

"The farther backward you can look, the farther forward you are likely to see."

-Winston S. Churchill

IT IS APRIL 10, 1790. PRESIDENT GEORGE WASHINGTON HAS JUST SIGNED A BILL TO CREATE THE UNITED STATES PATENT OFFICE. FOR THE FIRST TIME IN AMERICAN HISTORY, THE RIGHT OF AN INVENTOR TO PROFIT FROM HIS OR HER INVENTION IS RECOGNIZED BY LAW.

- The Constitution (Article 1, Section 8, Clause 8) empowers Congress:
 "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."
- The subject matter of a United States patent is defined as "any useful art, manufacture, or device, or any improvement thereon not before known or used." To apply for a patent, a specification and drawing, and if possible, a model, are to be submitted.
- Secretary of State Thomas Jefferson, Secretary of War Henry Knox, and Attorney General Edmund Randolph, are chosen to head a three-member Patent Commission. Commission members are given the power to issue a patent—if they deem the invention or discovery sufficiently useful and important—for a period not to exceed fourteen years.
- The board's authority to grant patents is absolute, with no appeals process. The Department of State is given the responsibility for administering patent laws. The fee for a patent is between \$4 and \$5.
- July 1790, the first U.S. patent is granted to Samuel Hopkins of Pittsford, VT for a method of making potash and pearl ash by a new apparatus and process. Potash (potassium carbonate) is used in making soap and the manufacturing of glass.
- Every patent document issued between 1790 and 1836 is personally signed by the United States President, the Secretary of State, and the Attorney General. (Figure 1)

HISTORICAL TIMELINE

1790-1793

A total of 55 patents are granted to inventors. However, the board faces difficulties because its three members don't have the time to spare from their regular duties to sufficiently devote themselves to patent matters.

1793

The original patent law is revised. A simpler registration system is implemented, allowing anyone who applies and pays a \$30 fee to be granted a patent. The patent board is eliminated, and the granting of patents falls to a clerk at the Department of State. This system remains in effect until July 4, 1836.

1794

On March 14, Eli Whitney (1765-1825) patents his invention of the cotton gin. Whitney's patent is the first significant patent to be issued by the recently reformed patent act. "King Cotton" becomes the major crop of the American South. Cotton soon represents more than half the total of all U.S. exports.

1800

On December 1, the United States Capital moves from Philadelphia, PA to Washington, D.C.

1802

James Madison, Secretary of State, creates a separate patent office within the State Department, appointing Dr. William Thornton as its first superintendent. Thornton's salary is \$1,400 a year.

1809

The very first U.S. patent ever granted to a woman is issued to Mary Kies of Killingly, CT, on May 5th. Her patent is for a method of weaving straw with silk or thread.

1810

The Patent Office moves from the Department of State to Blodgett's Hotel, also known as the "Great Hotel" and "Union Pacific Hotel." It was built in 1793 by Samuel Blodgett on E Street between 7th and 8th Avenue. (Figure 2) Ironically the building is never used as a hotel. Instead, Washington's first formal playhouse, the "United States Theatre," opens in the building. For the first time, patent models are put on public display, and it becomes a local custom to stroll through the rooms on Sundays to see what new models are on view.

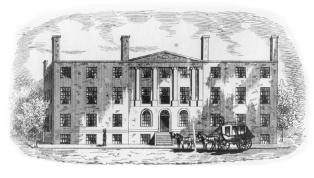


Figure 2: Blodgett's Hotel

1812

On June 18, the United States of America declares war on the United Kingdom of Great Britain and Ireland, its North American colonies, and its American Indian allies. The War is fought over maritime issues, the restriction of American trade with the European continent, and impressment, the Royal Navy's practice of removing seamen from American merchant vessels.

1814

The British burn government buildings in Washington, but the Patent Office is left untouched. Superintendent Thornton saves the Office by pleading with the British Commander not to "burn what would be useful to all mankind."

1815

On February 18, with the signing of the Treaty of Ghent, both parties return occupied land to its prewar owners and resume friendly trade relations.

1821

Thomas Jennings, born in 1791, becomes the first African-American to receive a U.S. patent. Jennings operates a laundry in New York City and patents an invention for a dry cleaning process.

1823

An attempt is first made to record and keep a list of all existing patent models. 1,819 are counted.

1836

The Patent Act of July 4 reestablishes the examination system of 1790. The submission of models are once again required by the Commissioner. *"The model, not more than 12 inches square, should be neatly made, the name of the inventor should be printed or engraved upon, or affixed to it, in a durable manner.*" The requirement of submitting a model is a unique feature of the American patent system; no other country in the world requires or makes use of such models. The application fee is \$30 for U.S. citizens, \$500 for British subjects, and \$300 for all others.

On July 13, a numbering system for issued patents is instituted, replacing the previous practice of using names. Patent No. 1 is issued to Senator John Ruggles of Maine for traction wheels on locomotive steam engines. Ruggles was the head of the committee to draft the new patent law.

On December 15, there is a fire in the Patent Office and the entire building burns to the ground. All the records and most of the models are destroyed. Congress appropriates \$100,000 for the restoration of 3,000 of the most important ones. Luckily, enough records are held outside the office to allow almost all of the 10,000 patents to be reconstructed. They are given their original date and an X after their number. The X signifies that the patent was issued prior to July 1836. Congress authorizes construction of a new building for the Patent Office. The site chosen is bounded by F and G Streets, between 7th and 9th Avenue. The design is a Greek Revival structure, modeled after the Parthenon in Athens. (Figure 3) Congress sets certain requirements for the new building: it must be fireproof, meet the requirements of the Patent Office for the next 50 years, and include galleries for displaying patent models to the public.



Figure 3: The Patent Office between F and G Streets

1840

The first wing of the new building is completed at a cost of \$415,000. The North Wing is not completed until 1860. By the end of the 1840s, as many as 10,000 visitors per month came to view the models.

1842

"New and original designs" become patentable for a term of seven years. A "design patent" is a form of legal protection granted for the ornamental design of a functional item. Design patents have a separate numbering system. Design Patent No. 1 is granted to George Bruce of New York City for a collection of script and ornament typeface fonts.

1844

On June 15th, Charles Goodyear receives Patent No. 3,633 for the vulcanization of rubber. This very significant patent is responsible for many new products and eventually spawned entire industries.

1847

Thomas Edison is born on February 11. Edison, a prolific inventor, eventually receives 1,093 patents, along with thousands more from dozens of countries. Two of his most important inventions are the Electric Lamp (light bulb), patented in 1880, and the Phonograph or Speaking Machine, patented in 1878. Among his other well-known patents are the motion picture, the telegraph, and the telephone.

1849

Abraham Lincoln receives Patent No. 6,469 on May 22 for "A Device for Buoying Vessels over Shoals." Lincoln is the only U.S. president ever to receive a U.S. patent. His invention is never put into practical use.

1856

Nikola Tesla, undoubtedly one of the most famous and brilliant inventors in human history, is born on July 10. Tesla was a Serbian-American engineer and physicist who invented the first alternating current (AC) motor. He held 40 U.S. patents, mostly relating to the alternating current electrical system that he developed. He died broke in 1943 in New York City.

1861

On April 12, the U.S Civil War begins when the Confederate army Charleston Bay, SC opens fire on the federal garrison at Fort Sumter in Charleston Bay, South Carolina. The war between the Confederate States of America of the South, known as the "Confederacy" and the "Union" of the North is fought over the power of the national government to prohibit slavery in territories that were not yet states.

The term of a U.S. patent grant is extended from 14 to 17 years, and the 7 year extension is abolished. Foreign patent applicants now pay the same fees, and obtaining a patent becomes \$35. These changes are implemented due to a dearth of patent applications resulting from the outbreak of the Civil War.

The Constitution of the Confederate States of America provides for the establishment of its own Patent Office.

1865

On March 6th, Abraham Lincoln's second inauguration as President takes place. Lincoln's inaugural ball is held in the Patent Office Building, on the third floor of the North gallery. Over 4,000 guests attend the gala event which includes dinner and dancing until four in the morning.

The war ends on May 9, 1865 with a Union victory and the abolishment of slavery. The Civil War is responsible for over 600,000 deaths and over 400,000 wounded on both sides.

By the end of the war, a total of 266 patents are issued by the Confederacy.

1870

Congress abolishes the legal requirement for models, but the Patent Office will keep the requirement anyway for another ten years.

1876

Because of space constraints, the public is finally barred from viewing patent models in the Patent Office.

1877

On September 24, a major fire breaks out on the first floor of the west wing of the Patent Office Building. The fire spreads quickly to the upper floors, destroying 12,000 rejected models. Another 114,000 models in the north and west halls are engulfed in flames. 87,000 models are totally destroyed and 27,000 are retrieved from the blaze. Congress appropriates \$45,000 for their restoration. (Figure 4).

The model requirement is subsequently deemed impractical, so the law is changed to omit models unless required by the Commissioner. Of the 246,094 patents that had been issued by 1880, perhaps 200,000 are represented by models.

1893

The models are moved out of the Patent Office and placed in storage. By the turn of the century, some models are still being submitted with patents.



THE CONFLAGRATION. Figure 4: Patent Office fire

1908

Congress decides to get rid of its patent models. The Smithsonian selects 1,060 models. An auction of some 3,000 more models that failed to receive patents sell for \$62.18. The remaining 150,000 or so are placed in storage, finally ending up in an abandoned livery stable.

1911

On August 8, Patent No. 1,000,000 is issued to Francis Holton of Summit, Ohio, for a vehicle tire.

1925

It is estimated that from 1884 to 1925, \$200,000 is spent

in moving and storing patent models.

On February 13, no longer willing to continue to pay for storage, Congress appropriates \$10,000 to do away with the stored models. The Smithsonian is given 2,500 additional models, some are returned to the original inventors or their relatives. On December 3, the remainder of the models are sold at a public auction in New York City to philanthropist Sir Henry Wellcome, the founder of the Burroughs-Wellcome Company (now part of Glaxo-Wellcome).

1936

Sir Henry Wellcome dies at the age of 82, his dreams of establishing a patent model museum having been dashed in the 1929 stock market crash.

The trustees of Wellcome's estate sell the models for \$50,000 to Broadway producer Crosby Gaige. He in turn sells the collection to a group of businessmen for \$75,000. This group forms American Patent Models, Inc.

1940

American Patent Models, Inc. declares bankruptcy.

1941

The models are acquired by O. Rundle Gilbert, an auctioneer, in a bankruptcy auction at Foley Square in New York City for \$5,000. He moves the models to his home in Garrison-on-the-Hudson, NY. Over the years, Gilbert holds many auctions and thousands of the models are sold. A fire destroys an untold number of them in one of Gilbert's storage facilities. On a number of occasions, Gilbert attempts to sell the entire collection.

1973

Cliff Petersen, a designer and inventor within the aerospace industry, begins collecting patent models from Gilbert.