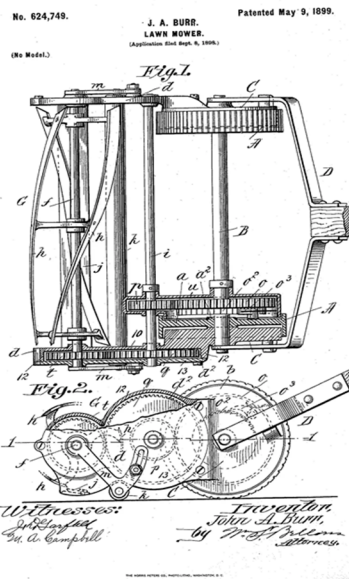
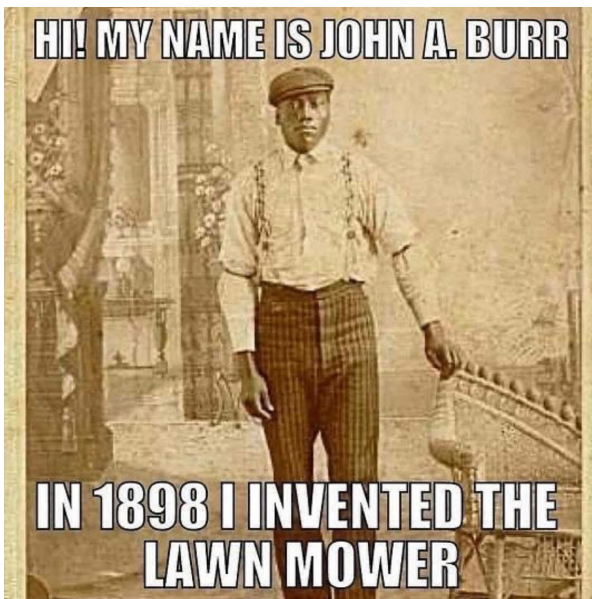




John Albert Burr (1848-1926)

Inventor of the patented rotary blade for lawn mowers



John Burr was born in Maryland in 1848. His parents were slaves who were later freed, and he may also have been a slave until age 17. He didn't escape from manual labor, as he worked as a field hand during his teenage years. As he began to understand mechanics, he put his mechanical skills to work making a living repairing and servicing farm equipment and other machines.

His talent was recognized by wealthy black activists and they ensured he was able to attend engineering classes at a private university. He moved to Chicago and also worked as a steelworker. When he filed his patent for the rotary blade mower in 1898, he was living in Agawam, Massachusetts.

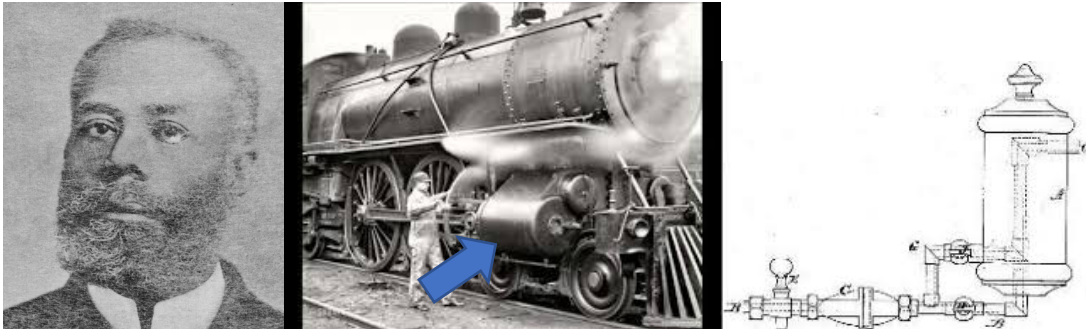
His rotary lawn mower design helped reduce the irritating clogs of clippings that are the bane of manual mowers. His invention was also more maneuverable and could be used for closer clipping around objects such as posts and buildings. Looking at his patent diagram, you will see a design that is very familiar to manual rotary mowers today.

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. He lived a long life and died in 1926 of influenza at age 78.



Elijah McCoy, "The Real McCoy" (May 2, 1844–October 10, 1929)

He's best known for inventing an automatic lubricator that was used on trains.



Elijah McCoy (May 2, 1844–October 10, 1929) was a Black American inventor who received more than 50 patents for his inventions during his lifetime. It was said that his workmanship was so exceptional that companies would request "**the real McCoy**" as a way to distinguish his products from imitations. His most famous invention was a cup that feeds lubricating oil to machine bearings through a small tube.

Born in Colchester, Ontario in 1843, Elijah McCoy's parents were slaves in the Underground Railroad. Elijah's father was enlisted in British forces, receiving approximately 160 acres of land as a result of service excellence. At the age of 15, McCoy left the United States for a mechanical engineering apprenticeship in Edinburgh, Scotland. After becoming certified, he returned to Michigan to pursue a position in his field. Facing discrimination upon his return, he was not allowed to use his engineering certificate, to only be hired as a fireman on a train--responsible for fueling the steam engine and for maintaining the oiler, which lubricated the engine's moving parts as well as the train's axles and bearings.

Because of his training, McCoy was able to identify and solve the problems of engine lubrication and overheating. At that time, trains needed to periodically stop and be lubricated to prevent overheating. McCoy developed a lubricator for steam engines that did not require the train to stop. McCoy received a patent for this invention in 1872, the first of many he would be granted for his improvements to steam engine lubricators. These advancements improved transit by allowing trains to travel farther without pausing for maintenance and re-oiling.

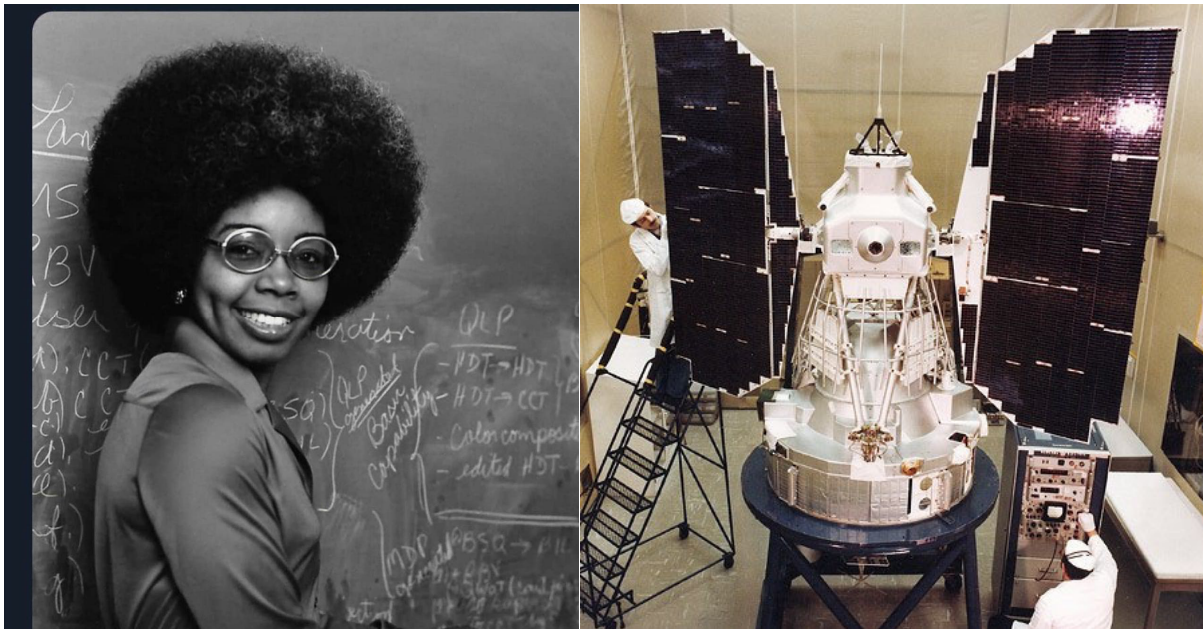
In 1920, Elijah McCoy opened his first manufacturing firm. He soon thereafter encountered many financial, physical, and mental issues. By October 10, 1929, Elijah McCoy died from dementia in Eloise Infirmary in Michigan, caused by severe hypertension.

The lubricator invention of Elijah McCoy will serve as his legacy throughout the world and he will never be forgotten by those people who become part of his manufacturing company and legacy.



Valerie Thomas (1943 -)

NASA physicist who invented the technology for 3D movies and television



The Illusion Transmitter

Valerie Thomas is a scientist who began working at NASA as a data analyst in 1964. While there, she managed a project for NASA's image processing systems and oversaw the development of "Landsat," which was the first satellite to ever send images from space. In 1977, Thomas began researching and experimenting on an "illusion transmitter," which would essentially create the appearance of a 3D image. She patented it in 1980, and NASA still uses her invention to this day.

The device produces optical illusion images via two concave mirrors. Unlike flat mirrors, which produce images that appear to be inside, or behind the mirror, concave mirrors create images that appear to be real, or in front of the mirror itself. NASA continues to use her invention to this day with some adaptations for use in surgery as well as the production of television and video screens.



**The Next Time You Use Any
Navigation Device Or Software Like
Google Maps. Thank Dr. Gladys West,
The Inventor Of GPS Technology**



Gladys Mae West (born 1930) is an American mathematician known for her contributions to the mathematical modeling of the shape of the Earth, and her work on the development of the satellite geodesy models that were eventually incorporated into the Global Positioning System (GPS). West was inducted into the United States Air Force Hall of Fame in 2018.

Whether you are getting driving directions from your phone or tagging the location of an Instagram photo, the use of GPS (Global Positioning System) has become seamlessly integrated into our daily lives. But less ubiquitous is the knowledge that GPS got its start in the mind of an Air Force mathematician named Gladys West.

West was born in 1930 in Dinwiddie County Virginia, a rural community where her family had a small farm. There, surrounded by sharecroppers, farmers, and tobacco factory workers, she decided early on that staying and working in rural Virginia was not the future she pictured for herself. She considered education the key to her way off of the farm, and she worked hard to get top grades in all of her subjects in school. Although her family didn't have the money to send her to college, her hard work paid off – she secured a scholarship to study at Virginia State University by graduating from her high school as valedictorian in 1948.

West decided to major in mathematics at Virginia State University. After graduating with her bachelor's degree, West taught science and math in Waverly, VA for two years before returning to VSU for her master's degree in Mathematics, which she received in 1955. The following year, West was hired as a mathematician at the Naval Proving Ground in Dahlgren, VA, (now called the Naval Surface Warfare Center), where she analyzed satellite data. She was one of only four African American employees at the time.



Mary Jane McLeod Bethune (1875-1955)

Started a school for African American students with \$1.50.



Mary Jane McLeod Bethune (born **Mary Jane McLeod**; July 10, 1875 – May 18, 1955) was an American educator, stateswoman, philanthropist, humanitarian, womanist, and civil rights activist. Bethune founded the National Council for Negro Women in 1935, established the organization's flagship journal *African American Women's Journal*, and resided as president or leader for myriad African American women's organizations including the National Association for Colored Women and the National Youth Administration's Negro Division. In 1904, with \$1.50, McLeod founded a school for African American student in Daytona Beach—it would later become Bethune-Cookman University. She also was appointed as a national adviser to president Franklin D. Roosevelt, whom she worked with to create the Federal Council on Negro Affairs, also known as the Black Cabinet.



Shirley Chisholm (1924-2002)

- Politician and educator **Shirley Chisholm** survived three assassination attempts during her campaign for the 1972 U.S. presidential election. She was the first woman to run for the Democratic presidential nomination and in 1968 she was the first African-American woman elected to the U.S. Congress.



Representing New York's 12th district, Chisholm was the first Black congresswoman ever elected and served from 1969-1983.

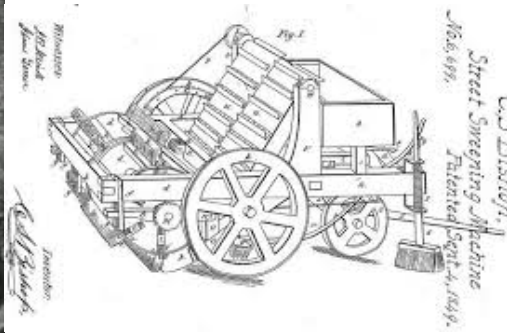
During her tenure, she served six years on the Committee on Education and Labor. The committee holds jurisdiction over many areas, including worker health and safety, equal employment opportunity, health care, wages and pensions. She also served on the Committee on Organization Study and Review (known as the Hansen Committee) in 1971.

From 1977 to 1981, Chisholm served as Secretary of the Democratic Caucus. She eventually left her Education and Labor Committee assignment to accept a seat on the Rules Committee in 1977, becoming the first Black woman—and the second woman ever—to serve on that powerful panel. Chisholm also was a founding member of the Congressional Black Caucus (CBC) in 1971 and the Congressional Women's Caucus in 1977.



Charles B. Brooks (1865-1956)

Inventor of the first automatic propelled Street Sweeper



Born in Virginia in 1865, by the 1890s he was a resident of Newark, New Jersey. Besides inventing, Brooks was a porter for the Pullman Palace Car Company. Unlike other sweepers at that time (1890s), Brooks' sweeper was the first self-propelled street sweeping truck. His design had revolving brushes attached to the front fender, and the brushes were interchangeable so that when snow fell, scrapers could be attached for snow removal. He received a patent for his invention on March 17, 1896 (US Patent #556,711). A few months later, on May 12, 1896, he patented a dust-proof collection bag for the street sweeper (US Patent #560,154). an early example of a paper punch, unique for its time because unlike hole punchers of today, his had a built-in receptacle to catch the round pieces of wastepaper there and prevent littering.



Colored National Labor Union (CNLU) Est. 1869



Established in 1869, the National Labor Union, more commonly known as the **Colored National Labor Union (CNLU)**, was formed by African Americans to organize their labor collectively on a national level. The CNLU, like other labor unions in the United States, was created with the goal of improving the working conditions and quality of life for its members.

African Americans were excluded from some existing labor unions, such as when white workers formed the National Labor Union (NLU). William Sylvis, president of the NLU, made a speech in which he agreed that there should be "no distinction of race or nationality" within the ranks of his organization. In 1869 several black delegates were invited to the annual meeting of the NLU, among them Isaac Myers, a prominent organizer of African American laborers. Myers was a pioneering African American trade unionist, a co-operative organizer and a caulker from Baltimore, Maryland.

Myers, a labor leader and mason, was born in Baltimore on January 13, 1835. He was the son of free parents but grew up in a slave state. Myers received his early education from a private day school of a local clergyman, Rev. John Fortie, since the state of Maryland provided no public education for African American children at the time. At age sixteen, he became an apprentice to James Jackson, a prominent black Baltimore ship caulker. Four years later Myers was supervising the caulking of clipper ships operating out of Baltimore.



Phillis Wheatley (1753–1784)

The earliest known African poet in the United States and first women to publish a book.



This monument stands in Boston in honor of **Phillis Wheatley**.

Born in West Africa, she was sold into slavery at the age of seven or eight and transported to North America. Phillis was brought to Boston, Massachusetts, on an enslaved person ship in 1761 and was purchased by John Wheatley as a personal servant to his wife. At a time when African Americans were discouraged and intimidated from learning how to read and write, Wheatley's life was an anomaly. The Wheatley's educated Phillis and she soon mastered English, Latin and Greek, going on to write highly acclaimed poetry.

At age 13, having received patronage from Selina Hastings, the Countess of Huntingdon, in England Wheatley published her first poem in 1767 and her first volume of verse, *Poems on Various Subjects, Religious and Moral*, in 1773. As proof of her authorship, the volume included a preface in which 17 Boston men, including John Hancock asserted that she had indeed written the poems in it.