

## HAGLEY: A PLACE IN TIME

In 1800—more than 200 years ago—a family arrived in America after a three-month trip across the ocean from France. They had left France to escape a violent revolution and to start a new life here. The father of the family, Pierre Samuel du Pont de Nemours, had been an important man in the French government, and he had met some famous Americans in Paris, like Benjamin Franklin and Thomas Jefferson. Pierre Samuel wanted to start an agricultural community in America, but Jefferson had warned him that real estate was a risky business in the United States at that time. After arriving here, the family decided that land would not be a good investment, so they came up with a list of other possible business ventures.

One day, not long after their arrival, the youngest son, Eleuthère Irénée (E. I.), went on a hunting trip with a friend. He noticed that the gunpowder they were using was not very good, and E. I. knew something about gunpowder because he had studied how to make it with a famous French chemist, Antoine Lavoisier. He knew that he could make much better gunpowder than the kind available in the United States, so he suggested this business to his father. Because of Pierre Samuel's friendship with President Jefferson, the family was sure to get business from the United States government if they could offer a superior product.

After planning a gunpowder works and searching for land, E. I. du Pont de Nemours & Co. began construction along the Brandywine River in 1802. E. I. chose this location because of three great natural resources: water for power, granite for buildings, and willow trees for charcoal, one of the ingredients of gunpowder—he would have to import the other two ingredients, sulfur and saltpeter. The site was also convenient because many other French families had settled in this area, but it was a safe distance from the city of Wilmington in case of explosions. Unfortunately, nobody else in the area knew how to make gunpowder, so E. I. recruited skilled workers from the gunpowder mills in France.

It turned out that DuPont gunpowder really was better than other powder available in the United States, and it cost less to make. Black powder, as gunpowder was called then, was used for much more than just hunting. Mining and railroad companies used it for blasting away rock, and farmers used it to clear land. The company made its first government sale in 1804, when the U.S. Marines attacked the Barbary pirates to rescue American hostages. When the War of 1812 began, the military demand for powder was so great that E. I. had to expand his company. He bought a piece of land next to his original powder mills named Hagley and opened a second powder yard. In 1829, he added a third powder yard. Yet even though the company was selling a lot of powder and continuing to expand, E. I. was constantly in debt and unsure about the company's future. The day he died in 1834, he had just finished a meeting with some businessmen to whom he owed money. It was not until after the Civil War (1861-1865) that the company became financially successful. By the 1890s, the DuPont Company was able to buy out its competitors' powder yards in eight other states.



**Pierre Samuel du Pont  
de Nemours (1739-1817),  
pastel drawing by Joseph  
Ducreaux; Paris, France;  
ca. 1795,  
Hagley Museum Collection -  
#77.22**



**Eleuthère Irénée du Pont  
(1771-1834)**

**oil portrait by Rembrandt Peale,  
Philadelphia, PA;  
1831,  
Private collection**

Making gunpowder was a very dangerous business. There were 288 explosions at the DuPont mills on the Brandywine, resulting in thousands of dollars of damage and 228 deaths. Often, local people were afraid to work in the mills, so the company brought many workers from Ireland and Italy. The DuPont Company offered good wages, affordable housing, savings plans, and insurance for the workers' families. The company also helped its employees bring family members here from Europe by paying for their passage in advance and allowing workers to pay off the debt over time. In 1817, E. I. built a school where his daughter, Victorine, taught the children of workers from the DuPont Company and other local mills on Sundays. Even though powder workers lived with the constant danger of explosions, they were very loyal to the du Pont family and often worked for the company for many generations.

In 1866, Alfred Nobel introduced a more powerful explosive, dynamite, which quickly began taking the place of blasting powder. The DuPont Company opened its first research and development laboratory in 1902 to experiment with nitrocellulose, one of dynamite's main ingredients. The company soon moved away from the explosives industry as it found many new uses for chemicals, but continued to make explosives until 1981. The DuPont powder mills closed in 1921, but the company's success continued. Today the DuPont Company is known for inventing many products we use every day, like nylon and Teflon®.

When you visit Hagley with your class, you will see what is left of the powder yard that E. I. began building in 1802, including some of the mill buildings, one of the houses where workers lived, and the children's school. The Gibbons House looks much like it did in the 1870s, but the rest of Hagley has changed quite a lot. Remember that the DuPont mills and the workers' communities that surrounded them were once much larger. You will see that today, Hagley is a very beautiful place, full of trees, flowers, and birds; in the 1870s, it looked much more like a factory, with railroad tracks, metal line shafts, smoke stacks, and dirt.

On your walk to Workers' Hill, try to imagine what it might have been like back then. Have a great time on your trip back to the nineteenth century!



**Lower DuPont powder yards, crayon sketch by Pierre Gentieu;  
March, 1878, Hagley Museum Collection - #55G4/P23-7**



# GLOSSARY

**Artifact** – an object made by people that gives historians clues about the past

**Charcoal** – one of the three ingredients used to make gunpowder, charcoal is obtained by heating wood. At Hagley, charcoal was made from the branches of willow trees, which were plentiful on the property.

**Cipher** – to calculate or do math

**Debt** – an amount that is owed to a lender

**Dry sink** – a nineteenth-century sink that consists of a wooden cabinet with a basin on top that is not connected to a water supply

**Dynamite** – a high explosive made with nitroglycerin developed in 1867, it soon replaced gunpowder

**Emigrant** – a person who leaves his or her home country to settle in another, like the people who left France, Ireland, and Italy to go to the United States

**Entrepreneur** – a person who is willing to take a risk in starting or managing a business, like E. I. du Pont

**Explosive** – a substance that can cause an explosion, such as gunpowder or dynamite

**Factory** – a building or group of buildings where goods are produced; Hagley was a gunpowder factory

**Gee haw** – a nineteenth-century toy made of two wooden sticks and a propeller; when rubbed one way, the propeller turns to the right (gee) and when rubbed another way, the propeller turns to the left (haw)

**Gunpowder** – an explosive mixture of saltpeter, sulfur, and charcoal, used in firearm shells and cartridges, fireworks, and for blasting

**Immigrant** – a person who comes to a country to settle permanently, like the French, Irish, and Italians who came to Delaware

**Industrial Revolution** – a period that introduced mass production, improved transportation, technological progress, and the factory work system, beginning around 1780 in England and spreading in the United States during the mid- nineteenth century

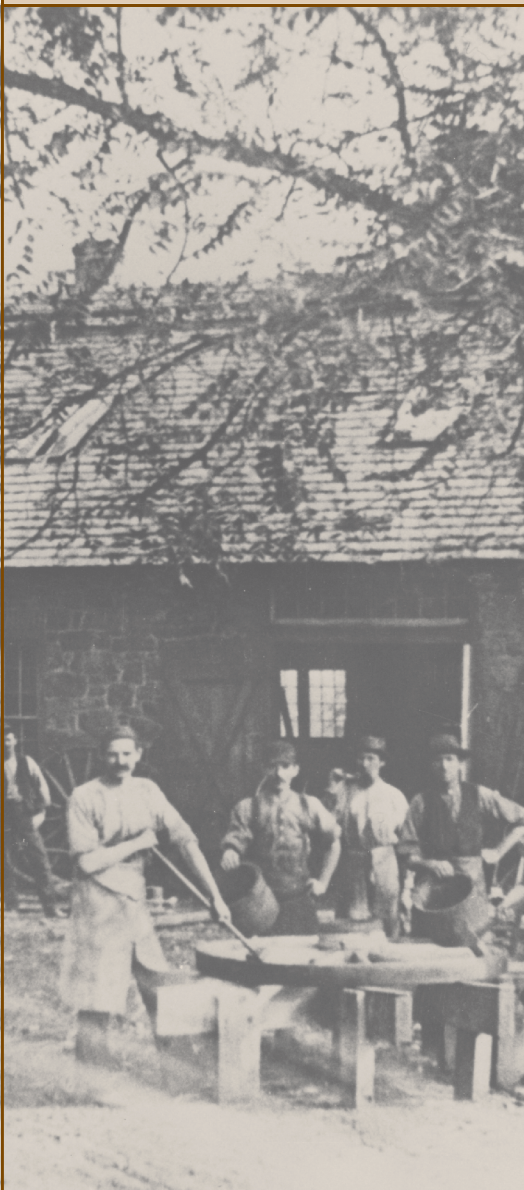
**Industry** – commercial production and sale of goods

**Manufacture** – to make or produce by hand or by machinery, especially on a large scale

**Mill** – a kind of factory, or a building that houses machinery to grind or crush a substance; Hagley was a gunpowder mill that used roll mills to crush the ingredients for gunpowder

**Natural resource** – a material that occurs in nature and is valuable or useful to humans, such as the wood, water, and stone available at Hagley

**Nineteenth century** – the years from 1801 through 1900



**“Blacksmith shop,”  
ca. 1880-1920,  
Pierre Gentieu Collection,  
70.1.105**

**Wheelwrights work  
on a wagon wheel.**



**“Mr. William Miller’s House,”  
1899,  
Pierre Gentieu Collection,  
70.1.240**

**Nitrocellulose** – a chemical used in the production of explosives and plastics, such as dynamite and DuPont varnishes

**Oral history** - information about history obtained by interviews with people whose experiences and memories are representative of a certain time. Much of what we know about life at Hagley in the nineteenth century came from oral history interviews with people who once lived and worked here.

**Primary source** – a document, image, interview, or artifact that offers a firsthand account of events or topics without historical interpretation

**Punch paper** – a popular nineteenth-century craft similar to cross stitch or needlepoint done on perforated paper instead of canvas

**Revolution** – a sudden and complete change in government, society, or a way of thinking, such as the American Revolution (a change in government) or the Industrial Revolution (a change in the way of life)

**Roll mill** – a building at Hagley where two giant, cast iron wheels rolled over the ingredients for gunpowder to crush and mix them together. Roll mills were also used in other industries to crush and mix many other substances like wheat for flour or cocoa beans for chocolate.

**Salt peter** - a white, gray, or colorless mineral (potassium nitrate) used to pickle meat and also to make gunpowder, explosives, matches, and fertilizers; Hagley’s supply came mainly from guano (bat dung) imported from caves in India.

**Secondary source** – a text, image, or exhibit that offers commentary or interpretation of events or topics from a historical perspective

**Sulfur** - a pale yellow element used to make gunpowder, insecticides, pharmaceuticals, and fertilizers; Hagley’s supply came primarily from Sicily.

**Turbine** – an engine that looks like a fan turned on its side, in which water or steam causes the blades to turn and power machinery. At Hagley, turbines began replacing water wheels as a source of power in the 1840s.

**Wood stove** – a stove that is heated by burning wood, rather than with gas or electricity

