

# The Wistars

## (Casper, Richard, Dr. Casper, Henry & Issac)

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**Brass Buttons**  
**Wistarburg Glasshouse**  
**Scientific Discovery**  
**Wistar's Balsam of Wild Cherry**  
**Wistar's Cough Lozenges**  
**Wistar Institute of Anatomy and Biology**

### PROLOGUE TO THIS ARTICLE

This article is the first comprehensive research-based work on the First Family of American Glass—The Wistars. It covers three hundred years of glass-related history in America.

It begins, after a brief history of glass, with the 1739 building of the first successful glass factory in America—Wistarburg in South Jersey. It deals with a famous Civil War era proprietary medicine. And provides a short history of the first nation's first independent medical research facility that was started in the 1890s and is still in existence today.

### A Brief History of Glass

Man-made glass, in the form of beads, was first created in Egypt 2,500 years before Christ. The next most important step in glass production was the introduction of the blowpipe in the Near East approximately 50 years before Christ. In view of the fact that the area was under the control of the Romans, that and other glass produced in Europe was called "Roman Glass." Roman glass was quite advanced. But, when the western half of the Roman Empire collapsed, the production of glass was limited to the remaining Eastern Half of the Roman Empire (which eventually became Byzantium) and later to production in the Arab states.

It was not until the Renaissance that Western Europe again started to produce glass of fine quality, in Venice Italy. The fact that Venice was closely linked by trade with Byzantium and with the Arab states undoubtedly played an important role in this development. In 1291 the production of glass in Venice was moved to the island of Murano to prevent the spread of fires and protect the secrets of glass making, and where it has basically remained to this day.

A very clear form of glass called Cristallo was developed in Venice and delivered by sea to Northern Europe where it was in great demand. When Columbus arrived in America, he had with him glass beads to trade with the "Indians." They were made in the city of Venice!

Eventually the secrets of glass making were stolen from Venice and the production of glass spread to northern Europe and England. The first industry transplanted to America by Europeans was glass making—by the Spanish in 1535 in Mexico. Later, the English started glass production in their first settlement in America, at Jamestown in 1608. The effort failed, then was re-attempted in 1621, but again failed even though six Italian glass blowers were "imported" to handle the work. The American settlers did not give up easily and attempts at glass making were again made in Boston, New Amsterdam and Philadelphia—but all failed within relatively short periods.

### Caspar Wistar (1696-1752)

The Wistar name was one of great influence and importance in Philadelphia during the 19<sup>th</sup> and 20<sup>th</sup> centuries. The progenitor of the American *Wistars* was Caspar who came to the United States from his homeland near Wald-Hilspach, Baden, Germany in 1717 at age 21, and established in New Jersey what is believed to be the first *successful* glass factory in the colonies. Like his father, Caspar always wrote his name "Wüster," but at the time of his naturalization in the British colony (1739?) it was recorded "Wistar." Caspar's younger brother John (1708-1789?) arrived in Philadelphia ten years later in 1727, settled in the Germantown district, and was



Figure 1: Caspar Wistar

registered with yet another variant of the surname, "Wister." To this day there exists two spellings of the family name.

Caspar Wistar emigrated with almost no money. But within three years he was buying, dividing, and selling real estate to other German newcomers. Soon after, he invested in an iron furnace, followed by a forge, in Berks County, and later established a lucrative brass button manufactory in Philadelphia. His buttons, in his son's words, "...were noted for their strength, and warranted for 7 years." In 1726 he married a wealthy Quaker, Catherine Jansen, having already been admitted to the Society of Friends for that purpose. Wistar thus entered into the Philadelphia Establishment, and became one of the city's leading merchants, with a house and general store on Market Street near the homes of Mayor Charles Willing and Benjamin Franklin. At the time of his death, from the disease dropsy in 1752, Caspar Wistar [Figure 1] was one of the wealthiest men in the province.

In 1738-39, Wistar launched his bold entrepreneurial venture in glass making



**Figure 2:** Bottle embossed “C. Willing.”

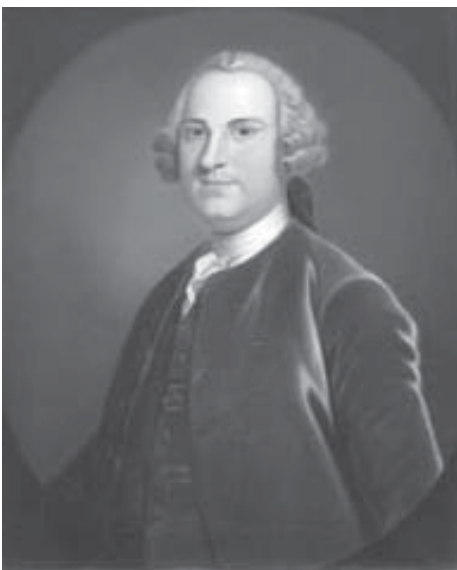


**Figure 4:** Bottle embossed “WM. SAVORY 1752.”



**Figure 5:** Bottle embossed “RW.”

near Alloways Creek in the wilds of Salem County, New Jersey (near present day Alloway). The site contained excellent sand, clay for crucibles, abundant wood for fuel and potash, and access to the Delaware River and Philadelphia by water. Wistar contracted with four skilled Belgian glassmakers. He agreed to pay their passage, furnish food and servants for them in America, and to grant them one-third of the profits from the glassworks. The master craftsmen agreed to oversee the construction of a glassworks built at Wistar’s expense, operate the factory, and teach Caspar Wistar and his son Richard



**Figure 3:** Charles Willing (1710-1754)

(and “no one else”) the mystery and art of producing glass. The works were generally referred to as the Wistar Glass Works, but were known internally by its proprietors as the United Glass Company.

The Wistar Glass Works became the first successful glass producing plant not only in the colonies, but in all of America. The factory also made scientific glass, supplying Benjamin Franklin (1706-1790) with the glass apparatus used in his experiments on electricity. Bottles and window glass were the chief products of “Wistarburg,” as the glasshouse and its surrounding community were called. Historians claim that bottles formed the major thrust of the Wistars’ output. They estimate, based on the glasshouse ledger figures for the period from October 1748 to May 1749, approximately 17,000 bottles were made during those seven months. Despite those numbers, only three authenticated bottles from the Wistarburg factory are known to have survived.

The oldest of the authenticated bottles made at Wistarburg Glass Works is a black glass seal bottle embossed, “C. Willing” [Figure 2]. Charles Willing (1710-1754, Figure 3) was born in England and trained in the mercantile business, coming to Philadelphia in 1728 to take charge of a firm established by his family. He carried on a large foreign trade and was very active in city affairs. Elected to the Common

Council in 1743, he was commissioned as one of the justices of the City Court, and in 1748 was elected Mayor of Philadelphia. A decade later, in 1754, he was again elected mayor. The “C. Willing” seal bottle was blown for him during his time as mayor.

Wistarburg and subsequent glassworks in New Jersey became known collectively as the glass factories of “South Jersey.” They were vividly described in a poetic essay by Carl Sandburg in his first published volume:

*“Down in Southern New Jersey, they make glass. By day and by night, the fires burn on and bid the sand let in the light. The factories by night would have delighted Whistler, who loved gloom and mist and wild shadows. Great rafts of wood and big brick hulks, dotted with a myriad of light, glowing and twinkling every shade of red. Big, black flames shooting out smoke and sparks; bottles, bottles, bottles, of every tint and hue, from a brilliant crimson to the dull green that marks the death of sand and the birth of glass.”* —In *Reckless Ecstasy* (1904)

#### **Richard Wistar (1727-1781)**

Caspar Wistar died in 1752, and his son, Richard Wistar, took over the business. He continued to operate the glass works for 29 years until his death in 1781 when the

property passed to his son, John Wistar (1759-1815) who conducted it for a short time before its abandonment.

It was during Richard's tenure as the owner of Wistarburg, that another of the authenticated Wistarburg seal bottles was made [Figure 4]. WM. SAVORY 1752 reads the glass seal on this wine or spirits bottle, handed down in the family of the famous Philadelphia cabinet-maker who died in 1787. The bottle is a dark olive green, bubbled, with a sheared lip and a collared neck.

Richard Wistar made another of the three remaining authenticated bottles from Wistarburg. This bottle was made for his personal use. The seal on the bottle featured an embossed "RW" (presumably standing for "Richard Wistar") and was made of green glass [Figure 5].

In 1769 Richard Wistar inserted an advertisement in the *New York Journal or General Advertiser* for August 17 that provides a good picture of the kinds of glass being produced at Wistarburg at that time:

*"Made at the Subscriber's Glassworks and now on Hand to be sold at His House in Market Street, opposite the Meal Market, either wholesale or retail, between three and four hundred boxes of Window Glass, consisting of the common sizes, 10x12, 9x11, 8x10, 7x9, 6x8, etc. Lamps Glass or any uncommon Sizes under 16x18 are cut upon short notice. Where also may be had, most sorts of Bottles, Gallon, Half Gallon, Quart, full measure Half Gallon Case Bottles, Snuff and Mustard, Receivers and Retorts of various sizes, also electrifying Globes and Tubes, etc."*

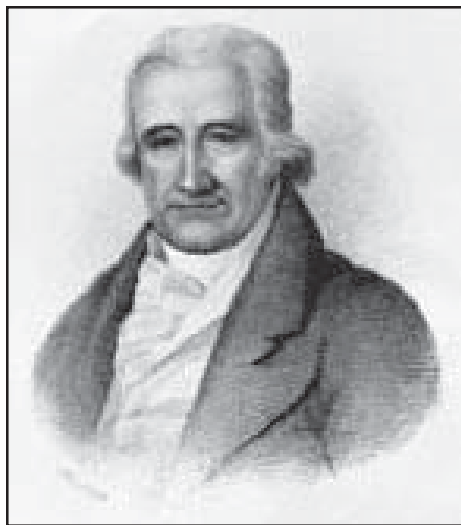


Figure 6: Dr. Caspar Wistar, M.D.

Beside John, Richard Wistar had five other sons. Richard Jr. (1756-1821) built a large four-storied building in Philadelphia in 1790 to conduct an extensive retail and wholesale iron and hardware business. With the profits of this undertaking he invested largely in lands and houses in the vicinity of Philadelphia that later became exceedingly valuable. During the Revolutionary War he had advocated the defense of his property by arms, resulting in his being disowned by the Society of Friends that his grandfather had adopted in 1726. He was an inspector of prisons, and one of the early friends and supporters of the Philadelphia Library Company and the Pennsylvania Hospital.

#### Caspar Wistar, M.D. (1761-1818)

The second Caspar Wistar [Figure 6] was a brother of Richard Wistar, Jr. (see above). He was a prominent American physician and man of learning, born in Philadelphia, and named for his grandfather who founded the Wistarburg glass factory.

Born a Quaker, Wistar was said to have been inspired to become a physician by the suffering he witnessed in the aftermath of the Battle of Germantown in 1777. He earned his medical degree from the University of Edinburgh [Scotland] in 1786, returned to Philadelphia, and succeeded Dr. Benjamin Rush in 1789 as professor of chemistry at the medical school of the College of Philadelphia (later the University of Pennsylvania). He held the position of professor of anatomy and midwifery there from 1792 to 1810. Dr. Caspar Wistar also served as a staff physician at area hospitals including Pennsylvania Hospital, the country's oldest, and became chairman of the Department of Anatomy at the University of Pennsylvania School of Medicine in 1808. He wrote the first American textbook on anatomy, *A System of Anatomy* (two volumes, 1811, 1814). He had many progressive ideas and was an early advocate of vaccinations against disease. During the yellow fever epidemic of 1793 he nearly lost his life after being stricken by the disease while caring tirelessly for others. Differences of opinion regarding treatment of the fever caused a breach in his friendship with the famous Dr. Rush.

Dr. Wistar's reputation drew medical students to Philadelphia from around the world. He was, however, widely respected not only for his expertise in medicine, but

also for his breadth of knowledge in the humanities and the general sciences. His chief scientific interests outside of medicine were paleontology and botany. He was also particularly known for his hospitality, and his home was the weekly meeting place of students and scientists. These so-called "Wistar parties" were so popular that they continued to be given even after his death. He was elected to the American Philosophical Society in 1787 and served as its president from 1815 until his death in 1818. He was also elected a Fellow of the College of Physicians in 1788. The plant genus *Wisteria*, described by botanist Thomas Nutall, was named in his honor.

Dr. Caspar Wistar was married twice, first in 1788 to Isabella Marshal, who died childless two years later. In 1798 he married Elizabeth Mifflin, with whom he had three children: Dr. Richard Mifflin Wistar, Dr. Mifflin Wistar, and Elizabeth Wistar.

#### Henry Wistar

It is believed that Henry Wistar was a descendant of John Wister (brother of the first Caspar Wistar) who settled at Germantown in 1727. A Pennsylvania will indicates Henry Wistar leased property in the Moyamensing district of Philadelphia during the early 1800s. By 1840 he was acknowledged the originator of a "patent medicine" that would command sales for more than a century—*Dr. Wistar's Balsam of Wild Cherry*. Wistar promoted his consumption cure with the tag line, "*The true Riches of Life is Health.*" In 1841 the nostrum was advertised by Lewis Williams & Co. of Philadelphia, apparently the new proprietor of Wistar's recipe; but by May 1844 Williams had transferred sole right to manufacture and sell the medicine in various regions, including eastern Pennsylvania, to Isaac Butts of New York who had been a distributor of the *Balsam* for the past year. Butts ordered 8-sided, green glass bottles blown with the product name embossed vertically over three of the eight sides [Figure 7]. On the sixth side the letters "I.B." were added, undoubtedly representing the initials of the proprietor. Less than a year later, in March 1845, Butts conveyed rights to Seth W. Fowle of Boston, including the bottle molds, printing plates, pamphlets, and other equipment. A companion product was *Wistar's Cough Lozenges*, added in 1855.

In addition to the containers embossed "I.B.", other surviving bottles, possessing



**Figure 7:** Dr. Wistar's Balsam of Wild Cherry.

applied lips along with blowpipe or iron pontil scars, are embossed with agency names such as "Sanford & Park/Cincinnati.O.", "John D. Park/Cincinnati", and "W.M.S.". The latter set of initials are those of W.M. Spear, a Philadelphia opportunist who landed in court in 1847 when Fowle requested an injunction to halt the production and sale of Spear's blatant imitation of Dr. Wistar's Balsam.

Undoubtedly, the big seller for Seth W. Fowle & Son was "Dr. Wistar's Balsam of Wild Cherry for the cure of Consumption and all Lung Diseases." From the fact that the U.S. medicine tax stamp pasted on the containers had a face value of four cents, it can be determined that this proprietary retailed at \$1 a bottle. Also, government records of the private die revenue stamps sold to the proprietor during the years 1869-1883 indicate that over one million bottles

of Wistar's Balsam were produced, yielding an average annual retail sale of \$78,000—more than a goodly sum in those days.

Included on the bottle wrapper was this presumptuous rhythmic verse:

*"In Rome thus spoke the Pope:*

*I'm glad to meet you, I assure you, sir*

*You are quite well, I hope?*

*No? Then I know just what will cure you, sir.*

*What, ho! Request our court apothecary*

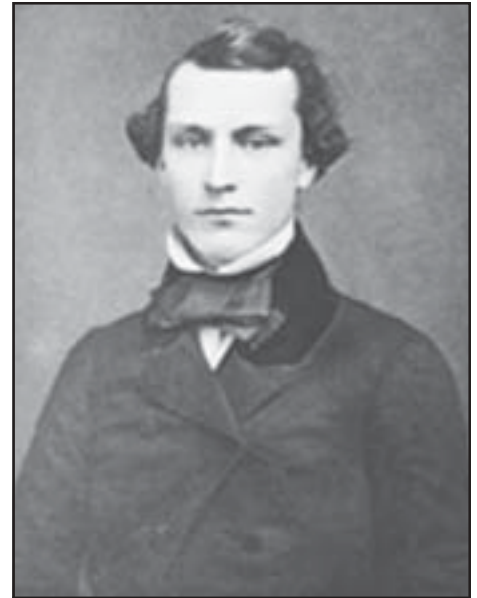
*To bring some WISTAR'S BALSAM OF WILD CHERRY."*

### **Isaac Jones Wistar (1827-1905)**

The Wistar Institute of Anatomy and Biology, the nation's first independent medical research facility, was founded in 1892 by General Isaac Jones Wistar [Figure 8]. General Wistar provided funds for a new building and a trust fund to guarantee perpetual care for the existing Wistar Museum at the University of Pennsylvania. The Museum originally consisted of the accumulation of anatomical preparations used by the famous Dr. Caspar Wistar (1761-1818, see above) throughout his active career, and was renamed the Wistar Institute upon incorporation in April 1892. Its benefactor, General Isaac Wistar, was Dr. Caspar Wistar's great nephew.

In his role as teacher, Dr. Caspar Wistar developed a number of unique teaching aids, some of which were life-sized anatomical models made of dried and wax-injected human limbs and organs. Others were fashioned of wood, carved by America's first native-born professional sculptor, William Rush. Today, The Wistar Institute owns the only extant examples of Rush's anatomical models. Two years before his death, Dr. Wistar appointed a young physician, Dr. William Edmonds Horner as caretaker of these valuable models. Horner later enlarged the collection and opened the first anatomical museum in the United States, the Wistar and Horner Museum. After Wistar's death William Horner, who later served as dean of the University of Pennsylvania School of Medicine, maintained and expanded the collection of anatomical specimens, further expanded under the curation of Dr. Joseph Leidy who acquired animal specimens as well as fossil and anthropological samples.

By the late 1880s the collection had grown so large and overly handled that it was beginning to show signs of wear and neglect, a situation compounded by a fire in Logan Hall at the University of



**Figure 8:** Isaac Jones Wistar

Pennsylvania where the museum was housed. University Provost William Pepper began a fund-raising campaign to provide for rehousing and refurbishing the collections to assure their continued availability for study and the teaching of medicine.

It was at this point that Isaac Jones Wistar stepped into the picture. A prominent Philadelphia lawyer and retired Civil War Brigadier General, Wistar made an initial gift to Provost Pepper's campaign to save the museum. But General Wistar then offered a more far-reaching proposal. Determined to create a lasting gift for the serious study of biological research as well as to preserve his great uncle's teaching collection, he funded an endowment and research building for The Wistar Institute of Anatomy and Biology. The University of Pennsylvania transferred the museum collections to the Institute by Deed of Gift in 1892. Shortly after the turn of the 20<sup>th</sup> century, The Wistar Institute began to fulfill Isaac Wistar's dream of a center for "new and original research" in the biological and medical sciences.

The Wistar Institute today has nearly 400 staff members, including about 130 doctoral-level scientists who occupy more than 50 laboratories. Working in the Institute's original 1894 building and its more recent extensions, Wistar scientists carry out multidisciplinary investigations of all types of cancer and viral, autoimmune, and degenerative diseases.

### **AUTHOR'S NOTE:**

In 2003 a wonderful, best selling, book

was published—*A Short History of Nearly Everything* by Bill Bryson (see bibliography). Indulging my interest in many things, including paleontology, I selected Bryson's award winning book as one to read as a distraction from my almost constant research and writing about bottles. I had only read a hundred pages of the over 500-page work when up popped the name "Caspar Wistar."

From my forty-five years of studying bottles and their history, my memory reminded me that a Caspar Wistar was America's first successful glassmaker. Could it be that the Wistar featured in the Bryson book was the same person? I quickly found out that there were numerous notable Wistars in American history of the 1600s through 1900s: I discovered that the first Caspar and his son Richard were involved in early American glass history, and that perhaps the most famous was Caspar Wistar, M.D. (1761-1818), the well known physician and teacher. Then there was Dr. Henry Wistar who invented and promoted *Dr. Wistar's Balsam of Wild Cherry*. And also Isaac Jones Wistar who founded and funded the world famous Wistar Institute of Anatomy and Biology in Philadelphia.

Bill Bryson not only tries to find out *what* we know, but also to find out *how* we know it. To that end, the author apprenticed himself to a host of the world's most profound scientific minds, living and dead, and that elite group included Dr. Caspar Wistar. According to Bryson:

*"In 1787, someone in New Jersey – exactly who now seems to be forgotten – found an enormous thighbone sticking out of a stream back at a place called Woodbury Creek [Figure 9]. The bone clearly didn't belong to any species of creature still alive, certainly not in New Jersey. From what little is known now, it is thought to have belonged to a "hadrosaur," a large duck-billed dinosaur. At the time, dinosaurs were unknown.*

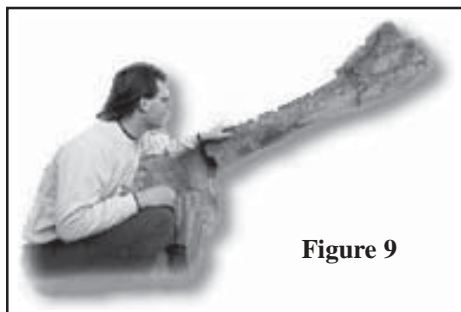


Figure 9

*The bone was sent to Dr. Caspar Wistar, the nation's leading anatomist, who described it at a meeting of the American Philosophical Society in Philadelphia that autumn. Unfortunately, Wistar failed completely to recognize the bone's significance and merely made a few cautious and uninspired remarks to the effect that it was indeed a whopper. He thus missed that chance, half a century ahead of anyone else, to be the discoverer of dinosaurs. Indeed, the bone excited so little interest that it was put in a storeroom and eventually disappeared altogether. So the first dinosaur bone ever found was also the first to be lost."*

As most of us know, President Thomas Jefferson thought there might be scientific and political value in sending a party to explore the interior of America beyond the Mississippi. Hoping the intrepid adventurers would find herds of healthy mastodons and other outsized creatures grazing on the bounteous plains, Jefferson's personal secretary and trusted friend Meriwether Lewis was chosen co-leader and chief naturalist, along with George Rogers Clark, for the expedition. And the person selected to advise Meriwether Lewis on what to look out for with regard to animals living and deceased was none other than Dr. Caspar Wistar.

By the early years of the nineteenth century, fossils had taken on a certain inescapable importance, which makes Wistar's failure to see the significance of his dinosaur bone all the more unfortunate. At the time, several other opportunities arose for Americans to claim the discovery of dinosaurs but all were wasted. In 1806 the Lewis and Clark expedition passed through the Hell Creek formation in Montana, an area where fossil hunters would later literally trip over dinosaur bones, and even examine what was clearly a dinosaur bone embedded in rock, but failed to make anything of it. Other bones and fossilized footprints were found in the Connecticut River Valley of New England after a farm boy named Plinus Moody spied ancient tracks on a rock ledge in South Hadley, Massachusetts. Some of these at least survive and are in the collection of the Peabody Museum at Yale. Found in 1818 (the year of Dr. Caspar Wistar's death), they were the first dinosaur bones to be examined and saved, but unfortunately they weren't recognized for what they were

until 1855, decades after a first opportunity to appreciate the age of dinosaurs.

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