

= Eli Lilly =

Eli Lilly (July 8 , 1838 ? June 6 , 1898) was an American soldier , pharmacist , chemist , and businessman . He was the founder of the Eli Lilly and Company pharmaceutical corporation . Lilly enlisted in the Union Army during the American Civil War ; he recruited a company of men to serve with him in an artillery battery , was later promoted to colonel , and was given command of a cavalry unit . He was captured near the end of the war and held as a prisoner of war until its conclusion . After the war , he attempted to run a plantation in Mississippi , but failed and returned to his pharmacy profession after the death of his wife . Lilly remarried and worked in several pharmacies with partners before opening his own business in 1876 with plans to manufacture drugs and market them wholesale to pharmacies .

His company was successful and he soon became wealthy after making numerous advances in medicinal drug manufacturing . Two of the early advances he pioneered were creating gelatin capsules to hold medicine and fruit flavoring for liquid medicines . Eli Lilly and Company was one of the first pharmaceutical firms of its kind ; it staffed a dedicated research department and put in place numerous quality @-@ assurance measures .

Using his wealth , Lilly engaged in numerous philanthropic pursuits . He turned over the management of the company to his son in 1890 allowing himself to continue his engagement in charity and civic advancement in his primary focus . He helped found the organization that became the Indianapolis Chamber of Commerce , was the primary patron of Indiana 's branch of the Charity Organization Society , and personally funded the creation of the city 's children 's hospital which was later expanded by the state to become the Riley Children 's Hospital . He continued his active involvement with many organizations until his death from cancer in 1898 .

Lilly was an advocate of federal regulation of the pharmaceutical industry , and many of his suggested reforms were enacted into law in 1906 , resulting in the creation of the Food and Drug Administration . He was also among the pioneers of the concept of prescriptions , and helped form what became the common practice of giving addictive or dangerous medicines only to people who had first seen a physician . The company he founded has since grown into one of the largest and most influential pharmaceutical corporations in the world , and the largest corporation in Indiana . Using the wealth generated by the company , his son and grandsons created the Lilly Endowment to continue Lilly 's legacy of philanthropy . The endowment remains one of the largest charitable benefactors in the world .

= = Early life = =

= = = Family and background = = =

Eli Lilly was born the son of Gustavus and Esther Lilly in Baltimore , Maryland on July 8 , 1838 . His family was of Swedish descent and had moved to the low country of France before his great @-@ grandparents immigrated to Maryland in 1789 . The Lilly family moved to Kentucky , where Lilly first enrolled in public school . His family moved again in 1852 to Indiana , where he apprenticed to become a printer . Lilly grew up in a Methodist household , and his family was prohibitionist and anti @-@ slavery ; their beliefs served as part of their motivation for moving to Indiana . He and his family were members of the Democratic party during his early life , but they became Republicans during the years leading up to the Civil War .

Lilly became interested in chemicals at an early age . While on a trip visiting his aunt and uncle , he was taken to visit an apothecary , where he first witnessed the creation of drugs . In 1854 , he served an apprenticeship to become a chemist and pharmacist under Henry Lawrence at the Good Samaritan Drug Store in Lafayette . In addition to learning to mix chemicals , Lawrence taught Lilly how to manage funds and operate a business . His parents enrolled him in pharmacology studies at DePauw University , then known as Indiana Asbury University , and he graduated after two years . In 1859 , he took a position at Perkin 's and Coon 's Pharmacy in Indianapolis . Lilly became

acquainted with Emily Lemen , the daughter of a local merchant , and the couple married in 1860 . The couple returned to Greencastle , where Lilly opened his own drug store in 1861 .

= = = American Civil War = = =

Lilly enlisted in the Union Army at the start of the American Civil War , and his first child , Josiah , was born in 1861 while he was away . Lilly actively recruited among his classmates , friends , local merchants and farmers , asking them to join him in forming a unit . He had recruitment posters created and posted them around Indianapolis , promising to form the " crack battery of Indiana " . His unit , the 18th Battery , Indiana Light Artillery , was known as the Lilly Battery and consisted of six 3 Inch Ordnance Rifles and 150 men . He mustered in at Indianapolis and spent a brief time drilling . His unit was assigned to the Lightning Brigade commanded by Colonel John T. Wilder in 1862 and Lilly was elected to serve as the commanding officer of his battery from August until the winter of 1863 , when his three @-@ year enlistment expired . His only prior military experience had been in a Lafayette Indiana Legion unit , and several of his artillerymen considered him too young and intemperate to command . Despite his initial inexperience , he became a competent artillery officer and his battery was instrumental in several important battles . He first saw action in the 1863 Battle of Hoover 's Gap , and he was later in the Second Battle of Chattanooga and the Battle of Chickamauga .

When Lilly 's term of enlistment ended , he reenlisted and was promoted to become a Major of cavalry and given command of the 9th Indiana Cavalry . During a mission in Alabama in the December 1864 , he was captured by troops under Major General Nathan B. Forrest and held in a Confederate prisoner @-@ of @-@ war camp at Enterprise , Mississippi , until the end of the war in the spring of 1865 , when he was paroled and allowed to return home . In recognition of his service , he was brevetted to the rank of Colonel before being mustered out of the army . In his later life he obtained a large atlas and marked the path of his movements in the war and the location of battles and skirmishes . He often used the atlas when telling war stories . His Colonel 's title stayed with him for the rest of his life , and his friends and family used it as a nickname for him . Lilly served as chairman of the Grand Army of the Republic , a brotherhood of Union Civil War veterans , in 1893 . During his term he helped organize an event that brought tens of thousands of Union war veterans , including Lilly 's battery , together in Indianapolis for a reunion and a large parade .

= = = Business ventures = = =

After the war , Lilly attempted a new business venture and purchased a 1 @, @ 200 @-@ acre (490 ha) cotton plantation in Mississippi . Shortly after moving to their new home , the entire family was stricken with mosquito @-@ borne malaria , a disease common in the region at that time . Although Lilly and his son recovered , his wife Emily died on August 20 , 1866 . She was eight months pregnant with the couple 's second child ; their unborn son could not be saved and was stillborn . The death devastated Lilly ; he wrote to his family , " I can hardly tell you how it glares at me ... it 's a bitter , bitter truth ... Emily is indeed dead . " She was initially buried on the plantation , but later that year her body was disinterred and moved to Indiana to be reburied . Lilly 's return to Indiana following her death allowed the plantation to fall into disrepair and his crop to fail . His partner was unable to maintain the plantation because of a drought and then disappeared with the business 's remaining money . Lilly was forced to file bankruptcy in 1868 . Josiah was sent to live with Lilly 's parents in Greencastle while he worked to resolve the situation on the plantation . He remarried in 1869 , this time to Maria Cynthia Sloan , and began working for Pattison , Moore & Talbott , a medicinal wholesale company . The business was purchased by H. Daly and Company during his employment there .

In 1869 , Lilly left Indiana and , with a partner , opened a successful drug store , Binford and Lilly , in Paris , Illinois . He soon sent for his son . The business was profitable and allowed Lilly to save money , but he was more interested in medicinal manufacturing than running a pharmacy . He formulated a plan to create a medicinal wholesale company of his own . In 1873 , Lilly left the

partnership and returned to Indianapolis , where he opened a drug store , Johnson and Lilly , with a new partner . Three years later , Lilly dissolved the partnership ; his share of the assets amounted to several pieces of equipment , a few gallons of unmixed chemicals , and a small amount of money . He had previously approached a family friend , Augustus Keifer , to create a new partnership . Keifer and two associated drug stores agreed to purchase all their drugs from Lilly at a cost lower than they were currently paying . On May 10 , 1876 , Lilly opened a laboratory to manufacture drugs . The sign for the business said " Eli Lilly , Chemist " .

= = Later life = =

= = = Eli Lilly & Company = = =

Lilly 's manufacturing venture began with three employees , including his 14 @-@ year @-@ old son Josiah , who had quit school to work with his father . The elder Lilly had \$ 1 @,@ 400 (\$ 29 @,@ 575 in 2011 chained dollars) in working capital . His first innovation was gelatin @-@ coating for pills and capsules . Other early innovations included fruit flavoring for medicines and sugarcoated pills , making the medicines easier to take . Following his experience with the low @-@ quality medicines used in the Civil War , Lilly committed himself to producing only high @-@ quality prescription drugs , in contrast to the common and often ineffective patent medicines of the day . One of the first medicines he began to produce was quinine , a drug used to treat malaria , which became his best @-@ selling medicine . His products gained a reputation for quality and became popular in the city . In his first year of business , sales reached \$ 4 @,@ 470 (\$ 90 @,@ 057 in 2009 chained dollars) , and by 1879 they had grown to \$ 48 @,@ 000 (\$ 1 @,@ 105 @,@ 200 in 2009 chained dollars) . Sales expanded rapidly and he began to acquire customers outside of Indiana . Lilly hired his brother , James , as his first full @-@ time salesman in 1878 . James , and the subsequent sales team that developed , marketed the company 's drugs nationally . Other family members were also employed by the growing company ; Lilly 's cousin Evan Lilly was hired as a bookkeeper and his grandsons , Eli and Josiah , were hired to run errands and perform other odd jobs . In 1881 , he formally incorporated the company , naming it Eli Lilly and Company . By the late 1880s , he was one of the Indianapolis area 's leading businessmen with over one hundred employees and \$ 200 @,@ 000 (\$ 4 @,@ 775 @,@ 556 in 2009 chained dollars) in annual sales .

To accommodate his growing business , Lilly acquired additional facilities for research and production . He purchased a complex of buildings on McCarty Street in south Indianapolis ; other businesses followed , and the area began to develop into a major business section of the city . Believing that it would be an advantage for his son to gain a greater technical knowledge , Lilly sent Josiah to attend Philadelphia College of Pharmacy in 1880 . Upon returning to the business in 1882 , Josiah was named superintendent of the laboratory . In 1890 , Lilly turned over the management his business to Josiah , who ran the company for several decades . The company flourished despite the tumultuous economic conditions in the 1890s . In 1894 , Lilly purchased a manufacturing plant to be used solely for creating capsules . Several technological advances were made by the company , and the capsule creation was automated . Over the next few years , they annually created tens of millions of capsules and pills .

Although there were many other small pharmaceutical companies in the United States , Eli Lilly and Company distinguished itself from the others by having a permanent research staff , inventing superior techniques for the mass production of medicinal drugs , and its strong focus on quality . At first , Lilly was the company 's only researcher , but as his business grew , he created a laboratory and employed a department dedicated to creating new drugs , hiring his first research scientist in 1886 . The department 's methods of research were based on Lilly 's . He insisted on quality assurance , and instituted mechanisms to ensure that the drugs being produced worked as advertised , had the correct combination of ingredients , and that only the correct dosages of medicines were contained in each pill . He was aware of the addictive and dangerous nature of some of his drugs , and pioneered the concept of giving such drugs only to people who had first

seen a physician to determine if they needed the medicine .

= = = Philanthropy = = =

By the time of his partial retirement from his business , Lilly was a millionaire . He had been involved in civic affairs for several years and became increasingly philanthropic , granting funds to charitable groups in the city . Working with a group of twenty @-@ five other businessmen , he had begun sponsoring the Charity Organization Society in the late 1870s and soon became the primary patron of its Indiana chapter . The society was the forerunner of the United Way and worked to organize charitable groups under a central leadership . It allowed the many organizations to easily interact and better help people in need by coordinating their efforts and identifying areas with the greatest need .

Lilly wished to encourage economic growth and general development in Indianapolis . He attempted to achieve those goals by supporting local commercial organizations financially and through his personal advocacy and promotion . He first became active in local civics in 1879 . As a result of his proposal for a public water supply company to meet the needs of the city , the Indianapolis Water Company was created . In 1890 , Lilly founded the Commercial Club and was elected as its first president . The club was the primary vehicle for his city development goals and was a precursor to the Indianapolis Chamber of Commerce . The group was instrumental in making numerous advances for the city , including city @-@ wide paved streets , elevated railways to allow vehicles and people to pass beneath them , and a city sewage system . The companies were created through private and public investments and operated at low @-@ cost ; in practice they belonged to customers of the company who slowly bought each company back from its initial investors . The model was later followed in most parts of the state to provide water and electricity . The group also helped fund the creation of parks , monuments , and memorials , and successfully attracted investment from other businessmen and organizations to expand the city 's growing industries .

After the Gas Boom began to sweep the state in the 1880s , Lilly and his Commercial Club advocated the creation of a public corporation to pump the natural gas from the ground , pipe it to the city from the Trenton Gas Field , and provide it at low cost to businesses and homes . The project led to the creation of the Consumer Gas Trust Company , which was named by Lilly . The company provided low @-@ cost heating fuel that made urban living much more desirable . The gas was further used to create electricity to run the city 's first public transportation venture , a streetcar system .

During the Panic of 1893 , Lilly created a commission to help provide food and shelter to the poor people who were adversely affected . His work with the commission led him to personally donate enough funds to create a children 's hospital in Indianapolis to care for the many children of families who had no money to pay for routine medical care .

Lilly 's friends often urged him to seek public office , and they attempted to nominate him to run for Governor of Indiana as a Republican in 1896 , but he refused . He shunned public office and instead wanted to focus his attention on his philanthropic organizations . He did regularly endorse candidates , and made substantial donations to politicians who advanced his causes . Lilly became friends with former Governor Oliver P. Morton , who suggested that Lilly use his Commercial Club to advocate for the creation of a memorial to Indiana 's many veterans of the Civil War . Accepting the suggestion , Lilly began raising funds to build the Indiana Soldiers ' and Sailors ' Monument . Construction began in 1888 , but the monument was not completed until 1901 . The interior of the monument houses a civil war museum that was later named in honor of Lilly .

Lilly was an avid fisherman and built a family cottage on Lake Wawasee in 1887 , where he had enjoyed regular vacations and recreation since 1880 . In 1892 , he built the Wawasee Inn on the lake . The site became a haven for the family , and his grandson later expanded the estate . He also owned a large home on Tennessee Street in Indianapolis , where he spent most of his time . Lilly developed cancer in 1897 and died in his Indianapolis home on June 6 , 1898 . His bier was held on June 9 and attended by thousands before he was moved to his burial site , a large sepulcher in

Indianapolis 's Crown Hill Cemetery .

= = Legacy = =

By 1898 , Lilly 's namesake company had a product line of 2 @, @ 005 items and annual sales over \$ 300 @, @ 000 (\$ 7 @, @ 736 @, @ 400 in 2009 chained dollars) . Josiah Lilly inherited the company following his father 's death , and continued to build the company before passing it on to his own sons , Eli Lilly and Josiah K. Lilly Jr . Josiah and his two sons continued the philanthropy practiced by Lilly and later established the Lilly Endowment that in 1998 became the largest philanthropic endowment in the world in terms of assets and charitable giving ; it has since been surpassed but still remains in the top ten . The company played an important role in delivering medicine to the victims of the devastating 1906 San Francisco earthquake . Lilly 's company has since grown into one of the largest pharmaceutical companies in the world , and under Lilly 's grandson 's leadership developed many new innovations , including the pioneering and development of insulin during the 1920s , the mass production of penicillin during the 1940s , and the promotion of advancements in the mass production of medicines . Innovation continued at the company after it was made a publicly traded corporation in 1952 , and it developed Humulin , Merthiolate , Prozac , and many other medicines . According to Forbes , Eli Lilly & Co. was the 229th largest company in the world and 152nd in the United States in 2007 , with a worth of \$ 17 billion (USD) . It is the largest corporation and the largest charitable benefactor in Indiana .

Lilly 's greatest contributions were his standardized and methodical creation of drugs , his dedication to research and development , and the actual value of the drugs he created . He pioneered the modern pharmaceutical industry , and many of his innovations later became standard practice . His ethical reforms , in a trade that was marked by outlandish claims of miracle medicines , began a period of rapid advancement in the development of medicinal drugs . During his lifetime , Lilly had advocated for federal regulation on medicines , and his son continued that advocacy after his father 's death .

The Colonel Eli Lilly Civil War Museum , located below the Sailors ' and Soldiers ' Monument in Indianapolis , is named in Lilly 's honor . It opened in October 1999 and features exhibits about Indiana during the war period and the war in general .