No. 647,657. Patented Apr. 17, 1900.

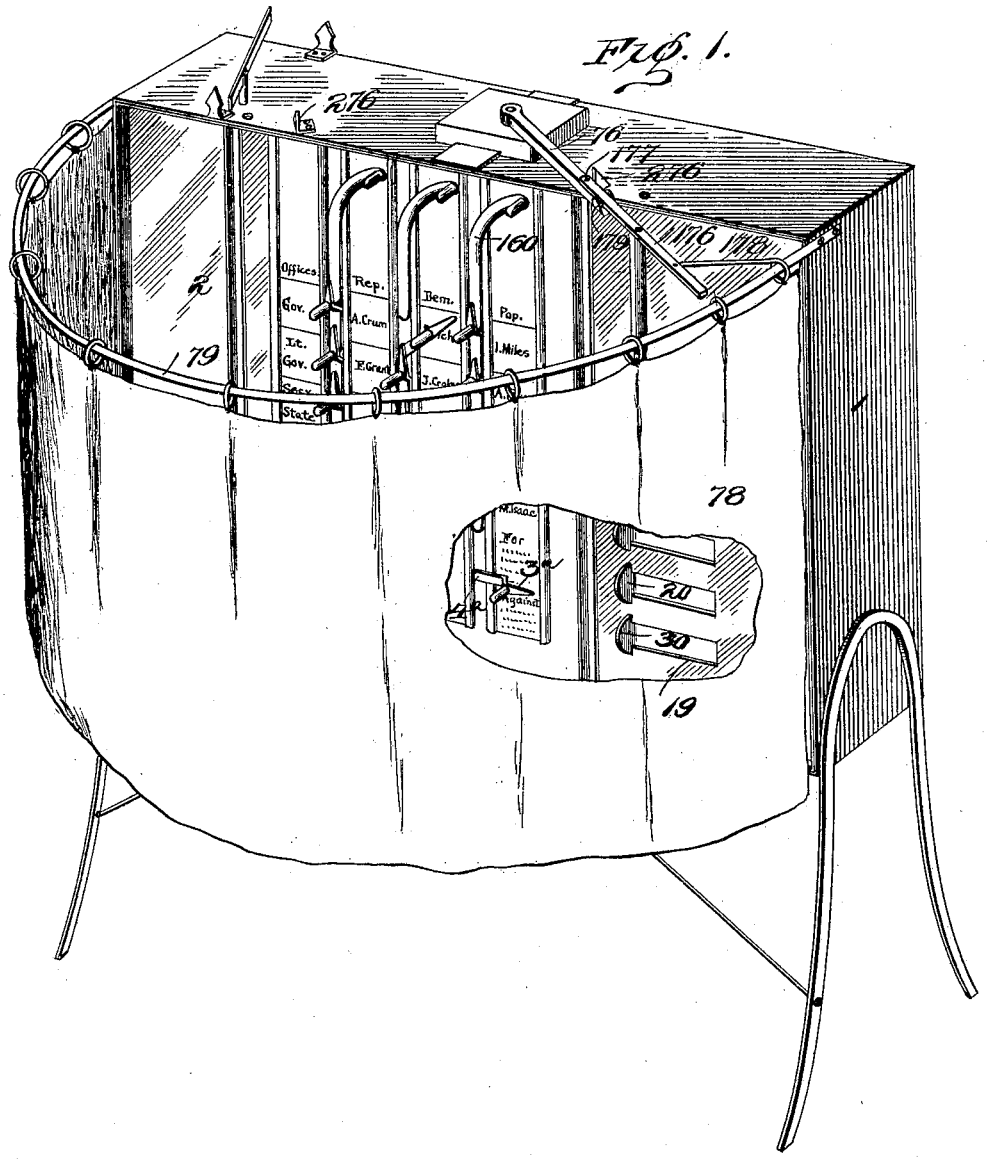
A. J. GILLESPIE.

VOTING MACHINE.

(Application filed May 5, 1899.)

(No Model.) 9 Sheets—Sheet 1.

Fig. 1.



Witnesses.

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G. Willard Fisk.

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his Attorneys

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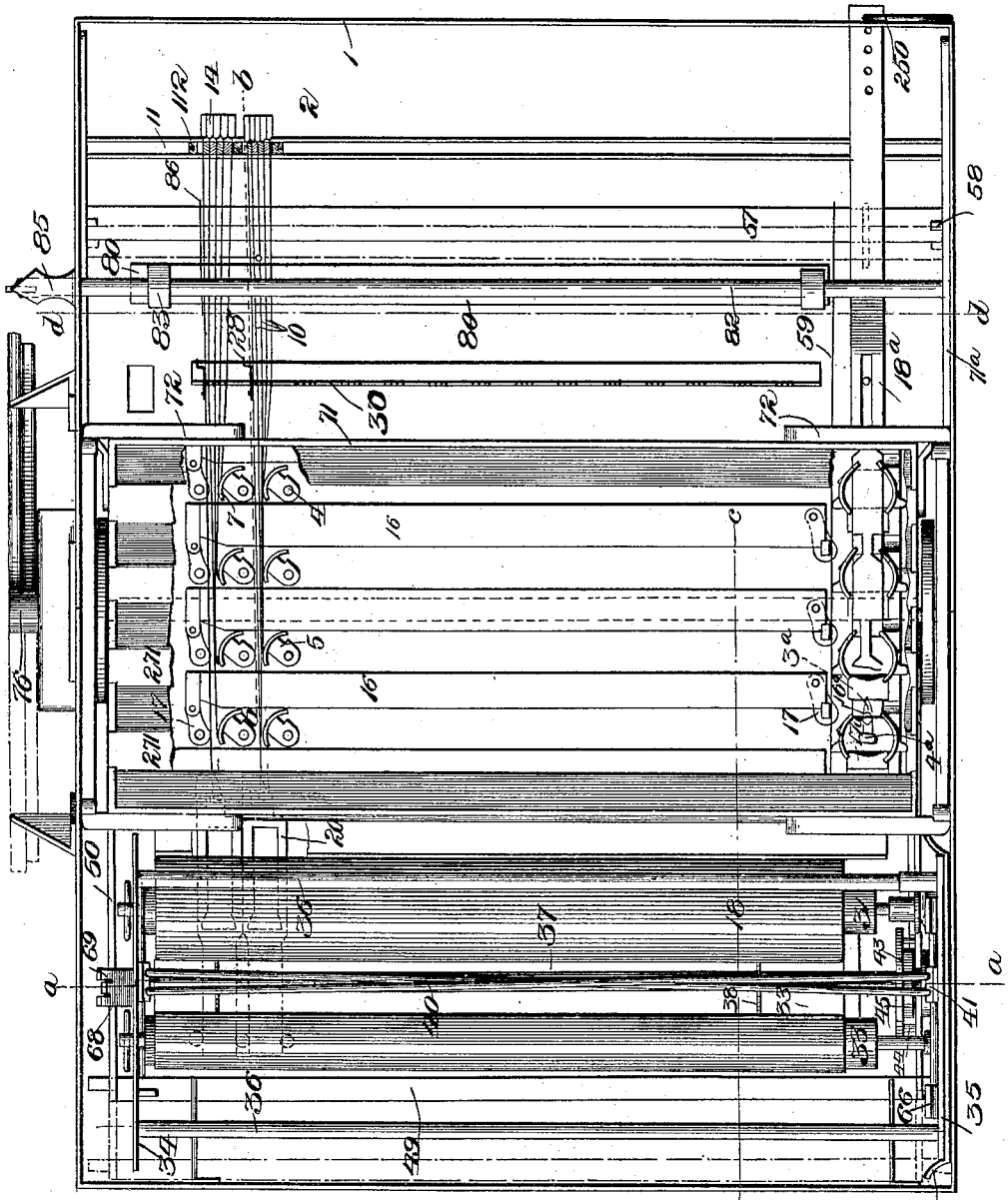

Fig. 2.

Witnesses.
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No. 647,657. Patented Apr. 17, 1900.

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(No Model.) 9 Sheets—Sheet 3.

Fig. 4.

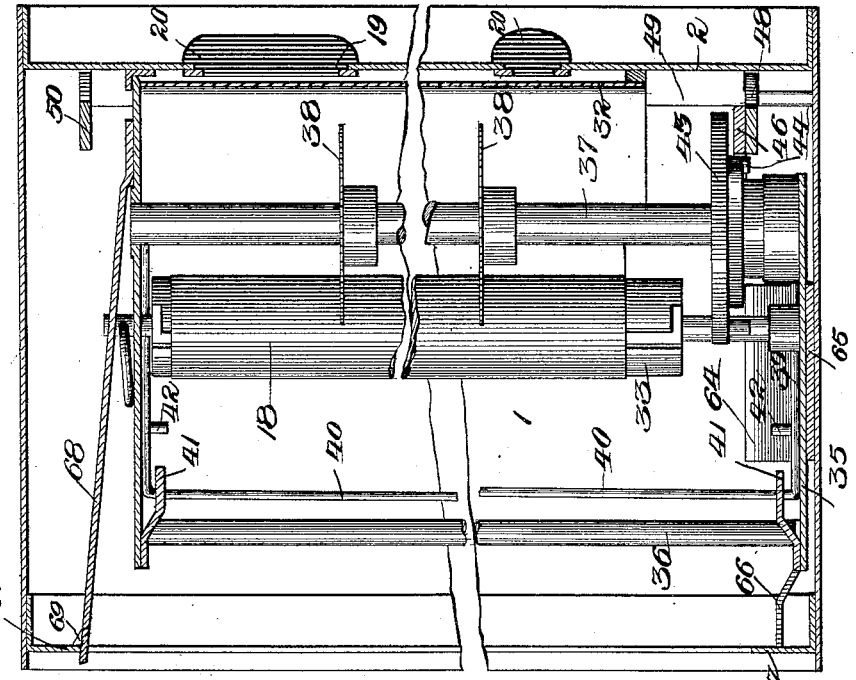
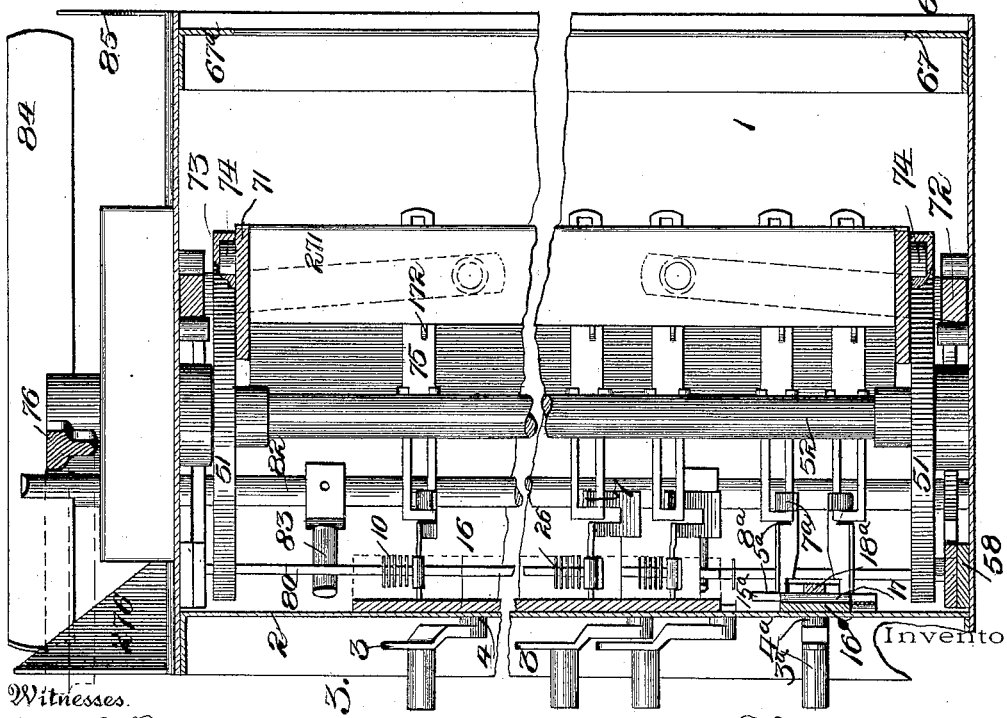


Fig. 5.



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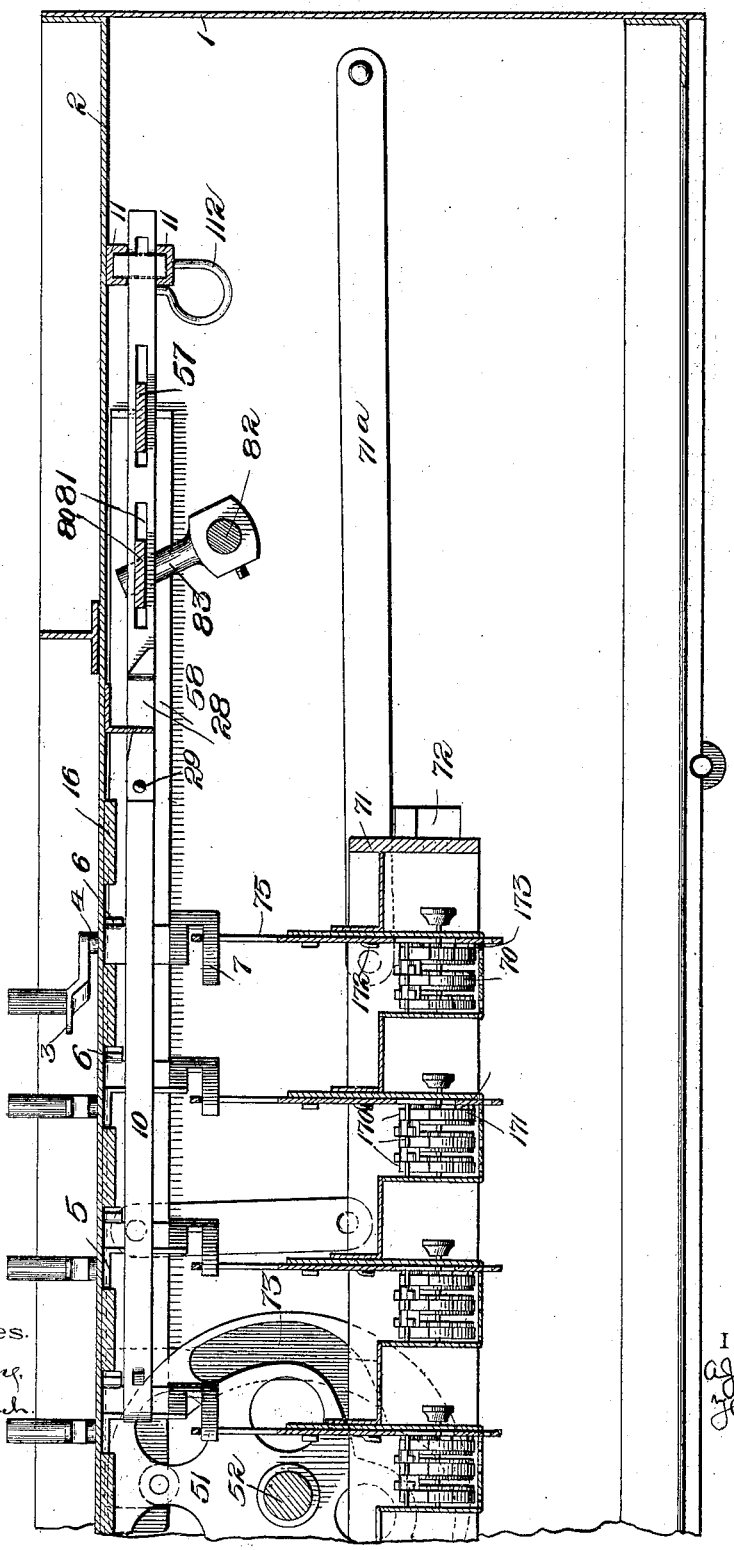
(No Model.) 9 Sheets—Sheet 4.

Fig. 5.



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(No Model.) 9 Sheets—Sheet 5.

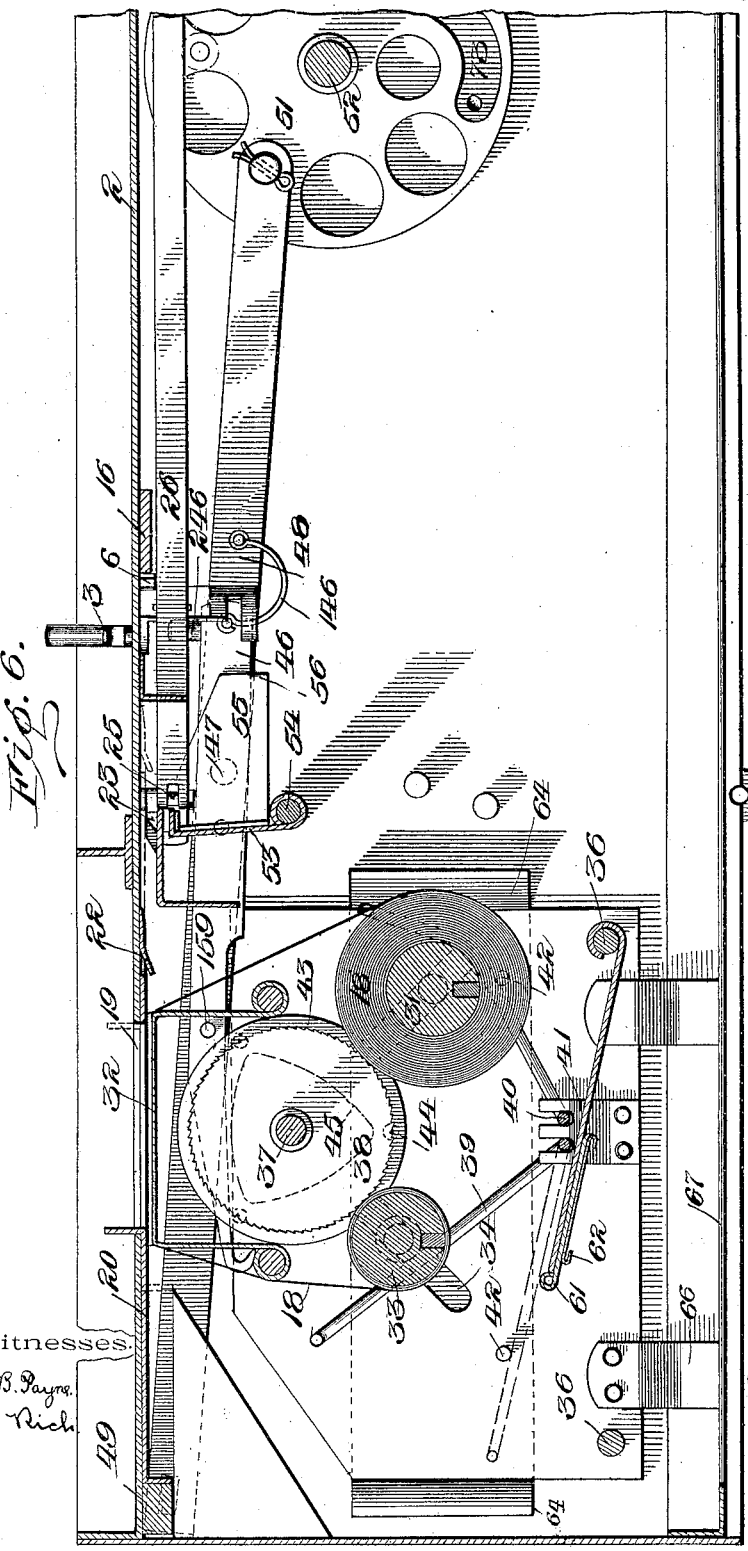

Fig. 6.

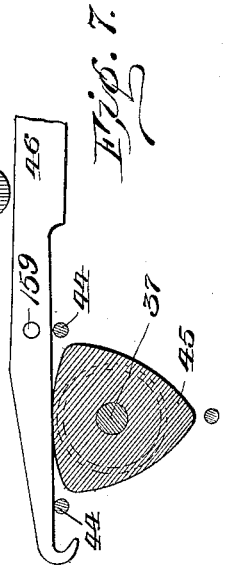

Fig. 7.

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VOTING MACHINE.

(Application filed May 5, 1899.)

(No Model.) 9 Sheets—Sheet 6.

Fig. 8.

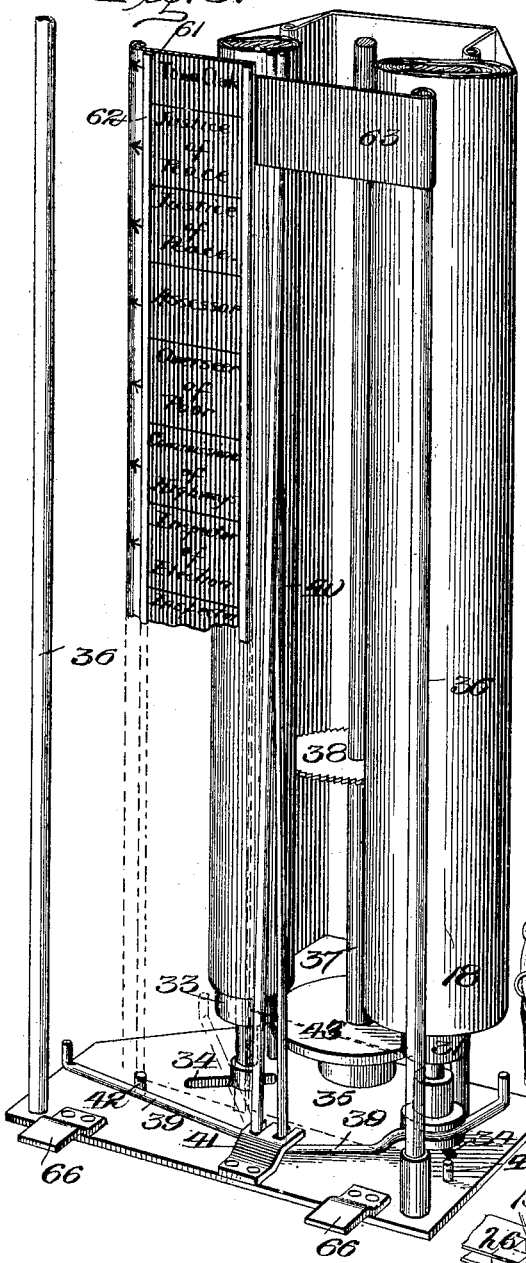


Fig. 9.

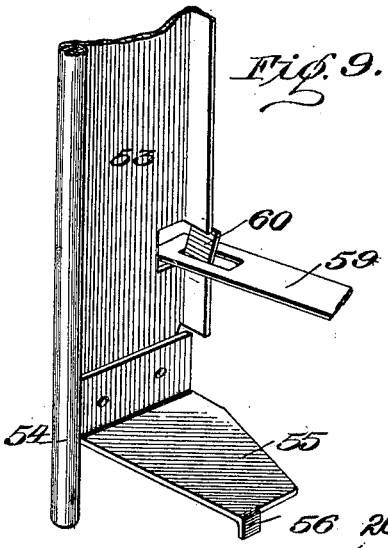


Fig. 10a.

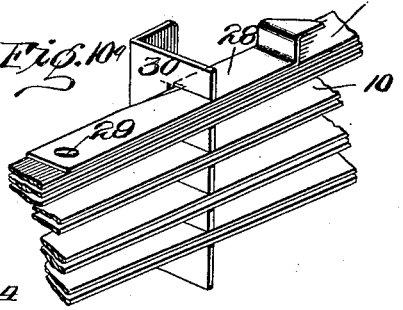


Fig. 22.

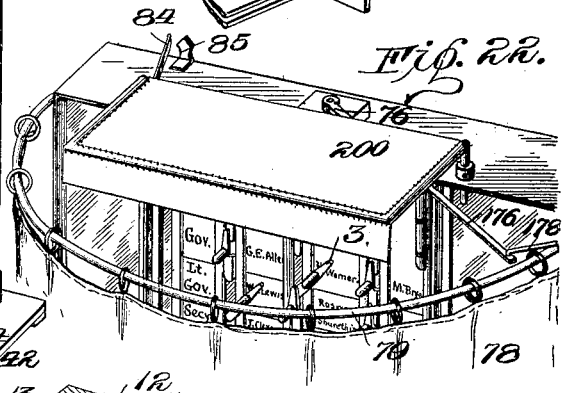
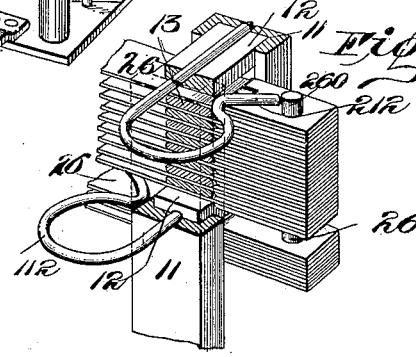


Fig. 10.



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No. 647,657. Patented Apr. 17, 1900.

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VOTING MACHINE.

(Application filed May 5, 1899.)

(No Model.) 9 Sheets—Sheet 7.

Fig. 11.

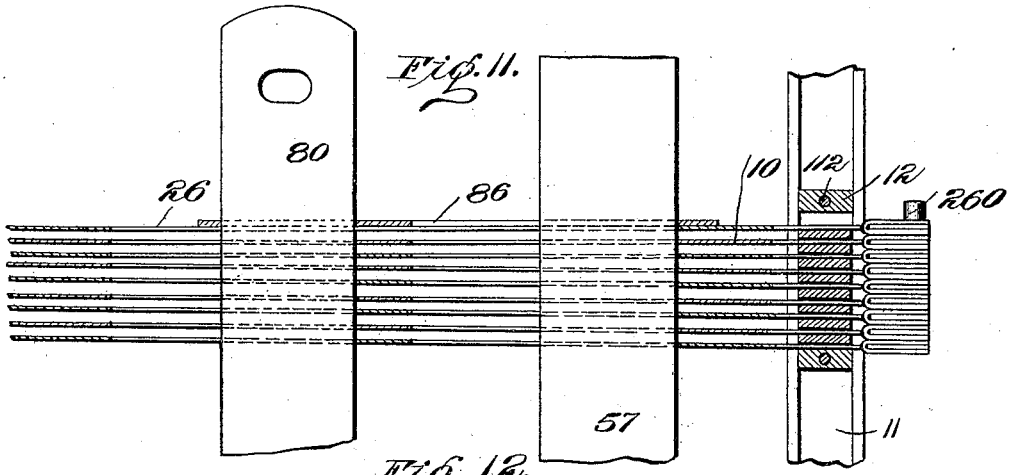


Fig. 12.

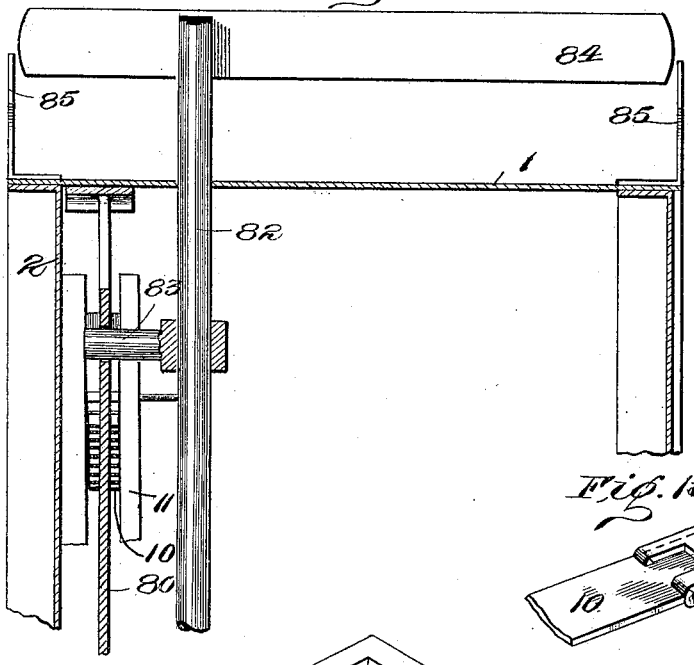


Fig. 13

Fig. 14.

Fig. 19

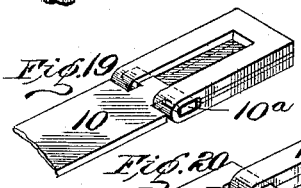


Fig. 20

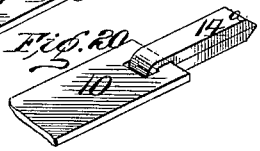
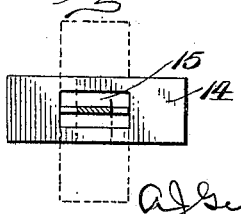


Fig. 15.



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(No Model.) 9 Sheets—Sheet 8.

Fig. 16.

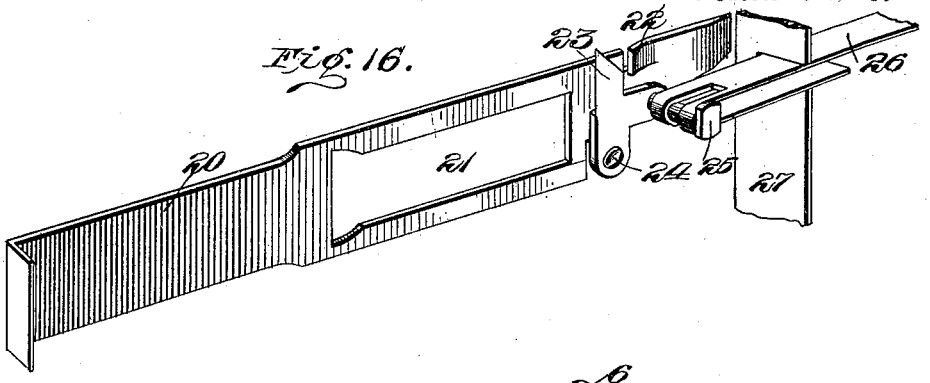

Fig. 17

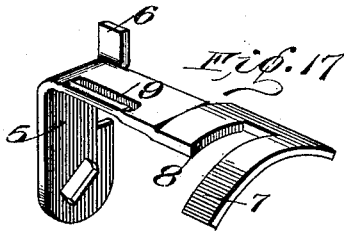

Fig. 18.

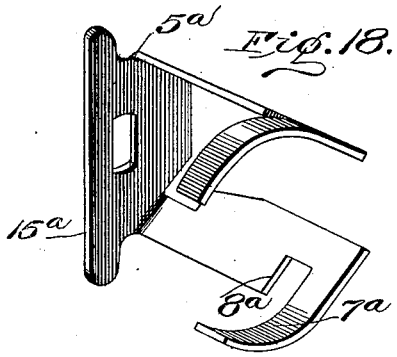

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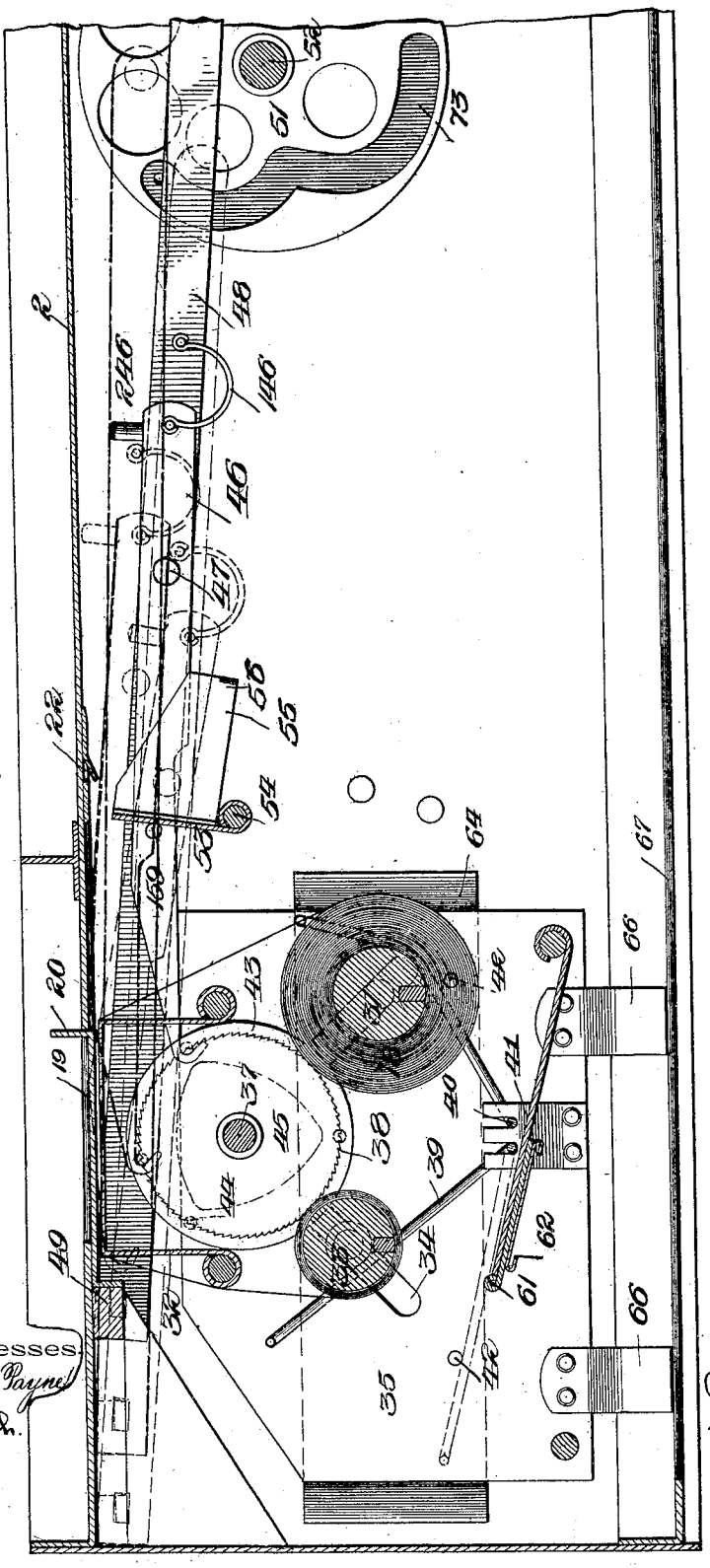
Fig. 21.



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H. W. Rich.

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Attorneys

UNITED STATES PATENT OFFICE.

ALFRED J. GILLESPIE, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE STANDARD VOTING MACHINE COMPANY, OF SAME PLACE.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 647,657, dated April 17, 1900.

Application filed May 5, 1899. Serial No. 715,725. (No model.)

To all whom it may concern:

Be it known that I, ALFRED J. GILLESPIE, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Voting-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-numerals marked thereon.

My present invention relates to voting-machines of that type contained in my prior patents, No. 576,570, granted to me February 9, 1897, and No. 628,792, dated July 11, 1899; and it consists in improvements relating to the irregular-voting devices or those provided to enable the voter to cast a ballot for a person or persons not regular nominees of any political party and also a means for indicating to the inspector or person in charge of the machine whether or not the voter has operated any of the ballot-indicators without of course disclosing which, and providing means for resetting all of the operated indicators when the voter has made a mistake and does not know how to rectify it.

The invention further consists in certain improvements relating to other parts of the machine and to details, all as will be hereinafter fully described, the novel features being pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a perspective view of the front of the machine; Fig. 2, a rear elevation of a voting-machine embodying my improvements, the rear side of the main casing being removed and the registers being also removed from the register-frame to more clearly illustrate the construction of the parts, only two rows of indicators being shown and the parts being shown in locked position in full lines; Fig. 3, a vertical central sectional view of the machine looking to the right of Fig. 2; Fig. 4, a vertical sectional view taken on the line *a a* of Fig. 2; Fig. 5, a horizontal sectional view on the line *b b* of Fig. 2; Fig. 6, a similar view on the line *c c*, showing the position when one of the irregular or independent ballot covers has been operated; Fig. 7, a sectional view of the devices for moving the paper-web-feeding devices; Fig. 8, a perspective view of the irregular-voting devices removed from the casing; Fig. 9, a detail view showing the means for returning the interlocking wing of the irregular-voting device; Fig. 10, a detail view showing the devices for locking the irregular indicators; Fig. 10^a, a modification of the same; Fig. 11, an enlarged view showing the connection of the manually-operated resetting-bar and the interlocking devices; Fig. 12, a vertical sectional view on the line *d d* of Fig. 2; Figs. 13, 14, and 15, views of details and the manner of forming the enlarged or thickened portions on the interlocking rods; Fig. 16, a perspective view of one of the irregular cover-plates; Figs. 17 and 18, views of portions of the ballot-indicators; Figs. 19 and 20, views of modifications of the thickened ends of the interlocking rods; Fig. 21, a horizontal sectional view similar to Fig. 6, showing the position of the parts during the resetting operation; Fig. 22, a view of a detail.

Similar reference-numerals in the different figures indicate similar parts.

As described in my prior patents, the machine embodies generally a casing 1, having at the front a ballot support or plate 2, upon which are the tickets containing the names of the candidates and the offices, and mounted upon this plate are ballot-indicators embodying pointers 3, adapted to coöperate with the tickets on the front of the plate, studs 4 extending through the journal in the plate, having on their rear side the plates 5, constructed as shown in Fig. 17 and provided on one side, near the plate 2, with a tongue 6 and at the rear end with a curved finger 7 and the shoulder or abutment 8, shorter than said finger, in rear thereof, and also provided at one edge with a slot 9 for the accommodation of the interlocking rods or straps 10, each formed, preferably, of a plate of thin metal and having a thickened portion at the outer end. These interlocking straps extend between channel-plates 11, secured at one end of the frame, and the interlocking rods, connected to indicators devoted to candidates for the same office, are grouped by stationary blocks or abutments 12, secured removably by pins 112 between the channel-plates 11, and be-

tween the rods are sliding blocks 13. As usual in devices of this nature, the space between the abutments 12 is sufficient to allow the thickened portion of a predetermined number of rods to pass between them. In the present construction the thickened portion of the interlocking rods is formed by slitting said rods at the sides, near one end, and securing thereto a plate or strip 14, preferably of steel, said plate 14 being formed when flat with an aperture 15 of substantially the width of the rod 10, attached to the rod by being placed over the end thereof, as shown in Fig. 15, and then turned to the position shown in dotted lines in said figure, with the portions of the metal at the sides of the slot located within the slots formed in the sides of the rod 10, and then bending the plate 14 down upon opposite sides of the rod 10, thereby forming a secure connection of the parts. In some instances instead of making the plate 14 rigid with the rod 10 the end of the latter beyond the small cut-away portions at the sides might be removed, thereby permitting the plate to swing slightly on the ears 10^a thus formed, as shown in Fig. 19, or the rods 13 might have a simple perforation near the end, through which the plate 14^a is passed and bent over, as in Fig. 20, thereby also forming a slightly-flexible connection or a rigid one if the plate 14^a is clamped down tightly. While these modifications embody the general construction of doubling the thickening-plate over the rod, I prefer the form shown, in which the plates are rigidly connected.

It will be understood that the indicators devoted to candidates for the same office are located in the same horizontal line on the front plate of the machine and the interlocking devices are arranged to prevent the operation of more than one and also that indicators devoted to candidates of the same political party are located in the same vertical column on the ballot-board, and when desired to vote a straight ticket—that is, for all the candidates of a political party—it may be accomplished by the movement of the straight-ticket rod 16, pivoted to links 17 and having operating-handles 160 and adapted to coöperate with the tongues 6, formed on the indicator-plate 5, so as to turn to indicated position all the indicators in that party-column.

The indicators devoted to questions or appropriations for and against which a popular vote is desired embody the pointer 3^a, adapted to be brought over the words "For" and "Against" on the front or ballot plate, said pointer being connected by the stud 4^a with a double plate 5^a, composed of a single piece of metal bent up to the form shown in Fig. 18 and embodying two abutments or shoulders 8^a and fingers 7^a. When the pointer cooperates with one of the tickets or signs on the front plate 2, one of the shoulders 8^a is brought into coöperative relation with a register-actuator, as described later on, and the other is moved out of coöperative position. The plate 5^a is flattened on one side, as shown at 15^a, for coöperation with the lugs 17^a on the returning plate 16^a, said lugs coöperating with the straight side of the double indicator and the plate 16^a being actuated by the operation of the indicator-resetting bar 57.

18^a indicates a locking-bar for preventing the operation of more than a predetermined number of the indicators, said bar 18^a, the resetting-bar, and the double indicators, broadly considered, being claimed in my Patent No. 628,792, and the novel feature herein contained being the plate 5^a when formed from a single plate of material, as shown, with the fingers and shoulders integral therewith. The locking-bar 18^a is arranged to be operated from the exterior of the casing inward or outward to lock one or more of the questions-indicators and is secured in adjusted position by pins or locking devices 250, as shown in Fig. 2.

The mechanism for permitting a voter to cast an irregular or free ballot—that is, one for a person not nominated by one of the regular parties—involves in this application a continuous web 18 or sheet of paper arranged in rear of a series of apertures 19 in the front plate 2, different portions of the surface of said web being accessible to the voter through said apertures by the operation of the apertured slides or doors 20, which doors are each connected with the interlocking mechanisms of the regular-party indicators for the same office in such manner that after having operated the door or slide to open the aperture the voter is prevented from casting a ballot for a regular-party candidate for the same office, or vice versa, the one irregular or independent indicator slide being arranged in each group or office line.

The slides 20 are each constructed of a single piece of sheet metal having an aperture 21 and a small spring-tongue 22 formed thereon, as shown in Fig. 16, said tongue being adapted to coöperate with the rear side of an angular lever 23, pivoted at 24 and having a pin 25, with which connects the interlocking rod 26, said connection being formed by doubling the rod around said pin and passing the free end back into a slot formed in a vertical guide-plate 27. (See Fig. 16.) When the slide 20 is drawn to the left in Figs. 2 and 6 to open the aperture 19, the lever 24 is moved and the interlocking rod 26 is drawn to the left, pulling its thickened portion between the interlocking blocks and preventing the operation of a regular indicator in the same group. When it is desirable to prevent the operation of the irregular cover-plate 20, (as when two or more lines of indicators are formed into a multicandidate group by the adjustment of the stops 12,) it may be locked by suitable means. In the preferred construction I provide near the extreme end of the interlocking rod a projection 260, which in the normal operation of the rod is not moved far enough to engage the abutment

12, and I also provide upon each of the pins 112, that secure said abutments, arms 212, which not only engage the inner sides of the channel-plates and serve to retain the pins by spring friction when turned inward, but said arms when turned outward, as shown in Fig. 10, project in the path traversed by the projection 260 when the covers are opened and prevent their operation. The pins thus serve two functions—first, to hold the abutments 12 removably in position, and, second, when reversed in position to arrest and lock the rods 26. Another form of rod-locking device is shown in Fig. 10ª, in which I employ a catch 28, pivoted to the interlocking rod 26 at 29, (see Fig. 10ª,) said catch being capable of movement to engage with a guide-plate 30, secured to the plate 2; but under normal circumstances and when the cover-plate is connected in group for operation said catch occupies the position shown in full lines in said figure. The paper-web 18 is contained on a winding-reel 31 and extends over a metal support 32, arranged in rear of the apertures 19, and its other end is connected to a winding-roller 33, corresponding to the roller 31. The journals of the rollers 31 and 33 extend through slots 34, formed in the end plates 35 of a frame composed of said end plates and suitable connecting-rods 36, as shown particularly in Figs. 2, 6, and 8. Mounted in journals in the end plates 35 is a shaft 37, having at suitable intervals toothed wheels 38, arranged to contact with the paper-web upon the rollers 31 and 33, said rollers being held in engagement with said wheels by spring-arms 39 engaging the journals of said rollers or pulleys, such as $39^{\times}$ thereon, Fig. 8. These spring-arms 39 are formed integral with rods 40, entering slots formed in plates 41, secured to the top and bottom plates 35 of the frame, the arm 39 of one of said rods engaging the lower end of the roller 31 and the upper end of the same rod engaging the upper end of the roller 33, as shown in Figs. 2, 4, and 8, the tendency of the two arms on a single spring-rod being to approach each other, so as to force the paper-rollers in contact with the wheels 38, as described. When desired to remove either or both of the rollers from the frame, the spring-arms 39 may be moved back to the position shown in dotted lines in Fig. 6 and engaged with pins 42 on the top and bottom plates 35.

The shaft 37 is provided near its lower end with a disk 43, having on its under side a series of engaging pins 44, three being shown in the present instance, spaced equally around said disk and also provided with a guard-plate 45, as shown in Figs. 6 and 7. The shaft 37 is actuated at suitable intervals by a hook 46, pivoted at 47 to a pitman 48, connected at its outer end to a cover-resetting bar 49, the upper end of said bar being connected to a corresponding pitman 50. The pitmen 48 and 50 are pivoted to rotary disks or wheels 51, secured to the upper and lower ends of the vertical oscillatory shaft 52, located near the center of the main casing and adapted to be moved a portion of a revolution and back again by each voter when the front of the machine is rendered accessible and also when the voter leaves the ballot-board. The engaging end of the actuating-hook 46 is moved over to engage one of the pins 44 when any of the cover-plates 20 are actuated to the position shown in Fig. 6 by means of a wing or plate 53, pivoted upon a rod 54 and extending vertically of the casing, said wing or plate 53 having at the lower end an angular plate or extension 55, provided with a lug or ear 56, as shown particularly in Fig. 9, adapted to engage the tail of the hook 46 in rear of its pivot. The hook 46 is held either in or out of engagement with the pins 44 by a spring 146, consisting of a single piece of wire and operating on either side of the pivot 47, and the inner end of the hook 46 in rear of the pivot is provided with a pin or projection 246, adapted to engage the front plate 2 of the machine when the pitman 48 is moved nearest to said plate and disengage the hook 46, as shown in dotted lines in Fig. 21, said plate then constituting a stationary abutment for this purpose. The forward edge of the wing 53 is bent at an angle, as shown, and engages with the pins 25 on the levers 24, the interlocking rods 26 being slotted. (See Figs. 6 and 21.) When one of the cover-plates 20 is moved to the left, the lug 22 thereon turns the lever 23 and draws the interlocking rod 26 to the left, preventing the operation of a regular indicator in that group, swinging the wing 53 and turning the hook 46 to the position shown in Fig. 6, so that at the next oscillation of the disks 51 the paper-web-feeding shaft 37 will be moved a distance corresponding to that between the pins 44. The normal or closed position of the cover-plates 20 is shown in dotted lines in Fig. 6 and in full lines in Figs. 2 and 21, and from the above description it will be seen that when any of said cover-plates are operated to permit access to the paper-web the plate 53 will be operated and the web-actuating hook moved into engagement, and when the voter leaves the front of the machine and operates the shaft 52 in the direction indicated by the arrow in Fig. 5 the cover-plates 20, which have been actuated, will be returned by the resetting-bar 49, as shown in full lines, Fig. 21, the hook 46 being released from the pins 44 by the engagement of the projection 246 on its tail with the plate 2. At the same time the interlocking rods 26 of the irregular or independent indicating devices will be returned by the movement of the indicator-resetting bar 57 to the position shown in full lines in Fig. 2, said resetting-bar being connected by links 58 with the cam-wheels or disks 51 on the central shaft. The swinging plate 53 is also returned to normal position (shown in dotted lines in Fig. 6) by means of a pin or lug 159

on the hook 46, said pin engaging the wing as the pitman 48 is moved toward the center. If desired, the wing may be returned by means of a rod or strap 59 engaging with a tongue 60, formed in the edge of the plate 53 and having a loop therein, through which passes the resetting-bar 57, as shown in Figs. 2 and 9. The reason for slotting the ends of the interlocking rods 26 of the cover-plates is to prevent the thickened portion of said interlocking rod 26 from being forced out from between the interlocking blocks 13 by the spring action of the wing-plate 53 in case the voter should violently throw open one of the cover-plates 20, because it will be noticed that the rod 26 does not engage directly with said wing 53 and therefore that there can be no reaction of said wing that can operate to release the interlocking mechanism.

61 indicates a plate having a card-holder 62 thereon and connected to arms 63, pivoted upon the vertical rods 36 of the frame carrying the web-holding device, said card-holder being adapted to receive cards containing the names of the offices to which the cover-plates 20 in line therewith are devoted, so that upon winding the paper-web from one roller to the other it can be readily ascertained for which offices the persons whose names appear upon the paper-web have been voted.

The frame carrying the web-holding devices and composed of the plates 35 and rods 36 is bodily removable from the casing, as shown in Figs. 2, 6, and 8, the lower plate 35 being guided and centered laterally between the inclined flanges 64 of a plate 65, secured in the bottom of the main casing 1, and said plate 35 having also rearwardly-projecting lugs 66 extending below the flange 67, formed at the rear of the casing. The web-holding frame is secured at the upper end by a spring catch-plate 68, having an engaging shoulder 69, which engages the flange 67^a at the upper end of the casing, as shown in Figs. 2 and 4. From this it will be seen that in order to remove the web-holding devices it is only necessary to disengage the catch 69 by pressing it downward and then to tilt and lift out the whole frame, so that the ballots indicated on the web of paper may by means of the card-holder 61 be readily counted and correctly tabulated separate from the machine.

The registering mechanism which is controlled by the regular ballot-indicators may be of any suitable construction; but I prefer to employ that shown in my before-mentioned patents. The registers or mechanical counters, (indicated by 70,) one being provided for each ballot-indicator, each embodying a train of registering-wheels 170, are mounted in series in the channel plates or casings 271, fastened in the register-frame 71, pivotally supported upon yokes 72, arranged at the top and bottom of the casing and adapted to be moved toward and from the front plate 2 by means of cam-grooves 73, formed in the cam-disks 51 on the shaft 52, in which grooves operate suitable rollers or studs 74.

The movement of the register-frame longitudinally of the machine is prevented by means of the long links 71^a, as shown in Fig. 5.

The registers shown are each provided with movable actuators 75, projecting toward the front plate 2 and having slots in their forward portions, in which project the fingers 7, forming part of the indicator, the construction being such that when the indicators are operated by the voter to indicate a ballot the shoulder 8 is brought in line with the end of the actuator 75, and then when the register-frame is moved toward the front plate only those register-actuators whose indicators have been operated will be moved to indicate one vote, and all of the indicators so moved will be operated simultaneously.

The registering-wheels may be operated in any suitable manner from the actuators; but I prefer to employ a train of numbered wheels, the units-wheel 171 being provided with ratchet-teeth engaged by pallets or teeth 172 173 on the actuator 75, as shown in Fig. 5, the movement of the register-frame toward the plate 2 causing the movement of said units-wheel practically one unit and the finger 7 on the indicator holding the actuator stationary during the backward movement of the frame, so that the tooth 173 may engage the units-wheel 171 and turn it just far enough to bring the next tooth in position to be engaged by the pallet or tooth 172, when the frame and actuator are moved relatively toward each other again.

The oscillation of the shaft 52 to cause the operation of the registers and the resetting of the machine may be caused by any suitable device; but I prefer to secure to its upper end an arm 76, having an outer portion 176 pivoted to it at 177 and extending between ears 179 and having an operating-handle 77 connected by a link 178 to a curtain 78, movable on a segmental curtain-guide 79, arranged over the front of the machine and adapted to envelop the voter and prevent inspection of the indicators when the machine is in position for the voter to cast a ballot. The operating-arm 76 is provided with means (not shown) contained in a suitable casing for preventing its movement in one direction either to close or open the curtain until it has made a full movement in the opposite direction; but this construction forms no portion of my present invention. The outer end of the arm extension 176 has a loose connection with the pivot and may be lifted from between the ears 179 and folded parallel with the arm 76 when desired, and the arm 76 is adapted at the extremes of its movement to coöperate with the stops 276 on the top of the casing.

In Fig. 2 the curtain is shown removed from the front of the machine, and the cover-plates for the independent or irregular ballots are

locked by the resetting-bar 49, and the interlocking rods of the indicators are locked by the resetting-bar 57, which bars are in the position shown in full lines in Fig. 2; but when the lever 76 is moved around to draw the curtain over the front of the machine, as in Fig. 1, the bars 49 and 57 are moved to the positions shown in full lines in Fig. 6 and dotted lines in Fig. 2.

In machines of this type, where the voter simply indicates his choice of candidates without causing the operation of any of the registers until he leaves the proximity of the indicators and where interlocking mechanism is employed between the indicators, it is desirable that some indication be given to the inspectors that a vote has been indicated by the voter, and it is also desirable to provide means for returning all of the indicators, excepting the irregular, in case the voter has made a mistake and desires to commence again, and in order to accomplish this I provide a vertically-extending resetting-bar 80, passing through apertures 81, formed in all of the regular-indicator-interlocking rods 10, and provide a vertical oscillatory shaft 82, having one or more fingers 83, passing loosely through an aperture or apertures in said bar 80, as shown in Figs. 3 and 12, said shaft being journaled in suitable bearings in the top and bottom of the casing and provided at its upper end with an arm or index-plate 84, adapted to coöperate with pointers or projections 85, arranged on the top of the casing. This construction is such that when any of the regular indicators are operated the bar and shaft will be moved, and the fact that an indicator has been operated will be shown by the movement of the arm 84, and if the voter announces to the inspector that he has made a mistake or wishes to change his vote the latter may, by means of the arm 84, return all of the operated regular indicators to normal or unvoted position before the voter leaves the front of the machine. The apertures in the rods 26 of the cover-plates 20 are sufficiently long so that the rod 80 will not engage and operate them, and therefore after one of the cover-plates 20 has been opened to permit access to the paper-web no other vote for a candidate for the same office can be indicated. The rod 80 is caused to move with the indicator-resetting bar 57 by means of a link 86, connecting the two, as shown in Fig. 11, the slot in said link in which the bar 57 operates being elongated, as shown in Fig. 11, so that while the bar 80 may be moved outward independently of the resetting-bar it will be carried outward by said bar 57 when the latter is actuated. The arm 84 also serves as an indicator, denoting when any of the regular or irregular indicators have been operated, so that if the person is entitled to a limited franchise only or is entitled to vote on the mechanisms in the questions-line and is not entitled to vote for the indicators connected with the bar 80 the attendant can determine the fact and return the indicators, if desired, without permitting the operation of the registers.

The operation of the machine will now be understood, the normal position of the parts being shown in Fig. 1, with the curtain drawn back and all of the indicating devices locked. The voter then goes up to the front board and, grasping the handle, draws the lever around, pulling the curtain over the front of the machine, and then indicates his choice of regular candidates by operating the indicators and of the irregular or independent candidates by operating the cover-plates 20 and by writing the name of the person for whom he desires to vote upon the paper web, and then grasping the handle turns the curtain back, the first portion of the movement causing the register-frame to approach the front plate and then to recede therefrom, then resetting the operated indicators and the cover-plates before the curtain connected to the lever is moved far enough to disclose the front of the machine to the public, the operations being more specifically described in my previous application.

In order to prevent persons standing in front of the machine from determining how a person has voted by viewing on the ceiling of the room any reflection from the front of the machine and also to prevent persons in a room above the machine from determining the choice of the voter, I sometimes employ a horizontal screen 200 at the top of the machine and extending over the front, as shown in Fig. 22, said screen being preferably composed of a fabric stretched over a metal frame having ends fitting in sockets on the top of the main frame of the machine.

I do not claim herein, broadly, the general construction of the machine by which the ballot-indicators may be freely operated into and out of coöperative position with their registers and the registers whose indicators have been operated caused to move simultaneously.

I claim as my invention—

1. In a voting-machine, the combination with the casing having a series of apertures therein, a series of separately-operable movable covers one for each of said apertures, a movable barrier for preventing access to the front of the casing, connections between it and the covers for resetting the latter, of a frame removable bodily from the casing and embodying the paper-rollers, and a web-support in rear of the apertures, a roller-operating device actuated by the movement of the barrier, and detachably connected with the paper-feeding rollers by the movement of any of the cover-plates, whereby the frame and rollers may be bodily removed from the casing.

2. In a voting-machine, the combination with the casing having a series of apertures therein, a series of separately-operable movable covers for said apertures, and a movable

barrier for preventing access to the front of the casing, of a frame removable bodily from the casing and embodying paper-rollers, and a paper-web support in rear of the apertures, a roller-actuator operated by the movement of the barrier, connections between said actuator and the covers for connecting the actuator with the roller when any cover is operated.

3. In a voting-machine, the combination with a casing, having a series of apertures therein, and a series of separately-operable movable covers for said apertures, of a frame bodily removable from the casing and embodying paper-holding rollers and a web-support, said rollers carrying a web of paper extending in rear of all the casing-apertures, means for operating the feeding-rollers and controlled by the operation of any of the covers, and detachable securing devices for holding the frame in the casing.

4. In a voting-machine, the combination with the casing having the apertures and covers at the front therefor, and the flanges at the rear, of the removable frame mounted in the casing having the web-rollers and web-support thereon, the projection on the frame for engaging one of the flanges at the rear of the casing, and the catch arranged between the frame and casing for locking the frame in position within the casing.

5. In a voting-machine, the combination with a casing having the apertures and covers therefor at the front, and the flanges at the rear, of the removable frame embodying the end plates having the roller-guides, the rollers therein, the plate on the frame engaging one flange in the casing, and the spring-catch 68 engaging the other flange for locking the frame in position.

6. In a voting-machine, the combination with a casing having the apertures and covers therefor, of the frame embodying the end plates having the guides thereon, the central shaft, the paper-support, the rollers guided on the end plates, and the springs, each composed of a single piece of spring material having both the ends bearing on the rollers to move the latter toward the central shaft.

7. In a voting-machine, the combination with a casing having the apertures and covers therefor at the front, and the flanges at the rear, and the inclined centering-plates 64 at the bottom, of the removable frame having the web-support, the shaft and operating-disks, the web-rollers guided in the frame, and the springs operating upon them, and the spring-catch holding the frame removably in position between the centering-plates.

8. In a voting-machine, the combination with a casing having the apertures and covers therefor, of the frame embodying the end plates having roller-guides thereon, and the pins or projections, the paper-support, the central shaft, the paper-rollers arranged in the guides on the plates, and the spring-arms coöperating with the rollers and adapted to be engaged with the pins on the plates when desired to permit the removal of the rollers.

9. In a voting-machine, the combination with the casing having apertures, the covers for the latter, and the centering plates or flanges 64, of the removable frame having a paper-support and paper-feeding rollers thereon, and the spring-catch engaging the casing.

10. In a voting-machine, the combination with the casing having an aperture, a movable cover for said aperture, and paper holding and feeding devices arranged in the casing in rear of the aperture, of a series of ballot-indicators, interlocking devices between said indicators and the cover, a movable member, such as hook 46, for actuating the paper-feeding devices, a movable arm, such as 55, inaccessible to the voter for connecting the member with the feeding device, an intermediate movable part arranged between the cover and the interlocking devices and operable by the movement of the former in one direction only, said intermediate part operating the member into engagement with the feeding devices by a movement in one direction only.

11. In a voting-machine, the combination with the casing having an aperture, paper holding and feeding devices in rear thereof, of the cover-plate, a pivoted lever, such as 23, the interlocking rod loosely connected thereto, the movable hook adapted to engage the paper-feeding devices, and a means operated upon by the lever and operating the hook for causing the latter to engage the feeding devices when the cover is operated in one direction.

12. In a voting-machine, the combination with the casing having an aperture and paper holding and feeding devices in rear thereof, a movable member for controlling the operation of the feeding devices, of the cover for the aperture, the interlocking rod, a movable part separate from the cover, the controlling member and the interlocking rod, but serving to operate the controlling member and the interlocking rod in one direction only and capable of operation in one direction only by the cover.

13. In a voting-machine, the combination with the casing having the aperture, the cover for the aperture, the lever operated in one direction only by the cover, of the interlocking rod moved in one direction only by the lever, and the pivoted wing coöperating directly with the lever and moved in one direction only thereby.

14. In a voting-machine, the combination with a casing having apertures therein, covers for the apertures, a plurality of series of regular ballot-indicators, a paper holding and feeding device in rear of the apertures, a movable member for operating the paper-feeding devices, and interlocking devices between the regular indicators of each series and one of the covers embodying an interlocking rod for each cover and indicator, of two detachable

connections between each cover and its interlocking rod whereby the rod will be moved in one direction only by the cover, a movable wing operating when moved in one direction to connect the movable member with the paper-feeding devices, said wing being operated by any of the covers in one direction only and being out of direct connection with the interlocking rods or the covers.

15. In a voting-machine, the combination with the casing having the apertures, covers therefor, of the levers 23, latch connections between the covers and levers, the interlocking rods 26 loosely engaging the levers and moved in one direction only by them, and the wing engaging the levers and operated in one direction only thereby, a paper-feeding device, a movable operating member, and connections between said wing and member for moving the latter into engagement.

16. In a voting-machine, the combination with the casing having the apertures, covers therefor, a paper-feeding device in rear of the apertures and embodying a movable shaft, of a longitudinally movable and swinging hook adapted to coöperate with the shaft, means for throwing the hook into engagement with the shaft, and actuated by the movement of a cover, and means for moving the hook out of engagement, and spring devices for holding the hook in either position of adjustment.

17. In a voting-machine, the combination with the casing having the apertures, the covers therefor and paper holding and feeding devices in rear of the apertures embodying a toothed wheel, of a longitudinally and laterally movable bar, such as a pitman, a hook pivoted thereon, means actuated by the covers for moving the hook into engagement with the wheel, and means for disengaging the hook when the pitman is moved in one direction.

18. In a voting-machine, the combination with the casing having the apertures, the covers therefor, and paper holding and feeding devices in rear of the apertures embodying a toothed wheel, of a longitudinally and laterally movable bar, a hook pivoted thereon, a spring for holding the hook in two positions, a stationary abutment engaged by the hook to disengage it from the wheel when moved in one direction, and means operated by the covers for connecting the hook with the wheel.

19. In a voting-machine, the combination with a casing, voting mechanism in the casing, a curtain-guide on the casing, and a curtain movable on the guide, of an operating-arm controlling the voting mechanism, and a removable cover or screen arranged over the curtain-guide.

20. In a voting-machine, the combination with a plurality of movable ballot-indicators, an equal number of registers with which the indicators are arranged to coöperate, and a single means for returning any operated indicator to normal position without actuating its register.

21. In a voting-machine, the combination with a plurality of registers, a plurality of ballot-indicators one for each register, each adapted to be moved into coöperative relation with its register, and means for causing the simultaneous operation of the registers whose indicators have been operated, of a single means for returning all said operated indicators to normal position without operating the registers.

22. In a voting-machine, the combination with a plurality of registers, a plurality of ballot-indicators, each adapted to be moved into coöperative relation with its register, of a movable part or indicator visible from the exterior of the machine and adapted to be moved by the operation of any of the indicators and arranged, when it is moved, to return the operated indicators to normal position without operating their registers.

23. In a voting-machine, the combination with a plurality of registers, a plurality of corresponding ballot-indicators movable into and out of coöperative relation with their registers, of means for causing the simultaneous operation of the registers whose indicators have been operated, means for resetting all the operated indicators after the actuation of their registers, and an independent resetting device operable from the exterior of the machine for restoring operated indicators to normal position before the actuation of the registers.

24. In a voting-machine, the combination with a plurality of series of registers, a plurality of series of ballot-indicators movable into and out of coöperative relation with their registers, interlocking mechanism for preventing the operation of more than a predetermined number of indicators in each series, a straight-ticket mechanism for simultaneously operating one of the indicators in each series, and means for causing the operation of the registers whose indicators have been operated, of means for restoring or resetting the operated indicators to normal position before the actuation of the registers.

25. In a voting-machine, the combination with a plurality of registers, a corresponding plurality of ballot-indicators movable into and out of coöperative relation with their registers, the apertured rods connected to the indicators and freely movable singly in opposite directions, of the bar coöperating with said rods, and means exterior of the machine for operating said bar to return the indicators without operating the registers.

26. In a voting-machine, the combination with a plurality of registers, a corresponding plurality of ballot-indicators movable into and out of coöperative relation with their indicators, and longitudinally-movable interlocking rods connected to the indicators, of a movable bar engaging the rods, the rock-shaft connected to the bar and having the operating and indicating handle exterior of the machine-casing.

27. In a voting-machine, the combination

with a plurality of registers, a corresponding plurality of ballot-indicators adapted to be moved into and out of coöperative relation with their registers, the interlocking rods, and connections between them for preventing the operation of more than a predetermined number, of means for causing the simultaneous operation of the registers whose indicators have been operated, an indicator-resetting bar actuated by said means, and an auxiliary indicator-restoring bar coöperating with the indicating interlocking rods, and having an operating-handle at the exterior of the casing, said restoring-bar being capable of actuation in one direction independently of the main resetting-bar.

28. In a voting-machine, the combination with a movable indicator, of an interlocking rod connected thereto consisting of a strip of metal having an engaging shoulder extending laterally of the rod, and a plate doubled over on opposite sides of the strip and coöperating with the shoulder to prevent relative longitudinal movement.

29. In a voting-machine, the combination with a movable indicator, of an interlocking rod connected thereto consisting of a strip of metal having the ears or shoulders on opposite sides, and the apertured plate engaging said shoulders and bent down upon opposite sides of the strip.

30. In a voting-machine, the combination with a movable indicator, of an interlocking rod connected thereto consisting of a strip of metal having notches formed in the sides and forming shoulders, the plate 14 having the aperture and the narrow portions at the sides engaging the notches on the strip and bent down upon opposite sides of the strip.

31. In a voting-machine, a ballot-indicator embodying an oscillatory stud and a single plate of metal bent as shown to form the tongue 6, curved finger 7, abutment 8 and slot 9, in combination with a relatively-movable register having a slotted actuator coöperating with the finger and abutment.

32. In a voting-machine, a double oscillatory indicator embodying a single metal plate 5^a cut and bent to form the abutments 8^a, fingers 7^a and flattened at one side, substantially as described, in combination with two registers movable relatively to the indicator and having the slotted actuators coöperating with the abutments and fingers.

33. In a voting-machine, the combination with a casing having a series of apertures and covers therefor, of a plurality of series of ballot-indicators, interlocking mechanism between the covers and indicators embodying longitudinally-movable interlocking rods, and locking devices for positively engaging and locking the rods connected to the cover.

34. In a voting-machine, the combination with a casing having an aperture, a movable cover therefor, a longitudinally-movable interlocking rod connected to and operated by the cover, and a catch thereon adapted to engage with a stationary stop, of a series of ballot-indicators, each having interlocking rods, and means for preventing the operation of more than a predetermined number of covers or indicators.

35. In a voting-machine, the combination with a casing having irregular or free ballot-indicating devices embodying movable parts, a plurality of series of ballot-indicators, interlocking rods connected to the said movable parts and indicators, of adjustable abutments with which the interlocking rods cooperate to form groups, and movable securing devices for the abutments adapted when moved to one position to coöperate with the rods of the irregular balloting device to lock it.

36. In a voting-machine, the combination with a plurality of series of ballot-indicating devices, a series of movable irregular or free ballot-indicating devices, and interlocking rods for all of said devices, of abutments between which the rods operate in groups, the reversible pins for securing the abutments having the projections for engaging and locking the irregular indicator-rods when turned to one position.

37. In a voting-machine, the combination with the channel-bars, the blocks between them, and the abutments 12, of the interlocking rods, and the reversible abutment-locking pin having the projection for engaging an adjacent interlocking rod and preventing its operation when turned to one position.

38. The combination with a series of interlocking rods, the separating blocks or plates, and the stationary abutments, of the wedges or enlargements flexibly connected to the rods and arranged to be moved between the separating blocks or plates by the longitudinal movement of the rods.

39. In a voting-machine, the combination with a plurality of ballot-indicators, an equal number of registers coöperating therewith but not capable of direct operation by the movement of the indicators alone, and means for causing the subsequent operation of the registers whose indicators have been actuated and left in voted position, of an indicating mechanism for denoting exteriorly of the machine the operation of any ballot-indicator before the operation of the register.

40. In a voting-machine, the combination with a plurality of ballot-indicators, an equal number of registers coöperating therewith but incapable of direct operation by the movement of the indicators to voted position alone, and means for causing the subsequent operation of the registers whose indicators have been actuated and left in voted position, of an indicating device operated by any of the ballot-indicators and denoting to persons other than the voter the operation of any indicator.

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