

W. H. DANA.
VOTING MACHINE.
APPLICATION FILED NOV. 23, 1908.

994,131.

Patented June 6, 1911.

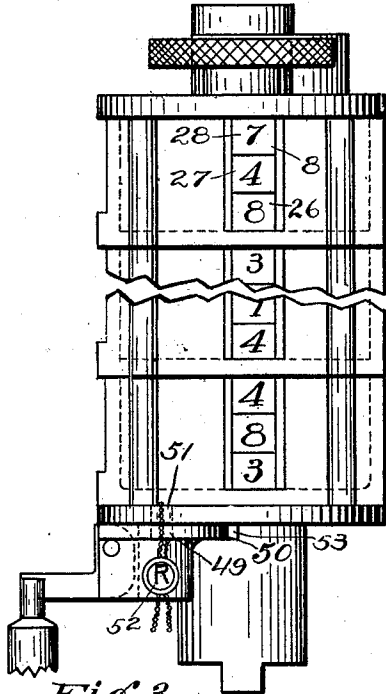


Fig. 3.

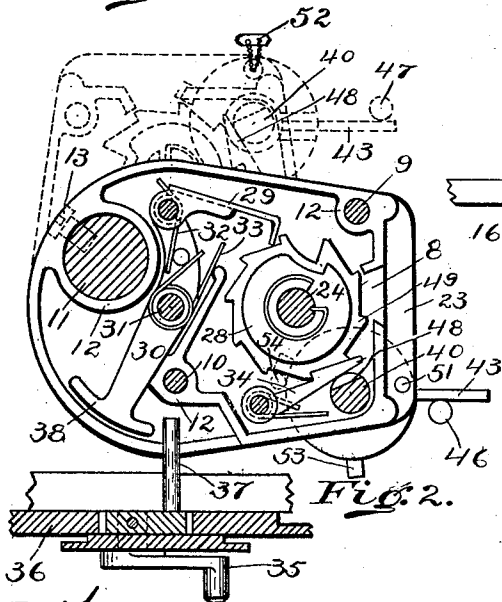


Fig. 2.

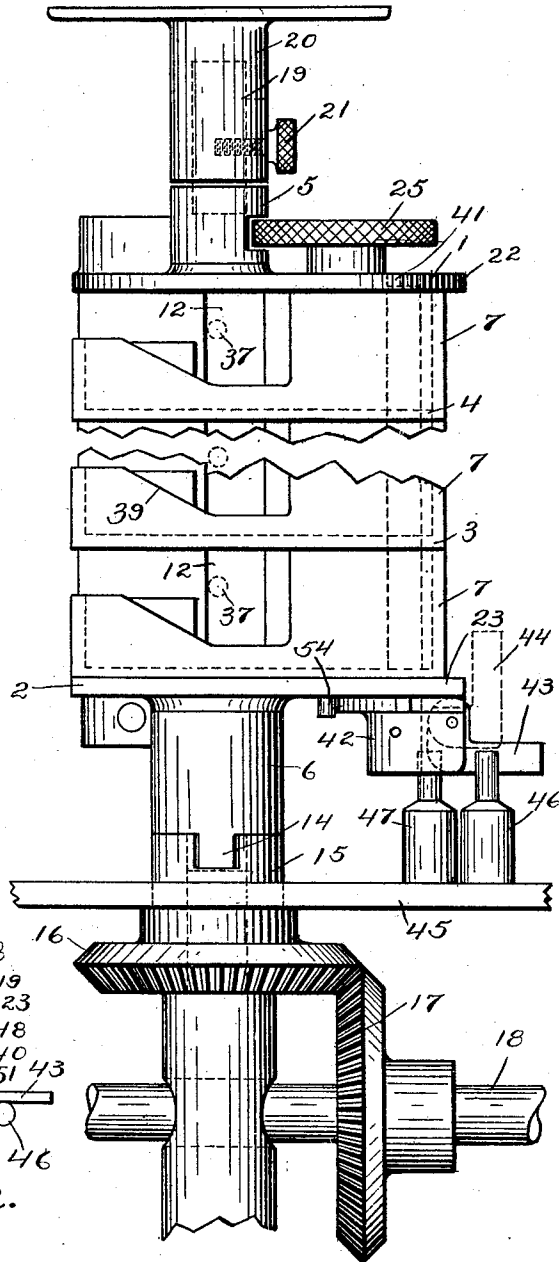


Fig. 1.

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VOTING-MACHINE.

994,131.

Specification of Letters Patent.

Patented June 6, 1911.

Application filed November 23, 1908. Serial No. 464,168.

To all whom it may concern:

Be it known that I, WILLIAM H. DANA, a citizen of the United States, residing in Indianapolis, county of Marion, State of Indiana, have invented certain new and useful Improvements in Voting-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

The object of my present invention is to provide a construction in connection with the registry mechanism of voting machines, whereby the counting wheels or other registering devices may be locked, and when desired, sealed from any movement when the machine is not in use.

For the purposes of any contest in the election, and for many other reasons, it becomes of great importance that after the close of any election, there shall be absolute assurance that the counting devices have not been tampered with, and that even those election officers or others who may have access to the working parts of the machines, shall have no opportunity to modify or change the record as contained on the counting devices.

I attain my object in the present invention, by providing a locking bar which shall be actuated to lock the counting mechanisms positively against any movement on the conclusion of each voting operation, and by so arranging the parts that a seal may be attached when the election is completed that shall guarantee that the mechanism has not been tampered with as long as the seal is unbroken.

I have illustrated my improvements in connection with the construction of rotatable registry frames and counting devices, of my prior patent on voting machines No. 845,860, issued March 15, 1907, but it will be understood that I do not wish to limit myself to this particular construction, as my improvements can be readily applied to many other constructions of voting machines, in which registering counters are employed, especially when mounted in frames arranged to be moved to register and count the voting devices that might have been actuated by the elector in indicating his choice.

In addition to the general construction applicable to various voting machines, I have

also improved the particular construction illustrated in my former patent, in such details as will be hereinafter particularly pointed out and claimed.

In the drawings Figure 1 is a side elevation of a portion of one of my registry frames. Fig. 2 is a top plan view of same, with the upper or cover disk removed, and showing the registry mechanism in its two positions. Fig. 3 is a side elevation of a portion of the registry frame viewed from a position at right angles to that shown in Fig. 1.

In illustrating my present improvements, I have only shown those parts of the voting machine relating to the registry mechanism, and in this connection only a single registry frame. It will be understood, however, that the general type of machine is of the kind shown and described in my prior patent above referred to, No. 845,860, of March 5, 1907, in which the various tickets containing the names of candidates, are arranged in vertical rows, with the names of the candidates for the same offices on the various tickets in horizontal rows, and that as many complete registry frames as there are party tickets, are provided with individual counters for each office candidate.

Each registry frame is made up of a top disk 1, and a bottom disk 2, with as many intermediate disks 3, 4, as may be required, one for each candidate. The top and bottom disks carry hub collars 5 and 6, and the intermediate disks are provided with vertical flanges 7, which rest on and support the disk immediately above it and form inclosing side walls to inclose and protect the counter mechanism from access and harm. The side walls or vertical webbed portion of the disks, are cut away for a portion of the periphery to allow for actuation of the counter mechanism, and a vertical slot 8, is also cut in this inclosed portion for the display of the numerals on the counting wheels, indicating the number of votes cast for any candidate.

The top and bottom plates, and the intermediate disks are tied together by the rods 9 and 10, and the larger rod 11, which pass entirely through the disks, and are secured to the top and bottom disks, so that they can be drawn tightly together and held in proper alinement, and to further secure this rigidity of frame, collars 12 are formed around

each rod integral with the disk, and carried up to the top of the side wall portions of each disk. For the larger rod 11 set screws 13, are also provided at suitable points to prevent twisting. The hub collar 6 on the lower disk is provided with a tenon 14, to engage the mortise in the shaft 15, upon which the beveled gear 16 is mounted, which gear is engaged by the gear 17, mounted on the rock shaft 18, which extends across the machine and is actuated by the voter in entering and leaving the machine. The hub 5 on the upper disk, is cored out to receive the end of a slidable bolt 19, which is slidably mounted in the collar 20, depending from the upper plate of the frame, and 21 is a set screw for locking this bolt in position.

With this construction each registry frame with its counting mechanism may be readily removed from the machine proper to be stored away between elections.

The top and bottom disks are made quite strong and rigid, and at their straight or front edges project a short distance beyond the intermediate flanged disk, as indicated at 22, 23, in Fig. 1.

Each disk carries an individual set of counting wheels all strung on a common shaft 24, mounted in the bottom disk, and extending through the top disk where it is provided with the thumb nut 25, for rotating the shaft for re-setting the counters.

Each individual set of counting devices comprises three ratchet wheels 26, 27 and 28, which carry numerals on the periphery, and these counters represent the units, tens and hundreds wheels, and for transferring the units and tens the units and tens disks are each provided with one tooth deeper than the normal teeth of the wheel. These counters are actuated by a three stepped pawl 29, pivoted upon one end of a pawl carrier 30, the pawl carrier being pivotally mounted on a center pin 31, carried by the disk upon which the individual counters are supported.

Instead of employing a single spring acting on the pawl carrier, to hold it and the actuating pawl in engagement with the counters, I employ a light spring 32 to hold the pawl in engagement with the counters, and a heavier spring 33 to return the pawl carried to its normal position. This is a matter of some particular advantage for the reason that the pawl carrier spring can be made abundantly strong, while the spring for the actuating pawl need only be of sufficient strength to hold the pawl against the periphery of the counting wheels, thus preventing any scratching or undue wear on the periphery of these wheels which carry the counting numerals.

In order to retain the counting wheels in their respective positions, I prefer to use the spring pressed retaining pawls 34, one for each counting disk.

I provide for the actuation of the pawl carriers and counting wheels, as in my previous patent above mentioned.

In Fig. 2 I have indicated one of the voting levers 35, which is pivotally mounted in the front plate 36 of the machine, and carries the crank pin 37 which extends into the cut away portion of each registry disk, immediately above the segmental contact plate 38 of its respective pawl carrier.

When any voting lever is operated, its respective crank pin 37 will be lowered into the pathway of the contact plate 38 of the pawl carrier, and as the voter leaves the booth he actuates the rock shaft 18 to rotate each registry frame a quarter of a revolution into the position shown in the dotted lines in Fig. 2, and this movement causes the pin 37 to actuate the pawl carrier and its pawl to advance the units wheel of the counting disks one step, at the same time that the crank pin 37 rides up the edge 39 of the side wall of the registry disk to return the voting lever to its normal position, and the next voter in entering the booth, actuates the rock shaft 18 to return the registry frames to their first position, all as fully described in my former patent above mentioned.

In order to lock the various counters of each registry frame against any tampering therewith or actuation thereof except in the regular way, and in order that the registry frames before being removed from the machine may be effectually sealed, I provide as follows: 40 is a shaft or rod passing vertically through the entire registry frame, and having its bearings in close proximity to the retaining pawls 34 of the counting disks. This shaft is held in rotatable position in the top disk by the collar 41, and below the bottom disk is provided with the flanged collar 42. This collar is slotted at one side and carries the arm 43 pivoted in the slot so that the arm will normally project horizontally as shown in Fig. 1, but so that it can be raised into vertical position shown by the dotted lines 44, in Fig. 1, and the arm is pivoted so firmly that it will remain in any intermediate position in which it may be placed.

Mounted on the cross piece 45 of the frame, in the pathway of this arm 43, in the two positions to be taken by the registry frames, are the stop pins 46 and 47. The rod 40 is flattened on one side at 48, and when the registry frame is in the position shown in full lines in Fig. 2, with the voting machine unlocked and ready for operation, the arm 43 rests against the pin 46 and the flattened side of the rod 40 is presented toward the retaining pawls 34 so that there is ample room for the actuation of the counting wheels. When, however, the registry frame is rotated, as the voter leaves the booth, the rotation of the frame brings the arm 43

after the counters have been actuated, against the stop pin 47, and the further rotation of the frame into the position shown in dotted lines in Fig. 2, rotates the rod 40, to bring the circular portion of the rod to bear upon the retaining pawls 34, and thus to lock the counters against any movement whatever. When the registry frame is turned back to its open position, the arm 43 will contact with the stop pin 46 and the locking rod 40 will be again turned back to release the retaining pawls.

Before the registry frames are removed from the machine, and at the close of the election, in order that the counters may be sealed I form an opening 49 in the flange 50 of the collar 42, and also an opening 51 in the front edge of the bottom plate 2, and these openings are so arranged that when the flanged collar 42 is in the position shown in dotted lines in Fig. 2, with the shaft 40 turned so as to lock the counting wheels, these two openings will be in register and a seal 52 of any desired description, may be placed through the openings and the movement of the shaft 40 securely locked until the seal is broken.

It frequently occurs that it may be desired to test the voting machine before the actual commencement of the election, and as in this event it will be desired to re-set the counters, I arrange for pivotally mounting the arm 43 as above described, so that the arm may be raised and passed behind the stop pin 47 to turn the locking bar 40, and release the counters.

In order that the operator may know when the locking bar is released, I form studs or shoulders 53, projecting from the flange 50 of the collar 42, and arrange a stop pin 54 on the lower surface of the disk plate 2 in the pathway of these studs, and this stop pin is so arranged that when the shaft 40 is rotated in either direction, one of these shoulders will be brought to bear against the stop pin. The operator, therefore, in order to release the counters, turns the arm 43 until it stops, the counters are released and can be re-set to zero and then the operator turns back the arm 43 to again lock the counters, and the machine is ready for use.

From the foregoing description it will be seen that a very convenient and easily arranged lock is provided for the counting wheels, which will uniformly lock every counter from actuation, and furthermore, that by merely sealing the position of the locking bar with a single seal of any desired description, and without any loss of time or trouble every counter will be permanently sealed from actuation to be only released upon the breaking of the seal.

With this construction in which the registry frames can be removed, and in which

each registry frame comprises a single party ticket, it will not be necessary to seal up and keep intact the entire voting machine until the period of limitation for commencing the contest shall have expired. Each registry frame with all its counters can be sealed, and then the frames removed without disturbing the seal, the registry frames placed in proper receptacles and duly marked and numbered, and the registry frames alone need be preserved intact. This removal of the registry frames not only will lighten the voting machine, but the voting machine frames and other parts can all be at once removed from the booths and stored without regard to any possible contest.

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

1. In a voting machine, a plurality of voting devices and a plurality of counting devices, one device for each candidate and arranged in a party row, a rotatable frame upon which said counters are mounted, means for rotating said frame to cause actuation of the proper counting device for each selected candidate, and a locking bar common to each party row actuated by the rotation of said frame to positively block all the counting devices against subsequent movement.

2. In a voting machine, a registry mechanism, comprising a plurality of sets of counting wheels, one set for each candidate, and arranged in a row, means for actuating said counters to register the selection of each elector, and a rotatable rod common to each row of counting wheels, having its bearings in close proximity thereto, and flattened on one side, to permit movement of the counting wheels, and means for rotating said rod to bring the curved side thereof in contact with said counting wheels to prevent subsequent movement thereof.

3. In a voting machine, a plurality of voting devices and a plurality of counting devices, one device for each candidate and arranged in a party row, a rotatable frame upon which said counters are mounted, means for rotating said frame to cause actuation of the proper counting device for each selected candidate, and a rotatable rod common to each row of counting devices having its bearings in close proximity thereto and flattened on one side to permit movement of the counting devices, and means for rotating said rod to bring the curved side thereof in contact with said counting devices to prevent subsequent movement thereof.

4. In a voting machine, a plurality of voting keys, with individual counting devices for each key, a rotatable register frame upon which the individual counters are mounted, means for rotating the frame to

cause all operated keys to actuate their respective counters, and a rotatable locking bar, common to all the individual counters and mounted in the frame with means for rotating said bar to block all counters against subsequent movement, and means for sealing said rod in locking position.

5. In a voting machine, a series of sets of individual ratchet counting wheels, one set for each candidate and arranged in a party row, with retaining pawls to hold said counting wheels in position, and a rotatable locking rod having one side flattened common to said series of sets of counting wheels, mounted in close proximity to said retaining pawls with the flattened side normally presented toward the pawls to permit free movement thereof, with means for rotating said rod to bring the curved side against said pawls to lock the counting wheels from movement.

6. In a voting machine, a series of sets of individual ratchet counting wheels, one set for each candidate and arranged in a party row, with retaining pawls to hold said counting wheels in position, and a rotatable locking rod having one side flattened common to said series of sets of counting wheels, mounted in close proximity to said retaining pawls with the flattened side normally presented toward the pawls to permit free movement thereof, with means for rotating said rod to bring the curved side against said pawls to lock the counting wheels from movement, and means for sealing said rod in locking position.

7. In a voting machine, a plurality of voting keys, with individual counting devices for each key, a rotatable register frame upon which the individual counters are mounted, means for rotating the frame to cause all operated keys to actuate their re-

spective counters, a rotatable locking rod, having one side flattened, mounted on said frame in close proximity to said counters, an arm on said rod with stops to contact with said arm as the frame is rotated to rotate the rod to bring same to bear upon the counters and to lock them from further movement.

8. In a voting machine, a plurality of voting keys, with individual counting devices for each key, a rotatable register frame upon which the individual counters are mounted, means for rotating the frame to cause all operated keys to actuate their respective counters, a rotatable locking rod, having one side flattened, mounted on said frame in close proximity to said counters, an arm on said rod with stops to contact with said arm as the frame is rotated to rotate the rod to bring same to bear upon the counters and to lock them from further movement, and means for sealing said rod in locking position.

9. In a voting machine, a plurality of voting keys, with individual ratchet counting wheels for each key and individual retaining pawls for each wheel, a rotatable register frame upon which the counting wheels and pawls are mounted, means for rotating the frame to cause all operated keys to actuate their respective counters, a rotatable locking rod having one side flattened mounted on said frame, an arm on said rod with stops to contact with said arm as the frame is rotated to rotate the rod to bring same to bear upon the retaining pawls to lock the counters against subsequent movement.

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Witnesses:

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