

1,108,384.

4 SHEETS—SHEET 1.



A. J. Harman

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by Wright, Brown & Lundy
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J. McTAMMANY.
VOTING MACHINE.
APPLICATION FILED SEPT. 23, 1897.

Patented Aug. 25, 1914.
4 SHEETS—SHEET 2.

1,108,384.

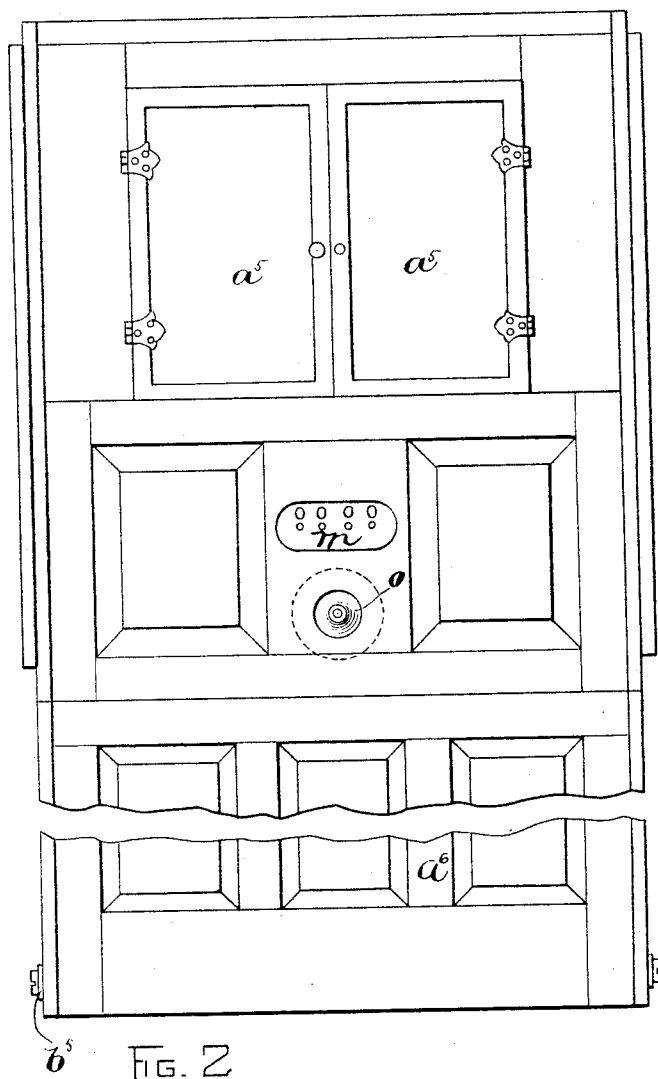


FIG. 2

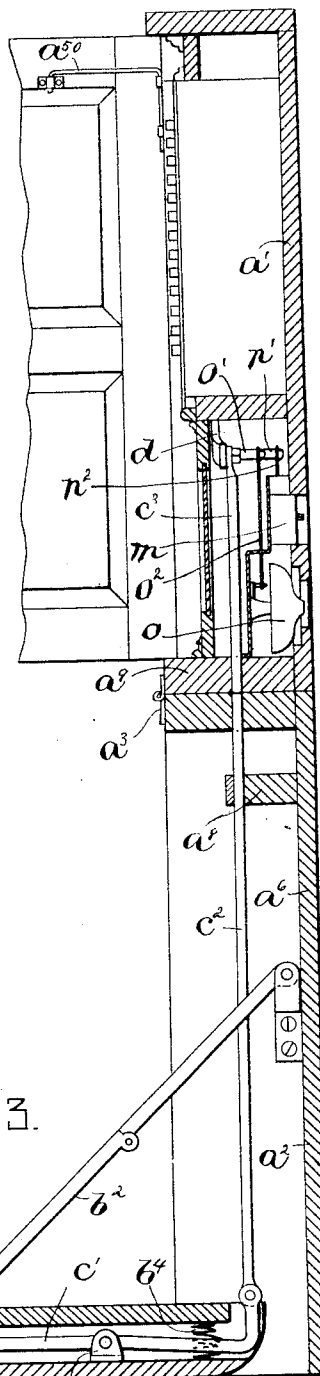


FIG. 3.

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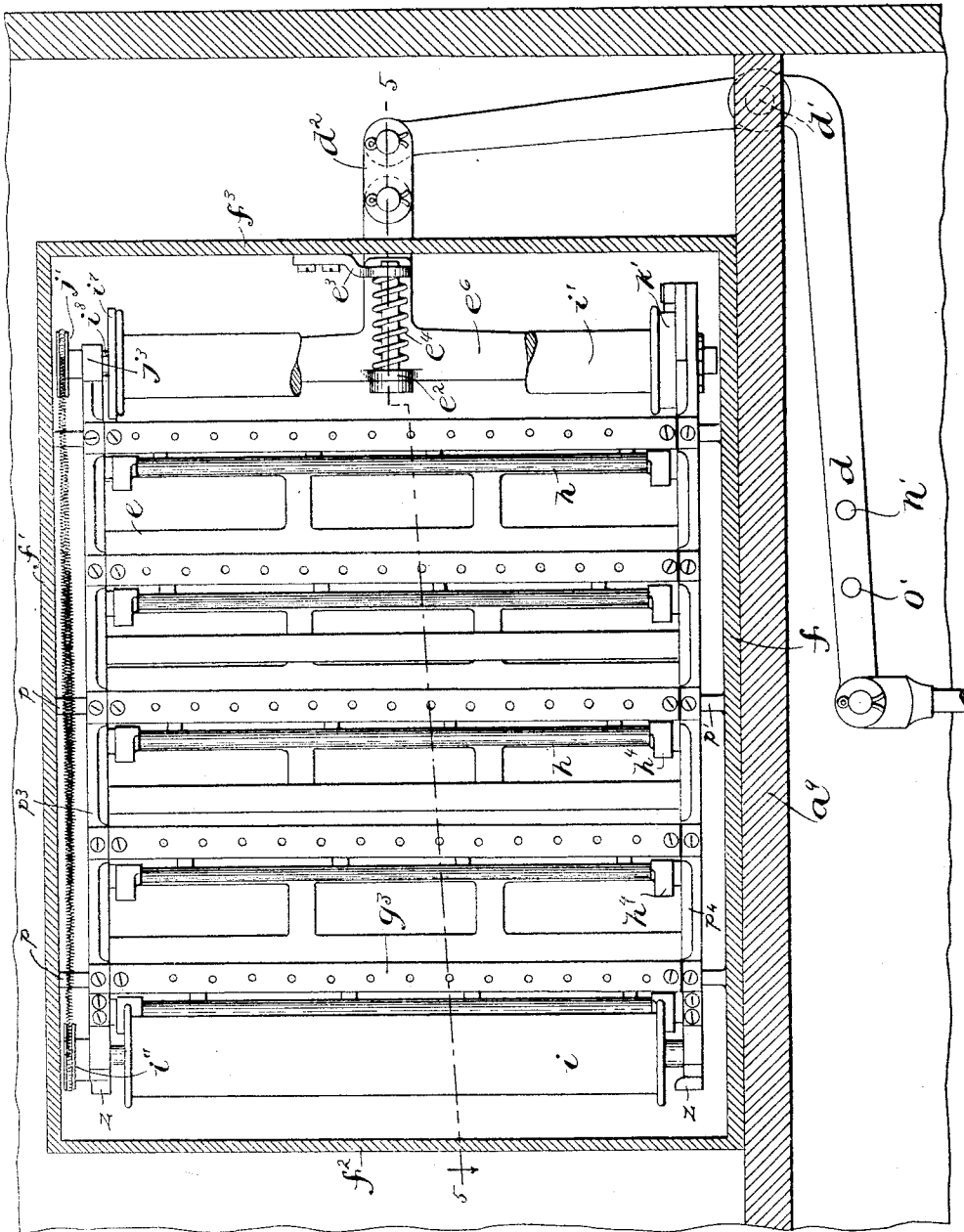
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4 SHEETS-SHEET 3.



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FIG. 4.

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4 SHEETS-SHEET 4.

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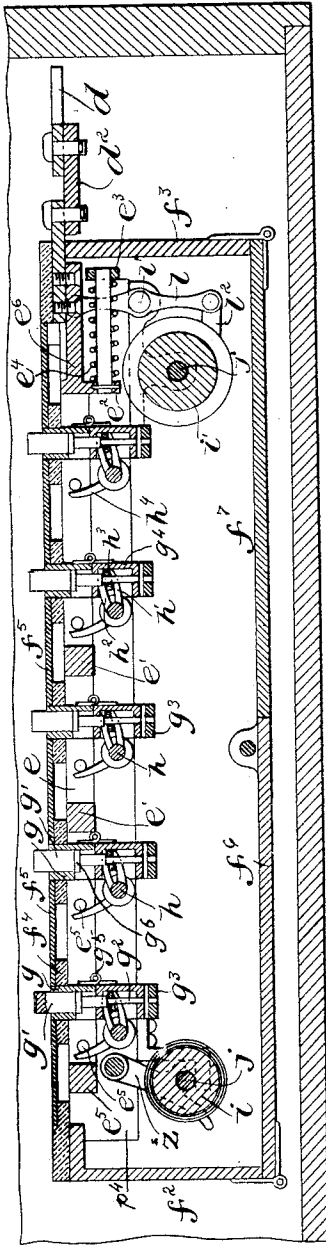


FIG. 6

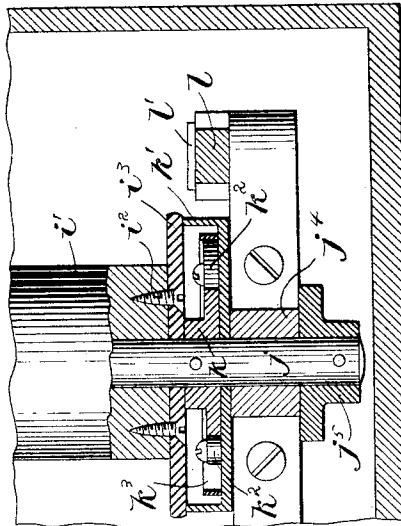
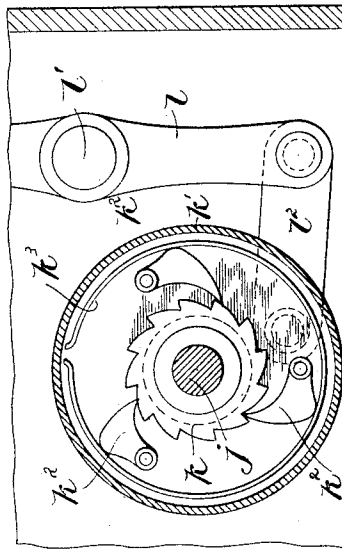


FIG. 7

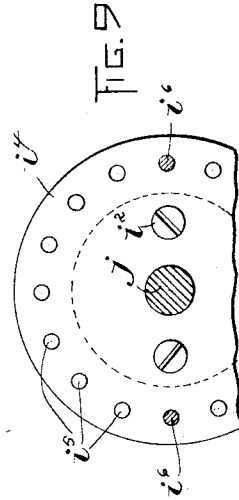


FIG. 9

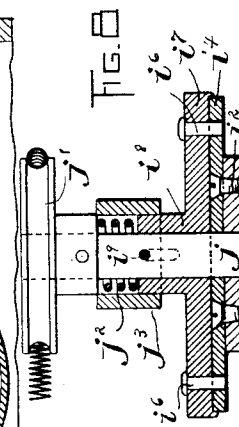
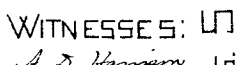
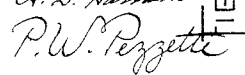


FIG. 10

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UNITED STATES PATENT OFFICE.

JOHN McTAMMANY, OF SPENCER, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO McTAMMANY BALLOT COMPANY, OF PORTLAND, MAINE, A CORPORATION OF MAINE.

VOTING-MACHINE.

1,108,384.

Specification of Letters Patent.

Patented Aug. 25, 1914.

Application filed September 23, 1897. Serial No. 652,704.

To all whom it may concern:

Be it known that I, JOHN McTAMMANY, of Spencer, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

This invention has relation to voting machines, and it consists of a machine possessing those features of construction and arrangement which are fully illustrated in the accompanying drawings and are now to be described in detail, and then pointed out in the claims hereto appended.

Reference is to be had to the accompanying drawings and to the letters and figures marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

Of the drawings.—Figure 1 shows in a perspective view a voting machine embodying my invention. Fig. 2 represents a rear elevation of the same, parts being broken away. Fig. 3 represents a vertical section through the machine. Fig. 4 represents a vertical cross section through the same. Fig. 5 represents a section on the line 5—5 of Fig. 4. Figs. 6, 7, 8 and 9 show in detail one of the paper voting rolls and the mechanism for imparting a step-by-step movement thereto.

Referring to the drawings, on which I have illustrated one form of machine in which my invention is embodied, the vertical frame a is formed in two halves a' a'' hinged together at a^3 a^3 . The upper half of the frame contains the vote recording mechanism and is provided at its front face with two doors a^4 a^4 which may be closed to conceal the punches, and the mechanism therein contained. When opened, the doors form a booth for the voter so as to prevent his vote from being observed. They are held open by swinging braces a^{50} . The frame is also provided in the rear with two doors a^5 a^5 which are normally locked but may be opened to remove the perforated strip of paper on which the votes are recorded. The lower half a^2 of the frame is provided with a solid back a^6 suitably paneled or otherwise ornamented, and in the base thereof is hinged the support b for the platform b' . Jointed struts b^2 connect the support b with

the side of the lower half of the frame to hold the support and the frame steady when the machine is to be employed for voting.

The platform b' is hinged at b^3 to the front of the support b and is held flush with the edges of the sides thereof by a powerful coiled spring b^4 placed underneath it. The support and platform may be swung upon their pivots b^5 so as to lie within the lower half of the frame and the upper half of the frame may be folded over the lower half so as to fit snugly over the same. When the parts are thus folded together, they may be locked in any suitable or desired way, and for the purpose of transporting the machine, the frame is provided with handles a^7 , the support b being also formed with a handle b^6 , as shown in Fig. 1.

Pivoted in ears or lugs extending upwardly from a bracket c in the support b and below the platform b' is a lever c' having its free end bearing against a plate c^x secured on the under side of the platform and having its other end bent upwardly and pivoted to a connecting rod c^2 which projects upwardly through the top of the lower half of the frame. Its upper half c^3 is entirely disconnected therefrom but rests against it when the parts are in the position shown in Fig. 3. This rod c^2 c^3 is thrust upwardly each time a voter steps upon the platform b' , the lower half of the rod being guided in its movements by a guide a^8 projecting out from the back of the lower half of the frame, and the upper half of the rod being guided by being passed through the bottom a^9 of the upper half of the frame. By reason of the lever c' being pivoted to the rod c^2 and the rod c^2 being formed in two disconnected portions, the support and the platform hinged therein may be readily folded within the lower half of the frame, when the support and platform are swung about the pivots b^5 . The rod c^2 c^3 is connected at its upper end to a bell crank lever d pivoted at d' and having its upwardly extending arm connected by a link d^2 to a sliding frame consisting of transverse bars e , up-rights e' , and end bars e^5 e^6 . The end bar e^6 of this sliding frame is formed with a lug e^2 between which and a lug e^3 secured to the framework or box (hereinafter referred to) which contains the voting mechanism, is placed a strong spring e^4 which normally

holds the sliding frame in its operative position.

Within the upper half of the frame and resting upon a partition a^9 extending across the same, is placed the above mentioned box which has top and bottom walls f f' , end walls f^2 f^3 , a front wall consisting of vertical strips f^4 and glass strips f^5 , and a rear wall consisting of two swinging doors f^6 f^7 , which may be held closed by any suitable locking mechanism, and by opening which access may be had to the record strip.

The sliding frame before referred to is placed within the box and operates for a purpose to be described. The top and bottom walls f' and f of the casing are provided with blocks or guides p p' respectively to which are detachably secured flat frame bars or elongated strips p^3 p^4 , as shown in Fig. 4. At their ends, the frame bars are equipped with journals for the rolls which support the vote receiver or tally sheet, and between their ends they are adapted to receive a plurality of frames or sections, each equipped with a series of vote-tabulating devices. These frames are interchangeable, as shown in Fig. 5, and may be removed at will in case there are fewer parties of different political complexion in the field. Each frame is formed in two hinged portions, (see said last-mentioned figure,) and each extends into the slot formed by the parallel strips in the front plate f^4 of the casing, with the edges flush therewith. The front portions g g' of the sections or frames, are formed of bars which are rabbeted, and are provided with a plurality of round holes to receive the actuators or pushes g' which project a short distance in front of the wall f^4 of the casing. Thus the actuators are arranged in a plurality of parallel vertical rows, separated far enough apart to permit the voting lists or captions to be placed between them, there being an actuator for each candidate. Preferably all the actuators for the candidates of any one political party are arranged in a vertical row, there being of course as many rows as there are parties. The rear portions g^4 of said frames consist of grooved or recessed bars which are connected by hinges g^5 to the front bars g , so as to form continuations thereof, and they are each apertured to receive a plurality of vote tabulating devices or punches g^2 arranged directly behind the actuators, so that when any of the latter are manipulated by a voter, the corresponding punches are also actuated. The rear ends of the actuators are flanged as at g^6 to prevent their being pulled through the front portions of the frame, and also to furnish heads to engage the ends of the punches. Said punches abut directly against the actuators, and are long enough to be projected through the vote receiver or tally sheet behind the rear por-

tions g^4 of the frames. By hinging the two portions of each frame together, they may be separated to permit the insertion of the actuators and the punches, and after the frames are inserted vertically between the frame bars, the securing devices which fasten them to the latter, likewise hold them against movement relatively to each other.

In the recess, or between the front and rear parallel webs or ribs of each rear half of the frames is a resetter, or resetting plate h^3 through apertures in which the punches loosely pass, and as will be seen from an inspection of Fig. 5, the latter are provided with shoulders to be engaged by said plates. When the actuators of any row are thrust inward, carrying the punches with them, the latter force the resetting plate back, and hence by moving the said plate forward, in the opposite direction, the punches and the actuators are reset, or returned to normal position.

The resetters or resetting plates are under the control of the voter, and operate to prevent the manipulation of the actuators until he has stepped on the movable platform; and the movement of the platform unlocks the resetters and renders the actuators accessible or operable. Each resetting plate is operated and locked in its operative position by a rock shaft h journaled in bearings afforded by the rear portion g^4 of the frame, so that it is removable with said frame. Each said shaft is formed or provided with arms h' h^2 extending in front of and behind the plate, and loosely engaging it, and is rocked by its arms h^4 h^4 which are engaged by pins e^5 on the cross-bars e of the sliding frame. The said sliding frame is placed between the vote-tabulating frame, and the front wall of the casing, and hence the arms h^4 project forwardly as shown. Normally, the strong spring e^4 holds the sliding frame in the left extreme of its movement, and consequently the pins e^5 lock the rock-shafts against movement, and they in turn prevent the actuation of the punches and the actuators. At this time, the actuators are practically inaccessible to the voter. But when the platform is depressed by the voter stepping upon it, the sliding frame is drawn to the right, to disengage the pins e^5 from the arms h^4 , to unlock the actuators, and permit them to be manipulated. As soon as the voter steps down from the platform, the spring e^4 immediately and automatically returns the sliding frame to its original normal position to reset and lock the punches and the actuators.

To provide an abutment for the vote receiver or tally-sheet, to resist the thrust of the punches, each vote-tabulator frame, is provided with a strip g^3 , secured by screws to the rear portion thereof, and also secured at its ends to the frame bars p^3 p^4 . There is

a space between each strip g^a and the rear web or rib of the frame g^4 adequate to receive the tally-sheet and permit it to be drawn therethrough. As previously stated, the tally-sheet is supported by rolls i i' journaled in the ends of the frame bars p^3 p^4 . This last mentioned roll i' is connected by screws i^2 at its ends to disk i^3 i^4 , as shown in Figs. 6 and 8, all being loose upon a shaft j . The disk i^4 is provided with a series of holes i^5 to receive two or more pins i^8 projecting through a disk i^7 which confronts it, as shown in Fig. 8. This disk i^7 has its hub i^3 slotted to receive a pin i^9 passed through the said shaft j . A pulley j' is pinned to the shaft j and between the hub thereof and the hub i^3 of the disk is placed a spring j^2 concealed by the sleeve j^3 . Thus it will be seen that the disk i^7 may be moved longitudinally of the shaft against the stress of the spring j^2 to permit the roll i' to be rotated backwardly to allow the paper to be unwound therefrom, and wound upon the roll i . The last mentioned roll is removable, being held in its bearings by the pivoted yoke z . The shaft j is journaled in bearings j^4 , projecting out from the framework in the box and provided with one or more collars j^5 pinned thereon. A ratchet wheel k is pinned to the shaft j and in an oscillatory shell k' , placed loosely on the shaft j are differentially spaced pivoted pawls k^2 k^2 all held inward by a circular spring k^3 so as to engage the ratchet.

A lever l pivoted at l' (see Fig. 5) is connected to the sliding frame and its lower end is connected to the pawl carrying shell by a connecting rod l^2 pivoted to the latter at a point remote from the shaft j . The foregoing parts are so arranged that when a voter steps upon the movable platform, the sliding frame is moved to the left to permit the actuators to be pressed inward and the ratchet wheel is rotated one step so as to advance the paper and when the voter steps off from the platform, the sliding frame returns to its original position and the movable resetters, or resetting plates h^3 thrust the buttons inward and hold them against movement. Between a pulley i'' connected to the roll i and the pulley j' is a crossed spiral spring belt which keeps the paper taut. This spring likewise performs another function for by reason of its being crossed, it acts as a drag to hold the roll i against rotation, and hence when a large voter jumps or steps heavily upon the platform, the spring operates to prevent a surplus of paper being drawn forward with a jerk, and thereby cause the perforations to be unevenly spaced.

A registering mechanism is conventionally indicated at m (see Fig. 3) to register the number of voters, and a gong is shown at o which is sounded by the voter stepping

off from the movable platform. The registering mechanism is operated by the rod c^2 c^3 and the lever d , there being a pin n' projecting out from the said lever and connected by a link n^2 with the said mechanism. A similar link o^2 connects a pin o' on said lever with the striker of the gong, and hence when a voter steps on the platform the registering mechanism is actuated, and the gong is sounded when he steps off.

Thus, from the foregoing, it will be seen that I have provided a very simple and compact voting machine which may be folded into very small space and, when not in use, may be packed or stored away in a convenient manner. There are practically no parts to get out of order and the mechanism is very simple and durable.

Parts of my invention may be applied to registering as well as to recording voting machines, and the said invention is not limited to the exact form or details of the machine described.

As has been described, the spring e^4 is a strong one, so strong, in fact, that it requires the weight of a voter on the platform, to overcome it. As illustrated and described, said spring, when it is permitted to act to shift the sliding frame longitudinally and transversely of the path of the actuators, causes the strips h^3 to engage shoulders on the push buttons or actuators, so as to thrust the latter forward and positively hold the actuators against being forced inward by the voter. Said spring therefore constitutes a motor for so actuating the sliding frame that the latter will positively move those actuators which have been voted, to unvoted position and hold them in unvoted position. This acts to prevent the operation of the keys or actuators of the machine while there is no voter within the voting booth provided by the entire structure when opened out, as shown in Fig. 1 and it prevents tampering with the machine or unauthorized voting, while the election judges are not noticing. It provides a voting machine which, by a single device holds all the counters from movement for future inspection.

Having thus explained the nature of the invention, and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made, or all of the modes of its use, I declare that what I claim is:—

1. A voting machine comprising a record strip, a series of manually operable punches, each adapted to perforate the record strip, a device movable by the voter before voting, and means controlled by the said device for returning the operated punches to original position and holding them against perforating movement.

2. A voting machine comprising a record

strip, a series of manually operated punches, each adapted to perforate the record strip, a movable platform, and means controlled by the platform for returning the operated punches to original position and holding them against inward movement.

3. A voting machine comprising a series of actuators each adapted to be thrust inward by a voter, a sliding frame, means actuated thereby for simultaneously returning the actuators to original position and holding them against movement, and a movable platform connected to said frame to draw it to inoperative position for permitting the manipulation of the actuators.

4. A voting machine comprising a plurality of actuators, each consisting of a longitudinally movable pin and adapted to be moved by a voter, a series of rock-shafts for moving said pins or actuators longitudinally to original position, and voter-controlled means for simultaneously actuating all of said rock-shafts.

5. A voting machine comprising a series of actuators, each adapted to be manipulated by a voter, a series of rock-shafts for positively returning said actuators to original position, a sliding frame for simultaneously actuating said shafts and the voter-controlled platform connected to the frame.

6. A voting machine, comprising a series of actuators, each adapted to be thrust inward by a voter, a record strip, and voter controlled means for returning said actuators to original position and feeding said record strip.

7. A voting machine, comprising a series of actuators, each adapted to be thrust inward by a voter, a series of rock shafts for positively returning said actuators to original position, a record strip, rolls therefor, and voter controlled means for operating said shafts and actuating said rolls to advance the record strip.

8. A voting machine, comprising a series of actuators, each adapted to be thrust inward by a voter, a record strip, means for returning said actuators to original position after being actuated, means for feeding said record strip, and a movable platform operating to actuate the feeding mechanism when a voter steps thereon, and to actuate the said actuator returning means when the voter steps thereoff.

9. A voting machine comprising voting mechanism a register for the number of votes, an alarm, a movable platform, and connections between said platform and said alarm and said register so arranged that when a voter steps on the platform the register is actuated, and when the voter steps off the platform the alarm is sounded.

10. A voting machine, comprising voting mechanism, a movable platform which con-

trols the voting mechanism, and a frame formed in two hinged sections, one section containing the voting mechanism, and the other containing the platform.

11. A voting machine comprising an upright frame formed in two hinged sections, a voting mechanism in the upper section, a base pivoted in the lower section, and a platform controlling the voting mechanism pivoted upon the base, the construction and arrangement of the said elements being such that the base and platform may be folded in the lower section of the frame, and the two sections of the frame folded together.

12. A voting machine comprising an upright frame formed in two hinged sections, a platform foldably mounted in the lower section, voting mechanism mounted in the upper section, and a two part rod connecting said platform with said mechanism.

13. A voting machine comprising a plurality of actuators, a vote-receiving sheet, rolls for supporting and feeding said sheet, means for imparting an intermediate rotatory movement to one of said rolls, and operative yielding connections between said rolls, said connections operating as a drag and retracting device for the actuated roll, to prevent the sheet from being moved beyond a predetermined distance.

14. A voting machine comprising voting mechanism, a platform on which the voter stands to vote, means for rendering the voting mechanism inoperative, and connections between said platform and said means, said connections including a lever extending under said platform, whereby when a voter steps on the platform the voting mechanism is freed.

15. A voting machine comprising voting mechanism, a platform hinged at its front edge, means for rendering the voting mechanism inoperative, and connections between the platform and the voting machine, said connections including a lever having its front end resting under and against said platform, whereby when a voter steps on the platform the voting mechanism is freed.

16. A voting machine comprising voting mechanism, a platform hinged at its front edge, means for rendering the voting mechanism inoperative, and connections between the platform and the voting machine, said connections including a lever having its front end resting under and against the middle portion of said platform where the voter usually stands, whereby when a voter steps on the platform the voting mechanism is freed.

17. A voting machine comprising voting mechanism, a platform hinged at its front edge, means for rendering the voting mechanism inoperative, and connections between the platform and the voting machine, said

connections including a centrally pivoted lever projecting forward and under the platform and having its front end bearing against the under-surface thereof, and a rod connecting the rear end of the lever with the voting mechanism, whereby when a voter steps on the platform the voting mechanism is freed.

18. A voting machine comprising voting mechanism, a lever controlling said mechanism, a rod connected to said lever, a second lever connected to said rod at the base of the machine, and having its free end projecting forwardly from the front of the machine, and a platform on which the voter stands to vote, arranged to rest upon the free end of the said second lever.

19. A voting machine comprising voting mechanism including a plurality of groups of actuators, a rock-shaft having means for resetting each group, a sliding frame for rocking said shafts in one direction and a spring holding said frame in position to keep the actuators in a reset position.

20. A voting machine comprising a plurality of horizontal actuators arranged in vertical rows, a plurality of vote tabulating devices in operative relation to said actuators, resetting mechanism engaging and arranged to reset the vote tabulating devices, and voter actuating means for controlling the resetting mechanism.

21. A voting machine comprising a plurality of actuators arranged in vertical rows, a plurality of frames having provisions for guiding said actuators in rectilinear paths in horizontal planes, a resetter for each row of actuators, a frame movable in a plane intersecting the paths of movement of said actuators for moving said resetters, and a platform on which the voter stands to vote operatively connected to said frame, whereby said resetters are under the control of the voter.

22. A voting machine comprising a casing, a plurality of independent vertical frames in said casing, each frame having a series of actuators, a vote tabulator, and a resetter; a platform; and connections between all of said resetters and said platform whereby the former are controlled by the latter.

23. A voting machine comprising a casing whose front wall is provided with slots, and a plurality of interchangeable and removable frames each registering with one of the slots and closing it, said frames each being provided with actuators and a vote-tabulator.

24. A voting machine comprising a casing whose front wall is provided with slots and a plurality of interchangeable and removable frames each registering with one of the slots and closing it, said frames each

being provided with a plurality of actuators adapted to be manipulated by a voter, a plurality of vote-tabulators, and a resetter for the actuators.

25. A voting machine comprising a plurality of frames, one or more actuators, and one or more vote tabulators carried by each frame, each of said frames being formed of two hinged parts, substantially for the purpose described.

26. A voting machine having a casing, a plurality of independent frames in said casing, each frame being formed in two separable parts, one or more actuators in one part of each frame, and one or more vote tabulators in the other part of each frame.

27. A voting machine having a casing, a plurality of independent frames in said casing, each frame being formed in two separable parts, one or more actuators in one part of each frame, and one or more vote-tabulators in the other part of each frame, said actuators and tabulators being provided with stops whereby they are incapable of dislodgment except when the parts of said frames are separated.

28. A voting machine comprising a plurality of actuators, vote tabulating mechanism, a support independent of said vote tabulating mechanism for said actuators, resetting mechanism for said actuators, and a platform for controlling said resetting mechanism.

29. A voting machine comprising a two-part frame, voting mechanism located in one part of the frame, a platform hinged to the other part of the frame, connections from the platform to the voting mechanism whereby said platform controls the voting mechanism, and doors hinged to the first mentioned part of the frame and adapted to cover the voting mechanism or to form a screen for the voter when he stands on the platform.

30. A voting machine comprising a frame formed in two movable sections or compartments, voting mechanism located in one compartment, doors for said compartment, struts or braces for holding said doors at an angle to screen the voter, a base adapted to be placed in the lower compartment, and struts or braces connecting said base with said frame.

31. A voting machine comprising a frame, voting mechanism located in one half of said frame, a base hinged in the other half of said frame and adapted to be folded thereinto, a platform pivoted in said base for controlling the voting mechanism, and adapted to be folded into said frame with said base, and means for covering the voting mechanism, said means constituting a booth for the voter when the machine is in use.

32. A complete portable voting machine comprising a voting mechanism, a platform for controlling said mechanism, and a frame to which said voting mechanism and said platform are attached, and screens also attached to said frame for forming a booth for the voter, said frame being foldable to completely inclose said screens, said platform and said voting mechanism, whereby the machine can be shipped or stored without danger of injury to any of the parts thereof.

33. A voting machine comprising a record strip, a series of manually operable punches each adapted to perforate the record strip, a device movable by the weight of the voter, and means controlled by said device for returning the operated punches to original position and locking them against perforating movement.

34. A voting machine comprising a record strip, tabulating mechanism including manually operable actuators and means ac-

tuated thereby for making a permanent record on said strip, a device movable by the voter before voting, and means controlled by said device for resetting the recording means and holding them against movement.

35. A voting machine including a casing, actuators on said machine, a member longitudinally movable and movable transversely of the path of the actuators, means for actuating said member to move those actuators voted to unvoted position and to hold them in unvoted position, and means extending outside the casing for controlling the movements of said member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses, this 20th day of September, A. D. 1897.

JOHN McTAMMANY.

Witnesses:

A. D. HARRISON,
C. F. BROWN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."