

L. W. HARMSSEN.
VOTING MACHINE.

No. 512,699.

Patented Jan. 16, 1894.

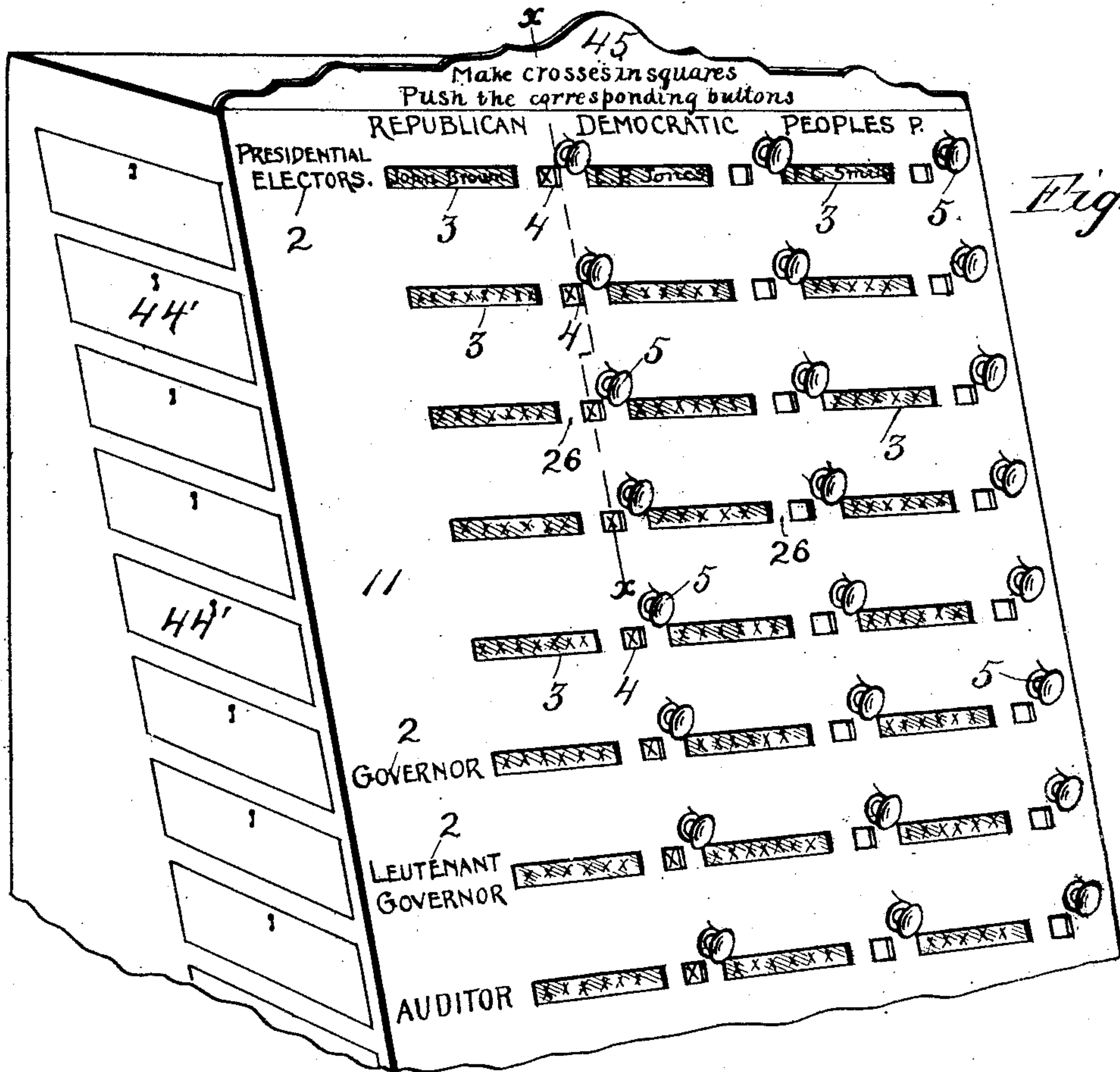


Fig. 1.

Republican Presidential Electors			
John Brown	1	X	
John Brown	2	X	
John Brown	3	X	
John Brown	4		
John Brown	5		
John Brown	6		

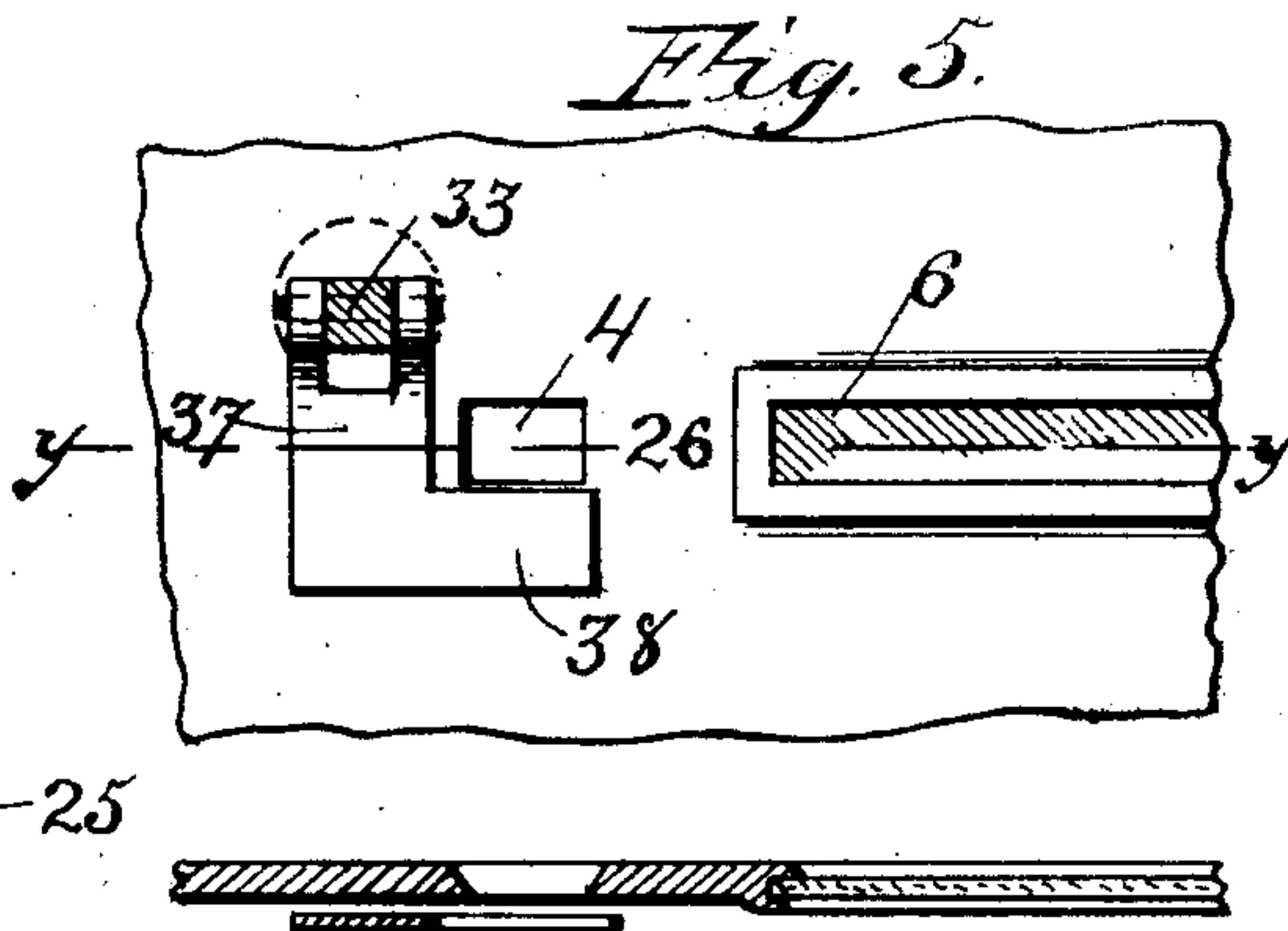


Fig. 5.

Witnesses. Fig. 4.

J. Jensen.
C. F. Lyon

Fig. 6.

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Ludwig W. Harmsen
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(No Model.)

2 Sheets—Sheet 2.

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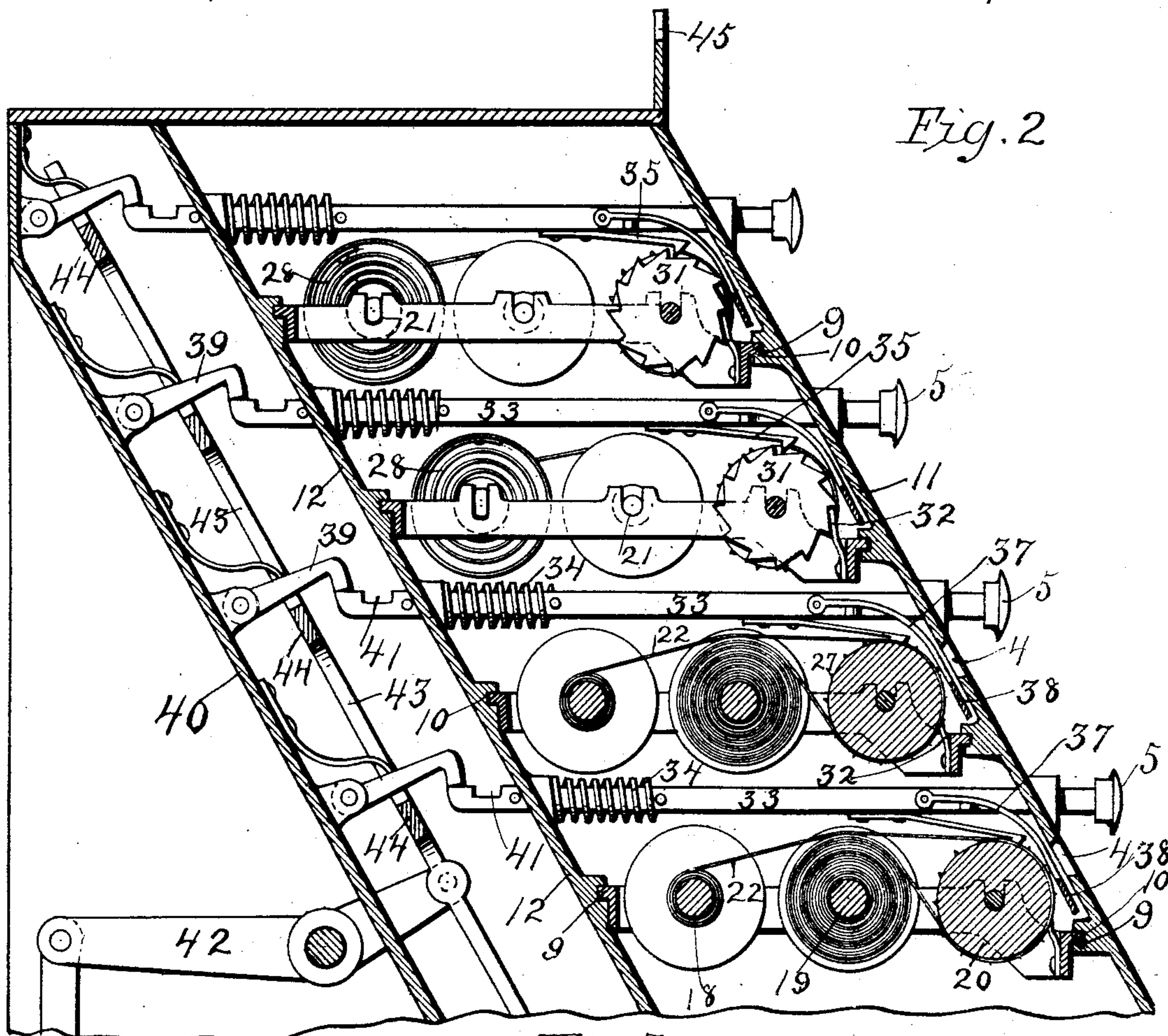


Fig. 2

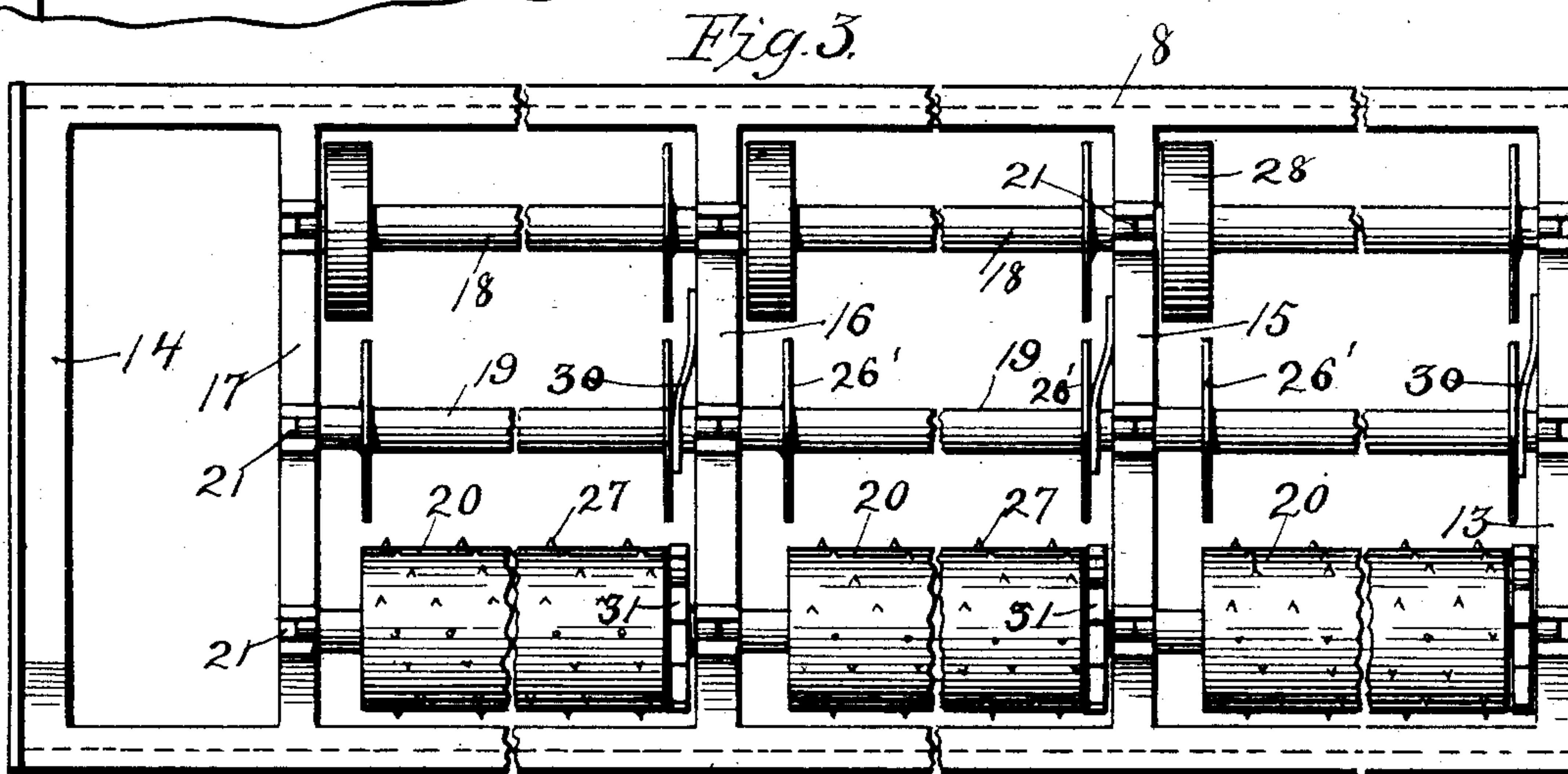


Fig. 3

Witnesses.

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P. H. Lyon

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UNITED STATES PATENT OFFICE.

LUDWIG W. HARMSSEN, OF MINNEAPOLIS, MINNESOTA.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 512,699, dated January 16, 1894.

Application filed April 28, 1893. Serial No. 472,174. (No model.)

To all whom it may concern:

Be it known that I, LUDWIG W. HARMSSEN, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

My invention relates to means for facilitating voting at elections, and for recording and numbering the votes; and the object of my invention is to provide means for expediting election returns by decreasing the work to be done by the election judges and clerks; and a further object is to simplify and cheapen the construction of voting machines.

To this end my invention consists in general in the construction and combinations all as hereinafter described and particularly pointed out in the claims.

The invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a general perspective view of the upper part of a voting machine embodying my invention. Fig. 2 is an enlarged longitudinal cross section thereof, the section being taken on the plane of the line $x-x$ of Fig. 1. Fig. 3 is a plan view showing one of the slides carrying the rolls of paper whereon the votes are recorded. Fig. 4 shows the end of a voting strip embodying my invention. Fig. 5 is a detail showing the inner side of the front of the case, and showing the means for closing the crossing slot or opening therein after registering the vote. Fig. 6 is a detail horizontal section on the line $y-y$ of Fig. 5.

As shown in the drawings, I preferably employ a casing having an inclined front of sufficient width to accommodate the titles of the candidate arranged in a column at the left hand side, and one or more vertically arranged sets or rows of slots or openings 3, 4, headed by the name or names of the party or parties participating in the election.

In the drawings I have shown spaces and means for recording Republican, Democratic and People's party votes. Beneath each of these heads is a series of horizontal slots 3 through which the names of the candidates show continuously, and opposite the end of

each slot is a second slot or opening 4, a space being left between them. Above the small opening 4 is a push button or knob 5 which is pushed in after the cross has been made upon the paper within the opening 4. The slots 3 are closed by small glass panes 6 while the slots 4 are open except as hereinafter described. The slots and openings for all candidates for the same office are arranged in a horizontal line with one another, and for each such horizontal series I provide a long frame or slide 8, which, as shown in Fig. 2, has the flanges or ribs 9 projecting into the horizontal and transverse grooves 10 provided in the front and intermediate walls 11 and 12 of the casing. This slide has, in addition to its end bars 13 and 14, the cross bars 15, 16 and 17. Between these I arrange the groups of rollers 18 19 and 20, the shafts thereof being fixed in small socket bearings 21 provided upon the cross bars. These groups are directly opposite their respective slots 3 and 4 in the front of the casing and they carry the recording strips or ribbons 22. These strips are printed, as illustrated in Fig. 4, where the upper end of one of the Republican tickets or strips is shown in full. At the head of the strip is the party name, and beneath the same the title of the candidate, and the rest of the ticket or strip is taken up by the name of the candidate repeated upon lines separated by about the width of the slot 3. Beginning at the top opposite the first print of the candidate's name, are the numbers 1 to 100, or as many times as the candidate's name is printed upon a particular strip as gaged by the number of votes in a given precinct. The edge 25 of the slip is left blank. These strips are so arranged upon the rolls that the numbers opposite the candidate's name are hidden by the solid part 26 between the slots 3 and 4. The paper is originally wound upon the roll 19, one end being fastened thereto, and the paper being kept in alignment by the end disk 26'. The other end of the strip is carried down and around the roll 20, which is provided with a number of small sharp teeth 27 adapted to project through the paper and prevent the same from slipping. The end of the strip is thence carried back and secured upon the roll 18, which roll is actu-

ated by a spring 28 to take up slack in the strip. A small pressure spring 30 is applied to the side of the roll 19 to prevent the paper from unwinding therefrom except as drawn out by the actuating roll 20. This roll 20 has upon one end a ratchet wheel 31, and the roll is prevented from turning back by a small spring detent 32. It will be seen that the paper upon the front side of the roll 20 will be immediately before the open slot 4 through which the voter may mark with his pencil upon the paper, the mark appearing beside the name showing through the glass covered slot 3. After so marking his vote, he pushes in the knob 5 beside the same, thereby forcing back the plunger rod 33 normally held out by a coiled spring 34. A pawl 35 is attached to the plunger and engages with the teeth of the ratchet wheel 31 to rotate the roller 20 a distance of one notch, thereby carrying the next repetition of the candidate's name into view, and leaving a new blank space for a cross. At the same time with the movement of the roll 20, the paper is unwound from the roll 19 and wound up upon the roll 18 by the spring therein. Upon the plunger I also pivot an arm 37 having a blind or shutter 38 which when the plunger is thrown back is drawn out so as to close the slot 4. Upon pushing back the plunger the same is engaged by a spring pawl 39 pivoted upon the rear wall 40 of the case, and adapted to drop into a notch 41 provided in the end of the plunger as shown clearly in Fig. 2. These arrangements are duplicated before each set of openings 3 and 4, and the plunger and pawls 39 with all parts directly connected therewith, are supported in the case independently from the rolls and the slides wherein the same are held. For voting the full ticket a person will make his cross several times, and will push in a large number of knobs or buttons, which will be immediately locked, and all of the slots closed to prevent repeating. In case a person after voting for the full number of candidates chooses to push in further buttons, he simply cancels the effect of votes for corresponding candidates. When the voter leaves the booth wherein the machine is located, the judge or judges throw down the lever 42 supported in the case, and thereby raise the long bar 43 pivoted thereto and having the cross lugs or parts 44 which engage the lugs 39; and by throwing them up liberate all of the plunger bars 33, whereupon they fly back, thereby placing the pawl 35 in position to engage the next teeth of the ratchet wheels and opening the X slots.

The openings in the end of the case required for drawing out the several frames are preferably closed by the end panels 44', which may be secured by a lock common to all, or by separate locks having a common key, as shown in Fig. 1.

Upon the edge of the machine I preferably arrange a molding or cap piece 45 bearing the words "Mark crosses in squares and push the

corresponding buttons," or words to the same effect.

After the voting has been completed the strips are all removed and the votes for each candidate determined by simply noting the number after the last check or cross upon the slip.

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

1. The combination, in a voting machine, of a casing provided with slots 3 and 4, with a roll arranged opposite said openings and carrying a strip bearing the candidate's name, said roll provided with a ratchet wheel, a plunger bar having a knob outside the case, a detent to engage said ratchet wheel and said slot 4 being open so that a cross may be made upon the paper beneath the same, substantially as described.

2. The combination, in a voting machine, of a casing provided with a series of slots 3, 4, the slots 4 being open, with a series of paper carrying rolls arranged opposite said slots respectively, paper strips for each roll, said strips bearing the repeated names of the candidates respectively, the paper strips beneath the slots 4 being adapted to be marked upon by the voter, and means for advancing the strips so marked to expose new check spaces, substantially as described.

3. The combination, with a casing having a series or sets of openings, 3, 4, of a paper carrying roll arranged opposite each set of openings, the paper being adapted to be marked through the openings 4, an independent advancing device in connection with each roll, means for closing the slots 4 when the rolls are advanced, and means for simultaneously opening said slots 4, after all votes have been registered, substantially as described.

4. The combination, in a voting machine, of a casing provided with slots 4, and name slots 3, a paper strip for each roll, said strip bearing the repeated name of the candidate, a space for the check marks or crosses opposite the opening 4, and said strip bearing numerals in order opposite the candidate's name, said numerals being concealed by the space between the slots 3 and 4, and means for advancing each roll after the strip has been checked, substantially as described.

5. The combination in a voting machine, of a casing having slots 3 and 4, the rolls 20 opposite said slots 3, 4 respectively, said rolls having the teeth or points 27 to engage the paper strip, a supply roll 19, a take-up roll 18 an actuating device in connection therewith for automatically winding the paper upon said roll, a plunger bar provided with an external knob or button, a ratchet wheel upon the roll 20, a pawl on said bar to engage said ratchet wheel, a spring for normally holding out said plunger bar, a pawl to engage said plunger when forced back, and adapted to hold the same, and means for simultaneously

disengaging all of said pawls to disengage the plungers held thereby, substantially as described.

5 6. The combination in a voting machine of a casing provided with sets of slots 3, 4, the slots 3 being closed by transparent panes, and the slots 4 being open, a slidable frame arranged within the casing and one before each set of slots, an actuating roll 20 arranged before the slots 3, 4 of each set, supply and
10 take-up rolls arranged in connection with each roll 20 and supported in their respective

frames, the push buttons and the bars thereof whereby the rolls 20 are operated, and each of said bars provided with a shutter 38 adapted to close the slots 4 opposite the bars respectively when said bars are forced back, substantially as described. 15

In testimony whereof I have hereunto set my hand this 19th day of April, 1893.

LUDWIG W. HARMSSEN.

In presence of—

C. G. HAWLEY,

M. E. GOOLEY.