No. 786,386. PATENTED APR. 4, 1905.

B. T. SEELYE.

FULL STROKE MECHANISM.

APPLICATION FILED AUG. 12, 1903.

Fig. 1.

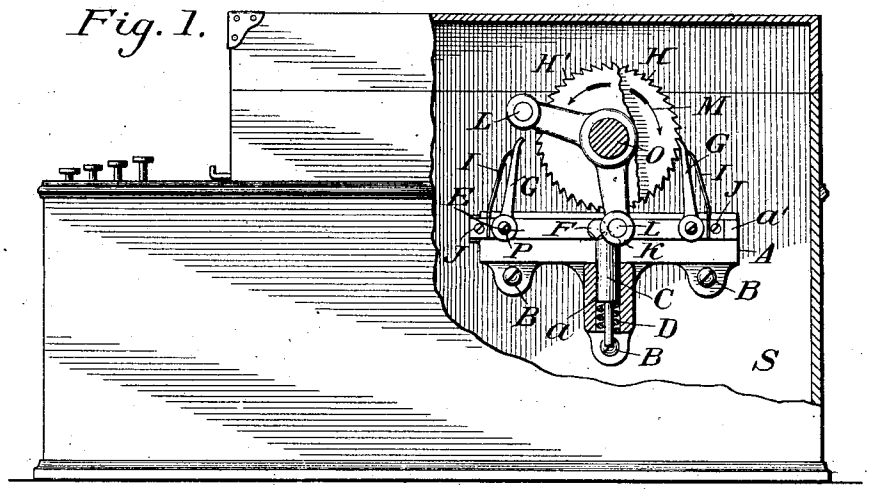
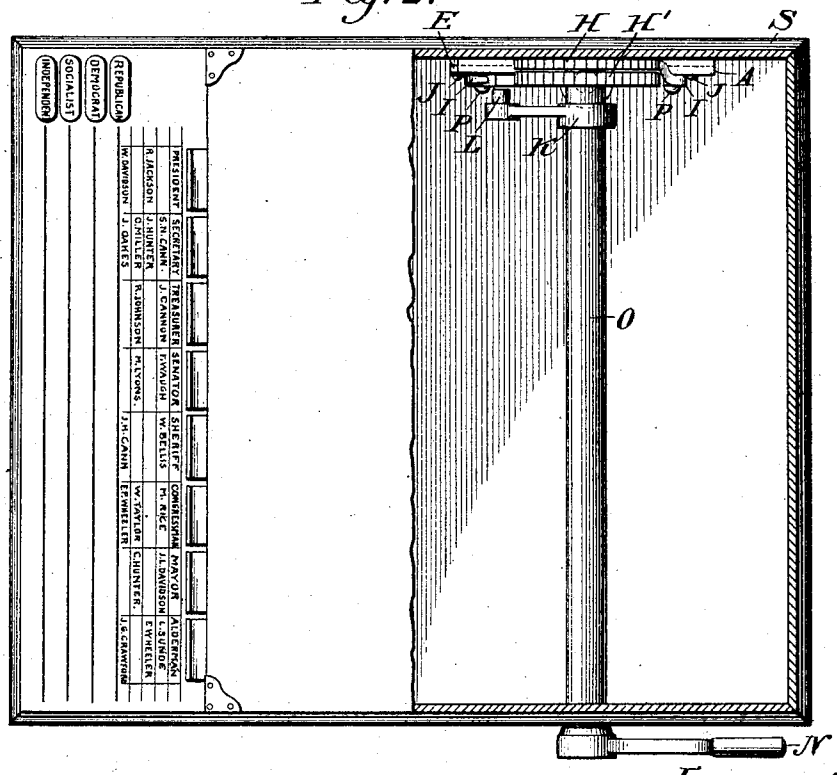


Fig. 2.



Witnesses:

O.A. Merkel.

J.A. Boyce

Fig. 3



Inventor:

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By Atty. N. DuBois.

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No. 786,386. Patented April 4, 1905.

UNITED STATES PATENT OFFICE.

BYRON T. SEELYE, OF CHICAGO, ILLINOIS.

FULL-STROKE MECHANISM.

SPECIFICATION forming part of Letters Patent No. 786,386, dated April 4, 1905.

Application filed August 12, 1903. Serial No. 169,242.

To all whom it may concern:

Be it known that I, BYRON T. SEELYE, a citizen of the United States, residing at 333½ Flournoy street, in the city of Chicago, county of Cook, and State of Illinois, have invented a certain new and useful Full-Stroke Mechanism, of which the following is such a full, clear, and exact description as will enable others skilled in the art to which it appertains to make and use my said invention.

My invention relates to full-stroke mechanisms, such as are used in voting-machines or the like to prevent reverse or return movement of an operating-lever or equivalent operating device after the movement of said lever in one direction has begun and before the full movement of the lever in that direction is completed.

My invention is primarily designed for use in connection with voting-machines, but may be used in other apparatuses in which it is desirable to prevent the return movement of the operating-lever before the full forward movement of the lever is completed.

The purposes of my invention are to provide a bed-plate of improved construction, to provide a pawl-carrier of improved construction, to provide means for sliding said pawl-carrier alternately in opposite directions, to provide means to prevent premature return movement of said pawl-carrier, and to provide means to expedite the movement of the pawl-carrier near the end of its travel in either direction.

With these ends in view my invention consists in the novel features of construction and combinations of parts shown in the annexed drawings, to which reference is hereby made, and hereinafter particularly described, and finally recited in the claim.

Referring to the drawings, Figure 1 is a combined side elevation and sectional view showing the full-stroke mechanism in position on the cabinet of the voting-machine. Fig. 2 is a top plan of the same, and Fig. 3 illustrates an end view and side elevation of the plunger-bolt.

Similar reference-letters designate like parts in the several views.

The bed-plate A is secured to the cabinet S by screws B or equivalent devices. The plate A has a longitudinal channel *a'*, in which the pawl-carrier E travels. Pawls G are mounted to oscillate on pivots P on the carrier E. Springs I have one end secured on the carrier E by securing devices J, and the free ends of the springs bear against the upper part of the pawls G. A laterally-projecting stud F is secured on the carrier E, engages with the upper end of the plunger-bolt C, and is engaged by the studs L of the radial arms K. A plunger-bolt C slides in a vertical housing *a* on the plate A. A spring D in the housing *a* is compressible by downward movement of the bolt C and reacts to raise the bolt.

A shaft O extends across the cabinet S and has at one end a lever N, by the means of which the shaft may be oscillated. The shaft O is operatively connected with the mechanism of the voting-machine, (not shown,) designed to coöperate with the full-stroke mechanism. Right and left ratchet-wheels H and H' are secured on and turn with the shaft O. Radial arms K are secured on the shaft O and have near their ends laterally-projecting studs L, which when the shaft O is oscillated alternately engage with the stud F to move the carrier E to the left or to the right, as the case may be.

When the shaft O is turned to the right, one of the studs L engages with the stud F to move the carrier E to the left and cause the pawl G at the right-hand end of the carrier to engage with the teeth of the right ratchet-wheel to stop the shaft O and prevent it from turning any farther to the right. The shaft O may then be turned to the left until the stud L on the left hand radial arm engages with the stud F on the carrier and moves the carrier to the right to cause the left-hand pawl G to engage with the ratchet-teeth of the left ratchet-wheel H', and thereby stop the shaft and prevent its turning farther to the left. The movement of the carrier E to the right disengages the right-hand pawl G, so that thereafter the shaft may be returned to the right. The shifting of the carrier E alternately to the right and to the left as de-

scribed permits alternate oscillations of the shaft within the scope limited by the action of the pawls.

To prevent the partial movement of the carrier E in either direction so as to disengage both pawls, thereby leaving the shaft free to turn in either direction, I provide the spring-actuated plunger-bolt C, having a wedge-shaped upper end, the use of which I will now explain.

It will be observed that the pawl-carrier E moves only during the latter part of the movement of the radial arms carrying the studs L, which engage with the stud F on the carrier. If the shaft be turned to move the sliding pawl-carrier E to the left, the stud L, engaging the pin F, will push the pin along until it rides on the wedge-shaped upper end of the bolt C. If it be then attempted to reverse the movement of the shaft, the wedge end of the bolt C, actuated by the spring D, will force the pawl-carrier to the left, so as to cause the right-hand pawl to engage with the ratchet-wheel H, and the upper end of the bolt in contact with the stud F will prevent movement of the pawl-carrier to the right until the stud F is engaged by the stud L on the left-hand radial arm and forced to right onto the end of the bolt. The wedge end of the bolt C prevents the pawl-carrier from stopping with the stud F on the center, because the wedge-shaped upper end of the bolt engaging with the stud must move the stud to one side or the other and cause one of the pawls to engage with a ratchet-wheel.

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

In a full-stroke mechanism, the combination of a channeled bed-plate, a pawl-carrier, pawls mounted on said pawl-carrier, springs acting against said pawls, a laterally-projecting stud on the pawl-carrier, a spring-actuated plunger-bolt having a wedge-shaped end engaging with the stud on the pawl-carrier, an oscillative shaft, right-hand and left-hand ratchet-wheels secured on said shaft and engaged by said pawls, and radial arms secured on said shaft and having studs engaging with the stud on said pawl-carrier, as set forth.

BYRON T. SEELYE.

Witnesses:
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EDWARD E. SNYDER.