

Black Inventors and Scientists

Noted Black Inventors: Anonymity and Achievement Inventions by Negroes: 1871-1900

In 1870, more than 80% of the Negroes in the United States were illiterate and, even 40 years later, more than one-third of the Negro population over 10 years of age had still never been to school. It is against this background of systematic educational deprivation that the achievements of the Negro inventor and scientist can be seen in their sharpest perspective. In addition to this lack of formal schooling, the Negro inventor and scientist also encountered innumerable legal and social obstacles. In pre-Civil War days, for example,

slaves were unable to obtain patents with the result that, today, there is no way of determining the actual number of Negro inventors who had their work expropriated by their masters. Even the inventions of free Negroes were often refused acceptance once the racial identity of the inventor became known. (See Garret Morgan entry.)

Many inventions by Negroes have not, therefore been identified as such; nonetheless, even if one considers only the verifiable ones, the total still runs into the thousands, ranging

from household conveniences to more complex mechanical devices which have proved to be of vital importance to business and industry. Some are as familiar as the potato chip of Hiram S. Thomas, a Saratoga chef; the ice cream of Augustus Jackson, a Philadelphia confectioner known as the "man" who invented ice cream" (1832); the golf tree of George F. Grant; the rop-holder of Thomas W. Stewart, and the player pianos of J.H. and S.L. Dickinson.

On the other hand, no commentary on Negro inventors and scientists could fail to make mention of the major accomplishments of such men as Granville Woods (the synchronous multiplex railway telegraph); Elijah McCoy (the automatic lubricator), and Jan Matzeliger (the shoe-last machine).

Nor should one forget that most of these achievements--whether large or small--were often made in the face of overwhelming odds, and frequently greeted with hostility and derision.

Benjamin Banneker 1731-1806 Inventor, mathematician, gazeteer

Benjamin Banneker's mechanical inventiveness led him, in 1761, to construct what was probably the first clock made in America—a wooden "striking" clock so accurate that it kept perfect time and struck each hour unfailingly for more than 20 years.

Born in Ellicott, Maryland on November 9, 1731 of a free mother and a slave father who ultimately purchased his own freedom, Banneker himself was considered free, and was thus able to attend an integrated private school, where he secured the equivalent of an eighth grade education.

His aptitude in mathematics and his knowledge of astronomy enabled

him to predict the solar eclipses of 1789. Within a few years, he began publishing an almanac which not only contained tide tables and data on future eclipses, but also listed a number of useful medicinal products and formulas as well. This almanac was the first scientific book written by an American Negro, and appeared annually for more than a decade.

Banneker's major reputation, however, stems from his service as a surveyor on the six-man team which helped lay out the blueprint for the eventual city of Washington, D.C. When the chairman of the committee, Major L'Enfant, abruptly resigned and returned to France with his plans, Banneker's precise memory enabled him to reproduce them in their entirety. Banneker died in 1806.



Benjamin Banneker

George Washington Carver 1864-1943 Agricultural Scientist

George Washington Carver devoted his life to research projects connected primarily with Southern agriculture. The products he derived from the peanut and the soybean may be said to have revolutionized the economy of the South by liberating it from an excessive dependence on a single crop: cotton.

Born a slave in 1864 in Diamond Grove, Missouri, Carver was only an infant when he and his mother were abducted from his owner's plantation by a band of slave raiders. His mother was sold and shipped away, but her son was ransomed by his master in exchange for a race horse.

At the age of 13, Carver was already on his own. By working hard as a farm hand, he managed to obtain a high school education. After being turned down by many colleges, he was finally admitted as the first Negro student of Simpson College in Indianola, Iowa. He then attended Iowa Agricultural College (now Iowa State University) where, while working as the school janitor,

he received a degree in agricultural science in 1894. Two years later, he received his master's degree from the same school, and became the first Negro to serve on its faculty. Within a short time, his fame had spread sufficiently for Booker T. Washington to offer him a post at Tuskegee.

Dr. Carver never patented any of the many discoveries he made while at Tuskegee. ("God gave them to me, how can I sell them to someone else?") In fact, in 1938, he donated over \$30,000 of his life's savings to the George Washington Carver Foundation, and willed the rest of his estate to the same organization so that his work might be carried on after his death.

Carver died in 1943, and is buried alongside Booker T. Washington, his colleague of long standing. The Carver epitaph reads: "He could have added fortune to fame, but caring for neither, he found happiness and honor in being helpful to the world."

Dr. Charles Drew 1904-1950 Blood plasma researcher

The techniques developed by

Charles Richard Drew for separating and preserving blood, as well as his advanced research in the vital field of blood plasma, helped save countless lives during World War II.

Born in Washington, D.C. on June 3, 1904, Drew graduated from Amherst College in Massachusetts, where he received the Messman Trophy for having brought the most honor to the school during his four-year stay there. He was not only an outstanding scholar, but also the captain of the track team and star halfback on the football team.

After receiving his medical degrees from McGill University in 1933, Drew returned to Washington, D.C. to teach pathology at Howard University. In 1940, while taking his D. Sc. degree at Columbia University, he wrote a dissertation on "banked blood," and soon became such an expert in this field that the British government called upon his services to set up the first blood bank in England.

During World War II, Dr. Drew was appointed as director of the American Red Cross blood donor project and, later, served as chief surgeon of Freedmen's Hospital in Washington, D.C.

He was killed in an automobile crash on April 1, 1950.

William A. Hinton 1883-1959 Medical Scientist

Long one of the world's authorities on venereal disease, Dr. William A. Hinton is responsible for the development of the "Hinton test," a reliable method for detecting syphilis. During his lifetime, he also collaborated with Dr. J.A.V. Davies on what is now called the "Davies-Hinton test" for the detection of this same disease.

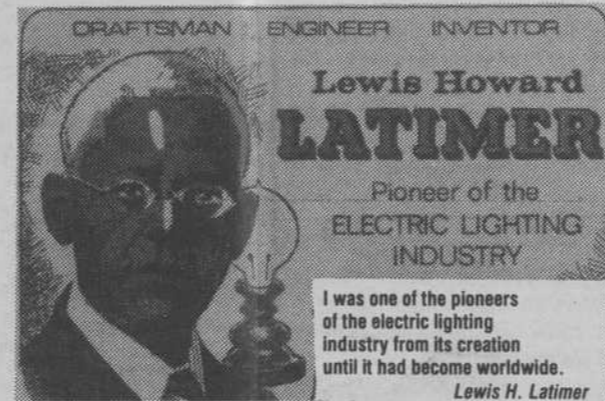
Born in Chicago on December 15, 1883, Hinton graduated from Harvard in 1905 and, seven years later, finished his studies at Harvard Medical School.

For three years after graduation, he served as a voluntary assistant in the pathological laboratory at Massachusetts General Hospital. This was followed by eight years of laboratory practice at the Boston

Dispensary and at the Massachusetts Department of Public Health. Hinton then became an assistant lecturer in preventive medicine and hygiene at the Harvard University Medical School. In 1949, he became the first Negro to be granted a professorship there.

Though he lost a leg in an automobile accident, Dr. Hinton remained active in both his teaching and his work at the Boston Dispensary Laboratory, which he directed from 1916 to 1952.

He died on August 8, 1959 in Canton, Massachusetts.



Lewis Howard Latimer 1848-1928 Inventor, draftsman, engineer

Lewis Howard Latimer was employed by Alexander Graham Bell to make the patent drawings for the first telephone, and later went on to become chief draftsman for both the General Electric and Westinghouse Companies.

Born in Chelsea, Massachusetts on September 4, 1848, Latimer enlisted in the Union Navy at the age of 15, and began the study of drafting upon completion of military service. In 1881, he invented and patented the first incandescent electric light bulb with a carbon filament. Later, as an engineer for the Edison Company, he supervised the installation of electric light in New York, Philadelphia, Montreal, and London. He also wrote the first textbook on the lighting system used by this company.

Latimer died in 1928.

Jan Matzeliger 1852-1889 Inventor

The shoe-lasting machine invented by Jan Matzeliger, a Negro from Dutch Guiana, not only revolutionized the shoe industry, but also made Lynn, Massachusetts the "shoe capital of the world."

Born in Paramaribo, Dutch Guiana on September 15, 1852, Matzeliger found employment in the government machine works at the age of 10. Eight years later, he immigrated to the United States,

the surface of Lake Erie. During the emergency, Morgan, his brother and two other volunteers -- all wearing inhalators -- were the only men able to descend into the smoke and gas-filled tunnel, and save several of the men from asphyxiation.

Orders for the Morgan inhalator soon began to pour into Cleveland from fire companies all over the nation but, as soon as Morgan's racial identity became known, many of them were cancelled. In the South, it was necessary for Morgan to utilize the services of a white man to demonstrate his invention. (During World War I, the Morgan inhalator was transformed into a gas mask used by combat troops.)

Born in Paris, Kentucky on March 4, 1877, Morgan moved to Cleveland at an early age. His first invention was an improvement on the sewing machine which he sold for \$150. In 1923, having established his reputation with the gas inhalator, he was able to command a price of \$40,000 from the General Electric Company for his automatic stopsign.

Morgan died in 1963 in Cleveland, the city which once awarded him a gold medal for his devotion to public safety.

Daniel Hale Williams 1856-1931 Surgeon

A pioneer in open heart surgery, Daniel Hale Williams was born in Holidayburg, Pennsylvania in 1856. His father died when he was 11, and his mother deserted him after first apprenticing him to a cobbler. He later worked as a roustabout on a lake steamer and as a barber before finishing his education at the Chicago Medical College in 1883.

Williams opened his office in Chicago's South Side at a time when Chicago hospitals did not allow a Negro doctor to use their facilities. In those days, operations were often performed on kitchen tables in tenements scattered through the Black Belt. Dr. Williams helped put

an end to this practice by founding Provident Hospital, which was open to patients of all races.

It was at Provident Hospital in 1893 that Dr. Williams performed the operation upon which his later fame rests. On July 10 of that year, a patient was admitted to the emergency ward with a knife wound in an artery lying a fraction of an inch from the heart. With the aid of six staff surgeons, Williams made an incision in the patient's chest, and operated successfully on the artery.

The operation performed by Williams was a delicate and astonishing feat of surgery. The doctor began by making a six inch incision and detaching the fifth rib from the breastbone, so he could settle down to work through a 2"x1½" opening. After securing the left internal mammary artery, he then inspected the heart, noting instantly that the pericardium had been punctured by the knife. The heart muscle, too, had been nicked, but the wound here was not serious enough to require suturing or stitching. Williams then repaired the pericardium, sutured the chest opening, and completed the momentous operation.

For the next four days, the patient, James Cornish, lay near death, his temperature for above normal and his pulse dangerously uneven. An encouraging rally then brought him out of immediate danger, terminating the immediate crisis period. Three weeks later, minor surgery was performed by Williams to remove fluid from Cornish's pleural cavity. After recuperating for still another month, Cornish was fully recovered and able to leave the hospital, scarred but cured.

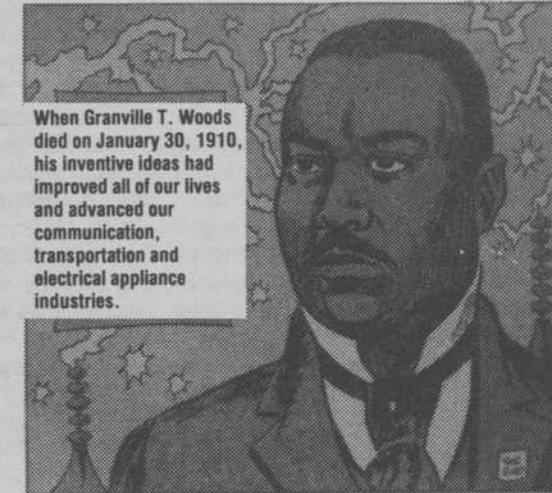
An uproar of publicity greeted Williams' later announcement that his heart surgery had been successful. Much of it was negative, in the sense that skeptics doubted a Negro doctor could have engineered such a significant breakthrough. Unaffected by the notoriety, Williams continued a fulltime association with Freedmen's Hospital.

Dr. Williams died in 1931 after a lifetime devoted to his two main interests -- the NAACP, and the construction of hospitals and training schools for Negro doctors and nurses.

Granville T. Woods 1856-1910 Inventor

During his lifetime, Granville T. Woods obtained some 50 patents, including one for an incubator which was the forerunner of present machines capable of hatching 50,000 eggs at a time.

Born in Columbus, Ohio on April 23, 1856, Woods attended school until he was 10. He was first employed in a machine, buy and



Granville T. Woods

When Granville T. Woods died on January 30, 1910, his inventive ideas had improved all of our lives and advanced our communication, transportation and electrical appliance industries.

continued to improve his mechanical aptitude by working on a railroad in 1872, in a rolling mill in 1874 and, later, studying mechanical engineering at college. In 1878, Woods became an engineer aboard

the Ironsides, a British steamer and, within two years, was handling a steam locomotive on the D&S Railroad.

In 1887, he patented the most advanced of his many inventions --

the Synchronous Multiplex Railway Telegraph. This device was designed "for the purpose of averting accidents by keeping each train informed of the whereabouts of the one immediately ahead or following it, in communicating with stations from moving trains; and in promoting general social and commercial intercourse."

Woods marketed this product, as well as the others which followed it, through his own company. A perusal of the patent files in Washington, D.C. shows Woods to have been an extremely prolific inventor, as well as a highly important one. In the 20-year span between 1879 and 1899, no less than 23 separate inventions bear his name. In 1887 alone, he registered seven separate inventions with the Patent Office, all of them connected with the ingenious railway communications system he devised. Woods died in New York City on January 30, 1910.

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PRELIMINARY COMPATIBILITY SCREENING

1. I am easily irritated when required to stand in line.
2. My level of refinement is average.
3. Off-color language is embarrassing.
4. Perfection is often just an accident.
5. Most people would consider me unsophisticated.
6. I dislike having to get dressed up to go out.
7. Early hotel check-out times are annoying.
8. People place too much emphasis on sex these days.
9. Moral values are lower now than ever before.
10. Love and commitment should precede sex.

**Garrett A. Morgan
1877-1963
Inventor**

The value of Garret Morgan's "gas inhalator" was first acknowledged during a successful rescue operation made necessary by a tunnel explosion when had trapped several men in the Cleveland Waterworks some 200 feet below



Daniel Hale Williams