No. 706,326. Patented Aug. 5, 1902.

W. LANGRILL.

VOTING MACHINE.

(Application filed Feb. 14, 1900.)

(No Model.)

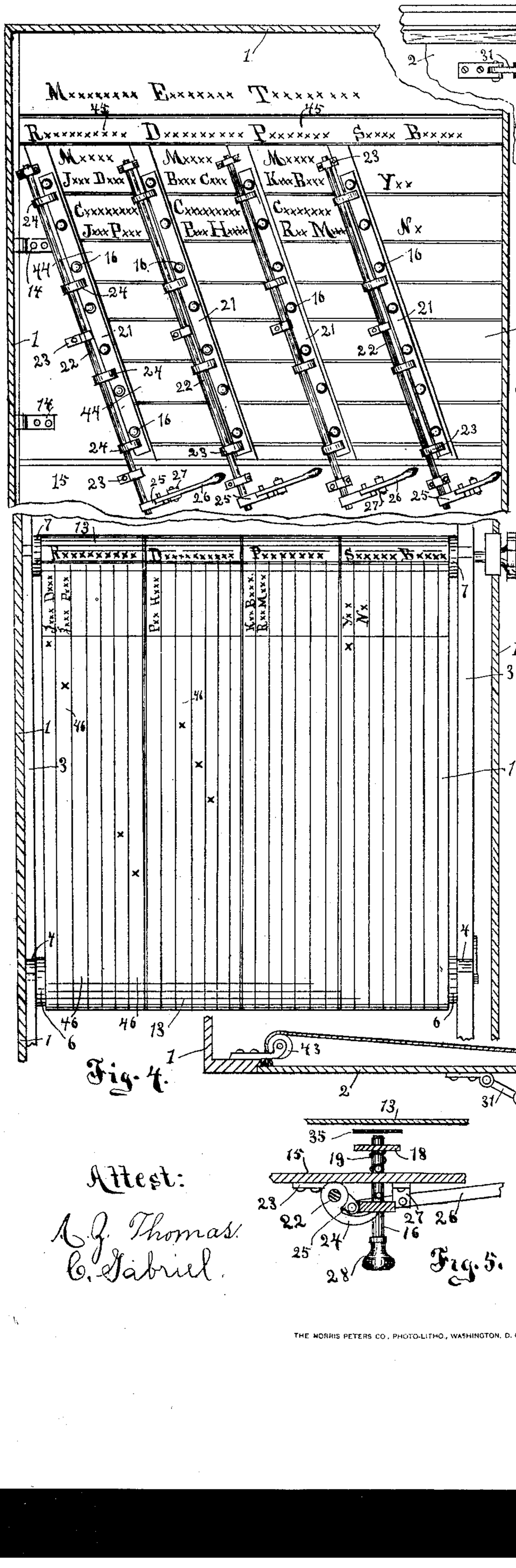

Fig. 1.

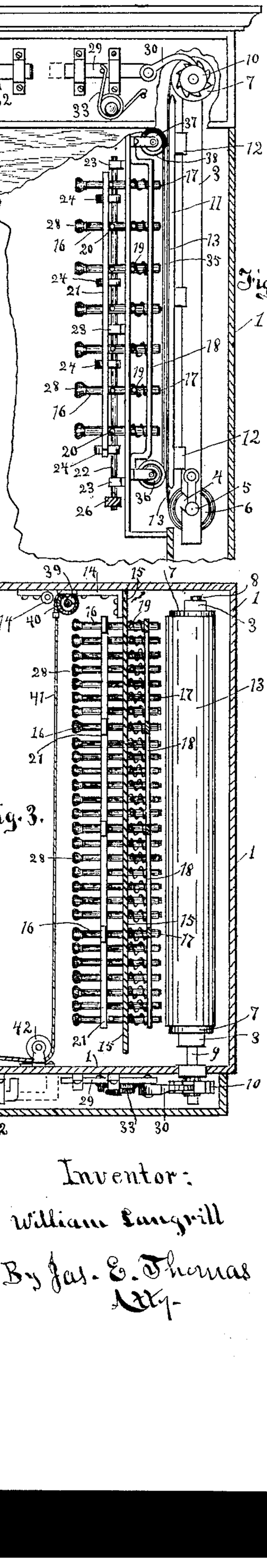

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Attest:

A. J. Thomas.
C. Gabriel.

Inventor:

William Langrill

By Jas. E. Thomas
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM LANGRILL, OF BAY CITY, MICHIGAN.

VOTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 706,326, dated August 5, 1902.

Application filed February 14, 1900. Serial No. 5,183. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LANGRILL, a citizen of Canada, residing in Bay City, in the county of Bay and State of Michigan, have invented a new and useful Improvement in Voting-Machines, of which the following is a specification, reference being had to the accompanying drawings, and to the reference characters marked thereon, which form a part hereof.

This invention relates to voting or balloting machines; and the invention consists, chiefly, in the arrangement and combination of parts and also in the construction and operation of the same, as I shall hereinafter explain in detail, and point out in the claim which follows.

One of the objects of the invention is to provide a simple, easy, and rapidly-operated means for recording a vote or ballot, whereby any candidate for either party can be voted for separately without liability of mistake or all candidates on either ticket can be voted for at one operation.

Another object of the invention is to arrange and construct a machine for casting votes or ballots which will operate to print upon a tally-sheet indicative marks or characters representing the vote cast by each individual voter for each candidate separately, said characters being arranged in columns, so that the total votes for each candidate can be quickly and accurately counted, thereby reducing the time of making returns and obviating the liability of mistakes.

Another object of the invention is to provide means whereby the vote cast for each candidate will be printed or stamped in characters upon the face of a tally-sheet, which may be stored away in a limited space and preserved for future reference.

I attain these objects by means of the devices shown in the accompanying drawings, in which the same reference characters indicate similar parts throughout the several illustrations.

Figure 1 represents a front view of my voting apparatus, showing the upper portion of the booth in vertical section. Fig. 2 is a side view of the upper portion of the booth, partly sectional, exposing a side view of the voting apparatus within and the means for operating it. Fig. 3 is a horizontal section of a portion of the voting-booth, showing a top view of the voting apparatus, partly in section. Fig. 4 is a front view of the tally-sheet arranged for receiving the imprint of the stamp or dies of the voting apparatus, showing a portion of the voting-booth in vertical section. Fig. 5 is a horizontal section detached of one of the series of voting devices.

1 represents a voting-booth of any desired form and construction provided with a door 2 for the passage of the voter to and from the booth.

3 3 are vertical standards firmly secured inside the booth. At a suitable height from the floor these standards are provided with inclined transverse slots 4, within which rest the journals 5 of a roller 6, extending between the standards. At a suitable distance above this roller is located a second or upper roller 7, the journals 8 and 9 of which extend through openings in the standards, the journal 9 projecting beyond the standard and carrying a ratchet-wheel 10, firmly mounted on the outer end. Between the upper and lower rollers is a vertical board 11, secured upon suitable supports 12, carried by the supporting-standards. The face of this board is so arranged as to project slightly beyond the vertical plane of the front faces of the rollers. A paper tally-sheet 13 is wound upon the lower roller, and after being passed over the face of the board 11 its end is secured to the upper roller, so that when the upper periphery of the top roller moves toward the rear the tally-sheet is drawn upwardly over the face of the board.

Secured by hinges 14 inside the booth is a supporting-plate 15, extending across over the face of the tally-sheet, and through this plate is passed one or more series of plungers 16, each series being arranged with one plunger above another in a line slightly oblique, so that successive impressions of any plunger will appear on the tally-sheet in a vertical column parallel with the column of impressions made by the next adjacent plunger. The inner ends of the plungers are provided with raised type-faces 17 of any desired form for stamping or printing an impression or character upon the tally-sheet when the plungers are pushed in. The inner ends of each

series of plungers pass through guide-bars 18, secured to the plate 15, and each plunger has an outwardly-pressing spring 19, so any plunger may be actuated inwardly and automatically return independent of the other plungers of the series. Each plunger is provided with a stop 20, upon which rests an actuating-bar 21, by which all of the plungers of the series may be pushed in simultaneously. Beside each series of plungers is a rock-shaft 22, journaled in supports 23, secured to the plate 15, and upon these shafts are secured arms 24, with their outer ends resting upon the bar 21. Each shaft is provided at its lower end with a projecting arm 25, and pivoted to the outer end of each arm is a lever 26, pivotally mounted in a support 27. The outer end of each lever is provided with a suitable handle, and as the free end of the lever is pulled outwardly the inner pivoted end thereof is depressed, rocking the shaft 22 and causing the arms 24 to depress the bar 21 and moving all of the plungers in simultaneously. When the lever is released, the springs 19 move the plungers and bar outwardly, returning the several parts to their original positions. The outer end of each plunger has a suitable knob 28 for pushing it in independently of the others of the series.

Upon the upper portion of the front of the voting-booth is arranged a sliding bar 29, carried by suitable supports, and to one end of this bar is secured a pawl 30, which is arranged to engage the teeth of the ratchet-wheel 10, and upon the door 2 is pivotally secured one end of a link 31, the opposite end of which is pivoted to the end of a sliding bar 32, which passes through suitable supports and has its inner end situated near the free end of the bar 29, so that when the door 2 of the booth is swung back the end of the bar 32 engages the end of bar 29, pushing it endwise and causing the pawl 30 to rotate the ratchet-wheel and the upper roller slightly, thereby drawing the tally-sheet a short distance upward over the face of the board 11, so that a clear space is presented on the tally-sheet to receive the impression of the plungers in recording the next vote. When the door is again closed, the bar 32 resumes its original position, and the bar 29 is actuated to bring the pawl into a position for engaging another tooth of the ratchet-wheel by a spring 33. The door is held closed by any ordinary form of latch or catch and is normally held open by a spring 34 of ordinary form, having one end secured to the door and the other end secured to the casing of the door or to the side of the booth.

Between the inner ends of each series of plungers and the tally-sheet is interposed a printing-ribbon 35, mounted upon suitable rollers 36 and 37, the upper roller 37 being provided with a projecting radial flange 38, which rests upon the tally-sheet, and as the tally-sheet is fed along by the pawl and ratchet the flange operates to turn the roller and move the ribbon along to a new position, so that when the plungers are pushed inwardly their inner ends impinge upon the ribbon and press it against the face of the tally-sheet, making a print or impression upon the sheet corresponding to the character upon the end of the plunger.

Inside the booth and in front of the series of plungers is secured a spring-roller 39, having a curtain or shutter 40 wound thereon by the action of the spring. The outer end of this shutter is attached to one end of a line or cord 41, which extends across the booth and passes over a pulley 42, secured to the frame of the booth, and thence over a pulley 43, secured to the booth at the opposite side of the doorway. The end of the line is then fastened to the door, so that when the door is swung outwardly the line draws the shutter across the booth in front of the voting devices, concealing them from view when the door is open and preventing their being operated until the door is closed.

Upon the face of the supporting-plate 15 are arranged spaces 44 opposite each plunger for the name of the candidate represented by that plunger, and a space 45, above each series of plungers, is arranged to receive the name of the party to which the candidates represented by the series of plungers below belong.

The face of the tally-sheet is provided with a series of longitudinal lines forming columns 46, which are directly in alinement with the ends of the plungers. At the top of each column is the name of the candidate represented by the plunger which is in alinement with this column and which would register on the column when pushed inwardly. At the top of the series of columns embraced by one series of plungers is printed the name of the party to which the candidates enumerated by that series of plungers belong.

In practice the door of the booth remains open when the booth is not occupied by a voter. The tally-sheet prepared for receiving the record of the votes being in place, the voter steps into the booth and closes the door 2. The line 41 is relaxed, and the spring-roller winds the shutter around its periphery, exposing the voting apparatus. If the voter desires to vote the full party ticket, he pulls outwardly on the lever 26 which is below the series of plungers representing the candidates of that party, thus depressing all the plungers of that series simultaneously and imprinting the dies of the whole series of plungers upon the several columns of the tally-sheet corresponding to the names of the candidates represented by the series. Should the voter desire to vote for part of the candidates on each ticket, he depresses the plunger opposite the name of each candidate desired, and the print of that plunger is made upon the tally-sheet in the proper column. The voter then unfastens the door and the spring 34 swings the door outwardly, operat-

ing the pawl-and-ratchet mechanism to turn the roller 7 and moving the tally-sheet to a new position. Since the tally-sheet is moved at the time the door is swung wide open, the voter is prevented from voting for a candidate more than once. If the tally-sheet is not moved, a second operation of the plunger makes the imprint of the plunger in the same place and directly upon the first impression.

By means of this apparatus an accurate and true count of the total number of votes cast for any candidate can be quickly and easily ascertained by counting the marks or impressions in the column under the name of the candidate. In order to make the count at the close of voting, the supporting-plate and plungers are swung outwardly on the hinges 14 and the tally-sheet is rewound upon the lower roller, which can then be removed from the slots. The names of the candidates are at the end of the tally-sheet, which can then be unwound, and the indicative marks in each space can be quickly counted and accredited to the corresponding name over the space or column.

It is proposed to have one series of plungers to represent each party or one series for State and a second for county officers. The characters in the columns of the different parties can be made in different colors, if desired, or different forms of characters may be used to designate the different parties.

Instead of the printing-ribbon some other well-known form of device may be used for inking the dies of the plungers.

It is of course understood that while I have shown and described certain pawl-and-ratchet mechanism for moving the tally-sheet any other suitable form of these devices may be used, the aim and intent of the invention being to provide a means for moving the tally-sheet after each vote has been recorded, effecting this by the door, which being released to allow the voter to pass from the booth is swung open by the spring 34. The shutter being in front of the plungers while the door is open prevents the voter from operating the plungers until the door has been closed and retained by the catch, insuring the movement of the tally-sheet before the voter can register his ballot. It will also be understood that while I have shown seven plungers in a series more or less can be used, and any number of series can be used.

A great saving of time and expense is obtained by the use of my improved machine, as all of the expense of printing the tickets for the several parties is avoided and the expense of a recount is greatly reduced. The time required for voting is also reduced, since the plungers can be rapidly operated with great accuracy and precision and without liability of mistakes.

Having described the construction and operation of my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a voting-machine, the combination of the voting-booth provided with an entrance-door, an upper and a lower roller journaled in supports within the booth, a supporting-board extending over the space between the rollers, a tally-sheet passed over the outer face of the board and with its end portions secured upon the rollers, mechanism for imparting revolution to the rollers by the movement of the door, a removable supporting-plate arranged in front of the tally-sheet and carrying a series of plungers having on their ends printing die-faces presented to the tally-sheet, a series of springs for actuating the plungers outwardly, a curtain-shutter carried by a spring-roller at one side of the booth and located in front of the supporting-plate, a line carried by pulleys and extending across the booth and with one end secured to the said shutter and having its opposite end secured to the outer edge of the door for moving the shutter across the booth in front of the series of plungers when the door is opened, and a spring for swinging the entrance-door open, substantially as set forth.

In witness whereof I hereunto affix my signature in the presence of two subscribing witnesses.

WILLIAM LANGRILL.

Witnesses:
JAS. E. THOMAS,
E. TERWILLIGES.