

Black Inventors and Inventions

Air Conditioning Unit	Frederick M. Jones	July 12, 1949
Almanac	Benjamin Banneker	Approx. 1791
Auto Cut-Off Switch	Granville T. Woods	January 1, 1839
Auto Fishing Devise	G. Cook	May 30, 1899
Automatic Gear Shift	Richard Spikes	February 28, 1932
Baby Buggy	W. H. Richardson	June 18, 1899
Bicycle Frame	L.R. Johnson	October 10, 1899
Biscuit Cutter	A.P. Ashbourne	November 30, 1875
Blood Plasma Bag	Charles Drew	Approx. 1945
Cellular Phone	Henry T. Sampson	July 6, 1971
Chamber Commode	T. Elkins	January 3, 1897
Clothes Dryer	G.T. Sampson	June 6, 1862
Curtain Rod	S.R. Scratton	November 30, 1889
Curtain Rod Support	William S. Grant	August 4, 1896
Door Stop	O. Dorsey	December 10, 1878
Dust Pan	Lawrence P. Ray	August 3, 1897
Egg Beater	Willie Johnson	February 5, 1884
Electric Lampbulb	Lewis Latimer	March 21, 1882
Elevator	Alexander Miles	October 11, 1867
Eye Protector	P. Johnson	November 2, 1880
Fire Escape Ladder	J.W. Winters	May 7, 1878
Folding Bed	L.C. Bailey	July 18, 1899
Folding Chair	Brody & Surgwar	June 11, 1889
Fountain Pen	W.B. Purvis	January 7, 1890
Furniture Caster	O.A. Fisher	1878
Gas Mask	Garrett Morgan	October 13, 1914
Golf Tee	T. Grant	December 12, 1899
Guitar	Robert F. Flemming, Jr.	March 3, 1886

Hair Brush	Lydia O. Newman	November 15, 18--
Hand Stamp	Walter B. Purvis	February 27, 1883
Horse Shoe	J. Ricks	March 30, 1885
Ice Cream Scooper	A.L. Cralle	February 2, 1897
Improv. Sugar Making	Norbet Rillieux	December 10, 1846
Insect-Destroyer Gun	A.C. Richard	February 28, 1899
Ironing Board	Sarah Boone	December 30, 1887
Key Chain	F.J. Loudin	January 9, 1894
Lantern	Michael c. Harvey	August 19, 1884
Lawn Mower	L.A. Burr	May 19, 1889
Lemon Squeezer	J. Thomas White	December 8, 1893
Lock	W.A. Martin	July 23, 18--
Lubricating Cup	Elijah McCoy	November 15, 1895
Lunch Pail	James Robinson	1887
Mail Box	Paul L. Downing	October 27, 1891
Mop	Thomas W. Stewart	June 11, 1893
Motor	Federick M. Jones	June 27, 1939
Peanut Butter	George Washington Carver	1896
Pencil Sharpener	J.L. Love	November 23, 1897
Record Player Arm	Joseph Hunger Dickenson	January 8, 1819
Refrigerator	J. Standard	June 14, 1891
Riding Saddles	W.D., Davis	Ocotber 6, 1895
Rolling Pin	John W. Reed	1864
Shampoo Headrest	C.O. Bailiff	October 11, 1898
Spark Plug	Edmond Berger	February 2, 1839
Stethoscope	Imhotep	Ancient Egypt
Stove	T.A. Carrington	July 25, 1876
Straightening Comb	Madam C.J. Walker	Approx. 1905
Street Sweeper	Charles B. Brooks	March 17, 1890
Phone Transmitter	Granville T. Woods	December 2, 1884

Thermostat Control	Frederick M. Jones	February 23, 1960
Traffic Light	Garrett Morgan	November 20, 1923
Tricycle	M.A. Cherry	May 6, 1886
Typewriter	Burridge & Marshman	April 7, 1885

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Black Scientists & Inventors

Benjamin Banneker, Thomas Jennings, other exceptional scientists

by Ann Marie Imbornoni

During slavery, most black slaves were denied formal education and in fact many laws were passed in the South prohibiting slave literacy in the aftermath of various slave rebellions. Even free blacks in the century before and after [the Civil War](#) were limited in their access to mainstream, quality education and vocational training.

This limited education and training meant that, for the most part, blacks were shut out of professional occupations and confined to working in industries deemed acceptable for them, such as domestic services, some manual trades, and agriculture. Nevertheless a small number of exceptionally talented blacks were able to obtain an education and, through their life's work, make significant contributions to American life.

Scientists

Two early African-American scientists, namely mathematician and astronomer [Benjamin Banneker](#) and agricultural chemist [George Washington Carver](#), have become legendary for their intellect and ingenuity.

Born free in Maryland, Banneker was largely self-taught. He constructed the first striking clock to be made in America, helped survey the boundaries for Washington, D.C., and published an almanac, which he compiled based on his own astronomical



Madame C.J. Walker

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observations and calculations.

Carver was born into slavery at the very end of the Civil War. He attended Iowa State College of Agriculture, where he received degrees in agricultural science. During his career as a researcher and educator, he advocated innovative agricultural methods and developed hundreds of applications for certain agricultural products, such as the peanut.

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Although Banneker and Carver are probably the best-known black scientists, they were not the only ones. The achievements of a selection of pioneering black scientists, including Banneker and Carver, are outlined in the [list of African American Scientists](#) below.

Inventors

Unlike black slaves, free blacks prior to the Civil War were entitled to receive [patents](#) for their inventions. Though, again, because blacks lacked educational and vocational opportunities, few had the necessary skills or experience to develop their inventive ideas or patent them.

Despite these constraints, there were a number of successful black inventors whose inventions proved useful and important. **Thomas Jennings**, the first known African American to hold a patent, used the money he earned from his invention to fund abolitionist causes.

Some slaves, who were skilled craftsmen, did create devices or techniques that benefited their masters' enterprises. According to a decision by the federal government in 1858, though, neither the slave nor the slave owner could claim ownership rights to such an invention. In 1870, following the Civil War, the U.S. patent laws were revised so that anyone, regardless of race, could hold a patent. Consequently the number of patents issued to African Americans soared. Below is a [list of some notable African-American inventors](#).

African American Scientists	
Benjamin Banneker (1731-1806)	Born into a family of free blacks in Maryland, Banneker learned the rudiments of reading, writing, and arithmetic from his grandmother and a Quaker schoolmaster. Later he taught himself advanced mathematics and astronomy . He is best known for publishing an almanac based on his astronomical calculations.
Rebecca Cole (1846-1922)	Born in Philadelphia, Pennsylvania, Cole was the second black woman to graduate from medical school (1867). She joined Dr. Elizabeth Blackwell, the first white woman physician, in New York and taught hygiene and childcare to families in poor neighborhoods.
Edward Alexander	Born in New Haven, Connecticut, Bouchet was the first African American to graduate (1874) from Yale College. In 1876, upon receiving his Ph.D. in physics from Yale, he

Bouchet (1852-1918)	became the first African American to earn a doctorate. Bouchet spent his career teaching college chemistry and physics.
Dr. Daniel Hale Williams (1856-1931)	Williams was born in Pennsylvania and attended medical school in Chicago, where he received his M.D. in 1883. He founded the Provident Hospital in Chicago in 1891, and he performed the first successful open heart surgery in 1893.
George Washington Carver (1865?-1943)	Born into slavery in Missouri, Carver later earned degrees from Iowa Agricultural College. The director of agricultural research at the Tuskegee Institute from 1896 until his death, Carver developed hundreds of applications for farm products important to the economy of the South, including the peanut, sweet potato, soybean, and pecan.
Charles Henry Turner (1867-1923)	A native of Cincinnati, Ohio, Turner received a B.S. (1891) and M.S. (1892) from the University of Cincinnati and a Ph.D. (1907) from the University of Chicago. A noted authority on the behavior of insects, he was the first researcher to prove that insects can hear.
Ernest Everett Just (1883-1941)	Originally from Charleston, South Carolina, Just attended Dartmouth College and the University of Chicago, where he earned a Ph.D. in zoology in 1916. Just's work on cell biology took him to marine laboratories in the U.S. and Europe and led him to publish more than 50 papers.
Archibald Alexander (1888-1958)	Iowa-born Alexander attended Iowa State University and earned a civil engineering degree in 1912. While working for an engineering firm, he designed the Tidal Basin Bridge in Washington, D.C. Later he formed his own company, designing Whitehurst Freeway in Washington, D.C. and an airfield in Tuskegee, Alabama, among other projects.
Roger Arliner Young (1889-1964)	Ms. Young was born in Virginia and attended Howard University, University of Chicago, and University of Pennsylvania, where she earned a Ph.D. in zoology in 1940. Working with her mentor, Ernest E. Just, she published a number of important studies.
Percy L. Julian (1899-1975)	Alabama-born Julian held a bachelor's degree from DePauw University, a master's degree from Harvard University, and a Ph.D. from the University of Vienna. His most famous achievement is his synthesis of cortisone, which is used to treat arthritis and other inflammatory diseases.
Dr. Charles Richard Drew (1904-1950)	Born in Washington, D.C., Drew earned advanced degrees in medicine and surgery from McGill University in Montreal, Quebec, in 1933 and from Columbia University in 1940. He is particularly noted for his research in blood plasma and for setting up the first blood bank.
Emmett Chappelle (1925-)	Born in Phoenix, Arizona, Chappelle earned a B.S. from the University of California and an M.S. from the University of Washington. He joined NASA in 1977 as a remote sensing scientist. Among Chappelle's discoveries is a method (developed with Grace Picciolo) of instantly detecting bacteria in water, which led to the improved diagnoses of urinary tract infections.
James West (b. 1931)	James West was born in 1931 in Prince Edward County, Virginia, and studied physics at Temple University. Specializing in microphones, West went on to author 200 patents and more than 60 technical and scientific publications. In 1962, with Gerhard Sessler, West developed the foil electret microphone, which became the industry standard. Approximately 90% of microphones in use today are based on this invention and almost all telephones utilize it, as well as tape recorders, camcorders, baby monitors and hearing aids.
Philip Emeagwali (b. 1954)	Born in Nigeria in 1954, Philip Emeagwali's determination to succeed grew out of a life of poverty and little formal education. An expert in mathematics, physics, and astronomy, Emeagwali won the Institute of Electronics and Electrical Engineers' Gordon Bell Prize in 1989 for an experiment that used 65,000 processors to perform the world's fastest

	computation of 3.1 billion calculations per second. Emeagwali's computers are currently being used to forecast the weather and predict future global warming.
Aprille Ericsson (b. 1963)	Born and raised in Brooklyn, N. Y., M.I.T graduate Aprille Ericsson was the first female (and the first African-American female) to receive a Ph.D. in mechanical engineering from Howard University and the first African-American female to receive a Ph.D. in engineering at the NASA Goddard Space Flight Center. Ericsson has won many awards, including the 1997 "Women in Science and Engineering" award for the best female engineer in the federal government, and she is currently the instrument manager for a proposed mission to bring dust from the Martian lower atmosphere back to Earth.

African American Inventors	
Thomas L. Jennings (1791-1859)	A tailor in New York City, Jennings is credited with being the first African American to hold a U.S. patent. The patent, which was issued in 1821, was for a dry-cleaning process.
Norbert Rillieux (1806-1894)	Born the son of a French planter and a slave in New Orleans, Rillieux was educated in France. Returning to the U.S., he developed an evaporator for refining sugar, which he patented in 1846. Rillieux's evaporation technique is still used in the sugar industry and in the manufacture of soap and other products.
Benjamin Bradley (1830?-?)	A slave, Bradley was employed at a printing office and later at the Annapolis Naval Academy, where he helped set up scientific experiments. In the 1840s he developed a steam engine for a war ship. Unable to patent his work, he sold it and with the proceeds purchased his freedom.
Elijah McCoy (1844-1929)	The son of escaped slaves from Kentucky, McCoy was born in Canada and educated in Scotland. Settling in Detroit, Michigan, he invented a lubricator for steam engines (patented 1872) and established his own manufacturing company. During his lifetime he acquired 57 patents.
Lewis Howard Latimer (1848-1929)	Born in Chelsea, Mass., Latimer learned mechanical drawing while working for a Boston patent attorney. He later invented an electric lamp and a carbon filament for light bulbs (patented 1881, 1882). Latimer was the only African-American member of Thomas Edison's engineering laboratory.
Granville T. Woods (1856-1910)	Woods was born in Columbus, Ohio, and later settled in Cincinnati. Largely self-educated, he was awarded more than 60 patents. One of his most important inventions was a telegraph that allowed moving trains to communicate with other trains and train stations, thus improving railway efficiency and safety.
Madame C.J. Walker (1867-1919)	Widowed at 20, Louisiana-born Sarah Breedlove Walker supported herself and her daughter as a washerwoman. In the early 1900s she developed a hair care system and other beauty products. Her business, headquartered in Indianapolis, Indiana, amassed a fortune, and she became a generous patron of many black charities.
Garrett Augustus Morgan (1877-1963)	Born in Kentucky, Morgan invented a gas mask (patented 1914) that was used to protect soldiers from chlorine fumes during World War I. Morgan also received a patent (1923) for a traffic signal that featured automated STOP and GO signs. Morgan's invention was later replaced by traffic lights.
Frederick McKinley Jones (1892-1961)	Jones was born in Cincinnati, Ohio. An experienced mechanic, he invented a self-starting gas engine and a series of devices for movie projectors. More importantly, he invented the first automatic refrigeration system for long-haul trucks (1935). Jones was awarded more than 40 patents in the field of refrigeration.
David Crosthwait, Jr.	Born in Nashville, Tennessee, Crosthwait earned a B.S. (1913) and M.S. (1920) from Purdue University. An expert on heating, ventilation, and air conditioning, he designed the

(1898-1976)	heating system for Radio City Music Hall in New York. During his lifetime he received some 40 U.S. patents relating to HVAC systems.
Patricia Bath (1942-)	Born in Harlem, New York, Bath holds a bachelor's degree from Hunter College and an M.D. from Howard University. She is a co-founder of the American Institute for the Prevention of Blindness. Bath is best known for her invention of the Laserphaco Probe for the treatment of cataracts.
Mark Dean (1957-)	Dean was born in Jefferson City, Tennessee, and holds a bachelor's degree from the University of Tennessee, a master's degree from Florida Atlantic University, and a Ph.D. from Stanford University. He led the team of IBM scientists that developed the ISA bus—a device that enabled computer components to communicate with each other rapidly, which made personal computers fast and efficient for the first time. Dean also led the design team responsible for creating the first one-gigahertz computer processor chip. He was inducted into the National Inventors Hall of Fame in 1997.

Read more: [African American Scientists & Inventors — Infoplease.com](http://www.infoplease.com/spot/bhmScientists1.html#ixzz2514J00Of)
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