

Technologists as Political Reformers: Lessons from the Early History of Voting Machines

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How did we get there



BINGHAM, THE COUNTY ELECTION

to



JONES, IVOTRONIC IN MIAMI

U. S. Patents

<http://www.uspto.gov/>

<http://www.freepatentsonline.gov/>

A wonderful resource,

That is, if you can find anything.

The first 200 years of patents are not easy to search.

This talk is an exploration of the patterns I found
in reading 19th century patents.

3 basic types of voting patent

- Those for use outside polling places, 1848 –
 - Legislative elections and lodge elections
 - Interesting mechanisms, dull reading
- Those for use in polling places prior to ~1892
 - Exciting, full of invective and reformist rhetoric
- Those for use in polling places after ~1892
 - Improvements on accepted machinery
 - Reformist rhetoric aimed at problems with machines

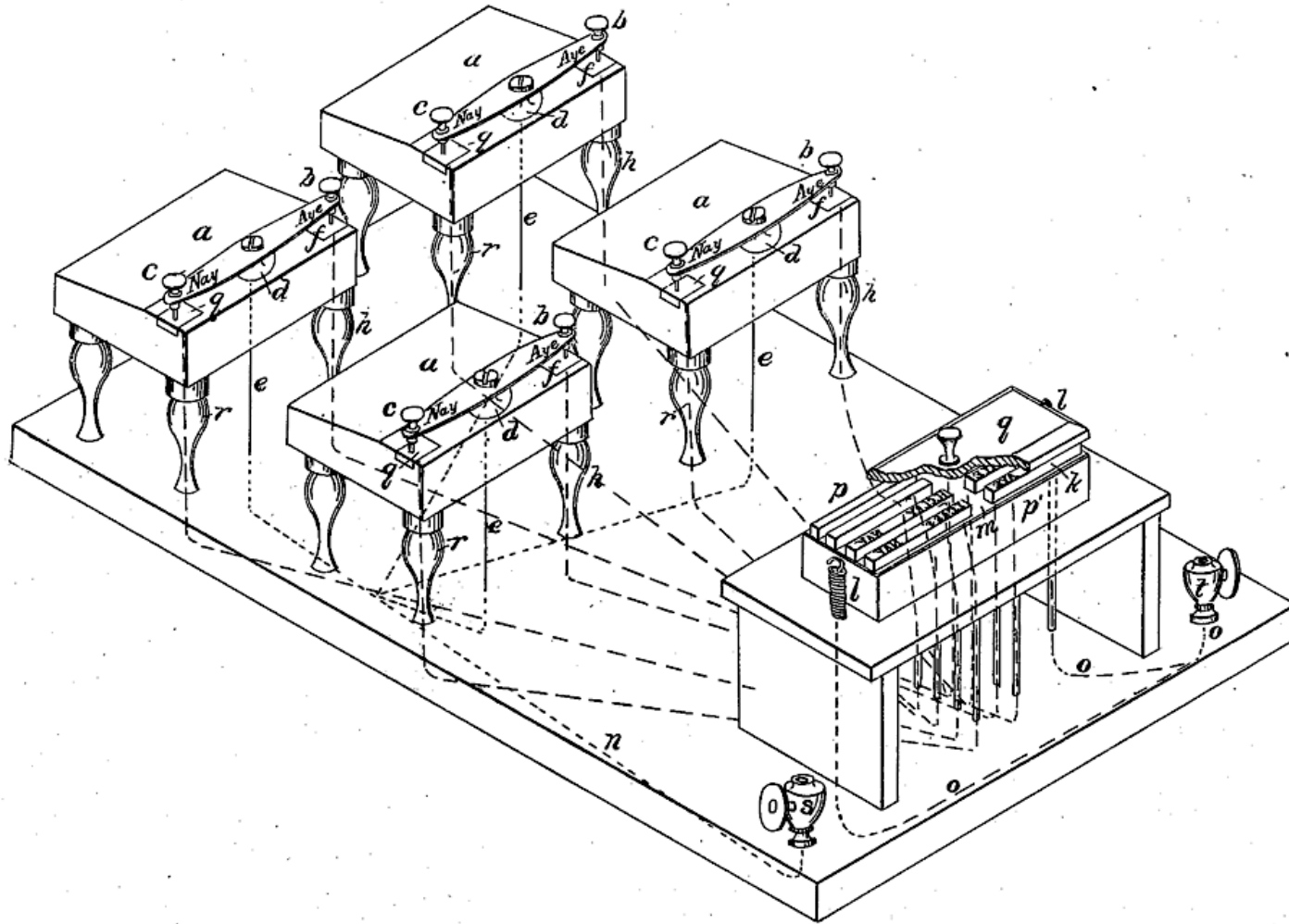
Voting Outside the Polling Place

- Legislative Elections
- Lodge Elections
 - No pressing social need.
- Original application of several technologies
 - Mechanical vote counting
 - Electrical vote transmission
- Patent statement of rationale is minimal
 - Primary motivation: Because it can be done.

A. N. HENDERSON.
AYE AND NAY APPARATUS.

No. 7,521

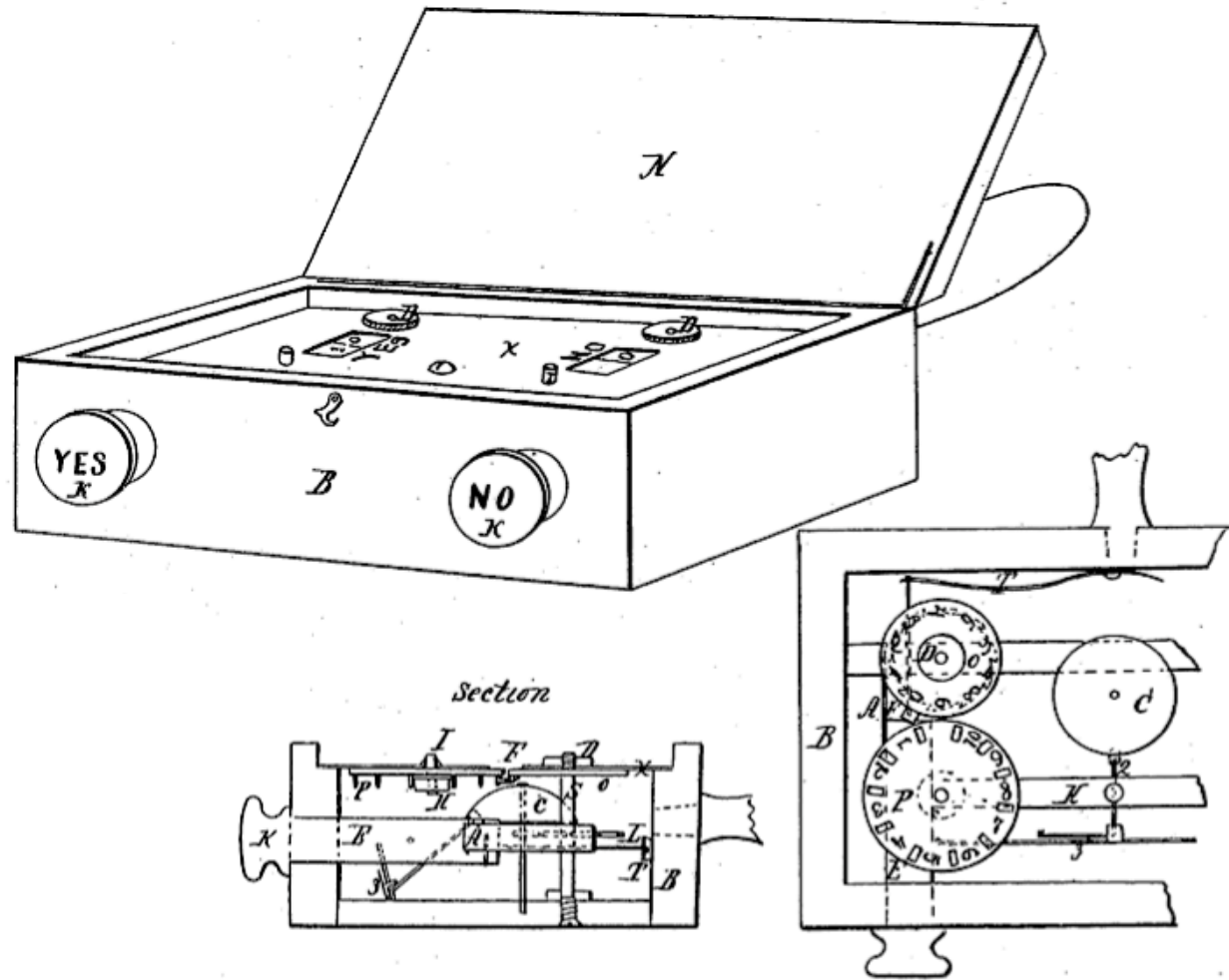
Patented July 22, 1850.



G. L. BAILEY.
BALLOT BOX.

No. 28,339.

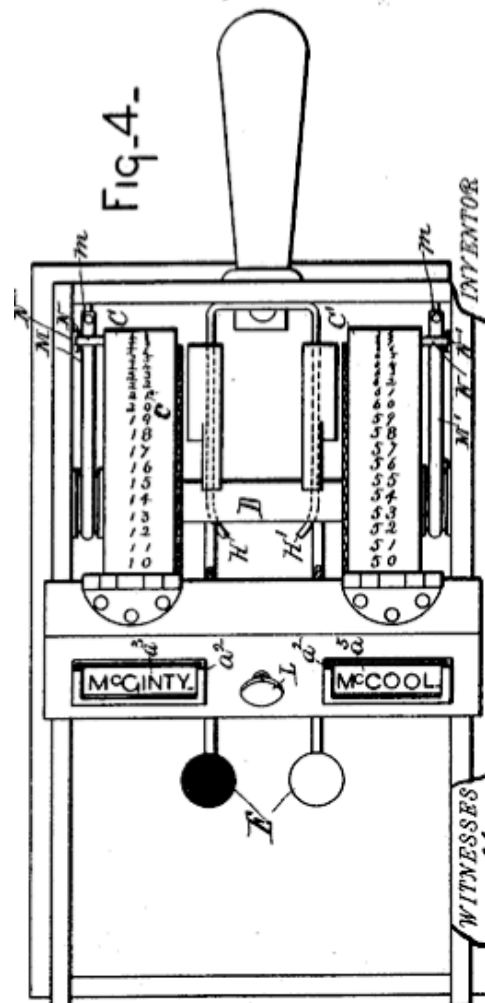
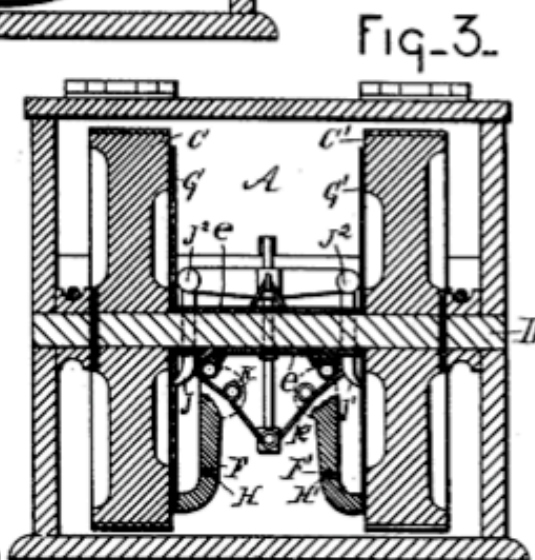
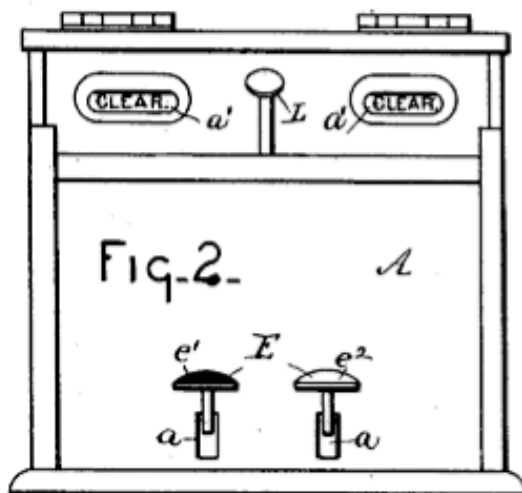
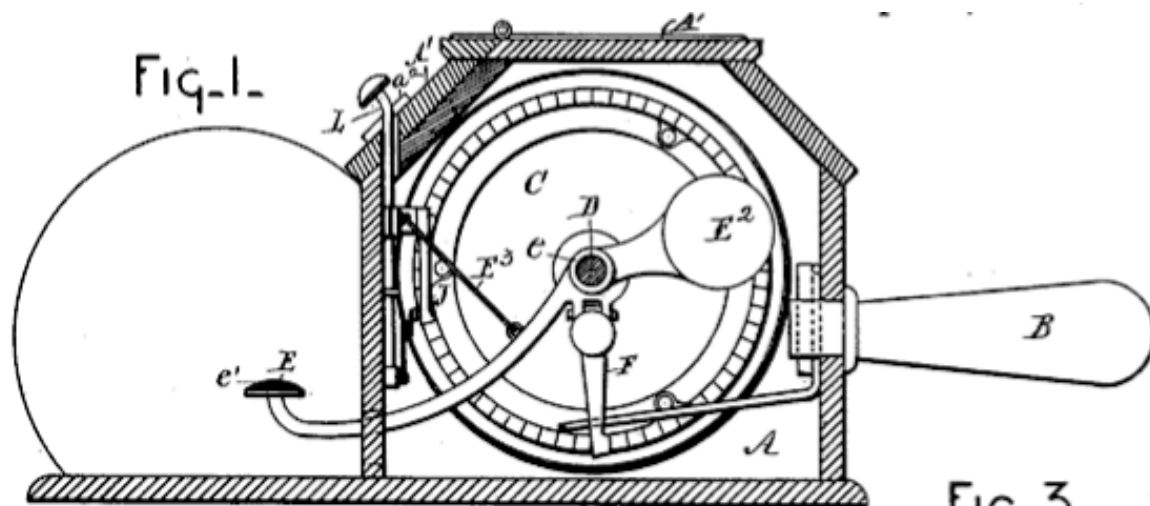
Patented May 22, 1860.



L. S. GARDNER. VOTING MACHINE.

No. 458,805.

Patented Sept. 1, 1891.



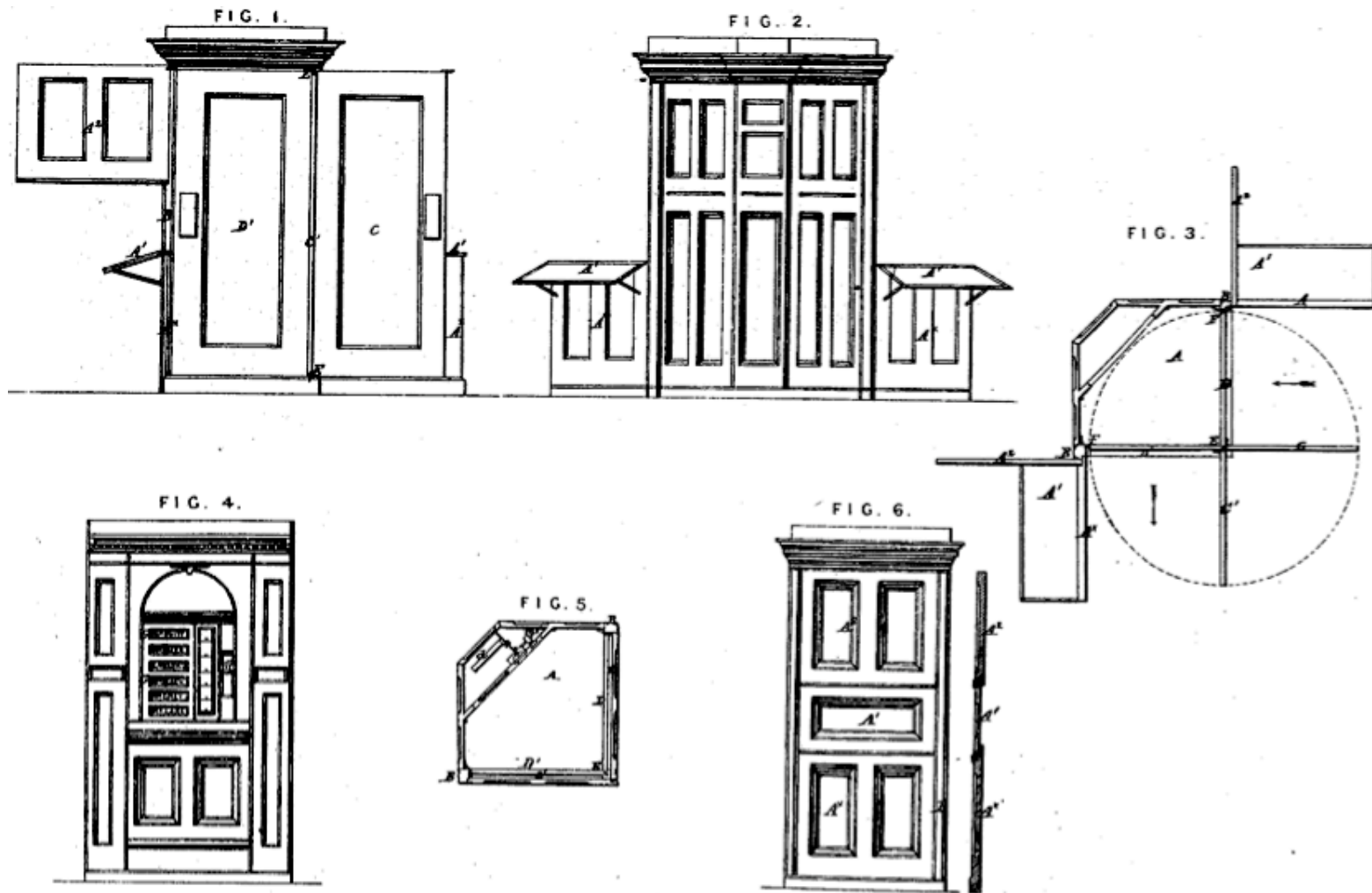
Voting at the Polling Place pre ~1892

- A response to election fraud
- In general, applying known technologies
 - Novelty is in combination
 - Novelty is in systems architecture
- Patent statement of rationale
 - Typically contains an indictment of the status quo
 - Typically contains strong rhetoric
 - Typically very fun reading – not like other patents

H. W. SPRATT. Voting-Apparatus.

No. 158,652.

Patented Jan. 12, 1875.



To all whom it may concern:

Be it known that I, HENRY WILLIAM SPRATT, of 4 Lee Road, Blackheath, in the county of Kent, England, Kingdom of Great Britain and Ireland, have invented an Improved Voting Apparatus, of which the following is a specification:

My invention consists in an improved voting-chamber, and mechanism therefor, which mechanism can also be applied to an existing building, or inclosed in a portable chamber for voting, and which is suitable and available for every description of voting, and for securing purity and secrecy of election, with the following advantages: First, balloting (that is, voting secretly) without the aid of balls, tickets, passes, letters, figures, official stamps, or ballot-boxes; second, absolute secrecy, it being impossible to discover for whom the voter has voted; third, while secrecy is obtained, all parties, pro and con, can be satisfied the voter has voted; fourth, at the close of the poll the result of the voting can be instantly made known; fifth, a complete check as to the numbers voted, preventing any tampering with the apparatus; sixth, economy, great saving of time, trouble, and expense at elections, and also with government officials, and office routine afterward.

(No Model.)

3 Sheets—Sheet 1.

L. KUTSCHER.

APPARATUS FOR USE IN SECRET VOTING.

No. 412,761.

Patented Oct. 15, 1889.

Fig. 1.

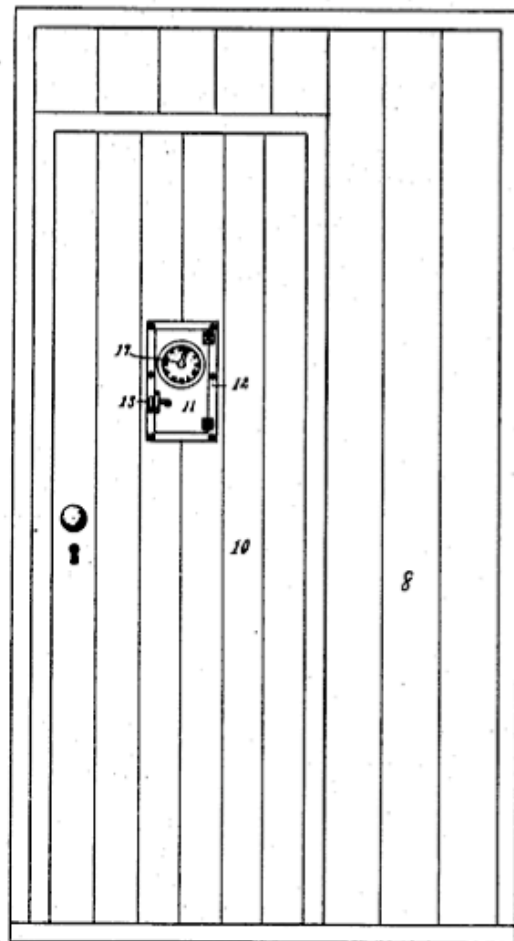


Fig. 2.

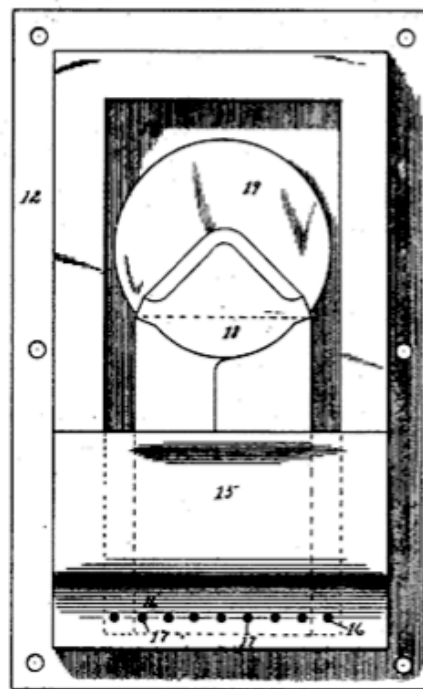
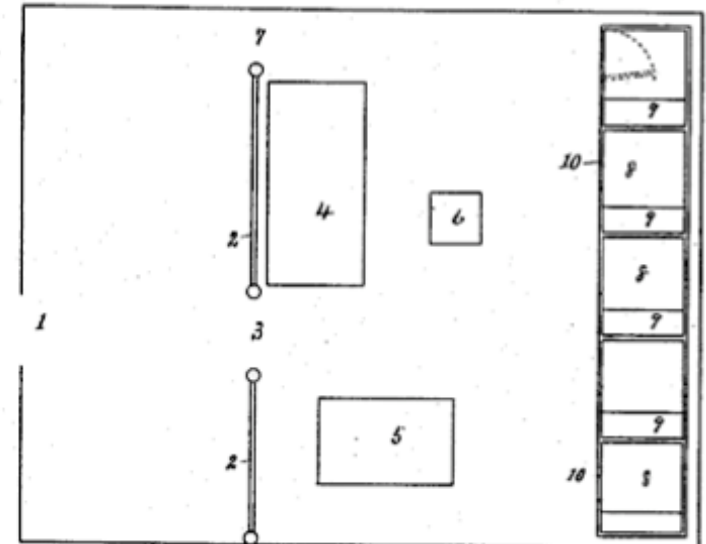


Fig. 3.



To all whom it may concern:

Be it known that I, LOUIS KUTSCHER, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Secret-Ballot Protectors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

It is well understood by those who have given the subject study that the system of open balloting now in use in most of the United States is open to serious objection through liability that the will of the people may be defeated by fraud or bribery. So serious has the evil become and so great the danger

of corruption of the ballot as to lead to much discussion of the subject and a universal demand for the passage of laws to insure the purity of the ballot. The three most prominent sources of corruption are, first, intimidation of voters; second, bribery of voters, and, third, fraudulent casting of votes, or, as it is commonly called, "ballot-box stuffing." It is universally conceded that in order to insure purity of the ballot all ballots or tickets should be made of uniform size, color, type, and quality of paper and free from other marks. The ballots cast by a voter should be inclosed in an envelope to be sealed by the voter, the envelopes to bear no marks except the official stamp, and to be illegal if otherwise marked, and, lastly; that secret compartments be provided having a shelf and a door, so that each voter can prepare his ballot or ballots wholly unseen by any other person.

(No Model.)

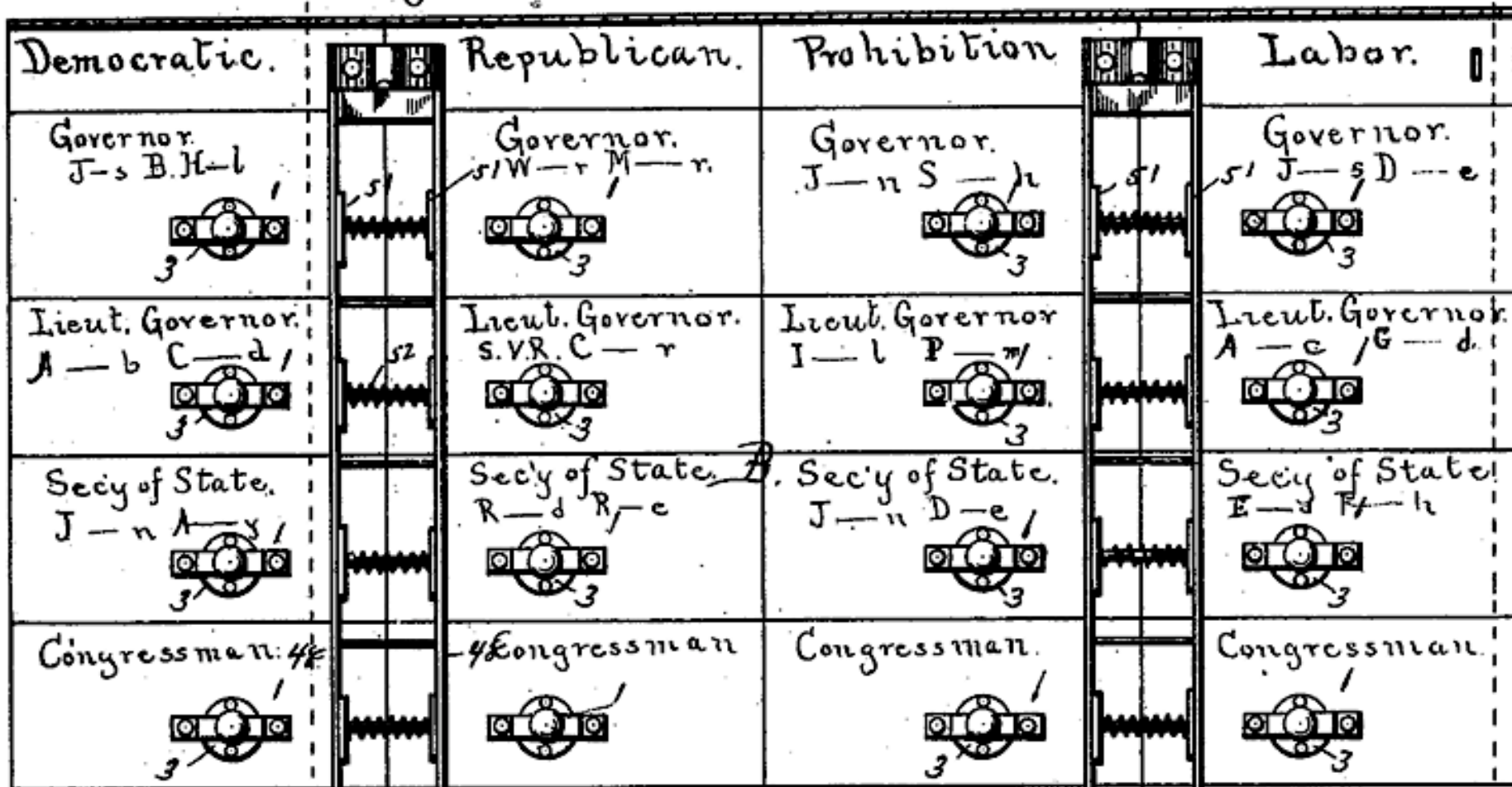
4 Sheets—Sheet 2.

J. H. MYERS. VOTING MACHINE.

No. 415,549.

Patented Nov. 19, 1889.

a Fig. 4.



To all whom it may concern:

Be it known that I, JACOB H. MYERS, of Rochester, 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 figures and letters of reference marked thereon.

My present invention relates to voting or balloting machines, and has for its objects to provide one by the employment of which an honest vote can be had and counted without liability of voters being intimidated, the balloting being secret, or of their voting more than once for the same candidate or different candidates for the same office, and as the votes are counted as fast as the voter indicates his preference the total number cast for each candidate can be ascertained rapidly and accurately at the close of the polls.

Voting at the Polling Place post ~1892

- One subcategory focuses on routine improvement
- First generation machines had shortcomings
 - Novel new interlocking schemes to prevent overvotes
 - Novel new straight party mechanisms
- Patent statement of rationale
 - Typically focuses on need to improve current systems
 - Takes need for voting technology for granted
 - Typically dull reading

(No Model.)

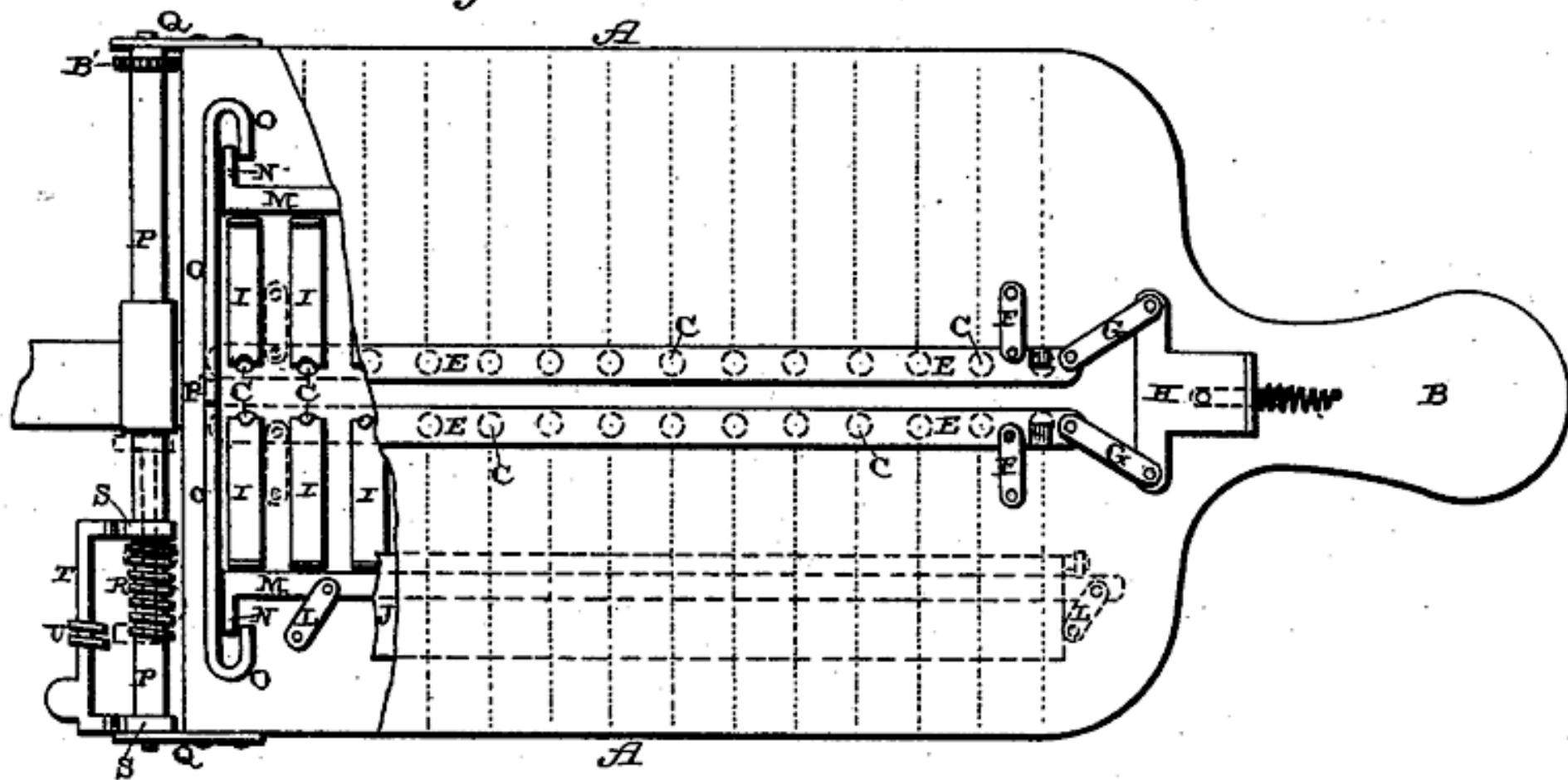
2 Sheets—Sheet 1.

K. DOUGAN.
BALLOT HOLDER.

No. 440,545.

Patented Nov. 11, 1890.

Fig. 1.

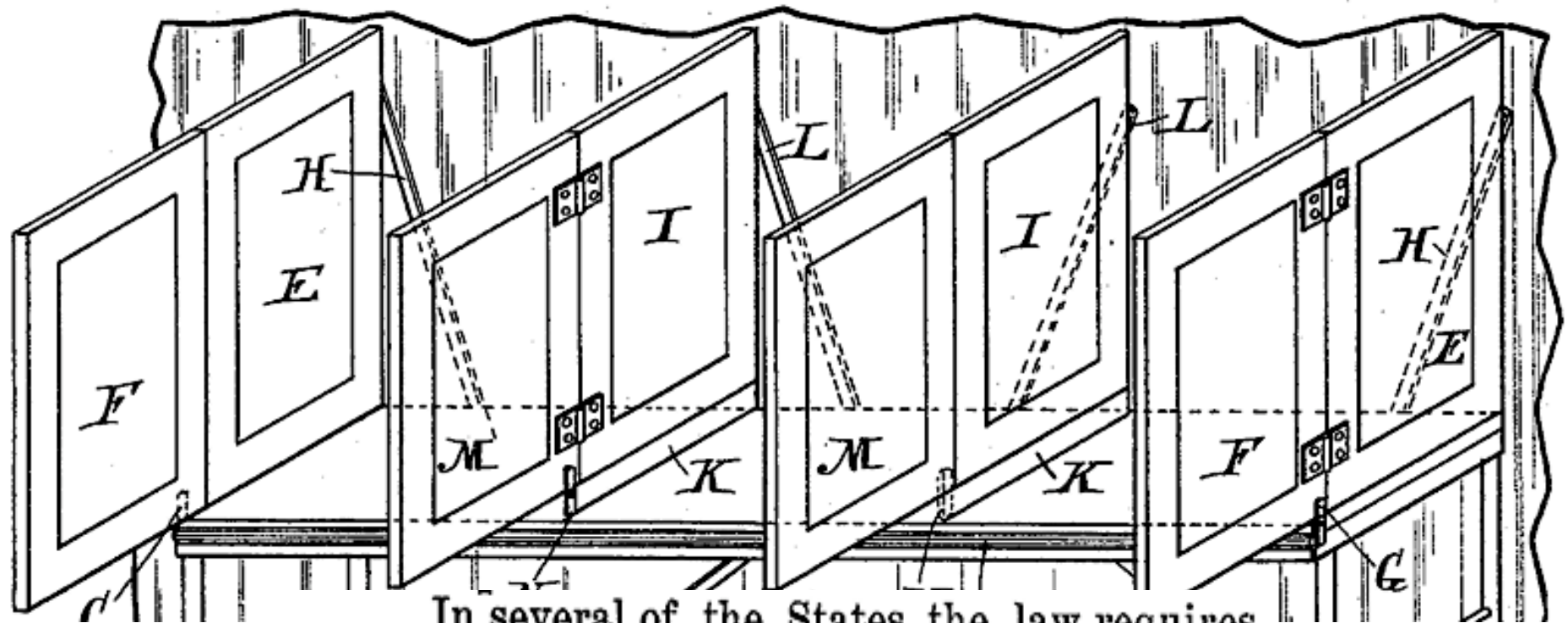


(No Model.)

J. JONES.
ELECTION BOOTH.

No. 481,571.

Patented Aug. 30, 1892.



In several of the States the law requires
that a suitable shelf and space shall be pro-
15 vided, properly screened from public observa-
tion, at and in which a voter may prepare his
ballot for voting unobserved by any other
person.

Voting at the Polling Place post ~1892

- Another subcategory criticizes new technology
- First generation machines failed to meet their goal
 - Novel security models
 - Novel auditing models
- Patent statement of rationale
 - Typically points up vulnerability of existing schemes
 - Takes need for voting technology for granted
 - The rhetoric is sometimes exciting, sometimes dull

(No Model.)

5 Sheets—Sheet 2.

J. H. MYERS.
VOTING MACHINE.

No. 415,548.

Patented Nov. 19, 1889.

<i>DEMOCRATIC</i>	<i>REPUBLICAN</i>	<i>LABOR</i>	<i>PROHIBITION</i>
<i>ELECTORS</i> <i>for</i> <i>GROVER CLEVELAND</i>	<i>ELECTORS</i> <i>for</i> <i>BENJ. HARRISON</i>	<i>ELECTORS</i> <i>for</i>	<i>ELECTORS</i> <i>for</i>
<i>GOVERNOR.</i> <i>DAVID B. HILL</i>	<i>GOVERNOR</i> <i>28</i>		
<i>Sec. of State.</i> <i>b</i>	<i>6</i>		
<i>CONGRESS</i>			

My present invention relates to voting or balloting apparatus, and has for its objects to provide one by the employment of which an honest vote can be had and counted without liability of voters being intimidated, the balloting being secret, or of their voting more than once for the same candidate or different candidates for the same office, and as the votes are counted as they are cast the total number can be ascertained rapidly and accurately at the close of the polls without the necessity of counting by hand the separate ballots, though this may be done as a check or verification should it be necessary or desirable.

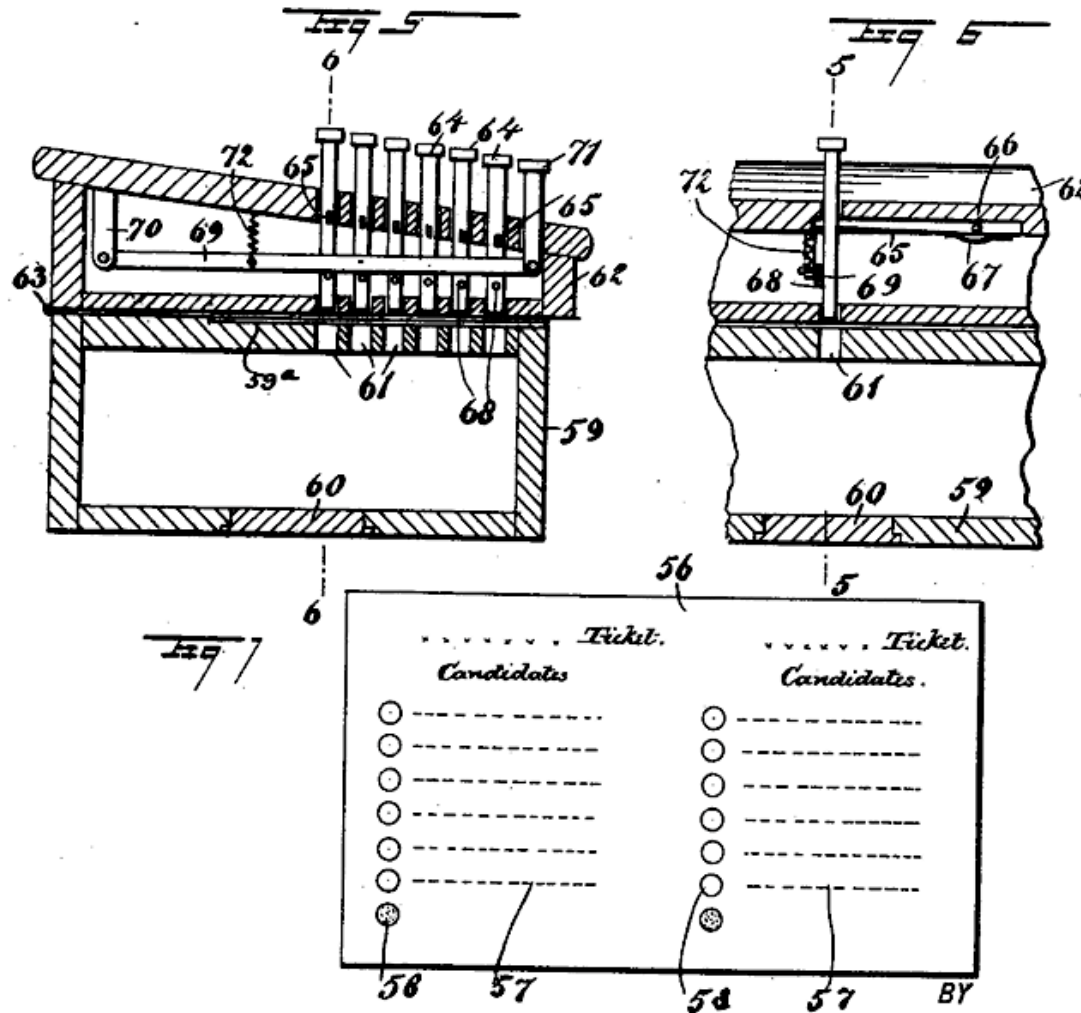
(No Model.)

2 Sheets—Sheet 1.

U. G. ILES. BALLOT REGISTERING DEVICE.

No. 500,001.

Patented June 20, 1893.



(No Model.)

8 Sheets—Sheet 4.

S. E. DAVIS.
VOTING MACHINE.

No. 526,668.

Patented Sept. 25, 1894.

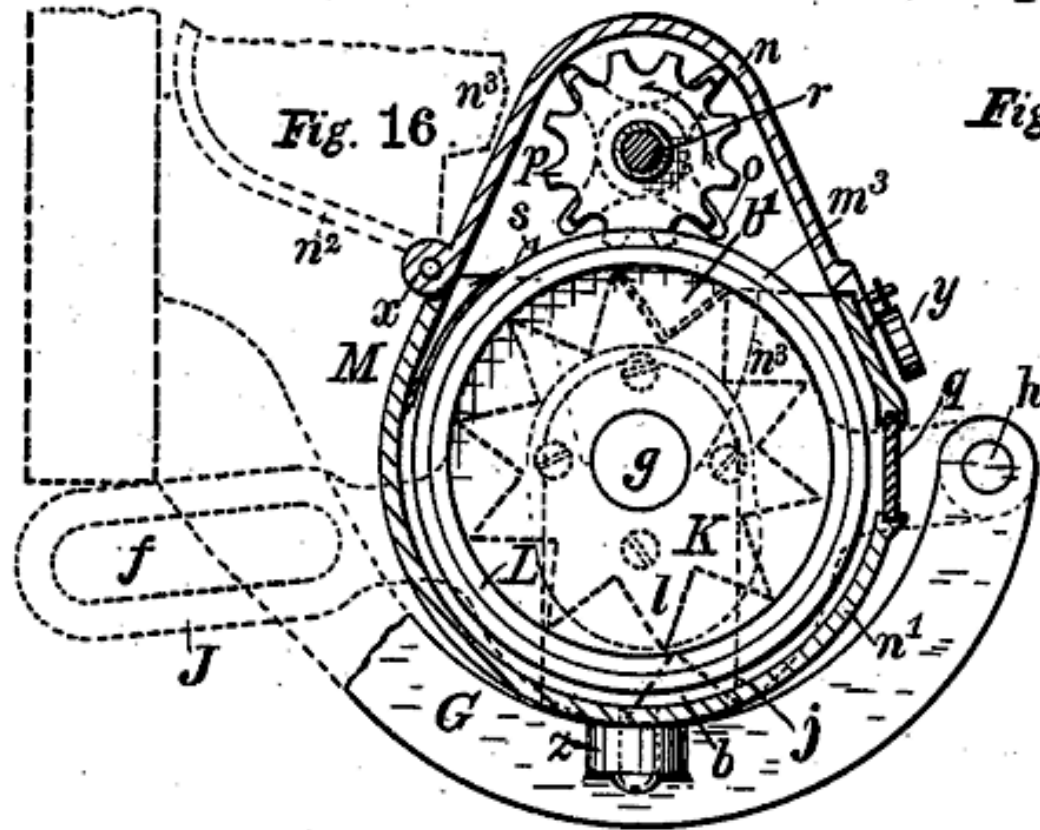
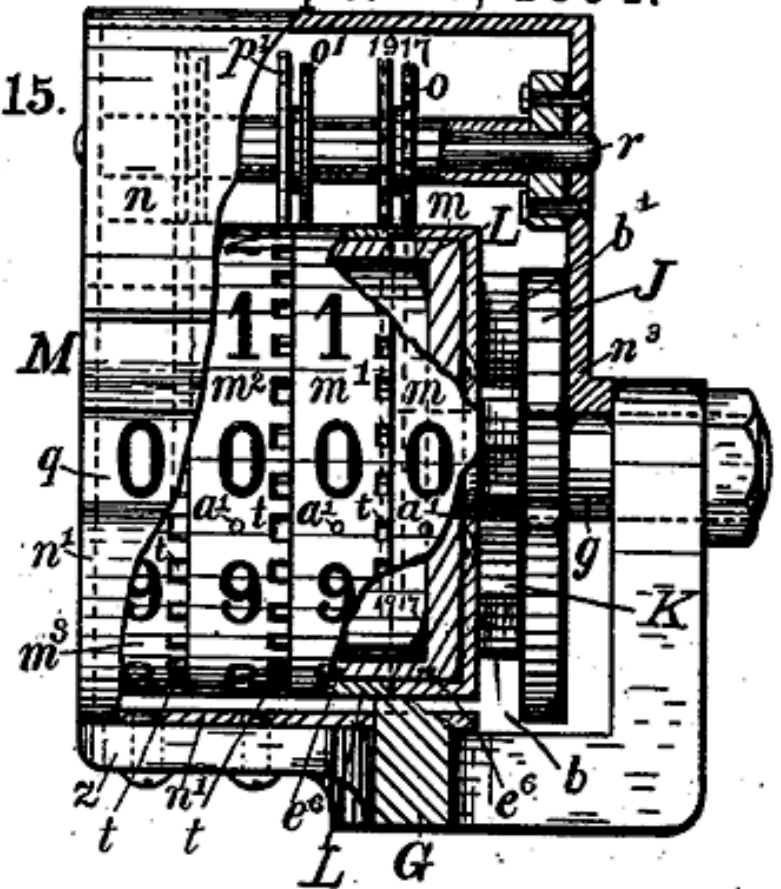


Fig. 15.



To all whom it may concern:

Be it known that I, SYLVANUS E. DAVIS, a citizen of the United States, residing at Rochester, in the county of Monroe, in the State of New York, have invented an Improved Voting-Machine, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to an improved voting-machine,—the construction and operation of which are fully described and illustrated in the following specification and the accompanying drawings,—the novel features thereof being specified in the claims annexed to the said specification.

The object of my invention is the production of a voting machine,—a machine for enabling the public to vote at ordinary elections without printed ballots,—which shall be beyond the possibility of failure from mechanical causes,—to secure which result all the moving devices between the push or part actuated by the voter and the registering devices which indicate the number of votes cast, are constructed so that they are at all times in positive mechanical engagement with each other, and so that no movement of the counting mechanism is possible, except that imparted to it by the voter.

My invention also involves the absolute prevention of fraudulent voting,

No. 620,767.

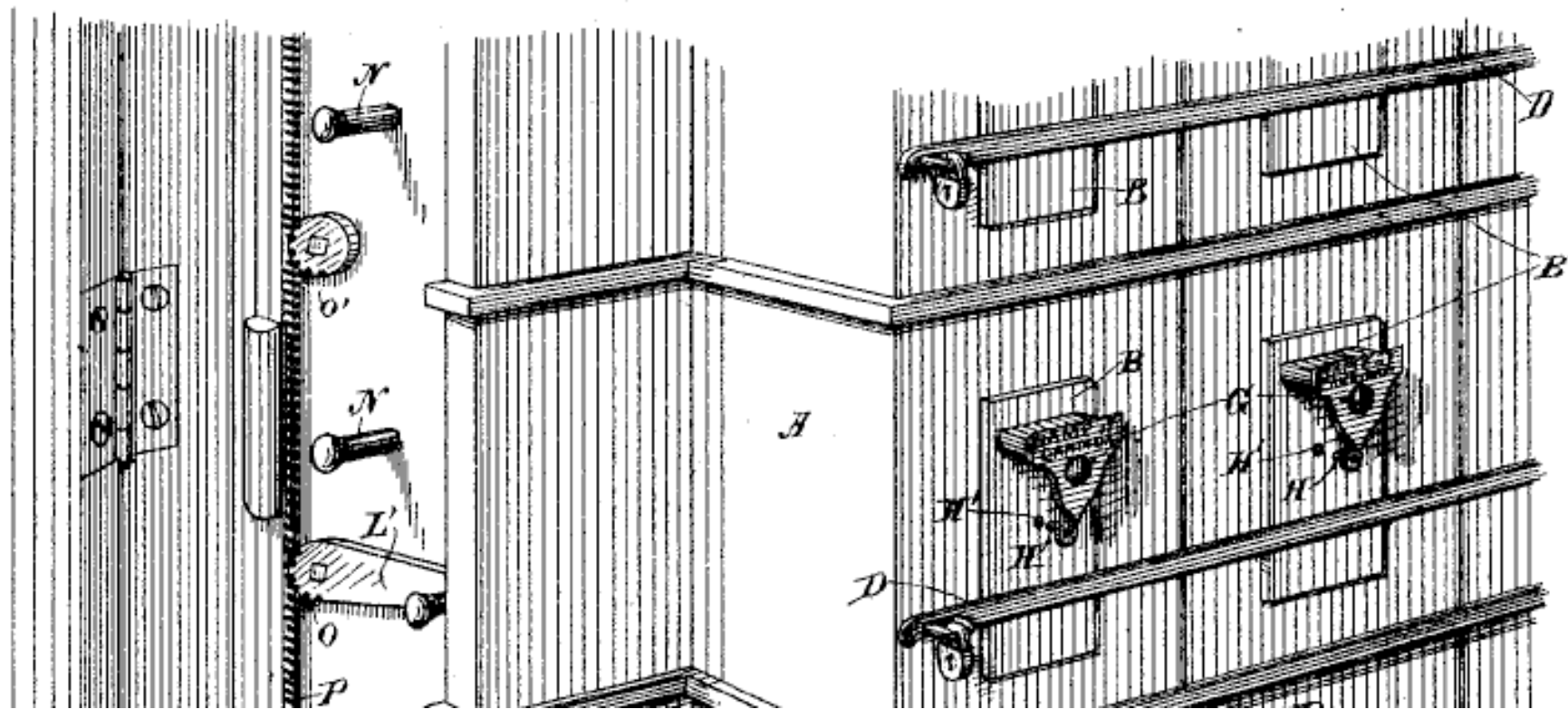
Patented Mar. 7, 1899.

J. A. GRAY.
VOTING MACHINE.

(Application filed Nov. 9, 1898.)

(No Model.)

Fig. 1.



To all whom it may concern:

Be it known that I, JOSEPH A. GRAY, a citizen of the United States, residing at Adin, county of Modoc, State of California, have invented an Improvement in Voting-Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a machine which is especially designed to enable the voter to indicate the candidate or candidates for whom he desires to vote upon a ticket having the names of candidates printed thereon and at the same time to register his vote or votes by means of an apparatus designed for the purpose.

punch. This enables the voter when he has received his ticket H² to punch a hole in the margin opposite the name of the person for whom he desires to vote, the plan being the same as that of the "Australian ballot," so called,

In this manner we have a mechanical check for the tickets, while the ticket is also a check upon the register.