

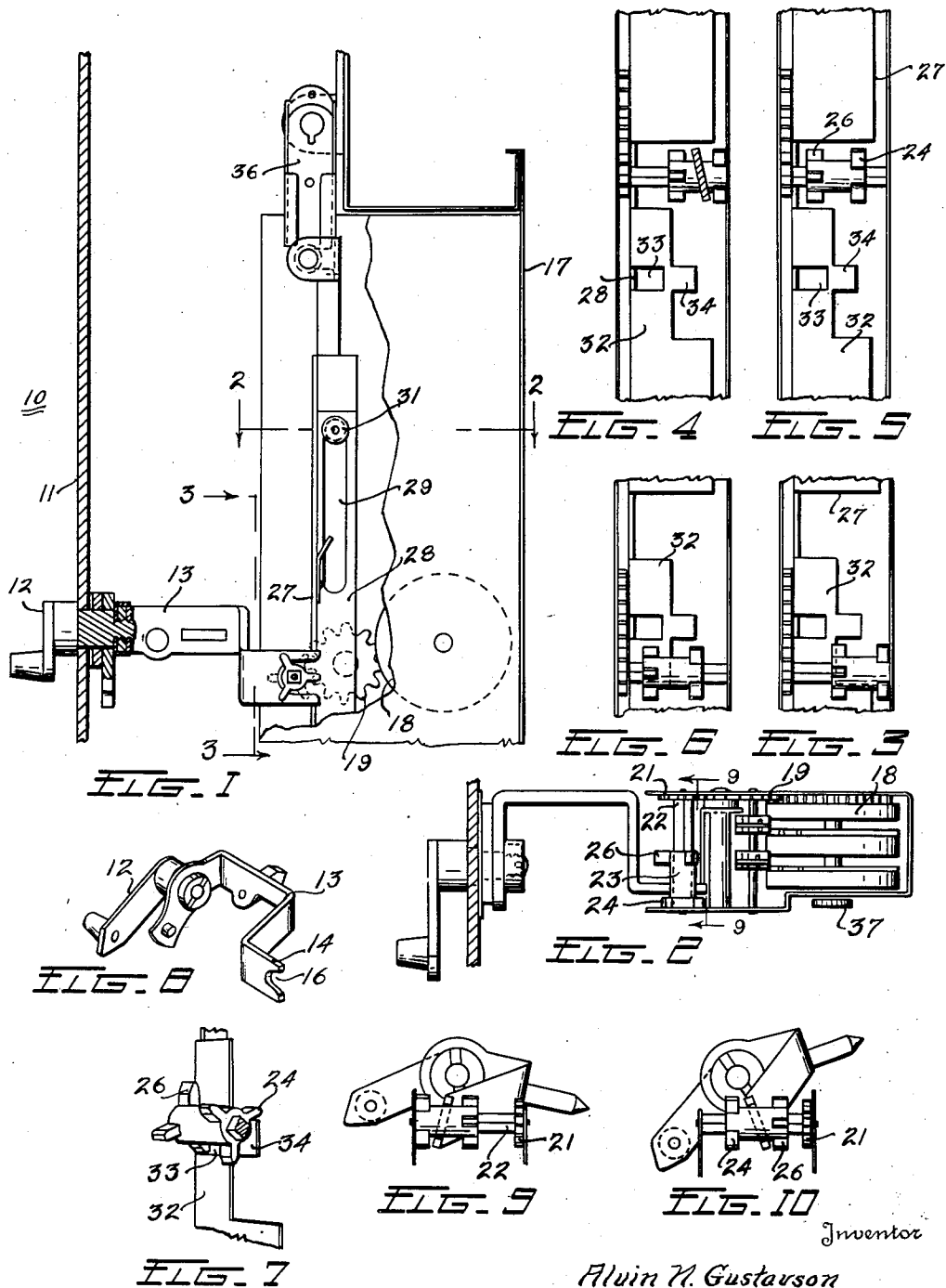
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VOTING MACHINE

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VOTING MACHINE

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This invention relates to improvements in voting machines and is more particularly directed to mechanisms applicable to conventional voting machines of the horizontal type, employing delayed action counters. The mechanism is associated both with the voting indicators and the voter controlled curtain lever or switch. Movement of an indicator into voting position prepares or sets an individual counter actuating mechanism for subsequent advance of the counter by the voter controlled curtain operating lever. Connection of the counter actuator mechanisms with the curtain lever may be had through employment of structure of the type shown in the W. J. Lausterer Patent #1,189,983.

It is the purpose and object of the invention to provide a mechanism that may be utilized to actuate groups or banks of counters, following setting by movement of individual indicators into voting position. The invention is also designed to simplify, through reduction in number of parts, a counter actuator mechanism, and by such simplification the cost of manufacture is reduced and installation of counters and connection with the mechanism greatly facilitated.

Other objects and advantages of the invention will be more fully understood from a consideration of the following specification, taken in conjunction with the accompanying drawing; and in which

Fig. 1 is a fragmentary vertical sectional view of the invention showing its association with a counter and a voting indicator;

Fig. 2 is an enlarged horizontal sectional view taken substantially as indicated by the line 2—2 of Fig. 1;

Fig. 3 is a fragmentary elevational view taken substantially as indicated by the line 3—3 of Fig. 1, and shows the counter actuator mechanism in inoperative position;

Fig. 4 is a view similar to Fig. 3, showing the operator bar in position preparatory to action by which to advance the counter;

Fig. 5 is a further view showing the counter actuator in position to be moved by the operator bar;

Fig. 6 is a still further view showing the operator bar returned to inoperative position after having rotated the counter actuator and advanced the counter one digit;

Fig. 7 is a fragmentary perspective view showing the action that takes place during movement of the operator bar from the position of Fig. 5 to that of Fig. 6;

Fig. 8 is a fragmentary perspective view of the

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assembled voting indicator and crank connection for the counter actuator mechanism;

Fig. 9 is a fragmentary view of the indicator crank and actuator in neutral position, being taken substantially as indicated by line 9—9 of Fig. 2; and

Fig. 10 is a view similar to Fig. 9 wherein the indicator, crank, and actuator have been partially moved into vote indicating position preparatory to registering the vote.

Referring more particularly to the drawing, the reference numeral 10 is employed to generally designate a portion of a voting machine that includes a front panel 11 in which are journaled a number of vote indicators 12. Each indicator 12, for purposes of the present invention, includes a U-shaped portion 13 that terminates in a crank arm 14. The arm 14 is slotted, as at 16, for operative engagement with the counter actuating mechanism hereinafter described.

As is common in voting machines of the type to which the present invention relates, vertical banks or groups of counters are installed as units, each bank or group including the same number of counters as there are horizontal rows of indicators 12 on the machine. In the present illustration, the counter unit 17 discloses only one counter mechanism 18 and one of the counter actuators. It will of course be clear that additional actuator mechanisms are provided for the other counters that may be located in each of the units 17.

The counter 18 is driven by reduction gears 19 and 21. Gear 19, as well as the counter 18, are mounted on suitable shafts carried by the conventional channel walls of the counter unit. Gear 21 is mounted on a shaft 22 that, in the present showing, is square in cross section and also mounts a sleeve 23. This sleeve is adapted to slide from one end of the shaft to the other, its limit being determined by the gear 21 and one of the channel walls of the counter unit. Mounted on, or forming a part of the ends of the sleeve 23 are two gears 24 and 26, gear 24 being of the nature of a starter for assuring rotation of gear 26. That portion of the sleeve 23 between the gears 24 and 26, is adapted to be received within the slot 16 of the crank 14. Thus, when the indicator 12 is rotated from one position to another (see Figures 9 and 10) the crank 14 will slide gears 24 and 26 along shaft 22. As is more clearly evident in Fig. 7, gears 24 and 26 each include three teeth, any one tooth of one gear being centered with the space between two teeth of the other gear.

An operator bar 27 is mounted in the unit 17

and includes a flange 28 that lies adjacent one of the sides of the counter channel. This flange is formed with one or more slots 29 through which pins 31 project. The pins, being mounted in the wall of the unit, serve to support the operator bar 27, as well as limit movement thereof to the length of slots 29. The body of the bar 32 is formed with a rectangular aperture 33, laterally adjacent to which is a lug 34. The aperture and lug structure 33 and 34 is repeated throughout the length of the bar as many times as there are counters and indicator actuators.

The upper end of the bar 27 is joined to linkage 36 which is in turn connected with the curtain operating structure and by means of which it is caused to move downwardly when the voter closes the curtains, and again upwardly to register a vote when the voter is opening the curtains. The particular structure by which the operator bar 27 is made to reciprocate forms no part of the present invention, but, for purpose of clarity, may be substantially the same as the structure employed in the Lausterer patent above identified, in connected with the operation of bar identified as 108.

Having described the structure of the invention, operation thereof is as follows: It is assumed that the counter actuating mechanism and vote indicator are in neutral position; namely, that shown in Fig. 9. The operator bar and slide gears 24 and 26 are in the position shown in Fig. 3. When a voter enters the voting machine, he moves a lever or throws a switch by which a mechanism is caused to close the machine curtains and unlock the indicators for voting. During the operation of closing the curtains, bar 27, through linkage 36, is moved downwardly its limit of travel and assumes the position shown in Fig. 4. When a voter indicates his preference by moving the indicator 12 to vote indicating position, arm 14 is rotated and moves the slide gears 24 and 26 from the position of Fig. 4 to that of Fig. 5. It will be noted that the teeth of gears 24 and 26 are now respectively aligned with lug 34 and aperture 33. After the voter has moved indicators 12 into voting position for all the candidates of his choice, he is ready to register such indicated vote on the counters, return the indicators to non-indicating position, and open the curtains, the machine then being in the same condition as when it was approached prior to voting. To accomplish this, the voter may swing a curtain lever or actuate a switch by means of which the linkage 36 moves operator bar 27 upwardly. During upward movement of the bar 27, lug 34, by contact with one of its teeth, rotates gear 24 to an extent such that a tooth of gear 26 moves into the aperture 33. As the bar 27 continues its upward movement, the trailing edge of the aperture 33 contacts a tooth of gear 26 and completes desired rotation of these gears. Inasmuch as these gears are keyed to shaft 22, gear 21 of the counter unit will be rotated to an extent sufficient to advance the counter one digit (see Fig. 6). As mentioned, the mechanism by which linkage 36 is operated also serves to return the indicators 12 to non-voting position, and thus, as these indicators are so returned, the crank arm 14 will move the sleeve 23 and attached gears 24 and 26 to the

position shown in Fig. 3. In this position the counter actuation mechanism is prepared for further setting and registering of votes.

It is evident from the foregoing that only a minimum of parts is necessary in the setting and actuating of counter mechanisms with the present structure, and also that the crank arm 14 is a conventional extension of the U-shaped portion 13 which serves other purposes in the operation of a voting machine of the type to which the invention relates. Additionally, it will be noted that when a voting machine embodying this structure is to be set up for an election, the counters may be readily released for resetting through the simple expedient of moving the operator bar 27 to its lowermost position (see Fig. 4), and the gears 24, 26, being free of the bar 27, will not prevent resetting the counter by the conventional counter reset knob 21. It will of course be understood, however, that the operator bar 27 is always returned to its uppermost position and remains in such position except when the voting machine is being used in the indicating and casting of a vote.

Although applicant has shown and described only one form of his invention and one application of use with a conventional voting machine, it will be understood that variations of the structure may be made and are contemplated insofar as such variations are within the spirit and scope of the annexed claims.

Having thus set forth my invention what I claim as new and for which I desire protection by Letters Patent is:

1. In a voting machine having an indicator movable into voting position, a counter for registering an indicated vote, a shaft mounted pinion operable to rotate said counter, gears keyed to and slidable along the shaft of said pinion, voter actuatable means engageable with and adapted to sequentially act on said gears in one slidable position thereof, and means, operable by movement of said indicator, to position said gears for engagement by said voter actuatable means.

2. In a voting machine having an indicator movable into voting position, a counter for registering an indicated vote, a shaft mounted pinion operable to rotate said counter, a pair of gears keyed to and jointly slidable along the shaft of said pinion, a reciprocal bar, parts on said bar adapted to have sequential operative engagement with said gears in one slidable position thereof, and means, operable by movement of said indicator, to position said gears for engagement by said bar.

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