W. J. LAUSTERER.

VOTING MACHINE.

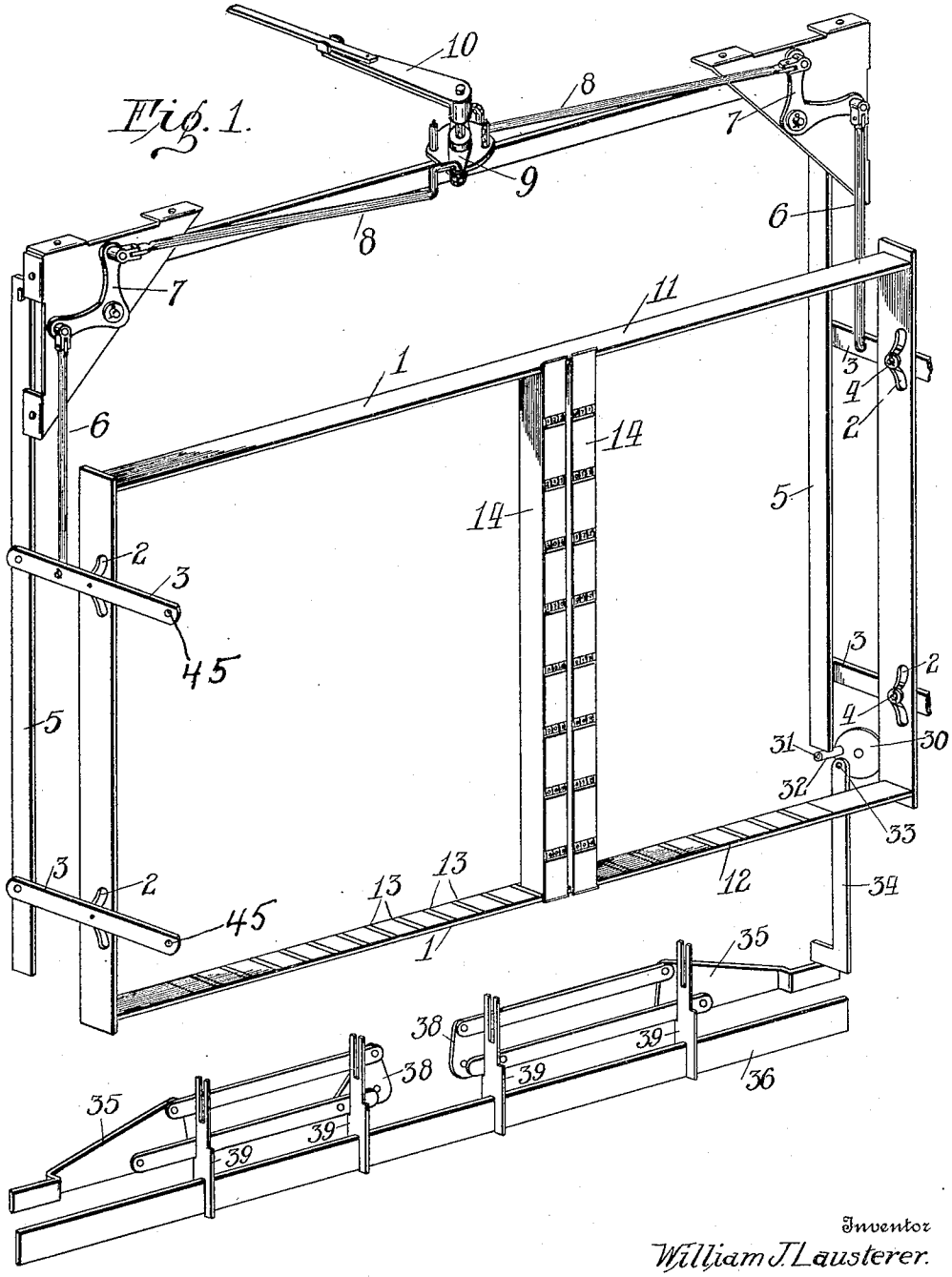
APPLICATION FILED NOV. 16, 1908.

1,069,338.

Patented Aug. 5, 1913.

3 SHEETS—SHEET 1.

Fig. 1.



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3 SHEETS—SHEET 2.

Fig. 2.

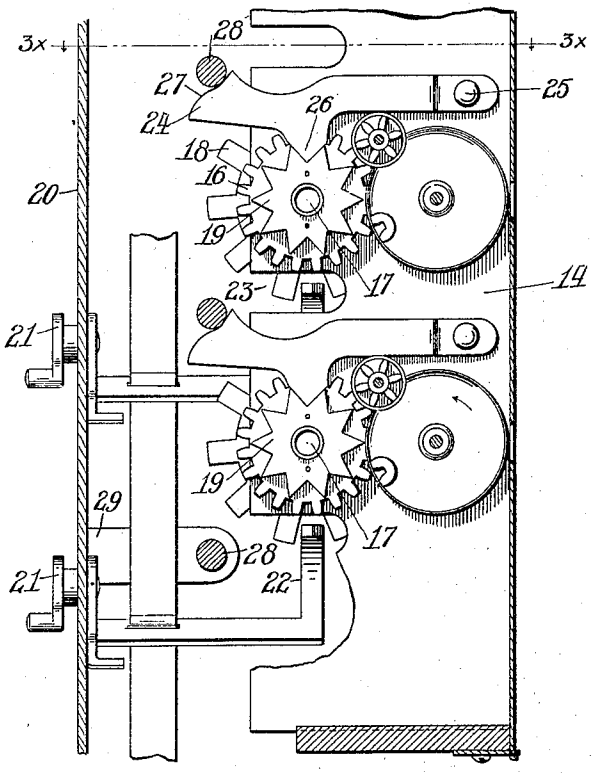
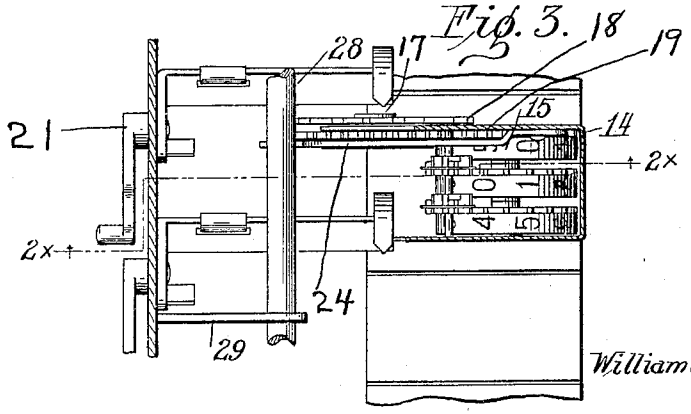


Fig. 3.



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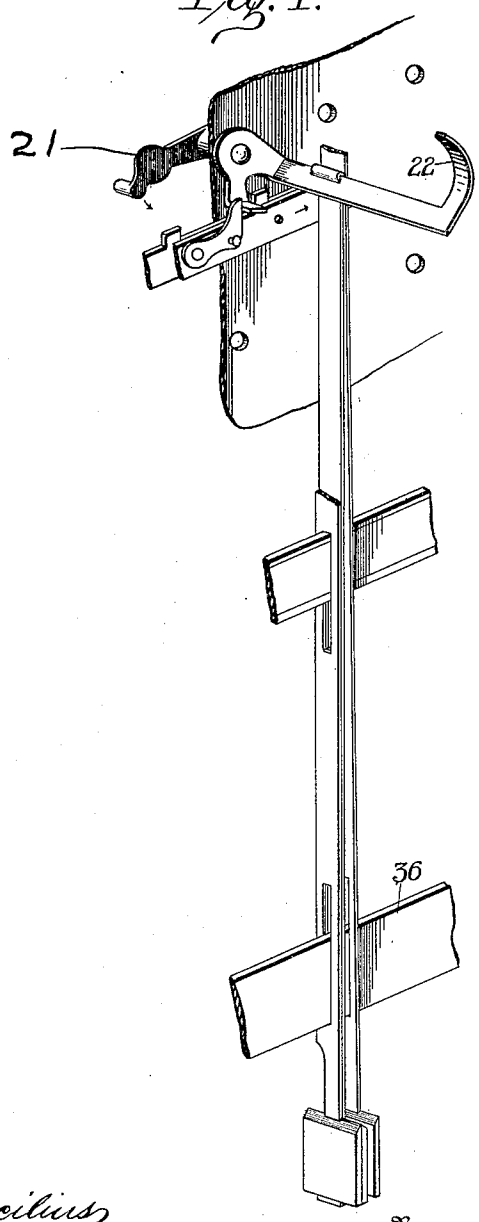
3 SHEETS—SHEET 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM J. LAUSTERER, OF JAMESTOWN, NEW YORK, ASSIGNOR TO EMPIRE VOTING MACHINE COMPANY, OF ROCHESTER AND JAMESTOWN, NEW YORK, A CORPORATION OF NEW YORK.

VOTING-MACHINE.

1,069,338. Specification of Letters Patent. Patented Aug. 5, 1913.

Application filed November 16, 1908. Serial No. 462,836.

To all whom it may concern:

Be it known that I, WILLIAM J. LAUSTERER, a citizen of the United States, residing at Jamestown, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Voting-Machines, of which the following is a specification.

My present invention relates to voting machines particularly of that type described in Letters Patent No. 820,802, granted to me May 15, 1906, and has for its object to improve and simplify the construction and operation of the counter and the resetting mechanism of the machine, as will be hereinafter fully described.

In the accompanying drawings, Figure 1 represents a perspective view of the frame for carrying the counters and the mechanism for operating the frame. Fig. 2 is a vertical cross section of one of the counter channels on the line 2^x, 2^x, of Fig. 3. Fig. 3 is a horizontal cross section of one of the counter channels on the line 3^x, 3^x, of Fig. 2. Fig. 4 is a detail view of the key for operating the counter.

Like reference numerals indicate like parts.

In the accompanying drawings, reference numeral 1 indicates the counter frame supported for horizontal reciprocating movement in the voting machine casing in any suitable manner. Cut in the sides of this counter frame are cam slots 2, 2: pivoted at 45 on the voting machine casing (not shown) are the levers 3, 3, having the studs 4, 4, thereon engaging with the cam slot 2, 2. The levers 3, 3, are connected to connecting rods 5, 5, which rods are connected in turn to the links 6, 6, and by them in turn to the bell cranks 7, 7, which bell cranks in turn are connected to the connecting rods 8, 8, which are in turn engaged with the double ended lever 9 and the handle or operating lever 10 by the movement of which forward and back the counter frame is reciprocated, all of which is substantially the same as has heretofore been described in previous patents.

The counter frame is made up of the top rail 11 and the bottom rail 12, each of which is grooved at appropriate intervals with the grooves 13, 13. Mounted in these grooves are the channels 14, 14, in which are carried the counters. Each of these counters consists of a units wheel, a tens wheel and a hundreds wheel on each of which the numerals from 0 to 9 inclusive are arranged consecutively. The wheels are geared together by pinions which transfer at intervals the rotation of the units wheel to the tens wheel and the rotation of the tens wheel to the hundreds wheel, so that at the end of each complete revolution of the wheel next below it the tens and the hundreds wheel will revolve one-tenth of a revolution.

To secure the driving of the units wheel of the counter the units wheel 19 is provided with a gear with twenty teeth thereon: this units wheel 15, engages by said gear with another gear 16, which is also cut with twenty teeth so that one complete revolution of the gear 16 will cause a complete revolution of the units wheel of the counter with which it is engaged, and will cause the counting of ten votes. The gear wheel 16 is mounted on the shaft 17. This shaft 17 extends through one side of the channel 14 and has keyed thereon on the outside of the channel the wheel 18, which wheel has ten spokes or teeth cut thereon. On the other end of the shaft 17 is fastened the star wheel 19. The shaft 17 and the wheels 16, 18 and 19 are all fastened together so as to rotate in unison for a purpose that will presently be described.

The machine is provided with a front plate 20 having keys 21 pivoted thereon, one for each of the counters: each of these keys extends back of the front plate and terminates in a hook 22, which hook is normally out of engagement with the wheel 18 of its counter, but which hook will engage with the wheel 18 of its counter when the key is placed in voted position. The relation of the parts in this respect are shown in Figs. 2 and 3.

When the key is placed in voted position, the arm 22 of the key passes in between two of the teeth on the wheel 18 and remains in that position until after the counter frame has been operated in one direction. To avoid interference between the counter frame and arms 22 of the keys, the counter frame is cut away with recesses at 23 into which the arms 22 project when the keys are placed in voted position. After the key has been placed in voted position, the voter is

then ready to operate the curtain lever 10. As shown in Fig. 1 the first part of the movement of the curtain lever will cause the counter frame to move away from the keyboard of the machine. It is during this movement that the forward operation of the counter takes place. Until the counter frame has moved backward the gear wheels for operating the counters are held locked by the pawls 24 pivoted at 25, each of which pawls has a tooth 26 thereon engaging with the star wheel 19. With the counter frame in the position shown in Fig. 2 the pawl 24 is held in such position so that its tooth 26 engages with the star wheel 19 and prevents the rotation thereof and of the counter as well. The forward end of the pawl 24 is cut with a cam 27, which engages with the rod 28, which rod is carried in suitable brackets 29 mounted on the front plate of the machine. When the counter frame moves forward the cams 27 react on the rod 28 by which it is forced downward until the tooth 26 reaches the bottom of the recess in the star wheel 19, thus centering the star wheel 19 in correct position and preventing the rotation thereof. If any one or more counters are only partially operated, due to the premature resetting of the keys or for any other reason, such counters will nevertheless be brought forward or back into proper adjustment by the pawls 24. When the counter frame moves backward to operate the counters of those keys that have been put in voted position, the pawls 24 move with the counter frame and are drawn away from the rod 28, which permits the lifting of the pawls 24 by the star wheels 19 when the wheels 18 are rotated by the arms 22 on the keys 21. In this way the counters and their operating gears are released for rotary movement during the reciprocation of the counter frame and are held against rotation when the counter frame is in its forward position or when the curtain lever is at either end of its travel.

In operating the counters in the manner above described it will be necessary to secure the complete operation of the counter before the key has been reset far enough to disengage it from the toothed wheel 18, after which it will be necessary to fully reset the keys without in any manner interfering with the return movement of the counter frame, and without disturbing the position of the counters carried thereon. The mechanism by which this result is secured I am now about to describe.

The counter frame 1 is given its forward and back movement by means of the cams 2 heretofore described. These cams are cut so as to have a considerable idle portion therein in the middle, which idle portion is cut in the form of a circle using as its radius the length of the lever 3 between its pivot 45 and the stud 4. While the stud 4 is traveling through this circular or idle portion of the cam 2, the counter frame will be held in one position and will not move either forward or back. It is during this part of the movement of the operating mechanism that the keys will be withdrawn from engagement with the toothed wheels 18. To secure this result I employ the following mechanism.

Mounted on the casing of the voting machine is a disk 30 having a stud 31 thereon, which stud is normally in the path of the movement of the connecting rod 5. This stud is provided with an anti-friction roller 32 thereon. Mounted on the disk 30 is a stud 33 on which is carried a link 34, the lower end of which engages the bell crank 35. As the bar 5 descends it engages with the stud 31 and rotates the disk 30, causing the link 34 to descend and operate the bell crank 35, which in turn causes the downward movement of the resetting bar 36. The lower end of the bar 5 is so shaped and positioned with reference to the stud 31, that it will disengage itself therefrom and continue its downward movement after the operation of the resetting bar 36 has been completed. This permits the return of the counter frame after the keys have been withdrawn from engagement with the counters so that the backward movement of the counter frame can be continued after the resetting movement of the operated keys has been completed. In order to drive the resetting bar in its downward movement at a number of points I provide the series of bell cranks 35 and 38 and the compression members 39 shown in Fig. 1.

Having thus described my invention, what I claim as new and patentable is as follows:

1. The combination in a voting machine of a decimal counter having a driving wheel therefor with ten spokes thereon, a pivoted key having a hook thereon capable of engaging each of said spokes in succession without operating said counter, and means for moving said counter away from the key to cause the operation of the counter.

2. The combination in a voting machine of a decimal counter having a driving wheel therefor with ten spokes thereon, a pivoted key having a hook thereon capable of engaging each of said spokes in succession without operating said counter, means for moving said counter away from the key to cause the operation of the counter, and means to reset the key and move the counter back to its normal position.

3. The combination in a voting machine of a reciprocating counter frame, a counter and a driving wheel therefor mounted thereon, a pawl pivoted on the counter frame engaging with said driving wheel to prevent its rotation, means to hold said pawl in its

locking position, said pawl being released therefrom during the reciprocation of the counter frame.

4. The combination in a voting machine of a reciprocating counter frame, a counter carried on said frame, a driving wheel for said counter, a pawl pivoted on said frame for locking said counter wheel, a cam on said pawl, and a stationary rod with which said cam contacts on the reciprocation of the frame to hold said pawl in locking position.

5. The combination in a voting machine of a reciprocating counter frame, a counter carried on said frame, a driving wheel for said counter, a key for engaging with said driving wheel without operating the counter, means to move said counter and its driving wheel in one direction relative to the key to operate the counter, means to reset the key and to subsequently move said counter and its operating wheel in the reverse direction.

6. The combination in a voting machine of an operating lever, a connecting rod, connections between it and the operating lever whereby the connecting rod is operated, an oscillating disk mounted adjacent to the connecting rod, a stud thereon engaged by the rod whereby the rod rotates the disk for a part of its downward movement and then disengages itself from the disk for further movement, and a resetting bar operated by the disk.

7. The combination in a voting machine of a reciprocating counter frame, counters and driving wheels therefor mounted thereon in a line, pawls pivoted on the counter frame one for each counter, said pawls engaging with said driving wheels to lock the driving wheels and counters against rotation, and a stationary bar mounted adjacent to said counter frame to engage with said pawls and hold them in locking position.

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

WILLIAM J. LAUSTERER.

Witnesses:
ALEXANDER B. CORCILIUS,
E. C. MILLER.