Black Inventors Who Have Improved Your Life

Introduction

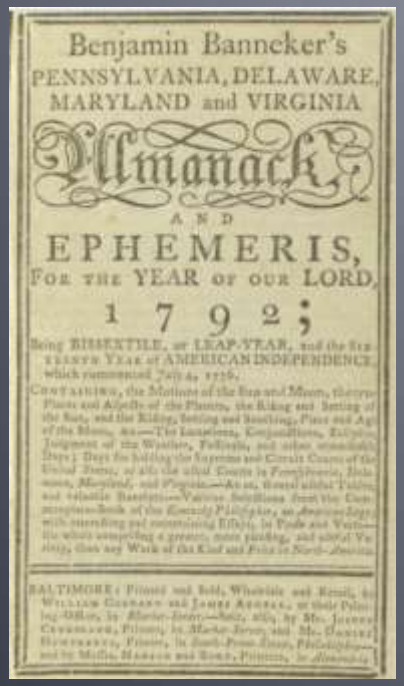
"Where Would the World Be Without Black People," a story available in several variations on the Internet, describes important inventions that make our lives easier—many of which we today take for granted. All are products of Black inventors. When I tried to confirm each inventor mentioned, I found two were probably wrong and several were misleading. Yes, these individuals had made major contributions through their inventions, however they were not original inventions but improvements on existing ones. The importance of this story should not be underestimated in it's value to educating children, especially since most portrayals of Black people in the media are just new versions about the same individuals over and over. This is not to say they aren't well-deserving, however this can lead to imagining they are somehow exceptional and rare to their race.

Far too many adults, including me, have been ignorant of this important part of our history. When I say "our history," it's not to say I'm Black. I am a White senior citizen who believes that all history is "our" history, no matter our nationality, gender identity, race, ethnicity, culture or any other area we choose to distinguish ourselves from others. Therefore, I made this slide presentation which is aimed at educating and inspiring the adults like me who I trust will find this interesting enough to share with others.

In searching the Internet it was disconcerting to say the least (I found myself experiencing a lot of "righteous indignation") that some photos of these inventors were duplicated. They had been placed with the biographies of two or more (sometimes quite a few more) people. I made every effort to try and determine to whom the photo did in fact belong. I apologize in advance for any errors; it was a difficult process. Where no photo could be identified, a silhouette has been used. Two photos were found for Alice Parker. One looks like a white woman. But the Black woman's photo was also used for Marie Van Brittan Brown and from the sites where it was linked to Brown, it seemed authentic. Due to the nature of the way people use the Internet, it could be that someone took a picture of a white woman named Alice Parker and put it with an article and then others just copied it for their own articles. But due to the number of times it is used and the sites where it was found, it may just be that Alice Parker had both White and Black ancestors and the White dominated at her birth. Society would still have said she was Black unless she had decided to "pass" for White. I chose to include this photo rather than substitute a silhouette.

Benjamin Banneker

Invented America's First Clock, circa 1750


Benjamin Banneker's
PENNSYLVANIA, DELAWARE,
MARYLAND and VIRGINIA
Almanack
AND
EPHEMERIS,
FOR THE YEAR OF OUR LORD,
1792;

A man of many talents, **Benjamin Banneker** is best known for creating what may have been the first clock in America. It surely was the first in Maryland and the novelty, which he built after taking apart and acquaintances pocket watch to study the workings and then using that knowledge as the basis for constructing a clock from pieces of wood. It ran for decades, keeping precise time. Fascination brought people flocking to see this wonder and Banneker ended up opening a watch repair and clock-making business. **Banneker** was on the surveying team that laid out the plans for Washington, D.C. It is that skill which put him on a U.S. postage stamp, because as explained on black-inventor.com: "Appointed to the three-man team by president George Washington, **Banneker** wound up saving the project when the lead architect quit in a fury—taking all the plans with him. Using his meticulous memory, **Banneker** was able to recreate the plans." **Benjamin Banneker** worked variously as farmer, mathematician, inventor, and astronomer. He was also an active anti-slavery proponent. and authored and published an almanac for the year 1792.

Thomas L. Jennings

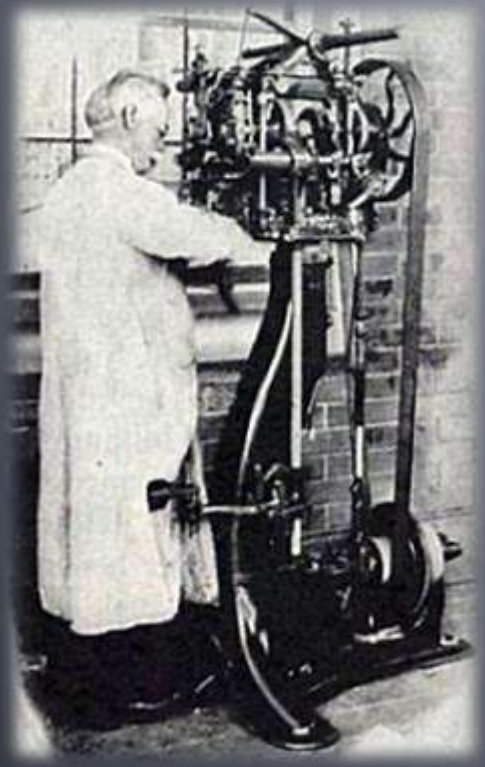
Dry Scouring, 1821

Tailor **Thomas L. Jennings,** realizing that many fabrics were resistant to established methods of cleaning, experimented until he finally developed a process he called "dry-scouring," known today as dry cleaning.

Jennings filed a patent in 1820. He was required to sign a document declaring he was indeed a citizen of the United States. Born a free Black man in 1791**, Jennings** was considered a citizen and received U.S. Patent No. 3306x on March 3, 1821 making him the first African-American to receive a patent. He used the money from the patent to purchase the freedom of his enslaved family. **Jennings** continued financial support of abolitionist causes.

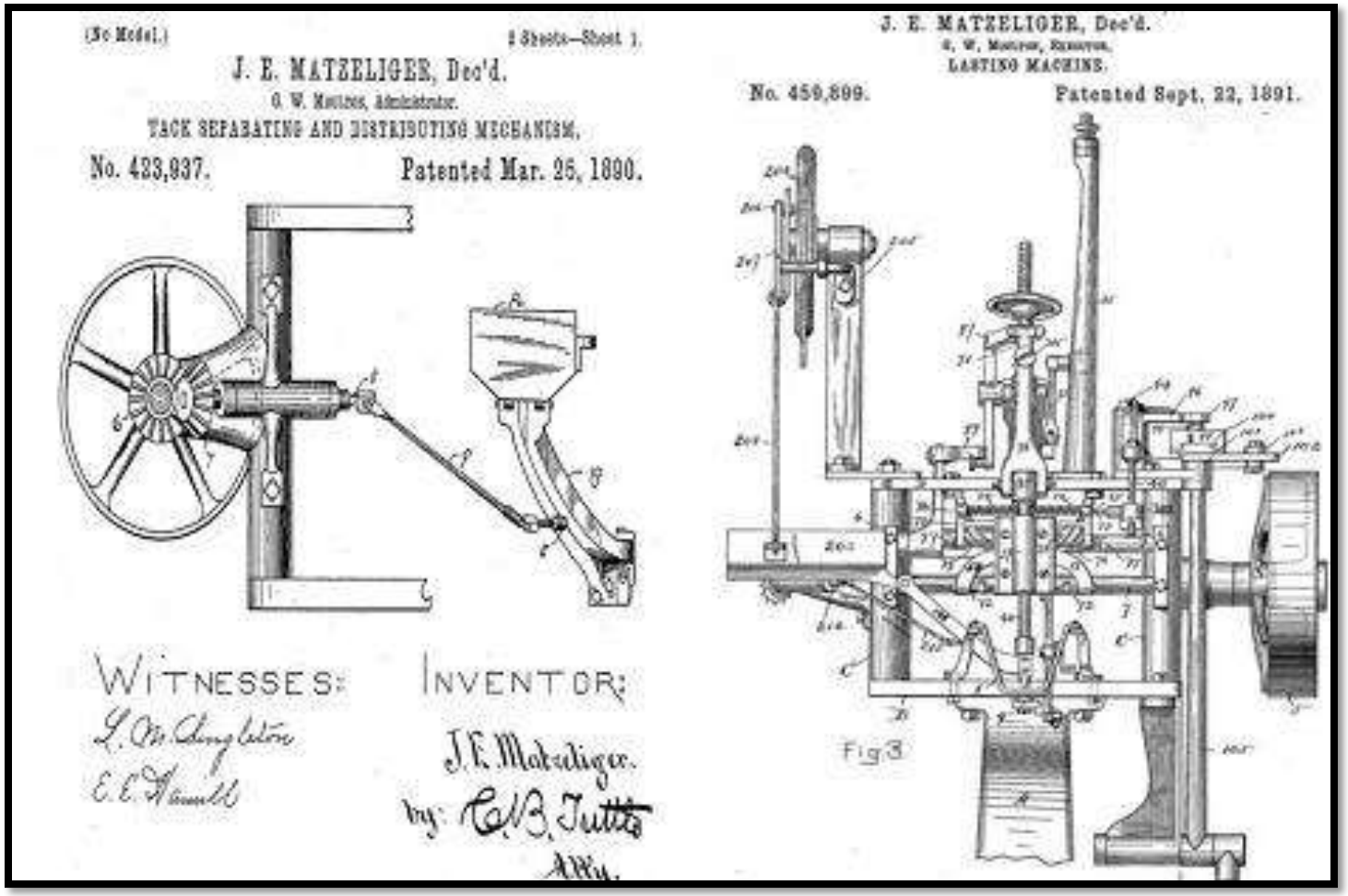
JAN E. MATZELIGER

Shoelasting Machine, 1883



After immigrating to the U.S. from Dutch Guyana (today's Suriname) **JAN E. MATZELIGER**, apprenticed in a shoe factory where he learned of cordwaining, which is the craft of making leather shoes by hand. According to biography.com, "Cordwainers made molds of customers' feet, called "lasts," with wood or stone. The shoes were then sized and shaped according to the molds. The process of shaping and attaching the body of the shoe to its sole was done entirely by hand with 'hand lasters.' This was considered the most difficult and time-consuming stage of assembly. Since the final step in the process was mechanized, the lack of mechanization of the penultimate stage, the lasting, created a significant bottleneck." **MATZELIGER** solved the problem by developing a mechanized lasting machine for which he was granted U.S. Patent No. 274,207 on March 20, 1883.

Shoe Lasting Machine



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J. E. MATZELIGER, Dec'd.

O. W. Masters, Administrator.

TACK SEPARATING AND DISTRIBUTING MECHANISM.

No. 423,837. Patented Mar. 25, 1890.

WITNESSES: INVENTOR:

L. M. Langston

E. C. Hamill

J. E. Matzeliger.

by: C. B. Tuttle

Atty.

J. E. MATZELIGER, Dec'd.

O. W. Masters, Executor.

LASTING MACHINE.

No. 459,899. Patented Sept. 22, 1891.

Fig 3.

William H. Richardson

Reversible Baby Carriage, 1889

William H. Richardson improved baby carriages through the use of a center joint which allowed the bassinet to be easily rotated to either face towards or away from the individual pushing it. He also designed the wheels to move independently, giving the carriage better maneuverability. **Richardson** received U.S. Patent No. 405,600 on June 18, 1889.

Reversible Baby Carriage

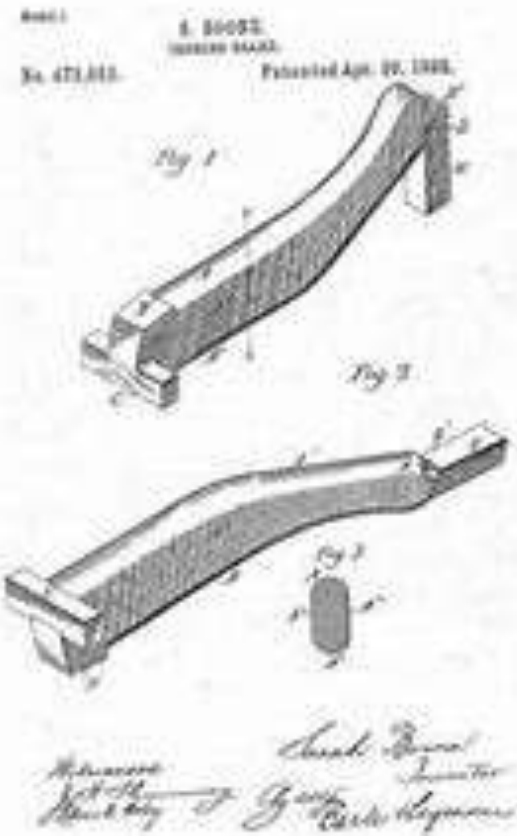
Sarah Boone

Ironing Board, 1892

U.S. Patent No. 473,653 was issued to seamstress **Sarah Boone** on April 26, 1892, making her the one of the first Black women to achieve that award. **Boone**, a free woman who had been born to enslaved parents, put her problem-solving skills to work because the way clothes had been ironed was to use a plank across the tops of chairs or simply iron on the kitchen table. According to an article on Biography.com:

"...that was fine for a wide skirt but ill-suited for the contours of tight, fitted material. **Boone**'s solution was to create a narrower, curved board that could slip into sleeves and allow for a garment to be shifted without getting wrinkled. Her creation also was padded, to eliminate the impressions produced by a wooden board, and collapsible for easy storage."

Ironing Board



Patent No. 473, 653

Ironing Board Patented by Sarah Boone

George T. Sampson

Clothes Dryer, 1892

According to chocolatevent.com, "**George T. Sampson** did not invent the clothes dryer, but improved it so much so that it has been recognized as the real starting point of the modern day clothes dryer. His innovation was in designing the dryer as a frame that could be placed over a stove and easily removed when not in use. Earlier dryers that also used heat to dry clothes were called ventilators.

However, these were large metal drums that had to be placed over a fire and constantly rotated. **Sampson** 's design did not require manual rotation or an open flame." In 1892 he received U.S. Patent No. 476,416. Reference.com states: "**Sampson** 's other known patent for a sled propeller, No. 312,388, was filed in 1885 and involved attaching a propelling device to a tricycle. The wheels were replaced with runners so it would function on the snow. People occupying the sled would operate the propeller with their feet using pedals. The diagrams for this and **Sampson** 's other patent are still on file with the U.S. patent office today."

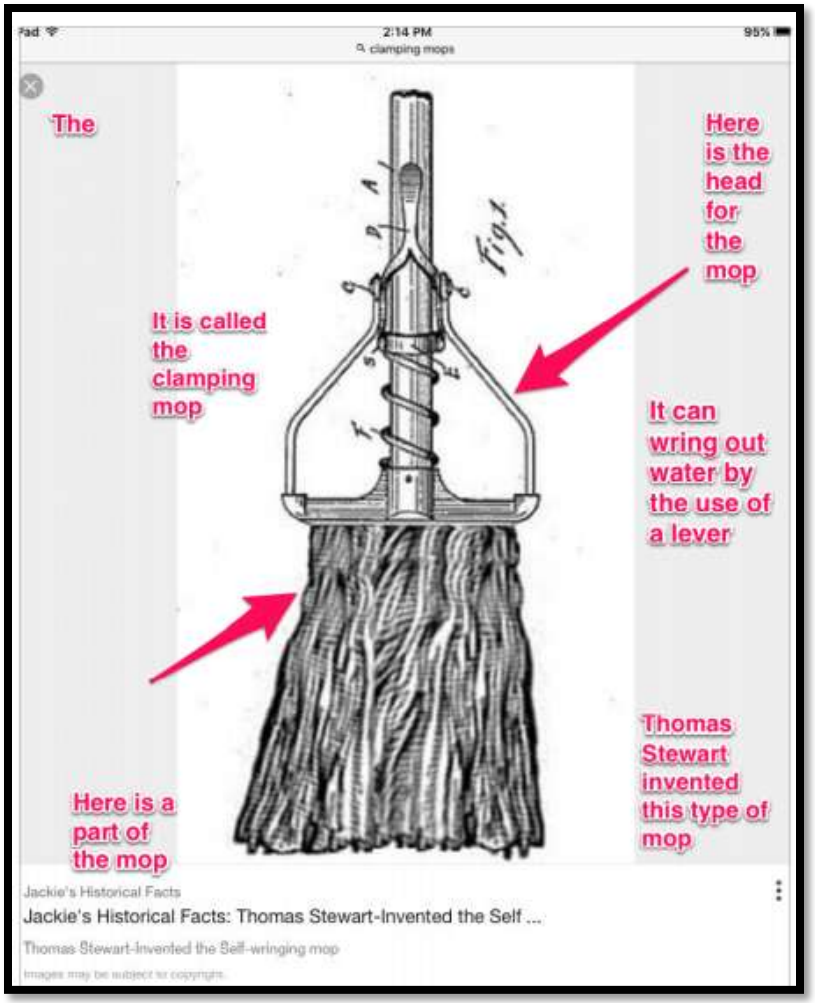
Thomas W. Stewart

Clamping Mop, 1893

One of the first African American inventors to be awarded a patent, **Thomas W. Stewart** developed two improvements to the mop. One was a mop head that could be removed by unscrewing it from the base of the mop handle, allowing users to clean the head or discard it when it wore out. The other was a lever that attached to the mop head. When pulled it would wring water from the head without users having to get their hands wet. Stewart received U.S. Patent No. 499,402 on June 11, 1893.

Mary Bellis of ThoughtCo.com writes: "**Stewart** also co-invented with William Edward Johnson an improved station and street indicator in 1883. It was used with railways and cars on the street to signal what road or street the vehicles were crossing. Their indicator would automatically activate a signal by means of a lever on the side of the track. Four years later, **Stewart** invented an improved metal-bending machine that was able to oscillate."

Clamping Mop



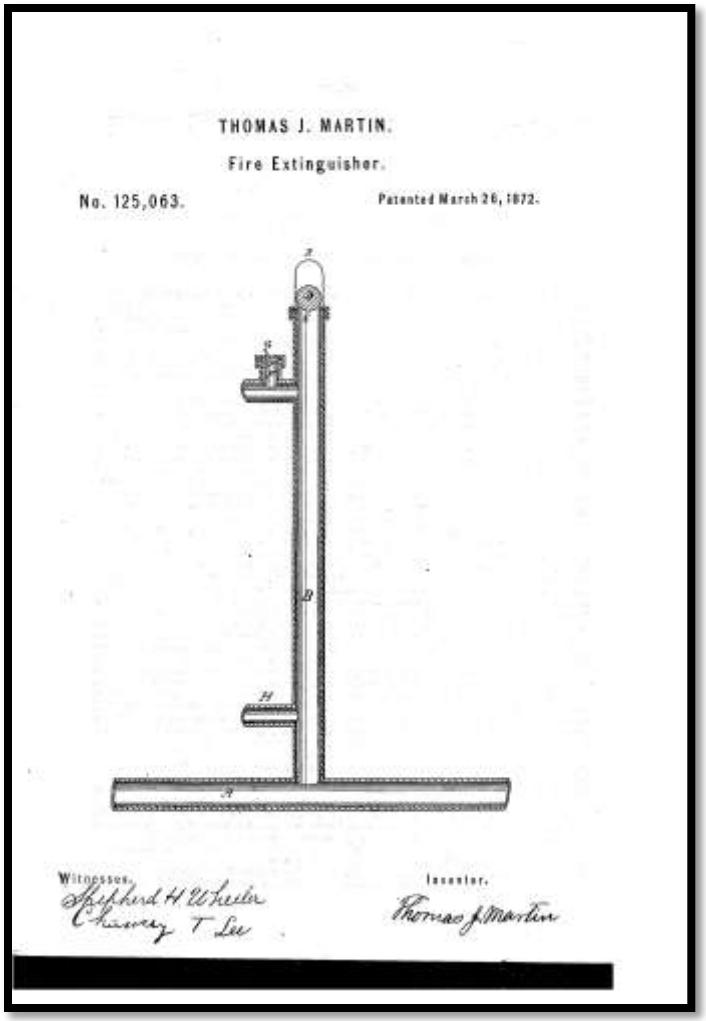
Thomas J Martin

Fire Extinguisher, 1872

Thomas J Martin was granted U.S. Patent No. 125,063 on March 18, 1872. He improved on existing fire extinguishing equipment by adding a system of valves and pipes that could be attached to a water source.

Although British Captain George William Manby is credited with creating the modern style of the fire extinguisher in 1818, **Martin**'s improved version is often regarded as the first practical use of the machinery by some historians.

Fire Extinguisher



THOMAS J. MARTIN.

Fire Extinguisher.

No. 125,063. Patented March 26, 1872.

Witnesses.
Shepherd H Wheeler
Chauncey T Lee

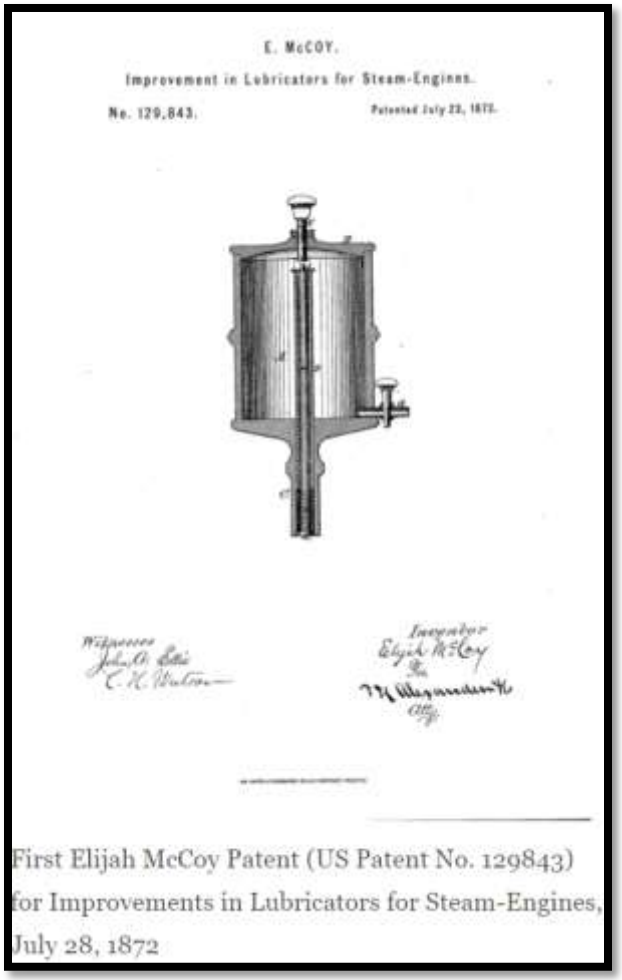
Inventor.
Thomas J Martin

Elijah McCoy

Steam-Engine Lubricator Improvements, 1872

Born free in Canada for parents who escaped enslavement, **Elijah McCoy** went to Scotland at age 15 as an apprentice, ultimately becoming a mechanical engineer. On **McCoy**'s return, his family had moved back to the U.S. and he joined them in Michigan. held 57 United States patents, mostly related to the railway. The first was U.S. Patent No. 129,843 "Improvement in Lubricators for Steam-Engines" issued in 1872. **McCoy**'s inventions, which were not headline-making outside the field of steam engines, were yet so associated with quality and good function that people began using "the real McCoy" to refer to quality products. His life became the subject of the 2006 play by Canadian playwright Andrew Moodie's, *The Real McCoy.*

Improvements in Lubricators for Steam-Engines



E. McCOY.

Improvement in Lubricators for Steam-Engines.

No. 129,843. Patented July 23, 1872.

Witnesses
John A. Ellis
C. H. Burton

Inventor
Elijah McCoy
By
W. Alexander
Atty.

First Elijah McCoy Patent (US Patent No. 129843) for Improvements in Lubricators for Steam-Engines, July 28, 1872

Lewis Howard Latimer

Carbon Filament for Light Bulb, 1876

Edison.Rutgers.edu states that "**Lewis Latimer** received, singly or with other inventors, seven U.S. patents. He witnessed two of Hiram Maxim's patents and was assigned a half interest in one issued to William Norton." Self-taught in mechanical drawing and drafting by paying close attention whilst employed as an office boy at the Crosby and Gould patent law office, they became aware of his talents and promoted him to draftsman. He went on the work closely with Alexander Graham Bell, drawing the patent for his telephone. He later became Thomas Edison's chief draftsman and patent expert. Latimer 's book I*ncandescent Electric Lighting: A Practical Description of the Edison System* was published in 1890. Some of his notable accomplishments:

- Co-invented with W.C. Brown an improved of a train water closet
- Drew and submitted patent for Alexander Graham Bell's telephone
- Redesigned the filament resulting in longer-lasting and more cost-efficient light bulbs
- Devised a safer elevator
- Invented Racks for Hats, Coats, and Umbrellas
- Improved on the Book Supporter to keep books neatly aligned on shelves.
- Devised an Apparatus for Cooling and Disinfecting improving conditions in hospitals by preventing dust and particles from circulating within patient rooms and public areas.

Lloyd P. Ray

Dustpan, 1897

Cleaning floors was a dirty chore. People had to get down on their hands and knees and it was difficult to do a thorough job. **Lloyd P. Ray** came up with a solution: a wooden-handled collection plate to hold the sweepings.

His industrial version had a longer handle which made it possible to sweep while standing. Modern versions have few variations, mostly in the materials used.

Ray's invention received the 165th patent ever given out in the U.S. Patent No. 587,607 was issued to Rayon August 3, 1897.

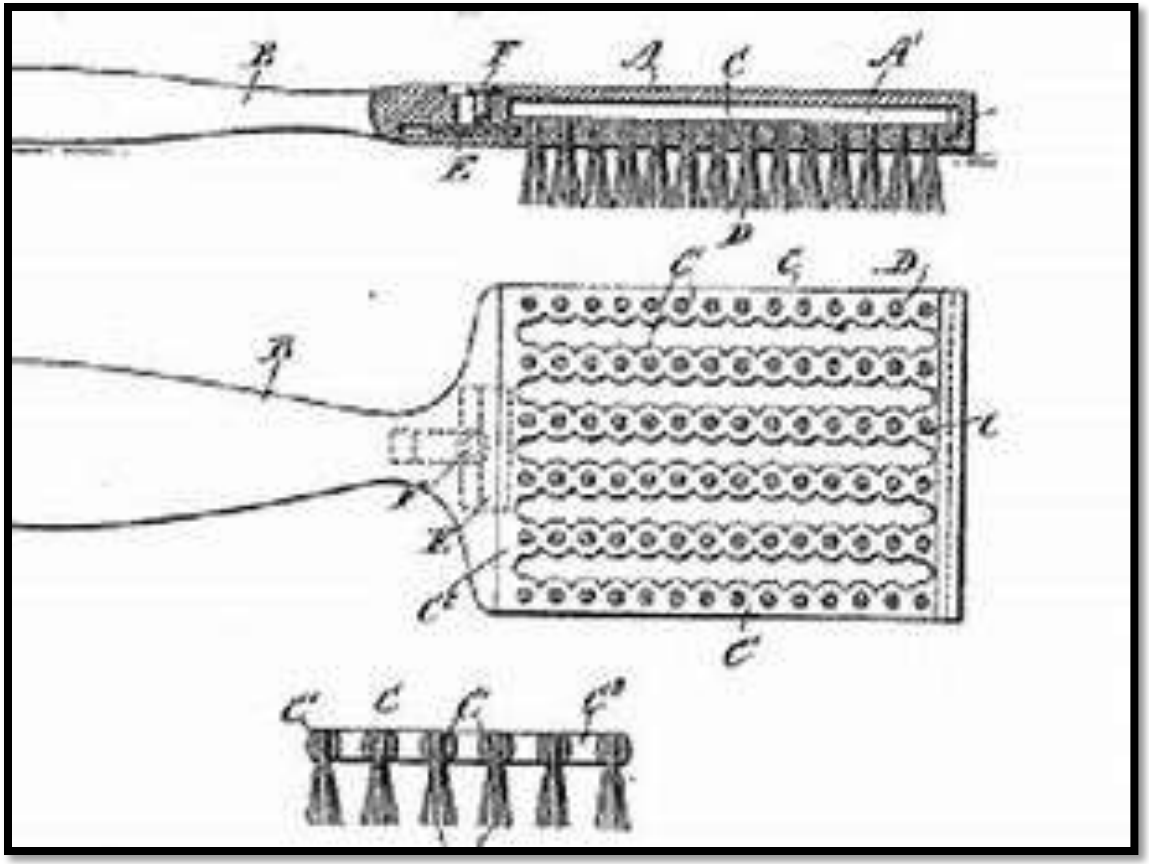
Lyda D. Newman

Hair Brush, 1898

Hairdresser and suffragist **Lyda D. Newman** created the first hairbrush with synthetic bristles. Before this brushes were made from animal hair. Newman's hairbrush was designed to promote ventilation and to help cure hair impurities. Bbiography.com gives the following description: "Her hairbrush design included several features for efficiency and hygiene.

"It had evenly spaced rows of bristles, with open slots to guide debris away from the hair into a recessed compartment, and a back that could be opened at the touch of a button for cleaning out the compartment. **Newman** was granted U. S. Patent No. 614,335 on November 15, 1898 while in her teens. Four years earlier, **Newman** was issued Trademark No. 25,022 for "VIDACABELLO, "A PREPARATION FOR THE HAIR AND SCALP".

Hair Brush



Osbourn Dorsey

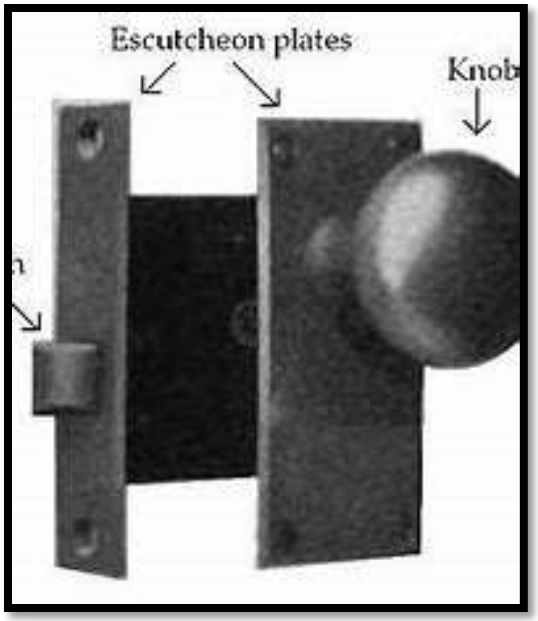
Doorknob and Doorstop, 1878

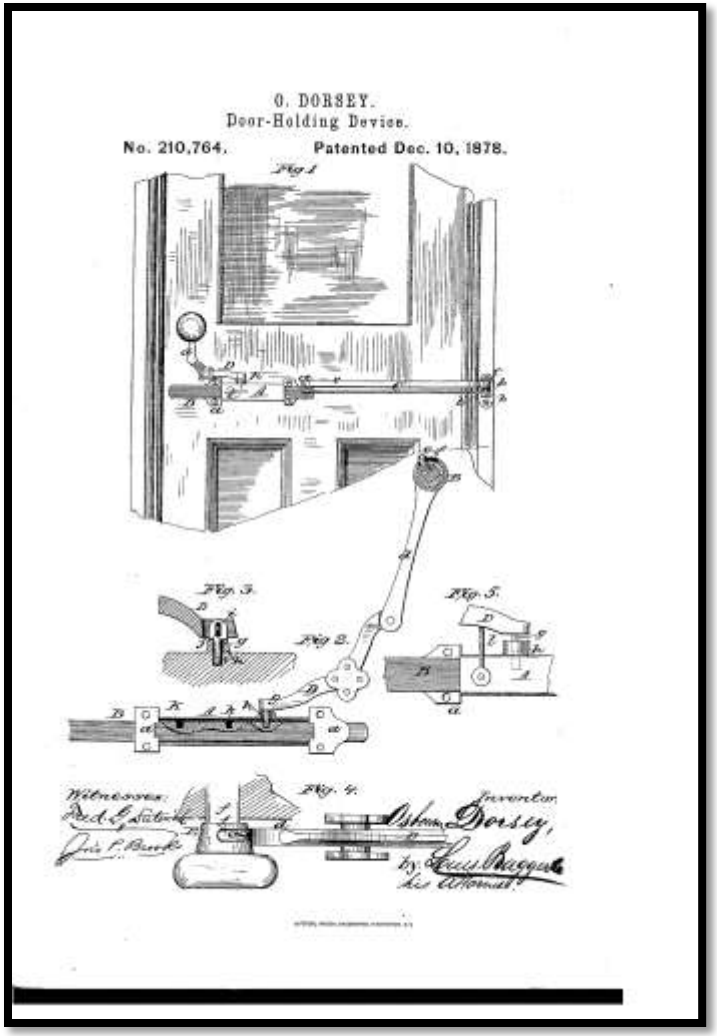
At the young age of about 16, **Osbourn Dorsey** became the first person to obtain a patent for any type of door-holding device. He received U.S. Patent #210,764 on December 10, 1878.

Lockreference.com tell us "Dorsey's patent contained another first: functioning knob trim. The "door-holding device" utilized a knob to aid with securing the door into its desired position as well as release it."

The patent also included his design for a doorstop.

Doorknob





O. DORSEY.
Door-Holding Device.

No. 210,764. Patented Dec. 10, 1878.

Fig. 1

Fig. 3. Fig. 2. Fig. 5.

Fig. 4.

Witnesses:
Fred. C. Dieterich
Jos. P. Burke

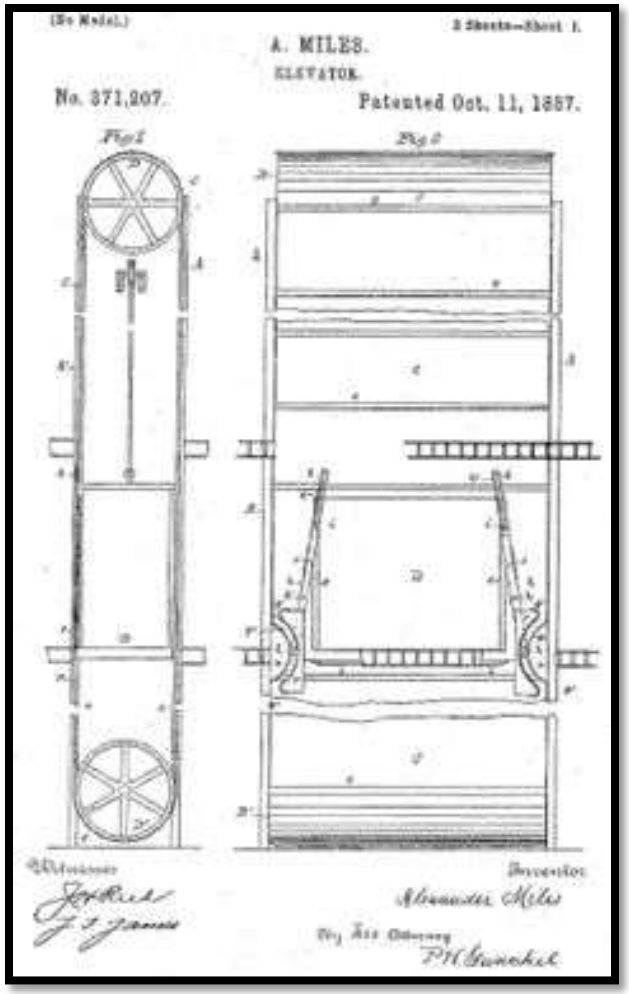
Inventor.
Osborn Dorsey,
by Louis Bagger
his Attorney

Alexander Miles

Automatic Electric Elevator Doors, 1887

Alexander Miles received U.S. Patent No. 371,207 on October 11, 1887, for shaft doors that opened and closed automatically along with the elevator doors. Prior to this invention, an elevator conductor had to manually pull the doors closed. If the conductor forgot to do that, or if there was no conductor, the shaft was exposed, creating a safety hazard for passengers in the elevator and people on other floors.

Electric Elevator Doors



William Purvis

Fountain Pen, 1890

William Purvis didn't originate the fountain pen but his version vastly improved on it. According to ThoughtCo.com, **Purvis** "invented and patented improvements to the fountain pen in 1890. His goal was to make a 'more durable, inexpensive and better pen to carry in the pocket.' **Purvis** inserted an elastic tube between the pen nib and the ink reservoir that used a suction action to return any excess ink to the ink reservoir, reducing ink spills and increasing the longevity of the ink.

Purvis also invented two machines for making paper bags which he sold to the Union Paper Bag Company of New York, as well as a bag fastener, a self-inking hand stamp and several devices for electric railroads. His first paper bag machine, for which he received a patent, created satchel bottom-type bags in an improved volume and with greater automation than previous machines.

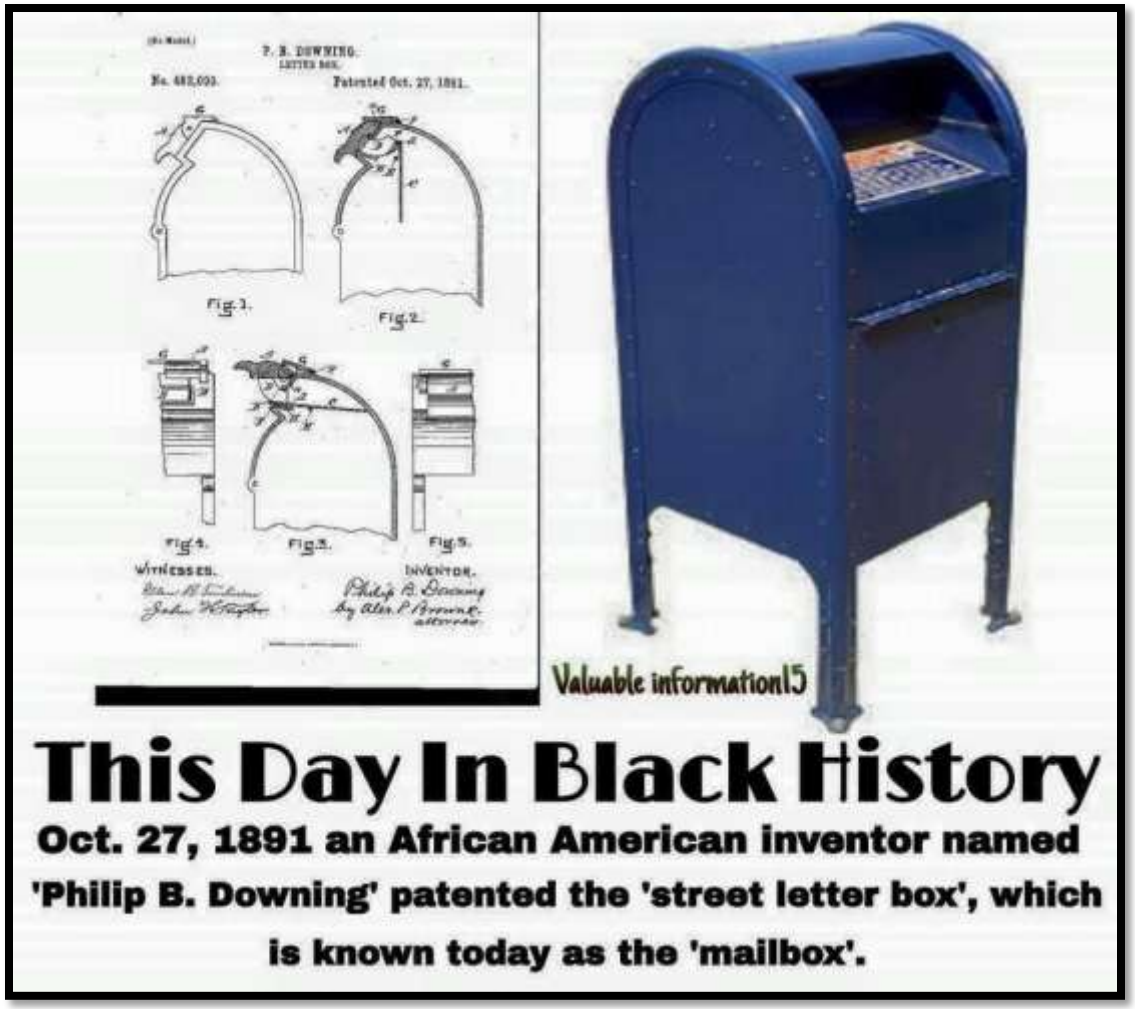
Philip B. Downing

Street Letter Box, 1891

Philip Downing received five patents., two of which were related to the mailbox: U.S. Patent No. 462,092 and No. 462,093, both issued on October 27, 1891 Prior to his invention of the letter box which stood on four legs and had a hinged drop-down door which a person opens to deposit their mail after which it closes automatically, people had to walk to the nearest postal facility with their outgoing letters.

He called his device a street letter box and it is the predecessor of today's mailbox. Another notable U.S. Patent, No. 430,11, granted to **Downing**, on June 17, 1890 was for "New and Useful Improvements in Street-Railway Switches." This design utilized a brass arm located next to the brake handle on the platform of the car and became the basis for modern day light switches.

Street Letter Box



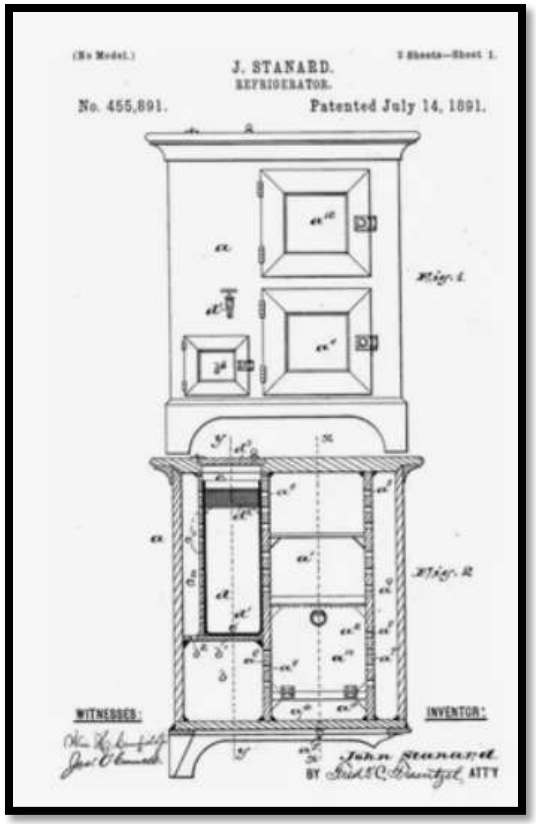
John Stanard

Refrigerator, 1891 and Oil Stove, 1889

John Stanard, whose surname is often misspelled as Standard, has often been credited with inventing the refrigerator, however his U.S Patent No. 55,891, issued on June 14, 1891, states it is a utility patent, and those are issued for improvement(s) on an existing patent. **Stanard** himself stated, "This invention relates to improvements in refrigerators, and it consists of certain novel arrangements and combinations of parts." He designed a manually filled ice chamber, separate from the main refrigerator unit and connected them via air ducts. He wrote those "cold-air ducts and perforations…[ensure that] a constant circulation of air is maintained through the several chambers, and the water for drinking purposes in the receptacle is always kept cool."

Stanard's other patent application described his space-saving oil stove design: "The herein described invention consists in certain improvements in that class of oilstoves. used more particularly in places where space is limited-as, for instance, in buffet cars, &c. the object being to furnish attachments for such stoves which will enable the cooking of a great variety of meats, vegetables, &c., at one time." This invention was granted with U.S. Patent No. 413,689 on October 29, 1889.

Refrigerator / Oil Stove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J. STANARD.

REFRIGERATOR.

No. 455,891. Patented July 14, 1891.

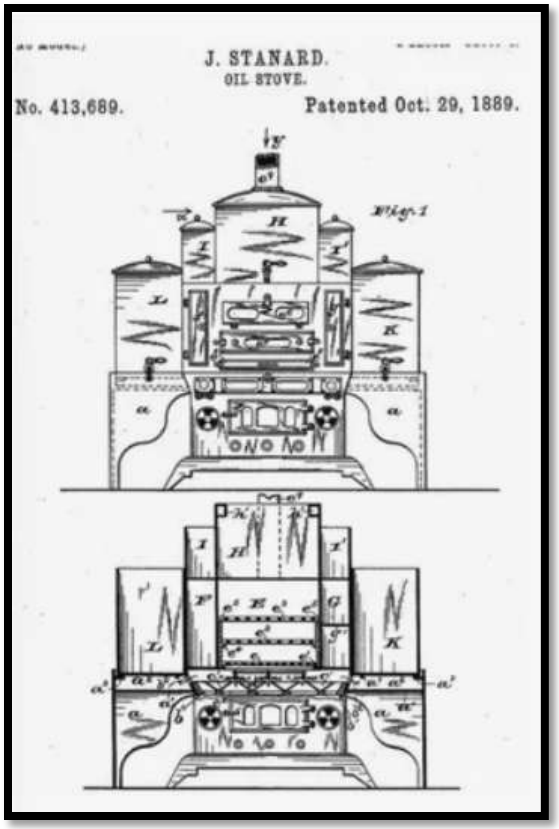
Fig. 1.

Fig. 2.

WITNESSES: INVENTOR:

John Stanard.

BY Field & Dewitzel ATTY


J. STANARD.

OIL STOVE.

No. 413,689. Patented Oct. 29, 1889.

Fig. 1.

Anna Mangin

Pastry Fork, 1892

Anna Mangin received U.S. Patent No. 470,505 on March 1, 1892 and the following year she became one of the few Black inventors to be included, for the first time ever, at the World's Columbian Exposition in Chicago, Illinois. Grace Seyoum writes on blackpast.com, "Although her invention occupied only a small corner on the second floor, a writer on female inventions noticed the kitchen wonder and called it "the only thing of its kind at the patent's office."

Mangin is quoted on howAfrica.com as having said, "The object of my invention is to provide a fork or implement for working together butter or lard and flour without the operator having to touch these articles with the hands, and for making drawn butter and thickening, beating eggs, mashing potatoes, and preparing dressing for salads." Her invention not only made food preparation less messy, but also more sanitary..

Elbert R. Robinson

Electric Highway Trolley Improvements, 1893

U.S. Patent No.505,370, issued on September 9, 1893 to **Elbert Robinson** of Nashville, TN, included improvements in trolleys for overhead electric railways. His invention focused primarily on the trolley wheels, implementing a new design to secure wheels to the wire when the trolley rounded curves or went down hills. On November 23, 1897 **Robinson** was awarded U.S. Patent No. 594,286, for a casting composite for other car wheels.

Charles B. Brooks

Street Sweeper, 1895

Charles B. Brooks' patent was filed on April 29, 1895 and approved on March 17, 1896 as U.S. Patent No. 558,719. His version of the street sweeper improved the self-propelled front-brush sweeper

The most notable of these improvements was the introduction of a "receiving-pan," which collected the swept dirt, carried it along a belt, and dumped it into a receptacle. **Brooks**' patent also detailed adjustments to the front brushes which made them of different lengths, and had a scraper for use with snow and ice.

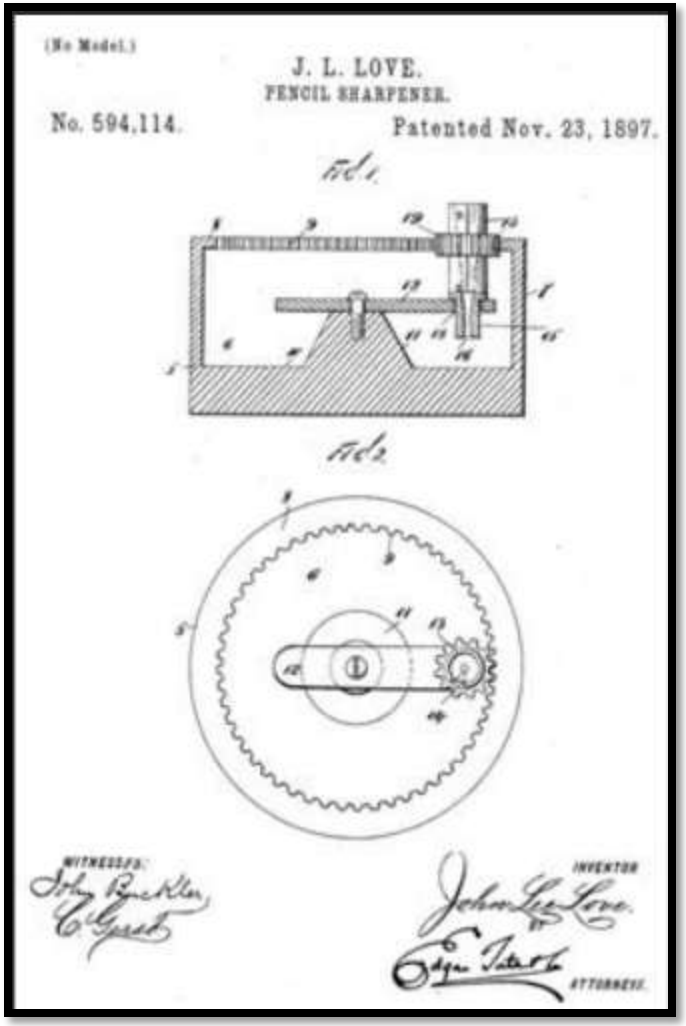
John Lee Love

Pencil Sharpener, 1897

Carpenter **John Lee Love** improved on Frenchman Bernard Lassimone's 1828 pencil sharpener with two unique features: it was portable and it had a compartment to catch the shavings. Prior to 1828, pencils were sharpened by whittling them with a knife. **Love** received U.S. Patent No. 594,114 on November 23, 1897.

Love also received an earlier patent for an improvement on the plasterer's hawk. He understood that the hawks in use at the time were too bulky to be portable. His innovation was to design a hawk with a detachable handle and a foldable board made of aluminum, which must have been a lot easier to clean than wood.

Pencil Sharpener / Plasterer's Hawk



(No Model.)

J. L. LOVE.

PENCIL SHARPENER.

No. 594,114. Patented Nov. 23, 1897.

Fig. 1.

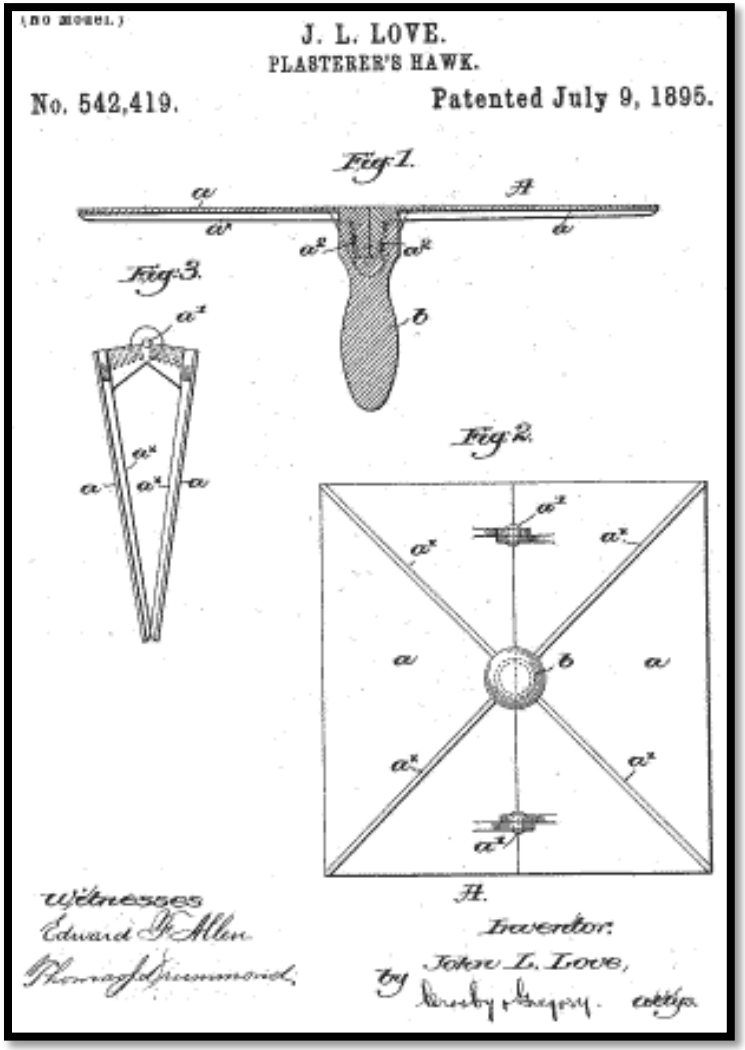
Fig. 2.

Witnesses:

John L. Love,

Inventor

Attorneys.



(No model.)

J. L. LOVE.

PLASTERER'S HAWK.

No. 542,419. Patented July 9, 1895.

Fig. 1.

Fig. 3.

Fig. 2.

Witnesses

Edward F. Allen

Thomas J. Drummond.

Inventor:

John L. Love,

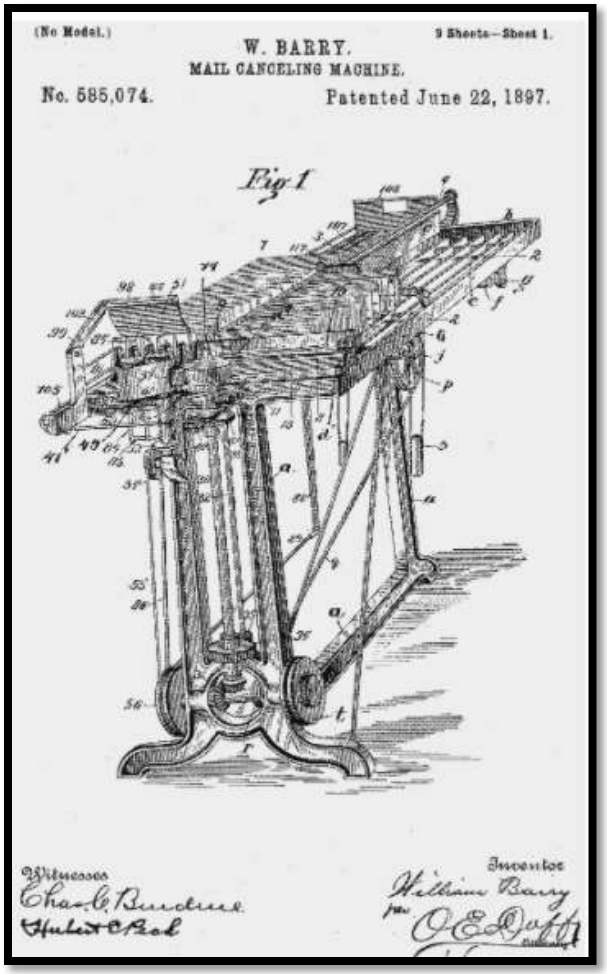
by Munn & Gregory. attys.

William Barry

Postmarking and Canceling Machine, 1897

William Barry invented the postmarking and canceling machine for which he was awarded U.S. Patent No. 585,074 on June 22, 1897. Unfortunately, aside from the record of his patent, no more information has been found about this Black inventor.

Mail Canceling Machine



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W. BARRY.

MAIL CANCELING MACHINE.

No. 585,074. Patented June 22, 1897.

Fig 1

Witnesses
Chas. C. Burdine.
Hubert C. Rod

Inventor
William Barry
per O. E. Duff
Attorney

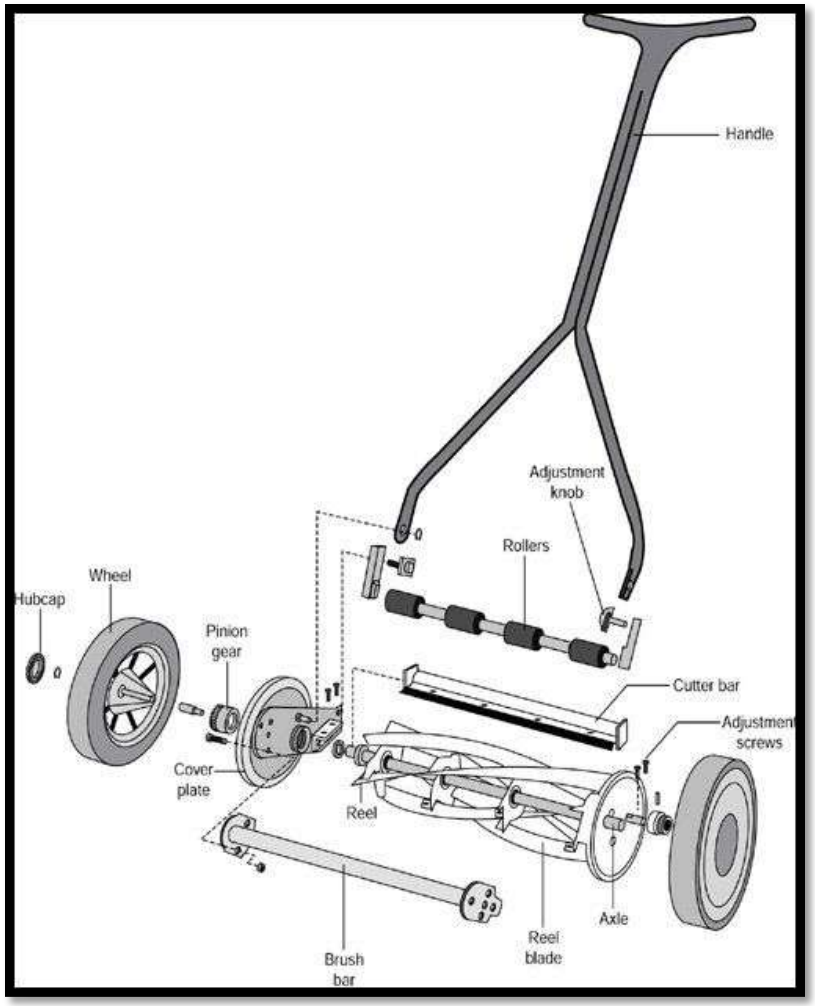
John Albert Burr

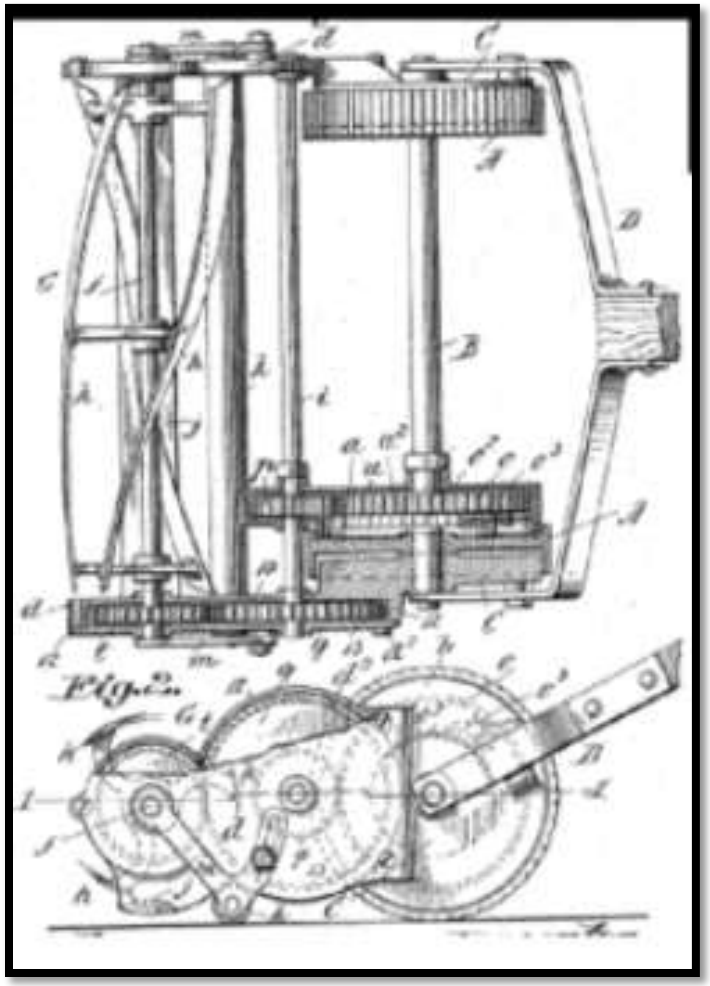
Lawnmower, 1899

In his patent application, **John Burr** explained, "The object of my invention is to provide a casing which wholly encloses the operating gearing so as to prevent it from becoming choked by the grass or clogged by obstructions of any kind." This was accomplished through the inclusion of traction wheels and a rotary blade. In addition, his design allowed the mower to cut closer to building and wall edges. His lawnmower received U.S. Patent No. 624,749 on May 8, 1999.

Mary Bellis writes on ThoughtCo.com, "**Burr** continued to patent improvements to his design. He also designed devices for mulching clippings, sifting, and dispersing them. Today's mulching power mowers may be part of his legacy, returning nutrients to the turf rather than bagging them for compost or disposal. In this way, his inventions helped save labor and were also good for the grass. He held over 30 U.S. patents for lawn care and agricultural inventions." She also notes that "**Burr** enjoyed the fruits of his success. Unlike many inventors who never see their designs commercialized, or soon lose any benefits, he received royalties for his creations. He enjoyed traveling and lecturing. "

Lawnmower


Handle
Adjustment knob
Rollers
Wheel
Hubcap
Pinion gear
Cutter bar
Adjustment screws
Cover plate
Reel
Brush bar
Reel blade
Axle



Alice Parker

Heating Furnace, 1919

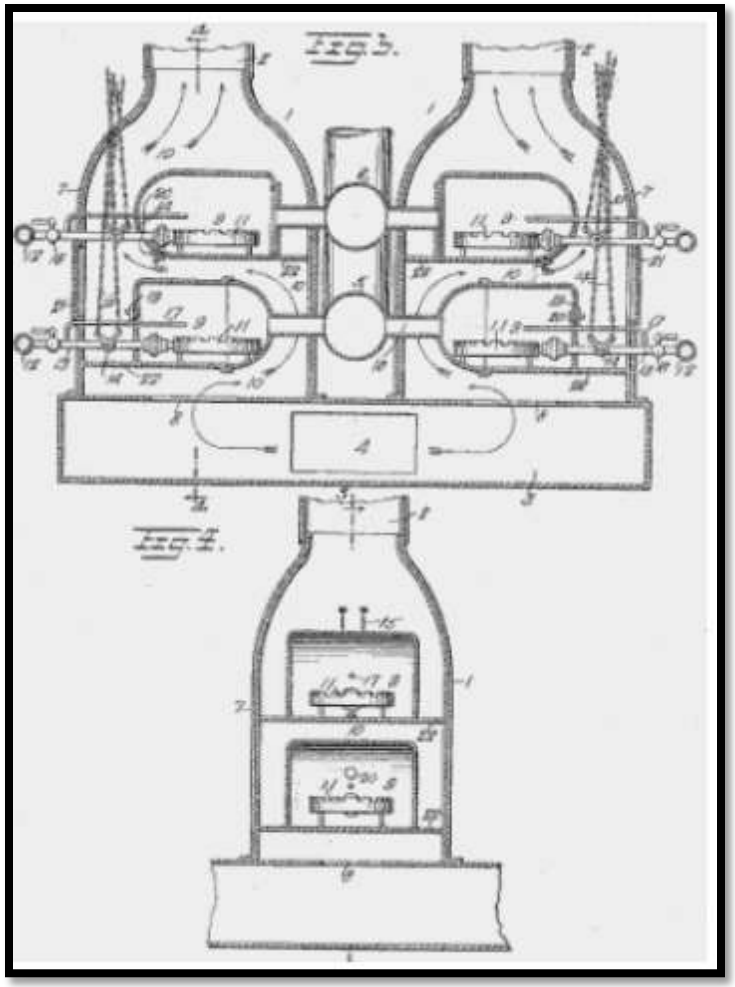
U.S. Patent No. 1,325,905 , issued to **Alice Parker** on December 23, 1919 revolutionized the way homes are heated. AC Southeast's profile honoring **Parker** on Inventor's Day, explains: "In **Parker**'s system, cool air was drawn through the furnace, conveyed through its heat exchanger, then used air ducts to spread warm air throughout the home. The system featured multiple burners and allowed temperatures to be moderated for different areas, much like later zoning systems." They noted two important benefits of her design:

- The use of natural gas meant homeowners no longer had to go out into the cold to chop or gather wood, nor purchase it for heating.

- The risk of fire was lowered, as fireplaces no longer had to be kept lit through the night.

Today's central heating systems are based on **Parker**'s 's model.

Heating Furnace

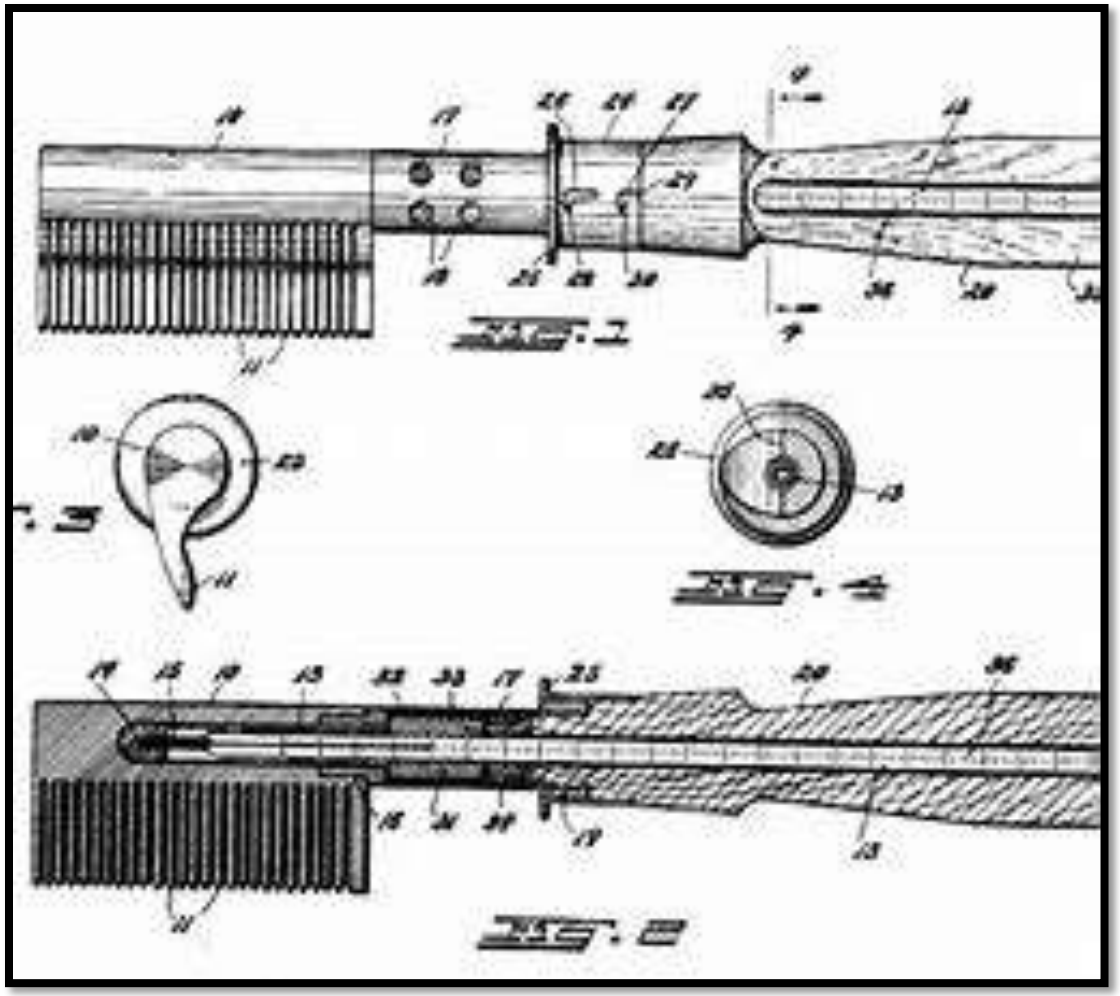


WALTER SAMMONS

Hot Hair Comb, 1920

WALTER SAMMONS was granted U.S. patent No. 1,362,823 on December 21, 1920 for inventing a hot comb that he said would smooth the kinks out of "nappy" hair. His comb was designed to straighten hair from the root to the tip. The process could be very painful and burns were not uncommon, but at the time the mistaken ideal was to have hair that resembled that of White women. Interestingly enough, hot combs also became popular with White women themselves and their popularity and safety have increased over the years. **SAMMONS** comb was heated on top of the stove. Today's models are electrically heated.

Hot Hair Comb

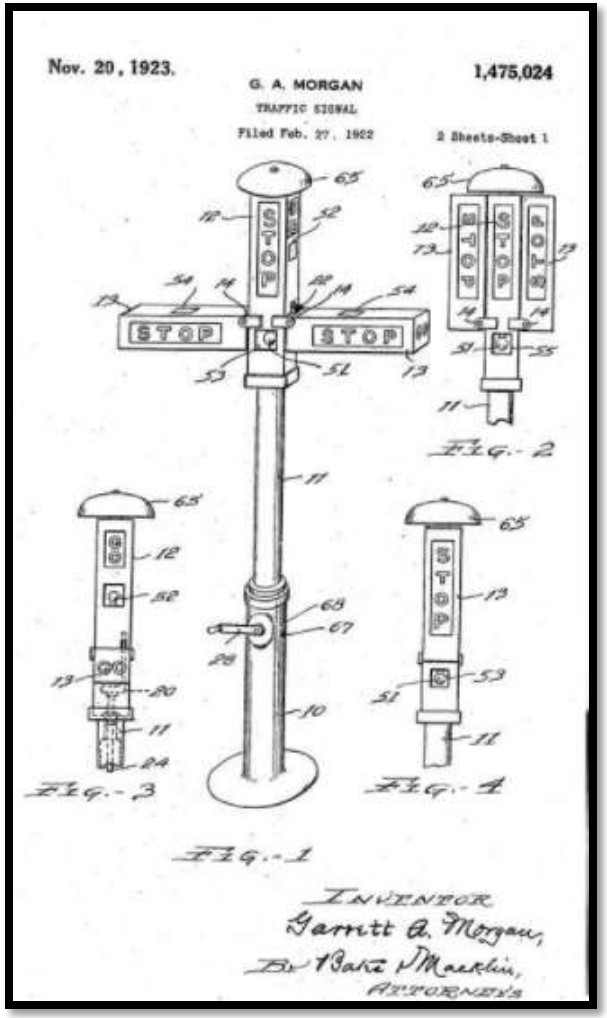


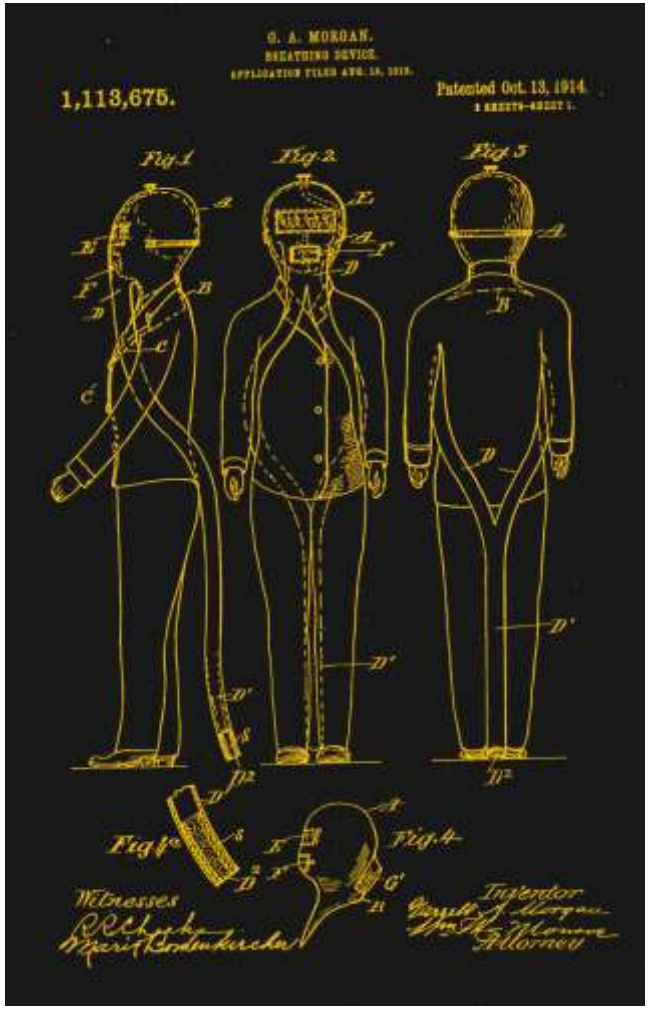
Garret A. Morgan

Traffic Light, 1923

Despite not receiving further education following elementary school education, **Garrett A. Morgan** became a prolific inventor. One of the most well-known being the traffic light fpr which he earned U.S. Patent No. 1,475,074 on November 20, 1923. Biography.com tells us "he created a new kind of traffic signal, one with a warning light to alert drivers that they would need to stop, after witnessing a carriage accident at a particularly problematic intersection in the city. **Morgan** quickly acquired patents for his traffic signal—a rudimentary version of the modern three-way traffic light—in the United States, Britain and Canada, but eventually sold the rights to General Electric for $40,000." He is also known for some of his other inventions which include an improved sewing machine, a hair-straightening product, and a respiratory device that would later provide the blueprint for WWI gas masks."

Traffic Signal / Breathing Device





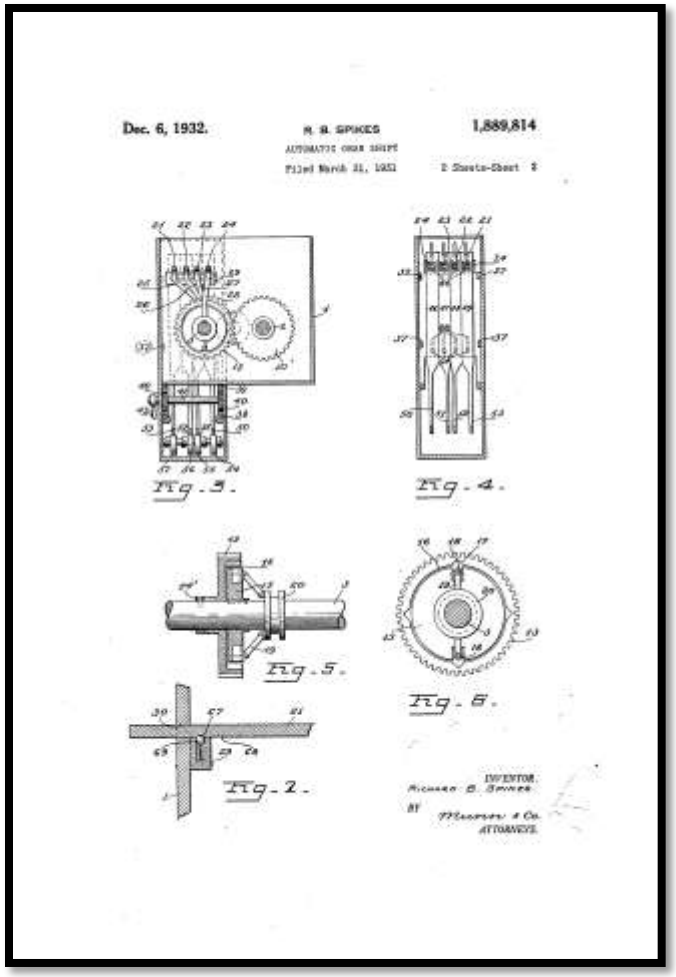
Richard Bowie Spikes

Automatic Gearshift, 1932

Of the 14 patents (from 1906 –1962) awarded to **Richard Spikes,** the automatic gear shift (U.S. Patent No. 1,889,814 in 1932) received in the one for which he is most remembered Also well-known is his automatic brake safety system which he patented in 1962 (U.S. Patent No. 3,015,522) at the age of 84 when he was legally blind . According to and article by Eleanor Mahoney on BlackArtStory.com, **"Spikes'** gear shifting device aimed to keep the gears for various speeds in constant mesh, enhancing the turn-of-the-century invention of the automatic transmission. His automatic brake safety system was also significant; according to the patent application, it provided provide a reserve braking action in case of damage to the normal braking means and is still used in some buses as a fail-safe means of stopping the vehicle.

"Spikes is also widely credited with patenting an automobile signaling system (turn signal) in the early 1910s, though a patent record has yet to be located at this time. The system was installed on a Pierce-Arrow motorcar."

Automatic Gear Shift



Dec. 6, 1932. H. B. SPIKES 1,889,814

AUTOMATIC GEAR SHIFT

Filed March 31, 1931 2 Sheets-Sheet 2

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 2.

INVENTOR.

Richard B. Spikes

BY

Pierson & Co.

ATTORNEYS.

Mary Kenner
Mildred Smith

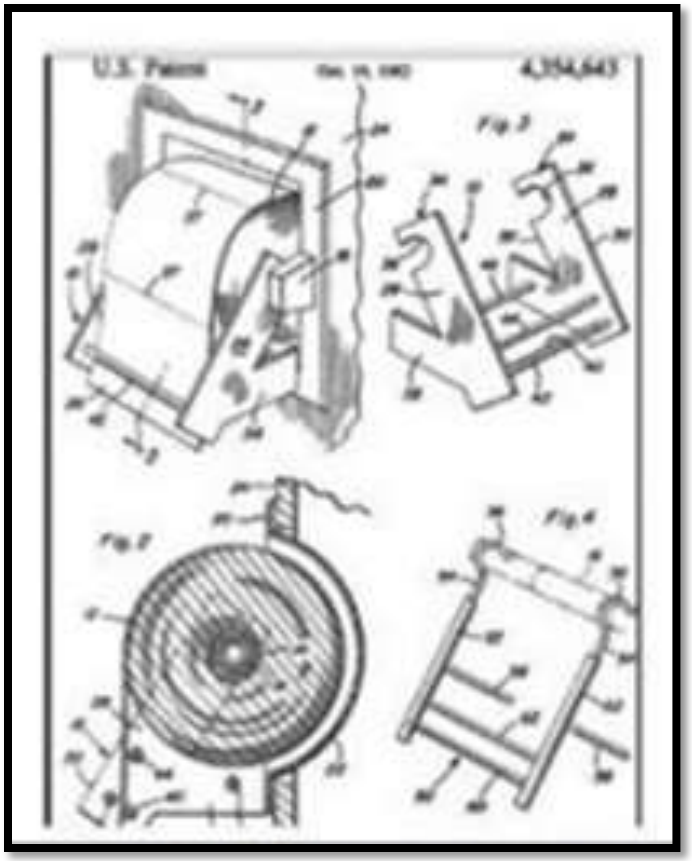
Five patents, first in 1957

Mary Beatrice Davidson Kenner holds five U.S. patents. These weren't her only inventions, but they are the ones for which she received patents. **Kenner**'s first attempt at invention was to work on a door hinge. She was eight at the time. At age 12, she designed a sanitary belt. The family had no money to apply for a patent then. That did end up being Kenner's first patent in 1957. Other notable inventions include a hard tray and a soft pocket that attached to a walker (1976); with her sister Mildred Davidson she shared the patent for a toilet paper holder that ensured the loose end of the paper was always reachable (1982); and her last patent was a back washer that attaches to a shower wall (1987).

In addition to the patent she shared with her sister, **Mildred E. Smith** held one of her own, U. S. Patent #4,230,321 issued October 28, 1980. According to BlackAmericaWeb, "Mildred, who was struck with multiple sclerosis at a young age, invented a children's board game that explored family ties. In 1980, she trademarked the game's name, "Family Treedition," in order to secure her legacy….

"In 1993, Mildred died, but not before seeing her game manufactured in several fashions, including in the Braille language."

Toilet Paper Holder / Sanitary Belt



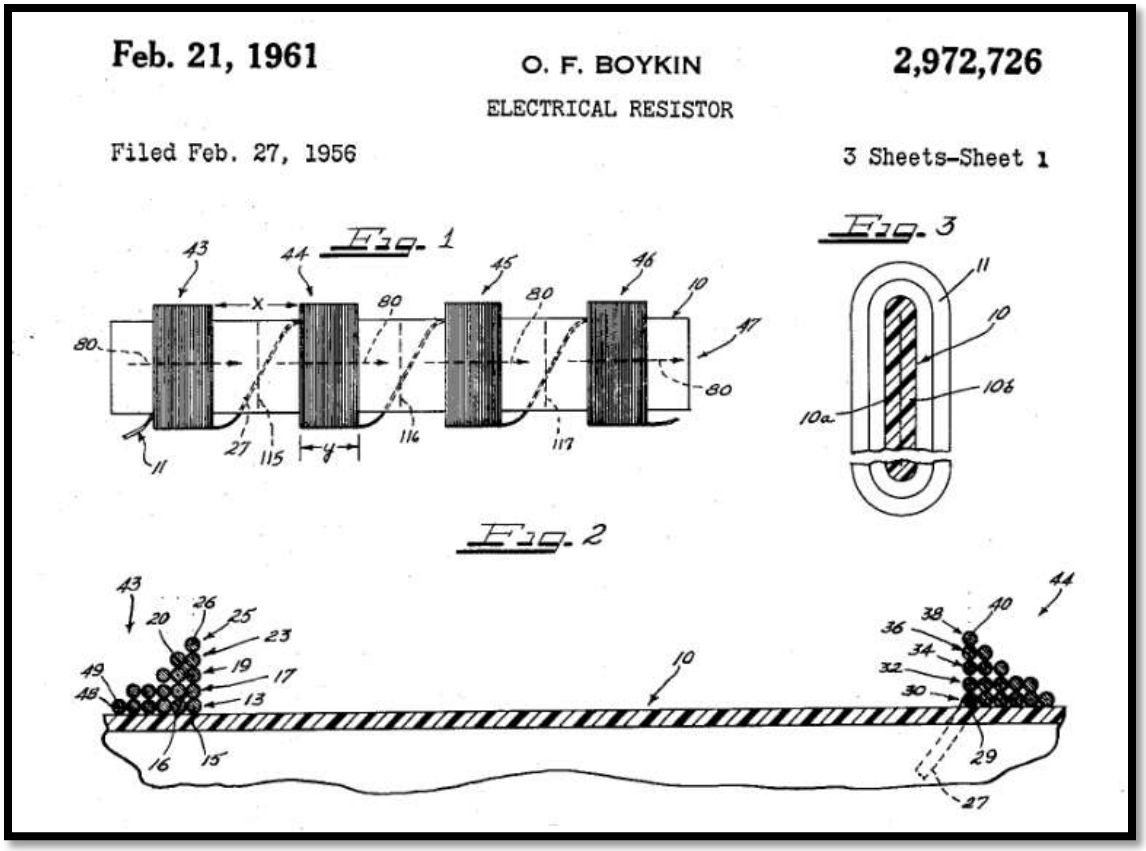
Otis Boykin

Electrical Resistor, 1961

Otis Boykin is best known for inventing an improved electrical resistor used in computers, radios, television sets, and a variety of electronic devices. His resistor helped reduce the cost of these products.

Boykin's other inventions include a variable resistor used in guided missile parts., a control unit for an artificial cardiac pacemaker, a burglar-proof cash register, and a chemical air filter. Boykin holds patents for 26 electronic devices.

Electrical Resistor



According to U.S. Patent No. 2,972,726, this resistor had the ability to "withstand extreme accelerations and shocks and great temperature changes without danger of breakage of the fine resistance wire or other detrimental effects."

James West

Electret Microphone, 1964

James West and co-inventor Gerhard Sessler developed the Electroacoustic Transducer more commonly known as the Electret Microphone, U.S. Patent No. 3,118,022 awarded on January 14, 1964.

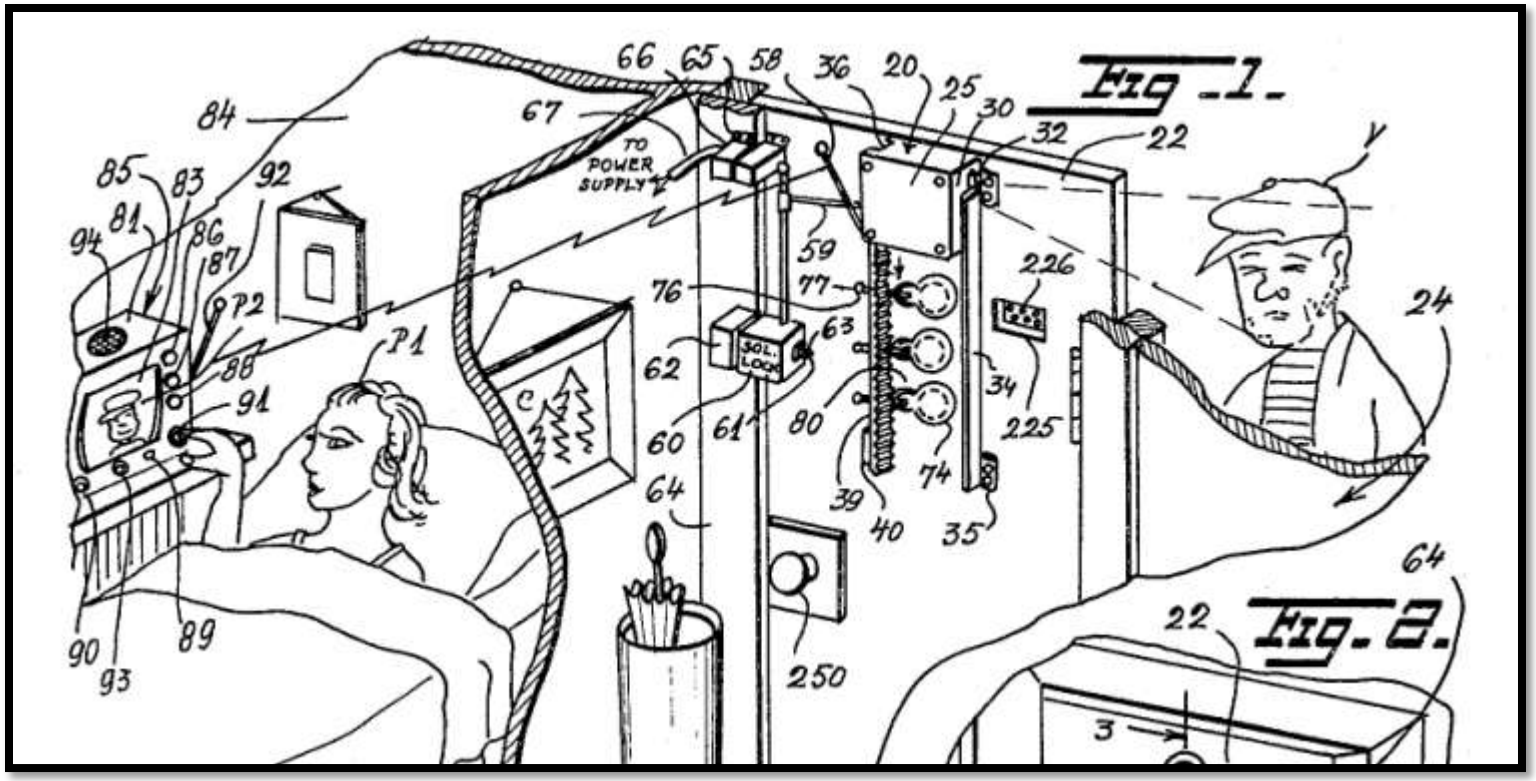
Ninety percent of all microphones produced annually and used in everyday items such as telephones, hearing aids, camcorders, and multimedia computers employ **West** and Sessler's technology. **West**, who earned more than 250 U.S. and foreign patents, was appointed president-elect of the Acoustical Society of America in 1997 and joined the National Academy of Engineering in 1998. And both **West** and Sessler were inducted into the National Inventors Hall of Fame in 1999. **West** worked with initiatives to entreat women and students of color to explore and pursue careers in the fields of science and technology. He was a professor at Johns Hopkins University. In addition, West authored and/or contributed to a number of scientific papers and books.

Marie Van Brittan Brown

Home Security Sytem, 1969

A truly first-of-its-kind invention was the Home Security System which on December 2, 1969 was granted U.S. Patent No. 3,482,037 to nurse **Marie Van Brittan Brown** and her electronics technician husband Albert Brown. Due to a high crime rate in their Queens NY neighborhood, and the slow response times from the police department, they determined to find a solution to help people be a little safer in their homes. An article on blackpast.org states: **"Brown**'s security system was the basis for the two-way communication [it allowed for persons indoors to speak to those outside] and surveillance features of modern security. Her original invention was comprised of peepholes [at different heights], a camera, monitors, and a two-way microphone. The final element was an alarm button that could be pressed to contact the police immediately."

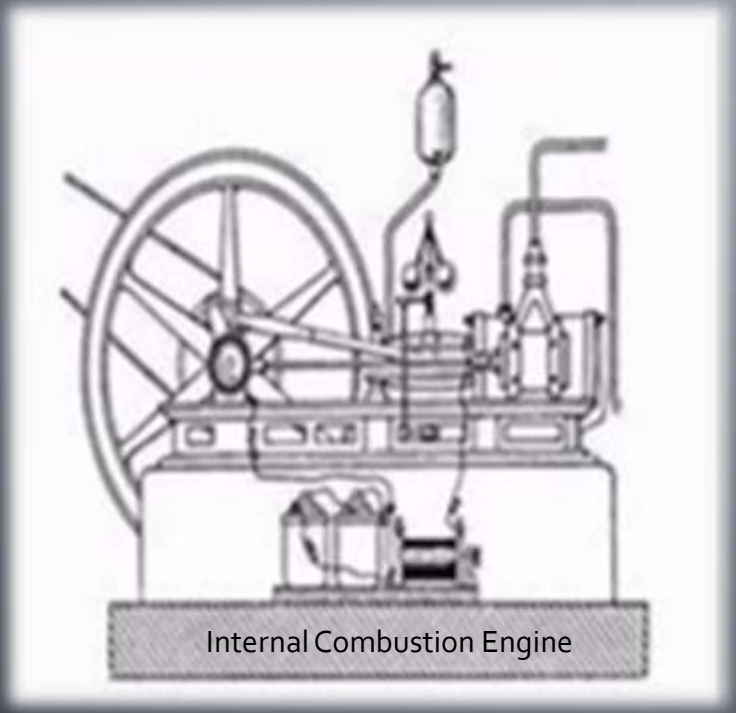
Home Security System



Detail of Marie Van Brittan Brown's original design for a home security system. (U.S. Patent and Trademark Office)

Joseph A. Gammel

Supercharge System for Internal Combustion Engines, 1974



Internal Combustion Engine

Joseph Gammel's supercharge system for internal combustion engines is the first of his 12 inventions related to engines, most if not all of which have been granted U. S. patents, this one receiving U.S. Patent No. 3,935,848 on May 10, 1974.

Supercharge System for Internal Combustion Engines

George Carruthers

Apollo 16 Far Ultraviolet \ Camera/Spectrograph, 1972

Just one of many inventions by NASA scientist **George Carruthers,** his Far Untraviolet Camera/Spectograph was placed on the moon in April 1972. It remains there, according to NASA, "on the Moon's Descartes highland region, in the shadow of the lunar module Orion. Asked to explain highlights of the instrument's findings for a general audience, **Dr. Carruthers** said, 'the most immediately obvious and spectacular results were really for the Earth observations, because this was the first time that the Earth had been photographed from a distance in ultraviolet (UV) light, so that you could see the full extent of the hydrogen atmosphere, the polar auroris and what we call the tropical airglow belt.'"

Valerie Thomas

Illusion Transmitter, 1980

Curious about how light and concave mirrors could be used in her work at NASA, **Valerie L. Thomas** began her research in 1977. This involved creating an experiment in which she observed how the position of a concave mirror would affect the real object that is reflected. Using this technology, she would invent the illusion transmitter for which she received U.S. Patent No. 4,229,761 on October 21, 1980. This research formed the basis for 3D television sets as well as modern medical imaging. NASA continues to use this technology today. As a woman and an African American, **Thomas** worked her way up to associate chief of the Space Science Data Operations Office at NASA.

She and her team developed the first satellite to send images from space. She also worked on computer programs used for research on Haley's Comet and the ozone hole.

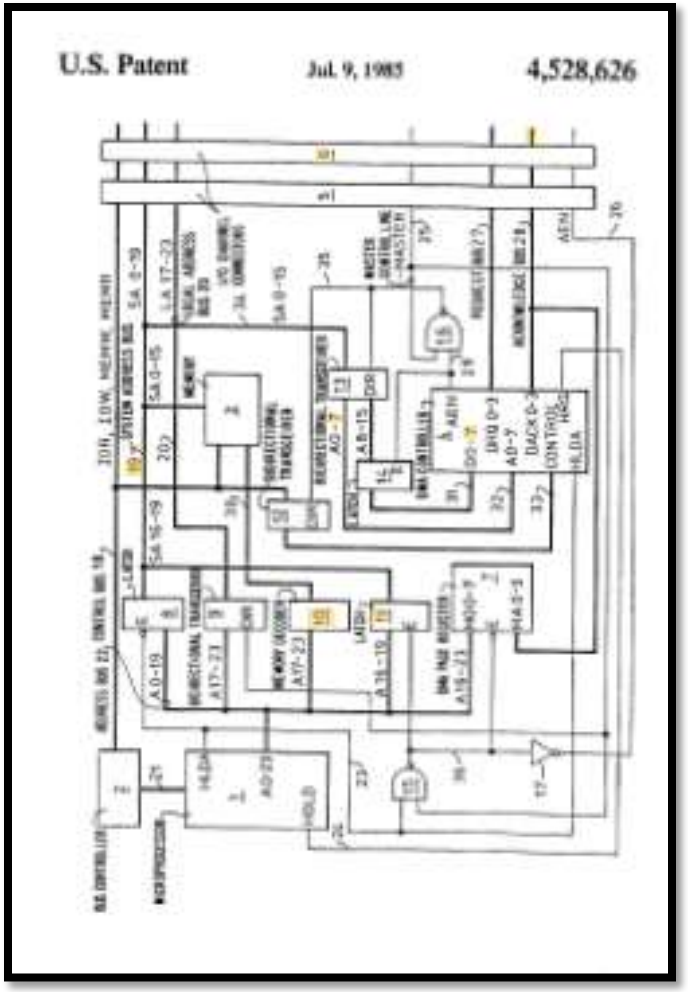
Thomas has received numerous awards including the Goddard Space Flight Center Award of Merit and NASA's Equal Opportunity Medal. She also mentored countless students Mathematics Aerospace Research and Technology Inc program.

Mark Dean, PhD

Microcomputer System with Bus Control Means for Peripheral Processing Devices, 1985

Computer scientist and engineer **Mark Dean** helped develop a number of landmark technologies for IBM, including the color PC monitor and the first gigahertz chip. Dean holds three of the company's original nine patents and more 20 patents associated with his name, including US Patent No. 4,528,626 on July 9, 1985 for a microcomputer system with bus control means for peripheral processing devices. Some honors he's received are IBM Fellow, Black Engineer of the Year President's Award, and induction into the National Inventors Hall of Fame.

MICROCOMPUTER SYSTEM WITH BUS CONTROL MEANS FOR PERIPHERAL PROCESSING DEVICES



Dr. Betty W. Harris

Spot test for 1,3,5-triamino-2,4,6-trinitrobenzene, TATB, 1986

U.S. Patent No. 4,618,452, granted on October 21, 1986 to "The United States of America as represented by the United States (Washington, D.C.)" names **Betty W. Harris** as the inventor. **Harris** spent most of her career at Los Alamos National Laboratory (LANL) in New Mexico where she specialized in the study of explosives and nuclear weapons. Harris's expertise wasn't limited to weapons. Her work areas also included the cleanup of hazardous materials and environmental restoration.

Blackpast.org states that **Harris** "grew more interested in recruiting women and people of color to become scientists, establishing, for example, a summer program for promising high school students. She also created a chemistry badge for the Girl Scouts and participated in making a CD-ROM titled *Telling Our Stories: Women in Science* for Mclean Media." The website goes on to say, "Following her retirement from LANL in 2002, **Harris** worked at the U.S. Department of Energy Office of Classification as a certified document reviewer. This agency determines whether documents should remain classified or be released to the public. **Harris** had long held a "Q" clearance, which allowed her to see items with Restricted Data."

MEREDITH GOURDINE

Method for Airport Fog Precipitation, 1987

When **MEREDITH GOURDINE'S** father told him that an education could spare him from a life of manual labor, he changed the course of his son's life. After graduating from Cornell and opening his own research laboratory, His biggest creation was the Incineraid system, which was used to disperse smoke from burning buildings and could be used to disperse fog on airport runways. The Incineraid system worked by negatively charging smoke or fog, (U.S. Patent No. 4,671,805, June 9, 1985) causing the airborne particles within to be electromagnetically charged and then to fall to the ground. The result was clean air and a clear area. He also received patents for the Focus Flow Heat Sink, which was used to cool computer chips as well as for processes for desalinating sea water, for developing acoustic imaging, and for a high-powered industrial paint spray.

GOURDINE held over 30 patents and many of his creations serve as the basis for allergen-filtration devices common to households across the world. He was inducted into the Engineering and Science Hall of Fame in 1994.

Dr. Patricia E. Bath

Laser Phaco Probe, 1988

Opthalmologist **Patricia Bath** was the first Black American to complete an Ophthalmology residency at New York University (1973), first Black American woman appointed to UCLA Medical Center's surgical staff (1975) and the first woman to lead a post-graduate training program in Ophthalmology.

Laser surgery for cataract removal became possible with **Bath's** invention of the an Apparatus for Ablating and Removing Contact Lenses, which was granted U.S. Patent No. 4,744,360 on May 17, 1988. It is known as the Laser Phaco Probe. The first African-American woman doctor to receive a patent for a medical purpose, **Bath** held a total of five patents. She also founded the non-profit American Institute for the Prevention of Blindness.

Lonnie Johnson

Supersoaker Water Gun, 1995

From childhood, **Lonnie Johnson**'s curiosity had him taking things apart to figure out how they worked, like the time he took his sisters doll apart to see how its eyes opened and closed. At age 13 he attached a lawnmower engine to a go-kart he built from junkyard scraps and raced it along the highway until the police pulled him over. Nicknamed "The Professor" by his high school buddies, **Johnson** represented his school at a 1968 science fair sponsored by the Junior Engineering Technical Society (JETS).

The fair took place at the University of Alabama at Tuscaloosa, where, just five years earlier, Governor George Wallace had tried to prevent two Black students from enrolling at the school by standing in the doorway of the auditorium. The only Black student in the competition, Johnson debuted a compressed-air-powered robot, called "the Linex," that he had painstakingly built from junkyard scraps over the course of a year. Much to the chagrin of the university officials, Johnson won first prize. "The only thing anybody from the university said to us during the entire competition," Johnson later recalled, "was 'Goodbye' and 'Y'all drive safe, now.'" After graduating with Williamson's last segregated class, in 1969, **Johnson** attended Tuskegee University on a scholarship. He earned a bachelor's degree in mechanical engineering in 1973, and two years later he received a master's degree in nuclear engineering from the school.

This curiosity was an asset in his work as an engineer in the Air Force and later at NASA. **Johnson** holds numerous scientific patents, yet he's best known for inventing one of the world's most popular toys: the Super Soaker water gun, U.S. Patent No. 6,540,108, awarded on March 13, 1995. **Johnson** earned his master's degree in nuclear engineering from Tuskegee University and went on to work for the U.S. Air Force and the NASA space program.

George Washington Carver

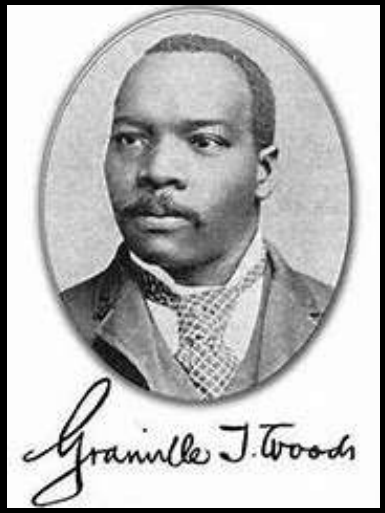
Agricultural Scientist, Inventor

Enslaved at birth, **George Washington Carver** rose above his origins, received higher education, taught at the Tuskegee Institute, and invented more than 300 products from peanuts, including milk, Worcestershire Sauce, chili sauce, cooking and salad oils, flour, paste, gasoline, dyes, insulation, plastics, soap, shaving cream, shampoo, skin lotion and glue. *Contrary to popular myth, he did not invent peanut butter.*

An article on Suiter.com relates that: "In 1990, **George Washington Carver** was the first African American introduced into the National Inventors Hall of Fame. The induction was based not only on his work in botany, but also for two patents he was granted in 1925 and 1927. **Carver** only patented three of his numerous inventions and when asked why, he said 'if I did it would take so much time, I would get nothing else done. But mainly I don't want my discoveries to benefit specific favored persons.'" In addition to numerous awards, **Carver** was honored with two commemorative stamps by the United States Postal Service, in 1948 and 1988 as well as being depicted he was depicted on a commemorative half-dollar coin along with Booker T. Washington.

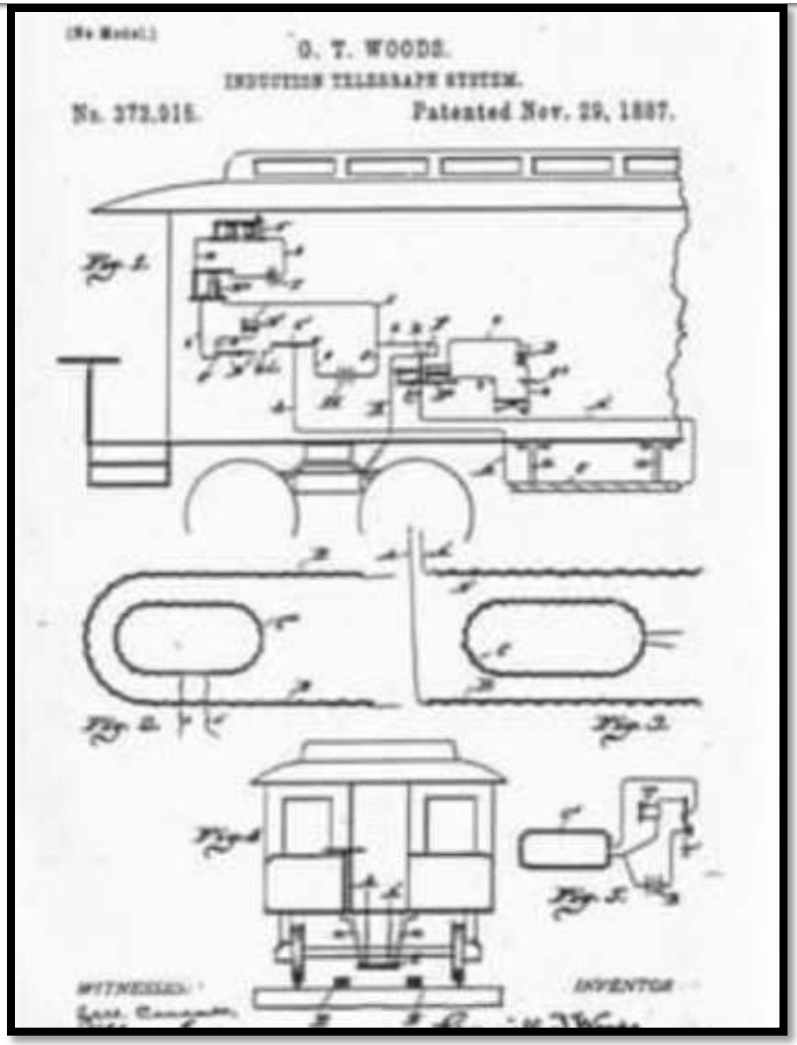
Granville T. Woods

"The Black Edison"



Referred to as an "Electrical Genius, **Granville T. Woods** was so successful that he was sometimes referred to as "The Black Edison." Interestingly, **Woods** dedicated his life's work to developing a variety of inventions, many relating to the railroad industry. By the time of his early death at age 53, **Woods** had invented 15 appliances for electric railways and received nearly 60 patents, many related to the railroad industry. Granted first patent, June 3, 1884, for a steam boiler furnace, **Woods** ultimately received approximately 60 additional patents (over 35 dealing with electrical systems), including 15 in the field of electric railways. Major inventions included an improved telephone transmitter, 1884; an electrical apparatus for transmitting messages, 1885; an induction telegraph system, 1887; a galvanic battery, 1888; an automatic safety cut-out for electric currents, 1889; a re-electric railway supply system, 1893; a regulator for electric motors, 1896; an egg incubator, 1900; and an automatic air brake, 1902.

Induction Telegraph System
Automatic Air Brake


(No Model.)

G. T. WOODS.

INDUCTION TELEGRAPH SYSTEM.

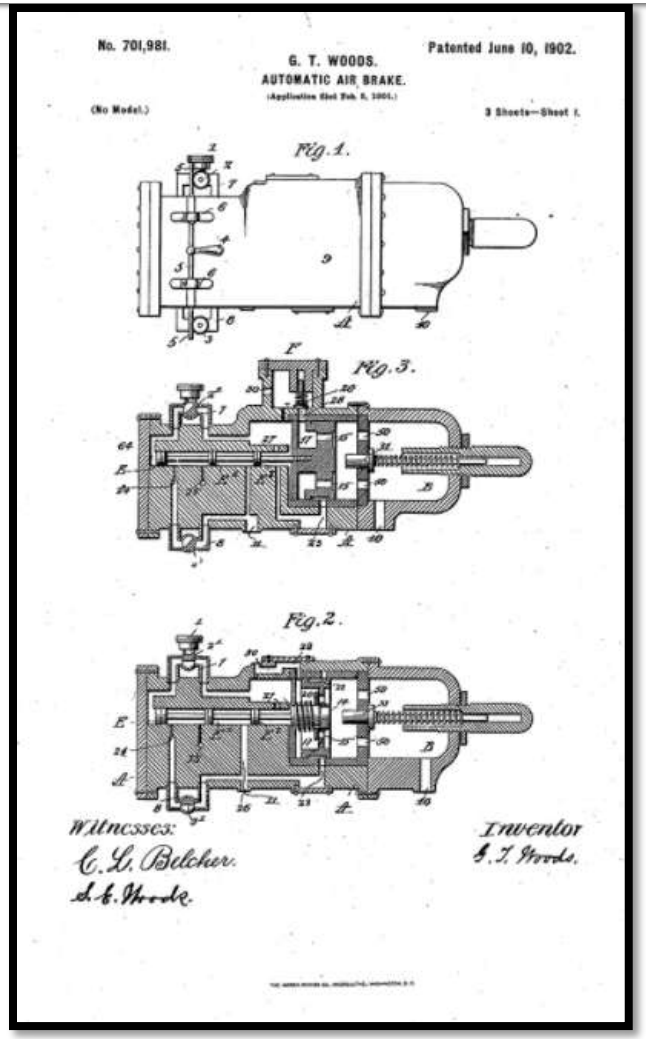
No. 372,915. Patented Nov. 29, 1887.

Fig. 1.

Fig. 2. Fig. 3.

Fig. 4. Fig. 5.

WITNESSES: INVENTOR


No. 701,981. Patented June 10, 1902.

G. T. WOODS.

AUTOMATIC AIR BRAKE.

(Application filed Feb. 5, 1901.)

(No Model.) 3 Sheets—Sheet 1.

Fig. 1.

Fig. 3.

Fig. 2.

Witnesses: Inventor

C. L. Belcher. G. T. Woods.

L. E. Woods.

Charles Richard Drew, M.D.

Father of Blood Banks

Dr. Charles Richard Drew broke barriers in a racially divided America to become one of the most important scientists of the 20th century. Drew's pioneering research and systematic developments in the use and preservation of blood plasma during World War II not only saved thousands of lives, but innovated the nation's blood banking process and standardized procedures for long-term blood preservation and storage techniques adapted by the American Red Cross, earning him the appellation "Father of Blood Banks." He innovated the mobile blood-collection units, today's "bloodmobile" which led to our modern day blood drives. At his funeral, Reverend Jerry Moore said, **Drew** had "a life which crowds into a handful of years' significance, so great, men will never be able to forget it."

Frederick McKinley Jones

60 patents

In 1940, **Frederick McKinley Jones** patented a refrigeration system for vehicles, a concept that suddenly opened a global market for fresh produce and changed the definition of seasonal foods. He and his business partner, Joseph Numero, parlayed his invention into a successful company, Thermo King, which still thrives today.

The refrigeration system also helped open new frontiers in medicine because hospitals could get shipments of blood and vaccines.

Before his death, **Jones** earned more than 60 patents, including one for a portable X-ray machine.

In 1944, he became the first black member of the American Society of Refrigeration Engineers. In 1977, the Minnesota Inventors inducted **Jones** into their Hall of Fame. In 1991, long after his death, he became the first African American to receive the National Medal of Technology.

Dr. Shirley Ann Jackson

Numerous Inventions

Nuclear physicist and President of the Renssalear Polytechnic Institute in Troy, New York, **Dr. Shirley Ann Jackson** was the on of the first two African-American woman to earn a Ph.D. in Physics and the first African-American woman to earn a Ph.D. in any field from the Massachusetts Institute of Technology. During Barack Obama's presidency, she served as Chair of the President's Intelligence Advisory Board.

Dr. Jackson is credited with groundbreaking research that led to inventions including fiber optic cable, caller ID, call waiting, the portable fax machine, touch-tone telephones and solar cells.

She has received 45 honorary doctoral degrees and is the recipient of countless other awards. In 2005 *Time Magazine* said **Dr. Jackson** is "perhaps the ultimate role model for women in science."

Percy Lavon Julian

Chemical Synthesis of Medicinal Drugs from Plants

American research chemist and pioneer in the chemical synthesis of medicinal drugs from plants, **Percy Lavon Julian** was the first to synthesize the natural product physostigmin. He pioneered the industrial large-scale chemical synthesis of the human hormones progesterone and testosterone from plant sterols. His work laid the foundation for the steroid drug industry's production of cortisone, other corticosteroids, and birth control pills.

Julian's efforts helped reduce the cost of steroid intermediates to large multinational pharmaceutical companies, helping to significantly expand the use of several important drugs.

Julian received more than 130 chemical patents. He was one of the first African-Americans to receive a doctorate in chemistry, the first African-American chemist inducted into the National Academy of Sciences and the second African-American scientist inducted (after David Blackwell) from any field. **Julian's** been honored with an annual award given in his name and several building named after him, as well as being honored with a U.S. Postage Stamp in the Black Heritage series.

Sources

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https://airconditioningsoutheast.com/2019/2/
https://blackamericaweb.com
https://blackartstory.org
https://blackinventor.com
https://blackthen.com
https://blog.directauto.com/odds-ends/ways-african-american-inventors-transformed-transportation/
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https://lockreference.com
https://patents.google.com
https://patents.justia.com
https://thinkgrowth.com
https://timeline.com

WABC-NY
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www.biography.com
www.blackpast.org
www.blackinventor.com
www.black-inventor.com
www.cracked.com
www.encylopedia.com
www.famous-black-inventors.net
www.freepatentsonline.com
www.history.com
www.insider.com
www.invent.org
www.madamcjwalker.com
www.nasa.gov
www.nationalpeanutboard.org
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www.thefamouspeople.com
www.theoptionalfacts.com/blog
www.thepbsblog.com
www.thoughtco.com
www.transportation.gov
wwww.womenof thehall.com
w.uspto.gov/kids
www.whitehousehistory.com
www.wikipedia.com
www.worldsweeper.org

Closing Thoughts

The information on each individual is necessarily brief, for the purposes of this slide program and is meant as an introduction which, hopefully, will spur the reader on to further inquiry in order to learn the full, fascinating, and truly moving stories of each of these inspiring Black inventors whose life's work has served to enhance your own life. This is not a complete list; there will be many more people I've missed. Perhaps you will go on to create a newer, more comprehensive one!