

ESSAY

Inventing the Woman Voter: Suffrage, Ability, and Patents

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Abstract

In 1870, the New York State Suffrage Association published a pamphlet titled “Woman as Inventor.” White suffragists distributed this history of female invention to prove women’s inventiveness, countering arguments that biological disabilities justified women’s legal disabilities. In the United States, inventiveness was linked to the capacity for original thought considered crucial for voters, making female inventiveness relevant to the franchise. As women could and did receive patents, activists used them as government certification of female ability. By publicizing female inventors, counting patents granted to women, and displaying women’s inventions, they sought to overturn the common wisdom that women could not invent and prove that they had the ability to vote. Although partially successful, these efforts left undisturbed the equally common assertion that African Americans could not invent. White suffragists kept the contemporary Black woman inventor invisible, relegating the technological creations of women of color to a primitive past. White suffragists created a feminist history of invention, in words and objects, that reinforced white supremacy—another erasure of Black women, whose activism white suffragists were eager to harness, yet whose public presence they sought to minimize in order to keep the woman voter, like the woman inventor, presumptively white.

Keywords: Disability; inventor; patents; race; suffrage

In 1870, the New York State Woman Suffrage Association published its first suffrage tract, *Woman as Inventor*.¹ Its author was Matilda Joslyn Gage, a white activist and prolific writer who would later help compile the multivolume *History of Woman Suffrage*, and who had recently cofounded the National Woman Suffrage Association (NWSA) and this affiliated state society.² Gage and her white allies were organizing in response to the Reconstruction Amendments, which had expanded the franchise to Black men.³ The failed push to include women had splintered the women’s rights movement and created a new emphasis on suffrage as a means to achieving the legal, social, and political equality that had been the aim of women’s rights activists since before the Civil War.⁴ At this transitional moment, these activists devoted scarce resources to distributing a history of women as technology creators.⁵

Their choice reflected a foundational understanding of the women’s rights movement, reflected in the call for the first national convention in 1850. As Pauline Wright Davis, another cofounder of the NWSA, had then written, women were a

“disabled caste,” in that they suffered legal disability, including (but not limited to) exclusion from the franchise.⁶ Opponents of women’s rights justified this status and the accompanying “forfeiture of great social, civil, and religious privileges” by claiming that women possessed inferior abilities; that is, they argued that women were “disabled” in a later sense of the term meaning deficient in physical and intellectual capacity.⁷ To counter this potent justification, white suffragists of the late nineteenth century turned to evidence of female invention.

Emphasizing inventive ability offered two strategic advantages. First, the United States had been promoting the inventiveness of its white male citizenry as an aspect of the national character linked to the capacity for original thought considered crucial for voters in a democratic republic. Therefore, activists hoped that proving female inventive ability would be particularly persuasive in their pursuit of the franchise. Second, there was a ready source of proof—the patent office. Women, despite their legal disabilities, could apply for and receive patents, and as more did so, suffragists used women’s patented inventions, individually and collectively, to argue for women’s fitness to vote. This argument echoed the logic of claims to the ballot by unpropertied white men and Black men based on military service, which combined a suggestion of having earned the vote by contribution to the state with a demonstration of a lauded ability, manly bravery.⁸ Suffragists offered new technologies and a demonstration that women had the prized ability to originate, not just imitate.

Between 1870 and ratification of the Nineteenth Amendment in 1920, white suffragists succeeded in overturning the common wisdom that women could not invent, a useful although not sufficient step toward overcoming opposition to female suffrage. Their campaign to challenge the gendered understanding of inventiveness, however, left undisturbed an equally common assertion that “the Negro Race,” limited to imitation with “little or no originality,” never patented.⁹ Negotiating the racial politics of expanding the franchise by frequently appealing to white supremacists, white suffragists kept the Black woman inventor, like Black women working for suffrage, largely invisible.¹⁰ The African American community similarly labored in these decades to identify and publicize Black inventors in order to assert claims for equality, but identifiable Black women patentees remained almost nonexistent, and Black suffragists did not stress inventiveness to show their fitness for the vote.

Female Abilities and Inventiveness

During the antebellum period, some women’s right’s leaders had already used evidence of female inventiveness as part of the “statistics, facts, and illustrations” that participants at the convention in 1850 hoped would “guide public opinion upward and onward” to the realization that woman deserved “political, legal, and social equality with man.”¹¹ Addressing the overflow crowd, Ernestine Rose, a Polish immigrant and experienced campaigner for married women’s property law reform, argued that women are equal to men “in the extent or operation of mind,” disputing what she termed the general belief that women lacked the capacity to invent.¹²

Rose’s claim that women possessed “inventive genius” was based on personal experience: she had reportedly invented an air freshener.¹³ Most Americans, however, lacked any knowledge of female invention. Instead, they encountered heroic tales of male inventors such as Eli Whitney and Robert Fulton, along with reiterated statements that women could not invent.¹⁴ The same year as the convention, for example, the

Bangor (Maine) Daily Whig & Courier used women's lack of inventiveness to prove female biological inferiority:

[The] following is an actual conversation which we overheard the other day, between a gentleman and lady:

Lady. ... [W]hat you think Peter means by woman being the weaker vessel?

Gentleman. Means as he says—that they have less mental capacity.

L. I do not believe that.

G. Indeed, facts prove it. What articles of usefulness did a woman invent? Her needle, thimble and pins, she had to get her head [man] to make.¹⁵

In the nineteenth-century United States, household sewing was woman's work, yet "Gentleman" claimed that women failed to invent even the sewing implements many used daily, ostensible proof that they were incapable of invention. This lack of capacity proved the biblical truth, contained in the writings of the Apostle Peter, that women were both "weaker" and necessarily subordinate to men.¹⁶ The secular Enlightenment thinkers who had influenced revolutionary rhetoric in North America also largely assumed the natural inferiority of women.¹⁷ Voltaire, for example, supported his belief in women's inferiority with the assertion that "they are seldom or ever inventors."¹⁸

As Rose and her fellow activists knew, claims of women's incapacities reached far beyond their failure to invent, and, as the century advanced, were increasingly grounded in science and medicine. Charles Darwin, whose ideas were widely influential, explained the inferior intellect of women in evolutionary terms and argued that human sexual dimorphism was a mark of advancement.¹⁹ Sexual inequality was therefore both natural and advantageous. Physical anthropologists collected data about smaller female brains to explain women's inability to think abstractly or originally.²⁰ Educators used these arguments to deny women access to the training in science and medicine they needed to refute them.²¹ Physiological arguments were also used to keep women from military service, blocking that means of claiming the franchise.

In this context, the patent office offered, according to white suffragist Mary S. Lockwood, "one place in the machinery of Government where ... she [woman] stands ... on an equal footing before the law."²² Despite significant barriers to female invention and patenting—which in addition to lack of education included the legal doctrine of coverture and limited access to networks of legal, financial, and business expertise—women could obtain patents.²³ After the Civil War, the patent office was issuing, on average, over 1,000 patents a month, and twice that number by the 1880s.²⁴ Out of that torrent, women earned perhaps a dozen a month, totaling about 150 patents per year, each patent the legal right to exclude others from making, using, or selling the invention for a limited period, giving the inventor time to commercialize it, just as Rose had done, reportedly supporting herself selling her air freshener.²⁵ Books for women "thrown on [their] own resources" considered patents as part of launching a business, focusing on "women of enterprise" rather than inventors.²⁶ Suffragists saw something additional, however. In a society in which women's biological limitations were not only continually reiterated but also used to keep women from venues and accomplishments by which they could prove their capacities, the woman patentee appeared a promising figure for activists seeking to shift public opinion about female ability.

Unique features of the U.S. patent system made patents strong certification of inventive ability. In contrast to registration systems, in which all who filed paperwork and

paid fees received a patent, the U.S. patent system employed technically trained examiners to investigate whether each applicant had originated an idea, not just imitated others.²⁷ Further, the U.S. government by midcentury was also using patents to demonstrate collective ability. Most Americans had not received a patent, but the federal government encouraged all to think they could. It constructed the large and elaborate Patent Office Building to include an exhibit hall, where patent models were displayed alongside evidence of conquering white masculinity, including George Washington's Revolutionary War sword and the bounty of western explorations.²⁸ Senator John Ruggles, who had orchestrated funding for the building in 1836, explained in a nationally circulated report that the display would "elevate our national character" by providing evidence of "our originality." Patents, as proxies for the awakened "dormant genius" of white male Americans, proved the "national character" necessary to make the Spirit of '76 succeed as the country expanded.²⁹

Since the Revolution, American elites had believed that citizens who participated in democratic governance required the capacity to think independently. Voters needed to form their own opinions, not just imitate those of others. Initially, states used property restrictions to ensure voters who thought for themselves. By the mid-nineteenth century, however, states lifted voting restrictions for white men and formally excluded women and nonwhites from the polls.³⁰ Believed incapable of independent thought, they, along with children and the insane, might be citizens, but they could not be voters.

Like Rose, Gage understood these stakes when she wrote her history of female invention. To prove female inventive ability, she boldly claimed "one of the greatest mechanical triumphs of modern times," the cotton gin, as a woman's invention. Although Whitney had patented the gin credited with transforming the southern economy, Gage explained that Catherine Greene, a white widowed plantation owner, originated the idea, but like other inventive women, did not seek a patent herself for fear of "contumely and ridicule."³¹ Gage stressed the economic value of women's inventions, attributing the silk industry to female innovators in ancient China and crediting American Betsy Metcalfe, who developed an innovative method of weaving straw, with launching a bonnet industry that provided employment for 10,000 workers and generated \$500,000 in annual business.³² Metcalfe, like Greene, failed to seek a patent, not wishing "to have my name sent to Congress."³³ Arguing that other women also hid their inventiveness "as improper"—that is, as a violation of assumed sex roles—Gage explained the relative invisibility of female inventors.³⁴

Gage published her history both as a suffrage tract and in the NWSA newspaper, *The Revolution*.³⁵ The editors of the much longer-lasting *Woman's Journal*, associated with the rival American Woman Suffrage Association (AWSA), also promoted the woman inventor.³⁶ They noted that "it is sometimes said that 'Women cannot invent and should not vote,'" and offered a "brief sermon" on that "text."³⁷ The "brief sermon" consisted of the story of Lucy Johnson, who had developed a method of weaving seamless bags that others had patented to their profit, echoing Gage's tale about Greene.³⁸ The ironic use of "text" and "sermon" likened the syllogism that made women's disenfranchisement a result of their lack of inventiveness to an unassailable truth, which in the United States drew its authority not just from Christianity but also from patriotic mythology about the national character.

To show that women had the character required of voting Americans, *Woman's Journal* turned to patents. Its editors quoted the patent commissioner, who noted that "any sketch of American inventions" needed to include "the part taken by women" and described his encounter with a woman who was seeking her seventh

patent.³⁹ As the highest authority on female inventiveness, they cited the editors of *Scientific American*, who also operated the country's largest patent agency. Their female clients taught them to "say to those who are unbelievers in regard to the power of women to achieve, as a class, anything higher than a pound cake or a piece of embroidery that ... our experience teaches us that women has [sic] as much natural inventive talent as men."⁴⁰

Exhibitions and Patent Lists

Finding women patentees was tricky, however, and often depended on happenstance. The patent office had never identified patentees by sex or race. Women could be identified only from inventor names in its annual reports, and the few female first names were easily overlooked, both in the reports and in the patent office exhibit. The *Revolution* editors used a report in the *Cleveland Ledger* to identify Miss Dewey of New Albany, Indiana, adding her name "to the roll of those who are a standing refutation of the slander that there are no women's names in the Patent Office reports."⁴¹

As the patent office began to print weekly patent lists in 1872, a female name might catch an editor's eye, as it had in Cleveland. A San Francisco paper noted that: "Isabella C. Schramm of Des Moines has patented a boiler attachment for cooking and washing. Did somebody say women invent nothing but fiction?"⁴² Papers in Macon, Georgia, and Philadelphia passed along the news in 1873 that "two New England women are making money as inventors with delightful rapidity." The papers reported that one had invented a machine for making paper bags and had refused \$50,000 for her patent, and the other had patented a "self-fastening button."⁴³

While individual stories supported the suffragist aim of shifting public opinion about female ability, a display of women's inventions would more directly refute the tale of masculine invention told by the patent office exhibit. Nearly 10 million visitors to the Philadelphia Centennial International Exposition in 1876 could see such a display in the female-curated Woman's Pavilion.⁴⁴ The Women's Executive Centennial Committee sought to "give to the mass of women ... laboring by the needle and obtaining only a scanty subsistence, the opportunity to see what women were capable of ... in the race for useful and remunerative employment."⁴⁵ The white middle- and upper-class organizers displayed fine arts, crafts, clothing and textiles, books, and, occupying one-quarter of the exhibit space, inventions by seventy-nine women.⁴⁶ Although the committee members were eager to include inventions, seeking the help of the patent office to identify recent female patentees, the inventors might have been even more eager to participate. They used the exhibition, like the patent system, as an opportunity for "remunerative employment," offering their products for sale or seeking investors.⁴⁷ Unlike the organizers and many suffragists, many patentees were scrambling to support themselves financially.⁴⁸ Martha Coston, for example, who exhibited her signal flares, worked for over ten years to develop and commercialize her invention when she was left a widow with young children, eventually selling her patent for \$20,000.⁴⁹

Although not included on the committee, white suffragists used the Philadelphia world's fair to publicize their cause, seeking new directions after the recent Supreme Court defeat of their argument that the Fourteenth Amendment had granted women suffrage.⁵⁰ Gage and fellow New Yorker Susan B. Anthony stormed the stage during the opening ceremony to protest women's inequality.⁵¹ Gage, then the president of the NWSA, also published newspaper reports about the Woman's Pavilion, describing the displayed inventions, which included innovative garments and dressmaking

systems as well as bricks, collapsible furniture, medical appliances, washing machines, and dishwashers.⁵² Phebe Hanaford, a white AWSA founding member, declared: “The question is sneeringly asked sometimes, Can a woman invent? The great Centennial Exposition answered the question satisfactorily.”⁵³

As suffragists countered the “slander” that women never patented, the argument for women’s inferiority sometimes shifted to denigrate women’s inventions as trivial, pointing to women’s tendency to invent technologies related to traditionally female tasks as proof that their inventive ability was limited. One writer in 1869 had scoffed that only “one woman’s [invention] out of the hundred and fifty thousand is of equal benefit to both sexes when carried into the experience of actual life.”⁵⁴ Although Coston had completed her husband’s chemical research to develop her flares, the fair exhibit reflected what patent office records showed—that many women invented implements of sewing, cooking, and cleaning.⁵⁵ Even the organizers noted “a poverty of exhibits in some branches of industry.”⁵⁶

Despite this critique, white suffragists continued to use exhibits to demonstrate female inventive ability. In 1885, Julia Ward Howe, a nationally known white suffragist and AWSA founder, opened the Woman’s Department at the World’s Industrial and Cotton Centennial Exposition in New Orleans by asking the “persistent question,” “what have women ever invented?” and then pointing to the fair’s exhibits as a “triumphant answer.”⁵⁷

Such exhibits, however, were inherently limited. They attracted only inventors who could afford to ship their inventions for display, discouraging those manufacturing larger items. Further, some women chose to exhibit in general exhibit spaces for maximum commercial advantage.⁵⁸ And though fairs drew large audiences, only a small fraction of Americans attended each fair. A list of all female patentees could circulate cheaply and extensively, providing “statistics, facts and illustrations” of women’s inventiveness, but obtaining such a list was not straightforward. Charlotte Smith, a white sometime-editor and campaigner for women’s economic independence, claimed that beginning in 1879, she had asked successive patent commissioners to collate a list. Although they were willing to track newly issued patents apparently granted to women, they refused to assign clerks to review previously granted patents for female first names.⁵⁹

By the 1880s, however, partial lists and tallies began to circulate among suffragists and then in the mainstream press. A report on women’s rights in Massachusetts published in *The History of Woman Suffrage* noted that eighty-seven patents had been granted to women in 1880, disproving the charge that “women never invent anything.”⁶⁰ A Denver newspaper gave the total as seventy-eight, but noted that “not one of them was for a kitchen utensil.”⁶¹ Gage published a lengthy article on the woman inventor in the *North American Review* in 1883, augmenting her previous historical survey with a discussion of recent female patentees, each demonstrating “self-reliant thought.”⁶² The *New York Times* reported that “the common reproach ... that [women] possess no inventive or mechanical genius—and the reproach was certainly once more common that it is now—is squarely answered” by Gage’s article.⁶³ In 1887, white journalist Ida Tarbell reported that a patent office employee had devoted “all his leisure time” for three years to identifying patents issued to women, counting almost 2,000.⁶⁴ The once-skeptical *Bangor Daily Whig & Courier* reported that based on “Nineteen Hundred Witnesses to Their Ingenuity Found in the Patent Office,” “the world has not given woman due credit for her inventive faculties.”⁶⁵

Perhaps in belated response to Smith, in 1888, the patent office published a list of over 5,000 patents granted to women between 1790 and 1888.⁶⁶ Reporters used this evidence to assess female inventiveness. The *Boston Daily Globe* declared that the list gives “no escape from [the] conclusion” that it was not nature but rather “the fact that woman has not had a fair chance” that had limited women’s inventions, proven by the accelerating rate of patents granted to women in recent years as she was freed “from old-time social prejudices.”⁶⁷ White Colorado journalist and suffragist Ellis Meredith used the list to “hit back” at a recent book by a physician whose argument against female physicians began with the claim that “all human work ... is the work of man,” describing the author as yet another insufficiently informed male expert who needed only to visit the patent office to see women’s “inventive genius.”⁶⁸

At the World’s Columbian Exposition of 1893 in Chicago, the Board of Lady Managers displayed the list itself in the Woman’s Building.⁶⁹ The all-white board, which included some suffragists, declared:

It is our intention to make in the Woman’s Building an exhibit which will clear away existing misconceptions as to the originality and inventiveness of women.⁷⁰

Board chair Bertha Palmer, a wealthy clubwoman who was not a suffragist, asked the suffragist Lockwood to head the patents committee.⁷¹ She urged Lockwood, an amateur historian who had been developing a lecture on the history of women in invention, to pick “distinguished and brilliant” inventions for display.⁷² Again, however, there was tension between demonstrating women’s collective ability and each inventor’s decision about how best to profit from exhibiting. About 100 women displayed inventions in the Woman’s Building, with over 200 others exhibiting in other parts of the fair.⁷³

In his speech to open the fair, President Grover Cleveland told the crowd that “We have made and here gathered together objects of use and beauty, the products of American skill and invention. We have also made men who rule themselves.”⁷⁴ He thus affirmed the continuing emphasis on the inventive ability of “men who rule themselves” and underscored the masculinity assumed for both inventiveness and civic participation. As the suffragists had been eagerly pointing out, the Woman’s Building contained yet more evidence that women too possessed “American skill and invention,” and therefore had the ability to participate in self-rule through the franchise.

By the turn of the century, activists had help from the patent office and the mainstream press in fighting the battle against what the *Boston Globe* now called the “old libel” that women could not invent.⁷⁵ A national magazine profiled the “woman inventor” in 1900 as an example of the “American Woman in Action,” illustrating the story with patent drawings, and newspapers touted her as both “clever” and on her way to riches.⁷⁶ Still, as noted in the suffragist *Woman’s Citizen* in 1917, “every now and then some hard-pushed detractor of woman’s political potentiality drags forth the query ‘where are your great women inventors,’ in a sort of befuddled insistence that superior inventive power inheres in man in causal relation to his divine right to vote.”⁷⁷ Continuing a half century of effort, the author used patents to refute the anti-suffrage argument, noting that 7,942 patents were granted to women between 1884 and 1910.⁷⁸ Even as states were ratifying the Nineteenth Amendment, Florence King, a white woman who had become the first female registered patent attorney in 1897, argued that “women never have been and probably never will be given proper credit for what they have [invented] ... unless women themselves” undertake “the writing of the history of invention.”⁷⁹

Race and the Woman Inventor

Using patents as evidence, white suffragists worked to rewrite the history of invention to include women, successfully changing public opinion about female inventive ability. Common wisdom had become “old libel,” overturning a key claim of biologically based female disability. The “American Woman in Action” recovered through their efforts, however, was white. In their histories, patent lists, and exhibits, white suffragists claimed inventiveness as a universal feminine ability while representing the contemporary female patentees who were contributing to industrialized America and would be striding to the ballot box as white women.

In part, this outcome arose from reliance on patents. The Black woman inventor, like white women inventors, has always existed, but her contributions have been even more deeply buried. Most African American women before emancipation were enslaved and lacked the power to claim credit for, let alone ownership of, their inventions. Enslaved persons, and between 1858 and 1861 all African Americans, were barred from the patent office.⁸⁰ Free Black women, even after emancipation, faced additional and more severe barriers to invention and patenting in the form of Black codes and limited access to education and resources. Despite often being, in the words of African American activist and inventor Gertrude Bustill Mossell, “too poor to secure patents” even as they were anxious for business success, Black women invented new technologies as varied as those of white women, including “kitchen utensils,” furniture, a hoist, and a portable newsstand.⁸¹ Black women also faced a double pressure to avoid patenting in their own names, fearing that both sex and race prejudice would hinder commercialization of products known to be the result of a Black woman’s effort.⁸² An author and physician’s wife, Mossell was not poor, but did not patent her innovative camping table and portable kitchen.⁸³

When a few Black women managed to overcome these barriers and obtain patents, the lack of racial identification in patent office records kept their accomplishments hidden. The updated patent office list of female patentees released in 1892 included Judy W. Reed and Miriam E. Benjamin, both of Washington, DC, and Sarah E. Goode of Chicago.⁸⁴ The patent officials who made the list, and the white Americans who read it, would not have known that these women were Black.

These women are identified as Black inventors because African American activists made their own lists of patentees through painstaking use of personal recollection.⁸⁵ Just as white suffragists sought to undo the syllogism that “women cannot invent and should not vote” by proving female inventive ability, Black Americans sought to counter the argument used by white supremacists that “the colored race should be denied the right to vote because ... ‘no one of the race had ever yet reached the dignity of an inventor.’”⁸⁶ African American male activists published a list of Black patentees in 1894 that included Miriam Benjamin.⁸⁷ These efforts, however, initially erroneously identified Benjamin as the lone female Black patentee and uncovered only about twenty others by 1913.⁸⁸ Instead of thousands of “witnesses to their ingenuity,” Black women could point to a mere handful, perhaps the reason Black suffragists did not stress inventive ability in making their argument for the vote.⁸⁹

The lack of identified Black women patentees, however, was only one element of the racialized portrayal of female inventiveness by white suffragists. They also engaged in active discrimination to keep the contemporary Black woman inventor invisible and promoted a history of female invention that relegated nonwhite women to the primitive past. At the Centennial Exposition in Philadelphia, both male and female white

organizers had almost completely excluded Black Americans from participating as organizers, employees, speakers, or exhibitors.⁹⁰ In New Orleans, when Black women requested space within Howe's Woman's Department, they were deflected to the "colored department," keeping the displays of female ability white only.⁹¹ In the "colored department," visitors saw "many useful inventions by colored men," but apparently no inventions by women.⁹² Despite persistent agitation and protest by Black women, the Board of Lady Managers in Chicago remained all white, and Palmer refused to hire Black women or to solicit African American exhibits, joining the anti-Black racism of the male fair organizers.⁹³ In response, Black activist Ida B. Wells published an essay collection called *The Reason Why the Colored American Is Not in the World's Columbian Exposition*, which she sold from a table in Haitian exhibit.⁹⁴ It included a list of seventy-five patents granted to Black Americans since 1845, including Benjamin's patent for "gong and signal chairs for hotels."⁹⁵ The only displayed patented invention credited to a Black woman was a pastry fork invented by Annie Mangin of Woodside, NY. It was tucked into the one case in the Woman's Building permitted for an "Afro-American Exhibit."⁹⁶

Compounding this minimal recognition that the "originality and inventiveness of women" in 1893 included Black women, Palmer and Lockwood solicited white ethnologist Otis Mason of the Smithsonian Institute to prepare an exhibit for the Woman's Building called "Woman's Work in Savagery" that filled eighty cases.⁹⁷ Drawing from the government's collections taken from Indigenous peoples around the world, the display was intended to show how "women, among all the primitive peoples, were the originators of most of the industrial arts," their actions as the "first inventors" in "antiquity" echoed in the work of "savages today."⁹⁸ This display of "savage" inventions of non-European American women, such as handmade baskets and woven cloth, contrasted sharply with the assumed whiteness and superiority of the patented machines in the invention room.⁹⁹ Lockwood explained that nineteenth-century woman inventors had "caught the afterglow of the fore-world," and after women's "inventive genius" "had lain dormant for ages" were now seeking patents, arguing for a temporal gap between savagery and modernity.¹⁰⁰ Mason intended to teach fairgoers that this gap was not only temporal, but biological. European Americans had achieved a higher stage of human evolution, while Native Americans who continued to use these ancient inventions remained in an early stage, justifying their status as wards of white Americans, incapable of full legal personhood.¹⁰¹ As Wells and other activists well knew, similar arguments had long been made about people of African descent.¹⁰² The Woman's Building exhibits taught visitors that women of color had participated in a long-ago past of female invention, but were not participants in the patentable inventions linked to democratic self-governance in the contemporary United States.¹⁰³ The feminist history of invention written by white suffragists, in words and objects, was a racialized history that reinforced white supremacy—another abandonment of Black women, whose activism white suffragists were eager to harness, yet whose public presence they sought to minimize in order to keep the woman voter, like the woman inventor, presumptively white.¹⁰⁴

Inventing the Woman Voter

White suffragists identified the patent office as a site where the federal government certified individual ability in ways that could be deployed for collective political advocacy, claiming female inventive ability in order to challenge legal disability and win the

franchise. While they succeeded in convincing at least some portion of the public that women *could* invent, this success did not convince male legislators that women *should* vote. Overcoming claims of women's mental disability, even partially, may have been a necessary part of the suffrage movement, but it was far from sufficient. Women deployed many other strategies to secure passage and ratification of the Nineteenth Amendment.¹⁰⁵ Further, just as inventiveness was only one ability among many that women were accused of lacking, the vote was only one item on what had begun as a lengthier agenda, demanding the lifting of all legal barriers that kept women a "disabled caste" along with social and political equality.¹⁰⁶ The vote, too, was necessary but not sufficient.

Black women did not have to wait until 1920 to learn that lesson. The Fifteenth Amendment granting suffrage to Black men had proven far from a guarantee of voting rights against a concerted state-based campaign of disenfranchisement.¹⁰⁷ As Black Americans continued to fight for full equality, they turned to the patent office and wrote histories of invention. For the same strategic reasons that had motivated white suffragists, they used inventive ability as part of a narrative of collective Black ability and progress since emancipation, seeking to shift the common wisdom that supported anti-Black racism. Activists seeking racial equality displayed every identified patent granted to a Black American as part of the "American Negro" exhibit at the Paris Exposition of 1900.¹⁰⁸ At the urging of Black American clubwomen, that exhibit then traveled to other fairs in the United States, and African Americans continued to include patents and inventions in Black-organized exhibitions that demonstrated Black Americans' history and ability.¹⁰⁹ Throughout the twentieth century, women and men wrote histories of Black invention, continually lengthening the list of Black patentees by adding every woman and man they could identify.¹¹⁰

White women returned to inventors in the late twentieth century as they pressed for equal rights, again claiming Catherine Greene as a starting point for the history of American women's invention.¹¹¹ For those seeking "full legal, social and political equality," the fight—and references to collective inventive ability—had not ended in 1870 with the Fifteenth Amendment nor in 1920 with the Nineteenth.

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Notes

1 Matilda Joslyn Gage, *Woman as Inventor*, Woman Suffrage Tracts, no. 1 (Fayetteville, NY: New York State Woman Suffrage Association, 1870).

2 Elizabeth Cady Stanton, Susan B. Anthony, Matilda Joslyn Gage, Ida Husted Harper, eds., *History of Woman Suffrage*, 6 vols., (Rochester, NY: Charles Mann Press, 1881–1922; repr., New York: Arno Press, 1969); Leila R. Brammer, *Excluded from Suffrage History: Matilda Joslyn Gage, Nineteenth-Century American Feminist* (Westport, CT: Greenwood Press, 2000), 7, 13–14; Mary E. Paddock Cory, "Matilda Joslyn Gage: Woman Suffrage Historian, 1852–1898," (PhD diss., University of Rochester, 1995).

3 U.S. Const., amend. XIII (1865), amend. XIV (1868), amend. XV (1870). See also Laura E. Free, *Suffrage Reconstructed: Gender, Race, and Voting Rights in the Civil War Era* (Ithaca, NY: Cornell University Press, 2015).

- 4 Ellen Carol DuBois, *Feminism and Suffrage: The Emergence of an Independent Women's Movement in America, 1848–1869* (Ithaca, NY: Cornell University Press, 1978; repr., with new preface, 1999).
- 5 For convenience, I use “technology” in its contemporary sense, although Gage and her contemporaries did not employ the term. See Eric Schatzberg, “‘Technik’ Comes to America: Changing Meanings of ‘Technology’ before 1930,” *Technology and Culture* 47 (July 2006): 486–512.
- 6 “Call of Convention,” *Proceedings of the Woman's Rights Convention held at Worcester, Oct. 23rd and 24th, 1850* (Boston: Prentiss & Sawyer, 1851), 5. See also Nancy Isenberg, *Sex and Citizenship in Antebellum America* (Chapel Hill: University of North Carolina Press, 1998), 32–34.
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