

No. 865,393.

O. T. JOHNSON.
VOTING MACHINE.
APPLICATION FILED APR. 19, 1900.

PATENTED SEPT. 10, 1907.

Fig. I

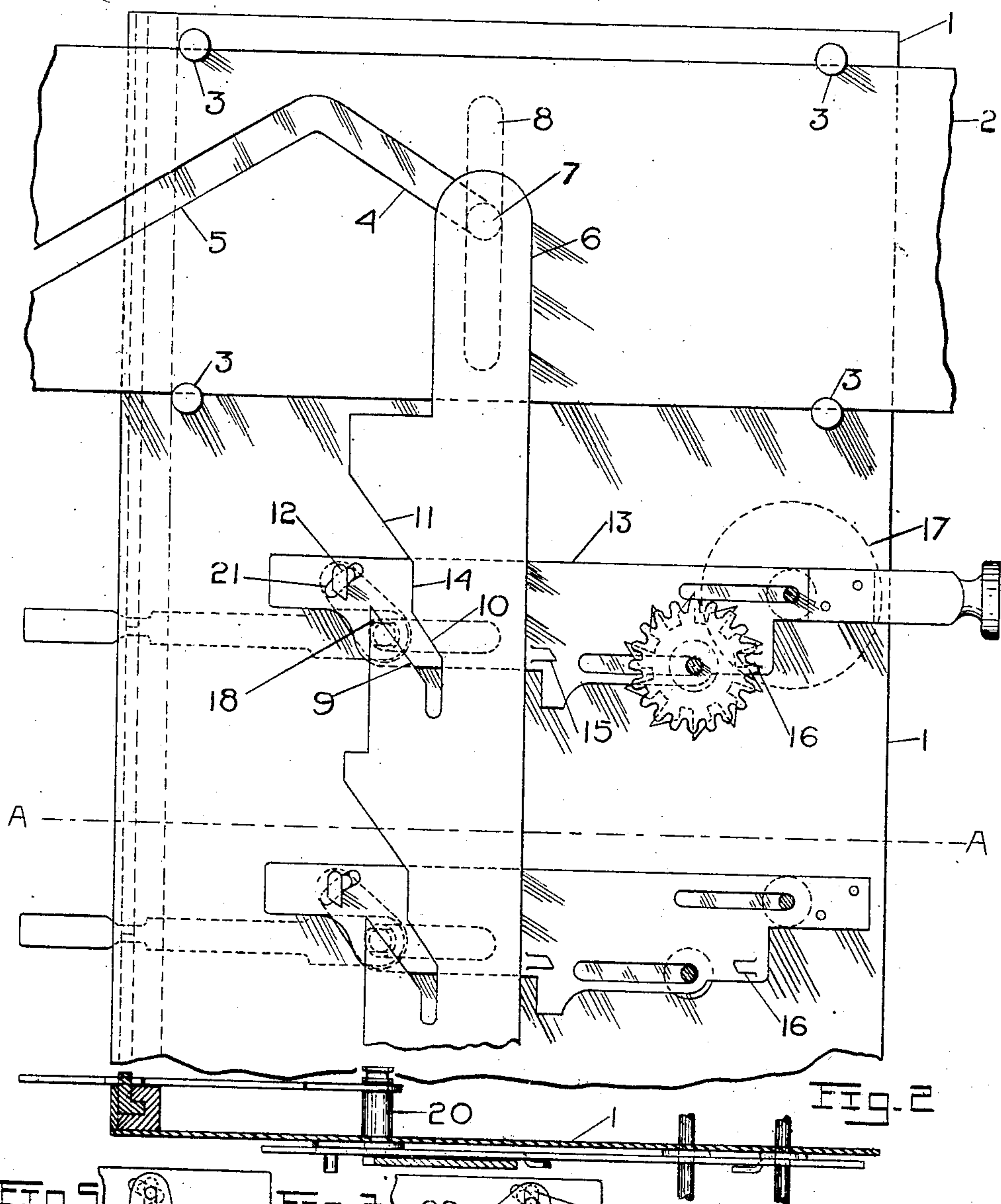
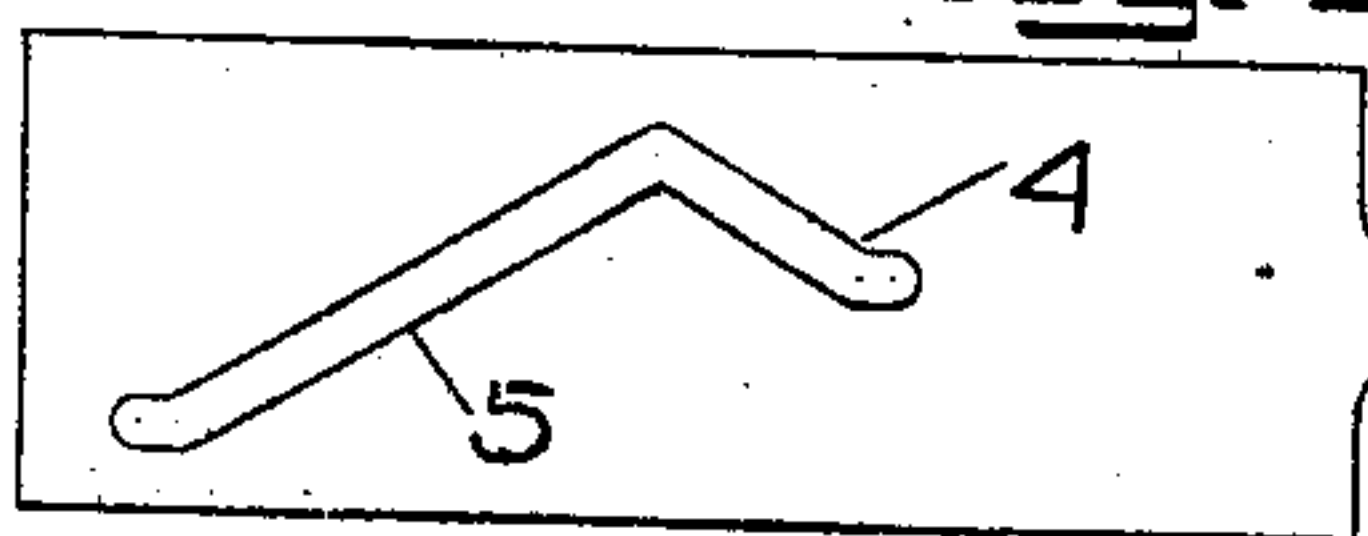


Fig. 5
20
Witnesses
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Fig. 3
22
20
12
19
Fig. 6
Fig. 4



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UNITED STATES PATENT OFFICE.

OTTO T. JOHNSON, OF JAMESTOWN, NEW YORK, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
U. S. STANDARD VOTING MACHINE CO., OF ROCHESTER, NEW YORK, A CORPORATION
OF NEW YORK.

VOTING-MACHINE.

No. 865,393.

Specification of Letters Patent.

Patented Sept. 10, 1907.

Application filed April 19, 1900. Serial No. 13,526.

To all whom it may concern:

Be it known that I, OTTO T. JOHNSON, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented
5 certain new and useful Improvements in Voting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being
10 had to the accompanying drawings, forming a part of this specification, and the reference-numerals marked thereon.

My present invention has for its object to provide an improvement in the operating mechanism of the
15 voting machine described in the application of Angus McKenzie, #732,393, filed Oct. 2, 1899, and consisting of an improved stud carried by the voting key in such a manner that it can never, under any circumstances, obstruct the action of the universal bar upon
20 the voting key.

The accompanying drawings illustrate a single section of said voting machine as it is ordinarily built for the purpose of exhibition to show the construction and operation of the machine.

25 In the accompanying drawings, Figure 1 is a side elevation of the voting machine showing the driving cam, the universal bar, the key and the counter, together with the plate which carries all of the mechanism. Fig. 2 is a cross section of Fig. 1 on the line A, A. Fig. 3 is a detail view showing the manner of carrying the elliptical stud on the key. Fig. 4 is the detail showing the cam by which the section of the machine is operated. Figs. 5 and 6 show the detail of mounting the stud when it must be carried immediately
35 ately over the pin 20.

Similar reference numerals in the different figures indicate similar parts.

Reference numeral 1 refers to the plate upon which the section of the machine is built, and 2 refers to the
40 sliding cam as carried between the pins 3 3 which act as guides for it and hold it in its movement to a single longitudinal reciprocation. This sliding plate 2 has cut therein a cam having an ascending portion 4 and a descending portion 5. The universal bar 6 is provided with a pin 7 which passes through the slot 8 in
45 the plate 2 and by means of the engagement therewith the universal bar 6 itself is reciprocated. The universal bar is held in place by a washer on the pin 7 on the far side of plate 1, which washer is held on the pin
50 7 by a cotter pin passing through a hole in the pin.

At the top the universal bar is held to longitudinal

reciprocation by the slot 8 which is cut in the plate 1 and through which the pin 7 extends, and on account of its engagement therewith the upper end of the universal bar cannot follow the cam plate in its reciprocation, but moves only as it is raised or lowered by the
55 cam 4 or 5. The universal bar 6 is provided with the cams 9, 10 and 11 for each voting key, by means of which the voting key is reciprocated on account of the engagement therewith of the stud 12. 60

The stud 12 is carried on a piece 19, which is pivoted on a yoke or key 13 and when it is moved to voted position the stud 12 rests against the flat portion 14 of the universal bar, up to which time the counter itself has not been moved. The reciprocation of the universal
65 bar drives the pallet 15 into the star wheel on the left hand side as the universal bar moves up, and drives the pallet 16 into the wheel on its right hand side when it descends, thus completing one-tenth of a revolution and registering one number on the units counter wheel
70 17, and holding the counter itself locked when the count has been completed on that counter.

Heretofore it has always been recognized as objectionable that in voting a key or scratching on that key, it might not reach either of its extreme positions of
75 voted or unvoted position, but might be left in an intermediate position so that the stud 12 might be directly opposite the point 18 on the universal bar. This is referred to for convenience as sticking the point and stud on a dead center, and to reduce this to a minimum
80 in ordinary practice the stud is ordinarily filed to a knife edge and the point 18 is made as sharp as possible by filing it to a perfect point, but by my improved device it is absolutely impossible in the operation of the machine to in any way bring these two parts to
85 a dead center, and the means which I employ to accomplish this purpose is described as follows:

The stud 12 is carried on a pivoted piece 19 which is pivoted in turn on the pin 20 which carries the interlocking finger and which projects from the other
90 side of the key. A short slot 21 is cut in the yoke or key concentric with the pivot 20, and within the limit of this slot the stud itself can have a sliding movement upward and forward and the reverse. In consequence of this if the stud should happen to be left on a dead
95 center with the point 18, as the universal bar rises the stud itself would be lifted along the arc marked by the slot 21, which at the same time would draw it forward off the center and having passed the center, the cam 9 on the universal bar would begin to move the
100 key forward thus taking it safely away from any danger of sticking on the center itself.

The stud 12 is riveted in the piece 19 and is placed upon the key by turning the stud so that it will pass through the slot 21, after which the piece 19 is given a partial turn sufficient to allow the pin 20 to be passed through the opening 21 in the piece 19, after which the pin 20 is riveted to the key thus securely holding the stud on the key itself. Thus it will be seen that by my device a simple and very effective means is afforded by which the key itself is positively driven by a cam which moves at right angles to the key, and yet the possibility of the key being stuck on a dead center with said cam is completely eliminated.

In the Figs. 5 and 6 I have shown additional details and variations of mounting the stud 12. In this case the stud 12 is carried immediately over the pin 20 and to permit its movement at an acute angle to the key and tripping bar, the arm 19 is provided with a slot 22 cut therein so that it may slide upon the pin 20 instead of rocking around it. In this case the slot 22 may be cut straight or in a curve and inclined at an angle, as may also the slot 21 through the key, and these two slots may be parallel with each other or placed at an angle with each other, so that in fact any movement desired may be secured. All of these things being practically included within the spirit of my invention.

It is further intended in the form shown in Fig. 1, that the movement of the stud 12 shall be not more than about three sixty-fourths of an inch, and although it moves in the arc of a circle for this small distance, its path is substantially a straight line. Either of these movements is within the spirit of my invention as any movement which carries the pin upward and forward or upward and backward is within the spirit of my invention.

It is preferred, however, to have the stud move in the direction shown in Fig. 1, for in that case the stud will move in the direction in which it will save a vote if it is to any extent engaged with the universal bar. If it moved in the other direction it would disengage itself from the universal bar and the vote would be lost in consequence.

Having thus described my invention, what I claim as new is—

1. The combination in a voting machine, of a voting key, a universal bar for operating the keys voted, and means carried by each key movable independently of the key to prevent the obstruction of said universal bar in its movement.
2. The combination in a voting machine, of a voting key retractable by a voter to indicate a vote, a cam for operating it, said key and cam reciprocating transversely of each other, and means carried by each key movable independently of the keys to prevent the obstruction of the cam by the movement of the key.
3. The combination in a voting machine of a voting key, a universal bar for operating the keys voted, and an oscillating stud carried on each key to insure the operation of the bar on said key.
4. The combination in a voting machine of a voting key movable freely into and out of voted position, a stud carried on said key, and a cam for operating on said key through said stud, said stud having a movement on said key independent of said key.
5. The combination in a voting machine of a voting key, an arm pivoted on said key on one side, and a stud car-

ried on said pivoted arm projecting from the other side of said key, said key having a slot limiting the movement of said stud.

6. The combination in a voting machine of a voting key, an arm pivoted on one side of the key, and an oscillating stud carried on said arm extending through and beyond the key, said key having a slot limiting the oscillating movement of said stud.

7. The combination in a voting machine of a voting key, an arm pivoted on said key, and a stud carried by said arm, said stud having an oscillating movement independent of its key, which movement is limited by a slot in said key.

8. The combination in a voting machine of a voting key, an arm fastened to said key, a stud carried on said arm, said stud being capable of an upward and forward movement if caught on a dead center, so that it will not remain there.

9. The combination in a voting machine of a voting key, a pin carried on said key, an arm capable of movement on said key controlled by said pin and a slot in said key, a stud carried on said arm, and driving means for said stud, said stud having an upward and forward movement by means of which it is carried off of a dead center by said driving means.

10. The combination in a voting machine of a key longitudinally movable to voted position, a cam reciprocating transversely to said key, said key being reciprocated to operate and lock the counter, said cam driving said key through a stud carried on said key, and said stud having a movement independent of its key by means of which it is prevented from obstructing the movement of its cam.

11. The combination in a voting machine of counter actuating means, a reciprocating device to impart movement to said counter actuating means, said means and said device reciprocating transversely to each other, and means carried by said counter actuating means by which it may be engaged or disengaged with said reciprocating device, said means being movable relatively to said counter actuating means to automatically adjust itself with said reciprocating device.

12. The combination in a voting machine of a counter actuating device, a reciprocating device for operating said counter actuating device, said devices reciprocating across each other, and means carried by said counter actuating device for engaging or disengaging it with its reciprocating device, said means having a short oscillating movement at an acute angle with the line of motion of the counter actuating device whereby it can engage with but not obstruct the movement of said reciprocating device.

13. The combination in a voting machine of a voting key, an arm carried on said key, and a stud carried on said arm, said stud having a short movement at an angle of 45 degrees to the line of motion of the key.

14. The combination in a voting machine of a voting key, an arm carried on said key, and a stud carried on said arm, said stud having a movement at an acute angle to the line of movement of the key, said movement being limited by a slot in said key.

15. The combination in a voting machine of a voting key, an arm on said key and a stud mounted on said arm having an independent movement at an acute angle to the line of movement of the key.

16. The combination in a voting machine of a voting key, a stud mounted on said key, and driving means for said voting key said stud having an independent movement at an acute angle to the line of movement of said driving means.

17. The combination in a voting machine of a voting key, a stud mounted on said key, and driving means for said key, said stud having an independent movement across the line of movement of said driving means.

18. The combination in a voting machine of a voting key, movable freely into and out of voted position, means for driving said key to operate the counter when placed in voted position and a stud mounted on said key engaging

said driving means, said stud having an independent movement at an acute angle to the line of movement of the key and the line of movement of said driving means.

5 19. The combination in a voting machine of a voting key, an arm fastened to said key, a stud carried on said arm, said stud being capable of an upward and lateral movement if caught on a dead center, and reciprocating means adapted to engage said stud after the movement of the key.

20. The combination in a voting machine of a voting 10 key, and a stud mounted on said key, said stud having an upward and a lateral movement relative to its key.

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

OTTO T. JOHNSON.

Witnesses:

OLIVA G. WADE,
FRANK KEIPER.