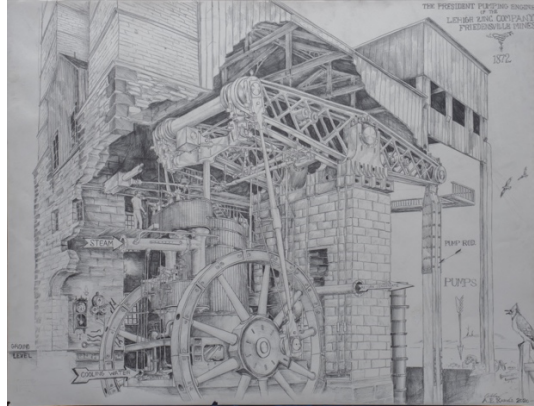


The President Pumping Engine Historical Marker Dedication Ceremony November 20, 2024

In April 2022, Lehigh University (Bethlehem, PA) applied to the Pennsylvania Historical and Museum Commission (PHMC) for a Historical Marker recognizing The President Pumping Engine. In December 2022, this application was approved, one of 36 across the Commonwealth. These new markers, selected from 91 applications, were added to the more than 2500 familiar blue signs with gold lettering along city streets and country roads and highways throughout Pennsylvania. Since 1946 PHMC's Historical Markers have chronicled the people, places, and events that have affected the lives of Pennsylvanians over the centuries. The signs feature subjects such as Native Americans and early settlers, government and politics, athletes, entertainers, artists, struggles for freedom and equality, factories and businesses, and many other noteworthy topics. The standard for recognition requires that the nominee (site or person) had both a substantial connection to the state and a significant impact on its times at a statewide or broader level. Local or regional historical significance on its own is not qualifying. The application process includes validation through extensive primary and secondary documentation. As one of two Historical Markers approved in the Lehigh Valley during this cycle, achieving this recognition was an important milestone in our overall efforts to memorialize the story and preserve the existing physical features of The President Pumping Engine.

The President Engine House ruins (Lehigh Co., PA) are the surviving remnant of The President Pumping Engine (1872-1900). The engine was designed by John West, a Cornish émigré who played a significant role in the development of Cornish style pumping engines in America. The President Pumping Engine was the largest single cylinder walking beam engine ever designed and manufactured in the United States and a global engineering landmark that attracting worldwide interest. When the combination of size, equipment weight and power generated are considered, it was the largest and most powerful single cylinder stationary steam engine ever constructed. It was the essential machine necessary to dewater a mine that represented the ore source for over one half of the growing market for zinc products in America. When one of the engine's walking beams fractured in 1891 and available resources were not able to effectively repair it, all alternative attempts to clear water from the mines failed and the operations were forced to close in 1893. Fabricated in Philadelphia foundries, the engine and pumping equipment were a tribute to the great manufacturing skills of the city known as the "workshop of the world". An important substory is the contribution of Cornish mining and mechanical expertise as the engine designer, the master building and equipment erectors, and the initial equipment operators were all émigrés from Cornwall, a small county in the United Kingdom that gained outsized prominence in the 19th century for the contribution made by its people to hard rock mining and steam technology throughout the world.



(Above: Sketch of The President Engine by Alexander Karnes, on display at the NMIH)

The Dedication Ceremony, which is a key element in the overall process, commenced at 11:00 AM at the National Museum of Industrial History (NMIH), Bethlehem on November 20, 2024. Shortly after the museum opening, the Antebellum Marine Band (Gettysburg), began playing late 19th century music in the museum's foyer space. At 12:30 PM, the formal presentation ceremony commenced. Following an introduction by Andria Zaia, the Executive Director of NMIH, PHMC Commissioner William Lewis greeted the audience. Following Commissioner Lewis' remarks, Steven DeWeerth, Dean of the P.C. Rossin College of Engineering and Applied Sciences, Lehigh University, delivered a short talk highlighting the important contribution of The President Pumping Engine to technological advancement and the many intersections, spanning three centuries, connecting Lehigh University and the former zinc mine property where the engine was once located.



(Above: Antebellum Marine Band playing at the Dedication Ceremony)

Tracey Carbonetto, the Chair of the Anthracite-Lehigh Valley Chapter of the American Society of Mechanical Engineers (ASME) recognized The President Pumping Engine as an engineering landmark. Early in 2024, the chapter nominated, under the aegis of ASME's national program, The President Pumping Engine as a Landmark. However, at the present time, new applications to ASME's national program have been indefinitely suspended. Given this, The President Pumping Engine was recognized by the local chapter with a plaque and contribution to the preservation fund managed by Lehigh University, the current property owner.



(Above: Tracey Carbonetto presenting a plaque recognizing The President Engine to community advocate, Mark Connar)

Mark Connar, community advocate and historian, followed this with an overview of the Friedensville Mines and The President Pumping Engine. An hour was reserved for guests to tour the museum and during this time the scale model of The President Pumping Engine was operated on compressed air. This 1:38 scale model was built by Anthony (Tony) Mount of Bampton, Devon, United Kingdom over a period of four years and generously donated by Tony in 2022. The scale model is the centerpiece of a display in the museum's main hallway.



(Above: President Grant and Lehigh Zinc Company President Webster reenactors in front the model of The President Engine designed and built by Anthony Mount and on display at the NMIH)

Light refreshments were served during this time. At 2:15PM buses left the museum to go to site where the engine was located for the Historical Marker unveiling (about 4 miles away) in Friedensville, Upper Saucon Township.

The President Pumping Engine was named for “the chief magistrate of our Country”, who at that time was Ulysses S. Grant. One of Grant’s close associates attended the dedication service on January 19th, 1872, but President Grant was not present. For the Historical Marker dedication, we “redid” the original dedication ceremony with a reenactor (Robert Fahringer) representing the president of the Lehigh Zinc Company, Benjamin Webster, delivering the same remarks that were reported to have been made during the dedication ceremony in 1872:

This is the engine which is destined to become famous as is the house that Jack built; this is the engine whose cylinder is one hundred and ten inches, and whose piston rod is ten inches, in diameter, with a ten-foot stroke; this is the engine that can work ‘comfortably’, as we are told, at twelve strokes per minute, and yet not the least ‘fussy’; the engine, each of its walking beams weighs 48,000 pounds; twenty-six of whose pieces weigh each upwards of seven tons, and whose entire weight, including girders, is 1,310,300 pounds; the engine that can lift 52,800,000 pounds, or 26400 tons, one foot high in one minute of time, with the majestic ease and consciousness of power with which an elephant lifts a straw; the engine that can raise 12,000 gallons of water per minute, from a depth of three hundred feet, which works, day and night, without rest, and whose influence is a mighty one towards transforming the subterranean haunts of Kobalt and gnome, where, from times Silurian, these spirits have sported undisturbed in the ice-cold sea, that noiselessly washes the shores of their crystal kingdom.

From the inception of this engine, in 1868, this work has been sustained by our Board of Directors with unfaltering determination and courage. At the dedication they requested that public acknowledgment be made to our chief engineer, John West, for the skill with which he planned the whole, and the fidelity with which he executed it from the lowest foundation stone to the chimney coping.

[Above abridged from the original dedication remarks]

In this “historical fiction redo” President Grant was able to attend, and a President Grant reenactor (Ken Serfass) gave an appropriate speech. Once President Grant delivered his remarks, President Webster of the Lehigh Zinc Company returned to the podium and made the following declaration (which closely follows what was reported to have been said at the time):

“Mr. West, put on the steam and start the engine! I now christen the engine “The President” in honor of the chief magistrate of our country and as a fitting name for an engine which is chief of all engines in power.”

With the above instruction, the cover on the Historical Marker was dramatically removed by John West, the engine’s designer and chief engineer of the Lehigh Zinc Company (played by NMH historian Mike Piersa), and the sign revealed to much applause.



(Above: "President Grant" delivering his address while the "Lehigh Zinc President" looks on)



(Above: "Mr. West" removing the PHMC Historical Marker cover)

The president of Lehigh Zinc Company, his spouse Elizabeth (played by NMIH museum collections manager Emily Marchello) and President Grant arrived at the engine house site in a horse drawn carriage provided by the Bethlehem Carriage Company and left in the same carriage. After President Grant left, buses took the audience back to the NMIH after a brief period that allowed attendees to inspect the engine house ruins and the water filled mine pit that was once the Ueberroth Zinc Mine.



(Above: The carriage preparing to collect Presidents Grant and Webster following the Dedication Ceremony)

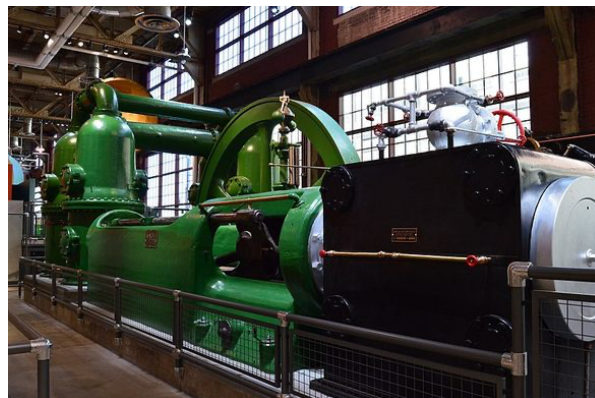


(Above: The Engine House and some of the attendees following the Ceremony)



(Above from left: “President Grant”, Andria Zaia (NMIH), Erin Kintzer (Lehigh University), Mark Connor, William Lewis (PHMC) and “Lehigh Zinc President Webster”)

Light appetizers and refreshments were available at the museum upon the bus return (the two presidents attended as well). The museum ran on compressed air, the large pumping engine known as “The Big Green Machine” which is a key exhibit at the museum. This engine first started operation in 1915 at the York Water Company and was built by Snow Steam Pump Works of Buffalo, N.Y.



(Above: “The Big Green Machine at the NMIH)

In advance of the Historical Marker dedication, Lehigh University improved the engine house ruin appearance by removing plant growth on the walls, tree growth near the ruins

which threatened the structure and obscured the view. The front gate area where the Historical Marker is located was likewise improved with the removal plant growth and the installation of a new, more attractive gate and fence. This work was expertly accomplished by Keystone Siteworks, a local contractor. A local metal fabricator, TruBlu Welding & Fabrication, designed and built an attractive protective cage for the base of the Historical Marker pole which is modeled on the face of the engine house and incorporates brick and stone from the site. The engine house is now clearly visible in all seasons from the Historical Marker.



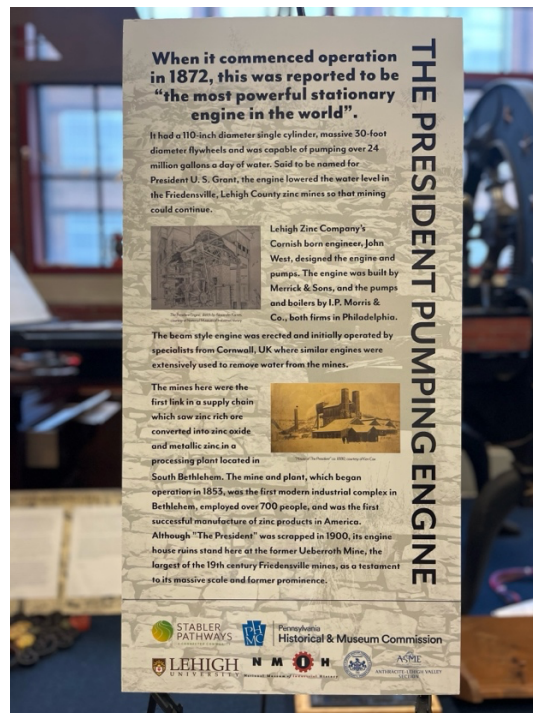
(Above: President Engine House and Historical Marker in the foreground)

Although the engine was scrapped in 1900, the four walls of the engine house remain in a deteriorated state at their original height. These ruins are of outstanding historical value as they are the only surviving example of a Cornish style pumping engine house in the United States. In Cornwall and Devon, in the United Kingdom, surviving engine houses are the keynote feature of a UNESCO World Heritage Landscape. William Rosen, in his book on the origin story of the steam engine, “The Most Powerful Idea in the World”, describes invention of the steam engine as “...a machine that changed everything, up to including the idea of invention itself”. Simply said, The President Engine House is the only structure in the United States that Thomas Newcomen, the father of the atmospheric steam engine, would immediately recognize in its shape, appearance, and design as a pumping engine house. Requiring a sturdy structure to support his first mine pumping engine, built in 1712, nearby Dudley Castle was a likely inspiration and, similarly, the ruins in Friedensville look very much like a castle keep.

In addition to the PHMC sponsored Historical Marker, the fence at the gate entrance to the engine house property will also have more descriptive signage which tells the story of The President Pumping Engine and the Ueberroth Mine.



(Above: Close up view of the PHMC Historical Marker)



(Above: The descriptive sign which will be installed on the fence near the entrance gate)

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