

J. H. DEAN.
VOTING MACHINE.

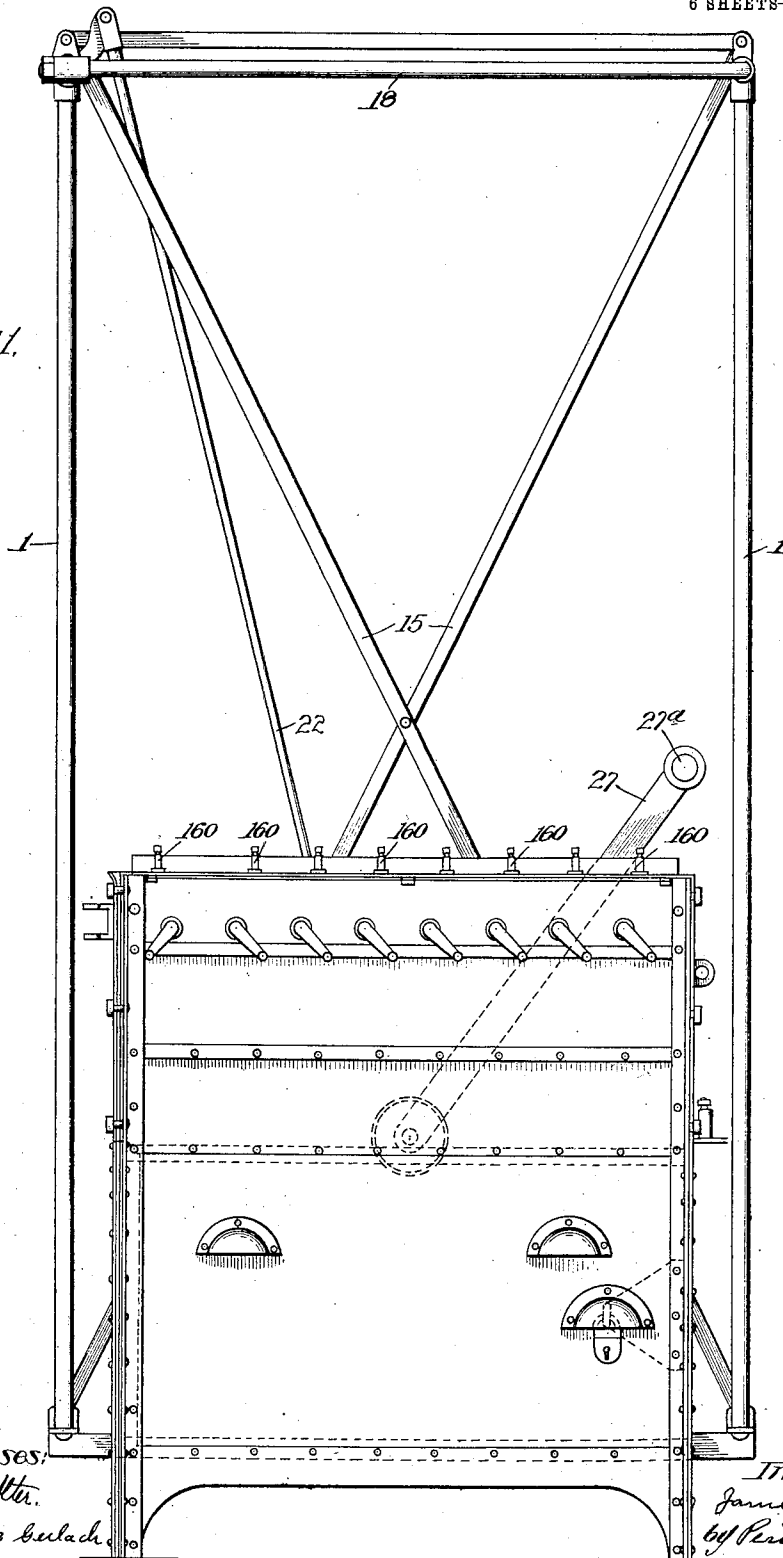
APPLICATION FILED JULY 25, 1905.

Patented Oct. 4, 1910.

6 SHEETS—SHEET 1.

971,666.

Fig. 1.



Witnesses:

John S. Mott.

Mathias Seilach.

Inventor:

James H. Dean

by Pierce Fisher

Attorney.

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6 SHEETS—SHEET 2.

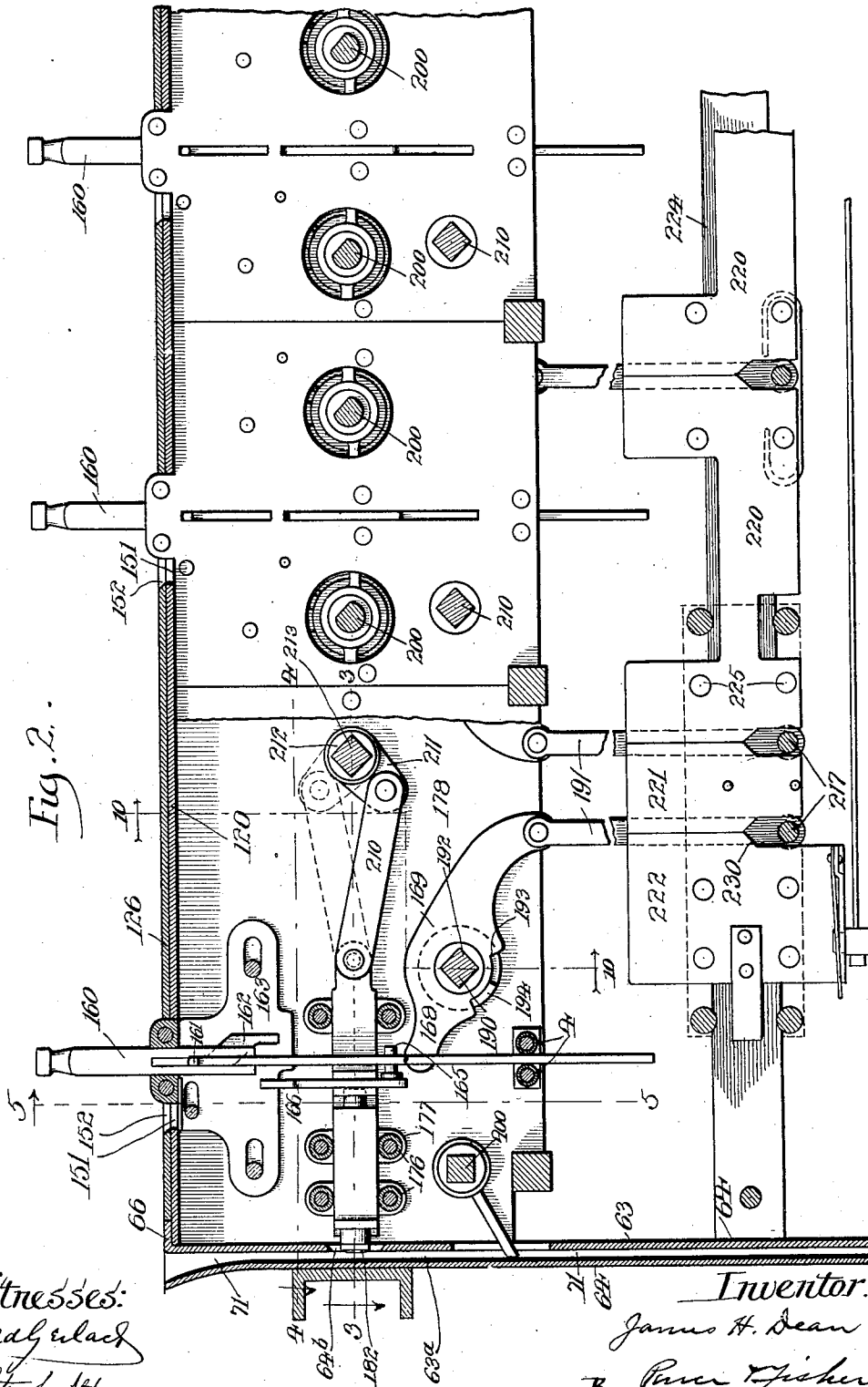


Fig. 2.

Witnesses:
Frederick
L. A. A. A.

Inventor:
James H. Dean
By *James H. Dean*
his Attorneys

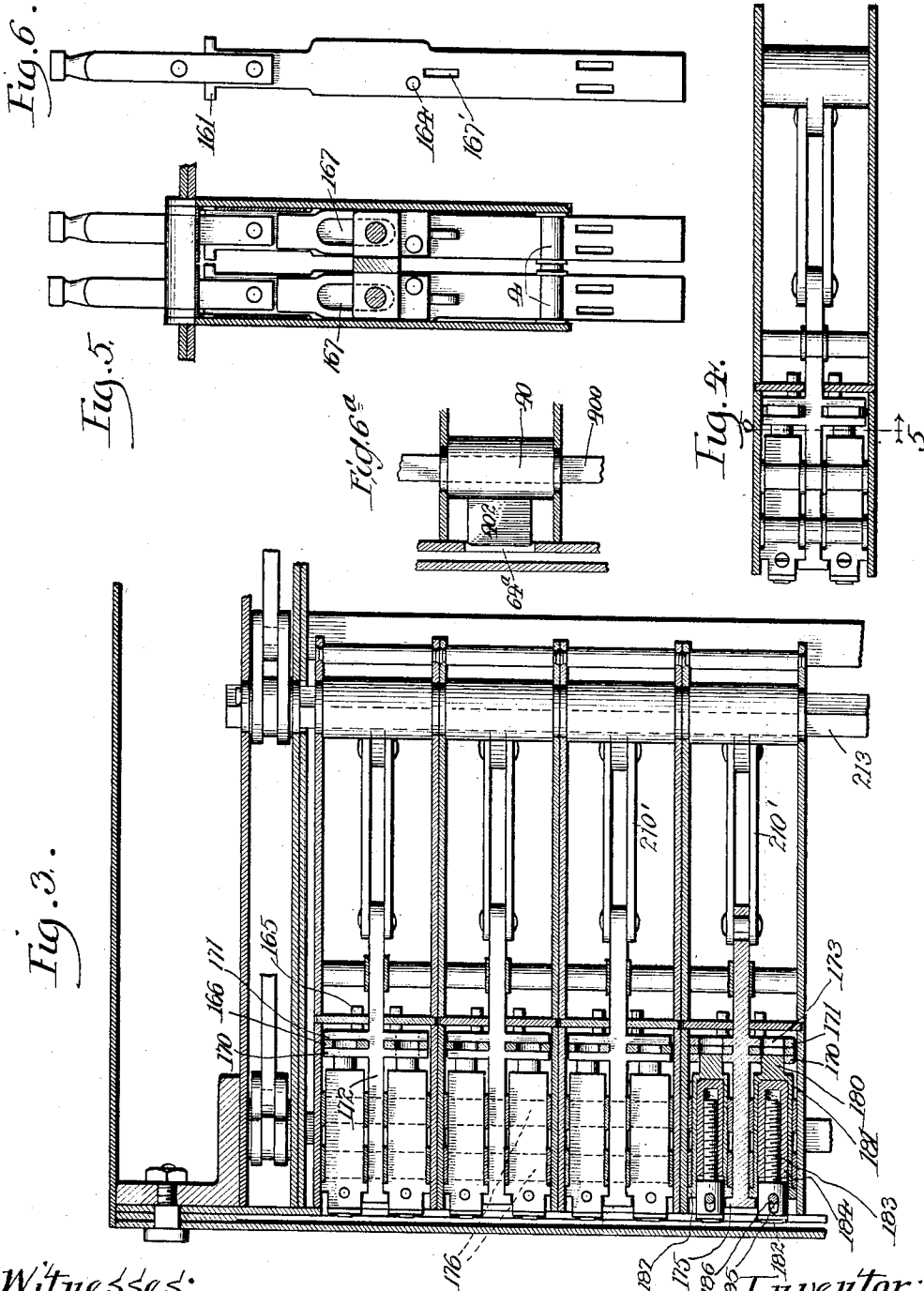
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6 SHEETS—SHEET 3.



Witnesses:
Frdg. W. Lach
Lut. J. Allen

Inventor:
James H. Dean
By *Paul Fisher*
his Attorney.

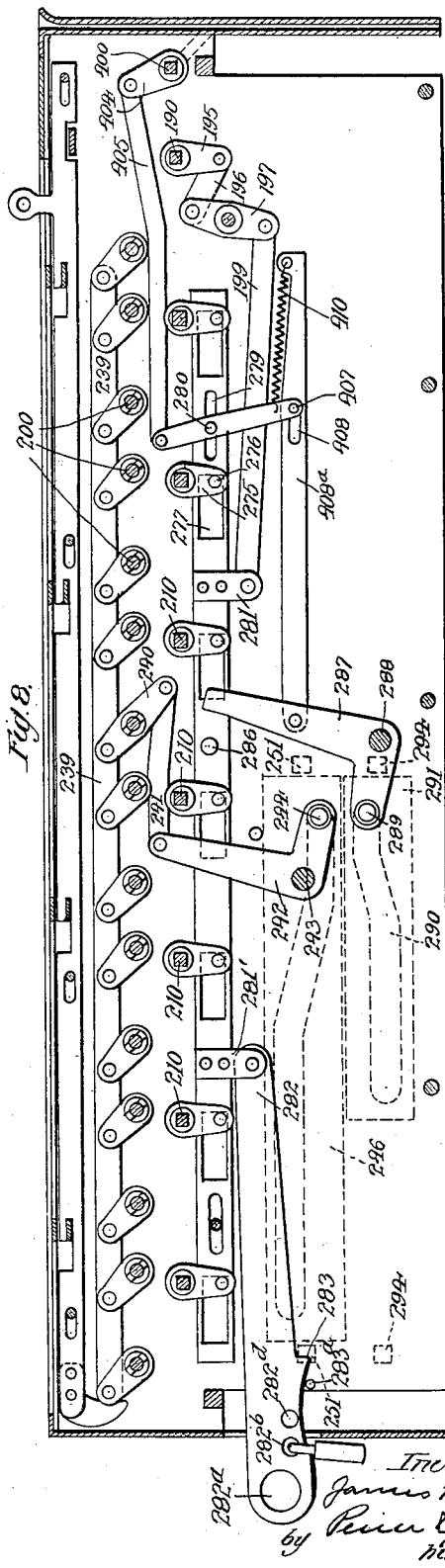
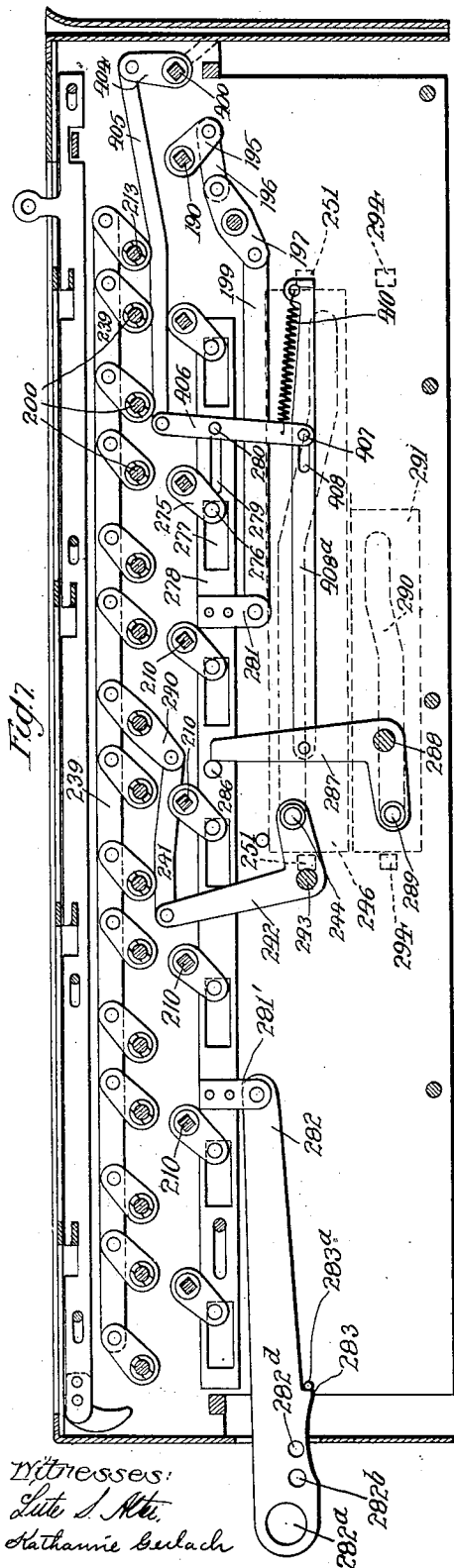
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6 SHEETS-SHEET 5.

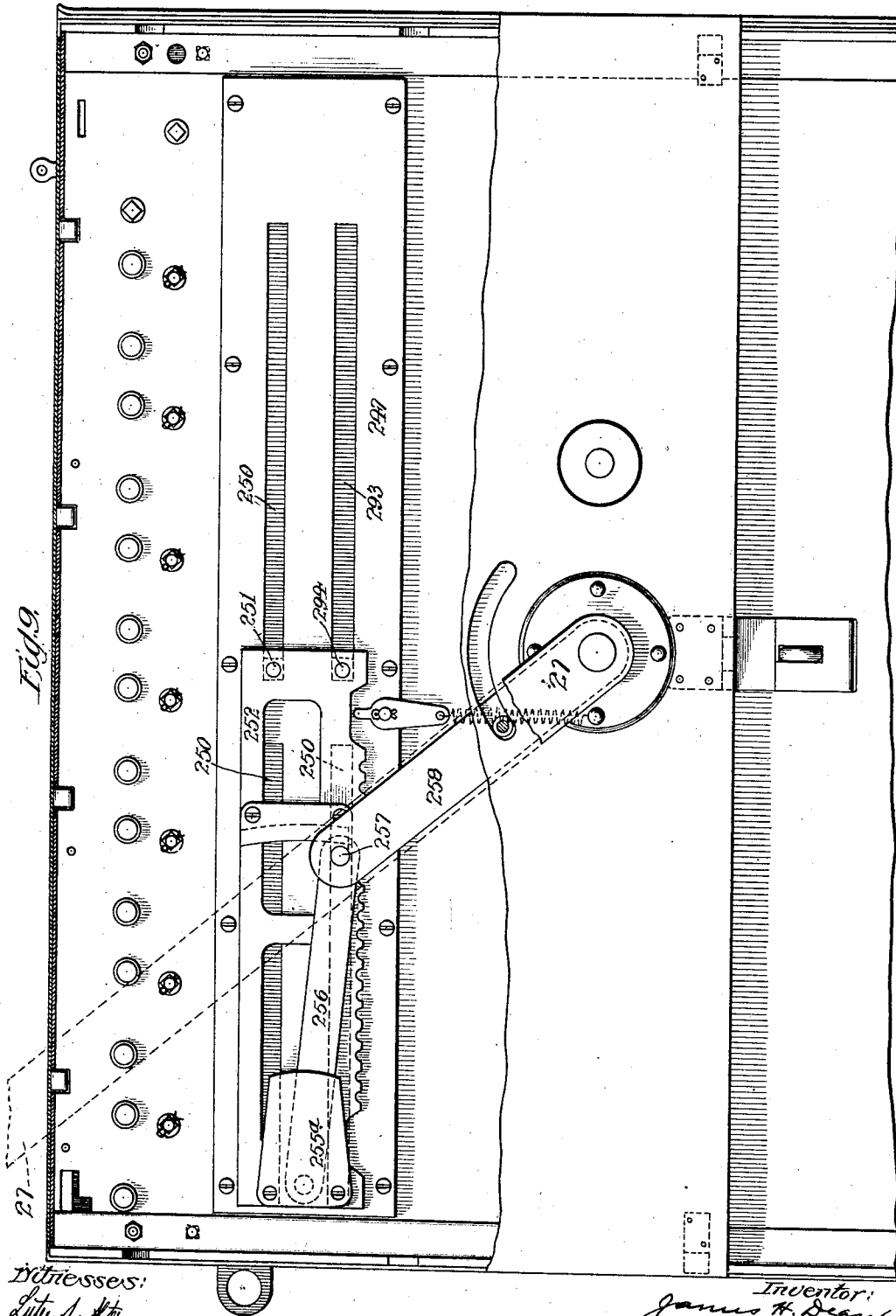


Fig. 9.

Witnesses:
Lute S. Allen
Katharine Gurlach

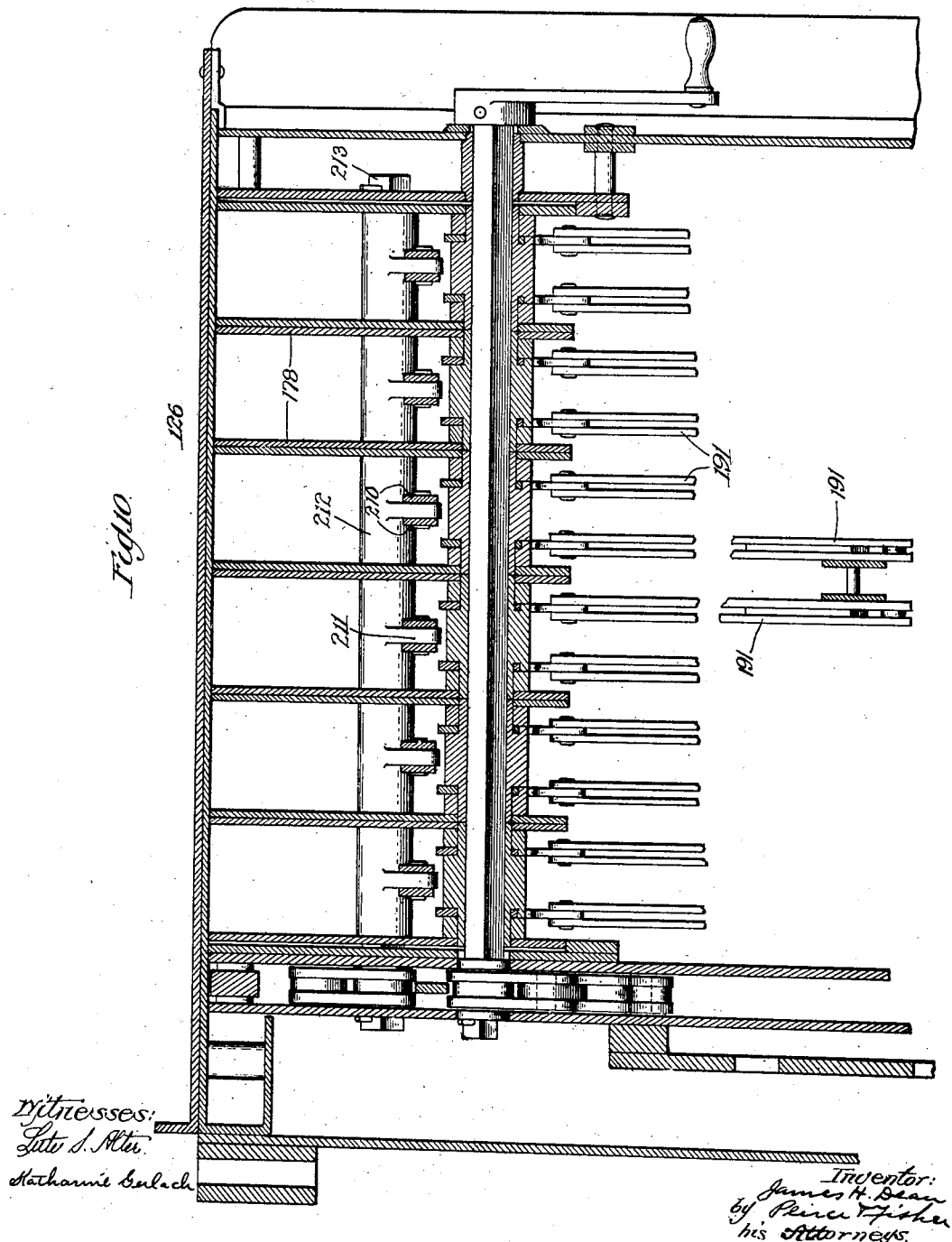
Inventor:
James H. Dean
by Peirce Fisher
His Attys.

971,666.

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VOTING MACHINE.
APPLICATION FILED JULY 25, 1905.

Patented Oct. 4, 1910.

6 SHEETS—SHEET 6.



UNITED STATES PATENT OFFICE.

JAMES H. DEAN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
EMPIRE VOTING MACHINE COMPANY, A CORPORATION OF NEW YORK.

VOTING-MACHINE.

971,666.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed July 25, 1905. Serial No. 271,216.

To all whom it may concern:

Be it known that I, JAMES H. DEAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Voting-Machines, of which I do declare the following to be a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

The present invention has for its main object to provide improved mechanism for enabling a voter to cast his ballot for a candidate or candidates other than those whose names appear in the several party groups on the machine. The necessity of enabling a voter, when voting for any of the regular party candidates whose names appear upon the machine, to retract his ballot up to the time he leaves the booth, has long been recognized. But while provision has been made for allowing such retraction of ballots cast for such party nominees or candidates, still, no provision has been made, heretofore, whereby a like retraction of the voter's ballot could be had when he cast his ballot for a person whose name does not appear on the machine as a candidate of any one of the specified political parties. By my present invention the voter is enabled to cast a ballot for any one or a number of persons whose names do not appear upon the machine as nominees of the regular political parties and the voter is enabled, by my invention, to cast his ballot for any persons who may be named as candidates by political parties, by petition or otherwise, in event the number of parties is in excess of the group capacity of the machine; that is to say, where the parties making nominations exceed in number the number of party groups for which the machine is organized. Not only is the voter thus enabled to cast his independent ballot, but with my invention he is enabled to retract or modify such ballot up to the time that he leaves the booth.

In certain States the voting of "straight" party tickets is forbidden by law, it being required that the voter shall indicate individually each candidate for whom he desires to vote.

A further object of the present invention is to provide means whereby a "straight" ticket voting device, (for example the independent straight ticket shaft), may have its

movement so restricted that while this device is enabled to restore to normal position any ballot keys of its group that may have been actuated by the voter, it is prevented from moving the ballot keys to the "voted" position.

The invention has for its further object to improve in various respects the mechanism for enabling the voter to mark an independent ballot, and these several objects of invention are accomplished by the features of novelty hereinafter described, illustrated in the accompanying drawings and particularly pointed out in the claims at the end of this specification.

In carrying out my invention, I prefer to effect the marking of the independent ballots cast by the voters by means of type or dies that print, punch or otherwise mark the ballots at the desired points, and to effect such printing, punching or marking of the ballots as the voter departs from the booth.

In the accompanying drawings, I have deemed it necessary to illustrate only such parts of the voting machine as more directly appertain to the operation of the mechanism whereby the independent ballots are printed or marked, but for a better understanding of the parts with which this mechanism is associated in a complete machine, I desire to make reference to a companion application for Letters Patent filed by me in the Patent Office on the 27th day of December, 1904, Serial No. 238,388.

Figure 1 is a view in front elevation of a voting machine embodying my invention. Fig. 2 is a view upon an enlarged scale (full size) in vertical section, through that portion of the upper part of the machine containing the independent ballot printing mechanism and adjacent parts. Fig. 3 is a view in horizontal section on line 3—3 of Fig. 2, certain of the type carrying plungers being shown in plan and others in horizontal section. Fig. 4 is a detail view in horizontal section on line 4—4 of Fig. 2, this view showing merely one of the removable sections and its contained parts. Fig. 5 is a view in vertical section on line 5—5 of Fig. 4. Fig. 6 is a detail view in side elevation of one of the ballot keys. Fig. 6^a is a detail plan view of mechanism for holding a ticket in position to be printed. Figs. 7 and 8 are views in vertical transverse section through

the upper part of the inclosing casing at the rear, showing in elevation various parts whereby the straight ticket shafts, the actuator shafts, etc., are connected and operated.

Fig. 9 is a view in rear elevation with the upper part of the back of the casing broken away. Fig. 10 is a view in vertical section from front to rear on line 10—10 of Fig. 2.

The inclosing casing of the machine may be identical in construction with that set forth in my above mentioned application, Serial No. 238,388, this casing comprising a box-like structure, the walls whereof are formed of metal plates suitably secured together. As shown, (see Fig. 2), one of the sides of the inclosing casing is formed with double walls 63 and 64, the space 71 between these walls affording a passageway for the delivery of independent ballots to the interior of the casing. It will be understood that the casing of the machine is contained within a suitable booth, as indicated in Fig. 1 of the drawings. This booth may consist of vertical posts 1, four in number; these posts being connected at their tops by suitable cross-bars and a swinging front bar from which the curtains of the booth will be suspended. Inasmuch as the mechanism for operating the front curtain bar 18 of the booth forms no part of the present invention, it will be sufficient to state that this front bar 18 will hang downward in vertical position when the booth is empty, and will be raised to the horizontal position shown in Fig. 1 by the voter manipulating an operating lever 27 through the medium of a handle 27^a when he enters the booth. In my present construction, as in that set forth in my above mentioned application No. 238,388, the shifting of the operating lever 27 not only serves to raise and lower the front curtain of the booth, but serves also, as the voter leaves the booth (and for such purpose shifts the lever 27) to lower the front curtain rod 18, to cause the registration of all the ballots that the voter has cast. On the other hand, the opposite shifting of the operating lever 27 to raise the curtain rod 18 and close the booth as another voter enters the booth, will serve not merely to close the curtain of the booth, but also to place the various parts of the mechanism within the machine in position to enable the voter to cast his ballots.

Through the top plate of the inclosing casing of the machine extend a number of rows of ballot keys, each row comprising keys in number corresponding to the number of offices that may be voted for, and these several rows (with the exception of one row of ballot keys commonly designated the "independent" or "irregular" voting keys) are commonly designated "party rows" or "groups" of keys. Adjacent each of the keys of the several rows or groups will be

marked the names of the offices for which corresponding ballots may be cast, and, in proximity to the names of such offices, will appear the names of the various candidates of the several political parties. Adjacent the row of independent ballot keys will appear, upon the top plate of the machine, merely the names of the offices to which candidates are to be elected. As the arrangement of party rows or groups of keys is well understood, and is fully set forth in my above mentioned application, it is not deemed necessary to illustrate the complete rows of keys; nor is it deemed necessary to illustrate the mechanism whereby the keys of the different party groups enable the voter to effect a registration of his ballot.

From front to back of the machine, and parallel with the rows of ballot keys, extend a corresponding number of "straight ticket" shafts 210, these shafts enabling the voter, who desires to cast ballots for all the candidates of any one political party, to do so by the simple manipulation of the corresponding straight ticket shaft. Adjacent the rows of ballot keys there extend also a plurality of actuator shafts 200, the movement of which causes the registration of the ballots in accordance with the ballot keys that have been actuated by the voter. The specific mechanism whereby the voter is enabled to cast his ballot for any of the candidates whose names appear upon the machine, the mechanism whereby the registration of the ballots is effected, and the mechanism whereby the casting of straight ticket ballots may be accomplished, form no part of the present invention; but to a better understanding of the present invention, the illustration of such parts to some extent seems necessary.

In Fig. 1 there are shown eight rows of ballot keys 160. The row of keys 160 appearing upon the left-hand side of the machine in Fig. 1 constitutes the independent ballot keys, while the remaining seven rows of keys belong to the various party groups. It will be understood, of course, that the keys in each party row or group, and, as well, also, the row of independent ballot keys, may include as many keys as are deemed necessary. In Fig. 1 of the drawings there are shown eight ballot keys 160. Each of these keys 160 may comprise a squared upper portion that extends through the top of the inclosing casing, this upper portion having connected thereto a plate metal body or lower portion that passes between suitable guides 4 (see Fig. 2). Each of the keys 160 is shown as provided with offset lugs 161 that engage slots 162 in a sliding indicator plate 163, so that the shifting of the keys serves to effect a corresponding movement of the indicator plates in order to show to the voter that the ballot key depressed is actuating the mechanism within

the casing. Each of the ballot keys 160 (of the independent ballot keys) is formed with a hole 164, through which extends loosely a pin 165 projecting from a plate 166 that is mounted to slide in vertical direction as the ballot key is moved. Each of the plates 166 (see Figs. 3 and 5) is formed with a long slot 167, the purpose of which will presently appear. Each plate 166 is mounted in manner free to slide between arms 170 and 171 that project laterally from the die shifters 172. Each of the arms 170 and 171 is formed with a hole 173, adapted to receive the stem 180 of a plunger 181, whereby the marking type will be carried. Preferably, the plunger 181 is formed with a chamber in which is set the die carrier, the outer portion of which carries the die or type 182. As shown, the die carrier is formed of two parts, viz: the parts 183 and 184, these parts being screw-threaded together. As shown, the part 183 is formed with a reduced stem that enters a correspondingly threaded hole formed through the part 184. A slot 185 is formed through the outer portion 183 of the die carrier and through this slot 185 passes a pin 186, the ends of which are embedded in the outer end of the plunger 181. By means of the sleeve or part 184 that sets upon the stem of the part 183 of the die carrier, the part 183 can be adjusted so as to cause the type or die 182 to properly make its impression upon the ballot, as will presently appear; and the pin 186 not only holds the type or die in proper position, but also allows for its adjustment, as last described. Upon the outer ends of the plungers 181 are the lugs or flanges 187 that set within, and are adapted to engage, lateral lugs or extensions 175 formed at the ends of the die-shifters 171. Each die-shifter 171 serves to shift two dies and each die shifter is mounted between a series of spacing-sleeves 176 that are carried by plates 177 fixed to the side plates 178 of the sections, (see Figs. 2 and 3).

In each of the ballot keys 160 is formed a slot 167 through which projects the short end 168 of a rocker-arm 169 that is mounted upon the independent or irregular straight ticket shaft 190. The opposite ends of the rocker-arms 169 are connected to links 191 that lead downward to interlocking mechanism that may be of any suitable construction. The purpose of this interlocking mechanism, as well understood, is to limit the number of ballot keys that the voter is at liberty to operate, and, preferably, this interlocking mechanism will comprise a series of slide blocks, the spreading of which will be effected by the lifting of the links 191. The particular construction of interlocking mechanism preferably employed will form the subject-matter of a separate application about to be filed by me in the United States

Patent Office and to which application reference may be had for a more complete understanding of the exact construction of such interlocking mechanism shown on Sheet 2 of the drawings. As shown, the lower ends of each pair of links 191 of each rocker-arm 169 are connected by a pin 217 and this pin 217 sets in a space 230 formed between the adjacent slide-blocks 221 and 222. The slide-blocks 221 and 222 comprise suitable plates to which are secured pins or studs 225 that extend above and below a supporting bar 224 along which the slide-blocks are free to move within certain limits. Adjacent the slide-block 221 and at the right thereof are the slide-blocks 220 that are also supported upon the bar 224, the blocks 220 being notched or cut away at their corners to admit the cross-pins 217 that unite the lower ends of the links 191 that lead to the rocker-arms 169. It will be understood by those familiar with this class of machines that all the interlocking slide-blocks mounted upon the bar 224 are so disposed that they can be separated only a distance sufficient to permit a connecting pin 217 at the end of one pair of links 191 to rise above the space 230 and between the upper portions of the slide-blocks, and when any pin 217 is thus lifted it will prevent the lifting of a pin 217 corresponding to any other ballot key and, hence, will prevent the operation of such ballot key and consequently will prevent the casting of more than one ballot for any one office.

There will be a rocker-arm 169 for each of the ballot keys 160, and each rocker-arm, as shown, is mounted upon a sleeve 192 through the squared hole of which passes the straight independent ballot shaft 190. Each rocker-arm 169 is formed with a segmental slot 193, into which extends a lug 194 that is formed on the sleeve 192, the lug 194 being much shorter than the length of the segmental slot or space 193. To the outer end of each of the die-shifters 171 is connected a pair of links 210', the opposite ends of which links are pivotally connected to an arm 211 that projects from a sleeve 212 that is mounted upon a rocker-shaft 213, the movement of this shaft being from the position shown by full lines to the position shown by dotted lines in Fig. 2 of the drawings.

By reference to Figs. 7 and 8 of the drawings, it will be seen that the end of the rocker-shaft 213 is connected by an arm with a link 239, to which link are connected the arms of the various actuator shafts 200, whereby the movement of the register wheels within the inclosing casing will be effected. This movement of the register-wheels, however, forms no part of the present invention, and, being completely set forth in my companion application No. 238,388, above mentioned, need not be here-

in described. By reference also to Figs. 7 and 8 it will be seen that the independent straight ticket shaft 190 carries at its end an arm 195 that is united by a link 196 to a rocker-arm 197 that is pivoted upon the stud 198, the opposite end of this rocker-arm 197 being connected by a link or rod 199 to an arm 281 projecting downwardly from a bar 278 that is mounted to slide transversely at the back of the machine. The bar 278 is provided with a number of slots 277 into which extend studs 276 that project from the arms 275 at the ends of the straight ticket shafts 210. The bar 278 is adapted to restore the straight ticket shafts to normal position, and, by reason of the connection of this bar to the independent straight ticket shaft, in manner above described, the movement of the bar 278 will also serve to restore the independent ballot keys to normal position. To the bar 278 is connected an arm 281' to which is pivotally attached the inner end of a shifter-bar 282, the free end of which extends outside of the machine, where it will be under the control of the officer of election. This shifter-bar is shown as furnished at its end with a hole 282^a to enable the bar to be conveniently grasped by the hand of the officer under whose immediate control this bar is, and the bar 282 is formed at some distance from its outer end with a hole 282^b to enable a lock (such as the hasp of a padlock, or other locking device) to be passed through the bar in order to limit the extent to which it may be moved inward, under certain conditions to be presently stated. The underside of the bar 282 is provided with a shoulder 283 adapted to engage with a pin 283^a, this pin serving to prevent the shifting of the bar 282 inward, so long as the pin 283^a is in engagement with the shoulder 283. When, however, the bar 282 has been lifted by the election officer, so that its shoulder 283 clears the pin 283^a, the bar 282 may be shifted back and forth to effect a corresponding shift of the bar 278.

Under the laws of some States, the voting of straight tickets is forbidden, such laws requiring that the voter shall operate each individual ballot key corresponding to the office for which a ballot is cast. Now, if the hasp of a padlock or other locking device be inserted in the hole 282^b of the bar 282, this bar 282 can then be moved inward only to the extent shown in Fig. 8 of the drawing; and this restriction of the inward movement of the bar 282 correspondingly limits the inward movement of the bar 278. When the movement of bars 282 and 278 is thus limited, the crank-arms 275 on the straight ticket shaft 210 cannot be turned to the left beyond the vertical position; nor, can the crank-arm 195 on the end of the shaft 190 be turned to the right beyond a

vertical position. By reference to the companion application 238,388, it will be seen that this restriction of the movement of the arms 275 on the straight ticket shafts 210 will prevent the straight-ticket shafts from setting the actuator mechanism in position to register the voter's ballots. So, also, by reference to Figs. 2, 7 and 8, it will be seen that the limited movement of the crank-arm 195 from the position shown in Fig. 7 to the vertical position shown in Fig. 8 of the drawings, will simply cause the rocker-sleeve 192 and its lug 194 (see Fig. 2) to turn until the lug 194 contacts with the shoulder at the lower end of the segmental slot 193 of the rocker-arm 169. Hence, this movement of the independent straight ticket shaft 190 and of the crank-arm 195 will not effect any downward movement of the independent ballot keys 160. Consequently, it will be necessary (when the movement of the bar 282 is restricted as above described) for the voter to depress individually each of the ballot keys 160 corresponding to the individual ballots that he wishes to cast. If, however, the inward movement of the bar 282 is not restricted as above described, and this bar 282 and the bar 278 be moved inward to the full extent, then the voter, by manipulating the independent straight ticket shaft 190, can turn this shaft and its crank-arm 195 to the left (from the position shown in Fig. 7) to a point beyond the vertical, and, as the crank-arm 195 passes this vertical position, the lug 194 (see Fig. 2) will engage the shoulder of the lower end of the segmental slot 193 and will turn all the rocker-arms 169 on such shaft in the direction of the arrow, (Fig. 2), thereby causing these rocker-arms to move downward simultaneously with all of the independent ballot keys 160. It will, therefore, be seen that whether the movement of the bars 282 and 278 be restricted or not, all the ballot keys may be simultaneously restored to raised or normal position. But, if the movement of the bars 282 and 278 be restricted, then the simultaneous depression, or voting movement, of the ballot keys 160, by the operation of the independent straight ticket shaft 190, is prevented, thereby requiring the individual manipulation of the several independent ballot keys 160 by the voter. The bar 282 is shown as provided with a hole 282^d adapted to receive the hasp of a padlock, the wire of a seal, or the like, in order to permit the machine to be locked so that the bar 282 cannot be shifted, and when the bar is thus locked, the operation of all the mechanism controlled by said bar 282 is prevented.

Parallel with the independent straight ticket shaft 190 extends the ballot holding shaft 400, that is furnished with sleeves 401 carrying ballot holding arms 402, adapted

to be projected through a slot 64^a in the wall 63 of the inclosing casing, this slot 64^a being located at a distance below the slot 64^b through which the dies or types 182 will be projected. These arms 402 may be flat plates arranged a sufficient distance apart along the shaft 400 to sustain a paper ballot when it has been inserted in the passageway or throat 63^a of the casing. Upon the end of the shaft 400, and preferably at the back of the casing (see Figs. 7 and 8), is fixed a crank-arm 404 that is connected by a link 405 with a rocking lever 406 that is pivoted on a pin 280 projecting from the wall of the inclosing casing, this pin passing through a slot 279 formed in the bar 278. The lower end of the rocking-lever 406 is provided with a pin 407 that projects into a slot 408 formed in a bar 408^a, one end of which is connected to an elbow lever 287 that is pivoted upon a stud 288 that is mounted in supporting plates within the inclosing casing. A spring 410 connects the lower arm of the lever 406 with one end of the bar 408^a and serves to hold the pin 407 normally at one end of the slot 408. The upper end of the elbow lever 287 is arranged in position to be engaged by a pin 286 that projects from the bar 278 while the lower end of this elbow lever 287 is provided with a stud 289 adapted to enter a cam-slot 290 of a cam-block 291, shown by dotted lines in Figs. 7 and 8 of the drawings. Above the cam-block 291 is mounted another cam-block 246 in the slot of which projects a pin 244 at the lower end of an elbow lever 242 that is pivoted upon the stud 243 mounted in supporting plates within the inclosing casing, the upper arm of the elbow lever 242 being pivotally connected by a link 241 with a lever 240 that is mounted upon one of the actuator shafts, the upper end of this lever being connected to the bar 239. The cam-blocks 291 and 246, which form no part of the present invention, but are fully set forth in my companion application No. 238,388, serve to effect the movement of the elbow levers 287 and 242 when one voter shifts the operating lever 27 (see Figs. 1 and 9) to lower the curtain rod, as he leaves the booth, and when another voter, entering the booth, reversely shifts the operating lever 27 to raise the curtain rod and place the mechanism within the inclosing casing in position to receive his ballots. In Fig. 9 I have shown the power portion of the operating lever 27 where it is pivotally mounted on the back of the main casing, the upper portion of this lever being broken away. To the pivot shaft of the operating lever 27 is connected the arm 258 that is united by a pin 257 and a link 256 to a sliding plate 252, a plate-spring 255^a serving to brace the link 256 normally against the side of the plate 252. From the inner end of the plate 252

project the studs 251 and 294 through slots 250 and 293 in a plate 247, and from the outer end of the plate 252 project similar studs 251 and 294 through slots 250 formed in the plate 247. The studs 251 and 294 serve to transmit movement from the plate 252 to the cam-blocks 246 and 291, as will be readily understood by reference to my application No. 238,388 before referred to.

From the foregoing description, the manner in which a voter may cast an independent or regular ballot will be seen to be as follows: If it be assumed that the voter desires to vote an independent straight ticket (*i. e.*, to cast all the ballots that he is entitled to cast for parties whose names do not appear in the party groups upon the machine), then, as he enters the booth, he will turn the operating lever 27 so as to raise the front curtain of the booth, and this movement of the operating lever 27 will serve to shift the cam-blocks 291 and 246, as fully set forth in my above mentioned application No. 238,388, so as to cause the upper end of the elbow lever 287 to be moved away from the pin 286 of the bar 278. This movement of the upper end of the elbow lever 287 will shift the bar 408^a toward the right, thereby permitting the spring 410 to turn the lever 406 and cause the rod 405 to swing the crank-arm 404 toward the left (Fig. 7), and thereby move the card-holding arms 402 into the passageway 63^a, where they will be in readiness to sustain any ballot that may be placed within the passage way 63^a. The movement of the cam-block 246, which will occur slightly in advance of the movement of the cam-block 291, will have shifted the elbow lever 242, thereby causing the upper end of this elbow lever 242, through the medium of the rod 241 and the lever 240, to move the bar 239 toward the left (Fig. 7) thereby causing the crank-arm 213^a on the end of the shaft 213 to swing toward the left, and this movement of the rocker-shaft 213 will turn the crank-arm 211 (see Fig. 2) from the position shown by full lines to the position shown by dotted lines, in Fig. 2. Inasmuch, however, as this movement of the crank-arm 211, and consequent movement of the parts actuated thereby, must occur before any of the individual ballot keys 160 have been actuated, it follows that no movement of the dies or type 182 will be effected thereby. The election officer having control of the bar 282 will now lift the bar from off the pin 283^a and move the bar to its full extent, no padlock hasp being at such time within the holes of the bar. If, now, the voter desires to cast all his ballots for persons whose names do not appear upon the machine, he will write upon a paper ballot (to be furnished for such purpose and provided with spaces arranged in accordance with the offices for which ballots

may be cast) the names of the persons for whom he desires to vote. He will then insert such independent ballot within the passageway 63^a, and such ballot will be supported by the ballot-holding arms 402. The voter will then turn the crank handle 190^a upon the outer end of the independent straight ticket shaft 190, and, by so doing, will cause all of the rocker-arms 169 upon this shaft to turn in the direction of the arrow (Fig. 2) and to carry downward all of the independent ballot keys 160. As these independent ballot keys are thus moved downward, they will carry with them the slide plates 166 until the upper uncut portions of these plates come opposite the inner ends of the stems 180 of the plungers 181. The voter will then shift the operating lever 27 in order to lower the front curtain-rod of the booth to permit him to pass from the booth; and, in thus shifting the operating lever 27, he will cause the cam-blocks 246 and 291 to be moved from the position seen in Fig. 8 to the position shown in Fig. 7. This movement of the cam-blocks will first cause the cam-block 246 to shift the lever 242 in order to move the bar 239 toward the right, thereby turning the shaft 213 and its crank-arms 211 from the position shown by dotted lines to the position shown by full lines in Fig. 2 of the drawings. This shifting of the shaft 213 and its arms 211 will cause the dies or types 182 of all the plungers 180 to be moved outward and to impress or mark the ballot at such times supported by the ballot holding arms 402 within the passageway 63^a. If no inking ribbon, or like device, be employed within the passageway 63^a, then the marking of the ballot will depend simply upon the embossing of the ballot by the dies or types 182. The movement of the shaft 213 and its crank-arms from the position shown by dotted lines to the position shown by full lines in Fig. 2 of the drawings not only serves to effect the outward movement of the dies or types 182, but also serves to retract them, as shown by the drawings. This same movement of the operating-lever 27, as the voter leaves the booth, also causes the cam-block 291 to rock the elbow lever 287 and the upper end of this elbow lever 287 forces the lever 406 through the rod 405 to turn the ballot holding shaft 400 until the ballot-holding arms 402, carried by such shaft, are moved out of the passageway 63^a so as to permit the ballot to drop into the inclosing casing of the machine. This same movement of the elbow lever 287 causes its upper end to engage the pin 286 on the bar 278, thereby moving the bar 278 toward the left from the position shown in Fig. 8 of the drawings. As the bar 278 is thus moved toward the left, it will—through the medium of the rod 199, the lever 197, the link

196 and crank-arm 195—turn the independent straight ticket shaft 190 from the position shown in Fig. 8 to the position shown in Fig. 7, and, at the same time, will turn the various other straight ticket shafts (corresponding to the party groups), so as to restore to normal position the ballot keys of such groups. This movement of the independent straight ticket shaft will cause the rocker-arms 169 of such shaft to be turned in the direction the reverse of that shown by the arrow in Fig. 2 of the drawings, thereby lifting all of the independent ballot keys 160 to normal position, and in readiness to be actuated by the next voter.

If it be assumed that the machine is being operated under the laws of a State in which the voting of straight tickets is forbidden, then the election officer will insert the hasp of a padlock in the hole 282^b of the bar 282, so as to limit the inward movement of such bar and of the bar 278. The bar 278, thus restricted, can be moved inward only to the extent shown in Fig. 8 of the drawings, and, as above explained, with the bar 278 in such restricted position, the voter cannot, by the operation of the independent straight ticket shaft 190, depress the independent ballot keys 160, but must, by his hand, individually depress such keys. Again, if it be assumed that the voter desires to cast certain ballots for parties whose names appear upon the machine, and to cast certain other ballots for parties whose names do not appear upon the machine, he will depress certain of the independent ballot keys 160 corresponding to the offices other than those the keys of which he has depressed in one or more of the regular party groups. The operation of the ballot marking mechanism and its restoration to normal position will, however, be the same as above described. It will be understood, of course, that the depression of the independent ballot keys 160, by turning the rocking arms 169, will lift the rods 191 that extend to the interlocking mechanism. The object in providing the plates 166 with long slots is to insure the complete depression of ballot keys 160 and consequent movement of the interlocking mechanism before the solid portions of the plates 166 can be brought into position to cause the corresponding types or dies to be shifted to mark the ballots.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A voting machine comprising in combination a plurality of independently movable ballot keys, a plurality of ballot marking devices corresponding to and controlled by said keys, and interlocking mechanism interposed between and controlled by said keys, said ballot keys and said interlocking mechanism being retractile by the voter

until the ballot marking devices have been actuated.

2. A voting machine comprising in combination mechanism for marking a ballot, means for operating said ballot-marking mechanism, and a ballot key arranged to control the actuation of the ballot-marking mechanism by its operating means, said ballot key and controlling parts connected therewith being retractile by the voter until said operating means has been caused to actuate the ballot-marking mechanism.

3. A voting machine comprising in combination mechanism for placing an independent ballot beyond the voter's control, means for marking said independent ballot, means for operating said ballot-marking mechanism, a ballot key arranged to control the actuation of the ballot-marking mechanism by its operating means, said ballot key and the controlling parts connected therewith being retractile by the voter until said operating means has been caused to actuate the ballot-marking mechanism and until said mechanism for placing the independent ballot beyond the voter's control has been brought into operation.

4. A voting machine comprising in combination mechanism for marking a ballot, means for operating said ballot-marking mechanism and a ballot key arranged to control the actuation of the ballot-marking mechanism by its operating means, said ballot key being retractile by the voter and means independent of said ballot key for imparting movement to the means whereby the ballot-marking mechanism is operated.

5. A voting machine comprising an inclosing casing provided with a passageway adapted to receive independent ballots, in combination with means for holding said independent ballots within said passageway, a marking mechanism for marking said ballots, means for operating said ballot-marking mechanism and a ballot key arranged to control the actuation of the ballot-marking mechanism by its operating means, said ballot key being retractile by the voter until said operating means has been caused to actuate the ballot-marking mechanism and until the ballot-holding device within said passageway has been released.

6. A voting machine comprising in combination a plurality of devices for marking a ballot, operating mechanism for effecting the impression of said ballot-marking devices, a plurality of ballot keys arranged to control the actuation of the ballot-marking devices by said operating mechanism and means whereby several of said ballot keys may be simultaneously shifted.

7. A voting machine comprising in combination a plurality of devices for marking a ballot, means for operating said ballot-

marking devices, a plurality of ballot keys arranged to control the actuation of the ballot-marking devices by their operating means, means whereby several of said ballot keys may be simultaneously shifted in one direction to enable them to control the actuation of the ballot-marking devices and may be shifted in the opposite direction to restore said ballot keys to normal position, and means whereby the simultaneous shifting of said ballot keys to control the actuation of the ballot-marking devices may be locked or dogged.

8. A voting machine comprising in combination mechanism for marking a ballot, a ballot key, means controlled by said ballot key for causing the ballot marking mechanism to be actuated, and an interlocking device connected to said key, said ballot key being arranged to set said interlocking device before said key shifts to operative position, and means whereby the actuation of the ballot marking mechanism is controlled.

9. A voting machine comprising in combination, a movable die or type for marking a ballot, a ballot key, a slotted plate arranged to be shifted by said ballot key for causing the ballot marking dies or type to be actuated, and an interlocking device operated by said key, said slotted plate serving to enable the ballot key to set said interlocking device before said slotted plate is brought to position for causing the ballot marking die or type to be actuated.

10. A voting machine comprising in combination, a plurality of independently movable ballot keys, a plurality of ballot marking devices corresponding to said keys, mechanism common to all of said ballot marking devices for causing them to mark the ballots, and means controlled by each of said keys whereby the ballot marking device corresponding to said key may be caused to mark the ballot when said common actuating mechanism is operated.

11. A voting machine comprising in combination, a ballot key, means controlled by said ballot key for causing a ballot marking mechanism to be actuated, and a ballot marking mechanism comprising a movable die and means for adjusting the position of said die in the direction of its movement to insure the accurate operation of said die.

12. A voting machine comprising in combination, a plurality of ballot marking devices, a plurality of ballot keys, mechanism whereby any number of said ballot marking devices may be simultaneously actuated to cause them to mark the ballot, and suitable means connected with said ballot keys and arranged intermediate between said marking devices and said actuating mechanism whereby, by the shifting of said ballot keys, any one or more of said marking devices

may be caused to be shifted by the common actuating mechanism.

13. A voting machine comprising in combination a plurality of independently movable marking dies, plungers carrying said dies, a plurality of independently movable carrying dies, a plurality of independently movable ballot keys, a plurality of individual shifters for moving said plungers to cause the dies to mark the ballots and a plurality of devices controlled by said ballot keys whereby the shifter mechanism may be caused to actuate any one or more of the die-carrying plungers.

14. A voting machine comprising in combination a plurality of die-carrying plungers for marking ballots, a plurality of ballot keys corresponding to said die-carrying plungers, means shiftable by said ballot keys for controlling the actuation of said die-carrying plungers, a shifting mechanism whereby any one or more of said die-carrying plungers may be actuated, said shifter mechanism comprising a shaft and toggle-links whereby the plungers are actuated.

15. A voting machine comprising in combination a plurality of die-carrying plungers, a plurality of ballot keys, movable plates connected to said ballot keys through which plates the stems of said plungers may pass, a die-shifter carrying said plate and in which said plate is movably mounted and means for moving said die-shifter back and forth to operate the die-carrying plunger.

16. A voting machine comprising in combination a plurality of ballot-marking dies, plungers for carrying said dies, a die-shifter provided with arms perforated to permit the passage therethrough of stems projecting from the die-carrying plungers, and movable plates carried by said die-shifters and arranged to be moved by the ballot keys to prevent the passage of the plunger stems through said shifter arms and to cause the plungers to be moved by said arms.

17. A voting machine comprising in combination a ballot key, means controlled by said key for causing a ballot-marking die to be actuated, and a support for said die formed of screw-threaded adjustable sections.

18. A voting machine comprising in combination a die for making a ballot, a screw-threaded sleeve or part for adjusting said die, a plunger for supporting said die, a die-shifter for actuating said plunger, a ballot key and means controlled by said ballot key for determining the operation of said die-shifter.

19. A voting machine comprising in combination a die for marking a ballot, a plunger chambered to receive said die, a pin connecting said die to the plunger, an adjustable screw-threaded part within said plunger for

determining the exact movement of the die, a ballot key and means controlled by said ballot key whereby the movement of the die can be controlled.

20. A voting machine comprising a casing having a passageway for a paper ballot, one side of said passageway being open, a ballot-marking device adapted to be projected through the side of said passageway, a ballot supporting device arranged to be moved in and out of said passageway, means for shifting said ballot-marking device, a ballot key and means controlled by said ballot key for determining the movement of said ballot-marking device from said passageway when the actuation of the ballot-marking device has occurred.

21. A voting machine comprising in combination a casing having a passageway for a paper ballot, a device for marking said ballot, means for holding said ballot temporarily in said passageway during the operation of the marking device, means for shifting said marking device, a ballot key for controlling the operation of said marking device, and means whereby the retraction of said ballot marking device is effected before the ballot is released by its holding means.

22. A voting machine comprising in combination a casing having a passageway for a paper ballot, a type or die for marking said ballot, a shaft provided with an arm arranged to extend into said passageway and beneath the marking device for temporarily holding the ballot in position to be marked, means for shifting said marking device, a ballot key and a part shiftable by said ballot key for determining the operation of any one of said ballot-marking devices.

23. A voting machine comprising in combination a casing having a passageway for paper ballots, means for detaining said ballots in said passageway, a plurality of ballot-marking devices arranged above said ballot-detaining means, a plurality of ballot keys and means controlled thereby whereby any one or more of said ballot marking devices may be moved to be actuated and a shifting device whereby the simultaneous movement of all the ballot-marking devices that are to be actuated is effected and means for simultaneously restoring to normal position the various ballot keys that have been actuated.

24. A voting machine comprising in combination a casing having a passageway to receive a paper ballot, a series of die-carrying plungers for marking said ballot, a series of die-shifters for moving said plungers, a plurality of ballot keys corresponding in arrangement to said die-carrying plungers, means whereby each of said ballot keys is enabled to control the actuation of its corresponding die-carrying plunger and

means for shifting said ballot holding device and for restoring said ballot keys to normal position.

25. A voting machine comprising a plurality of irregular vote indicators, one for each office to be filled, and a plurality of ballot impression devices, each having an impression face different from the others and controlled, one by each of said vote indicators, substantially as described.

26. A voting machine comprising a plurality of irregular vote indicators, one for each office to be filled, and freely movable into and out of set position to change a vote, a plurality of ballot impression devices each having an impression face different from the others and each controlled by one of said indicators, and means for causing an impression to be made from impression devices corresponding to indicators left in set position.

27. A voting machine comprising a plurality of irregular vote indicators movable into and out of voted position to change an irregular vote, one indicator for each office to be filled, a plurality of ballot impression devices one corresponding to each indicator and each having an impression character different from the others and means for causing the ballot impression to be made subsequently to the movement of the irregular indicator to voted position.

28. A voting machine comprising a plurality of irregular vote indicators movable into and out of voted position to change an irregular vote, one indicator for each office to be filled, a plurality of ballot impression devices one corresponding to each indicator and each having an impression character different from the others and means for causing the ballot impression to be made and the ballot fed subsequently to the movement of the irregular indicator to voted position.

29. A voting machine comprising a plurality of irregular vote indicators movable into and out of voted position to change an irregular vote, one indicator for each office to be filled, a plurality of ballot impression devices one corresponding to each indicator, and each having an impression character different from the others to identify the ballot with the corresponding office to be filled, and means for causing the impression to be made and the ballot to be deposited subsequently to the movement of the irregular indicator to voted position.

30. In a voting machine, the combination of a plurality of irregular vote indicators movable into and out of voted position to correct or change an irregular vote, a plurality of ballot impression devices one corresponding to each indicator, each of said indicators being arranged to place the corresponding impression device into and out of condition for operation, and means for ef-

fecting the impression of the devices in operative condition upon a ballot.

31. The combination of an oscillating shaft, a crank thereon, links connected to said crank; a die shifter connected to said links and reciprocated thereby, a normally inactive die positioned in line with said reciprocating die shifter and separated therefrom by a plate movable transversely to said die and die shifter to fill the opening between them and compel them to move in unison.

32. The combination of an oscillating shaft, a crank thereon, links connected to said crank; a die shifter connected to said links and reciprocated thereby, a normally inactive die positioned in line with said reciprocating die shifter and separated therefrom by a plate movable transversely to said die and die shifters to fill the opening between them and compel them to move in unison, and means for moving transversely a plurality of said plates in unison.

33. A voting machine comprising a plurality of irregular vote indicators, one for each office to be filled, and a plurality of ballot impression devices, each having an impression face and controlled, one by each of said vote indicators.

34. In voting machines, the combination with a holder for independent and irregular ballots, of a series of printing heads, key-controlled means for setting said heads and motor devices for effecting the relative movement between said ballot holder and said printing heads.

35. In voting machines, the combination with a holder for independent or irregular ballots, of a series of movable printing heads coöperating therewith, key-controlled means for blocking the movement of said heads and motor mechanism for shifting said ballot holder to and from said heads.

36. In voting machines, the combination with a sliding holder for independent or irregular ballots, of a series of loosely mounted printing heads coöperating therewith, key-controlled means for blocking the movement of said heads, a receiver for the ballots and motor devices for moving said ballot holder to and from said printing heads and for delivering the ballot to said receiver.

37. In voting machines, the combination with a receiver for independent or irregular ballots, having a slot, of a shifting ballot holder normally in line with said slot, a series of printing heads, keys for blocking said heads and motor mechanism for shifting said ballot holder out of line with said slot as the voter is admitted to the machine and for advancing said holder to and from said printing heads and back into line with said slot as the voter leaves the machine.

38. In voting machines, the combination

with a shifting holder for irregular or independent ballots, of a series of slidable printing heads cooperating therewith, key-controlled means for blocking the movement of said heads, motor devices for shifting said holder to and from said heads, both as the voter enters and as he leaves the machines, means actuated by said motor devices for locking and restoring said keys, the motor

mechanism being arranged to shift said holder in advance of said locking and restoring devices both as the voter enters and as he leaves the machine.

JAMES H. DEAN.

Witnesses:

GEORGE P. FISHER, Jr.,
KATHARINE GERLACH.