

Feb. 13, 1934.

J. P. HARRIS

1,947,157

VOTING AND COUNTING MACHINE

Filed Dec. 6, 1929

6 Sheets-Sheet 1

Fig. 1.

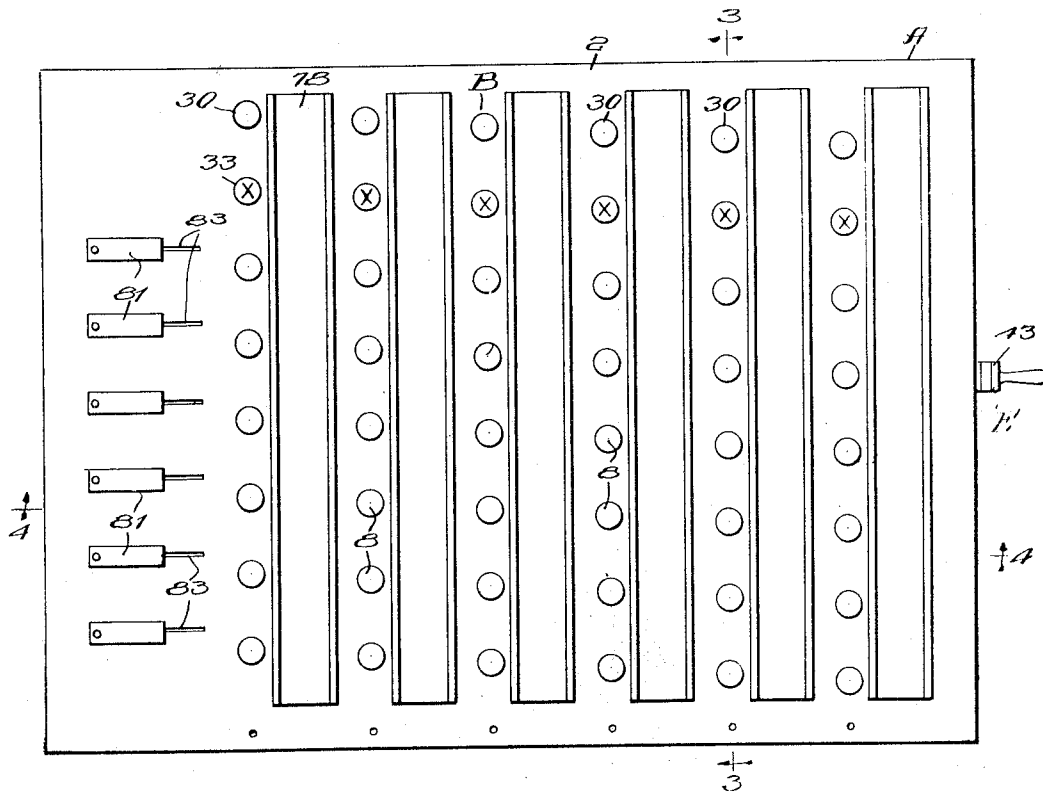
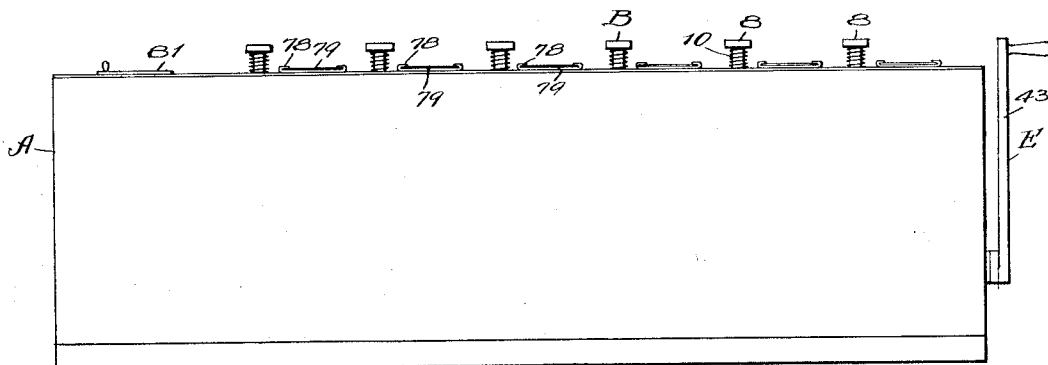


Fig. 2.



Witness:

William P. Hiboy

Inventor.

Joseph P. Harris.

By Dyrnforth, Lee, Chilton and Wills.
Attys.

Feb. 13, 1934.

J. P. HARRIS

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VOTING AND COUNTING MACHINE

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6 Sheets-Sheet 2

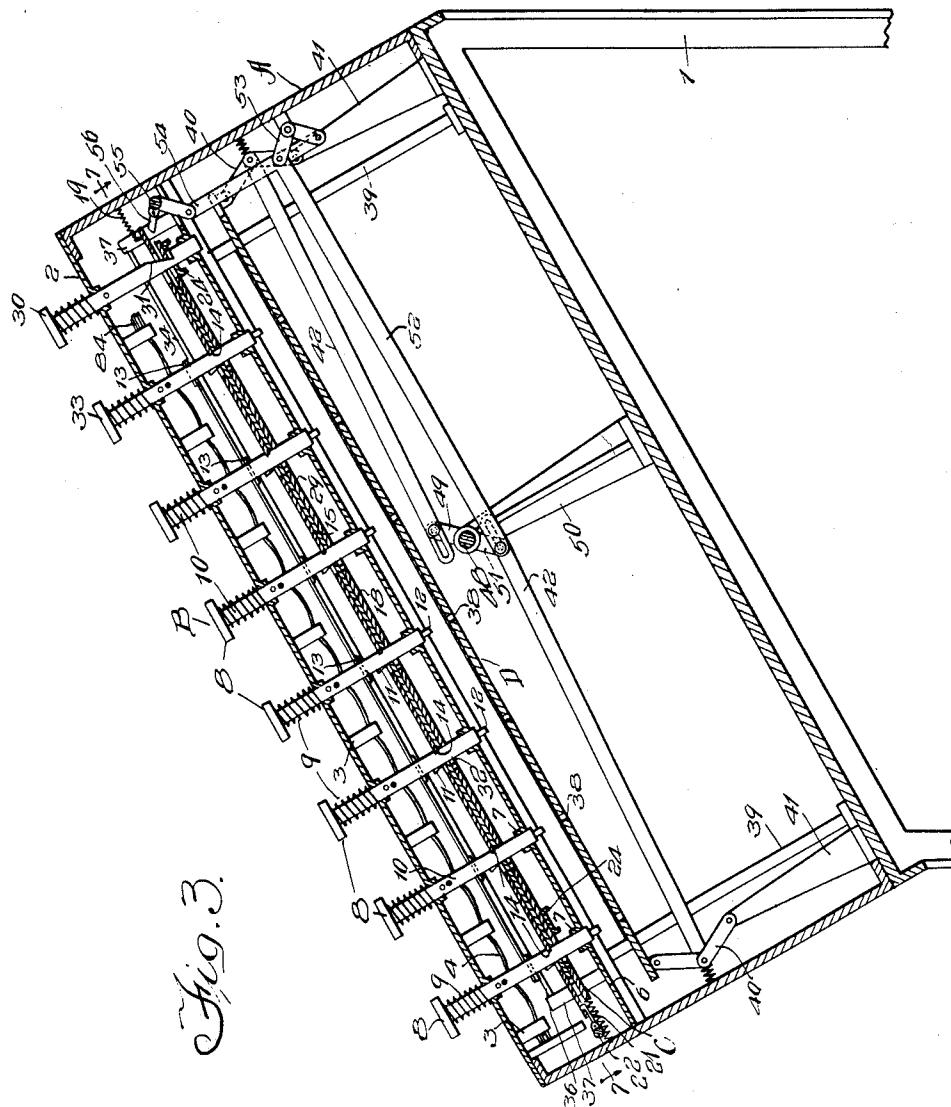


Fig. 3.

Witness:

William G. Kilroy

Inventor.

Joseph P. Harris.

By Dyrenforth, Lee, Christen and Miles
attys.

Feb. 13, 1934.

J. P. HARRIS

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VOTING AND COUNTING MACHINE

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6 Sheets-Sheet 3

Fig. 4.

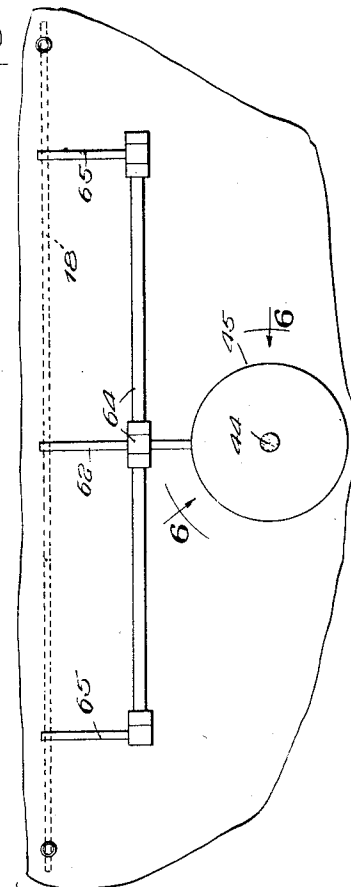
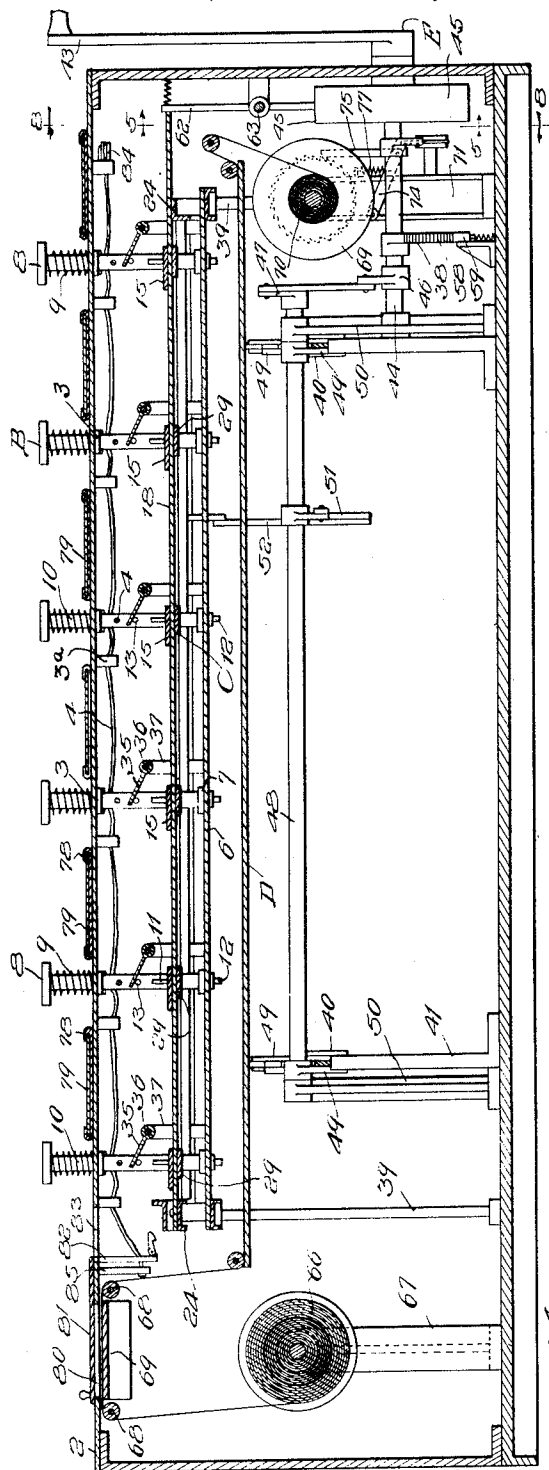


Fig. 5.

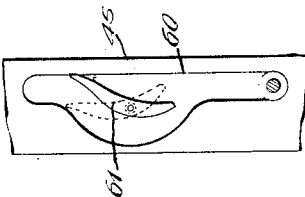


Fig. 6.

Witness:
William H. Kilroy

Inventor:
Joseph P. Harris.
By Dyrenforth, Lee, Britton and Mills,
Attys.

Feb. 13, 1934.

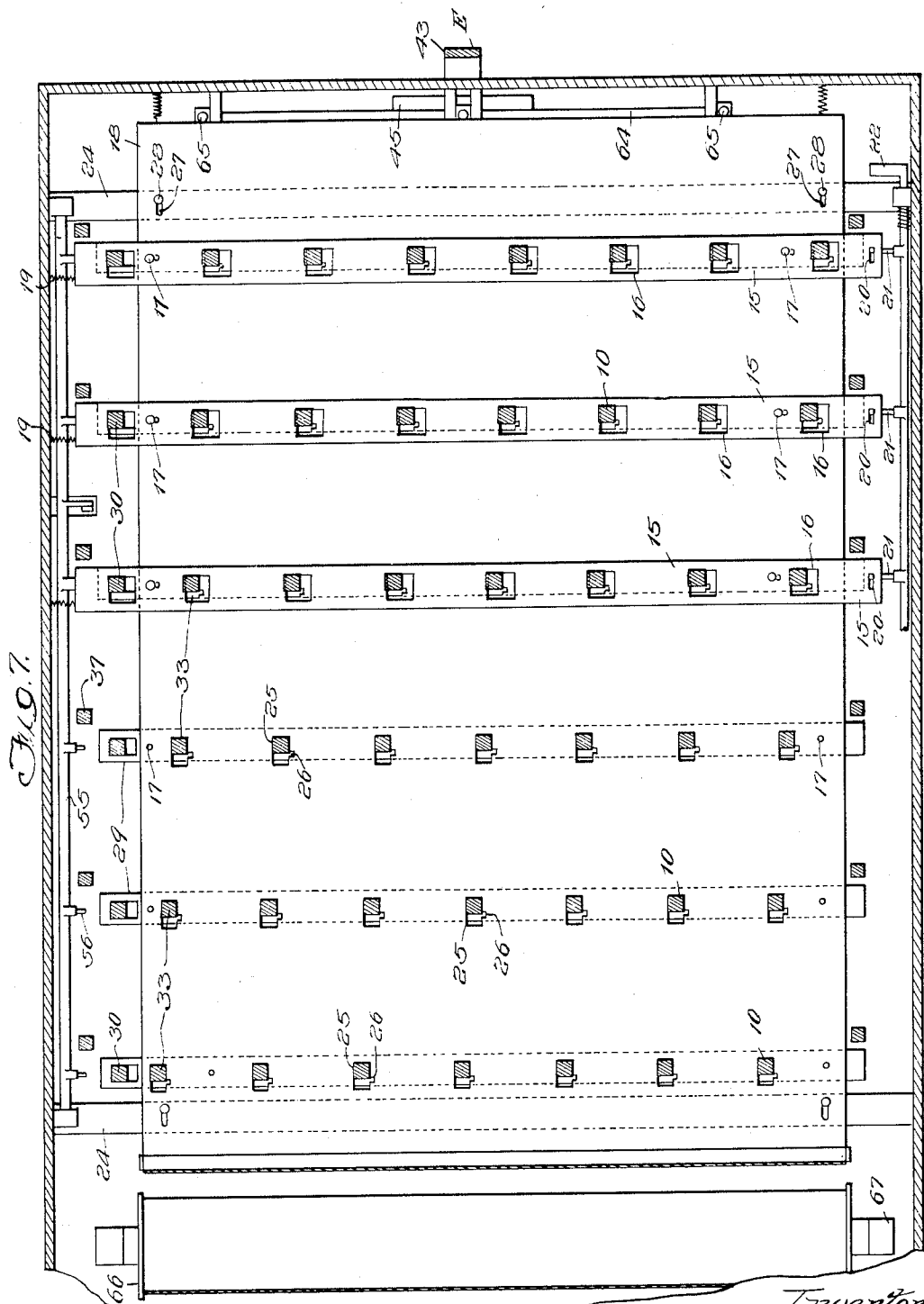
J. P. HARRIS

1,947,157

VOTING AND COUNTING MACHINE

Filed Dec. 6, 1929

6 Sheets-Sheet 4



Witness:
William P. Kelly

Inventor.
Joseph P. Harris.
By *Dunfords, Le, Chittor and Killo, Attys.*

Feb. 13, 1934.

J. P. HARRIS

1,947,157

VOTING AND COUNTING MACHINE

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6 Sheets-Sheet 5

Fig. 8.

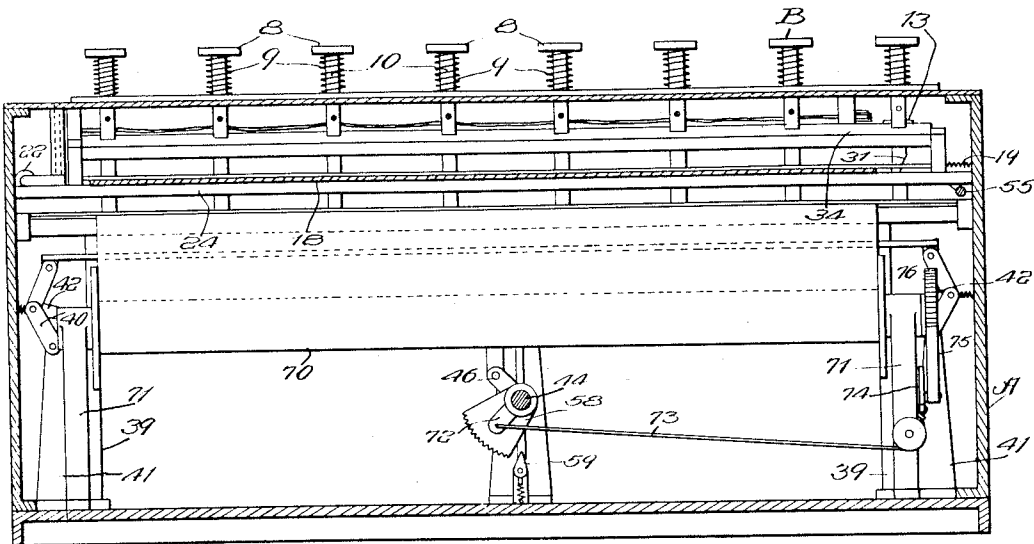


Fig. 9.

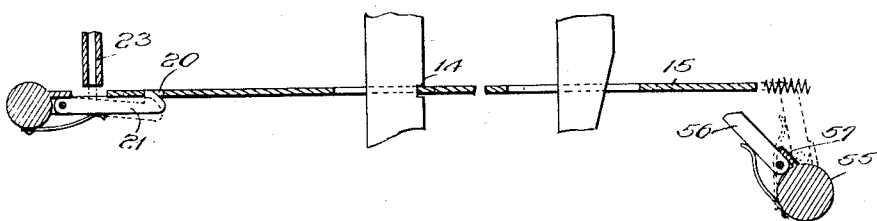
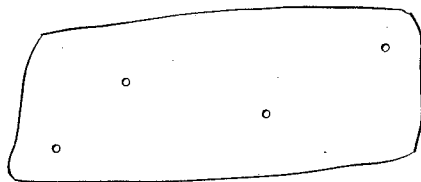


Fig. 10.



Witness:

William F. Kilroy

I, the inventor,
Joseph P. Harris.
By Ogdenforth, Lee, Christian and Miles
attys.

Feb. 13, 1934.

J. P. HARRIS

1,947,157

VOTING AND COUNTING MACHINE

Filed Dec. 6, 1929

6 Sheets-Sheet 6

Fig. 11.

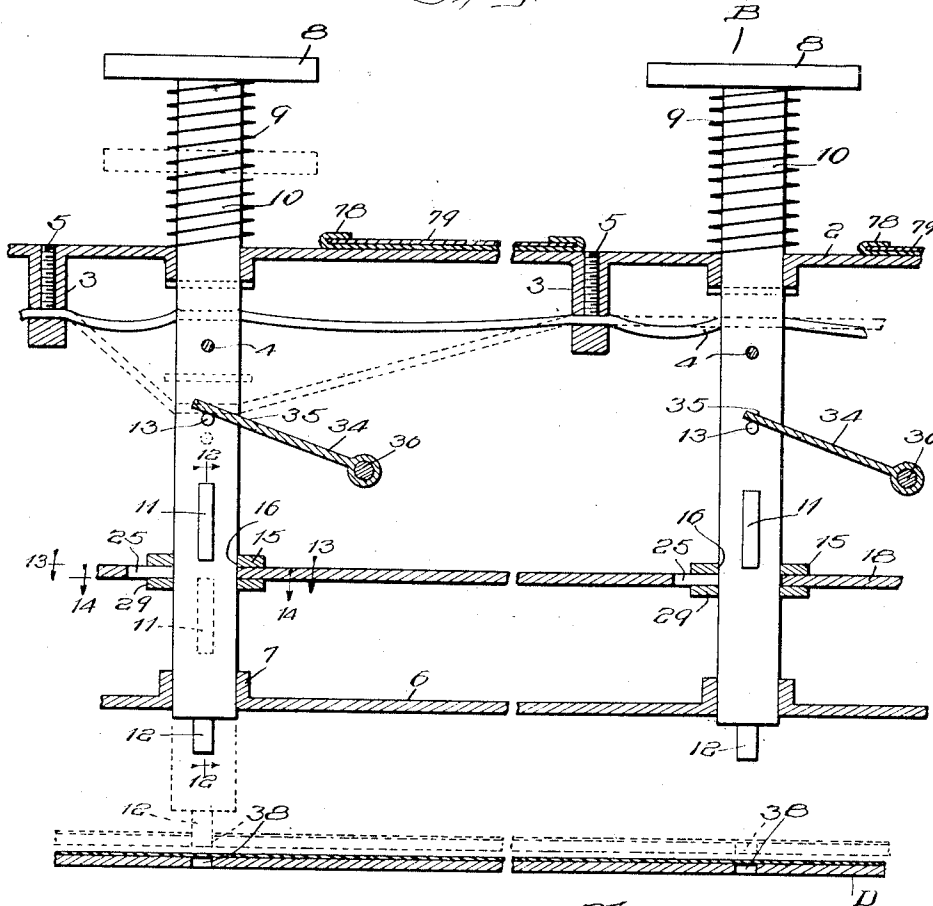


Fig. 13.

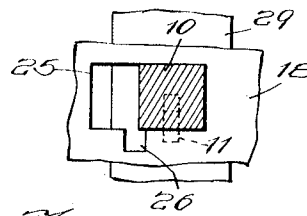


Fig. 14.

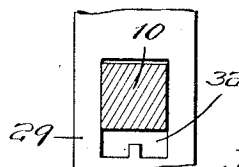
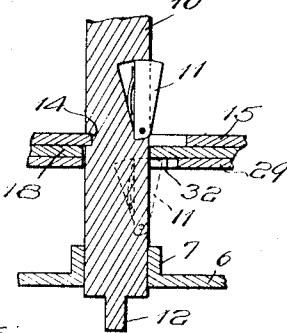


Fig. 12.



Witness:

William P. Kilroy

Inventor.

Joseph P. Harris.

By Dymally, Lee, E. H. Hutton & Wills
Attys.

UNITED STATES PATENT OFFICE

1,947,157

VOTING AND COUNTING MACHINE

Joseph P. Harris, Madison, Wis.

Application December 6, 1929. Serial No. 412,161

7 Claims. (Cl. 235—50)

This invention relates to recording methods and apparatus, and is more particularly adapted for use in connection with the recording of votes.

One of the objects of the invention is to provide means for registering and counting votes mechanically, while at the same time guarding against inaccuracies, fraud, and the danger of a voter voiding his own vote. Another object is to provide a voting machine of simple and staunch construction, which may be constructed at moderate cost, and may be operated and adjusted with a modicum of effort.

A further object is to provide simple locking and releasing mechanism by which voting key may be controlled, or confined against reissue and by which errors may be corrected before the vote is recorded. Another object is to provide vote recording mechanism which may be adjusted so as to group the names of candidates in any desired order upon the face of the voting instrument, while at the same time preventing voting for more than the designated number of candidates. A still further object is to provide voting mechanism which may be adjusted from a point outside the mechanism and without taking the apparatus apart. Another object is to provide means for forming perforations or indentations upon a vote record strip so that each perforation or indentation will have an individual path. A further object is to provide a voting machine equipped with keys which are arranged in staggered or vertical echelon relation whereby said keys are adapted to record the ballot vote items by indenting a vote record strip in longitudinal space channels. Other objects and advantages will appear as the specification proceeds.

My invention is fully described in the following specification and a preferred form of the mechanism thereof is shown in the accompanying drawings in which:

Figure 1 is a plan view of the face of the voting mechanism embodying my invention; Fig. 2 is a side view in elevation of the compartment housing the voting mechanism; Fig. 3 is a sectional view, the section being taken as indicated at line 3 of Fig. 1, this view also showing standards which may be used for supporting the vote mechanism compartment at the preferred angle; Fig. 4 is a sectional view, the section being taken as indicated at line 4 of Fig. 1; Fig. 5 is a broken detail sectional view, the section being taken as indicated at line 5 of Fig. 4; Fig. 6 is an enlarged detail sectional view, the section being taken as indicated at line 6 of Fig. 5; Fig. 7 is a broken transverse sectional view, the section being taken as indicated at line 7 of Fig. 3; Fig. 8 is a sectional view, the section being

taken as indicated at line 8 of Fig. 4; Fig. 9 an enlarged detail view showing the locking mechanism for voting keys; Fig. 10 is a broken detail view of the perforated web which is passed through the machine below the keys; Fig. 11 an enlarged sectional view illustrating the operation of the voting keys and the associated limiting, latching and locking members; Fig. 12 a broken sectional view, the section being taken as indicated at line 12 of Fig. 11; Fig. 13 a broken sectional view, the section being taken as indicated at line 13 of Fig. 11; Fig. 14 a broken sectional view, the section being taken as indicated at line 14 and of Fig. 11.

The apparatus comprises broadly, voting keys assembled in staggered relation in a casing and adapted to make perforations in a voting web which traverses the space below the keys. Flexible or control members pass vertically and horizontally through the keys and, by means of adjustment clamps in the apparatus, enable the keys to be grouped in the desired order, and at the same time limit the number of keys which may be depressed in each group by the voter. The keys operate in conjunction with a die or perforated platen which may be raised into contact with the lower portion of the keys to perforate the paper carried on the die, after the desired number of keys have been depressed. Locking mechanism is provided to hold the keys in depressed position and additional locking means are provided to hold the keys in original or up position until the voting official wishes to release them for the voting operation. Error releasing means are employed by which the depressed keys may be released when desired by the voter. A voting handle is provided by which the die may be raised to perforate the voting web, which records the vote, and immediately following to set in operation a releasing mechanism to return the keys to their original position. Party key mechanism is also provided by which all the keys under one party name may be depressed with one movement.

Referring more specifically to the drawings, A represents the casing of the voting machine; B represents the key members; C the locking and releasing members associated with the keys; D the platen or die member; and E the lever actuating mechanism.

The casing member A is suitably supported on standards 1 so that the top face of the machine is supported at an angle convenient for the manipulation of the voting keys. The top face or voting face 2 of the casing member A is perforated and provided with guides 3 adapted to receive the key members. Also secured to top wall 2 and depending therefrom within the casing are adjusting posts 3a which are positioned between each of the keys in vertical

and horizontal lines and which are perforated to receive the flexible control or limiting members 4. Each of the posts 3a are provided with set screws 5 or other suitable clamping means adapted to be tightened against the flexible members 4. Spaced a short distance below the top wall 2 and parallel therewith is a perforated plate member 6 provided with guides 7 adapted to receive the lower end portions of the key members. The plate member 8 may be secured to casing A by screws or any other suitable means. Supported in the lower portion of casing member A are a plurality of standards adapted to support apparatus which will be hereinafter described. The casing A may be formed of pressed steel, or any other suitable material.

The key members B are preferably equipped with buttons or heads 8 upon each of which an "X" or other suitable symbol or mark may be placed. Confined between the head 8 and the voting face 2 of the casing member A are springs 9 adapted to hold the keys in extended or up position. The shaft 10 of each key member is preferably perforated to receive the vertical and horizontal flexible control members 4. Each shaft 10 is also equipped with a spring pressed dog which is adapted to be used in conjunction with other members hereinafter described to lock the keys in depressed position.

The key members are provided at their lower ends with reduced portions or plungers 12 which are adapted to make perforations in the voting strip carried upon platen member D. The keys are also provided at an intermediate point, with transverse pins 13 which extend a short distance from the keys, and are adapted for use in conjunction with other members, as will be described later, for depressing all the keys in one bank simultaneously, as for example when it is desired to vote a straight party ticket. At a point below the pins 13, the keys are preferably provided with a notch 14 adapted to operate in conjunction with another member to lock the keys in up position as will be hereinafter described.

The locking and releasing mechanism C may comprise any suitable latch and release mechanism. In the illustration given a plurality of slidable strips or plates are employed.

Referring to Fig. 7, numeral 15 designates a series of locking strips which are inclined in a somewhat vertical plane and are provided with square openings 16 adapted to receive keys. The strips 15 are shiftable lengthwise and are adapted to engage notches 14 on the keys to lock them in up position. Slots 17 are provided in the strip to receive pins carried by latch plate 18 therebelow, thus preventing horizontal movement of locking strips 15. Springs 19 attached to one side of the casing and at one end of the strips 15 tend to hold the strips in unlocked position. The other end of each strip is equipped with a slot 20 which is adapted to receive a spring pressed latch member 21.

Latch member 21 is carried upon a rotatable lever 22 which may be turned to release the locking strips 15. With the form of locking strip shown more clearly in Figure 9, a tool 23 may be used to depress latch 21 to release an individual locking strip 15, when it is desired to leave the remaining locking strips 15 in unlocked position. The means for moving the locking strip 15 longitudinally into engagement with latch 21 will be described later.

Below the locking strips 15 is a slidably mounted latch plate 18 which is preferably large enough to extend under substantially all of the voting keys. Plate 18 is supported by channels 24 which extend transversely under the plate from the sides of casing A. As will be seen more clearly in Fig. 7, plate 18 is provided with rectangular slots 25 provided on one side with a small slotway 26 adapted to receive, when the plate member is pulled to one side, the dogs 11 carried by the key members. Plate 18 is provided also with slotways 27 adapted to receive pins 28 which are fixed to channels 24. Slots 27 permit the plate to be moved in but one direction. The means for reciprocating plate 18 during the voting operation will be described later.

Disposed below the locking strips 15 and parallel therewith, are error release slides 29. The plate 18 extends between the error release slides 29 and the locking strips 15. Each of the error release slides 29 is actuated by an error release key 30, which is provided with a notched or cam surface 31 at a point adjacent the release slide 29 and thus reciprocation of the error key 30 actuates the release slide 29. It will be observed from the illustration in Fig. 3 that the locking strip 15 and latch plate 18 are each provided with large openings around the error key 30 so that the reciprocation of the keys do not affect the locking strip 15 and latch plate 18.

As shown more clearly in Fig. 12, each of the error slides 29 is provided with a slot 32 which normally allows the dog 11 upon each of the keys to pass therethrough, being normally held in open position by a spring, or friction means. When the error key is depressed, the cam surface 31 actuates the slide 29 so as to exert pressure upon the dog 11. By this means the dog 11 is pushed inwardly as illustrated in dotted lines in Fig. 11, until it clears the edge of the slot in plate 18 and the key then springs upward into open position.

When it is desired to depress all of the keys in one row or bank, as when voting for all the candidates on a party ticket, the party ticket key 33 is depressed. This key is provided with a pin 13 which is disposed above a pivoted bar or plate 34 and which has segments 35 engaging or resting upon the pins 13 with which the remaining keys in the bank or row are provided. The plate 34 is pivotally supported on a shaft 36 mounted in standards 37 which rest upon the frame plate 6. When the party key 33 is pressed down, the pin 13 of the party ticket key 33, which rests above plate 34 causes the plate to turn upon its axis and the extensions 35 on the plate engage the pins 13 on the remaining keys and push them down.

The platen or die D preferably extends under all the keys and is provided with perforations 38 aligned with and adapted to receive plungers 12 of the key members. The platen is adapted to carry a web or paper strip upon which the various voting recordations are to be made, the standards 39 serving as guides for the paper strip. Means are provided for raising and lowering the platen to effect the perforation of the paper strip, the plungers 12 of the depressed key members extending through the paper into the perforations 38. Any suitable means for effecting the raising and lowering of the die or platen D may be employed. In the illustrations given toggle links 40, which are supported by standards 41 and hingedly connected to the lower

portion of platen D, are actuated by long arms 42 to move the platen upwardly and downwardly. The connections of arms 42 will be described in connection with the lever actuated mechanism E.

5 The lever actuated mechanism E comprises a lever or handle 43 connected to a rotatably mounted shaft 44. Shaft 44 carries a cam block or wheel 45 and a cam arm 46. By means of a similar cam arm 47 and a link be-
10 tween members 46 and 47, a second rotatively mounted shaft 48 may be turned by the movement of handle 43. The long arms 42 are connected to short arms 49 fixed to shaft 48 and thus effect through the movement of handle 43
15 the raising and lowering of platen D. Shaft 48 is suitably journaled in standards 50.

Intermediate the arms 49 and also fixedly secured to shaft 48 is another cam arm 51, to the outer end of which is secured a long arm 52. Arm 52 actuates through toggle links 53, the upright arm 54 and the shaft 55. As shown more clearly in Fig. 9, the shaft 55 carries a spring pressed finger 56, which is hingedly secured to shaft 55. A stop 57 upon shaft 55 pre-
20 vents finger 56 from moving in a rearward direction, although it may move against the pressure of the spring in the opposite direction. During the downward movement of handle 43, the shaft 55 will be caused, through the mechanism described, to turn in a clockwise direction,
25 the fingers 56 yielding when they strike locking strips 15 until the outer cam surface of the fingers has passed behind the locking strips 15. In the upward movement of the handle, each
30 finger 56 will be moved forwardly into contact with strip 15 and, because stop 57 prevents backward movement of the finger, the slide 15 will be advanced into engagement with the notches 14 of the keys, at which point, the latch
35 21 will engage the slot 20 of locking strip 15 and secure the strip in locked position. The spring pressed finger then continues in a counter-clockwise direction, disengaging from strip 15.

45 To prevent the operating handle 43 from being moved backward to its starting position before the complete stroke, downward or upward, is completed, a sector arm 58 is secured upon shaft 44. The outer arc of the arm 58
50 is provided with notches which engage the pivoted pawl 59. The pawl 59 is held normally in vertical position by a spring and by its engagement with the teeth of sector arm 58 prevents the handle from being moved in but one direction until a full vertical stroke has been completed.

As shown more clearly in Figs. 4, 5 and 6, the cam block or wheel 45 is fixedly carried on shaft 44, and is provided with an irregular
60 groove 60 of the shape shown in Fig. 6. A cam member 61 is pivotally secured within the groove 60. An upright arm 62 is pivotally secured to an arm 63 carried by frame member A and is secured at its upper end to the latch plate 18.

65 The lower end of arm 62 travels in groove 60. The cam member 61 permits the arm 62 to move in a straight direction when the voting lever is lowered to record the vote, but requires the arm to move around the cam member 61 when the lever is raised. This side movement of the lower
70 end shaft 62 during the raising of the handle causes the latch plate to be pulled to one side until the slot 26 thereof is aligned with dog 11 on each of the keys, thus permitting the keys to return to their original or up position. As

shown more clearly in Fig. 5, the arm 62 actuates the latch plate 18 through a horizontal rod 64 and connecting strips 65.

Any suitable web or strip may be used in which to record the vote indentations or perforations. In the illustration given the roll of easily deformable material such as, for example, paper, is carried on a large spool or roll 66 which is rotatively carried upon standards 67. The paper strip or web is carried over rollers 68 and across a rigid support 69. The strip then passes down under suitable rollers and extends across platen D, the sides of the paper being held in proper alignment on the platen D by standards 39. The strip then passes under and over suitable rollers to a second or receiving roll or spool 69 which is similarly supported on shaft 70 in standards 71. Any suitable mechanism for actuating the rolls to advance a new ballot strip below the voting keys may be employed. In the illustration given, a cam arm 72 extending from shaft 44 operates, through the flexible connection 73 and link 74, ratchet arm 75. A ratchet wheel 76 which is rigidly mounted on shaft 70 is engaged by ratchet arm 75 which is held in engagement therewith by spring 77 and is rotated during the downward movement of ratchet arm 75. When ratchet arm 75 is moved upwardly the cam point thereof ratchets over the teeth of gear wheel 76, but engages the toothed wheel during its downward movement. By this means the roll is turned to draw a new supply of recording strip underneath the voting keys. The apparatus for effecting such movement is well known and its operation understood in the art.

Between each of the rows of keys on top of wall 2, is secured a channel piece 78 provided with inturned edges adapted to receive a paper strip 79 upon which the names of the candidate may be typed or printed, or voting propositions indicated. Write-in slots 80, covered with removable slides 81, are provided on one side of top wall 2. The slides 81 may be pivoted to top wall 2 or, as in the illustration given, may be equipped with a depending lug 82 which operates through a slotway 83 with which the top wall is provided. The depending lug 82 is preferably perforated to allow the flexible control member 4 to extend therethrough. Any suitable means may be used, if desired, for retaining the slide in the drawn position.

Any number of flexible control members 4 may be employed to permit the desired grouping of the keys. It is preferred, however, to use two flexible members, one extending through the vertical banks of keys, and another extending through the horizontal row of keys. When the flexible member has been drawn through one column of keys it is preferably passed around a pulley 84 or any other suitable anti-friction device and is then passed down through the succeeding parallel column of keys, around another pulley, through the next parallel line of keys and so on through the remaining key columns. If desired, instead of using a pulley, the flexible member may be looped around a post at the end of each bank of keys and then passed through the next parallel line of keys. With either arrangement, it is possible not only to group (the keys for the several candidates for each office are "grouped together") a single line or column of keys, but also a series of key columns, the flexible member limiting the number of keys which may be depressed in the selected group of keys. By means of the set screws or

clamps 5, which are between each of the keys, it is possible to begin the group at practically any point and to form a group, thus limited, in any shape or form. If desired, the free ends of the flexible member may be passed through the movable leg or lug 82 and secured to a binding post 85 which is rigidly secured to the top wall 2 of casing A. It will be observed that when slide 81 is moved forwardly to permit the writing in of a candidate's name, that this movement will take up the slack at the outer end of flexible member 4 so as to give the same result as if one key had been depressed.

The grouping of the keys is then accomplished by clamping one set screw to the flexible member 4 at one end of the group, depressing the desired number of keys, and then taking up the slack of the flexible member at the other end of the group and clamping the end with the set screw.

The lists of candidates are then inserted in the channel guide 78 so that each ballot-item name is opposite the proper key.

When a key is pressed downward the dog 11 swings inwardly to permit the key to pass through the slot 25 in latch plate 18. After the dog is passed through the slot 25 of latch plate 18, it swings outwardly and locks the key in lowered position.

The downward movement of each key takes up some of the slack of the flexible member 4, and when the limited number of keys have been pressed down, the flexible member becomes taut and prevents the depression of other keys.

If the voter has made an error, or for some reason, desires to change his vote before recordation is made, he may press the error key 30 which forces the release slide 29 against dog 11 and thus permits the dog to be retracted through the slot 25 of the latch plate 18 to its original position. Another key may then be depressed to carry out the wishes of the voter, the lug or dog 11 on the voting key catching the latch plate 18 to hold the key in down position.

After the voter has pressed down the desired number of keys, and the flexible control 4 has assumed a taut condition preventing the manipulation of other keys, the voter may register his vote upon the recording-web by operating handle 43. The downward stroke of the handle actuates the arms 46, 47 and the toggle links 40 to raise the die or platen D into contact with plungers 12 of the depressed keys. With this movement the plungers pass through the vote-recording-web and enter perforations 28 of die D.

As the handle is lowered, the lower end of arm 62 travels in the moving cam block 45 in a straight line. When the handle is moved upward, however, and the cam block swings back to its original position, the cam 61 forces the lower end of 62 to follow a course around the cam, thus moving the lower end of the arm to one side. This movement causes the upper end of arm 62, as it swings around pivot 63, to move the latch plate 18 to one side. As the plate 18 moves to one side, the small slots 23 move to a position parallel to and register with dogs 11 of the keys and thus permit the keys to return to their up position.

In the operation of the voting machine apparatus, the paper roll is placed in position upon spool or spindle 66 and the paper passed over

the rollers 68 and support 69 and then drawn down under rollers over the platen member D and secured at the other end of the platen to the receiving roll or spool 69.

During the lowering operation of the handle, the pawl 75 swinging upon link 74 and actuated by the flexible connection 73 which is attached to the outer end of arm 72, ratchets upwardly over the teeth of gear 76. The upward stroke of the handle, by means of the same mechanism, exerts a downward pull on the ratchet or grip bar 75 and turns gear wheel 76. By this means the roll 69 is actuated and paper for the new ballot is drawn over the plates. Any other suitable means for this purpose may be employed.

The upward and downward movement of the handle also actuates the key locking mechanism. The rotation of shaft 48 turns arm 51 and through long arm 54 and the connecting link actuates the shaft 55. As the shaft 55 rotates in a clockwise movement, the finger 56 yields sufficiently to allow it to pass the locking strip 15. When the shaft 55 is turned in a counter-clockwise direction, as when the handle is raised, the stop 57 holds the finger 56 rigid with shaft 55 and thrusts the locking strip 15 forwardly until engaged by spring pressed latch 21, the strip 15 entering the grooves or notches 15 of a bank of keys to lock them in up position. The keys remain in locked condition until the operator turns the rocker arm 22 which releases the catches 21 from slots 20 of the various locking strips 15, thus allowing the strips to be retracted by their springs into unlocked position. If desired, as, for example, in a primary election, the operator may insert a special tool, as illustrated in Fig. 9, to effect the releasing of the keys in one or more banks, leaving the keys in other banks locked against voting.

It is preferred to employ a spring (not illustrated) or other suitable means in connection with handle 43 which will return it to the upward position without effort of the voter.

The cables or flexible control members 4 which extend through each of the keys in a vertical and horizontal plane operate in conjunction with the set screws or clamps which are interposed between each of the keys in the horizontal and vertical banks, to permit adjustments which will prevent the voter from voting for more candidates than he is entitled to vote for each office. By extending a single cable through several parallel banks of keys, and passing the portion of the cable between two adjacent banks around a post or pulley, the operator is able to group the candidates in any desired way, while at the same time limiting the number of keys which may be depressed in the group. For example, the first three vertical columns or the first three horizontal columns may be formed in a group by adjusting the set screws in the first three columns so that the cable moves freely, then depressing a number of keys equal to the number of votes to which the voter is entitled, taking up the slack in the cable, and tightening the set screw below the last voting key. Instead of using entire columns, portions of them may be grouped by tightening any set screw in the column. With an individual adjustment between each two keys, vertically and horizontally, the facilities for grouping are almost unlimited. The set screws are accessible and are operated from the face

of the machine, preferably by a tool with a special head.

It will be observed that unless the dog 11 in each of the voting keys engages the latch plate 18 so that it is held in the down position, that the spring 9 will force the key back into the up position. This makes it easy for the voter to know whether he has depressed the key far enough to record a vote.

If the voter wishes to write in a name of a candidate not on the printed ticket, he can do so by pushing the slide 81 aside to uncover the slot 80 and thus have access directly to the paper roll for this purpose.

It will be observed that the paper roll, or vote-recording strip, need be moved a very slight distance, say a fraction of an inch, to provide an entirely fresh surface upon which the next voter may record his votes. With this arrangement, a large number of votes may be recorded upon a relatively small web surface, thus effecting economy in the material used for this purpose and greatly facilitating the subsequent counting of the votes, preferably by means of a vote counting machine, although the counting may be done manually.

If desired, instead of employing a continuous paper roll, single ballot strips or cards may be used. Also, a plurality of die plates may be employed, one under each bank or keys, instead of a single large die plate extending beneath the keys.

With the illustration given, it is obvious that the voting machine may be constructed so as to be relatively small, inexpensive and portable, and consists of relatively few moving parts.

While, in the illustration given, the recording paper roll is perforated, it is obvious that the record strip may be deformed in other ways to serve the purposes of my invention. For example a portion of the recording web may be pressed out to form a raised point, or otherwise deformed to produce indentations adapted to actuate a counting mechanism.

It will be observed that instead of using a paper roll, as described, for recording votes, mechanical counters of well-known construction may be used for this purpose, the counters being actuated by the depressed keys.

While specific mechanism has been illustrated for the purpose of carrying out the various steps in the voting and counting operations, it is obvious that such specific forms of construction may be varied and changed without departing from the spirit of the invention.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

What I regard as new, and desire to claim by Letters Patent, is:

1. In recording apparatus, a frame provided with a top, a plurality of keys mounted in said frame and extending through said top, a flexible member connected to a plurality of said keys, and adjustable clamping members between said keys and adapted to engage said flexible member, said clamping members being adjustable from the top of said frame.

2. In recording apparatus of the character set forth, a casing, keys mounted in said casing

and adapted to effect recording upon a vote-recording strip, a slotway accessible from the top of said casing and means for supporting said strip adjacent said slotway, whereby the voter may write in a name upon said strip intermediate of the record made by said keys.

3. In vote recording apparatus, the combination of a stationary frame, a plurality of depressible punch keys mounted in said frame, notches in said keys, locking strips slidably mounted in said frame, apertures in said strips through which said keys pass, mechanism means operable to slide said strips to engage the said notches of all of said keys when the same are in raised position to prevent the unauthorized use of said keys, and mechanism means operable to disengage said locking strips from said notches to permit the authorized use of said apparatus for voting purposes.

4. In vote recording apparatus, the combination of a frame, a plurality of depressible punch keys mounted in said frame in a plurality of vertical rows with the corresponding positioned keys of said rows in echelon, a movable record strip adapted to be perforated in correspondingly designated space channels by said punch keys after the same have been depressed, and slot means in said frame whereby non-ballot items may be written on said record strip conjointly with the perforations made by the said keys depressed to record the voter's ballot-item designations.

5. In vote recording apparatus, the combination of a frame, a plurality of depressible punch keys mounted in said frame in a plurality of vertical rows with the corresponding positioned keys of said rows in echelon, a movable record strip adapted to be perforated in correspondingly designated space channels by said punch keys after the same have been depressed, and slot means in said frame whereby non-ballot items may be written on said record strip intermediate of the space channels corresponding to adjacent said echelon key groups, whereby said written items may be identified conjointly with the perforations made by the said keys depressed to record the voter's ballot-item designations.

6. In recording apparatus, a frame providing a top, a row of keys mounted in said frame and projecting from said top, adjustable clamping members intermediate the keys and at the ends of said row, and a flexible control member slidably connected to said clamping members and to said keys, said clamping members being adjustable from the top of said frame whereby the keys of said row may be divided into a plurality of controlled key groups.

7. In recording apparatus, a frame provided with a top, a plurality of keys mounted in said frame extending through said top and arranged in a plurality of rows, clamping members intermediate the keys in adjacent said rows, pulley means intermediate of said adjacent rows of keys, a flexible control member flexed over said pulley means and slidably connected to said clamping members and to the keys of said adjacent rows, said clamping members being adjustable from the top of said frame whereby the keys of said adjacent rows may be combined in a plurality of control group combinations.

JOSEPH P. HARRIS.