circles,) which rest, respectively, in the cam-grooves e' e^2 e^3 in the cams E' E^2 E^3. In the drawings the parts are represented in the position assumed at the end of the first revolution of the crank H, the cams having made one-fourth of a revolution from their normal positions, Figs. 3, 4, and 5 showing the cams E^2 E^3 E^4 as timed with with relation to the cam E' and peripheral cam E^5 in Fig. 2. When the mechanism is in its normal position, the bell-crank levers L' L^2 L^3 and L^4 L^5 L^6 coincide relatively in position with each other, the cam-rollers f' f^2 f^3 on the levers L' L^2 L^3 resting in the portions of the cam-grooves e' e^2 e^3 farthest from the common axis of the cams. As before stated, the drawings show the relative positions of the parts at the end of the first rotation of the crank H and pinion p, the groove e', and cam E', having depressed the roller f', thereby rocking the levers L' and L^4 backward and drawing the bar r' and racks R' to the right and resetting the units-shafts c'. During the next revolution of the crank H the groove e^2 of the cam E^2 depresses the roller f^2, rocking the levers L^2 L^5, drawing the bar r^2 and racks R^2 to the right, and resetting the tens-shafts c^2, and during the third turn of the crank H the groove e^3 in the cam E^3 depresses the roller f^3, rocking the levers L^3 and L^6 and resetting the hundreds-shafts c^3. During the second and third revolution of the crank the roller f' has traveled in the inner concentric portion of its groove e' of the cam E', and the roller f^2 has in like manner traveled in the inner concentric portion of the groove e^2 of the cam E^2 during the third revolution of the crank, so that it will be seen that the levers L' and L^2, bars r' r^2, and racks R' R^2 have been at rest after the completion of their stroke to the right. It is to be noted that the shafts $c'^{\times}$ c^2 c^3 of the counters have thus been reset successively, the units-shafts $c'^{\times}$ first, the tens-shafts c^2 next, and the hundreds-shafts c^3 last. The dial-resetting wheels w' w^2 w^3 being now all turned with their peripheral spaces w^4 opposed to the racks R' R^2 R^3, it is obvious that the latter can be returned to their normal positions simultaneously without disturbing the counters, and this is accomplished during the fourth revolution of the crank H and pinion p, the cams E' E^2 E^3 simultaneously raising the rollers f' f^2 f^3, thereby rocking the levers L' L^2 L^3 and L^4 L^5 L^6 and returning the racks R' R^2 R^3 to their former positions with their several sets of resetting-teeth r to the left of the resetting-wheels w' w^2 w^3.

To prevent the possibility of backward movement of the parts, I provide the wheel E with a ratchet-wheel p^3, with which engages a pawl P, pivotally supported on the arm p'' on the stud e'.

Having thus set forth my method of insuring the registration of all votes before the visual indicators can perform the functions of resetting the counters by positive means and of resetting all the counters in a machine simultaneously, I will now proceed to describe my method of insuring by positive means the resetting of all the counters before voting is possible.

The main idea is to lock the voting mechanism while the rear door of the machine is open for the purpose of resetting and to prevent the closing of said door until all the counters have returned to zero, thus rendering fraud or mistake impossible.

In Figs. 1, 2, 6, 7, and 8 I have shown the locking mechanism as applied to the gravity-bar c^{10}—such, for example, as that described in my Patent No. 608,922, and which bears such relation to the registering-keys that the operation of any one of them raises it, the weight of the said gravity-bar after the release of the key returning the key to its normal position. Thus the locking of the gravity-bar c^{10} in its lowest position will lock every key in the machine. A bell-crank lever Q, pivotally supported upon a stationary part of the machine, is formed with catch q upon its upper arm, the outer end of the lower or horizontal arm resting upon a shoulder or support t upon the inner side of the back door T, as indicated in Fig. 7, when the machine is properly set and the door closed. While the rock-lever Q is in this position, the gravity-bar c^{10} is at liberty to move vertically; but as soon as the back door T is opened, removing the support t from the end of the lower arm of the rock-lever Q, said lever drops into the position shown in Fig. 6, carrying the catch q over the gravity-bar c^{10} and locking it.

To prevent the unlocking of the gravity-bar c^{10} except through the medium of the dial-resetting mechanism hereinbefore described or its equivalent, I employ a latch-lever U, pivotally supported on a stationary part of the machine. When in its normal position, this latch-lever U rests with its foot u on the pin q', projecting from the side of the upper arm of the lever Q, as shown in Fig. 7; but upon the opening of the back door T the movement of the bell-crank lever Q to bring its catch q into engagement with the gravity-bar c^{10} carries the pin q' beyond the foot u of the latch-lever U and the latter drops over the pin q', securing the latter in its angle u' and locking the bell-crank lever Q in the position shown in Fig. 6. Pivotally suspended upon the latch-lever U is the pitman U', passing between stationary guides u^2 u^2 and pivotally connected at its lower end to the bolt u^{10}, provided with locking-shoulder u^{11}.

A spring u^3, carried by the pitman U' or

otherwise supported, tends constantly to press the lower end of the bolt u^{10} into engagement with the locking-cam E^4. As the bolt u^{10} is connected with the latch-lever U, as above described, it follows that when the latter is in its normal position, with its foot u upon the pin q' on the lever Q, as in Fig. 7, the bolt u^{10} will be raised, with its locking-shoulder u^{11}, above the concentric rim e^8 of the locking-cam E^4.

When by the opening of the door T the latch U is allowed to drop, the bolt u^{10} also drops with it into the position shown in Fig. 6, the spring u^8 yielding sufficiently to allow the locking-shoulder u^{11} to slip over the concentric rim e^8 of the cam E^4 and then holding said shoulder u^{11} in engagement with said concentric rim e^8, thus positively locking all the latch-levers U, bell-crank levers Q, and gravity-bar c^{10} until released at the completion of the operation of the counter-resetting mechanism.

The "locking-cam" E^4, so called for convenience of description, consists of a disk having the concentric peripheral rim e^8 projecting inward for the greater part of its circumference, a space e^9 being left, however, adjoining the cam e^{10}, which latter projects from the hub of the disk.

During the three first revolutions of the crank H in resetting the counters, as hereinbefore described, and also during the first part of the fourth revolution of the crank, the concentric rim e^8 confines the locking-shoulder u^{11} on the bolt u^{10}; but when the cam e^{10} encounters the foot u^{12} of the bolt u^{10} the latter is raised, its locking-shoulder u^{11} passing through the space e^9 and out of engagement with the rim e^8. The elevation of the bolt u^{10} causes the pitman U' to raise the latch-lever U out of engagement with the pin q' on the bell-crank lever Q and into the position shown in dotted lines in Fig. 8. As soon as the pin q' on the bell-crank lever Q is thus released the cam e'' upon the disk E^5 encounters and raises the lower arm of the bell-crank lever Q, thereby raising the latter into the position shown in Fig. 8, by which time the cam e'' has left the foot u^{12} of the bolt u^{10}, allowing the latch-lever U to drop into engagement with the pin q', as shown in solid lines in Fig. 8, in which position its shoulders u^4 u^5 sustain the bell-crank lever Q. This is all accomplished before the fourth revolution of the crank H is completed. When the fourth revolution of the crank H is completed, the rear door T is closed, the handle h of the crank entering the socket t or other mechanical expedient adapted to prevent the movement of the crank until the door is again opened. The apparatus is now ready for the use of voters.

It will be seen that it will be impossible to close the back door T unless the handle h of the crank H is in position to engage with the socket t or its equivalent, and hence the apparatus cannot be rendered available for voting unless the counters have been set at zero. Thus while the rear door T might be closed at the end of the first, second, or third revolution of the crank H the gravity-bar would still remain locked and a voter entering the booth would be unable to operate any of the keys.

The completion of the fourth revolution of the crank H and the closing of the back door T leaves the crank-lever Q and latch-lever U in the positions shown in Fig. 8, heretofore explained, so that they would be unable to lock the gravity-bar at the next opening of the back door T were it not for the fact that the first movement of any of the keys in voting raises the gravity-bar c^{10} into the position shown in dotted lines in Fig. 8, thereby releasing the bell-crank lever Q and allowing it to drop into its normal position with its lower arm resting upon the stop or shoulder t upon the rear door T, while the descent of the gravity-bar leaves the latch-lever U with its front u resting upon the pin q', as in Fig. 7, the parts being thus restored to their normal relation to each other.

In voting-machines in which the gravity-bar is not used the voting mechanism may be positively locked while the rear door is open by a slight modification of parts, any part of the mechanism capable of locking the whole machine being substituted for the gravity-bar—as, for instance, the resetting mechanism or the entrance-door of the booth.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a voting-machine, the combination with a vote-counting device, and with mechanism for actuating the same, of an indicating device independent of said counting device and operated by the latter to indicate visually each proper operation of both the actuating mechanism and the counting device.

2. In a voting-machine, the combination with a vote-counting device, and with mechanism for actuating the same, of an indicating device independent of said counting device and operated by the latter to indicate visually each proper operation of both the actuating mechanism and the counting device, and mechanism for resetting said indicator.

3. In a voting-machine, the combination with a counting device, and actuating mechanism for the same, of an indicator operated by said counting device to indicate each operative movement of the latter to register a vote, a resetting mechanism, and means operated thereby to return said indicator to its original position automatically at each operation of the said resetting mechanism.

4. In a voting-machine, the combination of a voting-key b, intermediate lever c^2, counting device c, provided with ratchet-wheel c'' on its units-shaft, rocker-arm J^2, rock-shaft J, latch-arm J', and pivoted drop-plate D, bearing a visual sign, the whole arranged and operating substantially in the manner and for the purpose described.

5. In a voting-machine, the combination of

a voting-key b, intermediate lever c^2, counting device provided with ratchet-wheel c'', on its units-shaft, rocker-arm J^2, rock-shaft J, latch-arm J', pivoted drop-plate D, bearing a visual sign, and the bar s^{14}, having pin s^{15}, for resetting the drop-plate, substantially in the manner and for the purpose described.

6. In a voting-machine, the combination with voting devices and counting devices operable thereby, and containing each a plurality of registering-wheels, the registering-wheels of each counting device being operated one by another, a single operating member, and means actuated thereby and engaging said registering-wheels independently and operating to return said wheels successively to their normal or zero positions on movement of said operating member.

7. In a voting-machine, the combination with voting devices and counting devices operable thereby, and containing each a plurality of registering-wheels, the registering-wheels of each counting device being operated one by another, an operating member, a plurality of cams connected therewith and moved thereby, and means connecting the said cams respectively with the said registering-wheels, whereby movement of said operating member operates through said cams and said means to return said wheels successively to their normal or zero positions.

8. In a voting-machine, the combination of a series of voting-keys and counting devices, mechanism for positively resetting said counting devices, means controlling access to the resetting mechanism for locking the said voting-keys, automatically, out of operation, during the operation of resetting said counters and means for releasing said locking mechanism automatically at the completion of the resetting operation.

9. In a voting-machine the combination with the voting and registering mechanism, of means for positively locking the voting mechanism before the counters can be reset, means for positively resetting the counters, and means for automatically releasing the voting mechanism when the counters are reset, substantially in the manner and for the purpose described.

10. In a voting-machine, the combination with a suitable inclosing case containing a compartment, of voting mechanism and a resetting mechanism inclosed within the said compartment, means for automatically locking the said voting mechanism by the act of opening said compartment, and means to effect automatic release of said locking means on operation of said resetting mechanism, substantially as described.

11. In a voting-machine, the combination with the voting and counting mechanisms, and a resetting mechanism normally locked against movement and inaccessible, of means to automatically release said resetting mechanism when the said resetting mechanism is made accessible, substantially as described.

12. In a voting-machine, the combination with voting mechanism and counting mechanism, with resetting mechanism for the said counting mechanism, of means to lock said resetting mechanism in such position only as will insure complete resetting of the counting mechanism, substantially as described.

13. In a voting-machine, the combination with voting, registering and resetting mechanism, of means for automatically locking the voting mechanism before the resetting mechanism can be operated, means for automatically releasing the voting mechanism at the completion of the operation of resetting the registering mechanism, and means for automatically resetting the said locking device for the voting mechanism by the first operation of the machine when used for voting, substantially in the manner and for the purpose described.

14. In a voting-machine, the combination with the voting and registering mechanism, of means for automatically locking the voting mechanism before the registering mechanism can be reset, means for releasing the voting mechanism after the registering mechanism is reset, and means for automatically resetting the said locking mechanism by the first operation of the machine when used for voting, substantially in the manner and for the purpose described.

15. In a voting-machine, a plurality of stationary counters, each comprising a plurality of registering dials or surfaces, with a reciprocating actuator for the same, registering dials or surfaces of each counter being actuated successively one by another, a plurality of vote-registering keys corresponding in number to the number of said counters and arranged respectively to operate the latter, and means independently engaging the respective registering dials or surfaces to restore the same to their normal or zero positions in resetting, substantially as described.

16. In a voting-machine, the combination with a plurality of counting devices having each a plurality of registering or counting dials or surfaces, vibrating actuators for the respective counting devices, voting devices connected with and to vibrate the respective actuators and thereby operate the counting devices, resetting-wheels for the respective registering dials or surfaces of the several counting devices, resetting-racks for the respective resetting-wheels, corresponding resetting-racks of the several devices being connected to move in unison to thereby cause simultaneous resetting of the corresponding dials or surfaces of all the counting devices, the resetting-racks of which are connected substantially as described.

17. In a voting-machine, the combination with a series of counters having resetting-wheels on their dial-shafts, of a series of resetting-racks, those for the corresponding shafts in the several counters being connected together so as to act in unison, and

mechanism for moving the sets of racks successively, the set of racks for the units-shaft first, the set for the tens-shaft next, and so on, substantially in the manner and for the purpose described.

18. In a voting-machine, the combination with a series of counters having resetting-wheels on their dial-shafts, of a series of resetting-racks, those for the corresponding shafts in the several counters being connected together so as to act in unison, and mechanism for moving the sets of racks successively, the set of racks for the units-shaft first, the set for the tens-shaft next, and so on, and for returning all the racks simultaneously to their normal positions, substantially in the manner and for the purpose described.

19. In a voting-machine, the combination of the counters *c*, having the dial-resetting wheels w', w^2, w^3, formed with the peripheral spaces w^4, the resetting-racks R′, R², R³, connected respectively to the bars r^2, r^3, the links l^4, l^5, l^6, l^7, l^8, l^9, the bell-crank levers L⁴, L⁵, L⁶, and the bell-crank levers L′, L², L³, carrying the cam-rollers f', f^2, f^3, and the cams E′, E², E³, the whole arranged and operating substantially in the manner and for the purpose described.

20. In a voting-machine, the combination with the counters and dial-resetting mechanism, and with the cams for actuating the same, of the gear-wheel E, pinion *p*, and crank H, arranged and operating substantially in the manner and for the purpose described.

21. In a voting-machine the combination of the counters and dial-resetting mechanism, the gear and cams for actuating the same, the crank H, *h*, and the door T, provided with means for engaging and locking the crank H, and dial-resetting mechanism, substantially in the manner and for the purpose described.

22. In a voting-machine, the combination with the counting and dial-resetting mechanism, of the locking-cam E⁴, bolt r', pitman U′, latch-lever U, bell-crank lever Q, gravity-bar c^{10}, and door T, adapted to support the bell-crank lever Q, substantially in the manner and for the purpose described.

ALBERT SNOECK.

Witnesses:
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D. W. GARDNER.