Jan. 13, 1942. A. N. GUSTAVSON 2,269,907

VOTING MACHINE

Filed May 3, 1939

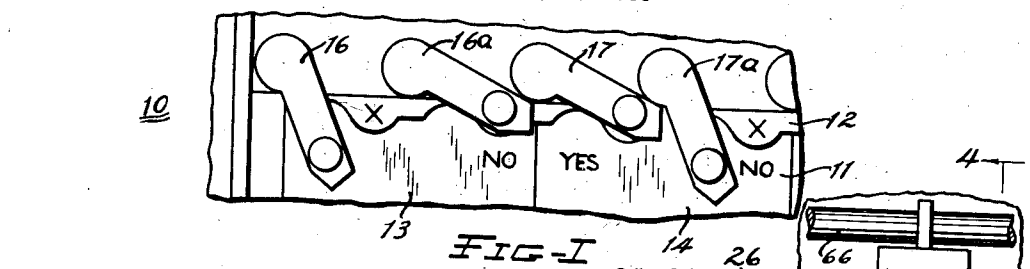


FIG-1

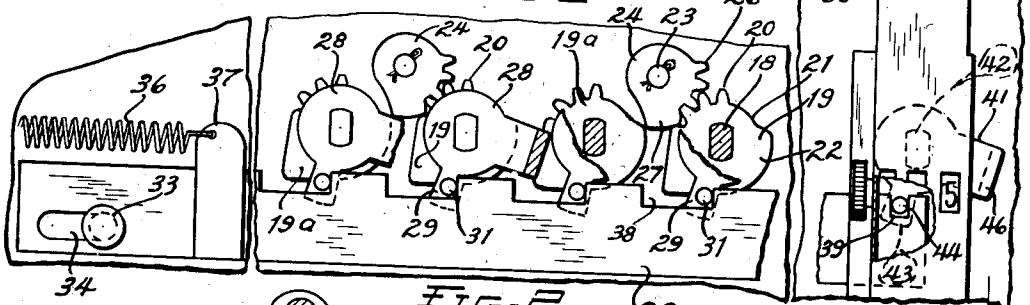


FIG-2

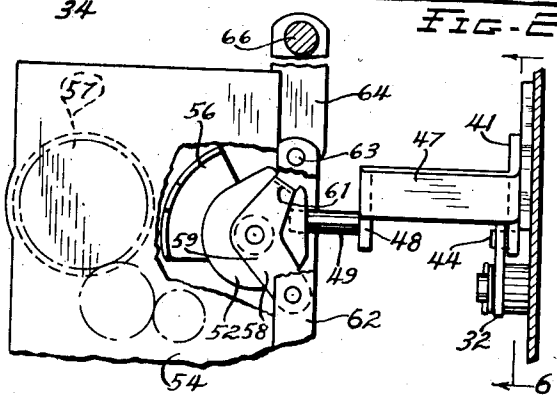


FIG-4

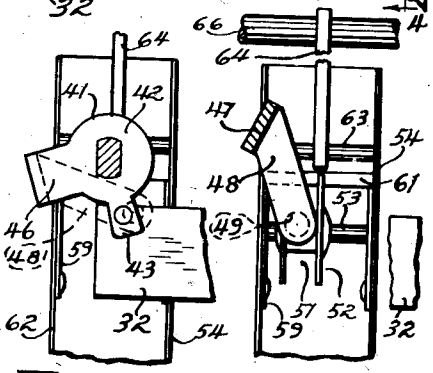


FIG-6 FIG-5

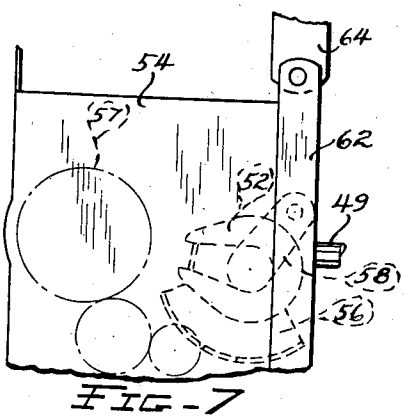


FIG-7

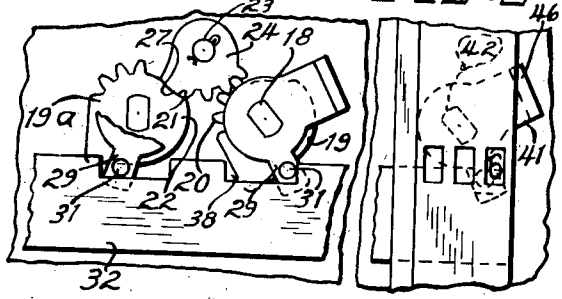


FIG-3

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VOTING MACHINE

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Application May 3, 1939, Serial No. 271,535

3 Claims. (Cl. 235—54)

This invention relates to an improvement in voting machines and more particularly to a device adapted to separately record ballots concerning special propositions or election issues.

In certain localities there are municipal election laws concerning the tabulation of ballots on municipal propositions as distinguished from state and national propositions. These propositions frequently have to do with transference of funds from one city department to another, daylight saving, prohibition, approval of bond issues for municipal projects, etc. These municipal laws, in substance, state that any given proposition, before action therein can take place, must be balloted for by a certain minimum percentage of the voters at an election during which the proposition is presented. This percentage may differ in different municipalities, as well as concerning different propositions. The percentage required in favor of a proposition is generally computed on the basis of the number of ballots cast during previous elections when other propositions were presented.

To make possible the separate recording of ballots concerning special propositions in a voting machine at a general election, it is contemplated to provide a device applicable to the voting machine which will register once for each voter provided he casts a ballot for one or more of the local propositions at issue. This is accomplished through the provision of means connected with the voting indicators pertaining to the propositions and a counter mechanism separate from the counters that record ballots for candidates to various offices. The device is so arranged that should the voter move one of the proposition indicators to a "yes" or "no" voting position and return such indicator to non-voting position, no record of the ballot would be made. It is thus possible, following an election, to determine how many voters of those who balloted cast a ballot for or against one or more of the propositions at issue. To illustrate, let it be assumed that a two-thirds majority of the ballots cast must be in favor of a proposition for it to be carried out. Five hundred voters have cast ballots for the election of candidates to various offices and of the five hundred voters only three hundred and thirty-five have balloted on either or both of two propositions presented. Since more than two-thirds of the voters have indicated their preference in connection with the propositions at issue, it is merely necessary to read the total ballots cast for and against each proposition to determine whether or not it is to be carried out. In this illustration, however, if only three hundred voters, less than the required majority, had balloted for or against either or both propositions, the results would not be considered representative of the preference of the majority of actual voters.

The ability of the present invention to meet the requirements of certain municipal election laws pertaining to special propositions, its convenience of installation and use in voting machines of different sizes, simplicity of construction, as well as accuracy of operation, constitute the principal advantages thereof.

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

Figure 1 is a fragmentary front elevational view of the upper portion of the keyboard of a voting machine illustrating a portion of the horizontal row of indicators utilized for voting on special propositions;

Figure 2 is a view from the interior of the voting machine looking toward the front and discloses the invention and certain details of its connection with the proposition indicators illustrated in Figure 1;

Figure 3 is a view taken in the same plane with that of Figure 2 and shows a part of the mechanism as it appears when one of the indicators has been actuated and a special counter is set for registering;

Figure 4 is a view of the counter mechanism by which to register ballots cast on propositions, being taken substantially as indicated at 4—4 of Figure 2;

Figure 5 is a further view of the counter mechanism being taken from the rear or open end thereof;

Figure 6 is a fragmentary view taken substantially on the line 6—6 of Figure 4 and further illustrates the connection between the structure of the invention and the counter mechanism; and

Figure 7 indicates the position of the elements of the counter mechanism during each registering.

Reference is now had to the drawing wherein the numeral 10 is employed to generally indicate a portion of the keyboard of a voting machine. Conventional voting machines are provided with horizontally arranged rows of candidate indicators, above the topmost row of which is a row of indicators for use in balloting on

special propositions. The invention being particularly concerned with balloting on special propositions or issues, attention is directed to Figure 1 of the drawing wherein a portion of the row of indicators for this purpose is illustrated. It is necessary that two indicators be provided in order that a voter may indicate his ballot for or against a proposition. The proposition to be voted on is displayed in a conventional manner on a card or strip 11 supported in a frame 12. For a clearer understanding of the invention, two propositions are set up, namely, 13 and 14. Indicators 16 and 16A are provided for proposition 13, and indicators 17 and 17A for proposition 14. The particular mounting of the indicators forms no part of the invention and, therefore, will not be described in detail. It is evident, however, that each indicator is rotatable to a limited extent for the purpose of moving into voting position for or against a given proposition.

Support for the indicators takes the form of shafts 18 carried by the voting machine. Means is provided by which to prevent both indicators for a given proposition from being manipulated. In the present disclosure plates 19 and 19*a* are mounted on the shafts 18. Each of these plates includes a small number of teeth 20 on one edge thereof. Adjacent the teeth is a shoulder 21 formed in part by a cam surface 22. Between and slightly above pairs of shafts 18, a pin 23 carries a freely rotatable member 24. Teeth 26 on one edge of the member 24 mesh with the teeth 20 on an adjacent plate 19. Adjacent the teeth 26, the member is formed with a lug 27. Assuming a voter has rotated indicator 16 into voting position, it will be noted, by referring to Figure 3, that plate 19, mounted on shaft 18 of this indicator, has been rotated and caused rotation of member 24 to the extent that the lug 27 now rests upon the shoulder 21 of the adjacent plate 19*a*. With the member 24 in this position it is impossible to move indicator 16A into voting position. On the other hand, if indicator 16A had been manipulated, cam surface 22 of plate 19*a* would have been moved up into contact with one side of the lug 27, thus preventing rotation of member 24, adjacent plate 19 and the indicator 16 connected therewith.

Mounted on each of the shafts 18, and preferably positioned adjacent plates 19 and 19*a*, are keys 28. Each key is formed with a radially directed lug 29 from which projects a pin 31. A horizontally disposed bar 32 is located beneath the row of keys 28, being supported for limited lateral movement by pins 33 that project through slots 34 in the bar. A spring 36 at one end is joined to the voting machine and at the other to a strap or lug 37 located adjacent one end of the bar 32. The spring 36 normally retains the bar 32 in the position shown in Figure 2 of the drawing. The upper edge of the bar 32 is formed with a number of upwardly opening slots 38 into which pins 31 of keys 28 project. That end of the bar 32 remote from spring 36 is provided with a further slot 39. A key 41, similar to keys 28, is mounted on a shaft 42. This key is formed with a lug 43 having a pin 44 that projects into slot 39. It will be understood that the shaft 42 has no connection with any indicators in the machine. An arm 46 forming a part of the key 41 is directed radially of the shaft 42 substantially ninety degrees from the lug 43. This arm is bent at right angles to form a laterally directed portion 47 that in turn terminates in a right angle portion 48. The portion 48 is parallel to but laterally spaced from the arm 46 and carries at its end a pin 49.

The pin 49 projects into the space 51 between a pair of disks 52 that are carried on a shaft 53. Shaft 53 projects transversely between the side walls of a counter casing 54. One of the disks 52 carries an arcuate flange 56 that, when the disks are moved laterally of the casing 54 along shaft 53, is engageable with a gear of a counter 57. Rotation of the disks 52 is had by means of a yoke 58. The yoke includes side members 59 and a connecting strap 61. The side members 59 are centrally pivoted on the shaft 53. Disks 52 are slotted and receive the strap 61. The free ends of the members 59 are pivotally joined to parallel bars 62. The upper ends of these bars are connected by a pin 63 that is pivotally engaged by one end of a strap 64. The other end of the strap 64 is secured to or may be integral with a rotatable rod 66. The rod 66 is joined to the curtain release mechanism of the voting machine.

It will be understood that the keys 28 are also provided with arms similar to arm 46 of key 41 and that connection of each is had with a separate counter, the structure being substantially identical with that already described. Counters for each of the indicators 16, 16A, and 17, 17A, are for the purpose of registering the ballots cast for or against either of the propositions 13 or 14, and such structure, having been employed for sometime, forms no part of the present invention. The number on counter 57 at the close of an election will indicate the number of voters that have cast ballots for or against either proposition 13 or 14, and this total, while having no bearing on the totals of the counters connected with each of the indicators 16 and 16A, 17 and 17A, must at least equal a predetermined percentage of all persons voting.

Operation of the structure is as follows. It is assumed that a voter has entered a voting booth, drawn the curtains, and cast a ballot for proposition 13 and against proposition 14 by manipulating indicators 16 and 17A, substantially as shown in Figure 1. Plate 19, shown at the right of Figure 3 connected with indicator 16, has been moved as shown. This movement has caused pin 31 to engage one end of the slot 38 of the bar 32, moving said bar laterally to the right, as viewed in Figures 2 and 3 of the drawing. Movement of the bar 32 causes key 41, through pin 44, to be rotated. Rotation of this key moves pin 49 in a circular path causing disks 52 of the counter mechanism to be moved laterally along shaft 53 to the position shown in Figure 5. The same voter, having moved indicator 17A will have caused another one of the keys 28 to be rotated. Pin 31 attached to the lug 29 of this key, however, will move freely in its slot 38 in the bar 32 because said bar has previously been moved due to manipulation of indicator 16. When the voter has completed balloting he moves the curtain lever for the purpose of opening the curtains, registering his ballot and returning the indicators to non-voting position. The mechanism by which this is accomplished is old and well known and forms no part of the present invention. The counter mechanism shown in the present invention is connected with rod 66 in a manner similar to the connection of all other counter mechanisms with this rod. During the operation of opening the curtains, the rod 66 moves upwardly, causing bars 62 to swing outwardly and upwardly about the shaft 53 as a

center. Figure 7 of the drawing indicates the position of parts of the counter **57** when the bars **62** have been raised. At this point the voting indicators, by a further well known mechanism, are returned to non-voting position, and since pin **49**, through key **41** and bar **32**, is connected with these indicators, said pin will be rotated in a direction opposite to that described above, thus moving disks **52** along shaft **53** to the right, as viewed in Figure 5. Subsequent to this, rod **66** is lowered and bars **62** returned to the position of Figure 4 and the total on the counter **57** has been advanced one.

In the event a voter moves one of the indicators to ballot for or against either or both propositions **13** and **14** and before completing balloting changes his mind and returns the indicator to non-voting position, the bar **32** will also be returned through action of the spring **36** and, consequently, the total on the counter **57** will not be advanced. Thus the total of the counter **57** advances only if a voter has cast a ballot for or against one or more of the propositions at issue.

Although applicant has shown and described only one mechanism by which a separate counter may be operated under the circumstances and conditions set forth, it will be apparent to those skilled in the art that this structure may be varied as may be required in its application to other uses and insofar as it is within the spirit and scope of the invention as defined in the hereunto 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 indicators for affirmative and negative balloting on special propositions, a device for registering the number of voters casting ballots on such propositions comprising a counter mechanism, a bar linked with and movable to set said mechanism for registering and means for operating the counter mechanism when so set, means for operatively engaging each of said indicators with said bar, any one of said indicators being operable to move said bar and render the engaging means of the other indicators ineffective with respect thereto, and spring means operable to move said bar to inoperative position and said mechanism to non-setting position when all of said indicators are returned to non-voting position.

2. In a voting machine having indicators for affirmative and negative balloting on given propositions, means engageable by and movable upon movement of any one of said indicators, a counter, counter setting mechanism operatively connected with said means, said counter setting mechanism normally rendering said counter inoperative, and further means for retracting said means and said counter setting mechanism upon the release of the operable engagement of said one indicator, and means for operating said counter when rendered operative by said counter setting mechanism.

3. In a voting machine having indicators, a counter, counter setting mechanism, an operative member connected with and adapted to move said setting mechanism into and out of counter setting position, said setting mechanism normally rendering said counter inoperative, means on each of said indicators for operatively engaging said member, any one of said indicators being operable to move said member into operative position, and means for returning said member and said mechanism to inoperative and non-setting position without affecting said counter, said last mentioned means being effective upon return of the operated indicator, and means for operating said counter when rendered operative by said setting mechanism.

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