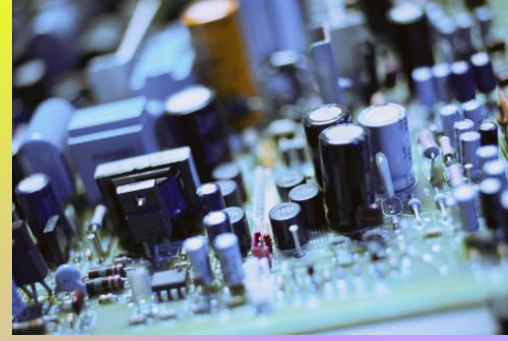
AMERICAN SCIENCE AND TECHNOLOGY

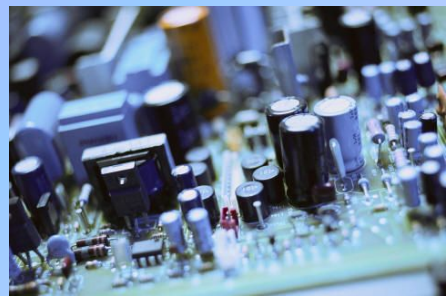


From its emergence as an independent nation, the United States has encouraged science and invention. It has done this by promoting a free flow of ideas, by encouraging the growth of "***useful knowledge***," and by welcoming creative people from all over the world.

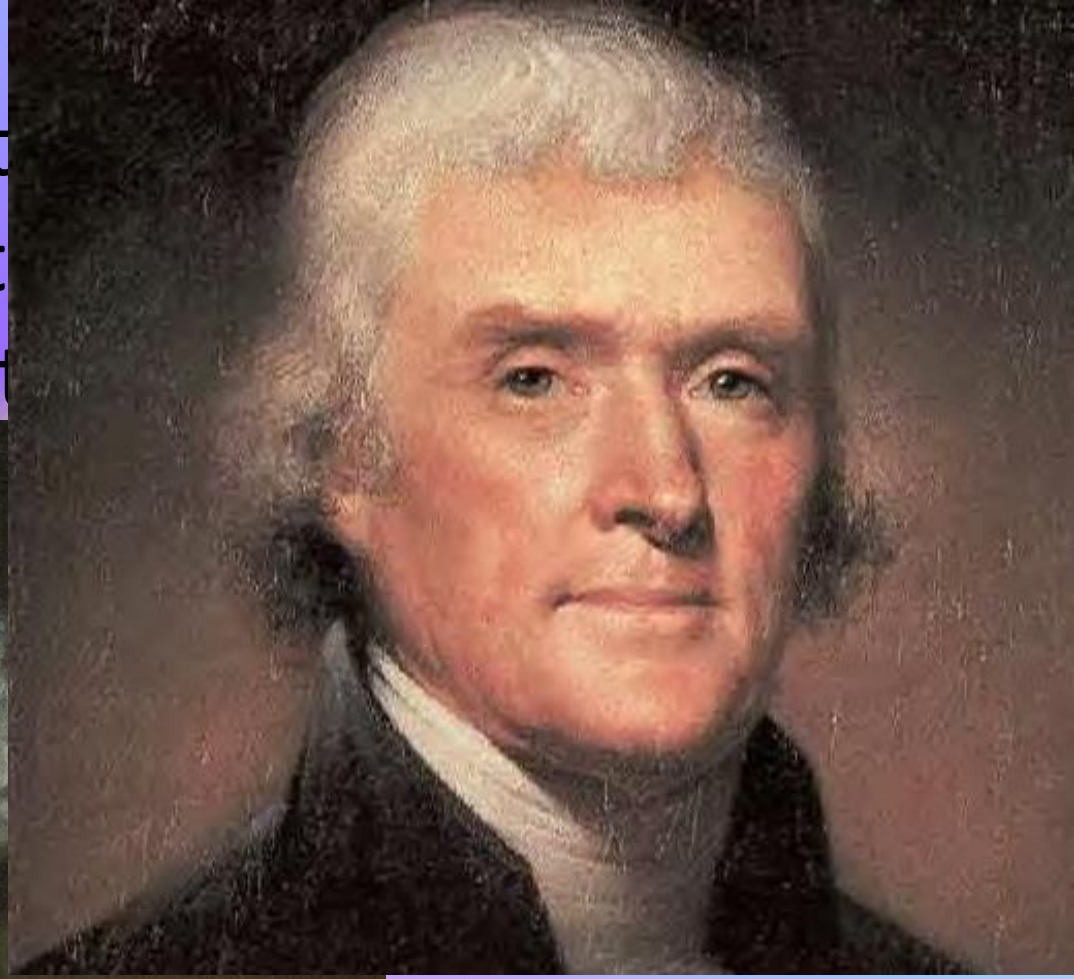
The United States Constitution itself reflects the desire to encourage scientific activity. It gives Congress the power

"***to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries***."

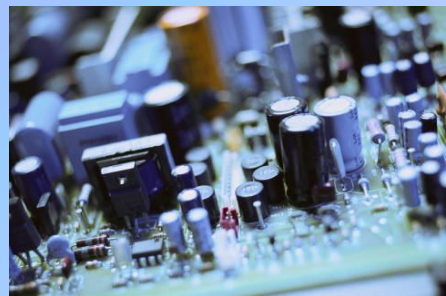
This clause is the basis of the U.S. patent and trademark system.



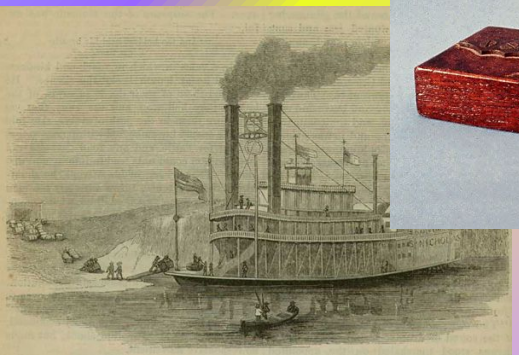
George Washingt
United States Pat
1790, and the pat

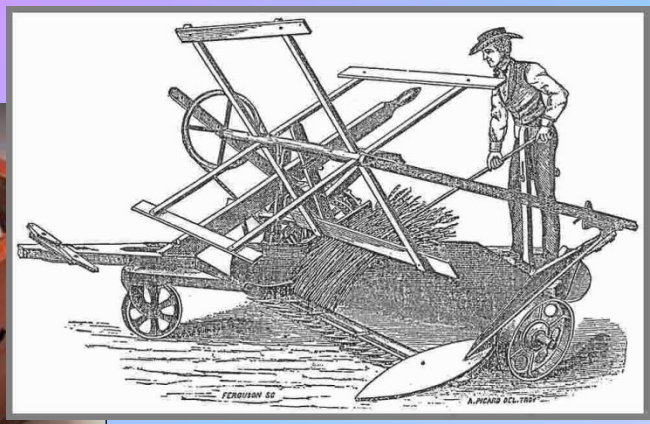


- During the 19th century, Britain, France and Germany were the leading sources of new ideas in science and mathematics; but if the United States lagged behind in the formulation of theory, it excelled in using applied science. Because Americans lived so far from the well-springs of Western science and manufacturing, they often had to figure out their own ways of doing things. The result was a flow of important inventions.

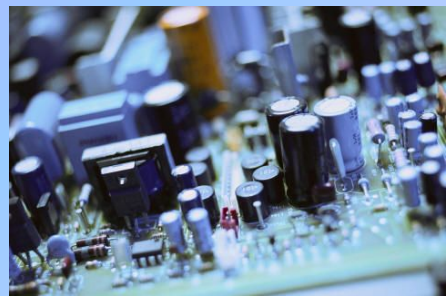


- The great American inventors include Robert Fulton (the steamboat); Samuel F.B. Morse (the telegraph); Eli Whitney (the cotton gin); Cyrus McCormick (the reaper); the Wright Brothers (the powered flying machine) and Thomas Alva Edison, the most fertile of them all, with more than a thousand inventions credited to his name.





- In the second half of the twentieth century, American scientists were increasingly recognized for their contributions to "pure" science, the formulation of concepts and theories. The changing pattern can be seen in the winners of the Nobel Prizes in physics and chemistry. During the first half-century of Nobel Prizes - from 1901 to 1950 - American winners were in a distinct minority in the science categories. Since 1950, Americans have won approximately half of the Nobel Prizes awarded in the sciences.



Since 1901, the Nobel Prize has been honoring men and women from all corners of the globe for outstanding achievements in ***physics***, ***chemistry***, ***medicine***, ***literature***, and for ***work in peace***. The foundations for the prize were laid in 1895 when Alfred Nobel wrote his last will, leaving much of his wealth to the establishment of the Nobel Prize.

Nobel Prize Announcements

The announcement of the Nobel Laureates for the year is made on the same day that the Nobel Prize awarding institutions choose from among the names recommended by the respective Nobel Committees. Immediately after the vote, a press conference is held by the concerned Nobel Prize awarder.

The Nobel Prize Award Ceremonies

- The Nobel Laureates take center stage in Stockholm on 10 December when they receive the Nobel Prize Medal, Nobel Prize Diploma and document confirming the Nobel Prize amount from King Carl XVI Gustaf of Sweden.

The Nobel Prize Awarders

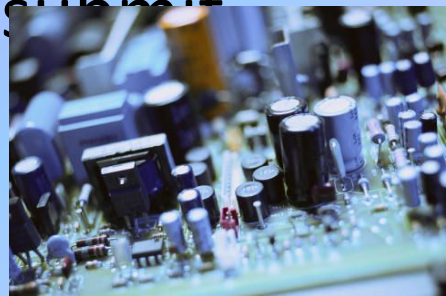
In his last will and testament, Alfred Nobel specifically designated the institutions responsible for the prizes he wished to be established:

- The Royal Swedish Academy of Sciences for the Nobel Prize in Physics and Chemistry,
- Karolinska Institute for the Nobel Prize in Physiology or Medicine,
- the Swedish Academy for the Nobel Prize in Literature,
- a Committee of five persons to be elected by the Norwegian Parliament (Storting) for the Nobel Peace Prize.

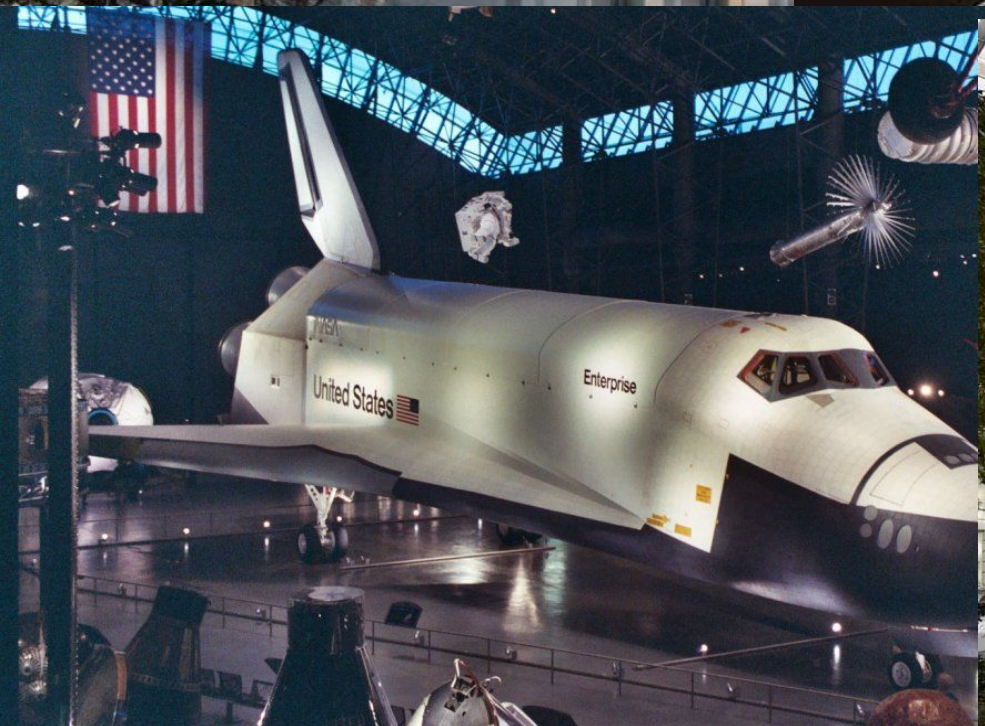
In 1968, the Sveriges Riksbank established the Sveriges Riksbank Prize in Economics in Memory of Alfred Nobel. The Royal Swedish Academy of Sciences was given the task to select the Economics Prize Laureates starting in 1969.

Each prize consists of a medal, personal diploma, and a cash award.

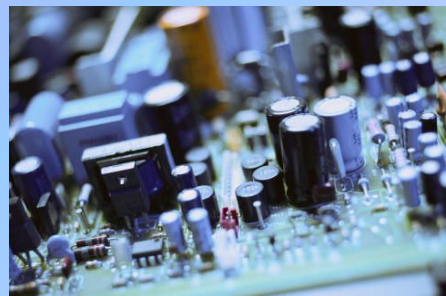
- Since 1790 the United States Patent Office has granted more than 6 million patents. The number of patents issued increased dramatically during the 19th century, stimulated by the American industrial revolution and further fueling it.
- The middle and late 19th century was a golden age for American invention. The technology envisioned by American inventors has improved the standard of living and linked Americans across physical and cultural divides. The **Smithsonian** preserves thousands of the models that inventors were required to submit with patent applications before 1880.




APPLE
COMPUTER


United States
Enterprise

- Two of America's founding fathers were actually scientists of some repute.



Ben ed a
series roved
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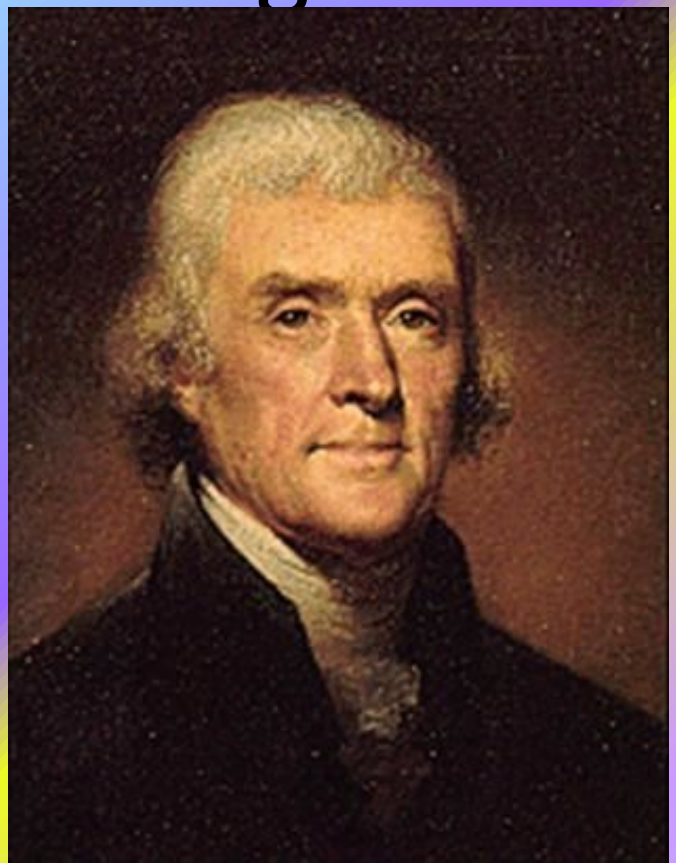
EXPERIMENTS
AND
OBSERVATIONS
ON
ELECTRICITY,
MADE AT
Philadelphia in *America*,
BY
Mr. BENJAMIN FRANKLIN,
AND
Communicated in several Letters to Mr. P. COLLINSON,
of *London*, F. R. S.
1st ed.

LONDON: 1751
Printed and sold by E. CAVE, at *St. John's Gate*. 1751.
(Price 2s. 6d.)

Thomas Jefferson was a student of agriculture who introduced various types of rice, olive trees and grasses into the New World.



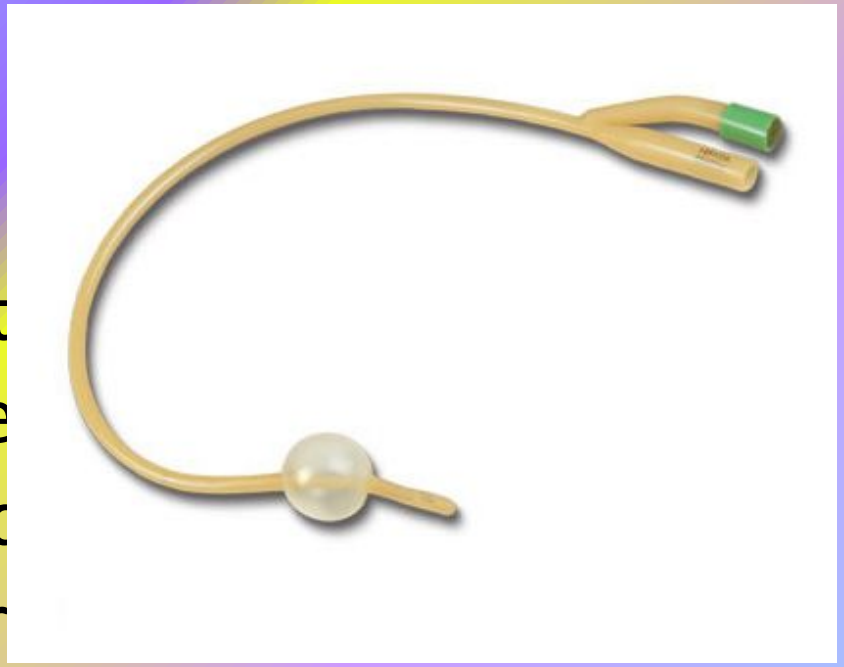
AMERICAN INVENTIONS

IF YOU WOULD
not be forgotten,
as soon as you are
dead & rotten,
either write things
worth reading,
or do things
worth the writing.

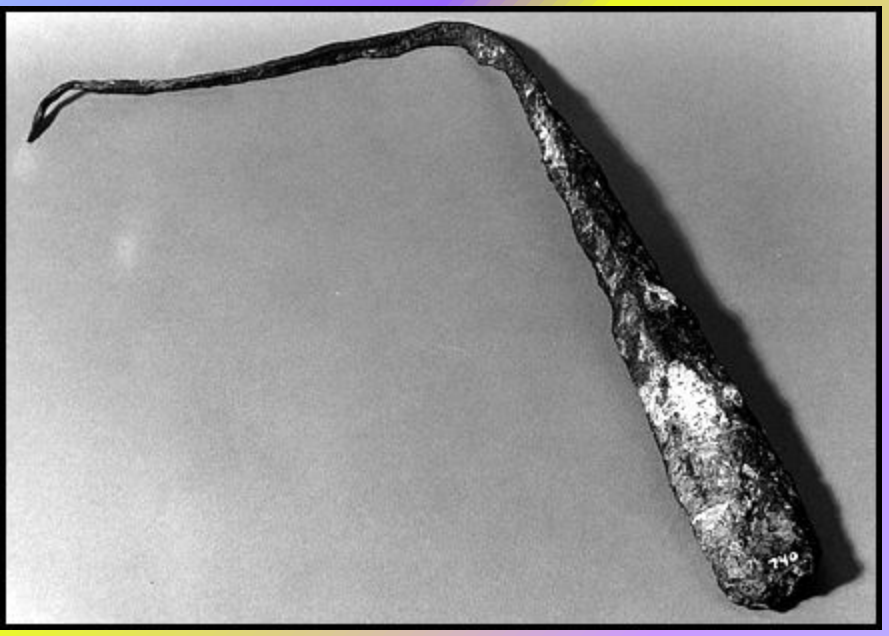
Benj. Franklin

- Ben had poor vision and needed glasses to read. He got tired of constantly taking them off and putting them back on, so he decided to figure out a way to make his glasses let him see both near and far. He had two pairs of spectacles cut in half and put half of each lens in a single frame. Today, we call them bifocals.

- Even though Ben is not
bioscience, he was inte
human body works and
help it work better. For
brother John suffered from kidney stones and Ben wanted to help him feel better. Ben developed a flexible urinary catheter that appears to have been the first one produced in America.

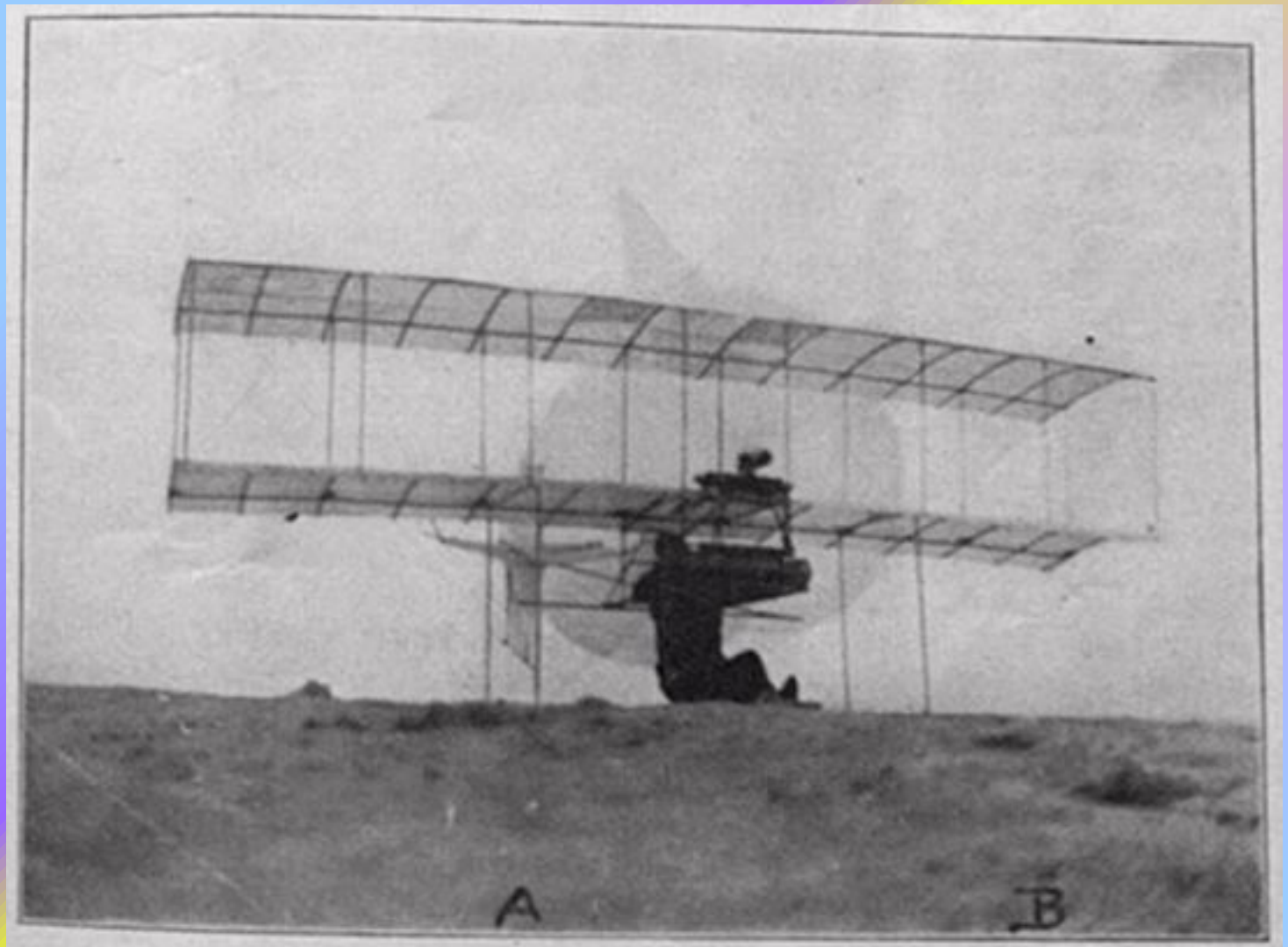


- He invented the lightning rod which protected buildings and ships from lightning damage.



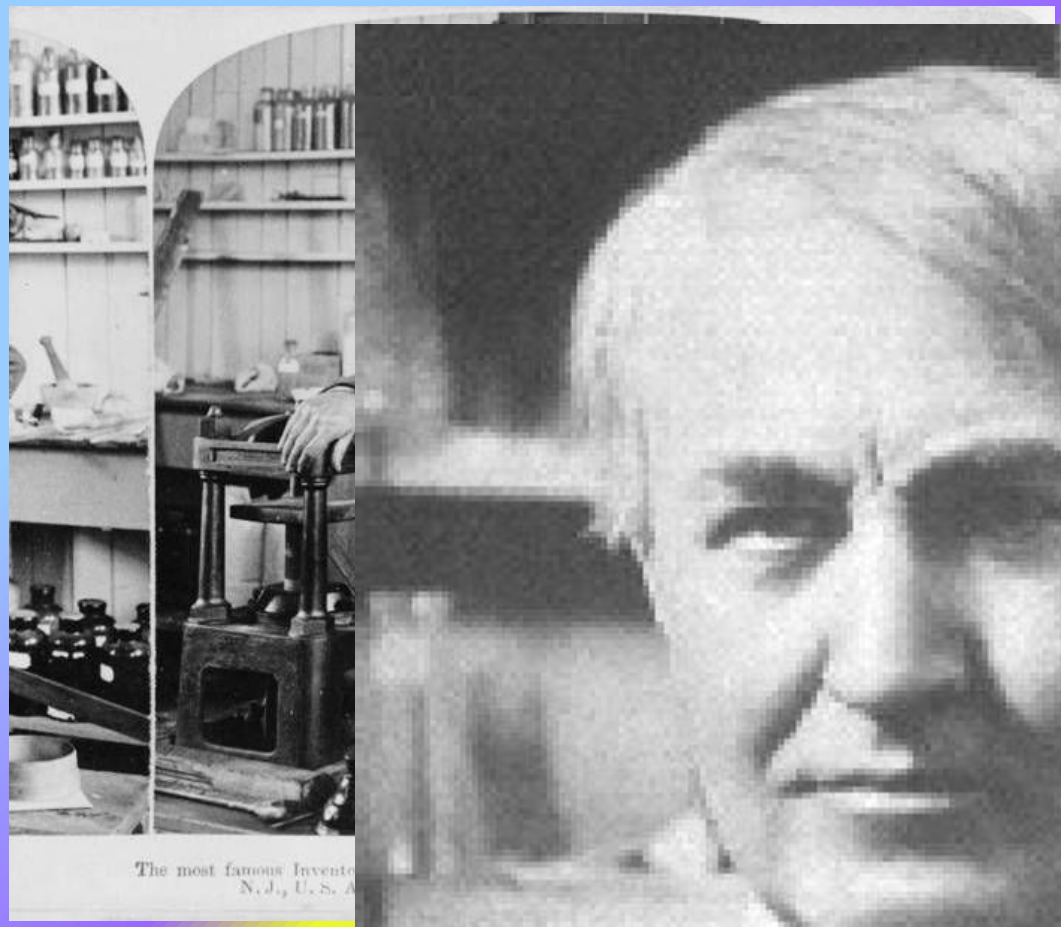
- In colonial America, most people warmed their homes by building a fire in a fireplace even though it was kind of dangerous and used a lot of wood. Ben figured that there had to be a better way. His invention of an iron furnace stove allowed people to warm their homes less dangerously and with less wood. The furnace stove that he invented is called a Franklin stove.
- Interestingly enough, Ben also established the first fire company and the first fire insurance company in order to help people live more safely.

Wright brothers



A. M. HERRING'S COMPRESSED AIR FLYING MACHINE.

First motor machine to successfully carry an operator in free flight.



The most famous Invento
N. J., U. S. A

THOMAS ALVA EDISON

electric light bulb

phonograph

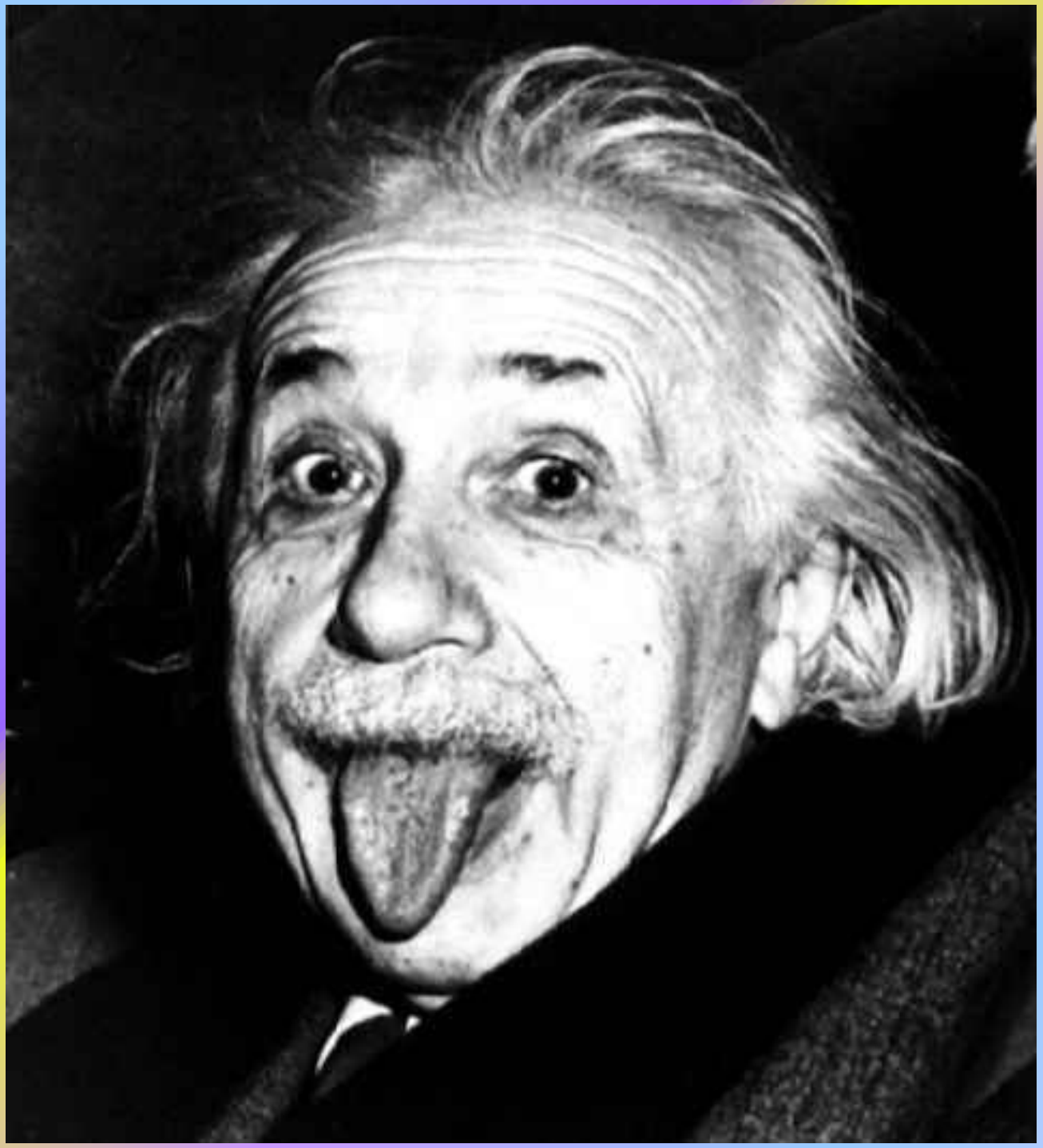
kinescope


CLARITY
MUTE
BOOST

Alexander Graham Bell

- Alexander Graham Bell was born in 1847 in Edinburgh, Scotland. He moved to Ontario, and then to the United States, settling in Boston, before beginning his career as an inventor. Throughout his life, Bell had been interested in the education of deaf people. This interest lead him to invent the microphone and, in 1876, his "electrical speech machine," which we now call a telephone.

- While Alexander Graham Bell was experimenting with telegraph instruments in the early 1870s, he realized it might be possible to transmit the human voice over a wire by using electricity. By March 1876 he made a transmission, but the sound was very faint.
- He improved his results over the next few months, including a critical test with this instrument on November 26, when he transmitted sound clearly between Cambridge and Salem, Massachusetts. It functioned as both a transmitter and a receiver.

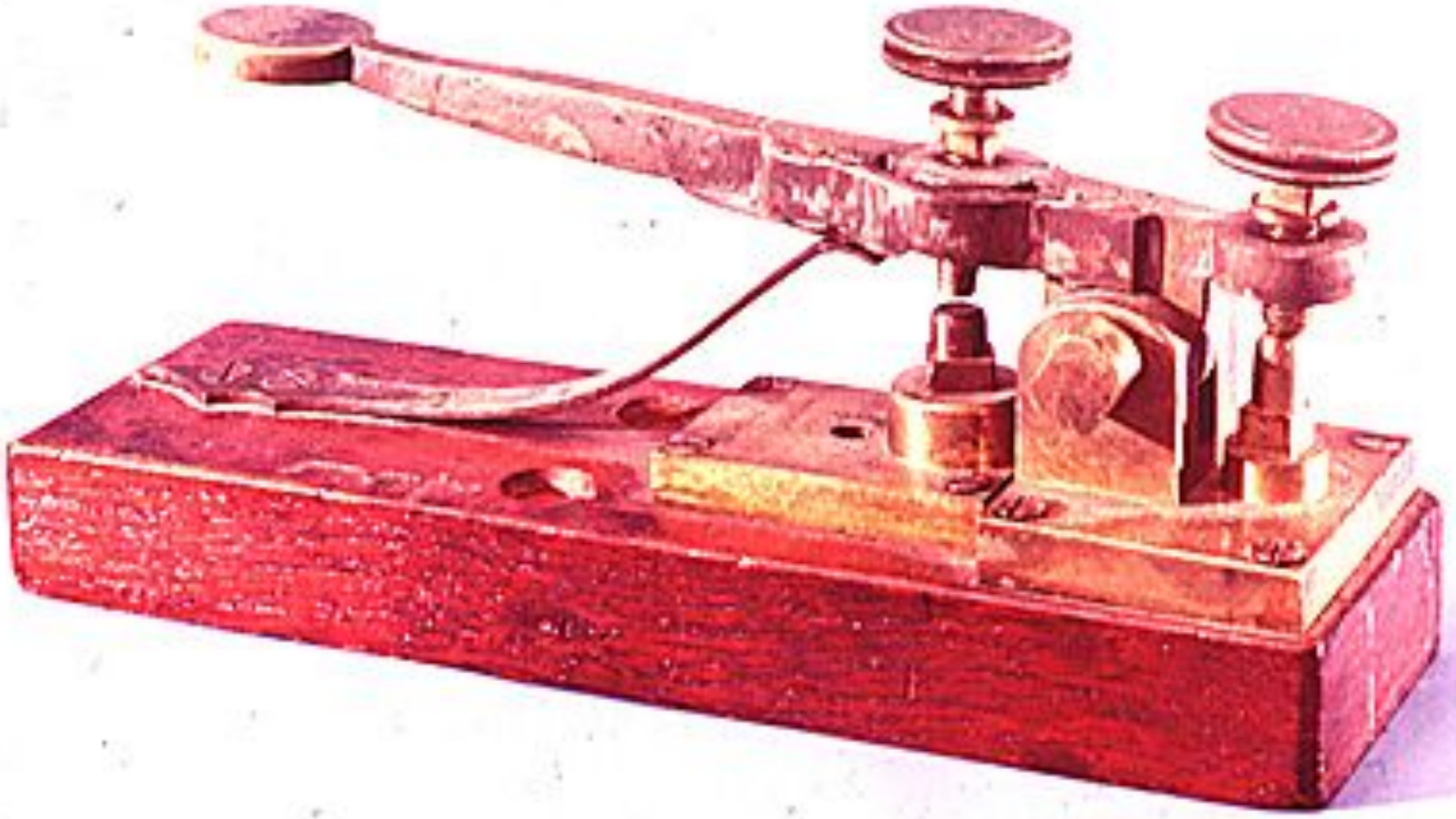


Albert Einstein

By the time German-born Albert Einstein was 30, his theory of relativity and work in quantum mechanics had set off a revolution in physics. Fleeing Nazi Germany in 1933, he came to the United States. He spent the rest of his career at the Institute for Advanced Study in Princeton, New Jersey. In 1939 he warned President Roosevelt that Germany was moving toward developing nuclear weaponry and urged that this country do the same, inspiring the Manhattan Project. Having paved the way for this new weapon with his warning and own discoveries, Einstein devoted much time in later years working for nuclear arms control.

Samuel Morse

The telegraph key Samuel Morse used on his first line in 1844 was very simple-a strip of spring steel that could be pressed against a metal contact. Alfred Vail, Morse's partner, designed this key, in which the gap was more easily adjustable because of changes in its spring tension. It was used on the expanding telegraph system, perhaps as early as the fall of 1844 and certainly by 1845.



- Samuel F. B. Morse conceived of an electromagnetic telegraph in 1832 and constructed an experimental versi tical syste imore to W ic featu appli h he desc s on pape
- With ened, 23,0 e inver of the West busir profi

- The inve 

nputer is having a al to, if not greater ight bulb, telegrap tair was the most po puter. It was program on the front panel. Its output was simply a pattern of lights. Communications, word processing, and other applications required additional components.

Isaac Merritt Singer

- Isaac Merritt Si amboyant of 19th-century s tors, having sharpened his re becoming an inventor. Arou ncentrating on improving an e ne. Success followed quick a commercial sewing machin were for the methods of fee ating the tension on the needle thre ne needle thread so that leather co
- The developme g machines contributed to the growth of the ready-made clothing industry in the late 19th and early 20th centuries.

- Polio-wit -was
among t seases.
Children ns. Jonas
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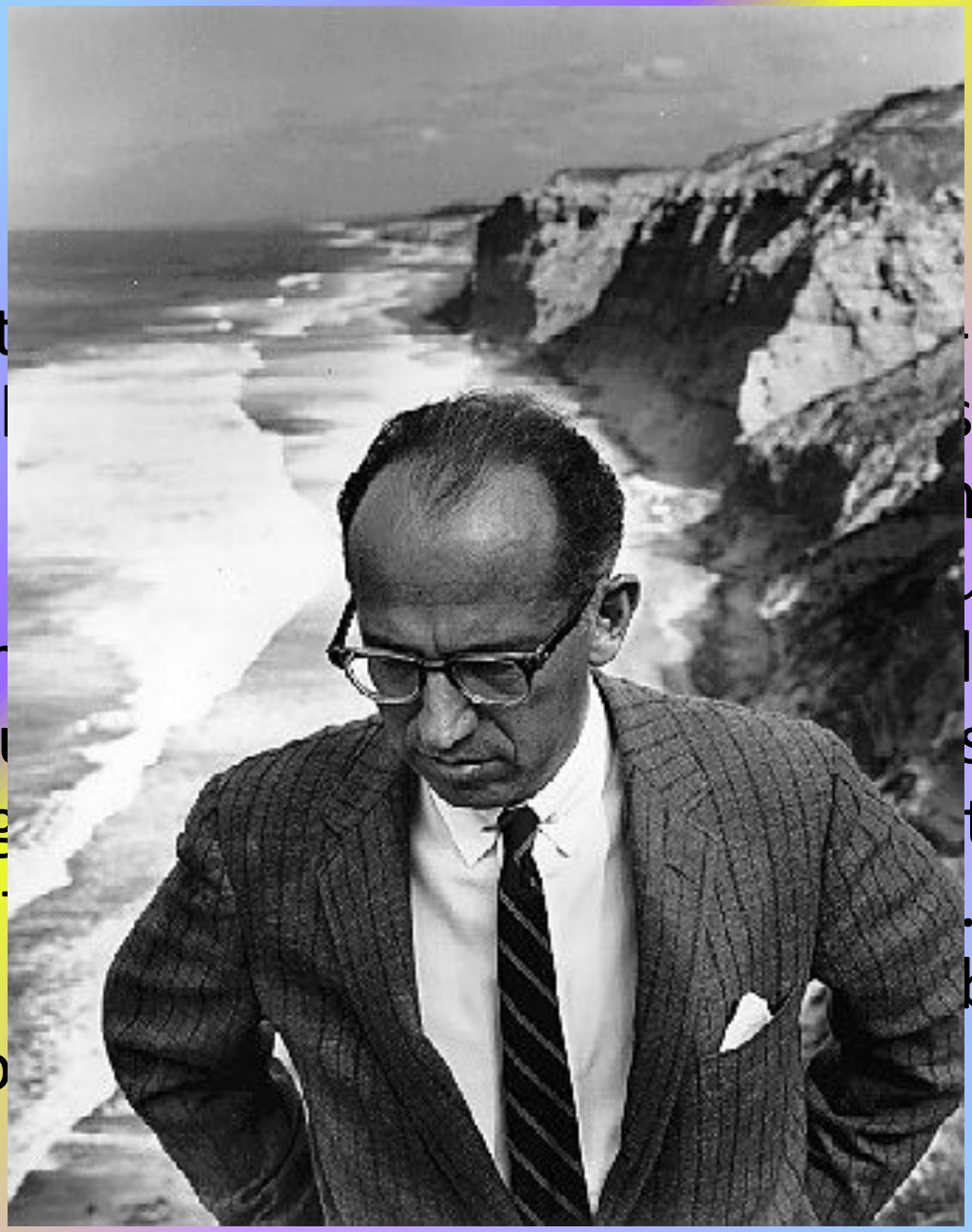

Recipient Name	Nobel Prize Category	Year Awarded	Summary
Theodore Roosevelt	Peace	1906	President of United States; collaborator of various peace treaties”
Albert Einstein	Physics	1921	"For his services to Theoretical Physics, and especially for his discovery of the law of the photoelectric effect"
Eugene O'Neill	Literature	1936	"For the power, honesty and deep-felt emotions of his dramatic works, which embody an original concept of tragedy"
Ernest Hemingway	Literature	1954	"For his mastery of the art of narrative, most recently demonstrated in *The Old Man and the Sea*, and for the influence that he has exerted on contemporary style"
Henry Kissinger (Le Duc Tho)	Peace	1973	Former Secretary of State, during the Vietnam War; (Democratic Republic of Vietnam; declined the prize)
Martin Luther King	Peace	1964	Leader of "Southern Christian Leadership Conference"

POTATO CHIPS

- The potato chip was invented in 1853 by George Crum. Crum was a Native American/African American chef at the Moon Lake Lodge resort in Saratoga Springs, New York, USA. French fries were popular at the restaurant and one day a diner complained that the fries were too thick. Although Crum made a thinner batch, the customer was still unsatisfied. Crum finally made fries that were too thin to eat with a fork, hoping to annoy the extremely fussy customer. The customer, surprisingly enough, was happy - and potato chips were invented!

- The product that has given the world its best-known taste was born in Atlanta, Georgia, on May 8, 1886. Dr. John Stith Pemberton, a local pharmacist, produced the syrup for Coca-Cola®, and carried a jug of the new product down the street to Jacobs' Pharmacy, where it was sampled, pronounced "excellent" and placed on sale for five cents a glass as a soda fountain drink.

Silicon Valley

is the southern part of the San Francisco Bay Area in Northern California, United States.

- **The term 'Silicon Valley' refers to regions large number of silicon chip manufacturers, and came to be known as the high-tech Capitol of the World. Known throughout the World as the leading high-tech hub because of the unique number and caliber of engineers, computer scientists venture capitalists & innovators.**