Black Firsts and Inventors

The Racial Justice and Inclusion Working Group

Marie Van Brittan Brown

- Marie Van Brittan Brown and her design for her home security system.
- Also a New York City resident, Marie Van Brittan Brown created an early version of the modern home security system more than a century later. Feeling unsafe due to her neighborhood's high crime rate, the full-time nurse rigged a motorized camera to record her home entryway and project images onto a TV monitor.
- Also included in her setup was a two-way microphone in order to communicate with visitors without opening the door, as well as a panic button to notify police of any potential emergency in progress. After filing to patent the closed circuit TV security system in 1966, Brown received her approval in December 1969.

Mary and Mildred Davidson

- Mary and her sister Mildred patented many practical inventions. They didn't have technical education, but they were both exceptional at spotting ways to make peoples' lives better. Together, they invented the sanitary belt. Later, Mary invented the moisture-resistant pocket for the belt. While disabled from multiple sclerosis, Mary went on to invent the walker and the toilet-tissue holder.
- She finally saved enough money to get a patent on the sanitary belt but the company that was interested in it turned it down once they discovered that she was African American. She never made any money off the sanitary belt, because her patent expired and became public domain, allowing it to be manufactured freely.

Thomas L. Jennings

- The first African American to ever receive a patent.
- He invented an early method of dry cleaning called "dry scouring" and patented it in 1821—four years before Paris tailor Jean Baptiste Jolly refined his own chemical technique and established what many people claim was history's first dry cleaning business.
- People objected to an African American receiving a patent, but Jennings had a loophole: He was a free man. At the time, U.S. patent laws said that the "[slavemaster] is the owner of the fruits of the labor of the slave both manual and intellectual"—meaning slaves couldn't legally own their ideas or inventions, but nothing was stopping Jennings. Several decades later, Congress extended patent rights to all African American individuals, both slaves and freedmen.

Jan E. Matzeliger

- In the 19th century, the average person couldn't afford shoes. This changed thanks to Jan Ernst Matzeliger (1852-1889), an immigrant from Dutch Guiana (modern Surinam) who worked as an apprentice in a Massachusetts shoe factory.
- Matzeliger invented an automated machine that attached a shoe's upper part to its sole. Once it was refined, the device could make 700 pairs of shoes each day—a far cry from the 50 per day that the average worker once sewed by hand. Matzeliger's creation led to lower shoe prices, making them finally within financial reach for the average American.

Dr. Patricia Bath

- Dr. Patricia Bath, who invented a more efficient way to remove cataracts, in 2017. In the 1980s, she discovered how to use a laser to correct the condition.
- When Dr. Patricia Bath had her “eureka” moment with a tool to fix cataracts in the 1980s, her supervisor was skeptical. By that point, she was used to being treated differently from her male counterparts in ophthalmology.
- She had discovered how to remove cataracts using a laser, making the surgery less invasive and more efficient. Her invention, which was patented in 1988 and would ultimately be called the Laserphaco probe, could eliminate cataracts — a clouding of the lens that can cause blindness — with a one-millimeter insertion into the patient’s eye.

Elijah McCoy

- Born in 1843 to former slaves from Kentucky who escaped to Canada on the Underground Railroad.
- In 1872, McCoy invented and patented an automatic oiling device for the moving parts of steam locomotives, known as the “oil-drip cup.” McCoy’s patented device was quickly adopted by the railroads, those who maintained steamship engines and many others who used large machinery.
- The reputation of McCoy’s oiler system was so good that engineers who maintained steam engines at the time referred to his invention as “**The Real McCoy**”.

Frederick McKinley Jones

- In 1940, Jones patented the cooling system that merchants used to preserve goods on trucks during extended periods of travel.
- Jones went on to co-found the U.S. Thermo Control Company, which later became Thermo King.
- The company played a vital role in World War II by helping preserve blood, food and other supplies. Before Jones' invention, the only way to keep goods cold during transport was to use ice.

George Carruthers

- Invented the far ultraviolet camera/spectrograph in 1969. It was plated in gold and carried aboard the Apollo 16 mission, where it was placed on the moon's surface.
- The camera used ultraviolet light, invisible to the naked eye, to capture high-quality images of Earth. Carruthers's invention helped scientists see how air pollution forms. This allowed them to develop new ways to control air pollution.
- The camera also found hydrogen in deep space, which led to new ideas about the birth of stars in the universe.

Henry Blair

- Henry Blair an inventor and one of the first African-Americans to receive a patent in the United States.
- Blair was born in Glen Ross, Md. in 1807. In 1834, Blair received his first patent for a corn planter, a wheel-driven device that allowed farmers to plant more corn using less labor in a shorter period of time.
- The planter looked much like a wheelbarrow, with a compartment included to hold seeds and rakes which dragged behind to cover the soil. Two years later, Blair received his second patent, this time for a cotton planter. Blair died in 1860.

Lonnie George Johnson

- An American inventor, aerospace engineer, and entrepreneur, whose work history includes a U.S. Air Force term of service and a twelve-year stint at NASA, including the Jet Propulsion Laboratory.
- He invented the Super Soaker water gun in 1990, which has been among the world's bestselling toys ever since.
- The factory next door at 12th and Callowhill, housed the Larami Corp, the company that sold the Super Soaker water gun.
- The company had a large dumpster in the parking lot between our buildings. Every week, a few brave young boys would climb into the dumpster, pick through the discarded Super Soakers parts and pieces, hoping to gather enough to make a function water gun.

Alexander Miles

- American inventor and businessperson, best known for being awarded a patent for automatically opening and closing elevator doors. He was awarded U.S. Patent 371,207 on October 11, 1887.
- In his time, doors of the elevators had to be closed manually, often by dedicated operators. If the shaft was not closed, people could fall through it leading to some horrific accidents. Miles improved on this mechanism by designing a flexible belt attachment to the elevator cage, and drums positioned to indicate if the elevator has reached a floor. The belt allowed for automatic opening and closing when the elevator reached the drums on the respective floors, by means of levers and rollers.

Granville T. Woods

- Granville T. Woods (1856–1910) was nicknamed "The Black Edison" for the number of inventions he built and patented. Like Edison, Woods' inventions were not focused on one industry.
- Woods earned his first patent in 1884 for a steam boiler. He also invented a system for railroad braking, electric railroad systems, and devices to improve the telephone and telegraph. The telephone and telegraph patents were bought by Alexander Graham Bell's company.
- In 1887, Woods invented the Synchronous Multiplex Railway Telegraph. It allowed railroad workers to know where the trains were on the railway. Before this no one knew precisely when a train was coming down the tracks. Woods's invention prevented many collisions and deaths. He registered twenty patents between 1900 and 1907 for electronic train control devices.

Mark Dean

- Mark Dean is a computer scientist and engineer credited with helping develop a number of landmark technologies, including the color PC monitor, the Industry Standard Architecture system bus (allowing for computer plug-ins such as disk drives and printers) and the first gigahertz chip.

- He holds three of the IMB's original nine patents and, in total, has more 20 patents associated with his name.

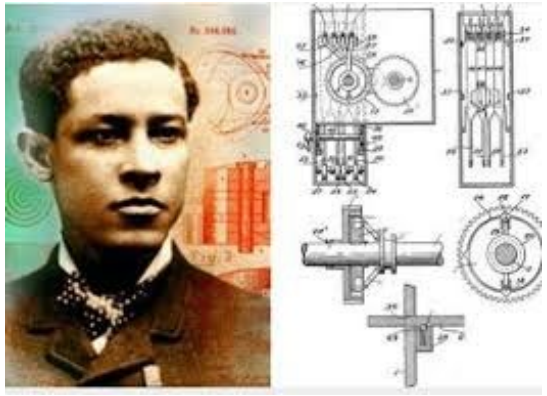
- In 1996, he was named an IBM fellow, the first African American ever to receive the honor. In 2001, he was tapped to be a member of the National Academy of Engineers.

Julian Abele

- Julian Abele a well-known Philadelphia architectural designer, was the first black graduate of architecture at the University of Pennsylvania in 1902 of what is today the School of Design.
- He spent his entire professional life with this large, nationally known firm, advancing to the position of chief designer in 1909 and taking over the office after Trumbauer's death in 1938.
- The company was responsible for the design of such Philadelphia buildings as the Philadelphia Museum of Art, the Free Library of Philadelphia, the Land Title Building (which came to house the offices of Trumbauer's firm), and a number of mansions, including Edward Stotesbury's Whitemarsh Hall.
- At Penn, Irvine Auditorium, the Dunning Coaches Center, and the President's House were designed by Trumbauer's office, and projects outside Philadelphia.

Black Inventors

Richard Spikes: Invented the Automatic Gear Shift



Roger Arliner Young: The African American to receive a doctorate in degree in Zoology from UPenn.