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The Technology of Unequal Rights for Women: Patent Drawings of a Voting Machine

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In 1878, Senator Aaron A. Sargent of California introduced to the Senate an amendment to the Constitution "Conferring upon Women the Right of Suffrage." Drafted by Susan B. Anthony, this same amendment would be introduced on a near-yearly basis until its final passage by Congress on May 19, 1919.

Prior to Senator Sargent and Susan B. Anthony's proposed amendment, however, there was a flurry of activity at the state and local levels to obtain for women some measure of voting eligibility. Indeed, by 1920, women's suffrage supporters had been at work for more than 80 years. As early as 1838, for example, Kentucky had extended to "widows with children of school age" the right to vote on school-related matters. Several states followed suit over the coming decades. These included Kansas (1861), Michigan (1875), Minnesota (1875), Colorado (1876), New Hampshire (1878), Oregon (1878), Massachusetts (1879), Mississippi (1880), New York (1880), and Vermont (1880).[1] In 1898, Delaware allowed "tax paying" women to vote on school issues.

States such as Kansas, in 1887, also began to allow women the right to vote in municipal elections. Others, such as Minnesota, in 1898, allowed women to vote for library trustees. In 1901, New York allowed women to vote on matters of local taxation. In 1908, Michigan followed New York's example. Illinois electoral law was a bit more complicated. By 1913, it allowed women to vote for presidential electors, the state board of equalization (involved in tax issues), the clerk of the appellate court, county collector, county surveyor, the board of assessors, sanitary district trustees, and municipal officers (except for police magistrates).

In the midst of this incremental progress, some states and territories extended full voting rights to women. In 1869, the territory of Wyoming granted women full suffrage rights. In 1893, the state of Colorado did the same. By 1896, Utah and Idaho had joined the ranks of equal suffrage states. By 1914, the states of Arizona, California, Kansas, Montana, Nevada, Oregon, and Washington and the territory of Alaska had all granted women voting rights equal to those of men.[2] This locally idiosyncratic system of voter eligibility was the result of painstaking efforts in state-by-state campaigns for women's voting rights.

These varying degrees of voting rights presented an opportunity and challenge for a number of ambitious American inventors of voting machines. Depending on the election year and the state, women might be allowed to vote on certain issues and for certain offices but not others. School issues or municipal officers might be on the ballot, for example. If so, how would officials tally women's votes on these issues in those states that allowed them to cast a ballot? As important, how would officials prevent them from voting for presidential electors or congressional representatives?

Inventors such as Lenna Ryland Winslow believed that they had the answer. Winslow submitted his patent application for a "Voting-Machine" on December 28, 1899. His application included 19 pages of drawings, three of which are featured in this article.[3] Working in Columbus, Ohio, he wrote to the Patent Office that his device would not only count votes, but would also contain a mechanism "automatically set to restrict certain classes of voters by and during their entrance to the booth."[4] Winslow stated that his voting machine achieved this by employing a "booth having an entrance opening, admission and exit through which is controlled by a turn-stile...." Women entered through the side of the turnstile labeled "Ladies"; men through the side labeled "Gents." As a voter moved through the turnstile, the interior of the booth was concealed. As the voter exited, the interior was once again revealed.[5]

Winslow further claimed that his voting machine would tabulate the total numbers of votes cast for an individual candidate, straight party-line voting, the total of voters admitted, the total numbers of voters who actually cast votes, "the total number of unrestricted voters (as men), and the total number of restricted voters (as women)."[6]

Upon entering the Ladies or "restricted" side of the machine's turnstile, Winslow claimed, "pin 416 will lock the block 107 of that single-candidate series in its depressed position, and thus prevent the actuation of any voting in that series." In short, the device, which was finally patented in 1910, would ensure that women would not be able to vote beyond what

state law allowed them. Upon a restricted voter's departure, the turnstile would reset the machine "to its normal position."[7]

Winslow was not alone in his pursuit of constructing a voting machine that would be both accurate and reflect the restricted nature of American voting rights. In 1901, Ottmar A. Gatrell of Columbus, Ohio, applied for a patent for his voting machine. He claimed that many such devices were of a "complicated construction" or difficult to use. Further, "[i]n some commonwealths or municipalities a class of electors is excluded from voting for nominees for some offices—as, for example, in the State of Ohio women are privileged to vote only for nominees on the school board. . . ." Gatrell claimed that his machine was simple in operation and provided "improved means operative by the election officer to lock out all voting devices except those permissible to be used by the particular elector entering the booth."[8]

In 1902, Angus C. Gordon of Rochester, N.Y., submitted a patent application for his voting machine. This device, which received a patent in December 1905,

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TEACHING SUGGESTIONS

1. Ask your students to vote on any issue (e.g., favorite season or best TV show) by writing their choice on a paper "ballot." Direct them to fold it in half, and place it in a "ballot box" (a hat or a paper box). Ask for a volunteer to play the role of an election official, whose job is to count the votes and announce the winner of the election. Following the election, lead a class discussion using the following questions:

    a. How confident are you in the accuracy of the reported election results?
    b. To what extent do you feel that your privacy was protected during this election?
    c. How would this election have differed with a voting machine?

2. Divide the class into groups of three or four. Provide each group with copies of the three featured documents. Direct students to study the documents in their groups and discuss the following questions: What kind of documents are these? When were they created? By whom? For what purpose? What information do the documents suggest about voting restrictions?

3. Inform students that prior to passage of the Nineteenth Amendment, women were only permitted to vote under certain circumstances in certain states. Provide students with information from the background essay and ask them to characterize the circumstances and to identify the states in which women could vote. Next, encourage students to pretend to be Lenna R. Winslow or another voting machine inventor. Assign them to write a cover letter to an election official promoting the use of his invention and stating how it could help the official run an election in his state. Remind them to mention the special circumstances.

4. Direct students to read the text of the Nineteenth Amendment, and ask them to write a single-page diary entry for August 26, 1920 (the day its ratification was certified), as though they were Lenna R. Winslow or one of the other voting machine inventors. Encourage them to include their reactions to ratification and their plans for future inventions.

5. Inform students that discussions regarding public confidence in the accuracy of voting machines have been prevalent in recent years. Ask your students to create a survey on voters' confidence in the accuracy of vote tabulating machines. Direct them to survey 10 adults each, to compile their results, and to write a letter to the editor of your local newspaper regarding their findings.

6. Divide students into groups of three or four and invite them to pretend to be teams of election officials responsible for selecting a voting machine for use in their states. Ask them to take into consideration the survey results from activity #5 and create a list of their requirements for voting machines. Direct them to conduct the following research activities as part of their decision-making process:

    a. Search **www.google.com/patents** for "voting machines" to determine the types of machines that are available. (Conducting an advanced search and limiting the year span to the past four to eight years will help to narrow the results.)

    b. Locate newspaper articles for information on the decisions states have made in recent years regarding voting machines.

    Finally, ask them to compare their requirements to the information found in their research, and write a one-page explanation of their final decision.

    As an extension activity, invite a local election official to visit your class; allow students to share their research with him or her; and invite the official to demonstrate how a voting machine used in your community works.

7. Conduct a brainstorming session with your students on the following topic: Who should be allowed to vote in American elections? Write a list of student responses on the board. Next, direct students to conduct research on groups (other than women) who have been restricted from voting in the United States. Ask them to research what methods were used (mechanical, legislative, or other) to enforce the restrictions. Finally, direct students to write a one- to two-page essay comparing the results of the class brainstorming session with their research. The essay should explain any differences or similarities.

235. REGISTERS,
Voting Machines.
Key Operated.

19
17 Sheets-1

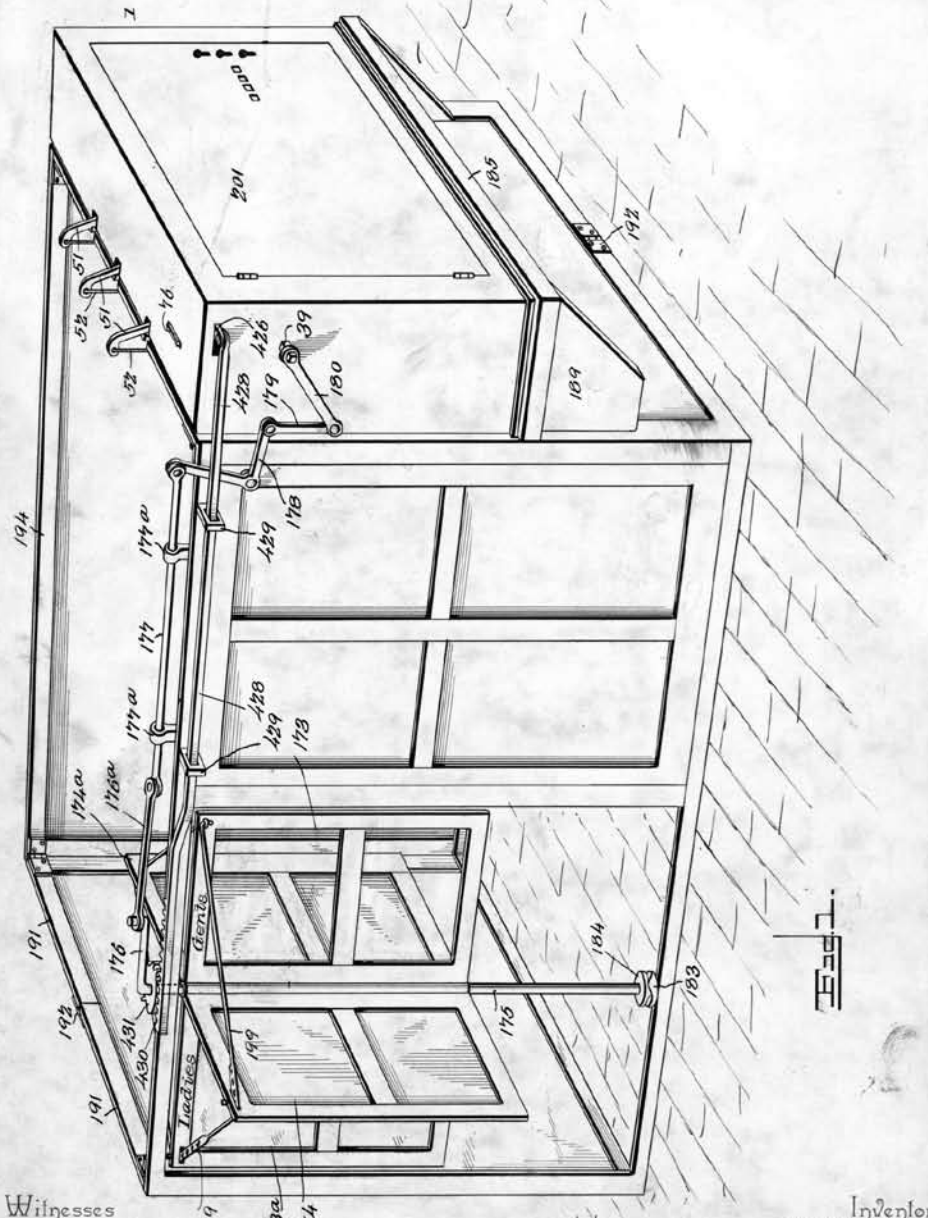
DIV. 23.

L. R. WINSLOW.
VOTING MACHINE.
APPLICATION FILED DEC. 28, 1899.

966,505.

Patented Aug. 9, 1910.

19 SHEETS—SHEET 1.



Witnesses
E. T. Stewart.
Chas. S. Hyer.

By his Attorneys,
C. A. Snow & Co.

Inventor
Lenna R. Winslow

Jan. 11, 1910

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19
17 Sheets - 3

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L. R. WINSLOW.

VOTING MACHINE.

APPLICATION FILED DEC. 28, 1899.

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19 SHEETS—SHEET 3.

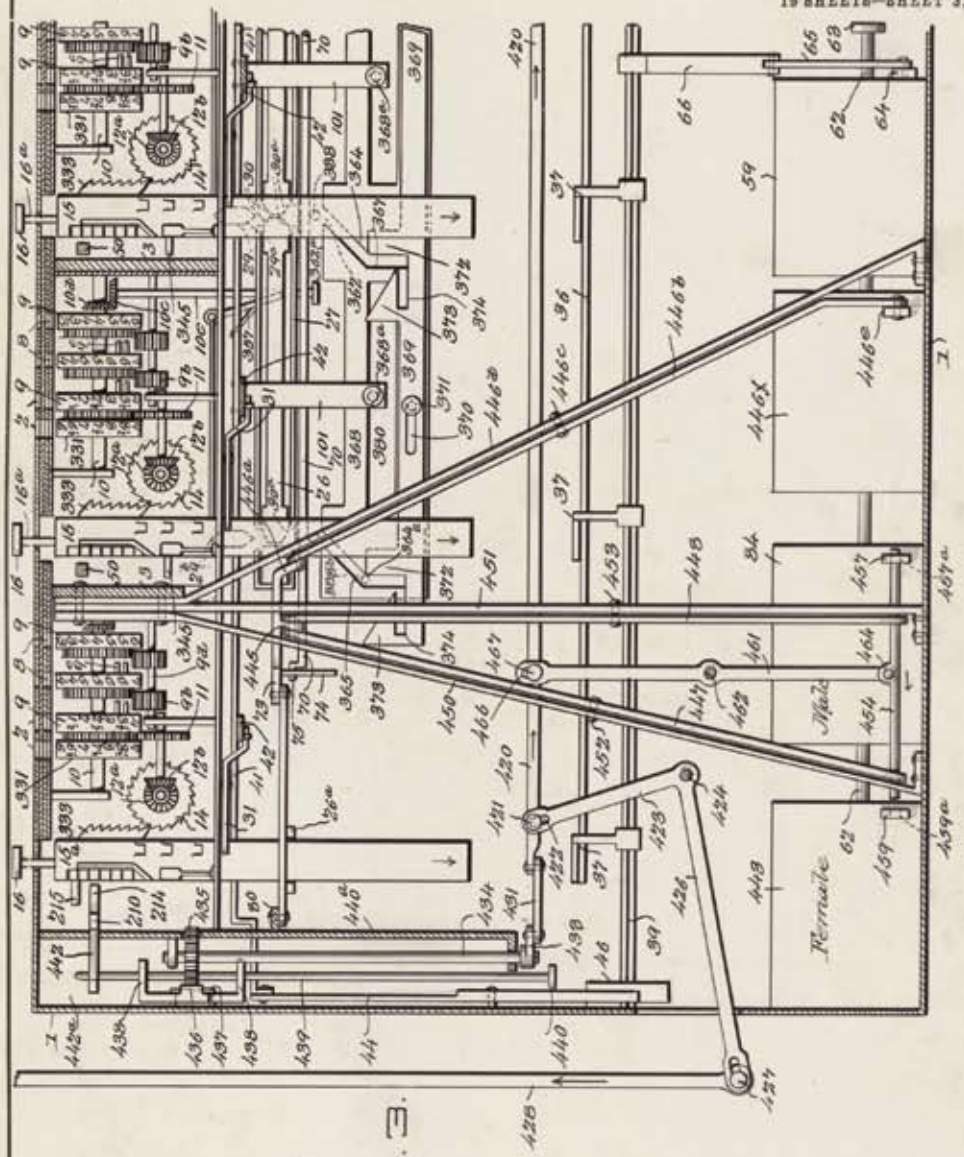

Fig. 3.

Witnesses

P. F. Stewart.

Chas. S. Hoyer.

Lenna R. Winslow, Inventor

By his Attorneys,

C. A. Snow & Co.

235. REGISTERS,
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741842

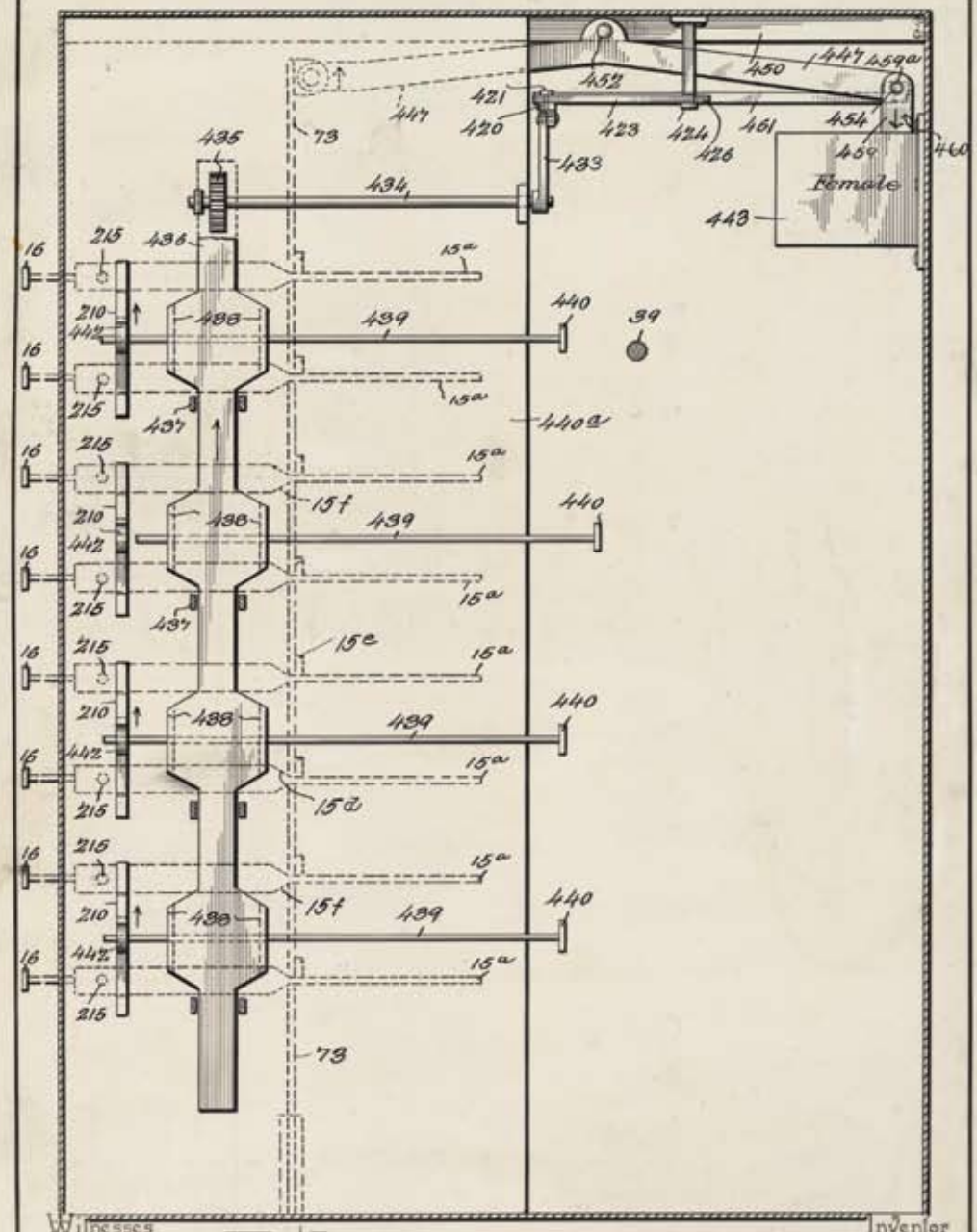
19
77 Sheets - 10

253-
4

L. R. WINSLOW.
VOTING MACHINE.
APPLICATION FILED DEC. 28, 1899.

966,505. Patented Aug. 9, 1910.

19 SHEETS—SHEET 10.



Witnesses

E. J. Stewart.
Chas. S. Hoyer.

Fig. 8.

By his Attorneys,

Inventor
Lenna R. Winslow

C. A. Snow & Co.

He noted that women in "many cities may vote for members of the school board and for members of the library board … while they have no rights whatever to vote for candidates for numerous other offices."

allowed for the tabulation of women's restricted voting. "[F]or instance, … where women are allowed to vote for a school board … provision is made for locking out the whole machine, except one or more rows.[9] Philip Yoe, of Dayton, Ohio, noted that his "voting machine interlocking mechanism"—also patented in 1905—complied with "the election laws of the State of Ohio, where women are entitled to vote for members of the board of education only."[10]

In his 1909 patent application, Charles C. Abbott touted the convenience of his machine for its "custodians." Said Abbott, "the restricting lever and the restricting bar will not be returned to their normal position … when the restricted voter leaves the machine, and so long as restricted voters continue to vote the custodian has nothing further to do." This was particularly advantageous since "most voters of limited franchise are women and a number of them usually vote together."[11]

In 1914, Syver Loe of Minneapolis (and the Loe Multiplex Voting Machine Company) received a patent for his "Office-Vote-Restricting Mechanism for Voting Machines." He claimed that his invention provided a "simple and efficient mechanism for use in connection with a complete voting machine, whereby mechanism ordinarily adapted for use by the regular voters, to wit: men, may be adapted for use … by persons, such as women, who have restricted or limited voting rights." He noted that women in "many cities may vote for members of the school board and for members of the library board … while they have no rights whatever to vote for candidates for numerous other offices."[12]

Support for the alternative constitutional amendment strategy of Senator Sargent, Susan B. Anthony, and many others grew steadily after 1912. Still, it was a long, slow process that ran parallel to state and local movements.[13] Six and a half years after receiving this patent, Loe's device would be relegated to the scrap heap when, on August 26, 1920, Secretary of State Bainbridge Colby certified the ratification of the Nineteenth Amendment, which extended full voting rights to women. Loe, Winslow, and their fellow inventors had created devices that matched their political and cultural milieu. By 1920, however, times had changed; specifically, regular voters thereafter included both women and men.

Notes

1. For a complete list see *The Woman Suffrage Year Book, 1917*; (National Woman Suffrage Publishing Company, Inc., New York, N.Y., 1917), 25.
2. Ibid., 15-44.
3. These drawings are contained within the record series *Utility Patent Drawings* (Entry UD-C12); Records of the Patent and Trademark Office, National Archives Record Group 241; National Archives & Records Administration, College Park, Md.
4. Specification of Letters Patent; Patent Number 966,505 granted to Lenna Ryland Winslow of Columbus, Ohio, August 9, 1910; p. 1; U.S. Patent Office. Winslow also received patents for similar devices. See Patent Numbers 1,000,062 (issued 8/8/1911) and 1,095,689 (issued 5/5/1914); *Patent Files*, 1836-1956 (Entry A1-9A); Records of the Patent and Trademark Office, Record Group 241; National Archives and Records Administration. All other patents cited in this article are from this same National Archives record series. Digital copies of the "Specification of Letters Patent" for this patent (and all others cited) are available at www.google.com/patents.
5. Ibid., 2.
6. Ibid.
7. Ibid., 11-12.
8. Specification of Letters Patent; Patent Number 701,324 granted to Ottmar A. Gatrell, of Columbus, Ohio, Assignor to Preston C. Houston of Jamestown, New York, June 3, 1902; p. 1. See also his patent number 658, 771 (issued 10/2/1900).
9. Specification of Letters Patent; Patent Number 807,818 granted to Angus C. Gordon of Rochester, New York, December 19, 1905; p. 4.
10. Specification of Letters Patent; Patent Number 794,914 granted to Philip Yoe of Dayton, Ohio, Assignor to Himself, Edward W. Hanley, and Kerien Fitzpatrick December 19, 1905; p. 1.
11. Specification of Letters Patent; Patent Number 1,105,597 granted to Charles C. Abbott of Pittsfield, Massachusetts, August 4, 1914, p. 11; U.S. Patent Office. For further examples see: Patent Numbers 647,437, 696,925, and 820,790, assigned to Arthur Francis Bardwell and Marquis H. Johnson, respectively.
12. Specification of Letters Patent; Patent Number 1,087,796 granted to Syver Loe, of Minneapolis, Minnesota, Assignor to Loe Multiplex Voting Machine Company, of Minneapolis, Minnesota, A Corporation of Minnesota, February 17, 1914; p. 1.
13. Sara M. Evans, *Born for Liberty: A History of Women in America*. (New York: The Free Press, 1989), 166-172.

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Note about the Documents:

The patent drawings featured in this article are preserved by the National Archives among the Records of the Patent and Trademark Office, Record Group 241. Drawings of the inventions and quotes from the "Specifications of Letters of Patent" cited in this article are available online. Conduct keyword searches on the inventors' names at **www.google.com/patents.**