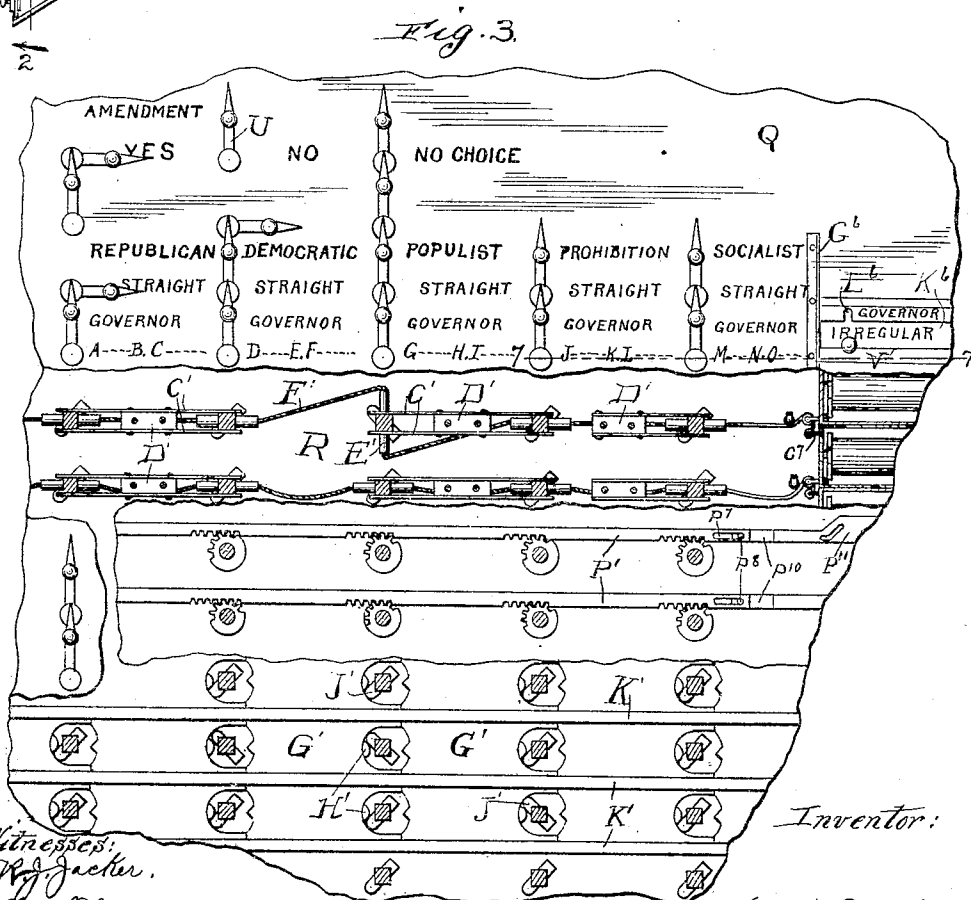
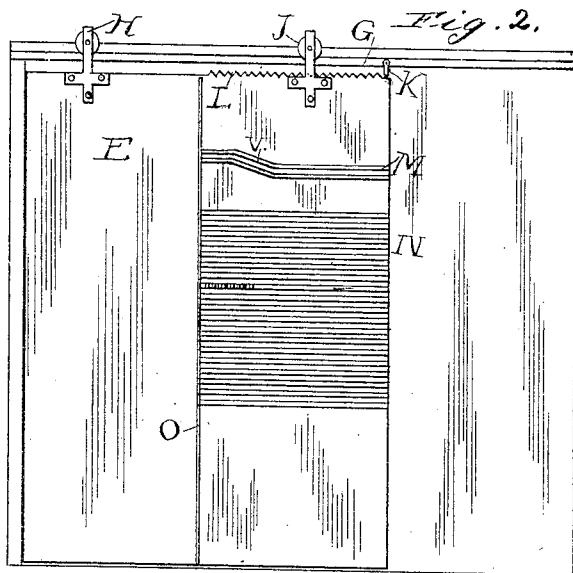
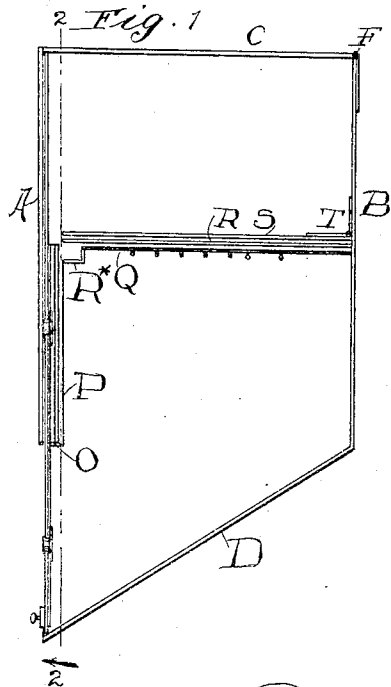


972,215.

J. H. McELROY.
VOTING MACHINE.
APPLICATION FILED JULY 27, 1899.

Patented Oct. 11, 1910.

4 SHEETS—SHEET 1.



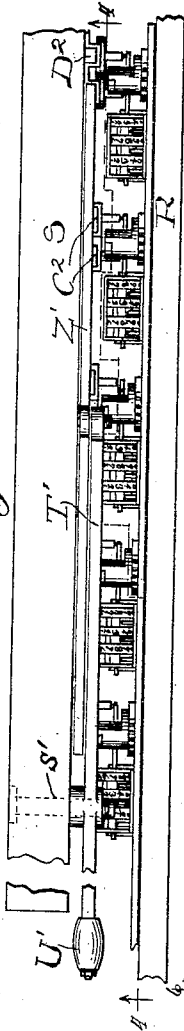
Witnesses:
R. J. Jacker.
Clarence Hummel

Inventor:
John Howard McElroy

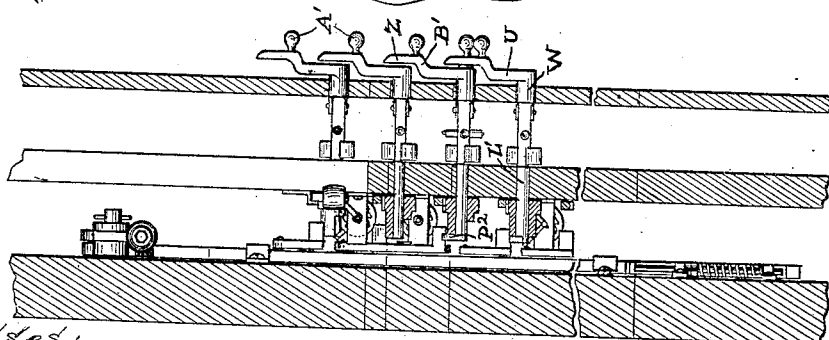
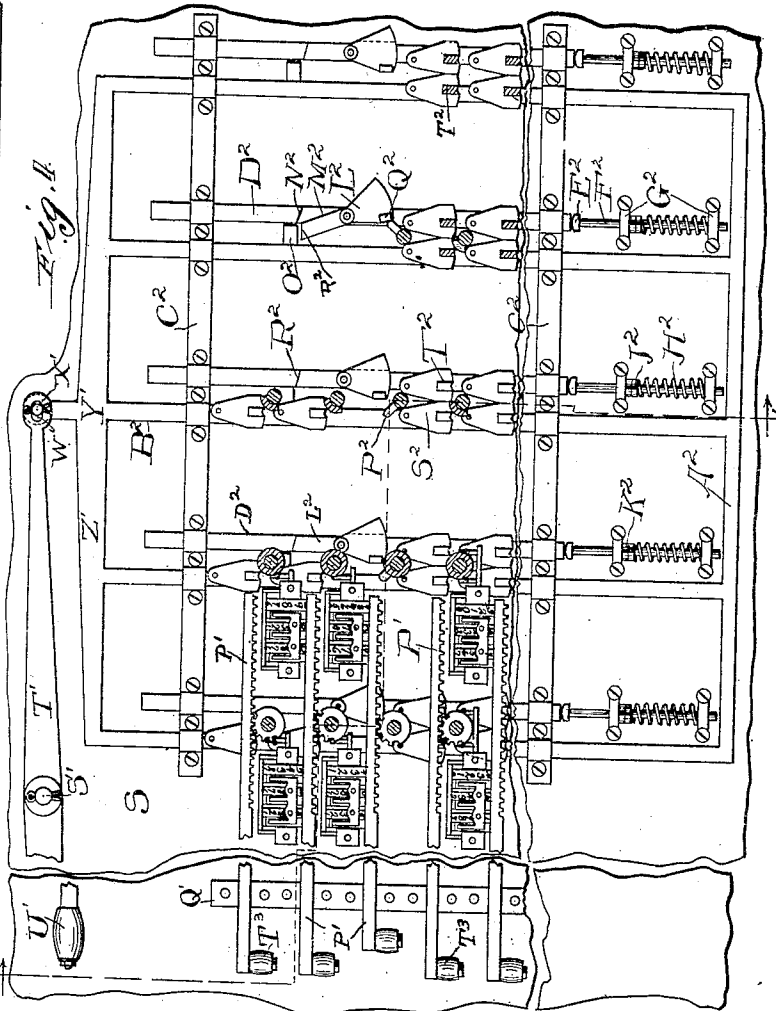
APPLICATION FILED JULY 27, 1899.

4 SHEETS—SHEET 2.

Fig. 5.



J. B. H.



Witnesses:
W. J. Jacker.
Orr Plummer

9. Oct.

Inventor:

John Howard McElroy.

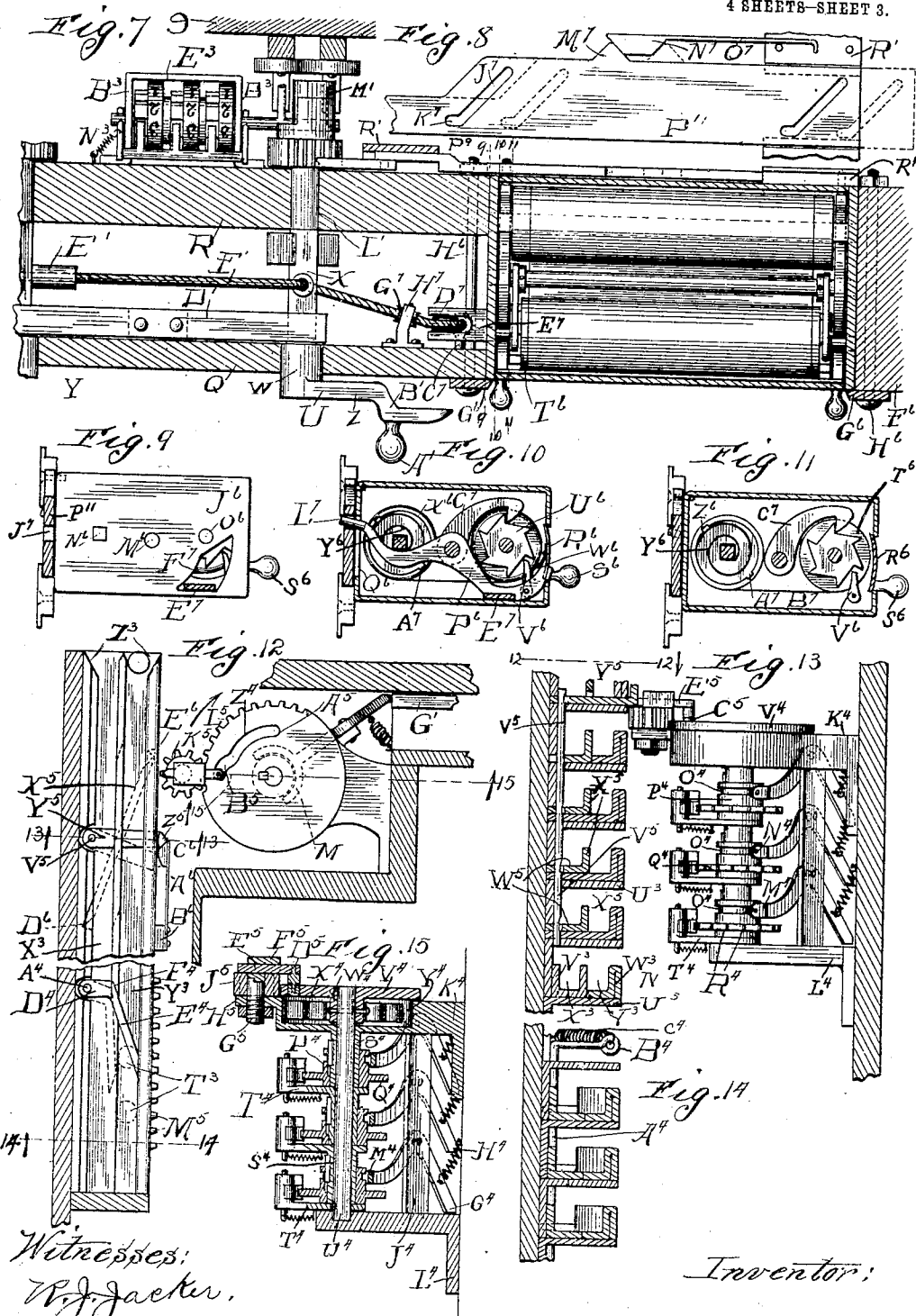
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4 SHEETS-SHEET 3.



Witnesses:
R. J. Jacker,
Chas. Plumtree

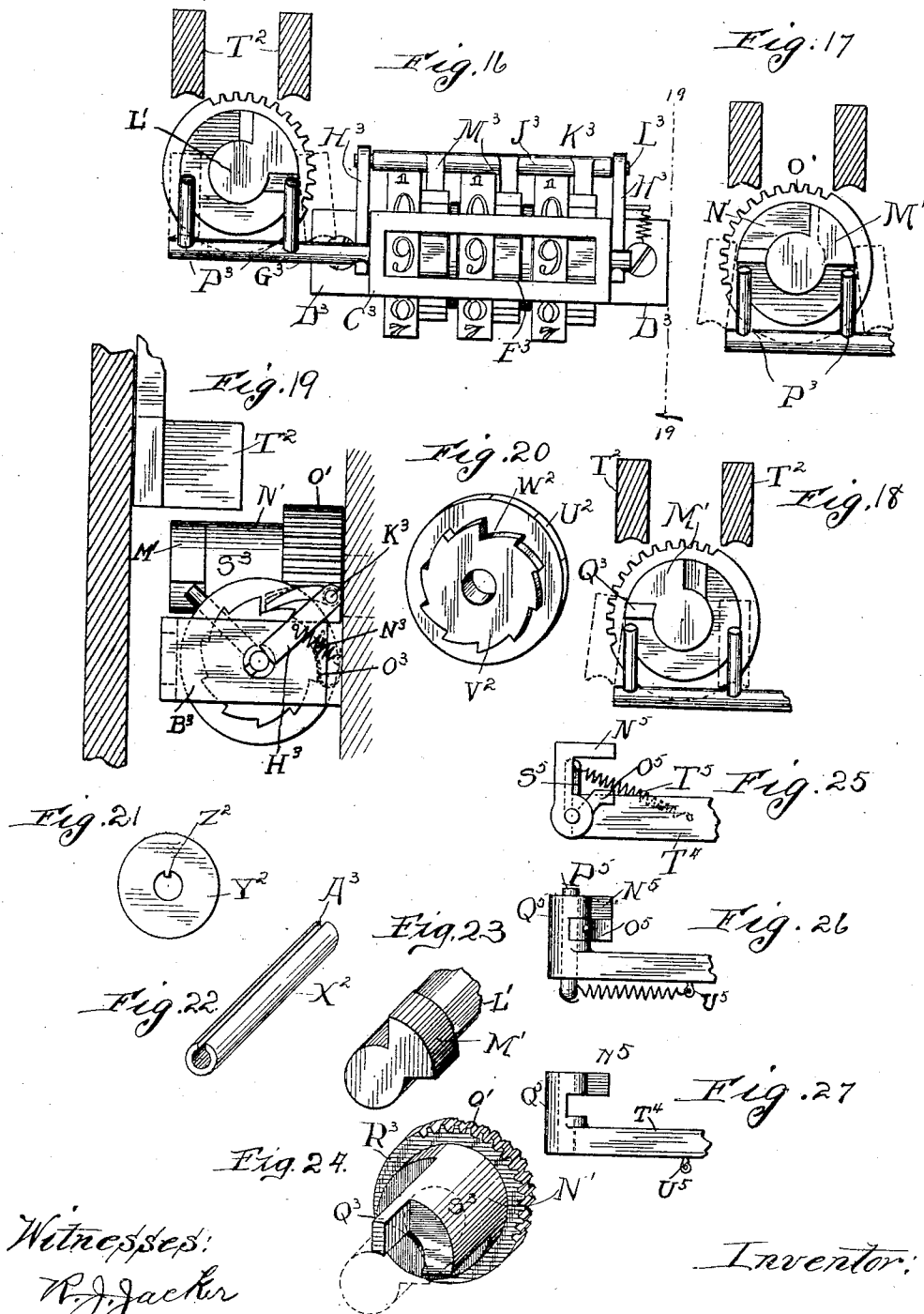
Inventor:
John Howard McElroy

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4 SHEETS—SHEET 4.



Witnesses:
W. J. Jacker

Chas. Pluntree

Inventor:

John Howard McElroy.

UNITED STATES PATENT OFFICE.

JOHN HOWARD McELROY, OF CHICAGO, ILLINOIS.

VOTING-MACHINE.

972,215.

Specification of Letters Patent.

Patented Oct. 11, 1910.

Application filed July 27, 1899. Serial No. 725,213.

To all whom it may concern:

Be it known that I, JOHN HOWARD McELROY, a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

Substantially this same form of mechanism, in a somewhat improved form is shown in my application No. 729,274, filed September 2, 1899, and I have made the last mentioned application generic to this one so far as this part of the invention is concerned, claiming therein such features as are common to both structures, and I have claimed in this application the specific features not shown in the other application.

One feature of my invention relates to a novel system of controlling the multi-candidate groups, the novelty consisting in an arrangement by which when more than the lawful number of keys in a multi-candidate group have been operated, the resetting mechanism will serve to unset all the keys in that multi-candidate group before the actuating mechanism can operate upon them, and thus the possibility of the voter casting his ballot for more than the lawful number of candidates in any multi-candidate group is prevented.

Another feature of my invention is concerned with a novel interlocking connection between the regular candidate keys and the irregular candidate mechanism of any office group, which permits the changing or correcting of the votes for a regular candidate as often as may be desired, but which, however, will not permit changes in irregular ballots, as such changes are deemed unnecessary and inadvisable, and could not well be made without making it possible to beat the machine by casting more ballots than the voter is entitled to.

My invention finally comprises certain details of construction, which will be set out in the claims.

Referring to the drawings, in which the same letters of reference are used to designate identical parts in all the figures, Figure 1 is a plan view of the booth with the machine therein; Fig. 2 is a side elevation of the booth in section on the line 2—2 of Fig. 1; Fig. 3 is a fragmentary elevation of the keyboard or ballot portion of the machine, portions of the machine being broken away in different planes to more clearly illustrate

the details thereof; Fig. 4 is a front elevation similar to Fig. 3, but with the front and middle plates removed, and the parts in section on the line 4—4 of Fig. 5; Fig. 5 is a plan view of the mechanism between the middle and rear plates shown in Fig. 4; Fig. 6 is a fragmentary section through the machine on the line 6—6 of Fig. 4; Fig. 7 is a fragmentary plan view, on a larger scale, in section on the line 7—7 of Fig. 3; Fig. 8 is a detached elevation of one end of one of the re-setting bars; Figs. 9, 10 and 11, are end elevations of the irregular balloting mechanism in section on the lines 9—9, 10—10, and 11—11, respectively, of Fig. 7; Fig. 12 is a plan view in section on the line 12—12 of Fig. 13, showing the relation of the multi-candidate controlling mechanism to the re-setting racks; Fig. 13 is a sectional view of the same mechanism on the line 13—13 of Fig. 12; Fig. 14 is a similar view on the line 14—14 of Fig. 12; Fig. 15 is a sectional view through the multi-candidate controlling mechanism proper on the line 15—15 of Fig. 12; Fig. 16 is a front elevation of one of the registers detached, and showing its relation to its cooperating parts or controlling mechanism when it is in position to be operated by the straight ticket mechanism; Fig. 17 is a similar view, but with the register omitted, and with its controlling mechanism in the position occupied by a scratched key in the straight ticket row; Fig. 18 is a view similar to Fig. 17, but showing the position of the controlling mechanism of the register of the candidate voted for outside of the party for which the straight ticket key had been operated; Fig. 19 is an end elevation of the register and controlling mechanism, as if on the line 19—19 of Fig. 16; Fig. 20 is a perspective view of one of the registering wheels and its attached ratchet; Fig. 21 is a side elevation of one of the washers interposed between the registering wheels; Fig. 22 is a perspective view of the sleeve upon which the registering wheels and washers were mounted; Fig. 23 is a perspective view of the inner end of the key shaft; Fig. 24 is a perspective view of the controlling sleeve; Fig. 25 is a plan view of the yielding escape-arm employed in the multi-candidate controlling mechanism; Fig. 26 is a side elevation of the same arm; and Fig. 27 is a similar view, but with the movable member omitted.

Referring first to Figs. 1 and 2, the booth

consists of the sides A and B, and the ends C and D, the end D being preferably arranged diagonally as shown will permit the requisite length being given to the sliding door E, without necessitating the use of so much floor space. The end C may be hinged as at F to permit of access to the rear side of the machine proper to inspect the registers. The door E is suspended upon the horizontal bar G by the arms H and the anti-friction rollers J, as is customary in the case of the doors to elevator wells, and freight cars. The bar G has pivoted thereon the hanging dog or pawl K which coöperates with the notches L formed on a portion of the top of the door E so as to compel the complete opening of the door after it has once been started, or the complete closing of the same, the dog K coöperating with the rack formed by the teeth L in the manner customary with this class of devices. The operating flanges M and the re-setting flanges N, to be subsequently described, are arranged on the rear half of the door, the two halves being separated by the flange or rib O placed upon the inner side of the door and serving to protect the flanges M and N. To prevent these flanges from being accessible to the voter and to prevent his possible endeavor to manipulate them to beat the machine, I preferably provide the wall or plate P which extends from the position of the flange O when the door is closed back to the front plate Q of the voting machine proper. The front plate Q is shown as formed with an angle therein as at R*, this space being necessary to accommodate the various multi-candidate controlling mechanisms which may be employed. A little distance in the rear of the front plate Q, which is a vertical plate extending across the width of the machine, is a middle plate R, which may be rigidly secured in place, while the rear plate S is preferably hinged at one side, as at T, so that when the end or door C is opened, the plate S can also be swung open to disclose the registers.

The keys U, as is customary, are arranged in vertical party columns and in horizontal office rows. In Fig. 3, I have shown the keys of the first horizontal row as devoted to some amendment which is to be submitted, and upon which the voter can vote yes, no, or no choice, the no choice being necessary in case these amendment keys should be interlocked with some of the party keys as provided for in the machine shown in my application No. 655,060, filed October 13, 1897. Similarly, the second row is devoted to some question to be voted upon, while the third row consists of the straight ticket keys for the various parties, the Republican, Democratic, Populist, Prohibition and Socialist parties being represented upon the ballot. The fourth row will be devoted

to the different party candidate registers for the same office, such as governor, and in addition to the keys of the parties previously mentioned, at the end of the row is placed the irregular balloting mechanism, which I designate generally by the letter V. The keys U, as best shown in Figs. 6 and 7, I preferably form with a small cap W, which fits over the end of the key shaft X so as to form a bearing for said shaft in the front plate Q, which has the cylindrical apertures Y therein to receive the said caps or thimbles. The keys U have the pointers Z, which may be provided with the knobs A', and these pointers Z are preferably offset as at B', so that another pointer can be employed without using up so much vertical space. The pointers normally stand in a vertical position, but when the key is operated, it is swung from the left over to the right through an angle of 90 degrees.

To insure the correct positioning of the keys in their normal and adjusted positions, I employ a simple mechanism consisting of a pair of flat leaf springs C', best shown in Fig. 3, and which are conveniently arranged to coöperate with two keys, being fastened at the top and bottom of the rectangular blocks D', which in turn are screwed or otherwise fastened to the rear side of the plate Q. The main body portion of the shaft X is, as best seen in Fig. 7, square in cross section, and when the key is in either position, the leaf springs bear squarely upon its opposite sides so as to hold them yieldingly in exact position. When a key is turned, it will be seen that during the first 45 degrees of its movement, the tendency of the springs is to return the key to its original position, while during the second 45 degrees, the tendency is to carry the key on to the position to which it is being moved. This simple construction secures an exact adjustment in the position of the keys.

To prevent the operation of more than a single key in a horizontal row, as is necessary in all the rows except the multi-candidate groups, I provide the tubes E' which are passed through, or formed integral with, the shafts X, and through these tubes I pass the cables or ropes F', which are suitably secured at each end of the row, and adjusted to furnish just enough slack to permit of the operation of one key, as it will be seen from Fig. 3 that as soon as any key is turned to its operated position, the slack in the cable is taken up, and thus the operation of more than one key in a row is prevented, the system being substantially the same as that shown in my application No. 723,873, filed July 14, 1899, and my Patent No. 866,801, granted September 24, 1907.

To prevent the simultaneous operation of two keys in the same horizontal row in any of the multi-candidate groups, I employ the

blocks G', having the lugs H' pivotally mounted in one end thereof so as to be acted upon by the lugs J' rigid with the shaft X, as the key is moved from unoperated to operated position, so as to advance the blocks, while permitting the return of the keys without advancing the blocks, the construction being the same as is shown and described in the aforesaid application No. 723,873 and Patent No. 866,801, to which reference is made for a fuller description. The blocks G' are conveniently secured in place and held against the front of the middle plate R by the strips K', which are T-shaped in cross section, and are fastened to said plate R.

The portion of the shaft X extending from the front side of the plate R into the thimble or cap W is preferably square in cross section, as shown, but the rear or remaining portion of this shaft X is circular in cross section, and this circular portion L' passes through the plate R, and projects into the space between the plates R and S. This circular portion L' is rigidly secured to the main squared portion of the shaft X when the machine is assembled in any desired manner, as by a screw-threaded or a tubular riveted connection. The rear end of this portion L' of the shaft X is provided with the segmental lug or portion M', which is rigidly secured thereto, or integral therewith, and coöperates with the sleeve N' which is mounted on the shaft so as to have an independent movement thereof through an angle of 90 degrees when necessary. This sleeve N' has formed integral with or secured to its end adjacent to the plate R the gear pinion O', which may be a complete pinion if desired, but which is shown as being toothed only part of the way around, inasmuch as the greatest possible range of movement of the sleeve is through an angle of 90 degrees, and a greater extent of movement is unnecessary. The pinions of each office row mesh with the teeth on the rack bar P' which is common to the keys of each office row, and which slide against the rear side of the plate R, being held in position by the straps Q' at the left hand end of the machine, and the cleats R' at the right hand end of the machine, the strap Q' and the cleats R' being secured to the rear side of the plate R by screws, bolts, rivets, or in any desired manner. Inasmuch as all of the sleeves N' in each office row have their pinions O' meshed with the same rack bar E', it will be seen that when any sleeve in the row is moved by the operation of its key, all the sleeves in the row will be moved, although none of the other keys will be moved, inasmuch as the sleeves are capable of independent advance movement, as before stated. Suitable means, to be subsequently described, are employed for drawing

the rack bars P' from their operated position to the right back to the left, the resetting of the parts thus restoring the normal or unoperated position of the keys and the sleeves.

Pivotally mounted, as upon a stud S' projecting from the front of the rear wall S is a lever T', the left hand end of which is provided with an anti-friction roller U', which takes into the groove formed between the flanges M upon the door. In the normal position of the parts with the door closed, the roller U' rests in the lower portion of the groove between the flanges M, so that as the door is opened, the inclined portion V' of the flanges M will force that end of the lever T' up, thus lowering the other end, which has a slightly elongated slot W' therein, through which passes the pin or stud X' projecting forwardly from the frame Y'. This frame Y' is of the general shape of a gridiron, and consists of the horizontal top cross piece Z', and the bottom cross piece A², which cross pieces are connected by the vertical bars B², of which there is one for each party column of keys. This frame is secured in place against the front side of the plate S by means of the straps C² which are screwed, bolted, or otherwise secured to the front side of said plate S, the adjustment being such that the frame Y' is permitted to slide up and down without any material horizontal variation in position. Mounted a slight distance to the right of each of the vertical bars B² are the straight ticket bars D², which are held in position against the plate S by the same straps C², and have their lower ends resting upon the enlarged heads E² of the rods F². These rods F² are held in position by the staples G² which are secured to the plate S, and have surrounding them the helical expanding springs H², which are confined between the lower staple G² and the nut J², which is screw-threaded on the rod F² beneath the upper staple G² so as to regulate the tension of the spring H², the function of which is to hold the bar D² normally in an upward position. A nut K² is also screwed upon the rod F² and coöperating with the under side of the upper staple G² serves to limit the upward movement of the rod F², and thus accurately position the bar D² in any position desired. Each of the bars D² has pivotally mounted at a short distance above its associated straight ticket key, a connecting switch L², which has its lower end enlarged or otherwise overweighted so that it normally hangs in a vertical position. The bar D² is preferably slightly cut away as at M² opposite the switch L², so as to form a stop shoulder N² for the switch, as well as to give additional space. Just above the upper end of the switch L² on the associated bar B² is the lug O², which projects to the right and also for-

wardly from the bar B^2 to which it is rigidly secured or with which it is integrally formed. The inner ends of the straight ticket keys terminate in the lugs P^2 , which in their normal position do not contact with the lugs Q^2 which project into the same plane from the face of the switch L^2 . When, however, a straight ticket key has been operated, as shown in the fourth column in Fig. 4, the lug P^2 contacting with the lug Q^2 rocks the switch L^2 so that its upper end comes beneath the lug O^2 , so that as the frame Y' descends when the door is opened, the bar B^2 corresponding to the straight ticket which has been operated will also descend. The straight ticket keys being interlocked by the rope F' , it will be apparent that but one bar B^2 can be operated at any time. The upper end of the switch L^2 is preferably cut off at an angle, as at R^2 , so that when it is swung from its normal position the surface will be horizontal and parallel with the under side of the lug O^2 . As the frame Y' descends, the lug O^2 contacts with the top R^2 of the switch L^2 and carries the bar D^2 downward, the only possible additional movement of the switch L^2 being far enough so that its nose contacts with and occupies the angle formed by the lug O^2 and the bar B^2 .

It will now be apparent that if mechanism to operate the registers is placed upon the bars B^2 and D^2 , at each time the door is opened, the mechanism on all the bars B^2 and one of the bars D^2 may be made available to operate the registers. This mechanism consists of the hangers S^2 , which are loosely pivoted upon the bars B^2 and D^2 , and are provided with projections T^2 projecting into the plane of the operating mechanism of the registers. These hangers S^2 , as will be seen, are so shaped as to be automatically carried to a vertical position when left to the action of gravity, and opposite the amendment registers, they are provided only upon the bars D^2 , inasmuch as the amendment keys have no connection with the straight ticket keys, as amendments are not ordinarily considered party questions. As no registers are employed to denote the number of times the straight ticket keys are operated, there are no hangers S^2 connecting with the straight ticket key, the switch L^2 being the nearest approach to a hanger in connection with those keys. All of the other keys, however, are provided with a pair of hangers, one on the bars B^2 , and the other on the bar D^2 .

The details of the registers, which are best shown in Figs. 7 and 16 to 22 will next be discussed. Three, or any desired number, of registering wheels U^2 may be employed, and I secure to the side of each of these wheels U^2 , or preferably stamp them integrally out of a single piece of metal, a

ratchet wheel V^2 , which has ten teeth, one notch on the units wheel, as at W^2 , being considerably deeper than the other notches, while one notch on the tens is slightly deeper than the others, while all the notches on the hundreds wheel are of the same depth. These wheels are suitably strung upon the split sleeve X^2 , shown in Fig. 22, and the washers Y^2 are interposed between them so as to prevent the movement of one wheel being accidentally imparted to the adjacent wheel. For the purpose of securing these washers rigidly from movement so that they may completely fulfil their functions, I provide the lug Z^2 thereon which when in position fits into the groove or slit A^3 in the sleeve X^2 . The ends of the sleeve X^2 are secured in the side portions B^3 of the sleeve or strap C^3 preferably by passing into apertures in said side portions shaped like the apertures in the washers Y^2 , which has its end portions D^3 screwed or otherwise secured to the back of the middle plate R , while its front or middle portion E^3 is provided with the slot F^3 through which the indication of the registers appears. The rock shaft G^3 is inserted through the sleeve X^2 , and then has the standards H^3 riveted or otherwise secured in holes made transversely through said shaft, and the pawl shaft K^3 in its turn is secured in the apertures formed in the outer ends of the standards H^3 , it having its central rod or shaft J^3 formed with the reduced portions L^3 for this purpose. The pawls proper M^3 are rigidly secured to or preferably formed integral with the shaft K^3 and have their points arranged on slightly different planes as is customary in the ordinary deep notched carrying mechanism. A small coiled spring N^3 secured to one of the standards H^3 and to the rear side of the plate R serves to hold the pawl piece J^3 normally back with the standards resting against the rear side of the plate R . Fastened to the rear side of the plate R just back of the wheels U^2 I secure some form of spring detents, as O^3 , shown in dotted lines in Fig. 19, to prevent the accidental movement of the wheels, as well as to position them accurately after movement. In the end of the shaft G^3 just beneath the key shaft, I secure the short rods or spurs P^3 , which normally stand at the angle shown in Fig. 19, and directly beneath the lugs T^2 , which have their lower sides slightly hollowed as shown to insure their engagement with the rods when they descend. It will thus be apparent that if the bars B^2 and D^2 descend, the lugs T^2 on the hangers S^2 will cause the operation of all the registers, by rocking the shafts G^3 through a sufficient angle, unless the hangers S^2 shall be deflected by some means. The keys are provided with controlling mecha-

nism governing the deflection of the hangers S^2 , and this controlling mechanism will now be described.

Referring especially to Figs. 7 and 16 to 24, as previously stated, the rounded portion L' of the shaft X is provided at its outer end with the substantially quadrangular segmental lug M' , which coöperates with the lug Q^3 on the sleeve N' . This sleeve N' is mostly cut away, as best shown in Fig. 24, at the surface R^3 , but a portion is retained, forming the bearing surface S^3 , from which the previously mentioned lug Q^3 projects. The normal or unoperated position of the parts is shown in Figs. 16, 19 and 24, and from an examination of Fig. 16, it will be seen that as the frame Y' descends carrying with it the bar B^2 corresponding to the straight ticket key operated, the lug T^2 on the straight ticket bar D^2 will descend and contact with its corresponding arm P^3 , the uninterrupted descent of the lug T^2 being permitted by the fact that the cut-away portion of the sleeve is beneath said lug. The lug T^2 of the hanger on the bar B^2 is, however, deflected by reason of its coming in contact with the curved surface of the segmental lug M' , as well as with the bearing surface S^3 of the sleeve, both of which are in its path, and serve to deflect it so that in descending it takes the dotted line position of Fig. 16 so that it does not contact with its arm P^3 . Consequently, as the straight ticket bar D^2 can only descend in one column at a time, this operation of the surface of the lug M' and the bearing surface S^3 serve to prevent the operation of any register outside of the party column for which the straight ticket has been operated, unless the key for that register has been moved to the second position, which is shown in Fig. 18. In this figure, the key, which represents a candidate voted for outside of the party column, has been moved to operated position, and in moving, the lug M' contacting with the lug Q^3 on the sleeve has moved the sleeve with it. From Fig. 18, it is very apparent that as the lug T^2 on the hanger on the bar B^2 descends, it can do so uninterruptedly, inasmuch as the cut-away portion of the sleeve N' is beneath it, and it will move to the dotted line position of Fig. 18 rocking the shaft G^3 to actuate the register. It will be remembered that the straight ticket bar D^2 does not descend, and, consequently, the lug T^2 on its hanger cannot descend to operate the register, but even if it did, it would be deflected into the dotted line position of Fig. 18, by the surfaces of the lug M' as well as by the bearing surface S^3 of the sleeve. If, however, a key should be accidentally operated in the party column for which the straight ticket key had been turned, while the straight ticket lug T^2 would not operate the register, yet the lug T^2 on the bar B^2

would, so the vote would be registered just the same. The third position, shown in Fig. 17, is that assumed by the parts of the key for a scratched candidate in the column for which the straight ticket key has been operated. In this case, the shaft X and the lug M' are in their normal position, while the sleeve N' is in its operated position, having been moved thereto by the operation of the key which scratches this candidate. As the lugs T^2 descend, the straight ticket lug will be deflected by the surface S^3 on the sleeve N' , while the lug on the bar B^2 will be deflected by the curved surface of the lug M' , so that neither of them can touch the arms P^2 , and the operation of the register is thus prevented. From a consideration of this construction, it will thus be seen that the operation of more registers than the voter is entitled to operate is thus absolutely prevented, while the structure is such that a scratched ticket can be voted almost as rapidly as the straight ticket, by simply turning the straight ticket key and then turning the keys for the candidates to be voted for outside of the party column for which the straight ticket key has been operated.

To bring the rack bars P' back to their normal position, and thus re-set the keys and sleeves after the frame Z' has been lowered, I employ the following mechanism, which consists of the flanges which I have generally designated by the reference letter N , and shown their location in Fig. 2, and which are shown in greater detail in Figs. 12, 13 and 14. Opposite the left hand end of each rack bar P' , which is provided with a downwardly extending anti-friction roller T^3 , is a strip U^3 formed of angle iron, the vertical side of which is fastened to the door E , while its horizontal portion extends outward to form a shelf. Secured upon this shelf are metallic strips, best shown in the cross section of the lower one on Fig. 13, where it will be seen that I employ a U-beam shaped strip V^3 , which is secured against the vertical flange and upon the upper side of the horizontal flange of the angle iron U^3 . Next to this U-shaped strip is another angle iron W^3 , which is secured upon the side of the horizontal flange of the angle iron U^3 , so that the coöperation of the strips V^3 and W^3 form two parallel channels X^3 and Y^3 , which have the widened entrance at Z^3 as shown in Fig. 12, from which it will be readily seen that as the door is moved inward, the anti-friction rollers T^3 of the unoperated rack bars P' will pass into the channel X^3 , and remain therein during the opening and closing of the door, thus locking the keys corresponding thereto from movement while the door is opened. Similarly, the anti-friction rollers T^3 of the operated bars will be received in the channels Y^3 , where they will be locked from move-

ment until after the frame Y' has been lowered, after which they will be switched into the other channel so as to be re-set when the door is closed again by the following mechanism.

Journalled in the flanges next to the vertical portions of the angle iron U³ is the rod or rock-shaft A⁴, which extends across the entire series of channels, and has its upper and lower ends turned outwardly at right angles forming the arms B⁴, which have attached thereto the coiled springs C⁴, the other end of which is fastened to the door E, so as to normally tend to hold the shaft A⁴ drawn in a certain direction. Rigidly secured to the shaft opposite each row of keys is an arm D⁴, which terminates in a vertical flange E⁴, which is held by the spring against the beveled end F⁴ of the inner portion of the parts of the U-shaped strip V³ which constitutes the dividing flange between the channels X³ and Y³, thus forming as it were a continuation of this flange, which, however, is held normally by the springs C⁴ in the full line position of Fig. 12. As will be seen by the dotted line position shown in said figure, not only of the switch E⁴, but of the anti-friction roller T³, as the door approaches the end of its opening movement, any of the anti-friction rollers T³ which may be in the channel Y³ force the switch flanges E⁴ to the dotted line position until they pass them, when the springs C⁴ return them to normal position, so that when the door is closed, these anti-friction rollers T³ riding on the incline formed by the other surfaces of the switch flanges E⁴ will be forced over into the channel X³ and thus re-set. By the employment of this re-setting mechanism, it will be seen that the keys of each row are acted upon directly, as it were, while at the same time they are entirely locked from movement except while the door is completely closed, and the voter is shielded from observation, thus securing the desired secrecy of the ballot. It will further be observed that the employment of this construction in connection with the complete stroke mechanism for insuring the complete movement of the door in either direction that it is started, effectually prevents the voter from tampering with the machine, as the door is opened when he enters it, and he must completely close the door from the inside before the keys are unlocked and ready for use. When the door is closed, and he is shut out from sight, he can set the keys as desired, after which he opens the door, the opening of which operates the registers, and the election officials will see that he then leaves the booth without attempting to close the door again.

The interlocking blocks of the multi-candidate group have been previously explained, and I will now describe my im-

proved construction for preventing the operation of more candidates in the group than are permitted by law. I have shown a group of three rows of multi-candidate groups, in which three are to be elected, and the construction of the interlocking blocks, as previously described, will permit the operation of any desired three in the entire group, whether they be in the same or in different horizontal lines. The operation of any key forces the blocks G' in that horizontal row, or a portion of them, to the left, and the block to the extreme left takes against the end G⁴ of the bell crank lever H⁴, which is pivoted upon the vertical strip J⁴ secured between the brackets K⁴ and L⁴ fastened in the angular strip R³. The other ends of the levers H⁴ are formed into yokes M⁴, which have pins N⁴ projecting into the annular groove O⁴ formed in the sleeve P⁴ forming the hubs of the disks Q⁴, which are provided with a definite number, say twelve, equi-distant teeth R⁴ on their periphery. These sleeves P⁴ are splined on to the sleeves S⁴, the upper one of which is secured to and projects downwardly from the bracket K⁴, while the two lower ones are independent and are secured to the escapement arms T⁴. The lowermost escapement arm T⁴ is rigidly secured to a shaft U⁴, which is journalled in a bearing in the bracket L⁴ and passes through the sleeves S⁴ previously mentioned. The upper end of this shaft has rigidly secured thereto the disk V⁴, preferably by means of a hub W⁴ integral therewith, and this hub W⁴ has fastened thereto the spiral spring X⁴, which is contained in the circular cavity Y⁴ formed in the upper side of the bracket K⁴, and the other end of this spring is fastened to the walls of said cavity so that the tendency of the spring is to rotate the shaft U⁴ and the connected disk D⁴ from the left over to the right, as shown by the arrow in Fig. 12. This disk V⁴ has formed therein the slot or channel Z⁴, the longer portion of which, A⁵, is on the arc of a circle having a certain radius, while the shorter portion B⁵ is on the arc of a circle having a slightly longer radius, and the two portions are connected so that the anti-friction roller C⁵ in said slot can move from one portion to the other. This anti-friction roller is mounted upon a stud D⁵ which projects downward from the sliding bar E⁵ which is mounted in a channel conveniently formed in the head F⁵ of the screw-bolt G⁵ which is screwed into and secured to a lug H⁵ projecting from the end of the bracket K⁴. In addition to serving as a bearing for the bar E⁵, this bolt G⁵ furnishes a bearing for the mutilated pinion J⁵ mounted thereon, the upper half of which has two of its teeth removed, as at K⁵, as seen in Fig. 12, while the lower half has the teeth extending all the way

around and meshing with the teeth L^5 formed on the edge of the disk V^4 . The outer edge of the horizontal portion of the angle iron U^3 which is opposite to the upper half of this pinion J^5 is provided at its outer end with a set of teeth M^5 , which mesh with the upper half of the teeth of the pinion J^5 as the door is opened. The escapement arms T^4 are provided with the escapement lugs N^5 and O^5 , best shown in Figs. 25 to 27. The upper lug N^5 is rigid, being formed integral with the end of the arm T^4 , while the lower one O^5 is pivotally mounted by being secured to the shaft P^5 which is mounted in bearings formed in the vertical cylindrical end of the arm T^4 . This shaft T^5 has its lower end turned at right angles to form the arm S^5 , which has secured thereto a coiled spring T^5 , the other end of which is fastened to a pin or projection U^5 on the under side of the arm T^4 so as to normally hold the lug O^5 in the position shown in Figs. 25 and 26. It will be seen, however, that if pressure is applied to the outside of said lug, it can give inwardly against the resistance of the spring T^5 , which throws it back to normal position as soon as the pressure is released.

The structure just described and embodying the parts marked N^5 to U^5 is practically identical with that shown in my application No. 723,873, above referred to, and the operation of it and its associated parts is as follows: When any key in the multi-candidate group has been operated, its lug J' co-operating with the lug H' on the adjacent block G' shoves all the blocks to the left for a certain distance, and the left hand block G' contacting with the bell crank lever H^4 raises the yoke end thereof up, thus raising the sleeve P^4 and the disk Q^4 with the teeth R^4 . In the position of rest, the inner side of the lug O^5 rested against one of these teeth, and prevented the escapement arm T^4 from advancing under the impulse of the spring X^4 . As soon as the raising of the sleeve moved the tooth R^4 out of engagement with the lug O^5 , the arm T^4 was swung from the left over to the right until the outside of the lug N^5 came in contact with the next tooth R^5 , which is now in the plane of this lug. When the sleeve P^4 was lowered, the arm again advanced until the inside of the lug O^5 came in contact with this next tooth, when the normal position of the parts was regained, but with the arm T^4 , and the shaft U^4 advanced through an angular distance of thirty degrees, provided that the disk U^4 has twelve teeth. As another key in the same row is operated, the operation is repeated, or if two keys in the different rows are operated simultaneously, the combined effect upon the shaft U^4 is produced the same as if they were operated separately, this structure being organized for the purpose of

securing the same advance of the shaft U^4 whether the keys are operated separately or simultaneously. In the normal position, the anti-friction roller C^5 was in the end A^5 of the slot Z^4 , and the bar E^5 was in its innermost position. If only three keys are operated, the disk V^4 is not swung around far enough to move the bar E^5 outward, but if four or more impulses are given, the bar E^5 will be moved outward to control the resetting mechanism in the manner to be described. As the door is opened, the teeth M^5 thereon engage with the teeth on the upper half of the pinion J^5 and move it back until the two missing teeth prevent the further engagement of the teeth M^5 with the pinion. During this movement of the pinion, the lower halves of its teeth meshing with the teeth L^5 will move the disk and the shaft back to normal position, the spring-mounted dog O^5 permitting this retrogressive movement of the arm T^4 , while holding the parts securely at the position to which they are advanced.

The construction of the re-setting mechanism controlled by this bar E^5 is as follows: Journaled parallel to the shaft A^4 , and in the position shown in Fig. 12, is a somewhat similar rock-shaft V^5 , which extends through the limits shown in Fig. 13, and has rigidly connected thereto in the three channels opposite the multi-candidate groups the arms W^5 , which are similar to the arms D^4 , and are likewise provided with the flanges X^5 , which are shaped as shown in Fig. 12, having the ends cut on a bevel so as to make a continuation of the central flange formed by the side of the U-shaped strip V^3 . At the upper end of the shaft V^5 is an arm Y^5 which is also rigidly fastened thereto, and which projects out through a space formed by cutting away the bottom of the strips V^3 and W^3 , outside of the edge of the flange, where it is provided with an upwardly turned end or lug Z^5 , the lower portion of which is in the plane of the end of the bar E^5 so as to contact therewith as the door is moved inward. A spring catch device A^6 , consisting of a leaf spring is secured upon an abutment B^6 , and which terminates in a lug C^6 which has its sides beveled off to coöperate with the upturned end Z^5 in either of the two positions which it can occupy. The strips V^3 adjacent to the switches X^5 have the notches D^6 cut therein while the corresponding strips W^3 have the notches E^6 . The operation of the device is as follows: Supposing that the multi-candidate group has been over-operated so that the bar E^5 is standing in its outermost position, after the door has been opened a short distance, and before the inner end of the switches X^5 have reached the position of the anti-friction rollers T^3 , the upturned end Z^5 of the arm Y^5 contacts with the end of the bar E^5

and is rocked from its ordinary position into the dotted line position of Fig. 12, where it is held by the spring device A^c. It will be seen that in this dotted line position, the switches X^s are arranged slanting across the pathway of the anti-friction rollers T^s of the multi-candidate group, so that they will cam the aforesaid anti-friction rollers from the channel Y^s into the channel X^s before the frame Y' has been lowered to operate the registers. After the anti-friction rollers T^s are in the channel X^s they in turn cam the switch pieces X^s back to their normal position against the resistance of the spring device A^c. At the conclusion of the opening of the door, the teeth M^s reset the multi-candidate controlling mechanism proper in the manner above described.

To prevent an over-actuation of the multi-candidate registers by voting for the permitted number in one horizontal row, and getting two votes from the straight ticket mechanism in the other rows, I connect all the bars P' in each multi-candidate group by means as explained in my applications Nos. 655,060 and 723,873 and Patent No. 866,801, before referred to.

The last feature of my invention is the novel irregular balloting mechanism which I employ, and which is best illustrated in Figs. 7 to 11. The plates Q and R may be conveniently terminated at the beginning of the irregular balloting mechanism, and beyond it their place may be taken by the piece F^c, which may be constructed of some other material than the metallic plates R and Q. There is one irregular balloting device for each office row, and each one is designed to be of sufficient depth to take up the space occupied by the plates Q and R and the intervening mechanism. These irregular balloting devices are separate and when the machine is built up, they are placed in position one above the other, and secured in place by the vertical strips G^c which are bolted upon the front of the casing by the bolts H^c shown in Fig. 7. Each consists of a rectangular metallic case J^c, composed of thin sheet metal, and provided in front with the elongated aperture K^c which has the notches L^c in the upper end thereof for the purpose to be described. Substantially centrally mounted in the casing J^c is a rod or stationary shaft M^c, while a short distance above it and on either side thereof are the stationary shaft N^c and the rotating shaft O^c. The stationary shaft M^c has mounted on it at both ends, just inside of the ends of the casing J^c, the somewhat irregular shaped levers P^c, the rear ends of which project through a vertical slot Q^c in the rear wall of the casing for a purpose to be described. The front ends of these levers P^c are connected by a curved strip R^c, which when the levers are in their lowermost position serves to cover the

aperture K^c. These levers P^c also have rigidly secured to them on the outside of the plate R^c the small knobs or handles S^c by which they are operated, and the ends of which pass into the notches L^c when the levers are raised up to their highest position. The shaft O^c has fastened thereon the paper roller T^c, which has the ratchet wheels U^c secured at either end and in position to be advanced one notch each time the levers P^c are operated by means of the dogs V^c which are pivoted on the inside of the levers P^c in the plane of the ratchet wheels U^c, and which are held in engagement with the teeth of the ratchet wheels by the leaf springs W^c. The supply roller X^c is mounted to rotate loosely on the shaft N^c, and is connected therewith by a weak spiral spring Y^c in the cup formed by an overhanging flange formed on either end of the roller X^c. One end of the spring Y^c is secured to the shaft N^c, while the other end is provided with a square lug Z^c, which can fit in either one of two or more notches A^c formed in the overhanging flange of the roller.

When the machine is ready for use, a small supply of a strip of paper B^c, substantially the width of the rollers, is wound upon the supply roller X^c and is wound once around the roller T^c and secured thereto. As the levers P^c are raised, the roller T^c will be advanced one space by the action of the dogs V^c, and will be held in this advanced position by the detent dogs C^c which are pivotally mounted on the shaft M^c in the plane of the ratchet wheels U^c with which they co-operate. As the paper is drawn off from the roller X^c, the spring Y^c is put under tension, resisting the advance of the roller, and thus keeping the paper taut, until the spring is coiled up sufficiently so that the lug Z^c is drawn out of the notch A^c, when the spring expands until it is finally caught and held by one of the notches. As the levers P^c are raised up, the slot K^c is uncovered, and a portion of the paper strip is accessible so that the name of the desired candidate can be written thereon by the voter. When the election is terminated, the paper strips can be removed, and the irregular ballots thus cast can be canvassed. It becomes necessary, of course, to provide interlocking mechanism between the irregular balloting devices and the registers or keys for regularly nominated candidates for the same office. In the single candidate rows, I provide the construction shown in Figs. 3 and 7, where the end of the cable F' is secured in the eye-bolt C^c fastened in the rear side of the front plate Q. The rope passes from this eye-bolt upward and over a pulley D^c which is mounted in an arm E^c projecting from the adjacent lever P^c through a suitably shaped slot F^c in the end of the case J^c. The rope F' then passes under the pulley G^c which is

journalled in a support H^7 secured to the rear side of the plate Q . Referring more especially to Fig. 3, it will be seen that as the irregular balloting device is manipulated to expose the paper, the raising up of the pulley D^7 will serve to take up the slack in the rope F^7 the same as the rotation of the tubes E^7 , and the parts are adjusted so that the amount of slack taken up will be the same whether the irregular balloting device is operated, or whether the register key is turned to operative position. In the multi-candidate groups, the place of the arm E^7 will be taken by a lug which will cooperate with a lug H^6 on the right hand end of the right hand block G^6 , so that as the irregular balloting device is operated, it will count one on the multi-candidate controlling mechanism. This modification will be so apparent that I have not deemed it necessary to illustrate the same.

To prevent the possibility of a voter raising the shield R^6 and writing a name, and then returning it and operating the key for a regular candidate in the same row, thus securing a double vote, it becomes necessary to lock the irregular balloting device in its operated position, and at the same time arrange said locking mechanism so that the irregular balloting device will be unlocked and re-set when the door is opened. For this purpose, the adjacent ends of the rack bars P^7 are widened as shown in Fig. 8, forming the plate P^{11} , which is provided with the diagonal slots J^7 , which terminate at their lower ends in the short horizontal portions K^7 . These slots are penetrated by the rounded inner ends L^7 of the levers P^6 , which ends might be furnished with anti-friction rollers if such a refinement was deemed necessary. As the shield is raised, it will be seen that the action of these ends L^7 operating against the lower sides of the inclined slots J^7 will be to cam the plate P^{11} to the right, and by reason of its connection with the bar P^7 operating the sleeves N^7 the same as they are operated by an ordinary key. When the end of the inclined portion of the slot J^7 is reached, the plate is carried a little farther so that the ends L^7 enter into the horizontal portions K^7 so as to be held locked thereby. To effect this additional movement, I provide the triangular lug M^7 on the upper side of the plate P^{11} , which lug cooperates with the enlarged end N^7 of the leaf spring O^7 , which is conveniently secured in the cleat R^7 . The camming action of the ends L^7 of the lever will be sufficient to carry the lug M^7 far enough past the enlargement N^7 so that the other side thereof acting against the opposite side of the lug M^7 will carry the plate P^{11} enough farther to lock it from movement.

If the plate P^{11} were rigidly connected to the bar P^7 , the operation of any key in the

row would cause the shield R^6 to be raised, and thus the interlocking mechanism would cause the parts to jam so that neither key nor irregular balloting device could be operated. To obviate this difficulty, I connect the bar P^7 with the plate P^{11} so that the bar can be advanced without advancing the plate, but so that the advancing of the plate will necessitate the advancement of the bar. The return of the bar to normal position must return the plate also, if it has been moved. This I effect by forming the end of the bar P^7 with a slot P^7 , best shown in Fig. 7, which receives a pin P^8 carried by the offset end P^9 of the plate P^{11} , which end overlaps the end of the bar P^7 , as shown in Fig. 7. The end of the plate P^{11} is cut away as at P^{10} to permit the bar P^7 to advance independently.

When the device is re-set, the pull on the rack bars P^7 will draw the under side of the slots J^7 into contact with the ends L^7 of the levers P^6 , and thus the levers P^6 will be cammed back into their normal position and the parts of the irregular balloting mechanism thus made ready for an additional operation.

While I have shown my invention as embodied in the form which I at present consider best adapted to carry out its purposes, it will be understood that in some respects it is capable of very wide modifications, and that I do not desire to be limited in the interpretation of the following claims except as may be necessitated by the state of the art.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. In a voting machine, the combination of the door E movable relative to the booth and having the re-setting mechanism and the flange O thereon, with the registering mechanism reached by said door and re-set thereby, and the shield P cooperating with the flange O to prevent access to said re-setting mechanism when the door is closed, substantially as and for the purpose described.

2. In a voting machine, the combination of a multi-candidate group of registers, keys for controlling the operation of said registers, actuating mechanism for said registers, with re-setting mechanism for said keys, multi-candidate controlling mechanism for said group, and connections between said multi-candidate controlling mechanism and the re-setting mechanism whereby the over-operation of said multi-candidate controlling mechanism will cause the keys to be re-set to normal position before the actuating mechanism fixes the registration.

3. In a voting machine, the combination of a multi-candidate group of registers, actuating mechanism for said registers, keys for controlling the operation of said actuating mechanism, with re-setting mechanism for restoring said keys to their unoperated position, multi-candidate controlling mechanism

for said group, and connections between said multi-candidate controlling mechanism and the re-setting mechanism whereby the over-operation of said multi-candidate controlling mechanism by the keys will cause all the operated keys to be returned to normal position to prevent over-registration before the actuating mechanism is operated.

4. In a voting machine, the combination of a multi-candidate group of registers, actuating mechanism for said registers, keys for controlling the operation of said actuating mechanism, with re-setting mechanism for restoring said keys to their unoperated position, multi-candidate controlling mechanism for said group, connections between said multi-candidate controlling mechanism and the re-setting mechanism whereby the over-operation of said multi-candidate controlling mechanism by the keys will cause all the operated keys to be returned to normal position to prevent over-registration, and a single movable member for operating said re-setting mechanism and actuating mechanism, and arranged to operate the re-setting mechanism prior to the operation of the actuating mechanism.

5. In a voting machine, the combination of a multi-candidate group of registers, actuating mechanism for said registers, keys for controlling the operation of said actuating mechanism, with re-setting mechanism for restoring said keys to their unoperated position, multi-candidate controlling mechanism for said group, connections between said multi-candidate controlling mechanism and the re-setting mechanism whereby the over-operation of said multi-candidate controlling mechanism by the keys will cause all the operated keys to be returned to normal position to prevent over-registration, and a movable door operating the re-setting mechanism and the actuating mechanism, and arranged to operate said re-setting mechanism prior to the operation of the actuating mechanism.

6. In a voting machine, the combination of plural series of registers devoted to candidates for a single office, actuating mechanism for said registers, keys for controlling the operation of said registers, and re-setting mechanism for said keys, with a multi-candidate group of registers and keys for controlling their operation, said registers being operated by the actuating mechanism which is common to both sets, re-setting mechanism for restoring all of said keys to their normal position after the operation of the actuating mechanism; and multi-candidate re-setting mechanism, and multi-candidate controlling mechanism for said multi-candidate group; and connections between said multi-candidate controlling mechanism and said multi-candidate re-setting mechanism whereby the over-operation of said

multi-candidate controlling mechanism by the keys will cause all the operated keys of that group to be returned to normal position to prevent the over-registration before the actuating mechanism is operated.

7. In a device of the class described, the combination of the multi-candidate controlling disk B⁵ advanced by the setting of the keys of the multi-candidate group, and having gear teeth upon its periphery, with a gear pinion J⁵ meshing with said gear teeth, a mutilated gear pinion K⁵ rotating with said first mentioned gear pinion, and a rack M⁵ reciprocating relative to said mutilated pinion to re-set the disk.

8. In a device of the class described, the combination of the disk advanced by the operation of the keys of the multi-candidate group, and having the cam slot therein, and means for re-setting said disk, with a sliding bar adjacent to said disk and provided with the anti-friction roller taking into said slot.

9. In a device of the class described, the combination of the multi-candidate controlling disk B⁵ advanced by the operation of the keys of the multi-candidate group, and having teeth on its periphery, with two gear pinions J⁵ and K⁵ rigidly connected and rotating upon the same shaft, the teeth of one of said pinions meshing with the teeth on the periphery of the disk, and the other gear pinion being mutilated to cooperate with a re-setting rack, and a slide bar mounted in the head of said shaft and cooperating with the cam slot in said disk, substantially as and for the purpose described.

10. In a device of the class described, the combination of a reciprocating member, with another reciprocating member, connections between said members so that the movement of one moves the other, and vice versa, said connections having a certain amount of lost motion between them, and spring connections for moving one of said members beyond the point to which the other member moves it to take up the lost motion.

11. In a device of the class described, the combination of the reciprocating member, as the plate P¹¹, having therein the inclined slot J⁷ terminating in the horizontal portion K⁷ and also having thereon the lug M⁷, with the lever P⁶ having its end L⁷ taking into the said slot, and pivoted upon the axis parallel to the movement of the slide, and the spring dog N⁷ cooperating with the lug M⁷ to carry the plate P¹¹ so that the horizontal portion A⁷ of the slot will take over the end L⁷ of the lever P⁶ to lock it from movement.

12. In a voting machine, the combination of the keys, the sleeves mounted thereon and moved thereby, with the reciprocating bars connected to said sleeves, and a reciprocating member having a switch to bring the

bars to normal position to re-set the sleeves and keys.

13. In a voting machine, the combination of the keys having the sleeves thereon and moved thereby, with the reciprocating bars connected to said sleeves, and a movable member cooperating with said bars to lock them from movement when said member is displaced.

14. In a device of the class described, the combination of the keys, with the re-setting bars, connections between the keys and the re-setting bars, and a movable member having two channels, one of which is adapted to receive the end of the bar if it is in its normal position, and the other if it is in its abnormal position.

15. In a device of the class described, the combination of the keys, with the re-setting bar, connections between the keys and the re-setting bar, a movable member having two channels, one channel being adapted to receive the end of the bar when it is in its normal position, and the other when it is in its abnormal position, and a switch between said channels adapted to return the bar from its abnormal to its normal position.

16. In a device of the class described, the combination of the keys, with the re-setting bar, connections between the keys and the re-setting bar for moving the bar when a key is operated, and for re-setting the key when the bar is returned to its normal position, the movable member having the channels X^3 and Y^3 therein, and the switch E^4 pivotally located at the end of said channels and adapted to shift the re-setting bar from the channel Y^3 to the channel X^3 .

17. In a voting machine, the combination of a series of group keys, a re-setting member connected with said keys, a movable member having two channels, one of which receives the end of said bar when it is in its normal position, and the other when it is in its abnormal position, a normally closed switch between said channels, and mechanism operated by the over-actuation of said keys to move the switch so as to throw the bar from its abnormal to its normal position.

18. In a device of the class described, the combination of a series of group keys, a re-setting member connected to said keys and moved by the operation of any one of them, a movable member having two channels, one of which is adapted to receive said re-setting member when it is in its normal position, and the other when it is in its abnormal position, a normally closed switch between said channels, mechanism operated by the over-actuation of said keys to open said switch, and means to hold said switch in its open position to shift the re-setting member from the abnormal channel to the normal channel.

19. In a voting machine, the combination

with the actuating members, and the register actuating arms with which they cooperate, of controlling means interposed between said members and arms to prevent the actuation of the arms by the actuating members consisting of the key carrying a controlling surface which in one position deflects one of said actuating members and in the other position deflects the other actuating member.

20. In a voting machine, the combination with the actuating members, and the register actuating arms with which they cooperate, of controlling means interposed between said members and arms to control the actuation of the arms by the members, said means consisting of a key and sleeve, each having a controlling surface which in one position deflects one member, and which in the other position deflects the other member.

21. In a voting machine, the combination with the actuating members, and the register actuating arms with which they cooperate, of controlling means interposed between said members and arms to control the actuation of the arms by the members, said means consisting of a key and sleeve, each having a controlling surface which in one position deflects one member, and which in the other position deflects the other member, the sleeve being mounted upon the key and moved thereby, but movable independently thereof.

22. In a voting machine, the combination with the actuating members T^2 , and the register actuating arms P^3 with which they cooperate, of controlling means interposed between said members and arms to control the actuation of the arms by members, said means consisting of the key having the shaft L' carrying the controlling surface M' .

23. In a voting machine, the combination with the actuating members T^2 , and register actuating arms P^3 with which they cooperate, of controlling means interposed between said members and arms to control the actuation of the arms by the members, said means consisting of the key having the shaft L' carrying the controlling surface M' , and the sleeve mounted therein and having the controlling surface S^3 .

24. In a voting machine, the combination with plural series of office groups each comprising a plurality of registers, of a corresponding plurality of keys freely movable into and out of operative position to control the operation of the registers, free balloting mechanism comprising a strip upon which the names of the irregular candidates may be placed by the voter, and a movable member to expose said strip, interlocking mechanism between said keys and member to prevent the simultaneous operation of said keys and member, and means for locking said member in its operated position; of operating mechanism for actuating only such registers

as have their keys in operative position and for advancing only such strips as are exposed.

25. In a voting machine, the combination of a group composed of a plurality of series of counters, a plurality of corresponding series of means actuated by the voter for selecting the counters to be actuated, and means operated by an excessive action of said selecting means for automatically withdrawing the entire previous selection of the group.

26. In a voting machine, the combination with plural series of office groups each comprising a plurality of registers, of a corresponding plurality of keys freely movable into and out of operative position to control the operation of the registers, free balloting mechanism comprising a strip upon which the names of the irregular candidates may be placed by the voter, and a movable member to expose said strip, interlocking mechanism between said keys and member to prevent the simultaneous operation of said keys and member, means for locking said member in its operated position; of operating mechanism for actuating only such registers as have their keys in operative position and for advancing only such strips as are exposed, and resetting mechanism for returning said keys and member to their unoperated positions.

27. In a voting machine, the combination with plural series of office groups each comprising a plurality of registers, of a free balloting device comprising a strip upon which the names of irregular candidates may be placed by the voter, a selective mechanism for said registers and free balloting device, said selective mechanism being freely movable into and out of operated position for the registers and being locked as soon as moved to operated position for the free balloting device; of operating mechanism for actuating only such registers and advancing only such strips as are indicated by the selective mechanism; and means for returning the selective mechanism to unoperative position.

28. In a voting machine, the combination in an office group, with an interlocking bar, of a series of keys freely movable into and out of operative position, connections between each key and said bar so that as the key is moved to operative position, said bar is moved, an irregular balloting member, and connections between said member and bar whereby said member moves the bar to and locks it and itself in operative position as said member is moved.

29. In a voting machine, the combination in an office group, with an interlocking bar, of a series of keys freely movable into and

out of operative position, connections between each key and said bar so that as the key is moved to operative position, said bar is moved, an irregular balloting member, and connections between said member and bar whereby said member moves the bar to and locks it and itself in operative position as said member is moved, said last-named connections comprising a cam slot having a horizontal portion adapted to be engaged by said member.

30. In a voting machine, the combination in an office group, with an interlocking bar, of a series of keys freely movable into and out of operative position, connections between each key and said bar, so that as the key is moved to operative position said bar is moved, an irregular balloting member, and connections between said member and bar whereby said member moves the bar to and locks it and itself in operative position as said member is moved, said last-named connections comprising a cam slot having a horizontal portion adapted to be engaged by said member in an auxiliary portion of said bar connected to the main portion so that the main portion can be moved independently of the auxiliary portion.

31. In a voting machine, the combination of a multi-candidate group composed of a plurality of series of counters, a corresponding plurality of series of means actuated by the voter for selecting the counters to be actuated, and means controlled by an improper operation of said selecting means for automatically restoring all previously operated selecting means.

32. In a voting machine, the combination of a multi-candidate group composed of a plurality of series of counters, a corresponding plurality of series of means actuated by the voter for selecting the counters to be actuated, means for actuating the counters selected, a multi-candidate interlock for said group, and means controlled by an improper operation of said selecting means for restoring all previously operated selecting means prior to the operation of the counters.

33. In a voting machine, the combination of a multi-candidate group composed of a plurality of series of counters, a corresponding plurality of series of means actuated by the voter for selecting the counters to be actuated, and means controlled by an improper operation of said selecting means for automatically preventing the operation of any of the counters in the multi-candidate group.

JOHN HOWARD McELROY.

Witnesses:

LOUISE E. SERAGE,

HATTIE O. HALVORSON.