

(No Model.)

2 Sheets—Sheet 1.

U. G. ILES.
BALLOT REGISTERING DEVICE.

No. 500,001.

Patented June 20, 1893.

Fig 1

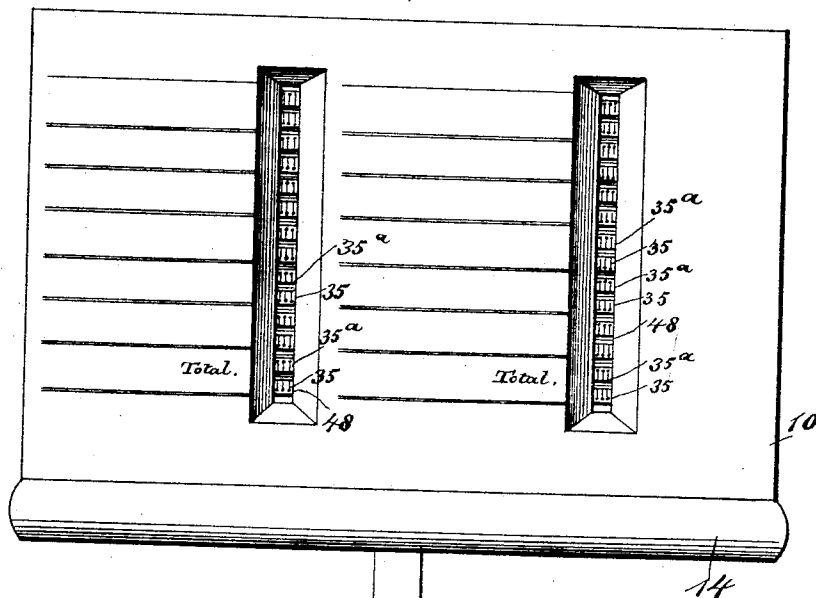
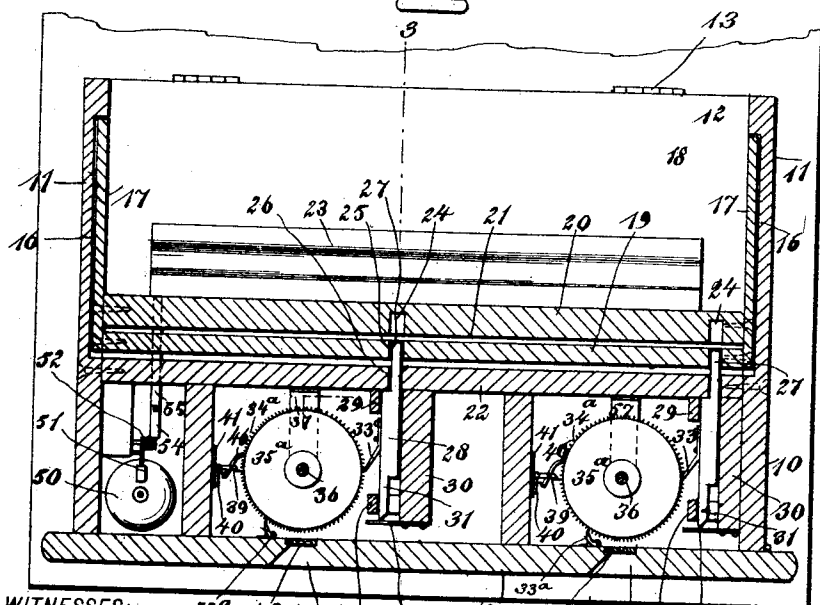


Fig 2



WITNESSES:

A. Walker
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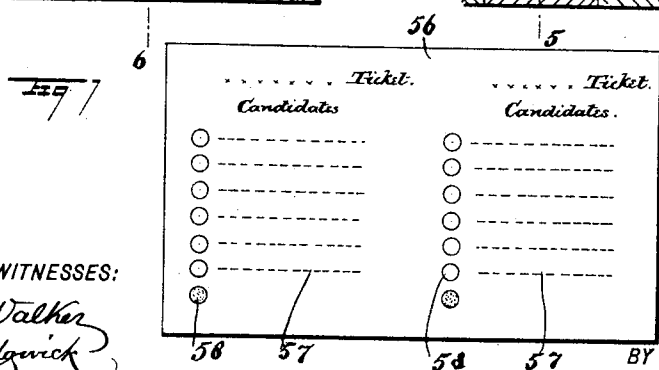
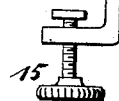
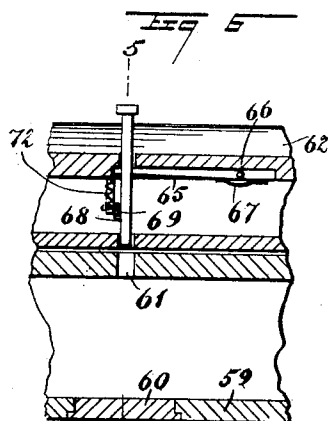
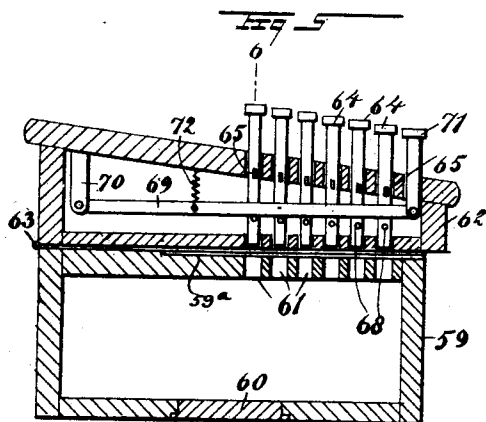
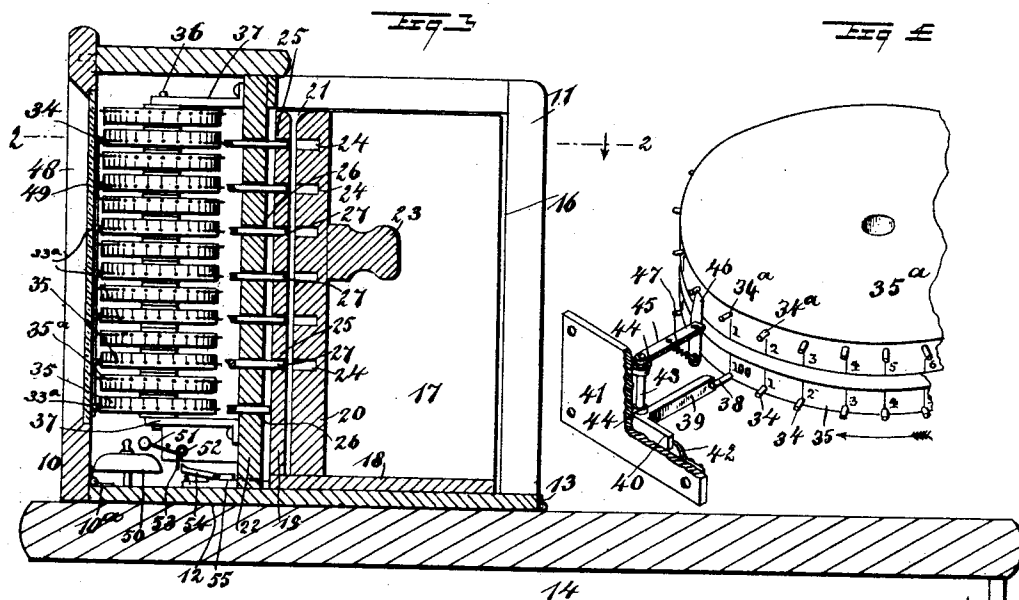
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WITNESSES:

A. Walker
to Sedgwick

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UNITED STATES PATENT OFFICE.

URBAN G. ILES, OF WELLSTON, MISSOURI.

BALLOT-REGISTERING DEVICE.

SPECIFICATION forming part of Letters Patent No. 500,001, dated June 20, 1893.

Application filed September 22, 1892. Serial No. 446,555. (No model.)

To all whom it may concern:

Be it known that I, URBAN G. ILES, of Wellston, in the county of St. Louis and State of Missouri, have invented a new and Improved Voting Apparatus, of which the following is a full, clear, and exact description.

My invention relates to improvements in voting apparatus, and the object of my invention is to produce a mechanical system of voting which will insure absolutely fair elections, and by which a vote may be taken with great accuracy and rapidity, and which also may be operated by any voter of ordinary intelligence.

A further object of my invention is to construct the apparatus in such a way that it may be easily manipulated and will not get out of order, to produce a ticket which is especially adapted to the system, to provide means for mutilating the ticket in such a way that it may be mechanically counted, and to provide a register which will accurately register the votes and exhibit the number of ballots cast so that the vote may be ascertained at any time.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a front elevation of the voting and counting box. Fig. 2 is a sectional plan of the same on the line 2—2 in Fig. 3. Fig. 3 is a vertical section on the line 3—3 in Fig. 2. Fig. 4 is a broken enlarged detail view of one set of counting wheels, showing particularly the mechanism for moving the hundreds wheel one notch after the units wheel has made a revolution. Fig. 5 is a central cross section of a punching or mutilating machine, which I employ as an adjunct of my voting apparatus, the view being taken on the line 5—5 in Fig. 6. Fig. 6 is a broken longitudinal section of the same on the line 6—6 in Fig. 5; and Fig. 7 is a plan of the ticket used in connection with the apparatus.

The voting and counting machine is contained in a box 10, the front of which is suitably secured to the box bottom. The front or lid may be secured by a suitable lock. The box holds the counting mechanism which will be hereinafter described, and its sides 11 extend backward behind the back of the

box, as shown best in Figs. 2 and 3, the box bottom 12 also projecting backward to the rear ends of the sides, and this bottom is hinged, as shown at 13, to a table or board 14, and the latter has on one edge and on the under side a common form of clamp 15 by which it may be secured to a suitable support. The counting or voting machine rests normally upon its bottom, as shown in Fig. 3, and the object of the hinges 13 is to enable the box to be tipped up when the vote is to be read so that the numbers representing the vote may be easily seen.

On the inner sides of the rear portions of the box sides 11 are slideways 16 in which are held the side pieces 17 of a slide which has a limited movement in the box, the side pieces 17 being connected by a base piece 18 which moves on the bottom 12. Near the front edge of the base 18 are vertically parallel boards or plates 19 and 20 which have a slot or pocket 21 between them adapted to receive the ticket when a ballot is cast, as described below, and these boards or plates are arranged parallel with the back 22 of the box. A hand hold or pull 23 is secured to the back plate 20 to enable the voting slide to be conveniently moved, and any suitable pull or hold may be provided.

On the front or inner side of the back plate 20 are produced rows of holes or recesses 24 which register with perforations 25 in the front plate or board 19, and with perforations 26 in the back 22 of the box. These perforations and recesses are adapted to receive the rear reduced ends 27 of pins 28 which are held to slide in the box 10 and are arranged between keepers 29 and supports 30. The inner or front ends of the pins 28 are also reduced, as shown at 31 in Fig. 2, and these front ends bear upon springs 32 which are secured to the supports 30, and the springs return the pins to their normal positions after they have been pushed forward to effect a count. The pins 28 have pawls 33 on one side which are adapted to engage pins 34 on the units counting wheels 35. The wheels are prevented from turning back by pawls 33^a on the side of the case. These counting wheels are arranged to turn in a horizontal position and are also arranged in vertical rows or tiers, there being a units wheel for each pin and there are as many

rows or tiers of pins and wheels as there are political parties to be balloted for. The drawings show but two rows, but as described below it will be understood that any number may be used.

The units wheels have one hundred equidistant pins 34 around their circumference, and each forward movement of the counting pins 28 moves the wheels the distance of one tooth. Above each units wheel is a similar wheel 35^a which, however, registers hundreds, and this wheel is also provided with teeth 34^a arranged like the teeth 34 just described. The counting wheels 35 and 35^a are journaled on vertical shafts 36 and the latter are supported in suitable hangers 37. Each units wheel has at the point indicating 100, a pin 38, which is longer than the pin 34, and this pin is adapted to strike one arm 39 of a bell crank lever which is arranged adjacent to the wheel, the opposite arm 40 of the lever lying normally against a plate 41 which is secured to a convenient support within the box 10, and the lever is normally held so that the arm 39 will extend at right angles to the plate by a spring 42 which is secured to the plate and presses upon the free end of the arm 40.

The bell crank lever is secured to a small vertical shaft 43 which turns in bearings 44, and secured to the shaft is a crank 45 which is substantially parallel with the arm 39 of the bell crank, and to the free end of the crank is pivoted a pawl 46 which is adapted to engage the teeth 34^a of the hundreds wheel 35^a, the pawl being pressed into position against the face of the wheel by a spring 47 which is secured to one end of the pawl and to the crank 45. It will be seen then that after the units wheel has made a revolution and counted 99, the pin 38 will at the next movement of the wheel strike the arm 39 and tilt the bell crank and turn the shaft 43, thus moving the crank 45 and pawl 46 so as to advance the hundreds wheel a distance of one tooth. The pawl 46 will prevent the hundreds wheel from turning back, and if desired, another locking ratchet may be used in connection with it. The hundreds wheel will thus register the count in hundreds and the units wheel may be moved as before, and when another revolution is completed the hundreds wheel will be advanced another point in the manner described. It will be understood that other registering mechanism may be used without departing from the principle of my system.

In the front of the box 10 are slots 48 which are preferably protected or covered by glass 49, and these slots are arranged opposite the counting wheels so that by looking through them the number of votes cast may be ascertained. The lower set of wheels 35 and 35^a may be made to register the total count as indicated on the face of the box, see Fig. 1, and to this end the lower pin 28 extends only through the perforation 26 in the back 22, and contacts with the front plate 19 of the voting

slide. The slide is moved forward every time a ballot is cast, as hereinafter described, and consequently these wheels will be moved every time the slide is moved, and the total vote accurately registered.

A tally bell 50 is arranged in the lower portion of the box and is adapted to ring every time a ballot is cast, so as to sound an alarm and give notice that everything is in working order. This bell is provided with the usual form of hammer 51, as shown in Figs. 2 and 3, which has a spring shank coiled around a support, as shown at 52, and one end 53 of the shank is bent downward so as to extend into the path of a pawl 54 which is hinged to a slide 55, and the latter extends through the back 22 of the box and into the path of the voting slide; consequently every time the voting slide is moved forward and back the slide 55 will be similarly moved and the hammer will be swung so as to strike the bell.

In connection with this voting box, a ticket 56 is used which is shown in detail in Fig. 7; as illustrated this ticket is made to conform with the Australian ballot and the size of the ticket is such that it fits snugly in the pocket or recess 21, and it has columns 57 on which the names of the candidates of the different parties are produced, and circles 58 or other suitable marks are produced opposite the names of the candidates. The tickets are headed in the usual way; that is, republican, democratic, &c., and while as illustrated it is arranged for two parties, it will be understood that it may be arranged for any necessary number.

The marks 58 are produced so as to register with the ends 27 of the pins 28, and when a ballot is cast the party voting punches out the circles 58 opposite the names of the candidates for which he does not intend to vote, after which the judge of elections, or some other suitable person, inserts the ticket in the pocket 21. The slide of the voting machine is then pushed forward and the counting pins which register with the punches in the ticket will pass through the said punches or holes without actuating the counting wheels, while the pins which register with the unpunched marks will be pushed forward and will turn the counting wheels a distance of one tooth, thus registering a vote. After the vote is made, the ticket is removed from the pocket 21 and may be preserved in a ballot box provided for the purpose.

To facilitate the quick and accurate punching of the ticket, the punching machine shown in Figs. 5 and 6 is used. Here a box 59 is shown which has a slide 60 in the bottom, to facilitate the removal of debris, and holes 61 in the top through which the chips from the punched tickets drop into the box. A supplemental top 62 is hinged to the box, as shown at 63, and this supplemental top carries rows of vertically movable keys 64 which slide in perforations in the supplemental top, these keys registering with the holes 61 in the top

of the box 59. The keys are normally held upward by tongues 65 which project into the keys and which are pivoted, as shown at 66, to the supplemental top 62, the tongues being held upward by springs 67, as shown clearly in Fig. 6. The keys 64 are provided near their lower ends with pins 68, and above these and adapted to contact with them is a swinging lever 69, which at one end is pivoted to a support 70 and at the opposite end is pivoted a key 71 which is arranged parallel with the keys 64 and is held to move vertically in the supplemental top 62. This key and lever are held upward by a spring 72.

The object of the key 71 and lever 69 is to facilitate quick punches where a party desires to vote a straight party ticket. The box 59 has a recess 59^a in the top in which a ticket 56 fits snugly, and this makes the points 58 come beneath the keys 64.

The punching is effected as follows:—The ticket 56 is inserted between the supplemental top 62 and the top of the box 59, and the punching machine is of such a size that the circles or other points 58 will register accurately with the keys 64. If a party desires to vote a mixed ticket; that is, if he desires to vote for certain candidates of one party and for other candidates of another party, he pushes down the key 64 opposite the names of the candidates for which he does not intend to vote and the keys punch holes in the ticket. If, on the other hand, he wishes to vote a straight party ticket, he depresses the key 71 opposite the party for which he does not intend to vote, and the keys 64 opposite the names of the candidates of said party are simultaneously depressed, and holes produced opposite the names of each candidate in said party. It will be understood that the marks 58 may be dispensed with, but they are preferably used. If they are not used however, the holes would be made in the proper places when the keys are depressed.

The voting according to the system, is carried out in the following way:—The voter takes the ticket 56, inserts it in the punching machine, punches the holes opposite the names of the candidates for which he does not desire to vote, in the manner just described, and he then hands the ticket to the judge of election, who inserts it in the pocket or recess 21 of the voting machine. The voting slide is then pushed forward and back by means of the pull or hand hold 23 and the counting pins 28 which come opposite the unpunctured portions of the ticket will be pushed forward and the counting wheels turned so as to record the vote, all as previously described.

It will be seen from the above description that the method of voting described, is purely mechanical, that a mistake is almost impossible, that a vote may be very rapidly taken, and that the number of votes for each candidate and the total vote cast may be ascertained at any time by simply looking at the front of the voting box or machine.

To facilitate the quick and accurate ascertaining of the vote, an official ticket is pasted upon the front of the box 10, so that the names of the candidates will come opposite their appropriate wheels, and slots are cut into the ticket to register with the slots 48 in the box. When the vote is officially taken or counted, it is better to tip the box 10 upward, so that the slots 48 shall come on top, as an exact count may be more easily and accurately obtained in this way.

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

1. In a voting system and apparatus, a perforated ticket having upon it the names of candidates, the voting or counting machine comprising a box having registering wheels therein, pins held to slide in the box back and adapted to engage and turn the registering wheels, and a slide held to move behind the box back, said slide having a vertical pocket parallel with the box back, adapted to receive a ticket, and holes and recesses on opposite sides of the pocket, said holes and recesses being arranged to register with the counting pins, substantially as shown and for the purpose specified.

2. In a voting system and apparatus, a perforated ticket having upon it the names of candidates, the voting or counting machine comprising a box having registering wheels therein, slidable pins arranged in the box back and adapted to engage and move the registering wheels, rearwardly extending sides produced on the box and having slideways therein, and a slide held to move in the slideways, said slide having a recess or pocket to receive a ticket, the pocket being substantially parallel with the back of the box, and holes and recesses on opposite sides of the pocket, said holes and recesses being arranged to register with the pins, substantially as described.

3. In a voting system and apparatus, a perforated ticket having upon it the names of candidates, the voting or counting machine, comprising a box containing registering wheels, slidable pins mounted in the box back and held to engage and turn the registering wheels, a movable slide arranged behind the box back, having a pocket or recess produced parallel with the box back and adapted to receive a ticket, and holes and recesses on opposite sides of the pocket which register with the pins, and an alarm bell arranged within the box and actuated at each movement of the slide, substantially as described.

4. In a voting system and apparatus, a perforated ticket having upon it the names of candidates, the voting or counting machine comprising a box hinged to a support and provided with counting or registering wheels, a movable slide held to move between the sides of the box, said slide having a pocket or recess parallel with the box back and adapted to contain a ticket and also perforations and recesses on opposite sides of the

pocket, and slidable pins held to move in the box back and adapted to register with the perforations and holes of the slide, said pins having an operative connection with the
5 counting wheels whereby their forward movement will turn the wheels, substantially as described.

5. In a voting system and apparatus, a perforated ticket having upon it the names of
10 candidates, the voting or counting machine comprising a box containing counting or registering mechanism, movable pins held to

slide in the box back and adapted when pressed to operate the registering mechanism, and a movable slide arranged behind the pins, 15 said slide having a pocket to receive a ticket and having holes and perforations on opposite sides of the pocket, these holes and perforations being arranged to register with the pins, substantially as described.

URBAN G. ILES.

Witnesses:

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FRANK. E. CORL.