

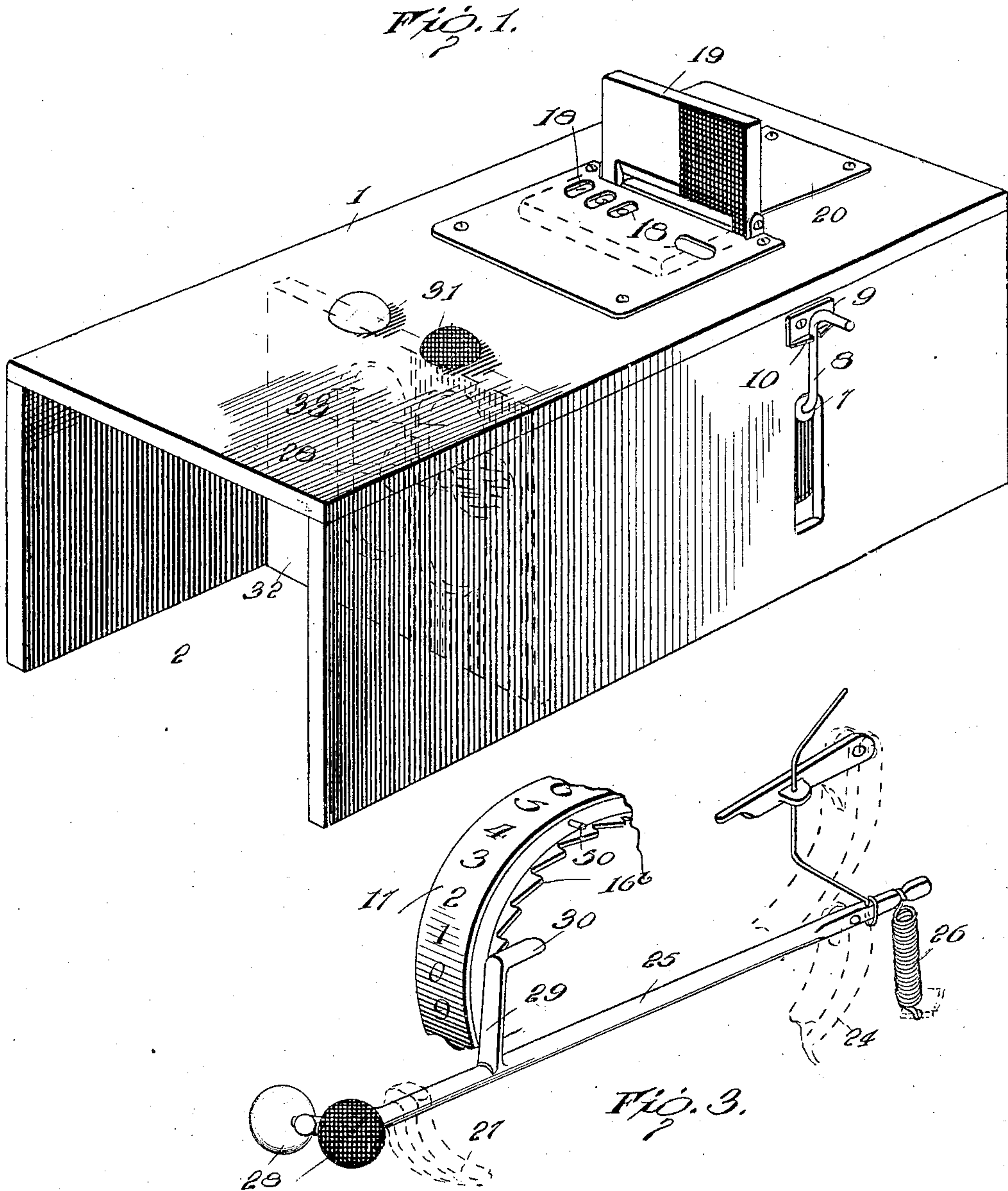
No. 837,041.

PATENTED NOV. 27, 1906.

J. W. CLARK.
VOTING MACHINE.

APPLICATION FILED MAR. 16, 1905.

2 SHEETS—SHEET 1.



Inventor

J. W. Clark.

Witnesses

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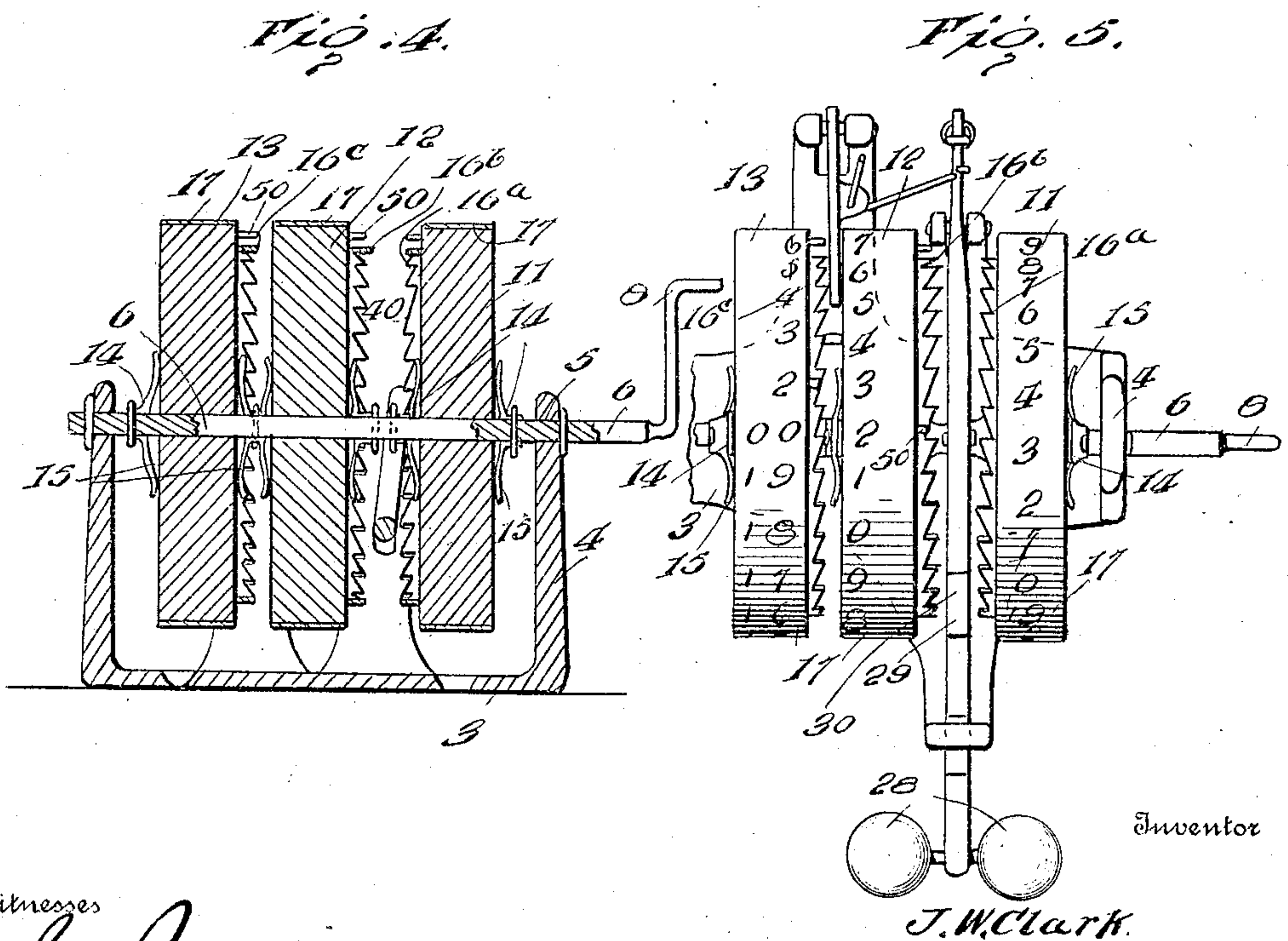
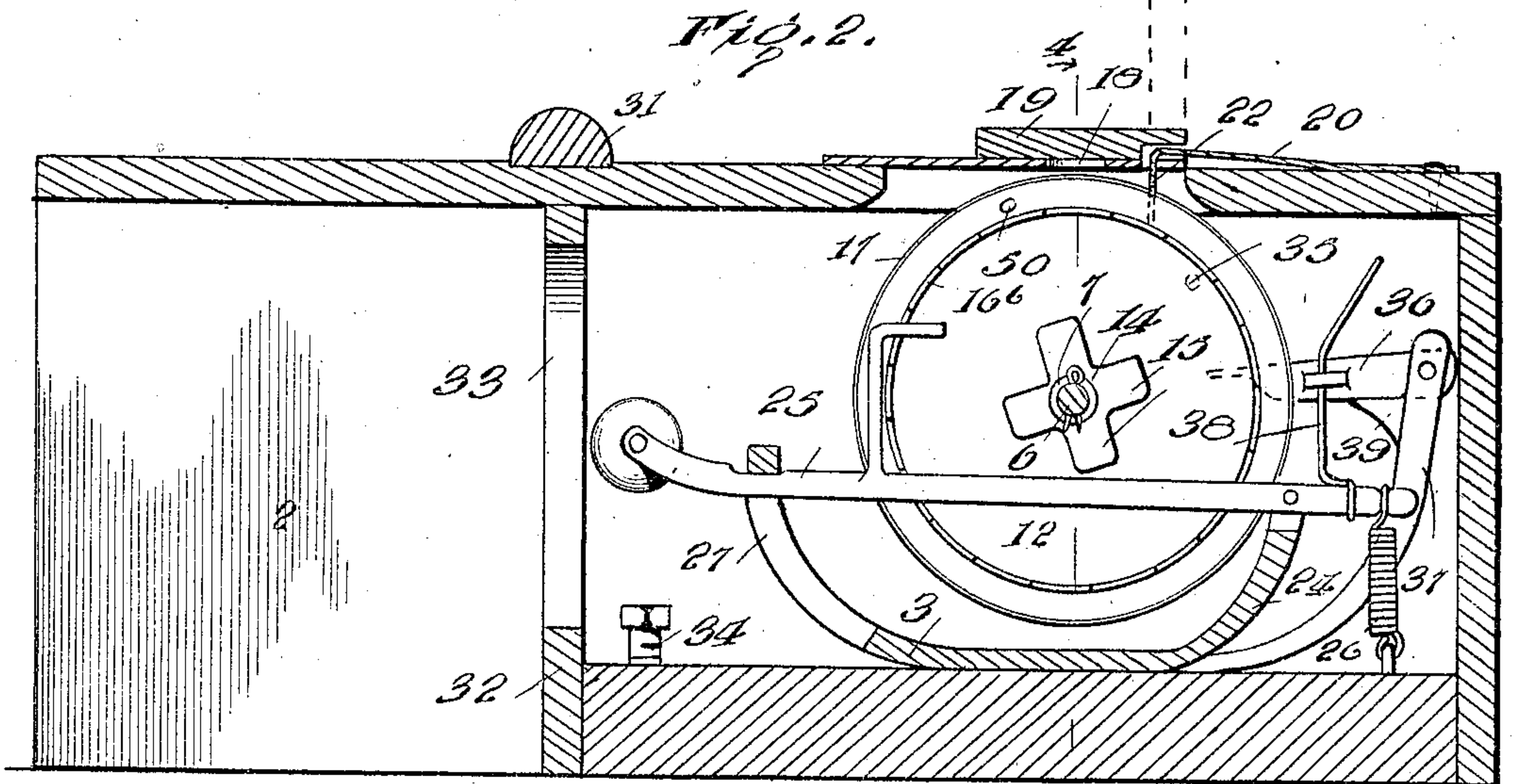
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UNITED STATES PATENT OFFICE.

JAMES W. CLARK, OF JANESVILLE, WISCONSIN.

VOTING-MACHINE.

No. 837,041.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed March 16, 1905. Serial No. 250,485.

To all whom it may concern:

Be it known that I, JAMES W. CLARK, a citizen of the United States, residing at Janesville, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

This invention comprises an improved form of machine especially adapted for registering votes cast in elections in secret orders or societies. As is well known, societies of this class generally vote dissent by blackballing, and it is desirable for the good of the order and also for purely personal reasons on the part of many that the individual votes be undisclosed.

The machine embodying this invention is adapted for balloting purposes generally, admitting, however, of keeping the voting secret until the entire vote has been cast, this being advantageous for reasons above premised.

The essential feature of the invention resides in the provision of peculiar operating mechanism for effecting registration of the votes and in various other structural details, which will appear more fully as the description proceeds.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a machine embodying the essential features of the invention. Fig. 2 is a vertical longitudinal sectional view. Fig. 3 is a broken perspective view showing the actuating device for the registering mechanism, one of the registering-wheels being illustrated partially broken away. Fig. 4 is a transverse vertical sectional view through the registering mechanism alone. Fig. 5 is a plan view of the registering mechanism, the casing of the machine being omitted.

Corresponding and like parts are referred to in the following description and indicated

in all the views of the drawings by the same reference characters.

The registering mechanism embodied in the invention is suitably housed or mounted in a casing or box 1 of any shape found desirable, said box being preferably of approximately rectangular form and open at one end, as shown at 2. Mounted in the casing 1 is a frame 3, which carries the various parts of the interior mechanism of the machine, this frame having spaced vertical standards 4 extending upwardly therefrom and provided with bearings 5 adjacent the upper extremities thereof. A transverse shaft 6 is mounted in the bearings 5 of the standards 4, and one end of this shaft projects through a side of the casing 1, as shown at 7. A crank-handle 8 exterior of the casing 1 is connected with the outer end of the shaft 6 and is designed to operate this shaft under certain conditions, as will appear more fully hereinafter.

To normally hold the shaft 6 from rotation, a lock-plate 9 is attached to the casing 1 and is notched, as shown at 10, so as to receive the crank-handle 8 and lock the latter from movement, the member 8 being adapted to spring into engagement with the plate 9 in a manner which will be readily seen. Within the casing 1 are located a plurality of movable registering elements, which are adapted for actuation in order to record the exact number of votes cast, and these elements comprise, preferably, a plurality of wheels or disks 11, 12, and 13, loosely mounted upon the shaft 6. The wheels 11, 12, and 13 are spaced from one another and though adapted for rotation irrespective of the shaft 6 as the machine is being operated in the voting yet means are provided for causing the wheels aforesaid to rotate with the shaft in order to adjust the same preparatory to the use of the machine. Friction devices are used for securing the wheels 11, 12, and 13 to the shaft in such a manner as to permit rotation of the wheels with the shaft 6 for the purpose above described, and these friction devices compose plates 14, arranged upon opposite sides of each of the registering-wheels and keyed or otherwise attached to the shaft 6 for rotation therewith. A plurality of spring-fingers 15 extend from the plates 14 and normally bear against opposite sides of the registering-wheels, so that the frictional contact between these parts will be

sufficient to cause the wheels to rotate with the shaft when the crank-handle 8 is actuated, the members 15, however, permitting the wheels 11, 12, and 13 aforesaid to rotate independently of the shaft 6 when these wheels are being actuated for registration of the votes under working conditions.

For the purposes of this description the wheel 11 will be designated the "black-ball-register wheel," whereas the wheels 12 and 13 are utilized for registering the white balls, which would ordinarily be cast if the old method of voting balls were employed. In other words, the wheel 11 is used for registering the votes of dissent, while the wheels 12 and 13 register the votes of assent, which are cast. The several registering-wheels above described are toothed upon one side, the teeth being indicated at 16^a, 16^b, and 16^c and arranged annularly of the wheels, as shown most clearly in the drawings. The teeth 16^a and 16^b are carried by the wheels 11 and 12, respectively, and project toward each other, as shown in Fig. 4.

The indicating means by which the vote is registered is preferably carried by the several registering-wheels, and for this purpose the peripheral portions of said wheels are provided with numerals running consecutively around the same. The said numerals may be carried by a strip or band 17, suitably attached to the peripheral portions of the several wheels above mentioned.

It will be understood that the numbers or indicating characters carried or actuated by the registering-wheels may run as high as necessary, and the machine may be made so that the indicating characters will be of a greater or less number, dependent upon the size of the order or society which will use the invention. In the construction of the machine shown a single wheel is utilized for registering the black-ball votes, the numerals carried by this wheel ranging from "1" to "19."

The white-ball-registering mechanism, however, must necessarily have a greater range of indicating-characters, since the proportion of the black balls and the white balls, so far as usually cast in voting operations, is very small. Two or more wheels are therefore employed for the white-ball-registering elements, the wheel 12 being a units-wheel, whereas the wheel 13 is a tens-wheel, as regards the reference-numerals which may be applied to the said wheels. The numerals of the wheel 12 range from "0" to "9" and the numerals of the wheel 13 from "1" to "19," so that the wheels 12 and 13 together are adapted to register a maximum of one hundred and ninety-nine votes.

The casing 1 is provided, preferably in the upper side thereof, with a plurality of sight-openings 18, through which the indicating characters of the wheels 11, 12, and 13 may be readily seen. The sight-openings 18 are

adapted to be normally covered, for purposes of secret ballot, by means of a lid or cover 19. The cover 19 is hinged or pivoted to the upper side of the casing 1 and is adapted to close down over the sight-openings 18, so that as the vote is being cast the indicating characters of the various registering-wheels will be hidden from view to prevent knowledge upon the part of any one as to whether a vote of dissent or assent is being cast. A spring-plate 20 is secured at one end to the upper side of the casing 1, the opposite end of said plate 20 extending beneath the lid 19 adjacent the point of pivotal connection of the latter with the casing. The spring action of the plate 20 is such as to normally tend to hold the extremity thereof, which extends beneath the cover 19, spaced from the casing 1. The under side of the cover 19 is recessed near its pivoted portion, as shown at 21, and when the cover is closed down over the sight-openings 18 the movable end portion of the plate 20 is spaced from the casing 1, being permitted to assume this position by the provision of the recess 12 in the cover 19, said recess receiving the end portion of the plate 20, as shown clearly in Fig. 2. When the cover 19 is lifted so as to expose the sight-openings 18, the adjacent end of the plate 20 is forced downwardly, and projecting from this end of the plate are stops or extensions 22 and 23, the extension 22 being forced into engagement with the projections 50, carried by the wheels 11 and 12, the extension 23 being similarly caused to engage the part 50 of the wheel 13, the engaging action above being such as to prevent further rotation of the several wheels. Thus when the openings 18 are exposed to show the vote the registering-wheels are locked from movement, and it is impossible to actuate the registering mechanism either accidentally or otherwise. A standard 24 projects upwardly from the rear end of the frame 3, and pivoted to the standard 24 is an actuating member in the form of a lever 25. The lever 25 is pivoted at a point between its ends to the standard 24, said lever being vertically movable and arranged to operate between the wheels 11 and 12. A spring 26 is connected at one end with the bottom of the casing 1, the upper end of the spring being connected with the inner extremity of the lever 25, so that said lever is normally held with its outer end at the upper limit of its movement. A vertically-slotted guide member 27 receives the outermost end portion of the lever 25 and directs said lever in its vertical movement, limiting the upward movement thereof. Handles or knobs 28 are provided at the upper end of the lever 25, and said handles project laterally from the lever upon opposite sides thereof. The lever 25 is adapted to actuate directly either of the wheels 11 and 12, and for this purpose an

arm 29 extends upwardly from the lever between the adjacent wheels 11 and 12 aforesaid, and a projection 30, extending horizontally from the arm 29, is adapted to engage either of the sets of teeth 16^a and 16^b in the actual operation of the registering mechanism.

In order that the engaging member 30 may cooperate with both of the wheels 11 and 12, the lever 15 is adapted for a certain amount of axial movement, so that lateral movement may be imparted to the arm 29 to throw the member 30 into engagement with the teeth 16^a for actuating the wheel 11 or to cause engagement of this member with the teeth 16^b if it is desired to actuate the registering-wheels 12 and 13. Thus by pressing downwardly upon one of the knobs 28 the lever 25 is forced downwardly, and at the same time the arm 29 is thrown laterally by the axial movement of the lever, causing the member 30 to engage one of the sets of teeth 16^a and 16^b. One of the knobs is thus designed for operation of the black-ball-registering wheel, the other for actuation of the white-ball-registering wheel or wheels, and in order that the person may know which of the knobs 28 he is actuating suitable exterior indicating means is provided. It is preferred to locate upon the upper side of the casing and approximately at points above the two knobs 28 spaced semispherical projections 31, and these may be colored, one black and one white, so that they may be readily distinguished one from the other. Just below the members 31 and arranged in the casing 1 is a vertical partition 32, provided with separate finger-openings 33, through which the finger may be passed in order to actuate one or the other of the members 28 in registering the vote of the person operating the machine.

Generally describing the operation of the machine, the handle 8, by which the shaft 6 is operated, is first manipulated so that the side openings 18 expose the characters "0" in the length of the indicating-strips 17 of the various wheels 11, 12, and 13. The above having been accomplished, the lid or cover 19 is forced downwardly, so as to cover the side openings. The person desiring to cast his vote will know which of the handles 28 to operate, because of the arrangement of the exterior indicating members 13, and should he decide to cast a vote of assent he depresses the handle 28 beneath the member 31, which denotes the assent-voting handle. By depressing the handle 28 the engaging member 30 is forced into engagement with a tooth 16^b of the wheel 12, and when the lever 25 has been forced downwardly to the limit of its movement, as regulated by a set-screw 34 or like member, the wheel 12 will have been revolved the length of a single tooth in a man-

ner apparent. Upon relieving the pressure from the knob or handle 28, which has been depressed, the spring 26 will return the lever 25 to its original normal position, and the member 30 is restored to a position about intermediate the wheels 11 and 12 and adjacent another tooth of the said wheels. The action of the machine is specifically the same when the other of said handles 28 is depressed, the engaging member 30 being thrown into the opposite direction in this instance and forced into engagement with one of the set of teeth 16^a, causing revolution of the wheel 11 and registration of the dissent-vote. A single lever 25 thus cooperates in actuating all of the wheels 11, 12, and 13. If the person operating the machine in casting his vote should accidentally depress both of the knobs or handles 28, the member 30 will move downwardly in the space between the wheels 11 and 12 without actuating either of these wheels. It is absolutely necessary that only one of the handles 28 be actuated in order that the arm 29 may be tilted laterally to effect cooperation of the member 30 with the teeth of one of the wheels 11 and 12. The click or sound made by depressing the lever 25 will readily tell when the operator has voted, so that it is impracticable for fraud to be committed by attempting to cast more than a single vote.

When the units-wheel 12 has been actuated nine times, according to the construction of the registering mechanism hereinbefore described, a projection or lug 35, which extends laterally from the wheel 12, is caused to engage an actuating-dog 36, pivoted in rear of the wheels 12 and 13, said dog being caused to engage one of the teeth 16^c of the wheel 13 to advance or revolve this wheel a distance equal to the length of a single tooth. The lock-dog 36 is pivoted at one end to a vertical arm 37, projected from the frame 3, and the opposite end of the dog 36 operates in the space between the wheels 12 and 13, being adapted to engage the teeth 16^c under certain conditions of service. A spring 38, carried by the lever 25, bears against the dog 36 and normally holds the same in contact with the teeth 16^c of the wheel 13, said dog, however, not having any operative connection with the teeth aforesaid except when the projection or lug 35 strikes the under side of the dog and forces the same upwardly against one of the teeth 16^c to effect movement of the wheel 13. The indicating characters carried by the wheels 11, 12, and 13 correspond, of course, in relative positions with the teeth of the various registering-wheels, and every tenth vote registered by movement of the wheel 12 will actuate the tens-wheel 13, increasing the vote-numerals consecutively in a manner readily apparent. The dog 36 under ordinary conditions rests in engagement with a prede-

terminated one of the teeth 16^c of the wheel 13, being supported in this operative position by means of a projection 39, extending from the member 37, to which the dog is pivoted. In order that the dog 36 may have vertical movement and always remain under the influence of the spring 38, said spring has a vertical slidable connection with the dog. One of the teeth in the set of teeth 16^a, carried by the registering-wheel 11, is omitted at a predetermined point, as shown at 40, so that the wheel 11 will not be operated after the maximum number of votes, which may be indicated thereby, have been cast. When the number of black balls cast reaches nineteen, therefore, the next tooth in the set of teeth 16^a, with which under ordinary conditions the member 30 would now engage, being omitted, the vertical movement of the member 30 will not revolve the wheel 11. It is of course seldom that nineteen black balls are ever cast in any vote, three and four usually being sufficient an evidence of dissent of the organization using the machine. After the voting operation has been finished the lid or cover 19 may be raised and the extensions 22 and 23 are forced into the space between the several registering-wheels, so that said wheels cannot be further actuated by depressing the lever 25, the vote being therefore clearly indicated.

The projections 50 extend laterally from the several wheels 11, 12, and 13 at corresponding points adjacent the peripheral portions of these wheels. When the spring engaging plate 20, actuated by the lid or cover of the sight-openings, is forced downwardly, the extensions thereof will cooperate with the projections 50 upon the registering-wheels and these wheels may be revolved a certain distance until all of the projections 50 are in transverse alinement and engaged with the extensions of the spring-plate 20 aforesaid. The arrangement of the projections 50 is such that when they engage the spring-plate 20 the characters "0" will be exposed at the sight-openings. The wheels cannot now be actuated by the operating-lever until the lid or cover of the sight-openings is thrown downwardly. The parts 50 afford convenient stop means for adjusting the wheels 11, 12, and 13 with the characters "0" at the sight-openings of the casing, thus forming resetting means for the registering mechanism.

Having thus described the invention, what is claimed as new is—

1. In a machine of the class described, the combination of a plurality of spaced toothed registering-wheels, a lever, means pivotally supporting the lever and permitting vertical and axial movement thereof, an engaging member projected from the lever and adapt-

ed to engage teeth of either registering-wheel on axial movement of the lever, spring means for holding the lever in a predetermined position, and means for adjusting the positions of the registering-wheels independently of the lever.

2. In a machine of the class described, the combination of independently-operable registering mechanisms, an operating-lever therefor, means permitting pivotal movement of said lever and admitting of axial movement of the lever about a line transverse to the axis of the first-mentioned pivotal movement, means operable by the lever and adapted to cooperate with either registering mechanism on axial movement of the lever, said means being adapted to operate either registering mechanism on the pivotal movement of the lever.

3. In a machine of the class described, the combination of independently-operable registering mechanisms, a lever, a pivot at one end of the lever permitting of vertical pivotal movement of the same and admitting of axial movement about a line or axis transverse to the axis of its pivotal movement, and a member carried by the lever and adapted to be thrown into engagement with either registering mechanism by the axial movement of the lever, said member being adapted to operate either registering mechanism on the pivotal movement of the lever.

4. In a voting-machine, the combination of a registering mechanism embodying a plurality of toothed registering-wheels, a dog arranged to actuate one of said wheels, a projection extended from a second of said wheels for causing the dog to engage the wheel aforesaid to effect simultaneous movement of the wheels, a voting-lever for actuating the registering-wheels, and a spring coacting with the dog aforesaid and supported by the voting-lever above mentioned.

5. In a voting-machine, the combination of a plurality of registering-wheels, a lid or cover for the registering-wheels, means for actuating said wheels in voting to effect movement of the wheels to register the vote, means for turning said wheels independently of the first-mentioned actuating mechanism to reset the same, and stop means operable by the lid or cover to engage with the wheels to position them at a predetermined point in their movement in the resetting operation.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES W. CLARK. [L. s.]

Witnesses:

A. A. JACKSON,
EUDELLA JACKSON.