No. 824,349. PATENTED JUNE 26, 1906.

W. I. T. FOSDICK.

SHUTTER LOCKING MECHANISM FOR VOTING MACHINES.

APPLICATION FILED SEPT. 18, 1905.

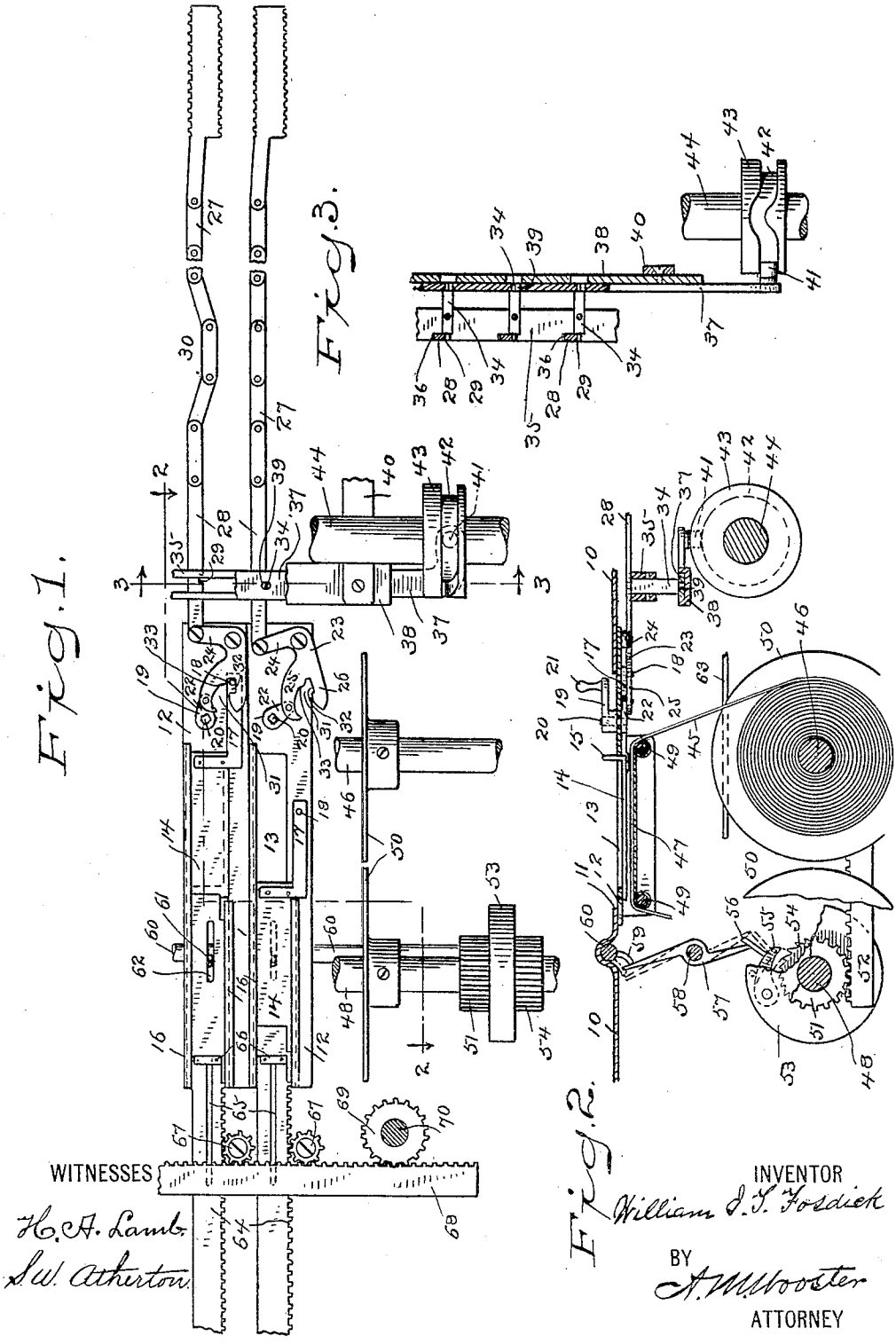

Fig. 1.

Fig. 3.

Fig. 2.

WITNESSES

H. A. Lamb.

S. W. Atherton.

INVENTOR

William I. T. Fosdick

BY

A. M. Wooster

ATTORNEY

UNITED STATES PATENT OFFICE.

WILLIAM I. T. FOSDICK, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO TRIUMPH VOTING MACHINE COMPANY, OF PITTSFIELD, MASSACHUSETTS, A CORPORATION OF NEW JERSEY.

SHUTTER-LOCKING MECHANISM FOR VOTING-MACHINES.

No. 824,349. Specification of Letters Patent. Patented June 26, 1906.

Application filed September 18, 1905. Serial No. 278,961.

To all whom it may concern:

Be it known that I, WILLIAM I. T. FOSDICK, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Shutter-Locking Mechanism for Voting-Machines, of which the following is a specification.

This invention relates to that portion of the mechanism of voting-machines which enables an independent voter to cast his vote for candidates of his own selection for any or all of the offices to be voted for wholly independently of party nominations.

A roll of paper called an "independent-voting sheet" is provided, which is carried by a vertical roller called the "supply-roller," from which it passes to a receiving-roller, being drawn over an intermediate backing-plate which supports it while votes are written thereon. A vertical series of voting-apertures are provided in the front plate of the machine, which are protected by sliding shutters. When a shutter is opened, a portion of the independent-voting sheet is disclosed, upon which a vote may be written. After voting the voter operates mechanism which I shall simply refer to as "operating" mechanism, which, by means of intermediate connections, closes the shutter or shutters which he has opened and locks them and also actuates the receiving-roller to draw the independent-voting sheet forward and place a fresh portion of its surface in position on the backing-plate for a vote or votes to be written thereon by the next independent voter.

My invention consists in certain constructions and in certain parts, improvements, and combinations for locking the shutters and for making the mechanism for actuating the receiving-roller operative, which I will now describe, referring to the accompanying drawing, forming a part of this specification, and using reference characters to indicate the several parts.

Figure 1 is a detail elevation illustrating the construction and operation of my novel shutter-locking and independent-voting sheet-actuating mechanism; Fig. 2, a detail sectional view on the line 2 2 in Fig. 1 looking down; and Fig. 3 is a detail sectional view on the line 3 3 in Fig. 1 looking toward the right, the latches being in the locking position.

10 denotes the face-plate of the machine, which is provided with a vertical aperture 11. Back of this aperture are superposed plates 12, with edges lying in contact with each other. These plates are in practice movable longitudinally; but for the purpose of group voting only, which will not be described, as it forms no portion of the present invention, for the purpose of which plates 12 may be considered as stationary, each plate 12 is provided with a voting-aperture 13, back of which is a sliding shutter 14, each shutter being provided with a finger-piece 15, extending through the voting-aperture for convenience in manipulation. The voting-apertures and shutters correspond in number with the offices which may be voted for on the machine—for example, thirty, more or less. The shutters reciprocate in ways 16 upon the backs of plates 12 and have extending therefrom, in the present instance from a forwardly-extending arm forming a part of each shutter, locking-pins 18.

19 denotes independent-voting levers carried by shafts 20, journaled in plates 12, each voting-lever being provided with a finger-piece 21 for convenience in manipulation. At the inner end of each shaft 20 is an arm 22.

23 denotes bell-crank levers pivoted on plates 12. Each bell-crank lever comprises three arms, (indicated specifically by 24, 25, and 26.)

27 denotes controlling-chains extending horizontally of the machine, each having at its inner end a long link 28, which is pivoted to arm 24 of the corresponding bell-crank lever, each long link being provided in its under side with a locking-notch 29. Two chains only are shown in the drawings, the lower chain being shown as drawn taut by operation of an independent-voting lever which prevents regular voting, and the upper chain as having a slack or bulge, as at 30, in which position the corresponding independent-voting lever is locked, as I shall presently explain. It will of course be understood that except in group voting (not described, as the present invention does not relate thereto) each voter is allowed to vote for one candidate only for any office. When a voter

has voted "regular"—that is, for a regular party nominee—by the ordinary voting mechanism of the machine, (not shown,) the chain corresponding with the name of that nominee will be taut, and the voter consequently cannot write an additional vote for the same office upon the independent-voting sheet; but when the voter has not voted for a regular party nominee or has canceled a vote cast by mistake there will be a slack or bulge in the corresponding locking-chain which will leave the corresponding independent-voting lever 19 free to be operated, as indicated by the position of lower arm 22 in Fig. 1, to unlock the corresponding shutter. Each arm 22 is pivoted to the arm 25 of the corresponding bell-crank lever, and when the independent-voting lever is operated, as in casting an independent vote, the bell-crank lever is oscillated, as indicated by the lower bell-crank lever in Fig. 1. Between arms 25 and 26 of each bell-crank lever is a downwardly-extending slot 31, at the inner end of which is a locking-notch 32, and a portion of the upper wall of which forms a cam 33, said locking-notch and cam being adapted to be engaged by the locking-pin 18, which extends from the corresponding shutter, as will be more fully explained.

The locking of the chains to prevent voting for regular party nominees after the chains have been drawn taut by independent-voting levers is effected by means of latches 34, pivoted between vertical plates 35, which engage the locking-notches 29 in the long links when the chains are drawn taut. These latches operate by gravity, their rear ends being made heavier so as to insure that the forward ends will enter the locking-notches the instant the chains are drawn taut. Vertical plates 35 are also provided with ways 36, which serve as guides for long links 28. (See Fig. 3.) 37 denotes a slide which is adapted to reciprocate in a vertical guide-plate 38, and is provided with apertures 39, which receive freely the rear ends of the latches. This guide-plate is supported by suitable brackets 40, (one only being shown,) which extend from the case of the machine. Slide 37 may be reciprocated in any suitable manner. In the present instance I have shown the lower end of the slide as provided with a stud carrying a roller 41, engaging a cam-groove 42 in a cam 43, carried by a vertical shaft 44. When the latches are in the locking position—that is, as in Fig. 3, corresponding with the lower chain in Fig. 1—the rear ends of the latches are in engagement with the upper sides of the walls of apertures 39 in the vertical slide. When the mechanism, which I have referred to as "operating mechanism," is operated, after the voter has cast his vote, shaft 44 and the cam are rotated thereby and move the slide upward, causing the lower sides of the walls of apertures 39 to engage the rear ends of the latches and move them upward, thereby disengaging the forward ends of the latches from the locking-notches in the long links 28 and leaving the chains unlocked and ready for ordinary voting or for the next independent voter. It will thus be seen that either the chains or the shutters are locked at all times. When a chain is locked, a straight vote cannot be cast for any of the corresponding nominees; but an independent vote for that office may be written upon the independent-voting sheet, and when a shutter is locked it is in the closed position and an independent vote cannot be cast; but a regular vote may be cast for any one of the party nominees for the corresponding office.

45 denotes the independent-voting sheet; 46, the supply-roller on which it is coiled; 47, the backing-plate over which it passes and which lies contiguous to the shutters, and 48 the receiving-roller, to which the outer end of the independent-voting sheet is attached. The receiving-roller acts to draw the independent-voting sheet from the supply-roller over the backing-plate and the used portion is wound thereon. The backing-plate is carried by rods 49, which are rigidly secured to the case of the machine. The supply and receiving rollers are journaled in suitable bearings (not shown) upon the top and bottom plates of the case, (not shown,) and each carries a disk 50, upon which the coil of paper rests. The receiving-roller is driven by means of a voting-sheet rack 52, which is reciprocated by means of the operating mechanism (not shown) by each voter after casting his vote. As it is only required, however, that the receiving-roller be actuated each time an independent vote has been cast I provide connecting mechanism intermediate the receiving-roller and the shutters which normally leaves the receiving-roller disconnected from rack 52 and only connects the receiving-roller with said rack through the operation of a shutter.

51 denotes a pinion which is rigidly secured to the upper side of a disk 53, which is mounted to turn freely on the receiving-roller. Below disk 53 and rigidly secured to the receiving-roller, but not secured to the disk, is a ratchet 54. Pivoted on the under side of the disk is a pawl 55, which is adapted to engage the ratchet, but normally lies out of engagement therewith. The back of this pawl is provided with an outwardly-extending pin 56, which is adapted to be engaged by one arm of a lever 57, pivoted on a stud 58, which extends upward from the base-plate of the case. The other arm of lever 57 is adapted to be engaged by an arm 59, extending from a vertical oscillatory shaft 60, which is also journaled in bearings (not shown) on the top and bottom plates of the case. Shaft 60 is also provided with outwardly-extending

pins 61, corresponding in number with the shutters and chains, which pass through clearance-slots 62 in plates 12 and lie in the path of the shutters in their backward movement. Each time a shutter is moved by an independent voter from the closed—that is, the non-voting—position to the open or voting position, as from the position in which the upper shutter is shown in Fig. 1 to the position in which the lower shutter is shown, the rear end of the shutter engages the corresponding pin 61, extending from shaft 60, oscillates said shaft, and by means of arm 59 oscillates lever 57, moving it from the position shown in full lines in Fig. 2 to the position shown in dotted lines and placing the pawl in engagement with the ratchet, so that when the operating mechanism is operated and the pinion and disk are carried forward by the rack through the engagement of the pawl with the ratchet the receiving-roller will be carried forward also and will wind enough of the independent-voting strip thereon to just draw the portion of the strip that was previously in alinement with the shutters entirely past the shutters, leaving a clear portion of its surface lying back of the shutters and over the backing-plate in position for votes to be written thereon by the next independent voter. During the movement of the operating mechanism and after the completion of the movement of the receiving-roller lever 57 will be engaged by a rod 63, which projects from a moving part, and said lever will be oscillated from the position shown in dotted lines in Fig. 2 to the position shown in full lines, and vertical shaft 60 will be returned to its normal position through the engagement of the other arm of lever 57 with the arm 59, extending from said shaft. During the return movement of the rack, which is also produced by the operating mechanism, the pawl will be thrown backward by the ratchet out of engagement therewith, in which position it will remain until again thrown into the engaging position by the oscillation of shaft 60 when a shutter is opened and the engagement of the inner arm of lever 57 with the pin extending from the pawl. Simultaneously with the return movement of the rack rod 63 is returned to its normal position, as in Fig. 2.

64 denotes a series of shutter-closing racks corresponding in number with the shutters, the forward ends of which reciprocate in ways 16 on plates 12, engage the rear ends of the opened shutters, and move them to the closed position. These racks are provided with clearance-slots 65 to prevent interference with pins 61 on shaft 60 when the racks are moved forward, a bridge-piece 66 at the forward end of each rack giving perfect rigidity thereto. The racks are operated by means of pinions 67, which also engage a vertical closing-rack 68, reciprocating in suitable guides (not shown) and operated by means of a pinion 69 on a horizontal shaft 70, which is driven from the operating mechanism. When none of the shutters have been moved to the open position—that is, when there has been no independent voting, but merely ordinary straight voting—no result is effected by the reciprocation of the shutter-closing racks.

The operation is as follows: When a voter desires to cast an independent vote, he first operates the independent-voting lever corresponding with the office for which he desires to cast a vote for a candidate of his own selection. The operation of the voting-lever swings the corresponding arm 22 from the upper position illustrated in Fig. 1 to the lower position in said figure, oscillates the bell-crank lever, and takes the slack out of the chain, which is immediately locked taut by the engagement of the corresponding latch 34 with the locking-notch in the long link, thus making it impossible to cast a vote for a regular nominee for the same office. The oscillation of the bell-crank lever causes pin 18 on the shutter to pass out of the locking-notch, leaving the shutter unlocked. The voter then pushes the shutter back and writes his independent vote on the portion of the voting-sheet within the aperture disclosed thereby. After finishing the voting operation the voter operates the operating mechanism, previously referred to, but not illustrated and described, as it forms no portion of the present invention. The forward ends of the shutter-closing racks engage the rear ends of the opened shutters and move them to the closed position. As a shutter approaches the closed position pin 18 on the shutter passes over arm 26 of the bell-crank lever and engages the corresponding cam 33 on the upper wall of slot 31. The cam is so shaped that when it is engaged by the pin it will ride up on the pin and tilt the bell-crank lever, returning it to its normal position, (the upper position in Fig. 1,) slackening the chain and locking the shutter at the closed position through the engagement of the pin on the shutter-arm with the locking-notch in the bell-crank lever and returning the independent-voting lever to its normal or non-voting position. If more than one shutter is opened for the purpose of casting a plurality of independent votes, the operation is precisely the same in connection with each shutter. Until an independent-voting lever is operated and a shutter unlocked and opened the corresponding chain remains slack. When shutters are opened, the corresponding chains are drawn taut and locked by the corresponding latches. The opening of any shutter by means of shaft 60, lever 57, and coöperating parts places the pawl in engagement with the ratchet and makes the independent sheet-actuating mechanism opera-

tive, and when the operating mechanism is operated the shutter-closing racks return all opened shutters to the closed position, lock them, and slacken the corresponding chains.

Having thus described my invention, I claim—

1. A mechanism of the character described comprising a shutter, a chain, an independent-voting member, means for locking the shutter and chain and means connecting the shutter, chain and voting member adapted to tighten the chain and release the shutter when said voting member is in voting position, and when the shutter is returned to the non-voting position to lock the shutter and slacken the chain.

2. In a mechanism of the character described, the combination with a shutter, a bell-crank lever and engaging means on said shutter and bell-crank lever, of a chain pivotally connected to the bell-crank lever, means for locking the chain, an independent-voting member and connections intermediate said member and the bell-crank lever substantially as described, for the purpose specified.

3. In a mechanism of the character described, the combination with a shutter having a locking-pin, a chain, and a bell-crank lever to which the chain is pivoted and which is provided with a locking-notch and a cam, of an independent-voting member, connections intermediate said member and the bell-crank lever and locking mechanism for the chain, said parts being so constructed and arranged that when the voting member is operated the shutter is released and the chain locked and when the parts are in their normal position the shutter is locked and the chain released.

4. In a mechanism of the character described the combination with a shutter having a locking-pin, a bell-crank lever having a locking-notch and a cam adapted to be engaged by said pin and an independent-voting member to which the bell-crank lever is connected by intermediate parts, of a chain pivotally connected to the bell-crank lever and locking mechanism for the chain, substantially as described, for the purpose specified.

5. In a mechanism of the character described the combination with a shutter, a bell-crank lever and engaging means on said shutter and bell-crank lever, of a chain pivoted to said bell-crank lever, locking mechanism therefor, an independent-voting member and a shaft therefor having at its inner end an arm to which the bell-crank lever is pivoted.

6. In a mechanism of the character described the combination with a shutter having a locking-pin and a bell-crank lever having a cam and a locking-notch, of an independent-voting member, a shaft therefor having at its inner end an arm to which the bell-crank lever is pivoted and means for moving the shutter when opened to the closed position substantially as described, for the purpose specified.

7. In a mechanism of the character described the combination with an independent-voting sheet and actuating mechanism therefor normally inoperative to feed said sheet, of a shutter, an independent-voting member and connections intermediate the shutter and the voting member for locking the shutter at the closed position, and mechanism intermediate the shutter and the sheet-actuating mechanism whereby the latter is made operative by the opening of the shutter.

8. In a mechanism of the character described the combination with an independent-voting sheet, a receiving-roller upon which it is adapted to be wound and actuating mechanism for said receiving-roller normally inoperative to feed said sheet, of a shutter, an independent-voting member and connections for locking the shutter at the closed position, an oscillatory shaft having a pin extending therefrom which is adapted to be engaged by the rear end of the shutter when the latter is moved to the open position, mechanism intermediate said shaft and the sheet-actuating mechanism whereby the latter is made operative through the oscillation of the shaft when the shutter is opened and mechanism for returning the parts to their normal position and making the shutter-operating mechanism inoperative.

9. In a mechanism of the character described the combination with an independent-voting sheet, a receiving-roller upon which it is adapted to be wound, a ratchet fixed to said roller, a driving-pinion and disk loose on said roller and a pawl on the disk adapted to engage the ratchet but normally out of engagement therewith and having a pin extending therefrom, of an oscillatory lever adapted to engage the pin and place the pawl in engagement with the ratchet, an oscillatory shaft having an arm adapted to engage the other arm of the lever and a pin extending therefrom and a shutter which engages the pin when moved to the open position, oscillates the shaft and the lever and places the pawl in engagement with the ratchet so that the receiving-roller will be actuated by the driving-pinion.

10. In a mechanism of the character described, the combination with an independent-voting sheet, a receiving-roller upon which it is adapted to be wound, an oscillatory shaft having an arm 59 and a pin extending therefrom and a shutter adapted to engage the pin to oscillate the shaft, of a ratchet fixed to the receiving-roller shaft, a driving-pinion and disk fixed to each other but loose on the receiving-roller, a pawl carried by the disk and

adapted to engage the ratchet but normally disengaged and having a pin extending therefrom, an oscillatory lever, one arm of which engages the pin and the other arm is engaged by arm 59, whereby when the shutter is opened the shaft is oscillated and the pawl placed in engagement with the ratchet, mechanism for driving the pinion and mechanism for returning the parts to their normal position.

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

WILLIAM I. T. FOSDICK.

Witnesses:

A. M. WOOSTER,

S. W. ATHERTON.