No. 670,521. Patented Mar. 26, 1901.

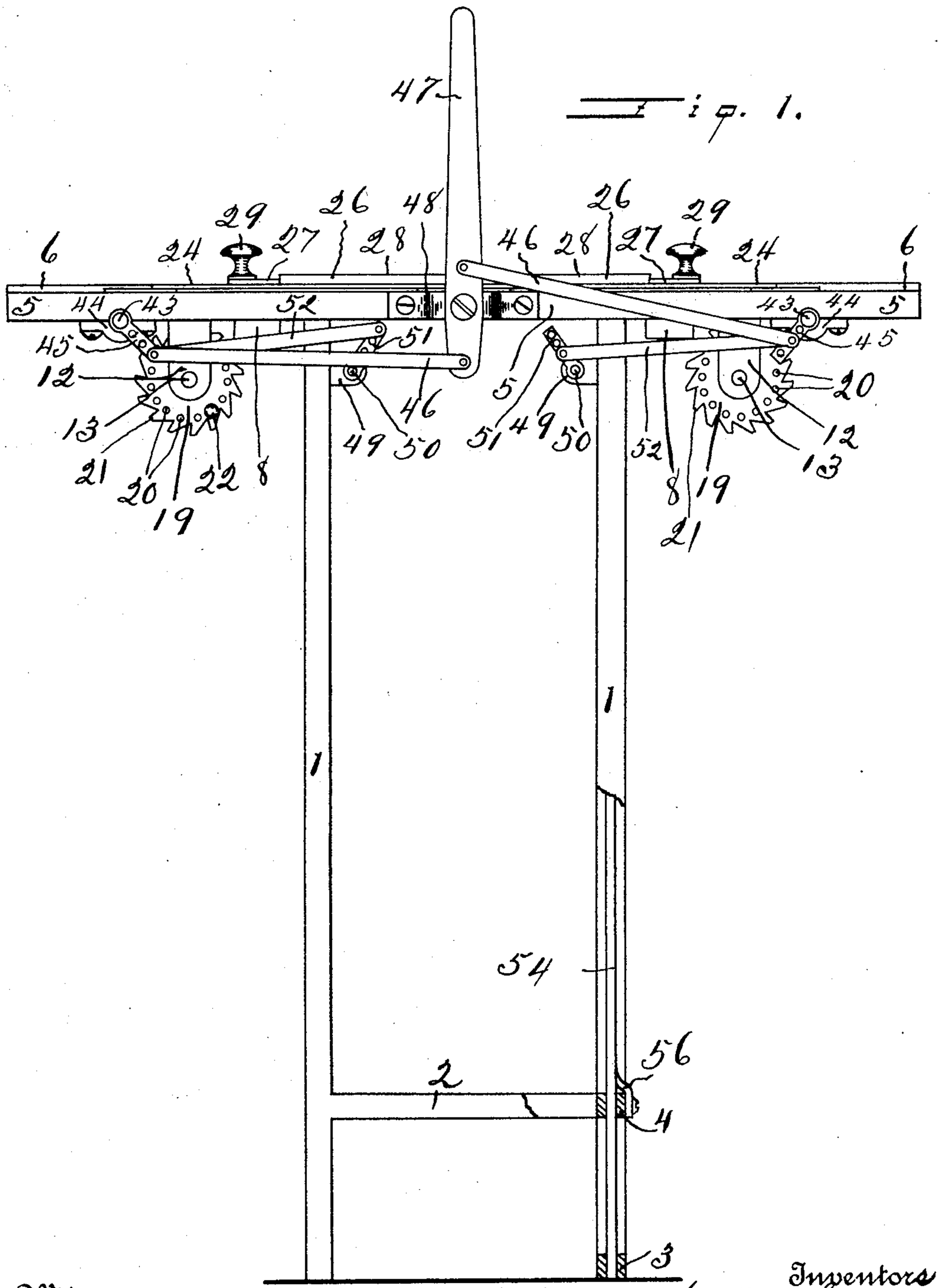
F. X. ST. LOUIS & E. J. BARCELOUX.

VOTING MACHINE.

(Application filed Apr. 17, 1900.)

(No Model.) 4 Sheets—Sheet 1.

Fig. 1.



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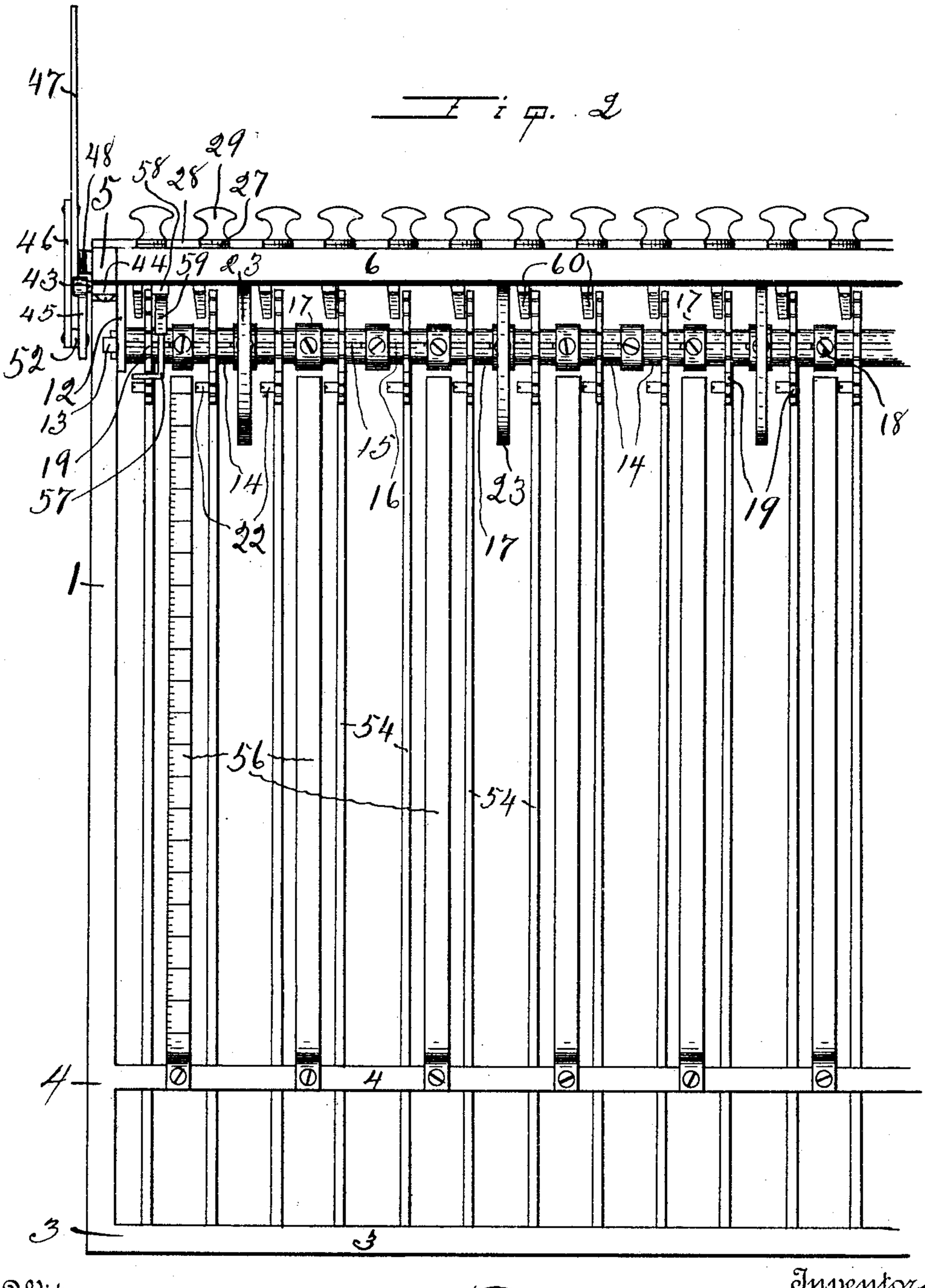
(No Model.) 4 Sheets—Sheet 2.

Fig. 2



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(No Model.) 4 Sheets—Sheet 3.

Fig. 3.

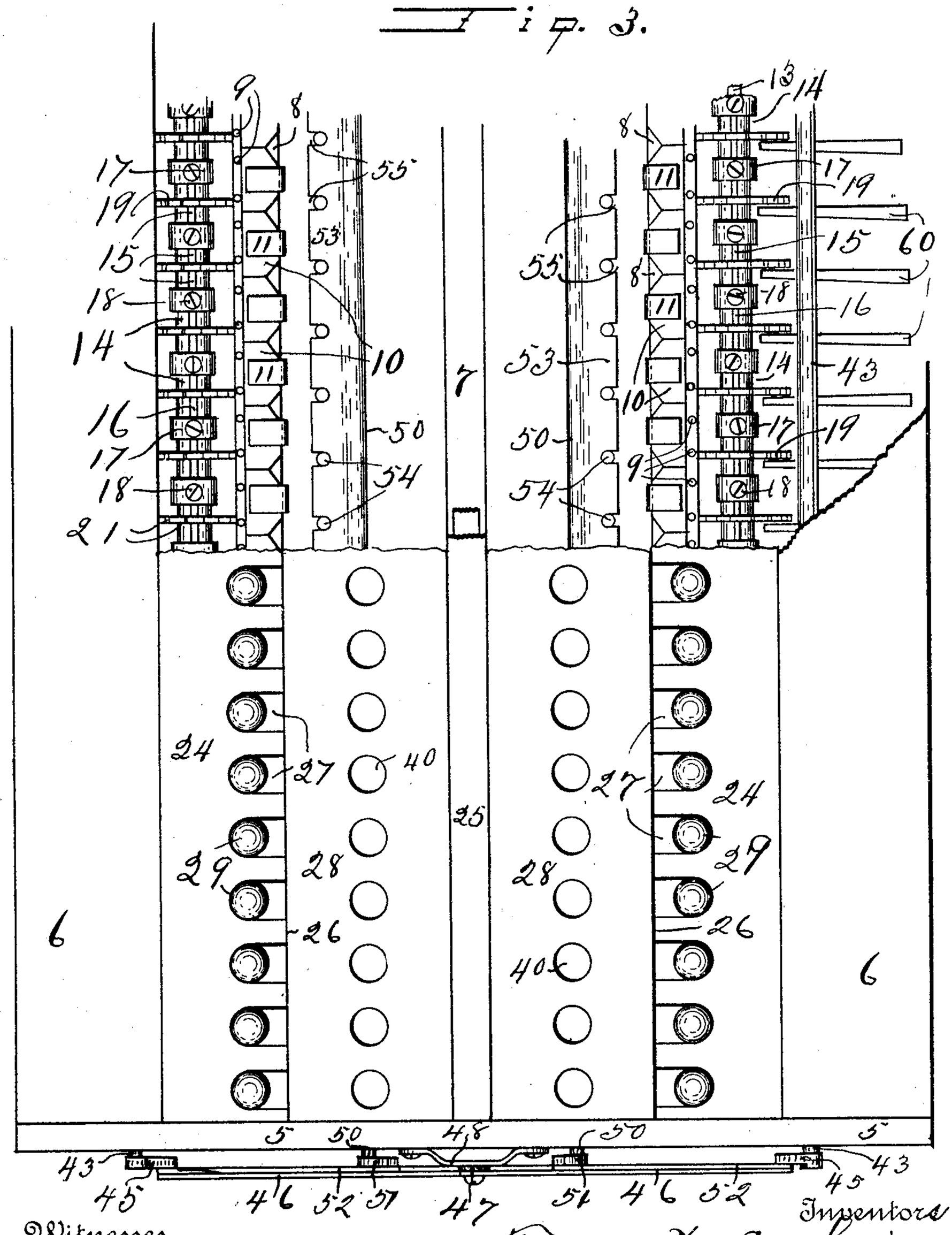

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Fig. 4.

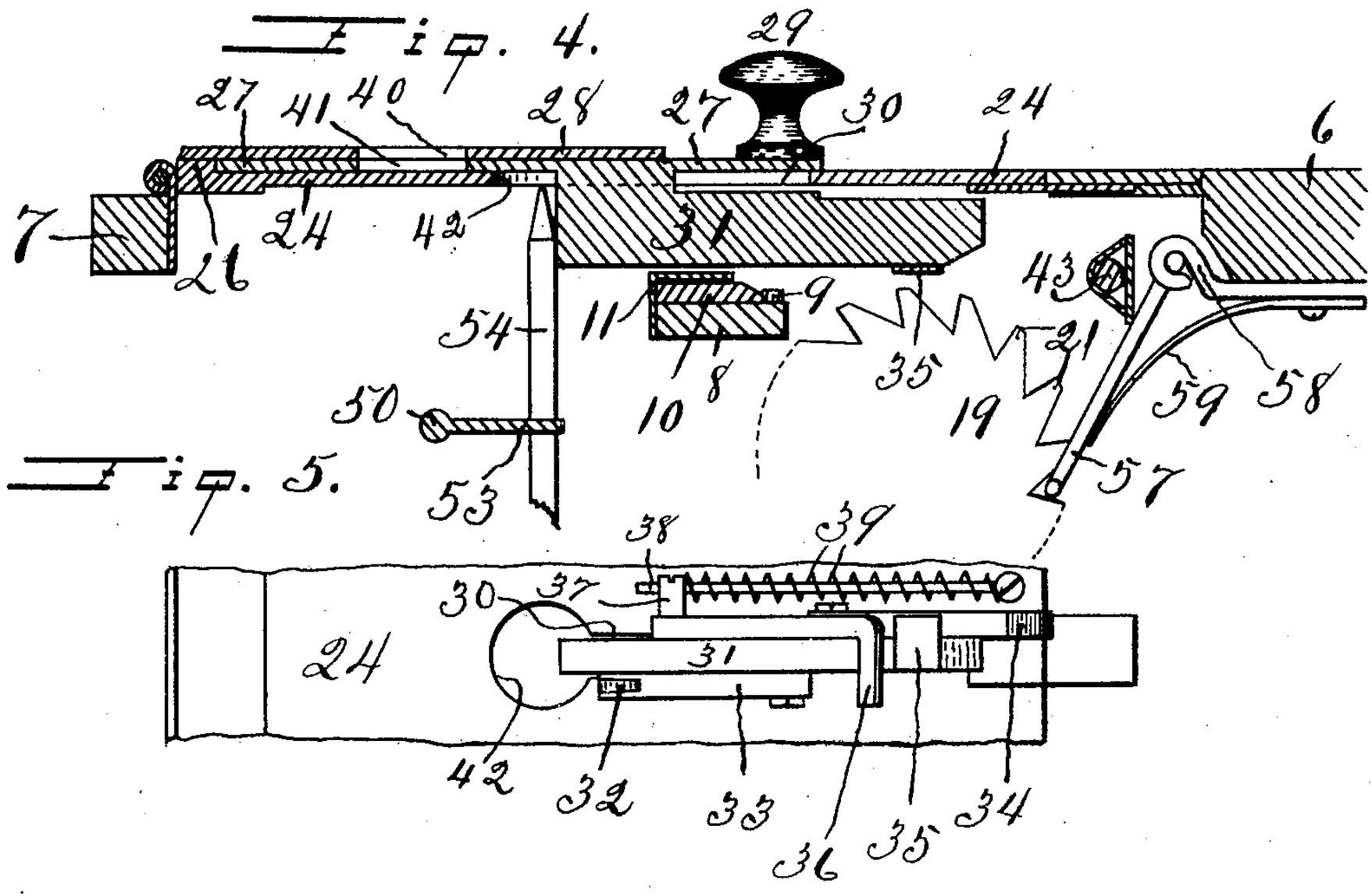


Fig. 5.

Fig. 7.

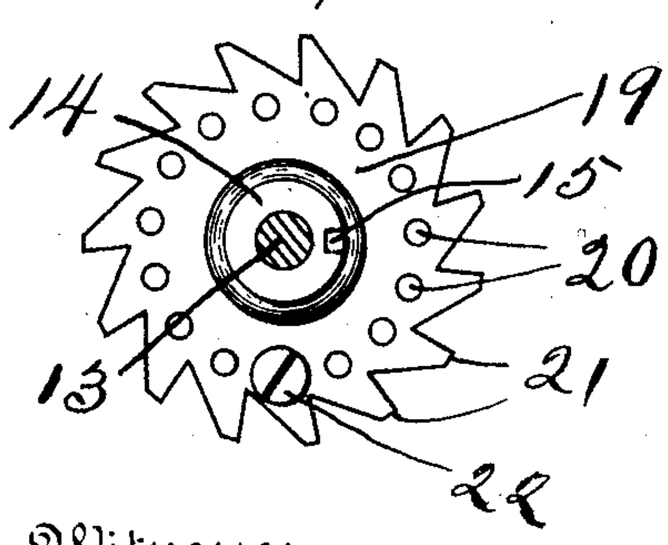
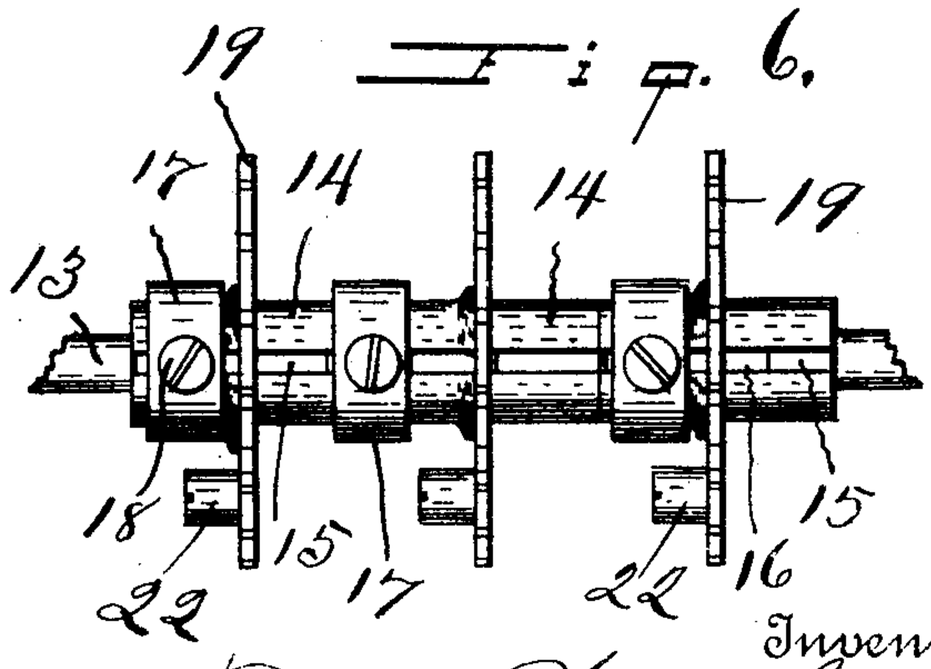


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANCIS X. ST. LOUIS AND ERNEST J. BARCELOUX, OF WILLOWS, CALIFORNIA.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 670,521, dated March 26, 1901.

Application filed April 17, 1900. Serial No. 13,189. (No model.)

To all whom it may concern:

Be it known that we, FRANCIS X. ST. LOUIS and ERNEST J. BARCELOUX, citizens of the United States, residing at Willows, in the county of Glenn and State of California, have invented certain new and useful Improvements in Voting-Machines; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to certain improvements in voting-machines such as may be used at the polls for electing officers either public or private, our object being to provide a mechanical apparatus upon which electors or persons entitled to vote may indicate their choice of men for office in secret, which will preclude fraudulent voting—"stuffing"—and facilitate counting the ballots cast.

Our invention also involves suitable means for voting for irregular candidates, questions, &c., and may be expeditiously arranged and adjusted for the election of any number of candidates for the same office or for each office. This we accomplish by the peculiar construction, novel combination, and adaptation of parts hereinafter described, and particularly pointed out in the claims hereunto annexed, reference being had to the accompanying drawings for a better understanding hereof, in which—

Figure 1 is a front end elevation of our improved voting-machine. Fig. 2 is a side elevation of the same. Fig. 3 is a top view of the same. Fig. 4 is a detached sectional view of one of the voting-keys, showing also the associate parts in position. Fig. 5 is an obverse plan view illustrating one of the voting-keys and a portion of the plate 24, the latter being broken away. Fig. 6 is a detached view of the sectional ratchet-wheels, showing their connection to and detachment from each other. Fig. 7 is an end view of the same.

Similar figures of reference indicate corresponding parts in the several views.

The mechanism of our voting-machine is clustered about and attached in various ways to a frame composed of vertically-disposed end posts 1, arranged parallel, as shown in Fig. 1, and having the cross-bars 2 rigidly attached near the bottom of said posts 1. A horizontal bar 3 connects the end posts 1 on either side, at the bottom thereof, and a similar bar 4 is arranged parallel to and at a suitable distance above the bar 3 on either side and rigidly attached to the posts 1. Across the top of the posts 1 a horizontal bar 5, adapted to extend beyond the said posts 1, is rigidly attached thereto at either end of the frame. To the ends of the bars 5, on either side, a bar or plate 6 is rigidly attached, and a square beam or bar 7 is rigidly attached to the bars 5, midway between the posts 1, in a horizontal position. Our machine is arranged symmetrically with relation to the bar 7. Therefore the description of one side will suffice for the other. A flat bar 8 is arranged longitudinally between the bars 7 and 6 and rigidly attached to the under side of the bars 5. Said bar 8 has pins 9 arranged in the top, near one side, at suitable distances apart. Sliding sections 10 are adapted to rest on the bar 8, with one side, which is straight, against the pins 9 aforesaid. The other side of the said sections 10 has the corners curved or cut off at an angle therewith, and said sections 10 are maintained in position on the bar 8 by means of angle-clasps 11, which are rigidly attached to one side of the bar 8 and adapted to extend horizontally over the sections 10.

A journal-bearing 12 is depended from and rigidly attached to the bars 5 outwardly from the bar 8, in which bearings 12 a rod or shaft 13 is seated, extending the entire length of the frame. A series of spools 14 are loosely journaled on the rod 13 and adapted to fit closely together. Said spools 14 have a slot 15 in one side, in which slot 15 a loosely-fitting key 16 for each joint is inserted and maintained in any desired position by means of a ring 17, surrounding the spool 14 and having a set-screw 18 inserted in said ring and adapted to impinge upon the key 16. Each of the spools 14 has a ratchet-wheel 19 rigidly attached to the same near its center. The said wheel 19 has a series of holes 20, corresponding in number to the teeth or cogs 21 on said wheel, located immediately within

said cogs or teeth 21, as shown in Fig. 7. One or more pins or screws 22 are located in said holes 20 for the purpose as will be shown. At suitable intervals throughout the length of the spools 14 a helical spring 23 has one end attached to the collar 17, and its other end is rigidly attached to the under side of the bar or beam 6. Each voting key or slide is constructed as follows and may be constructed singly or in sections of several keys or slides in a group.

A plate 24 of sheet metal is adapted to rest on the bars 7 and 6, extending at right angles thereto. Said plate 24 may be hinged to the bar 7, as shown in Fig. 4, or fitted on said bar 7 and maintained in position by a plate 25, which is rigidly attached to the bar 7, as shown in Fig. 3. The plate 24 has flanges 26 extending above its sides and ends, which are adapted to receive a sliding key 27, over which key a sheet-metal plate 28 is attached for the purpose of maintaining said key 27 in position. The plate 28 is adapted to extend over a portion of the inner end of the key 27 and plate 24, leaving a portion of the outer end of the key 27 exposed, to which a handle or button 29 is rigidly attached, wherewith said key may be operated.

The plate 24 has a slot 30 cut longitudinally therein near its center, through which a depending rib 31 protrudes. Said rib 31 extends outwardly beneath the plate 24, as shown in Fig. 4, and has a hook 32, which is provided with a shank 33, pivotally attached on one side thereof and extending inwardly, as shown in Fig. 5, said hook 32 being adapted to engage with the abutting ends of the sections 10 for the purpose as will be shown. At a point on the other side of the rib 31 nearly opposite the point where the hook 32 33 is attached a hook 34, of similar proportions to the hook 32, is pivotally attached and adapted to extend outwardly. The hook 34 is adapted to rest when idle on a lug 35, rigidly attached on the bottom of the rib 31 for that purpose. An L-shaped lever 36 is pivotally attached at one end near the inner end of the rib 31 and adapted to extend outwardly with the L or angular portion extending at right angles to and under the rib 31, as shown in Fig. 5, said angular portion of the lever 36 being adapted to engage with the cogs 21 of the ratchet-wheel 19.

A bolt or screw 37, having an enlarged head, is used to attach the lever 36 in position, and said head has an opening transversely therein into which one end of a rod 38 is inserted, the other end extending outwardly to near the end of the plate 24, where it is rigidly attached. A suitable spiral spring 39 is carried on the said rod 38 and engages with the bolt or screw 37 for the purpose of forcing the key inwardly into normal position when released, as hereinafter described. An opening 40, preferably circular in form, is arranged at a suitable point in the plate 28, and a similar opening 41 is arranged in the key 27, so as to communicate with the opening 40 when said key 27 is in normal position. An opening 42 is arranged in the plate 24 at a point outwardly from the opening 40 in the plate 28, so as to communicate with the opening 41 when the key 27 is pulled outwardly to its extreme limit.

A rod 43 is journaled in boxes 44, which are rigidly attached to the bars 5 near the ends thereof, said rod 43 being arranged parallel to the bar 7. The outer side of the said rod 43 is flat, as shown in section, Fig. 4, and has its other side convex, so as to allow the hook 34 when drawn forward with the key 27 to pass over and engage with the upper corner for the purpose of maintaining said key in its forward position for the purpose as will be shown.

At one end of each of the rods 43 a crank or lever 45 is rigidly attached and has a series of holes therein. A connecting-rod 46 is flexibly attached at one end to the crank or lever 45 by having a pin inserted in one of the holes aforesaid, and the other end of the rod 46 is flexibly attached at a suitable point to a lever 47, which is fulcrumed on a bracket 48, rigidly attached to the end of the main frame. Lugs 49 are rigidly attached on the inside of the posts 1, near the top end of the same, and said lugs 49 are adapted to support rods 50, which are arranged horizontally and parallel with the bar 7, said rods 50 each having a crank 51, extending in an approximately opposite direction from the cranks 45, to which they are connected by a connecting-rod 52, so as to be operated by the lever 47 simultaneously with the rods 43. The rods 50 are provided with a projection 53, arranged with notches 55 at suitable intervals on its outer edge and extending the entire length of the rod 50. The bars 3 and 4 have openings arranged at suitable intervals vertically therein, in which rods 54 are disposed in a vertical position, the top ends of which are adapted to repose immediately beneath the opening 42 in the plate 24 and engage with the notches 55 in the projection 53, which engagement maintains said rods in position beneath the openings 42 aforesaid.

A graduated scale 56 is erected between the rods 54 and rigidly attached to the bar 4 for the purpose as will be shown.

The ratchet-wheels 19 and spools 14 are divided into groups of several, each group having an L-shaped stop 57, pivotally attached to an eye 58, which is rigidly attached to the under side of the bar or plate 6, as shown in Fig. 4, and adapted to engage with the teeth 21 of one of the wheels 19 of said group for the purpose of preventing the backward motion of the same except as desired and hereinafter described.

The stop 57 is arranged in close proximity to the rod 43 and has a spring 59 rigidly attached at one end to the eye 58, the other end of which is adapted to engage with the said stop 57, so as to maintain the same in engagement with the wheel 19.

Fingers 60, one for each wheel 19, are rigidly attached at one end to the under side of the plate 6 and are adapted to extend inwardly in close proximity to the said wheels 19 and engage with the pins 22 for the purposes hereinafter set forth.

The sections 10 have space enough between the same throughout their entire length for the passage of one only of the hooks 32, thereby preventing the voter from manipulating more than one key at the same time. The joints of the sections 10 are arranged immediately beneath the said hooks 32, and the keys are so arranged as to cause the levers 36 when manipulated to engage with the wheels 19 and the hook 34 to engage with the rod 43.

As many voting-keys or sections of voting-keys may be used as may be required.

A booth of any desired shape and size may be used to inclose our machine, leaving one end only open to view and revealing the lever 47 and rods 46 and 52.

The mode of operating our improved voting-machine is as follows: Before an election is to be had our machine is set up and adjusted in accordance with the number of candidates running for each office and the number of officers to be elected for each office. For example, in the office of President one is to be elected, and there are four tickets in the field—viz., Republican, Democratic, People's Party, and Labor Party. One voting-key may be reserved for scattering votes, which would make five keys employed for the office of President. For each office one key may be reserved for scattering votes, thereby preserving the independence of the voter. The remainder of the keys of each group have the names of the candidates and party which they each represent placed opposite thereof, and each group of keys has the office to which their representative candidates aspire. The five wheels 19 accompanying the voting-keys of the aforesaid group are rigidly attached together by the keys 16 and collars 17 engaging with the slot 15 in the spools 14, and are detached from and adapted to rotate independently of the remainder of said wheels 19 and spools 14 by reason of having the key 16 at either end of said group removed from contact with the slot 15 in the adjacent spool 14. Each group of keys represents an office, and each group of keys is adapted to operate independently of each other group. The pins or screws 22 on each wheel 19 are adjusted in the holes 20, so as to allow said wheel 19 to rotate the space of one cog 21, thereby allowing but one key in said group to be operated at any one time. There are as many keys employed in each group as there are candidates for that particular office, with one extra key in each group for scattering votes. When there is an office to which two officers are to be elected, the pins or screws 22 are so arranged as to allow the wheels to rotate the space of two cogs 21, when the pins or screws 22 engage with the fingers 60 and prevent the operation of any other keys in that particular group. Should three officers be electable to one office, the pins 22 are adjusted three spaces apart, and for the election of four officers said pins are placed four spaces apart, and so on for as many as is desired, the pins 22 being placed as many spaces apart in that group as there are persons to be elected for that office. When in a normal position ready for action, the lever 47 assumes an upright position, as shown in Fig. 1, the rods 50 and 43 assume the position shown in Fig. 4, and the keys 27 are pressed rearwardly by the springs 39, with the holes 40 and 41 coinciding. The wheels 19, with their accompanying spools, are pressed rearwardly by the springs 23 until the pins 22 on one side engage with the under side of the fingers 60. Checks or buttons of uniform thickness and of the desired diameter are employed in conjunction with our machine and are adapted to be inserted through the holes 40 and into the holes 41, whereby they are transmitted to the holes 42, through which they drop and are caught by the rods 54, said checks being perforated for that purpose. A booth of any suitable make may be located about our machine if secret balloting is desired, whereupon the voter is provided with a suitable number of checks and admitted within the booth. Stepping in front of the voting-keys said voter selects the candidate in one group, which represents an office, for whom he desires to vote, and after depositing a check in the opening 40 of the key opposite the candidate's name selected said voter grasps the button 29 and draws the key 27 and all its connected parts outwardly or toward him. During the manipulation of said key the hook 32 passes between the sections 10, and the L-shaped lever 36 engages with the notches or the teeth 21 of the wheel 19 and rotates the same forward one notch, whereupon the stop-lever 57 drops behind the next succeeding notch or tooth 21 on said wheel 19 and retards its rearward motion, and the hook 34 is deposited over and engages with the rod 43, thereby preventing the rearward inclination of the key 27 and its parts and also preventing the fraudulent use of the same key the second time by the same voter. Should the voter attempt the use of two separate keys simultaneously, the hooks 32 will be unable to pass between the sections 10, there being space enough between them for one hook at a time only to pass, thereby preventing the same. If two officers are to be elected to that particular office, another key of that group may be manipulated in the same manner; but should the voter attempt the manipulation of more keys in a group than is allowable the same is prevented by the lever 36 engaging with the teeth 21 of the wheels 19 and the pins or screws 22 engaging with the fingers 60. In groups which represent offices to which two or more officers are to be elected the hooks 34 of the keys representing

the scattering vote are removed, so as to allow the key to recoil to its normal position and receive another button or check, on which the name of the man whom the voter wishes to elect may be written; but said voter is prevented from casting more than his allotted number of votes for that office by reason of the L-shaped lever 36 and the pins 22, in conjunction with the wheels 19. The same operation is performed at each group of keys or office until all offices have been voted for, and the voter then passes from the booth. After the voter has voted and emerged from the booth one of the ballot-clerks grasps the lever 47 and throws the same to the right, which by means of the connecting levers and cranks tilts the rods 43 and 50, thereby releasing the hooks 37 of the keys which have been used by the previous voter and the checks deposited over the rods 54, said keys being pressed into normal position by the springs 39 and the checks dropping to the bottom of the rods 54 or upon the checks previously voted. As the rods 43 are tilted the lower corners thereof are so constructed and adjusted as to engage with the stop-lever 57 and remove the same from contact with the cogs 21 of the wheel 19, whereupon the springs 23 force the wheels 19 rearwardly into normal position. The lever 47 is then returned to its vertical position and the next voter is provided with a suitable number of checks and admitted to the booth, and the *modus operandi* is repeated in succession as each and every voter enters the booth until the polls are closed, whereupon the number of votes cast for each candidate is indicated on the graduated scale and may be easily determined, thereby obviating the tedious task of counting the votes after they have been cast.

Having thus described the construction and operation of our improved voting-machine, what we claim as new, and desire to secure by Letters Patent, is—

1. In a mechanical voting-machine, a voting-key composed essentially of the plate 24 having the opening 42 and the slot 30 therein, the plate 28 located on and rigidly attached to the plate and having the opening 40 therein, the sliding key 27 located between the said plates 24 and 28 and having the opening 41 suitably located therein, the handle 29 rigidly attached on one end of said sliding key 27, the rib 31 rigidly attached to the sliding key 27 and protruding through the slot 30 in the plate 24, the hook 32 pivotally attached on one side of the rib 31, the hook 34 pivotally attached to the other side of said rib 31, the L-shaped lever 36 pivotally attached at a suitable location on one side of the rib 31 the rod 38 rigidly attached at one end to the plate 24 and having its other end inserted in the opening in the screw 37, said screw 37 inserted in the side of the rib 31, and the spring 39 comprehending the rod 38 and engaging with the screw 37 and the plate 24, in combination with suitable receiving and operating mechanism and a voting-machine adaptable to said voting-keys, all arranged and operating substantially as shown and described and for the purposes set forth herein.

2. In a voting-machine the combination with a suitable frame of a system of voting consisting in a suitable number of voting-keys of suitable structure mounted on and rigidly attached to the frame, a series of ratchet or toothed wheels arranged and journaled beneath and adapted to engage with, said keys, suitable fingers rigidly attached to the frame and adapted to engage with the said ratchet-wheels, a retaining bar or rod journaled beneath the frame and adapted to retain the voting-keys, a series of vertical rods arranged beneath the voting-keys and suitable means for operating the above parts, all arranged and operating substantially as shown and described and for the purposes set forth herein.

3. In a voting-machine, the combination of a frame, the plate 24 attached to the frame and having apertures 42 and slots 30, the plate 28 arranged on the plate 24, and having apertures 40, the sliding keys 27 arranged between the plates and having handles and also having spring-backed depending portions 31 extending through the slots 30, the hooks 32 and 34 and the L-shaped lever 36, the upright rods 54, the rod 50 having the projections 53, the bar 8, the sliding sections 10 held on said bar, the rod 43 having a flat and a rounded side and also having a crank, the lever 47 connected with the rods 43 and 50, the rods 13, spools 14 journaled thereon and having longitudinal slots and keys therein, collars arranged around the joints of the spools and having the screws 18, ratchet-wheels 19 attached to the spools and having lateral projections adjustably connected thereto, one or more springs for returning the spools to their normal position subsequent to an operation thereof, the stop-lever 57 arranged to engage the ratchet-wheels 19, and a spring connected to said stop-lever, substantially as specified.

4. In a voting-machine of the class described the combination with a suitable frame of the voting-keys 24 28 27 29 31 34 36 38 37 39, the rods 43 flattened on one side and journaled on the frame, the cranks 45 rigidly attached on one end of the rods 43 the lever 47 fulcrumed on the front end of the frame, the connecting-rods 46 attached to the cranks 45 and lever 47, the rods 13 suitably journaled on the frame, the spools 14 mounted thereon and attachable to and detachable from each other, the groove 15 formed in one side of said spools, the feather or key 16 inserted in said slot or groove 15, the ring or collar 17, having the set-screw 18 inserted therein, mounted over the ends of the spools 14, the cog or ratchet wheel 19 having the cogs or teeth 21 and the holes 20, the pins or screws 22 inserted in the holes 20 and adapted to engage with the fingers 60, said fingers 60

rigidly attached beneath the frame, the stop-levers 57 pivotally attached beneath the frame and adapted to engage with the teeth 21 of the wheels 19, the springs 59 attached to the frame and adapted to engage with the stop-levers 57 and the springs 23 attached to the collars 17 and the frame all arranged and operating substantially as shown and described and for the purposes set forth herein.

5. In a voting-machine of the class described, a voting-key located between two plates having openings suitably located therein, a rib rigidly attached beneath said key and protruding through a slot in the plates aforesaid, a hook 34 attached on the front end of said rib, the lever 36 attached to said rib, the screw 37 attached to the rib at a suitable point thereon, and a suitable spring adapted to impinge upon the screw 37 in combination with a suitable frame and registering mechanism all arranged and operating substantially as shown and described and for the purposes set forth herein.

6. In a voting-machine of the class described, a check device composed essentially of the rod 13 suitably journaled on a frame, a series of spools detachable one from another, inserted on the rod 13, the slot or groove 15 formed in the side of the spools, the feathers or keys 16 inserted in the groove or slot 15, the bands or collars 17 inserted over the ends of the spools and having the set-screws 18, the wheels 19 rigidly attached to the spools and having the teeth 21 and the screws or pins 22 inserted in the side of the wheel 19 in combination with a suitable frame and operating mechanism, all arranged and operating substantially as shown and described and for the purpose set forth herein.

In testimony whereof we affix our signatures in presence of witnesses.

FRANCIS X. ST. LOUIS.
ERNEST J. BARCELOUX.

Witnesses to signature of Francis X. St. Louis:

MAY A. C. HIGH,
J. S. WEST.

Witnesses to signature of Ernest J. Barceloux:

C. A. GREEN,
C. R. WICKES.