

Cornwall Iron Furnace Visitor Center

Cornwall, PA

The visitor center exhibit area at Cornwall Iron Furnace is approximately 2,500 square feet and is located in the former charcoal storage building of the museum complex. Interpretive Solutions conducted interpretive planning and provided exhibit research, development and design services to tell the story of the furnace from its early beginnings in the 18th century through the 19th century. The technology and processes of making iron, forging iron and life in the iron-making community were interpreted through graphic panels and simple interactive units. An actual, full-scale forge was incorporated into the exhibit.



Cornwall Iron Furnace

- SCOPE:** Historical research; interpretation; thematic space planning; scripting; exhibit design; lighting design; fabrication.
- DESIGNER:** Steve Feldman Design
Bethesda, MD
- COMPLETED:** 2004
- CLIENT:** Pennsylvania Historical and Museum Commission (PHMC)
Cornwall Iron Furnace
Cornwall, PA

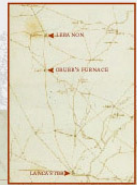
THE SONS OF PETER GRUBB: *Ironmasters to a Revolution*

By the time the Cornwall Company's lease expired in 1765, Peter Grubb had been dead for eleven years. Discouraged by meager profits, the company's investors returned operation of Cornwall Furnace to Peter Grubb's two sons, Curtis and Peter II.



Sketch of the British Troops at General Washington's camp after the Battle of Red Bank, December 19th, 1778. Copy of a lithograph, 1860.

Cornwall during America's War for Independence
By 1775, the American iron industry was thriving. When the call came for iron for George Washington's troops, Cornwall Furnace was ready. By war's end, the Grubbs had produced 42 cannon, more than eighty-six tons of shot, shot pans, stoves and ironware for the Continental Army.



British Map, 1777 (Fisher, and Goodland). While being fabricated, the map was small. A map drawn by Smith gave the location of American Furnaces and the names of their owners. The British were here intended to sabotage or commandeer industrial iron furnaces.

"This day I am going to contract for 100 ton of Cannon."
LETTER, CURTIS GRUBB TO HIS BROTHER PETER GRUBB, APRIL 12, 1776



Exhibit panels

THE FURNACE: *Fiery Iron Producer*

A furnace is a structure in which heat is generated for the purpose of smelting ore. In the smelting process, ore is melted in order to separate out the metal. A *blast furnace* is one in which a blast of air creates a hotter fire. A furnace that is "in blast" is one that is fired up for smelting.

Iron ore, limestone and charcoal are the raw materials used in the process. The *founder* blended ore and fuel in the furnace based on conditions he sensed through experience, but had no scientific way of measuring. He maintained the proper amount of blast and called for the tap when the iron was ready. Errors in judgment could ruin a batch of metal, damage the furnace — or even harm furnace workers. The *keeper* assisted the founder, and tended the furnace during the night shift.

Ironworkers poured off molten iron about every 12 hours. The men worked in two twelve-hour shifts, so the furnace could stay in blast around the clock. Ironmasters kept their furnaces in blast 24 hours a day for as many months of the year as they could. When operating on waterpower that meant the furnace went out of blast in the winter when the stream that turned the water wheel froze.

Later, steam-powered furnaces could stay in blast longer, but still needed about a month of downtime every year for cleaning and reblowing of the furnace stack.