Sept. 22, 1942. A. N. GUSTAVSON 2,296,613

VOTING MACHINE

Filed April 14, 1941 2 Sheets-Sheet 1

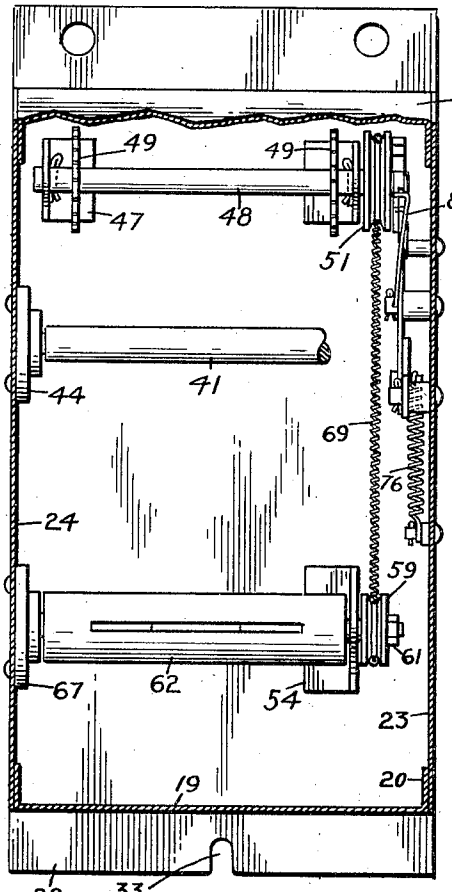


FIG. 2

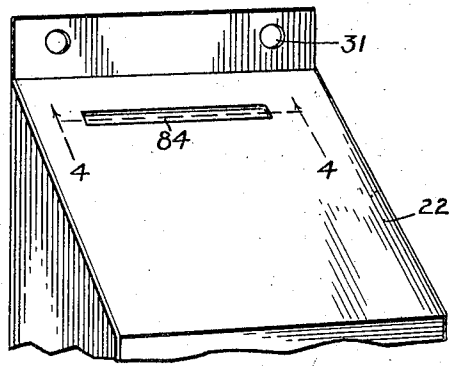


FIG. 1

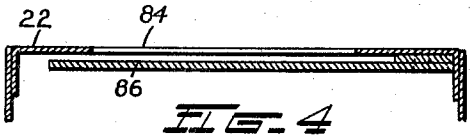


FIG. 4

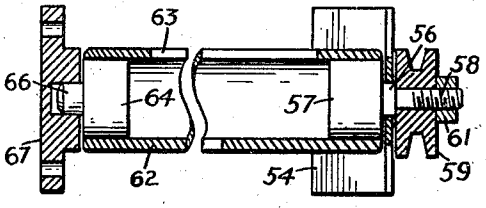


FIG. 3

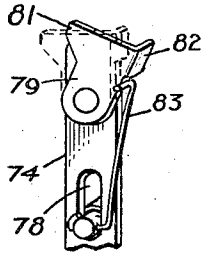


FIG. 7

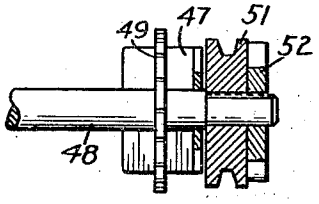


FIG. 6

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Sept. 22, 1942. A. N. GUSTAVSON 2,296,613

VOTING MACHINE

Filed April 1/ 1941 2 Sheets-Sheet 2

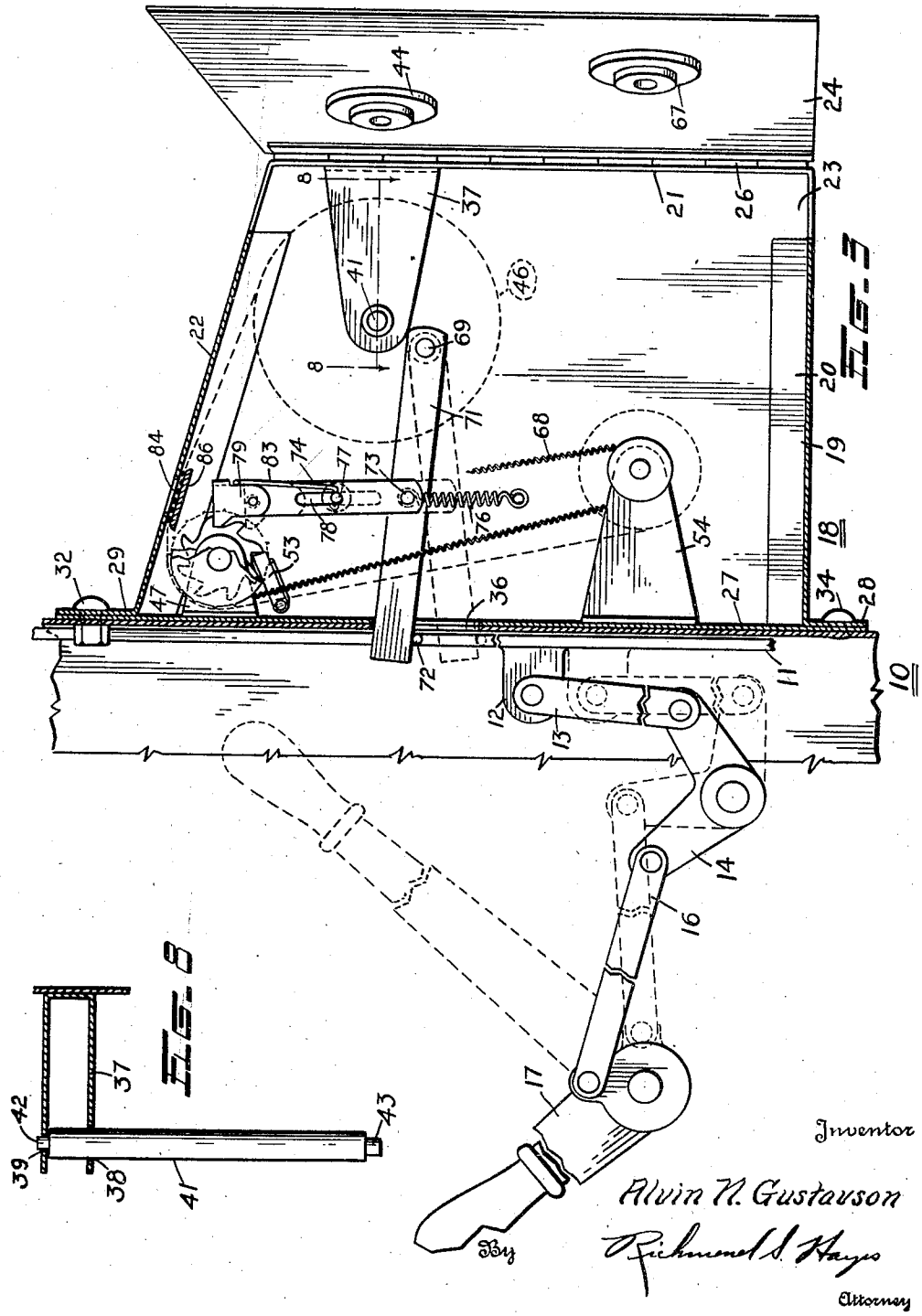


FIG. 3

FIG. 8

Patented Sept. 22, 1942 2,296,613

UNITED STATES PATENT OFFICE

2,296,613

VOTING MACHINE

Alvin N. Gustavson, Jamestown, N. Y., assignor to Automatic Voting Machine Corporation, Jamestown, N. Y., a corporation of Delaware

Application April 14, 1941, Serial No. 388,414

4 Claims. (Cl. 281—9)

This invention relates to an improvement in voting machines and more particularly to an attachment device for making a record of the signature of each voter at the time and place of voting.

It is well known that the actual number of votes cast at an election is invariably less than the number of registered voters, and it has been found desirable in certain election districts to obtain a record of all persons actually voting at a given election and on a given voting machine.

The present invention discloses one form of a device of this nature that is attached to and made operable by a voter in the normal use of a voting machine. More specifically, the device includes an enclosed paper roll that is accessible through a suitable aperture for the signature of a voter prior to indicating and registering a vote. A voter, having applied his signature to the roll, enters the voting booth and, by moving the conventional lever to draw the curtains and unlock the machine for voting, thereby adjusts the roll to conceal the signature just applied. A blank surface is thus presented for the signature of the next in order voter.

One of the objects of the invention lies in the provision of a poll list write-in device for use with a voting machine at an election.

Another object of the invention lies in the provision of means for making a signature record of a voter prior to his indicating and registering a vote.

Another object of the invention lies in the provision of a poll list write-in device operably connected with a lever which is operable to conceal a voter's signature at the time he encloses himself in a voting booth and unlocks the voting machine for voting.

Another object of the invention lies in the provision of means for making a record of voters in the order in which they cast their votes.

Another object of the invention lies in the provision of means for successively recording the signatures of voters, the signature of the preceding voter being cncealed and the succeeding voter being enabled to apply his signature while the previous signer is casting a vote.

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 drawings; and in which—

Figure 1 is a fragmentary perspective view of one form of the invention;

Figure 2 is an enlarged front view of the device, parts, including the enclosing container, being broken away to disclose certain of the structural details;

Figure 3 is a side elevational view of the device applied to a voting machine, being partly in section and showing the method of mounting, together with the connection with a conventional curtain operating lever;

Figure 4 is an enlarged fragmentary sectional view taken substantially on the line 4—4 of Figure 1;

Figure 5 is a vertical sectional view of the paper receiving roller located adjacent the bottom of the enclosure;

Figure 6 is a fragmentary detail view, partly in section, and shows the driving roller of the device;

Figure 7 is a fragmentary perspective view of a part of the linkage by which the driving roller is made to rotate; and

Figure 8 is a fragmentary view, partly in section, showing the roller by which to mount the paper roll, being taken substantially as indicated at 8—8 of Figure 3.

Reference is now had to the drawings wherein the numeral 10 is employed to generally designate a portion of the end wall of a voting machine casing. Supported in any suitable manner for vertical reciprocation, adjacent this end wall, is a vertically disposed bar 11. A bracket 12 on the bar is connected through a link 13 with a bell crank 14. A further link 16 connects the bell crank with a curtain operating lever 17. This structure is clearly disclosed and described in my co-pending application, Serial No. 278,527, filed June 10, 1939, and bar 11 of the present disclosure is similar to bar 52 of the reference application.

A box-like container, generally indicated by the numeral 18, comprises a base wall 19 having side flanges 20. The wall 19 may be integral with a vertical front wall 21 and an inclined top wall or writing shelf 22. One side of the container is closed by a wall 23, whereas the other side of the container is fitted with a door 24, operably connected with one edge of the wall 21 by a suitable hinge 26. Opposite the wall 21, the container is closed by a plate 27 that is secured to the base wall 19 and top wall 22 along their respective flanges 28 and 29. Suitable apertures

31 may be made in the flange 29 and plate 27 to receive bolts 32. These bolts are accessible for removal only from within the voting machine casing. One or more apertures or slots 33 are made in the lower end of the plate 27 and flange 28, and adapted to engage a stud 34 carried by the wall of the voting machine. The plate 27 and wall of the voting machine, to which the container is affixed, are formed with an elongated slot 36. This slot opens adjacent one vertical edge of the bar 11, being for a purpose hereinafter set forth.

Within the container, and secured in any suitable manner to the wall 21, is a bracket 37. In the present instance this bracket is U-shaped, having concentric large and small openings 38 and 39 in the sides thereof. A shaft 41, having a bearing end 42, is projected through the opening 38 of the bracket 37, end 42 resting in the opening 39. The other end of this shaft is formed with a somewhat larger bearing end 43 that, when the door 24 is moved into closed position, is engaged by a bearing member 44 mounted on the inside of the door. The shaft 41 supports a roll of paper 46, and, being supported only at one end by the bracket 37 when the door is opened, facilitates insertion and removal of this roll.

Near the upper end of the plate 27 is a pair of spaced apart angle brackets 47, each of which is apertured to receive the end portions of a shaft 48. Between the brackets 47 the shaft 48 mounts a pair of toothed wheels 49. One end of the shaft 48 extends well beyond one of the brackets 47. A V-pulley 51 and a ratchet gear 52 are keyed to this portion of the shaft (see Figure 6). The inclined teeth of the ratchet gear, together with a spring held dog 53, pivotally mounted on the container wall 23, permit rotation of shaft 48, pulley 51, and ratchet 52 in only one direction.

The plate 27 of the container also supports a further angle bracket 54, one flange of which is apertured to receive the bearing portion 56 of a plug 57. Beyond the bearing 56 is a threaded portion 58 that receives a small pulley 59. This pulley is prevented displacement in any suitable manner, as by a nut 61. It will be noted that the supporting flange of the bracket 54 is interposed between the body of the plug 57 and the pulley 59 (see Figure 5). A sleeve 62, having one or more slots 63, serves as a receiving roller for the paper roll. The sleeve is interfitted at one end with the plug 57. A further plug 64 is fitted in the other end and includes a bearing portion 66 that, when the door 24 is closed, projects into a bearing member 67 carried by the door. A spring or other elastic type endless belt 68 is mounted on the pulleys 51 and 59.

Secured to the wall 23 is a shaft 69 that pivotally mounts one end of a rod 71. The free end of this rod projects through the slot 36 in the container and voting machine casing, and rests on a pin 72 that extends from one side of the vertically reciprocable bar 11. At a suitable point between the ends of the rod 71 is a pivot pin 73 that mounts one end of a link 74. A spring 76 is connected at one end with the pin 73 and at the other with the container wall 23, substantially as indicated. This spring yieldingly urges the rod 71 into the position shown in dotted lines of Figure 3. A pin 77 on the wall 23 projects into a slot 78 in the link 74 and causes said link to follow a prescribed path as it is reciprocated by the rod 71. The free end of the link 74 pivotally mounts a latch 79. This latch includes a finger 81 engageable with the teeth of the ratchet gear 52, and a stop flange 82 (see Figure 7). Any suitable means, such as a spring wire 83, serves to yieldingly maintain the latch 79 in the position shown in Figure 3.

The top wall or shelf 22 of the container is formed with a transverse slot 84. Spaced a slight distance beneath the slot 84 is a write-in support 86. This support is sufficiently rugged to be secured at only one end to the top 22, leaving the other end open to permit convenient entry or removal of the roll of paper.

When the device is in position of use, a paper roll 46 is mounted on the shaft 41, the end thereof being fed over the write-in support 86, thence over the wheels 49, and downwardly to the roller 62, the end being projected into one of the slots 63 for securement in any well known manner. The door 24 is then closed, locked, or sealed, as found expedient, and the device is ready for use.

When a voter presents himself at the voting machine to which the present invention is applied, he is instructed to first sign his name on that portion of the paper roll that appears through the slot 84. Having signed his name, he is permitted to step up to the voting machine and operate the curtain lever 17 from dotted to full line position, as indicated in Figure 3 of the drawings. Movement of this lever draws the curtains about the voter in a well known manner, and unlocks the voting machine. During movement of the lever 17 from dotted to full line position, bar 11 is elevated. Pin 72 thus causes rod 71 to pivot upwardly, carrying with it link 74 and causing the finger of latch 79 to rotate the ratchet gear 52 to such an extent that the toothed wheels 49 will advance the paper roll to a position such that the voter's signature is concealed beneath the top of the container and a blank space on the roll is visible through the slot 84. By reason of the belt 68, the receiving roller 62 is rotated and thus no slack in the paper roll occurs. As operation of the device continues, the diameter of the paper roll on the receiving roller 62 increases and it is apparent that the reeciving roller need not be rotated to the same extent under these circumstances as when the device is first set up for use. Provision of a yieldable belt 68 permits sufficient slippage as between the drive pulley 51 and pulley 59 to accommodate this constantly changing condition of use.

When a voter has completed his ballot, the lever 17 is moved from full to dotted line position, thus lowering bar 11, and spring 76 returns rod 71 and link 74 to dotted line position in the drawings, thus presenting the latch finger 81 to the next tooth of the ratchet gear 52.

Although applicant has shown and described only one modification of a device for advancing a paper roll step by step through actuation of a curtain operating lever in a voting machine, it will be apparent to those skilled in the art that variations of this device may be made and are contemplated insofar as they are within the spirit and scope of the invention as defined in the 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 a reciprocable member, a signature recording device comprising a container joined to the casing of said voting machine, said container having an aperture in one wall thereof, signature strip feeding means,

said feeding means including toothed wheels having positive engagement with and serving to pass a strip beneath said aperture and beyond said feeding means, drive means operably connected with said feeding means, said drive means having connection with and being operable by said reciprocable member in only one direction of movement, a roller for receiving a strip as it leaves said feeding means, and means operably connecting said roller with said feeding means.

2. In a voting machine having a reciprocable member, a signature recording device comprising a container having an aperture in one wall thereof for discharging a portion of a record strip, a pair of shaft mounted toothed wheels, said wheels being spaced apart to have continuous engagement with the side margins of a signature strip, a ratchet structure for rotating said wheels, said ratchet structure being connected with said member and movable thereby to rotate said wheels and move said strip to a predetermined extent past said aperture, and a re-wind roll for the strip, drive means connecting said roll with said feeding means whereby to advance said roll and wind up the strip as it leaves said feeding means.

3. A signature recording device for use with and operation by a reciprocable member of a voting machine comprising a container, means fixedly securing said container to a wall of said machine, the corresponding walls of said machine and said container having concentric apertures, a rod pivotally associated at one end with a wall of said container and projecting through said apertures into said machine, said rod being engageable by and movable with said machine member in only one direction, receiving means for a signature strip, means operably connected with said rod, strip feeding means connected with and movable by said rod to feed a strip past an aperture in one wall of said container onto said receiving means, and further means for returning said rod and said feeding means to inoperative position upon completion of the reciprocation of said machine member.

4. A signature recording device for use with and operation by a reciprocable member of a voting machine comprising a container fixedly secured to a wall of said machine, the corresponding walls of said machine and said container having concentric apertures, a rod pivotally mounted in said container and projecting through said apertures into said machine, said rod being engageable by and movable with said machine member in only one direction, means for mounting a rolled signature strip in said container, strip feeding means, said feeding means including toothed wheels marginally engageable with the strip, drive means for rotating said wheels, said drive means being operably connected with said rod, receiving means for the strip adjacent said feeding means, said rod and said feeding means being spring returned to inoperative position upon completion of the reciprocation of said machine member.

ALVIN N. GUSTAVSON.

CERTIFICATE OF CORRECTION.

Patent No. 2,296,613. September 22, 1942.

ALVIN N. GUSTAVSON.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 3, first column, line 14, claim 2, for "discharging" read --disclosing--; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 10th day of November, A. D. 1942.

Henry Van Arsdale,
Acting Commissioner of Patents.

(Seal)