

No. 637,275.

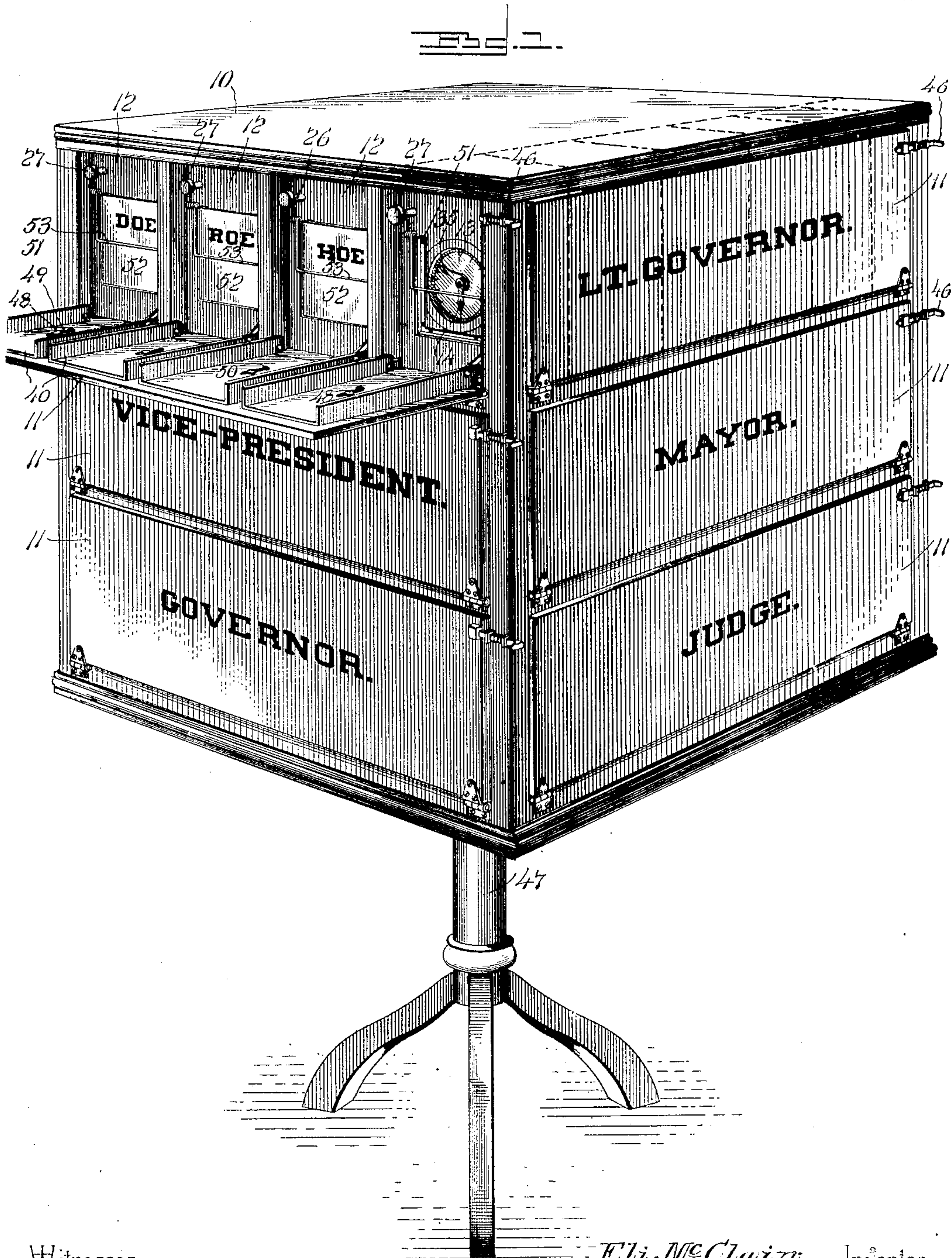
Patented Nov. 21, 1899.

E. McCLAIN.
VOTING MACHINE.

(Application filed Jan. 17, 1899.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses

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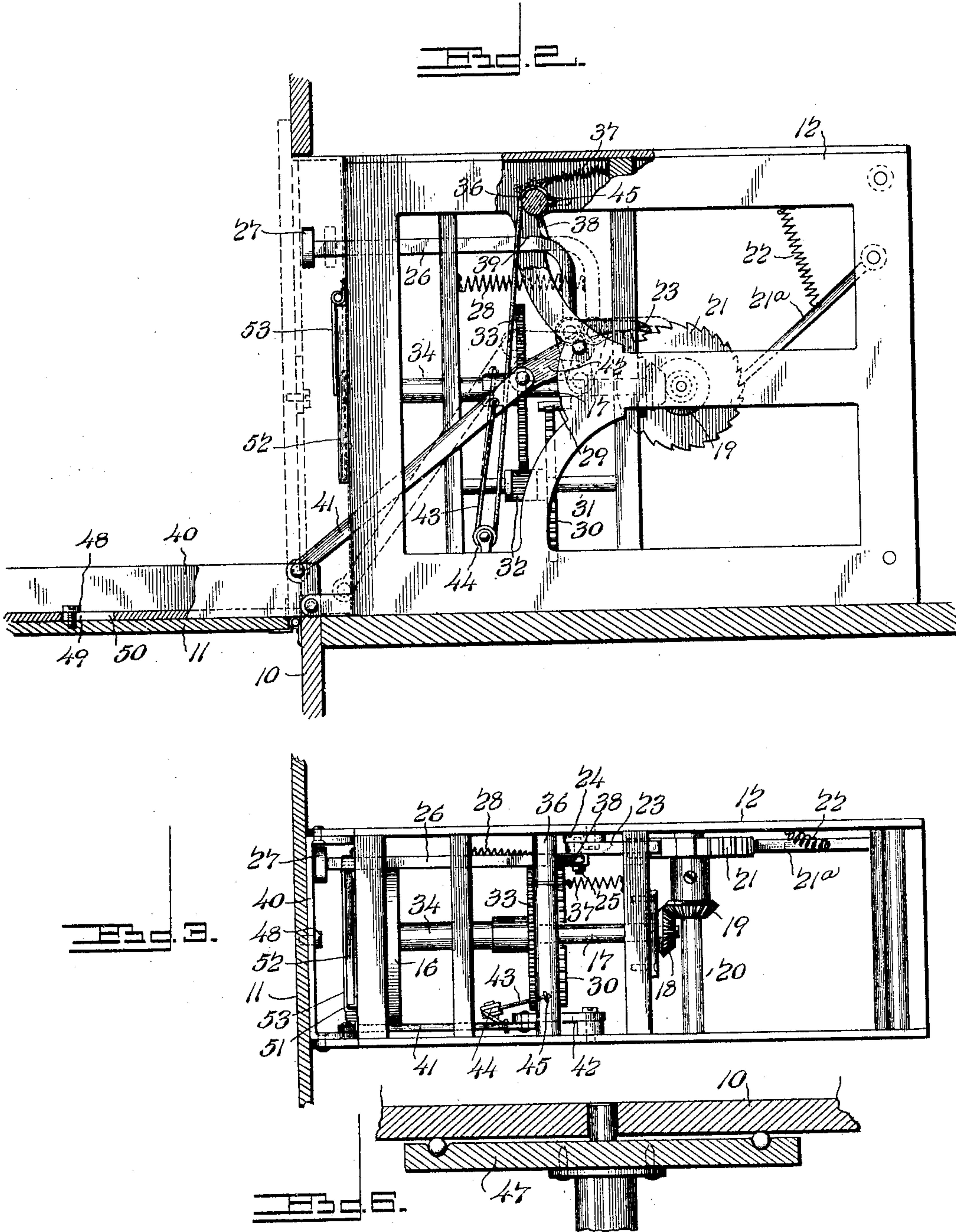
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3 Sheets—Sheet 2.



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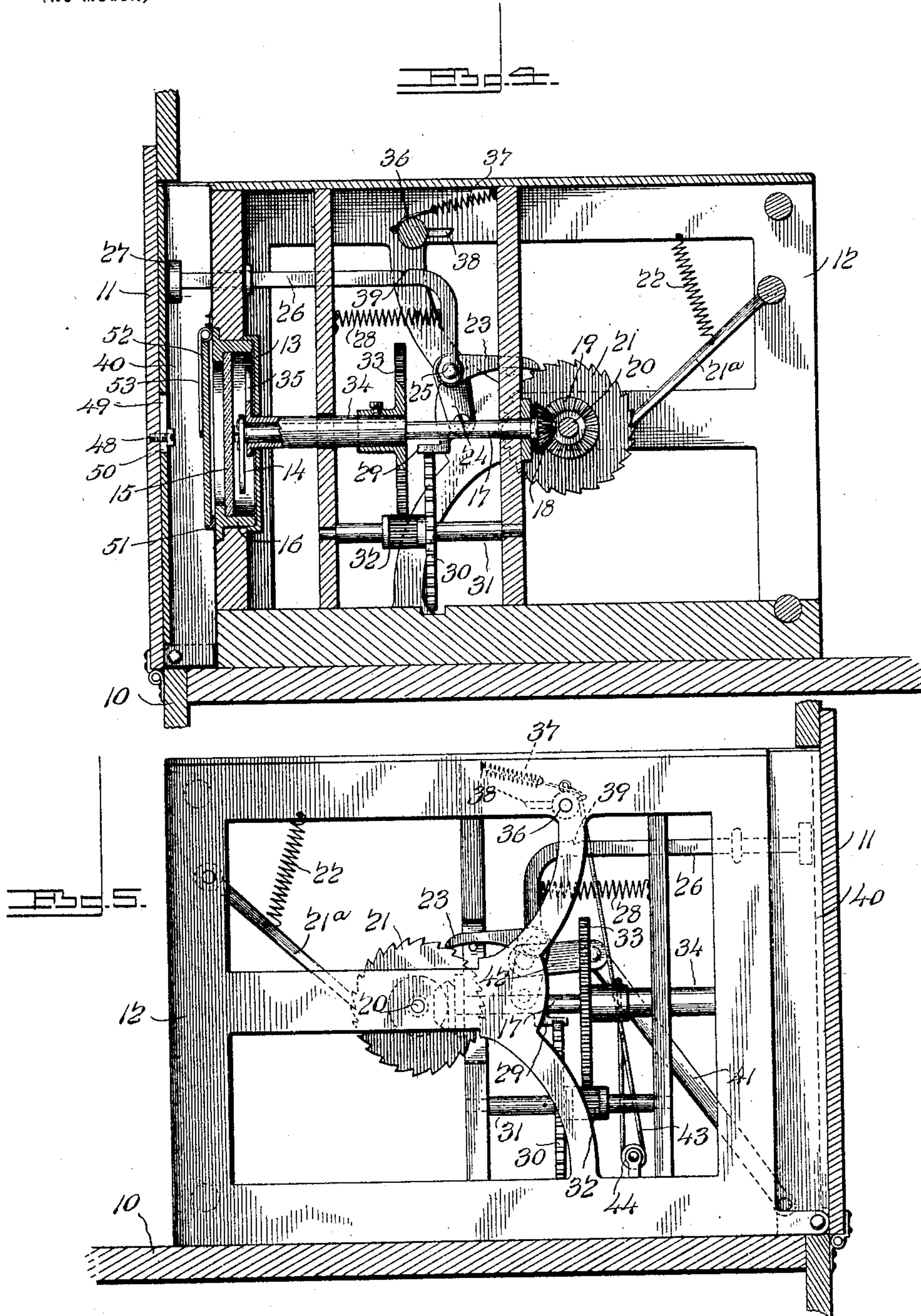
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3 Sheets—Sheet 3.



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UNITED STATES PATENT OFFICE.

ELI MCCLAIN, OF MAYNARD, ARKANSAS.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 637,275, dated November 21, 1899.

Application filed January 17, 1899. Serial No. 702,440. (No model.)

To all whom it may concern:

Be it known that I, ELI MCCLAIN, a citizen of the United States, residing at Maynard, in the county of Randolph and State of Arkansas, have invented a new and useful Voting-Machine, of which the following is a specification.

My invention relates to voting-machines, and has for its object to provide a simple and compact construction and arrangement of tally mechanisms designed for mechanically registering votes cast for different candidates, the mechanism being designed to insure the maximum accuracy and reduce to the minimum the chances of fraud.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a voting-machine constructed in accordance with my invention, one of the tier-doors of the casing being open to disclose the arrangement of the tally mechanisms. Fig. 2 is a side view, partly broken away, of one of the tally mechanisms, showing the setting flap or door in full lines in its open position and in dotted lines in its closed position. Fig. 3 is a plan view with the top plate omitted. Fig. 4 is a longitudinal vertical section. Fig. 5 is a side view opposite to that indicated in Fig. 2. Fig. 6 is a detail sectional view showing the antifrictional relation between the casing and a support therefor.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

The voting-machine embodying my invention is provided with a prismatic casing 10, in the faces or walls of which are formed openings fitted with closing-flaps 11, and communicating with each wall-opening is a series of compartments or pigeonholes for the reception of tally mechanisms by means of which votes for different candidates may be cast. In practice the number of tally mechanisms may be suited to the size of the voting district or precinct and to the peculiarities of the laws governing the voting therein; but preferably the tally mechanisms are arranged in horizontal tiers, a plurality of devices being arranged in each tier and each face of the casing being adapted for the reception of a plu-

rality of tiers. The tier-doors or casing-flaps 11 are preferably hinged at their lower edges, as shown, although it will be understood that this may be varied as may be found most convenient in manufacture.

Each tally mechanism consists of a frame 12, in the front of which is arranged a dial 13, provided with suitable graduations ranging consecutively from "1" to "50" or from "1" to "100," as may be preferred, and traversed by a units voting-hand or indicator 14. The dial is preferably covered by means of a glass or crystal 15, which preferably is of magnifying type of sufficient thickness to avoid accidental fracture, and thus protect the voting-hand or index and prevent fraud by the manual turning thereof, each dial being set in a cylinder or analogous box, as shown at 16. The voting-hand is carried by a spindle 17, which extends horizontally rearward into the frame and is connected by intermeshing bevel-gears 18 and 19 with a driving-shaft 20. This driving-shaft carries a ratchet-wheel 21, having a number of teeth corresponding with the graduations on the dial, whereby one complete revolution of the driving-shaft is adapted to cause a corresponding complete circular movement of the index or hand. This ratchet-wheel is held from backward rotation or excessive forward movement by means of a stop pawl or dog 21^a, actuated by a suitable spring 22 or the equivalent thereof, and forward step-by-step motion is communicated to the ratchet-wheel by means of an operating-pawl 23, which is carried by a spring-arm 24, suitably fulcrumed upon the frame. Connected with the swinging arm, as by means of an extension of the pivot 25 of said operating-pawl, is a push-bar or voting element 26, which extends forward beyond the front of the tally-mechanism frame and is fitted with a push-button 27. This voting key or element is yieldingly held in its normal or advanced position by means of a spring 28, which also serves to return it to its normal position when released, and it is obvious that by repressing said element in opposition to its return-spring motion will be communicated by the operating-pawl to the ratchet-wheel to cause the latter to advance one step, and thus through the intermediate gearing communicate a corresponding movement to the index to register one vote.

Carried by the index-spindle or other suit-

able rotary element of the mechanism which is arranged to operate synchronously with the index is a detent or finger 29, adapted for engagement successively with the teeth of a spur-wheel 30, of which the spindle 31 carries a pinion 32, and this pinion 32 in turn meshes with a gear 33, which is fixed to the spindle 34 of an index 35 of higher denomination, but also arranged to traverse the dial of the indicator and refer to the same graduations thereof. In practice the spindles of the two indexes are concentric, as shown in the drawings, the spindle of the index of higher denomination consisting of a sleeve fitted exteriorly upon the spindle of the units-index or that of lower denomination. Owing to the fact that the detent or finger on the spindle of the units-index comes in contact with a tooth of the spur-wheel only after a complete revolution of said units-index, it will be seen that the index of higher denomination, by reference to the graduations of the dial, will indicate the number of complete revolutions of the units-index.

Mounted transversely in the frame of the tally mechanism is a rock-shaft 36, having an actuating-spring 37, by which it is yieldingly held in its normal position, and also being provided with a locking-pawl 38, adapted for engagement with a notch or shoulder 39 in the voting key or element when the latter is repressed in opposition to its return-spring, and hence when the voting key or element is actuated by a voter to register a vote it is held in its repressed position by the engagement therewith of the locking-pawl until it is subsequently released by means of releasing or resetting mechanism, which in the construction illustrated consists of a resetting-flap 40, pivotally or hingedly mounted upon said frame of the tally mechanism and adapted to normally occupy a position covering the face of the dial, whereby said flap must be displaced in order to expose the dial and the voting-key to enable a voter to repress the voting slide or element, and connections between said resetting-flap and said rock-shaft whereby when said flap is closed the rock-shaft is actuated to withdraw the locking-pawl from engagement with the voting key or element and whereby when the resetting-flap is lowered or opened said locking-pawl is released for engagement with the voting key or element. In the construction illustrated these connections consist of a toggle-lever having pivotally-connected arms 41 and 42, of which the latter is pivotally mounted at its remote end upon the tally-mechanism frame and the former is pivotally connected with the resetting-flap at a point eccentric with the axis of said flap, and a flexible connection 43—such as a chain, cord, or wire—extending from the toggle-lever, preferably at an intermediate point of the arm 41, passing through the guide 44, and connected with a crank-arm 45 of the rock-shaft.

The resetting-flaps, as above indicated, nor-

mally occupy positions covering the dials and voting keys or elements of the tally mechanisms, one flap being employed for each tally mechanism, and these flaps are held in their normal positions by means of the above-described closing-flaps 11 of the casing, said closing-flaps being provided with latches 46 or similar locking devices, by which they are held in their closed positions. When the covering-flap is released by the disengagement of its locking device and is opened to give access to the tally mechanism of that tier, it being understood that only one covering-flap is employed for each tier of tally mechanisms in each face of the casing, the resetting-flaps are released and, by reason of the tension of the actuating-springs of the rock-shafts, are thrown down to expose the voting keys or elements for manipulation. As each voting key or element is repressed by the voter it is locked in that position to prevent further manipulation, and the release of the voting keys or elements can be accomplished only by the return of said resetting-flaps to their normal positions. This return of the resetting-flaps can be accomplished only by the closing of the covering-flaps with which said resetting-flaps are connected for simultaneous operation, and the opening and closing of the covering-flaps are under the control of the judges or officers of the election, and hence cannot be accomplished by the voter to reset the tally mechanisms for subsequent manipulation after the number of votes to which said voter is limited have been cast.

The casing of the apparatus embodying my invention is adapted to be swiveled upon a suitable support or stand 47, whereby either face of the prismatic casing may be arranged within reach of a voter, the movement of the casing being under the control of an officer of the election, whereby the different sides of the casing may be arranged successively to face the voter. Each covering-flap bears the name of an office for which the candidates whose names designate the several tally mechanisms concealed by said covering-flap are running, and in order that the resetting-flaps, which respectively cover the tally mechanisms, may be operated simultaneously with the cooperating covering-flap I may, as illustrated, employ a button 48 on the covering-flap to operate in a slot 49 in the resetting-flap, a button being provided for each resetting-flap. To facilitate the engagement of the covering and resetting flaps, the slots in the latter may be provided at one end with enlargements 50. Inasmuch as the opening of the covering-flaps is under the control of an officer of the election, the manipulation thereof by a voter in an attempt to cast votes fraudulently or to duplicate or multiply is prevented; also, to prevent the release of the mechanism or the resetting thereof before the covering-flap reaches its closed position I preferably employ a connection 43, which is of such length that it does not withdraw the

pawl from the notches of the voting-slide until the resetting-flap reaches its normal or closed position. The frictional contact of the connection 43 with the guide 44 is reduced to the minimum by providing said guide with a suitable antifriction-roll, as indicated.

To indicate the names of the candidates in connection with the tally mechanisms respectively allotted thereto, and also to conceal from voters the progress of the election, I employ in front of the crystal of each indicating device a card holder or clamp having a card-seat 51, into which a name-card 52 may be inserted, and a clamp 53 for closing the front side of the seat to maintain a card in place therein. The number indicated by the tally mechanism can be viewed only by removing the card, and this is secured in place, so as to prevent accidental displacement, and also to prevent the tampering of voters with the card during the time that the tally mechanisms are exposed for operation.

In practice various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described my invention, what I claim is—

1. In a voting-machine, a tally mechanism having a vote-indicating device, a voting key or element for operating said indicating device, a rotatable spring-actuated projection for locking the voting key or element in its repressed or voted position, said projection being adapted to be normally held in unlocked condition, a resetting-flap connected to said projection and normally arranged to conceal and prevent manipulation of the voting key or element, and a door or casing flap outside of and adapted to close against the resetting-flap.

2. In a voting-machine, a tally mechanism having a vote-indicating device, and a voting key or element for operating said indicating device, means for locking the voting key or element in its repressed or voted position, a resetting-flap normally arranged to prevent access to the voting key or element, and connections between the resetting-flap and said locking means, including a flap-actuated toggle-lever having one of its arms pivotally connected to said flap, and a flexible intermediary joining device between the toggle-lever and the voting key or element locking means, substantially as specified.

3. In a voting-machine, a tally mechanism having a vote-indicating device, and a voting key or element for operating said indicating device, locking means consisting of a rock-shaft having a projection for engaging and securing the voting key or element in its repressed or voted position, a covering-flap normally arranged to prevent access to the voting key or element, and connections between said flap and the locking means, including a

toggle-lever having terminal connection with the flap, and a flexible connection between said toggle-lever and said rock-shaft, substantially as specified.

4. In a voting-machine, a tally mechanism having a reciprocable voting key or element, indicating devices having indexes for communicating motion from an index of lower to one of higher denomination, a ratchet-wheel operatively connected with the index of lowest denomination, a swinging arm carrying an operating-pawl for engagement with said ratchet-wheel to impart forward motion thereto, connections between the voting key or element and said swinging arm, a rock-shaft carrying a locking-pawl for engagement with the voting key or element when the latter is in its repressed or voted position, and resetting devices having a flexible connection with said rock-shaft for disengaging the locking-pawl to release the voting key or element, substantially as described.

5. In a voting-machine, a rotatable cabinet having voting mechanism in all the faces thereof, which are adapted to be presented successively to a voter and including tally mechanisms arranged in the said faces in longitudinal alinement in tiers, covering-flaps each adapted for covering the series of tally mechanisms and bearing the names of officers, a resetting-flap for each tally mechanism, and connections between each covering-flap and a plurality of resetting-flaps, said connections consisting of buttons carried by one of said members operating in a slot in the other member.

6. In a voting-machine, a rotatable cabinet adapted to have its faces exposed in succession to a voter, tally mechanisms arranged in the faces of the casing or cabinet in longitudinal alinement and in tiers, covering-flaps, each adapted for covering a series of tally mechanisms and bearing the names of officers, a resetting-flap for each tally mechanism, and resetting connections between the covering-flaps and tally mechanisms and also between each covering-flap and a plurality of resetting-flaps.

7. In a voting-machine, a casing or cabinet, tally mechanisms having exposed voting-keys, movable covering-flaps, each adapted to cover a plurality of voting-keys, a resetting-flap for each tally mechanism, and connections between each covering-flap and a plurality of resetting-flaps, said connections consisting of buttons carried by one of said members operating in a slot in the other member, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ELI MCCLAIN.

Witnesses:

MOSES WILSON,
E. C. MACK.