2026 INDUCTEES

Louis Argenta 2
Michael Morykwas 3
Sara Blakely 4
Gebisa Ejeta 5
Teresa Meng 6
Henry Samueli 7
Feng Zhang 8
Donald Alstadt 9
Olive Dennis 10
Frank S. Greene Jr. 11
Maurus Logan 12
George Maison 13
Irving Porush 14
Charles Thiel 15
Reuben Trane 16

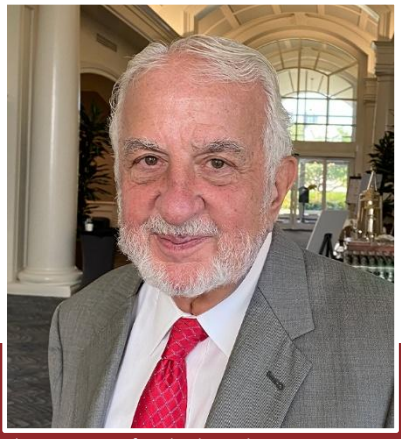

Photo courtesy of Michael Morykwas

Louis Argenta

Vacuum Assisted Closure® (V.A.C.®)

U.S. PATENT NO. 5,645,081: Method of treating tissue damage and apparatus for same

Inducted in 2026 ***Born: Dec. 28, 1942***

Louis Argenta and Michael Morykwas co-invented the medical device known as Vacuum Assisted Closure (V.A.C.). Using controlled suction to draw excess fluid from a wound, it promotes the wound's closure and encourages the growth of new tissue. V.A.C. therapy has been used to help millions of patients worldwide by treating a wide range of difficult-to-heal wounds, from surgical wounds to diabetic ulcers and burns.

Full Bio: https://www.invent.org/inductees/louis-argenta

Primary Connections:

- Renovo Concepts Inc.: Co-Founder, Medical Director, 2017-present
- Wake Forest University School of Medicine: Department of Plastic and Reconstructive Surgery, Chair, 1988-2008; Professor of Surgery, 1988-2022; Professor of Surgery, Emeritus, 2022-present
- University of Michigan Medical Center, Section of Plastic and Reconstructive Surgery: Associate Professor of Surgery; Interim Head, 1973-88

Education:

- University of Michigan: B.S., Zoology, 1965
- University of Michigan School of Medicine: M.D., 1969

Military Service:

- U.S. Navy Medical Corps, 1970-73

Key Memberships/Awards:

- American College of Surgeons: Jacobson Innovation Award, 2016
- Wake Forest University: Medallion of Merit, 2015
- American Association of Plastic Surgeons: Achievement Award for Clinical Research, 2013
- The Plastic Surgery Foundation: Outstanding Achievement in Basic and Translational Research Award, 2012
- Wake Forest University School of Medicine: Distinguished Faculty Award, 2010

Things You Should Know:

- Argenta was born in Detroit in 1942 to parents who had immigrated to the U.S. from Italy.
- Growing up, he found it inspiring to watch people repair household items in Detroit's "fix-it" shops.
- Encouraged by his family's emphasis on education, he graduated from high school in 1961 as both valedictorian and class president.
- Beginning in 1970, he served in the U.S. Navy Medical Corps for three years, including two years at sea.
- He was awarded a craniofacial fellowship in Paris, France, with Paul Tessier, who was the world's foremost craniofacial surgeon.
- In 1988, he established a department of plastic surgery at Wake Forest University, where he specialized in treating the most challenging cases.
- Argenta got the idea for the V.A.C. when he needed a solution for a patient who was expected to die, and he worked with his co-inventor Morykwas to develop a prototype.
- In a study involving 300 human patients, 296 experienced favorable wound healing following V.A.C. treatment.
- Patented in 1997, the V.A.C. since has been used to treat more than 20 million patients, and the V.A.C. is commonly used on U.S. military personnel with traumatic wounds.
- For more than 30 years, Argenta and his family have made medical missions around the world.

Photo courtesy of Christine Morykwas

Primary Connections:

- Renovo Concepts Inc.: Co-Founder, President, Chief Science Officer, 2017-present
- Wake Forest University School of Medicine: Department of Plastic and Reconstruction Surgery, Professor (now emeritus), 1988-2022
- University of Michigan: Research Associate, Plastic Surgery, 1982-88

Education:

- Michigan Technological University
- University of Detroit: B.S., Biology, 1981
- University of Michigan: M.S., Bioengineering, 1983; Ph.D., Bioengineering, 1988

Key Memberships/Awards:

- Wound Healing Foundation-Thomas K. Hunt Keystone Lecture, 2025
- Mona Shores Education Foundation Hall of Fame, 2016
- Wake Forest University: Medallion of Merit, 2015

Michael Morykwas

Vacuum Assisted Closure® (V.A.C.®)

U.S. PATENT NO. 5,645,081: Method of treating tissue damage and apparatus for same

Inducted in 2026 ***Born: May 2, 1956***

Michael Morykwas and Louis Argenta developed Vacuum Assisted Closure (V.A.C.), the revolutionary medical device that uses controlled suction to draw excess fluid from a wound, enable its closure and healing, and encourage new tissue growth. V.A.C. therapy has been used to treat millions of patients worldwide with a range of difficult-to-heal wounds.

Full Bio: https://www.invent.org/inductees/michael-morykwas

Things You Should Know:

- Morykwas was born in Detroit in 1956, and he spent much of his childhood in Muskegon, Michigan.
- He has always loved nature, and when he was growing up, he spent a lot of time in his family's cottage in the woods.
- He originally planned to be a dentist but changed course three years into dental school when he realized he was more interested in biomaterials.
- In 1988, he joined the department of plastic surgery at Wake Forest University, where he was hired by his future co-inventor.
- In late 1988, Morykwas developed a prototype for the V.A.C. after Argenta brought him his initial idea for the invention.
- The V.A.C. was certified by the Food and Drug Administration in 1995 and patented in 1997.
- V.A.C. therapy has been used to treat more than 20 million patients, and the V.A.C. was commonly used on traumatic wounds of U.S. military personnel in Iraq and Afghanistan.
- The V.A.C. is used for a wide variety of serious and challenging wounds, from surgical wounds to diabetic ulcers and burns.
- In 2017, Morykwas and Argenta co-founded Renovo Concepts Inc. to develop devices for treating brain and heart injuries.
- Morykwas has served on the board of the National Multiple Sclerosis Society and on the boards of charitable organizations in the Winston-Salem, North Carolina, area.

Photo courtesy of Sara Blakely

Primary Connections:

- Spanx Inc.: Founder and Executive Chairwoman, 2000-present

Education:

- Florida State University: B.S., Communications, 1993

Key Memberships/Awards:

- National Women's History Museum, Women Making History Award, 2025
- Florida Inventors Hall of Fame, 2018
- Time Magazine, The World's 100 Most Influential People, 2012
- University of Alabama, College Debate Tournament, First Place, 1993

Sara Blakely

SPANX® Shapewear

U.S. PATENT NO. 6,276,176: Pantyhose under garment

Inducted in 2026 ***Born: Feb. 27, 1971***

Sara Blakely invented footless control top pantyhose and created the Spanx brand, which has revolutionized and become synonymous with shapewear. Founded with a $5,000 personal investment, Spanx Inc. grew into a billion-dollar company. Blakely became the youngest self-made woman billionaire and a role model for aspiring entrepreneurs.

Full Bio: https://www.invent.org/inductees/sara-blakely

Things You Should Know:

- Blakely was born in Clearwater, Florida, in 1971.
- She studied communications at Florida State University.
- After graduating from college, she took a job selling fax machines in Florida, and later in Atlanta, where she became a national sales trainer.
- When she invented Spanx, Blakely wrote her own patent and asked her mother, an artist, to sketch the prototype for her patent application.
- A manufacturer she met in North Carolina was initially skeptical of her idea, but his daughters convinced him to work with Blakely.
- Neiman Marcus was the first store to begin selling Spanx.
- Oprah Winfrey named Spanx one of her "Favorite Things" in November 2000.
- After signing a contract with the home shopping channel QVC in 2001, within five minutes on the air, Blakely had sold 8,000 pairs of Spanx.
- Blakely founded the Red Backpack Foundation (RBF) in 2006 (formerly the Sara Blakely Foundation). The RBF is named for the backpack Blakely considered her "good luck charm" when she began building the Spanx brand.
- In 2013, Blakely signed the Giving Pledge, in which individuals commit to giving a majority of their wealth to charitable causes in their lifetime or wills.

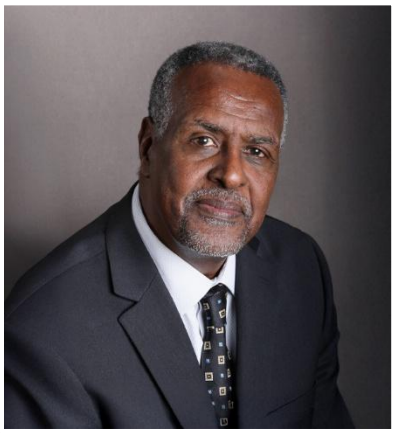

Photo courtesy of Purdue University/College of Agriculture

Primary Connections:

- Purdue University: Executive Director, Purdue Center for Global Food Security; Distinguished Professor, Plant Breeding and Genetics, 1984-2025
- International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), Wad Medani, Sudan: Principal Plant Breeder, 1978-83

Education:

- Alemaya College, Ethiopia: B.S., Plant Sciences, 1973
- Purdue University: M.S., Plant Breeding and Genetics, 1976; Ph.D., Plant Breeding and Genetics, 1978

Key Memberships/Awards:

- National Medal of Science, 2023
- Haramaya University, Ethiopia: Honorary Doctorate, 2015
- African Academy of Sciences, 2013
- National Sorghum Producers: Outstanding Achievement in Sorghum Improvement, 2013
- Jimma University, Ethiopia: Honorary Doctorate, 2012
- Oklahoma State University: Honorary Doctorate, 2011
- Crop Science Society of America: Presidential Award, 2009
- Government of Ethiopia's National Hero Medal (Science), 2009
- World Food Prize, 2009
- American Association for the Advancement of Science: Fellow, 2005

Gebisa Ejeta

Sorghum Hybrids

U.S. PATENT NO. 11,505,804: Immune receptor conferring broad spectrum fungal resistance in sorghum

Inducted in 2026 ***Born: June 1, 1950***

Plant geneticist Gebisa Ejeta developed higher-quality sorghum hybrids that are resistant to drought and disease. By increasing the production and availability of sorghum, a versatile and important cereal grain, Ejeta's efforts have helped feed millions of people across Africa and around the world.

Full Bio: https://www.invent.org/inductees/gebisa-ejeta

Things You Should Know:

- Ejeta was born in the small, rural village of Wollonkomi in Ethiopia in 1950.
- He grew up experiencing poverty and food insecurity, but his mother made sure he had access to an education.
- As an elementary student, he walked about 12 miles to his school each Sunday, then walked back home each Friday.
- After graduating from Alemaya College, he had an opportunity to play for the Ethiopian Olympic basketball team but instead came to the U.S. for his graduate studies.
- In the early 1980s, Ejeta developed the sorghum hybrid Hageen Dura-1 (HD-1). In field trials, it produced 50% to 100% more grain than traditional sorghum varieties, leading to widespread adoption by farmers, who saw yield increases of more than 150%.
- He developed Striga-resistant sorghum hybrids and created a Striga management program, helping farmers by combining resistance to this parasitic weed with soil-fertility enhancement and water conservation.
- He has personally trained and continues to inspire a new generation of agricultural scientists.
- When Ejeta won the National Hero Award in 2009, it was the first time the nation's highest honor had been given to an Ethiopian for work in science and technology.
- He also was awarded the World Food Prize, and he used the funds to establish an educational foundation supporting Ethiopian and other African children.

Photo courtesy of Teresa Meng

Primary Connections:

- Atheros Communications (acquired by Qualcomm Inc. in 2011): Founder, CEO, CTO and Director, 1998-2011
- Stanford University: Professor of Electrical Engineering, 1988-2013

Education:

- National Taiwan University: B.S., Electrical Engineering, 1983
- University of California, Berkeley: M.S., Electrical Engineering and Computer Sciences, 1985; Ph.D., Electrical Engineering and Computer Sciences, 1988

Key Memberships/Awards:

- Marconi Prize, 2024
- American Academy of Arts and Sciences: Member, 2021
- IEEE Alexander Graham Bell Medal, 2019
- Association for Computing Machinery: SIGMOBILE Outstanding Contributions Award, 2018
- National Taiwan University: Distinguished Alumna Award, 2010
- University of California, Berkeley, Electrical Engineering and Computer Sciences Department: Distinguished Alumna Award, 2010
- National Academy of Engineering: Member, 2007
- CIO Magazine: 20/20 Vision Award, 2002
- MIT Sloan eBusiness Awards: Innovator of the Year, 2002
- IEEE Fellow, 1998

Teresa Meng

CMOS Wi-Fi

U.S. PATENT NO. 6,356,748: Spectrum control for direct conversion radio frequency reception

Inducted in 2026 ***Born: Jan. 17, 1961***

Teresa Meng's groundbreaking research, engineering expertise and entrepreneurial leadership revolutionized Wi-Fi, making it faster, more energy-efficient and more affordable, and bringing connectivity to everyone, everywhere. She pioneered the integration of all RF (radio-frequency) and digital communication functions on a single CMOS (complementary metal-oxide semiconductor) chip, laying the technical foundation for future Wi-Fi devices and driving the widespread adoption of Wi-Fi.

Full Bio: https://www.invent.org/inductees/teresa-meng

Things You Should Know:

- Meng was born in Taiwan and attended an all-girls high school there.
- She has enjoyed studying history, literature and philosophy since her youth.
- She credits her father with helping her build the confidence to succeed in electrical engineering, which is a male-dominated field.
- In 1998, Meng founded Atheros Communications to commercialize her CMOS-based wireless technology for broader access by more consumers.
- In 2001, her team at Atheros announced the industry's first CMOS Wi-Fi transceiver.
- She served as the first CEO of Atheros Communications, which had a successful IPO in 2004. It was acquired by Qualcomm Inc. for over $3 billion in 2011. Atheros' chairman of the board was President John Hennessy of Stanford University.
- She later focused her research on applying signal processing and circuit design to biomedical applications, collaborating with neural scientists on neural signal detection and neural prosthetic systems.
- Meng directed a research group in exploring implantable biomedical devices and received eight patents for this work.
- She is a strong advocate for women in engineering and technology.
- In 2019, she became the first woman to receive the IEEE Alexander Graham Bell Medal.

Photo courtesy of Henry Samueli

Primary Connections:

- Broadcom (acquired by Avago Technologies in 2016): Co-Founder (1991); served in executive leadership roles including CTO and Vice President of Research and Development; Board Chair (2018-present)
- PairGain Technologies Inc.: Co-Founder and Chief Scientist, 1988-91; Consultant, 1991-94
- University of California, Los Angeles: Professor of Electrical Engineering, 1985-95
- TRW Inc.: Engineering Management, Electronics and Technology Division, 1980-85

Education:

- University of California, Los Angeles: B.S., Electrical Engineering, 1975; M.S., Electrical Engineering, 1976; Ph.D., Electrical Engineering, 1980

Key Memberships/Awards:

- National Hockey League, Board of Governors
- Samueli Foundation, Co-Founder and Board Director
- UCLA Samueli School of Engineering, Dean's Executive Board
- University of California, Irvine, Samueli School of Engineering, Dean's Leadership Council
- IEEE Medal of Honor, 2025
- IEEE Founders Medal, 2021
- Marconi Prize, 2012

Henry Samueli

Broadband Communications

U.S. PATENT NO. 5,754,591: System for, and method of, processing quadrature amplitude modulated signals

Inducted in 2026 ***Born: Sept. 20, 1954***

Electrical engineer Henry Samueli advanced broadband communications, creating solutions that enabled affordable, high-speed digital data transmission to homes and businesses. He is the co-founder of Broadcom Inc., a global leader in wired and wireless communications.

Full Bio: https://www.invent.org/inductees/henry-samueli

Things You Should Know:

- Samueli was born in Buffalo, New York, in 1954, to parents who had immigrated to the U.S. from Poland.
- In 1980, Samueli joined TRW Inc., where he worked on military broadband communications systems.
- In 1985, he established a multidisciplinary research program at the University of California, Los Angeles (UCLA), to develop chips for digital broadband.
- Samueli co-founded Broadcom in 1991 and the company's first major commercial client was Scientific Atlanta Inc.
- By 2000, Broadcom chips were in 90% of all cable modems and television set-top boxes and in more than 60% of all LAN networks.
- From 1998 to 2004, Broadcom acquired 24 fabless semiconductor firms that designed communications chips to add expertise in areas like fiber-optic networks and software.
- In 2016, Broadcom was acquired by Avago Technologies Ltd. for $37 billion.
- Samueli is the owner of the National Hockey League franchise Anaheim Ducks, and the team won the Stanley Cup in his second year of ownership.
- Known for their generous philanthropy, Samueli and his wife Susan signed the Giving Pledge, and are committed to supporting academic institutions and STEM education.

Photo credit: Allison Colorado

Primary Connections:

- Massachusetts Institute of Technology: Professor of Neuroscience; McGovern Institute for Brain Research at MIT, Investigator, 2011-present
- Broad Institute of MIT and Harvard: Core Institute Member, 2011-present
- Howard Hughes Medical Institute: Investigator, 2020-present
- Editas Medicine (2013); Arbor Biotechnologies (2016); Beam Therapeutics (2017); Sherlock Biosciences (2018); Aera Therapeutics (2023); Moonwalk Biosciences (2024): Co-founder

Education:

- Harvard University, A.B., Chemistry and Physics, 2004
- Stanford University, Ph.D., Chemistry, 2009

Key Memberships/Awards:

- National Medal of Technology and Innovation, 2024
- Genetics Society of America: Edward Novitski Prize, 2021
- National Academy of Medicine: Member, 2021
- National Academy of Sciences: Richard Lounsbery Award, 2021
- Harvey Prize, 2018
- Albany Medical Center Prize, 2017
- Gairdner Foundation: International Award, 2016
- Tang Prize, 2016
- Jacob Heskel Gabbay Award in Biotechnology and Medicine, 2014

Feng Zhang

CRISPR Gene Editing

U.S. PATENT NO. 8,697,359: CRISPR-Cas systems and methods for altering expression of gene products

Inducted in 2026 ***Born: Oct. 22, 1981***

Feng Zhang has invented transformative technologies to improve human health, including pioneering the use of engineered CRISPR-Cas9 systems for genome editing in human cells and harnessing CRISPR-Cas12 and Cas13 systems. He also has co-founded several companies to commercialize these technologies, including for diagnostic and therapeutic uses.

Full Bio: https://www.invent.org/inductees/feng-zhang

Things You Should Know:

- Zhang was born in 1981 and moved to Des Moines, Iowa, when he was 11.
- Growing up, he enjoyed taking things apart to understand how they work.
- When he was in high school, he learned molecular biology techniques while volunteering at a gene therapy lab in a local hospital.
- While studying at Harvard University, he became interested in developing treatments for mental illnesses.
- As a graduate student at Stanford University, he helped develop optogenetics — a method of using light to control brain cells.
- In 2011, Zhang started his own lab at the Massachusetts Institute of Technology (MIT).
- In 2013, he published a groundbreaking paper in the journal Science first demonstrating the use of engineered CRISPR-Cas9 systems to edit the genomes in living mouse and human cells.
- He shares his CRISPR reagents with other researchers and trains scientists through his workshops, by hosting them in his lab and by participating in online research forums.
- Zhang is a trustee of the nonprofit organizations Society for Science & the Public, Center for Excellence in Education and the Museum of Science in Boston.

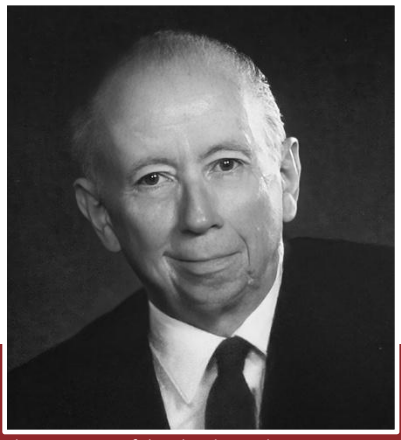

Photo courtesy of the Alstadt Family

Donald Alstadt

Chemlok® Rubber-to-Metal Adhesive System

U.S. PATENT NO. 2,900,292: Bonding rubber to metal

Inducted in 2026 ***Born: July 29, 1921*** ***Died: Feb. 19, 2007***

Chemist Donald Alstadt invented Chemlok®, a revolutionary rubber-to-metal adhesive system that is used across many industries, including the automotive, aerospace, agriculture, off-highway, defense and energy markets. Today, Chemlok and Chemlok-derived technologies are used in almost every vehicle in the world.

Full Bio: https://www.invent.org/inductees/donald-alstadt

Primary Connections:

- Lord Corp.: President; Chair and CEO; Research Chemist; 1943-2000
- Massachusetts Institute of Technology: Visiting Scientist

Education:

- University of Pittsburgh: B.S., Chemistry and Physics, 1943

Key Memberships/Awards:

- Polymer Research Institute (PRI) of Polytechnic University (now part of NYU Tandon School of Engineering): Herman F. Mark Technology Medal, 2000
- Royal Swedish Academy of Sciences: Member
- Allegheny College: Honorary Doctorate
- Thiel College: Honorary Doctorate
- Edinboro University: Honorary Doctorate

Things You Should Know:

- Alstadt was born in Erie, Pennsylvania, in 1921.
- At Lord Corp. in 1950, he began to investigate the characteristics of adhesion, including surface thermodynamics, polymer structure and the effect of processing variables.
- Alstadt connected with scientists at leading institutions to explore breakthroughs in polymer chemistry and what became known as materials science. He emerged as a global leader in understanding the chemistry of bonding rubber to metal.
- Passionate about education, Alstadt contributed to many academic endowments and workshops.
- He served on national boards and committees dedicated to promoting research collaborations between academia and industry, and improving America's competitiveness through innovation.
- He was a member of the Atlantic Council, the Faraday Society of London, the American Chemical Society and the Royal Society of Chemistry in England.
- In 2009, the American Chemical Society's Rubber Division named Chemlok one of the innovations that shaped the rubber industry.
- Programs and chairs at the California Institute of Technology, Duke University, Gannon University and Penn State Behrend are named in Alstadt's honor.

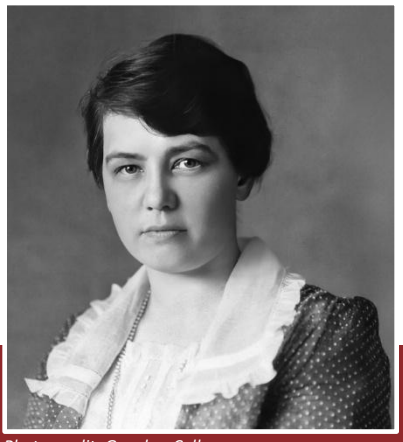

Photo credit: Goucher College

Olive Dennis

Railroad Passenger Car Improvements

U.S. PATENT NO. 1,693,108: Ventilator

Inducted in 2026 ***Born: Nov. 20, 1885*** ***Died: Nov. 5, 1957***

Olive Dennis, a civil engineer for the Baltimore and Ohio (B&O) Railroad Co., made travel vastly more comfortable for rail passengers. Traveling tens of thousands of miles annually for nearly 30 years, Dennis applied both her expertise and her experience to develop many significant innovations for railroad passenger cars.

Full Bio: https://www.invent.org/inductees/olive-dennis

Primary Connections:

- Baltimore & Ohio Railroad Co.: Research Engineer; Service Engineer; Designer, Bridge Department, 1920-51
- District of Columbia Public Schools: Mathematics teacher at McKinley Manual Training School, 1909-19

Education:

- Goucher College: B.A., Mathematics, 1908
- Columbia University: M.A., Mathematics and Astronomy, 1909
- Cornell University: Civil Engineering Degree, 1920

Key Memberships/Awards:

- Maryland Women's Council: "Woman of Maryland" Citation, Industrial Field, 1951
- Women's Centennial Congress: 100 Outstanding Career Women in the U.S., 1940
- American Railway Engineering Association: Elected Member, 1927
- Phi Beta Kappa, 1908

Things You Should Know:

- Dennis was born in 1885 in Thurlow, Pennsylvania, and she grew up in Baltimore.
- She showed an interest in engineering from a young age, even building houses and furniture for dolls and a model of a streetcar for her younger brother.
- At Goucher College in the early 1900s, she competed in intramural basketball, and following her graduation, she returned to play on the alumni side in games against the school's championship teams.
- Dennis was hired by the Baltimore & Ohio (B&O) Railroad in 1920 to develop ideas that would lead women to want to travel the B&O line, and in her first year, she traveled more than 44,000 miles on trains.
- She invented an individually operated passenger car ventilator in 1927 and patented it in 1928.
- During World War II, Dennis consulted with the Office of Defense Transportation and co-authored a study on the jobs in the railroad industry that women could fill.
- In 1927, she became the first woman elected to the American Railway Engineering Association.
- Dennis was the principal designer of the Cincinnatian, B&O's luxury streamliner passenger train that debuted in 1947.
- Dennis belonged to the American Cryptogram Association and to the National Puzzlers' League, for whom she served in executive positions including a term as president in 1930-31. Each member used an assumed name, and Dennis' was N. Jineer.

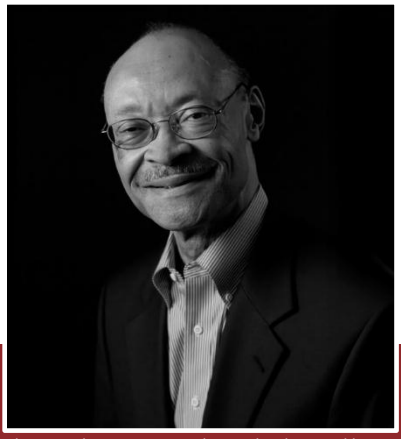

Photo credit: Veronica Weber, Palo Alto Weekly

Frank S. Greene Jr.

Semiconductor Memory Technology

U.S. PATENT NO. 3,654,610: Use of faulty storage circuits by position coding

Inducted in 2026 ***Born: Oct. 19, 1938*** ***Died: Dec. 26, 2009***

Frank S. Greene Jr. was a pioneering electrical engineer, inventor and entrepreneur in Silicon Valley. He developed high-speed semiconductor memory systems, including the fastest microchip then available for the ILLIAC IV supercomputer. As a leader who recognized the need for greater participation in STEM fields, Greene also was dedicated to mentoring the next generation.

Full Bio: https://www.invent.org/inductees/frank-greene-jr

Primary Connections:

- New Vista Capital: Founder, established 1993
- Zero One Systems: Founder and President, established 1984
- Technology Development Corp.: Founder and President, established 1971
- Fairchild Semiconductor International Inc.: Research and Development Engineer; high-speed semiconductor memory systems, 1965-71

Education:

- Washington University in St. Louis: B.S., Electrical Engineering, 1961
- Purdue University: M.S., Electrical Engineering, 1962
- Santa Clara University: Ph.D., Electrical Engineering, 1970

Military Service:

- U.S. Air Force, 1961-65

Key Memberships/Awards:

- Purdue University: Distinguished Engineering Alumnus Award, 2002
- Silicon Valley Engineering Council Hall of Fame, 2001
- Purdue University: Outstanding Electrical and Computer Engineer Award, 1999
- Santa Clara University: Distinguished Engineering Alumni Award, 1993
- Washington University in St. Louis: Black Alumni Achievement Award, 1991

Things You Should Know:

- Greene was born in Washington, D.C., in 1938, and he grew up in St. Louis.
- He joined the U.S. Air Force in 1961.
- He was assigned to the National Security Agency, where his focus was high-performance computers.
- While working with Fairchild Semiconductor International Inc., he also earned his doctorate in electrical engineering from Santa Clara University in 1970.
- Greene was one of the first Black engineers in Silicon Valley.
- He collaborated with future Apple Inc. engineer Wendell Sander to invent the solid-state RAM device used in the ILLIAC IV.
- His innovative semiconductor technology reduced both waste and chip production costs.
- He taught courses in computer sciences and electrical engineering at several universities.
- He founded Technology Development Corp. in 1971 and co-founded the venture capital firm New Vista Capital in 1993.
- Frank S. Greene Jr. Middle School in Palo Alto, California, was renamed in his honor in 2018.

National Inventors Hall of Fame®

Photo courtesy of Mary Logan

Maurus Logan

Ty-Rap® Cable Ties

U.S. PATENT NO. 3,022,557: Cable bundling and supporting strap

Inducted in 2026 ***Born: July 6, 1921*** ***Died: Nov. 12, 2007***

Electrical engineer Maurus Logan invented cable ties to address worker safety and wiring installation inefficiencies in the aviation industry. Now a billion-dollar market segment, cable ties are a fastening solution used in a wide variety of industries and projects, from aerospace to agriculture to electrical applications and DIY home improvement.

Full Bio: https://www.invent.org/inductees/maurus-logan

Primary Connections:

- Thomas & Betts Corp.: Vice President of Research and Development
- Diehl Electric Motor Division of the Singer Manufacturing Co.: Drafter
- Bethlehem Steel Shipbuilding: Drafter

Education:

- Ralph R. McKee Vocational High School

Things You Should Know:

- Logan was born in 1921 in Dalmuir, Scotland, a small community near Glasgow.
- At Ralph R. McKee Vocational High School on Staten Island, New York, he was trained as an electrical draftsman.
- He was hired by Thomas & Betts Corp. (now ABB Installation Products) to work on product development.
- Logan's development of cable ties came after he visited Boeing Corp. and saw workers sustaining injuries as they constructed airplane wire harnesses and secured thousands of feet of electrical wiring.
- He filed for a patent on his nylon cable bundling and supporting strap design in 1958, and the patent was issued in 1962.
- Branded as Ty-Rap®, Logan's invention was the first self-clinching cable tie.
- NASA has used Ty-Rap cable ties to fasten conduits and components on the Mars Perseverance, Spirit, Opportunity and Curiosity rovers, and other space exploration systems to support research and lab equipment.
- More than 30 billion standard and high-performance Ty-Rap brand cable ties have been produced by ABB, formerly Thomas & Betts, and billions more have been made by other manufacturers.
- Throughout his life, Logan continued to invent and remained determined to find practical solutions to the challenges of daily life.

Photo courtesy of Sally Maison

George Maison

Metered Dose Inhaler (MDI)

U.S. PATENT NO. 3,001,524: Aerosol dispensing apparatus

Inducted in 2026 ***Born: Oct. 13, 1911*** ***Died: July 24, 1993***

George Maison, Irving Porush and Charles Thiel invented the first pressurized metered dose inhaler (MDI). Developed at Riker Laboratories and introduced in 1956 for the management of asthma, it quickly gained widespread acceptance as the first convenient, portable inhaler that effectively delivered medicine to the lungs. The MDI has saved countless patients' lives and improved the quality of life for hundreds of millions more.

Full Bio: https://www.invent.org/inductees/george-maison

Primary Connections:

- Dart Industries: Vice President; Staff Officer; 1966-76
- Riker Laboratories: President and Board Chair; Director, Research and Development; 1952-66
- Boston University: Professor and Head of Pharmacology Department, 1945-52
- Wayne State University: Assistant Professor, 1941-42
- St. Louis University: Physiology Instructor, 1937-40
- University of Wisconsin-Madison: Physiology Instructor, 1935-37

Education:

- Northwestern University: B.A., 1930; M.S., 1934; M.D., 1935

Military Service:

- U.S. Army Air Forces, 1942-45

Things You Should Know:

- Maison was born in Frankfort, Kentucky, in 1911.
- During World War II, he served in the U.S. Army Air Forces and was chief of a unit in the air technical service command's engineering division.
- He received the Legion of Merit in 1945 for his work in improving a suit worn by fighter pilots.
- He established himself as an innovator when he contributed to the development of Veriloid, a drug used to treat hypertension, at Boston University School of Medicine.
- The inspiration behind the invention of the MDI came from a conversation Maison had with his daughter, 13-year-old Susie, who had asthma and depended on an inconvenient, fragile nebulizer.
- When Susie asked if asthma medication could be delivered in a spray, Maison — the president of Riker Laboratories, a wholly owned subsidiary of Rexall Drug Co. — approached his colleague Porush to explore the idea, and Porush consulted with the cosmetics laboratory at Rexall before developing a prototype.
- The MDI was approved by the Food and Drug Administration in March 1956, making it the first such device to receive approval for use by asthma patients.
- In 2014, medical market research indicated that more than 2,000 people were taking doses from an MDI every second.

Photo courtesy of Phil Porush

Irving Porush

Metered Dose Inhaler (MDI)

U.S. PATENT NO. 3,001,524: Aerosol dispensing apparatus

Inducted in 2026 ***Born: June 6, 1917*** ***Died: March 31, 2012***

Irving Porush, George Maison and Charles Thiel invented the pressurized metered dose inhaler (MDI), the first portable inhaler that could effectively deliver medicine to the lungs to manage asthma and other conditions. The MDI rapidly gained acceptance, saving lives and improving quality of life for hundreds of millions of patients.

Full Bio: https://www.invent.org/inductees/irving-porush

Primary Connections:

- Riker Laboratories: Director of Quality Assurance; Head of Product Development; Head of Analytical Research; 1951-82
- Various Companies: Industrial Chemist, 1946-51

Education:

- University of California, Los Angeles: B.A., Chemistry, 1939
- California Institute of Technology: M.S., Meteorology, 1941

Military Service:

- U.S. Army Air Forces, 1940-46

Things You Should Know:

- Porush was born in Newark, New Jersey, in 1917.
- In addition to earning a bachelor's degree in chemistry and a master's degree in meteorology, Porush took special courses in maritime meteorology and tropical meteorology while in military service.
- He served as a weather officer in the U.S. Army Air Forces during World War II, providing weather information to pilots who were ferrying bombers across the Atlantic Ocean.
- He received commendations from the Secretaries of Commerce and War for providing hurricane warnings that saved lives.
- Following his active military service, he took a couple of difficult chemistry courses to refresh his knowledge of the subject.
- He joined Riker Laboratories in 1951, and in 1958 he became Riker's director of quality assurance — a title he would hold for 24 years.
- Porush constructed the first MDI prototype using glass Coca-Cola® bottles.
- Porush held patents on both the MDI device and the asthma medication composition.
- After Porush retired in 1982, he spent many years as a consultant to pharmaceutical businesses, and a mediator for disputes between investors and investment companies.

Photo courtesy of Carol Thiel

Charles Thiel

Metered Dose Inhaler (MDI)

U.S. PATENT NO. 3,014,844: Self-propelling powder dispensing compositions

Inducted in 2026 ***Born: April 4, 1928*** ***Died: March 10, 2023***

Charles Thiel, George Maison and Irving Porush invented the first pressurized metered dose inhaler (MDI) for the management of asthma and other lung conditions. Introduced by Riker Laboratories in 1956, the MDI was quickly accepted as the first convenient, portable inhaler to effectively deliver medication to the lungs. This important device has saved lives and improved the quality of life for hundreds of millions of people.

Full Bio: https://www.invent.org/inductees/charles-thiel

Primary Connections:

- Riker Laboratories/3M Drug Delivery Systems: Research Chemist, 1954-2000

Education:

- University of California, Santa Barbara: B.A., Chemistry, 1954

Military Service:

- U.S. Army Air Forces

Key Memberships/Awards:

- U.S. Pharmacopeia (USP): Jacob Bigelow Award, 2017
- Virginia Commonwealth University School of Pharmacy-3M Drug Delivery/Kindeva Drug Delivery: The Charles G. Thiel Award for Outstanding Research and Discovery in Respiratory Drug Delivery, 2006
- 3M Carlton Society, 1982

Things You Should Know:

- Thiel was born in Santa Barbara, California, in 1928.
- When he served in the U.S. Army Air Forces, he was stationed in Japan as a military photographer.
- Though he had been interested in pursuing a career in photography, he found there was a lack of photography jobs available, so he chose to enter the field of chemistry.
- When collaborating to develop the MDI at Riker Laboratories, Thiel developed an innovative suspension of the necessary medication in a liquefied gas propellant.
- In the mid-1960s, he created a technique using high-speed flash photography to capture images of MDI plumes, making it possible to identify defects.
- Thiel's plume photography technique was adopted widely by industry product developers.
- When Riker Laboratories was purchased by 3M Corp. as a subsidiary in 1970, Thiel remained there until his retirement in 2000.
- He said that 3M "provided a beautiful laboratory and paid me to play in it."
- The Charles G. Thiel Award for Outstanding Research and Discovery in Respiratory Drug Delivery was established by the Virginia Commonwealth University School of Pharmacy in 2006, and Thiel was the award's first recipient.

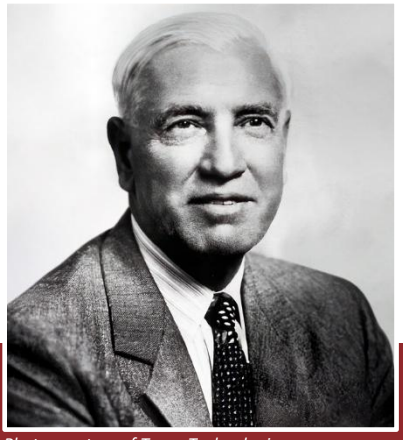

Photo courtesy of Trane Technologies

Reuben Trane

Lightweight Convector Radiator

U.S. PATENT NO. 1,764,187: Radiator

Inducted in 2026 ***Born: Sept. 13, 1886*** ***Died: Sept. 5, 1954***

Mechanical engineer Reuben Trane began making advancements to heating and cooling technologies early in the 20th century, providing reliable comfort for homes and commercial buildings around the world. With his innovations and business leadership, The Trane Co. became an industry giant. More than a century later, the brand remains a leader.

Full Bio: https://www.invent.org/inductees/reuben-trane

Primary Connections:

- The Trane Co.: Co-Founder, President and Board Chair, 1913-54

Education:

- University of Wisconsin-Madison: B.S., Mechanical Engineering, 1910

Key Memberships/Awards:

- American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE) Hall of Fame, 1997
- ASHRAE: Lifetime Member, 1951

Things You Should Know:

- Trane was born in 1886 in La Crosse, Wisconsin, and his father, James Trane, was an immigrant from Norway.
- After graduating from high school, he spent a year working as a plumber's helper at his father's plumbing company.
- At the University of Wisconsin-Madison, he was a member of the 1907 champion freshman crew team, and in his senior year he earned the position of varsity captain.
- He co-founded The Trane Co. with his father and sister in 1913.
- To build a well-educated salesforce, in 1925, The Trane Co. established a first-of-its-kind graduate training program, recruiting engineering graduates from prominent colleges and universities to receive intensive training in engineering, HVAC system design and sales.
- During World War II, The Trane Co. supplied more than 1 million products to support the U.S. and its allies.
- Trane served on the University of Wisconsin's Board of Regents and in 1945, he was one of the original members of the board for the university's Gifts and Bequests Council — the organization that would become the Wisconsin Foundation and Alumni Association.
- A dedicated philanthropist, Trane raised money for organizations including the La Crosse Home for Children.