



Striking the Right Balance: Welcoming Rick as Treasurer

The Old Millstone Forge is pleased to welcome Rick as the Foundation's new Treasurer. A familiar face at the Forge for a little more than a year, Rick has already earned a reputation for his steady presence, thoughtful perspective, and genuine commitment to our mission.

Rick is a husband and father, a woodworker, and a software engineer by trade. Earlier in his life, he taught shop class in Newark, passing along practical skills and a respect for hands-on learning. That dedication to craft and education continues to shape his work today, including a small startup he is currently developing: a phone app designed to encourage music students to practice consistently.

Rick's life also includes a meaningful moment in American history. In 1963, he attended the March on Washington and was present when Martin Luther King, Jr. delivered his "I Have a Dream" speech. It is a reminder that history lives not only in places like the Forge, but in the experiences of those who help steward it.



One of Rick's favorite sayings is, "When you stop learning, you start to die." That belief, paired with his attention to detail and long-term thinking, makes him a natural fit for the Treasurer role. We are grateful for his willingness to serve and look forward to the balance and insight he will bring as we continue forging a strong future together.

Turning Marsh to Metal: Weymouth Furnace and Bog Iron

By James Flint

In October 2025, Jason and Jim visited the ruins of the Weymouth Furnace in Mays Landing, NJ. Starting iron production in 1802, the forge remained in production for about 60 years. The iron produced at Weymouth was smelted from local bog iron in furnaces fueled by charcoal. Production consisted mostly of cast iron water pipe with limited production of pots, stoves, and nails.

Be sure to follow us on social media: <https://www.instagram.com/oldmillstoneforge/>

During the War of 1812, the Weymouth Forge / Furnace was a supplier of shot and bombs to the United States Government. By 1862, the Forge could no longer compete with anthracite coal-powered forges of the Pennsylvania area. It was reportedly destroyed by fire that same year.



Bog iron is plentiful in the small streams and rivers of the pine barrens. Natural springs carry groundwater rich in iron salts to the surface, where it is biologically oxidized and combines with sand and gravel to form bog iron.



Bog Iron

We had collected several pounds of bog iron, with the intent of replicating the process of producing wrought iron from bog iron. Roasting the bog iron in the coal forge until glowing red allows the amalgam to be easily crushed into a sand-like consistency. Once the weather allows, we intend to construct a small bloomery forge using dried bricks made of native clay, approximately 3 ft tall and 1 ft diameter. Layering 2 parts charcoal to 1 part bog iron (by weight) and forcing air into the bloomery forge should be sufficient to separate the iron from the slag and create a workable iron bloom. We will continue to share our successes and failures. Wish us luck!

Additional information can be found at the following sources:

<https://www.atlanticcountynj.gov/government/county-departments/department-of-public-works/division-of-parks-and-recreation/historic-sites-in-atlantic-county/weymouth-furnace>
<https://www.jerseysbest.com/community/uncovering-n-j-in-mays-landing-once-fiery-landmark-echoes-extinguished-era/>

Jason Flint's Eagle Scout Project

By Jason Flint

The goal of my Eagle Scout project is to build museum cases similar to jewelry store display cases to house the historic objects on the 2nd floor and anything else important/delicate that should be showcased. The cases will protect the objects from escaped coal smoke, sunlight, and humidity (which can be acidic when mixed with coal smoke), thereby extending their lifespan. The cases will have hinges and locks for security and the openness to change the exhibit's objects or layout if needed.

The current state of the project is organizing the materials, tools, supplies, and services necessary to complete (Eagle board requires a detailed list for final review), finding possible donors, and organizing stages of construction/installation.

The current state of the 2nd floor is organized by historic objects important to the Millstone Forge, but they need to be covered against damaging conditions. The proposal was presented and accepted by the Eagle board on November 17, and work can now begin.

Fueling the Fire: Coal, Charcoal, and the Smith's Choice

A blacksmith's fire has always been shaped by what fuel was available locally and when it could be obtained. **Charcoal, bituminous coal, and anthracite coal** each dominated different periods of history, influencing how iron was worked and where forges developed.



Charcoal was the primary forge fuel from antiquity through the early industrial period, roughly from 2000 BCE through the mid-1800s. Because it could be made wherever forests were available, early European and American forges were commonly located near woodlands and waterways. Charcoal burns hot and clean,

producing little smoke or sulfur, which made it ideal for early bloomeries and finery forges. Its major drawback was efficiency, as it burned quickly and required large amounts of timber.

Bituminous coal rose to prominence with the expansion of mining and rail transportation, becoming the dominant blacksmith fuel from the late 1700s through the early 1900s. In the United States, it was widely available in Pennsylvania, West Virginia, Ohio, and throughout the Appalachian region. When heated, bituminous coal can be coked in the forge, creating a dense, high-heat fire well suited for heavy forging and forge welding. Its smoky startup required skillful fire management, but its performance and availability made it the workhorse fuel of the industrial era.



Anthracite coal, often called “hard coal,” saw its greatest use from the mid-1800s through the early 1900s, primarily for heating homes and powering industry rather than small forges. Found most notably in eastern Pennsylvania, anthracite burns very cleanly and efficiently but requires higher ignition temperatures and strong airflow. These characteristics limited its practicality in traditional blacksmith forges, even in regions where it was abundant.

Together, these fuels tell a chronological story of blacksmithing. From charcoal’s ancient roots, to bituminous coal’s industrial

dominance, to anthracite’s specialized role, each reflects how geography, technology, and time shaped the forge and the work done upon its anvil.

From Plan to Pattern to Iron: Building a Decorative Grille

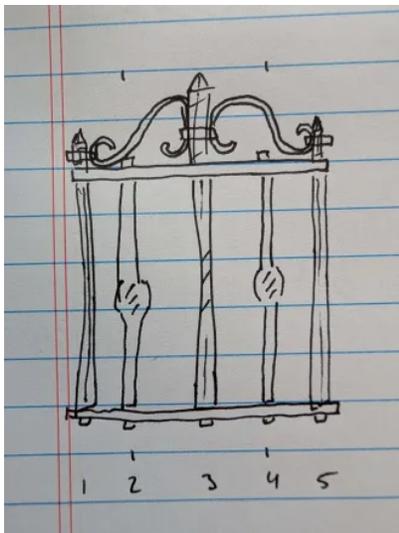
By Zachary Griffin



Larger forge projects rarely come together in a single heat. This decorative grille began not at the anvil, but on paper, with careful planning around proportions, repeating elements, and how each component would ultimately fit together.

From there, the work moved in stages. Individual parts were forged, refined, and set aside, allowing consistency to be maintained across the entire piece. Sub-assemblies were test-fit and adjusted before final assembly, reducing surprises and ensuring the finished grille came together cleanly and square.

Projects like this serve as a reminder that good blacksmithing is as much about forethought as force. By breaking complex work into manageable steps, the final piece reflects not just skill at the anvil, but discipline in planning and execution.



The initial design is sketched on paper before being transferred, full scale, to chalk. Pieces can then be fit to the full-scale drawing to ensure accuracy. The 3 vertical pickets were completed first as they'll "float" (not be permanently secured) through the top railing. Tenons were forged on the bottom of each picket to be pinned into place on the bottom rail.



Now that the first 3 pickets were completed, the top rail could be forged with square holes to allow the upper part of the pickets to pass through. The basket twists of pickets 2 and 4 were completed and welded onto the larger picket. The picket could then be cut to length with tenons forged on both top and bottom, securing the rail in place.



Top scrolls and C scrolls were completed using jigs to ensure accuracy. They were designed to be slightly oversized to pressure fit within the pickets. Hot collars were applied to permanently secure the scrolls. The final decorative floating mid-pickets could then be crafted and hot collared into place, completing the design. The final grille will be wire brushed to remove any dust/scale before being thoroughly wiped down with acetone to remove any oils leftover from fingerprints or milling. Primer and several layers of paint will be applied to complete the project.

Tigers at the Anvil: Spotlight on the Princeton Blacksmithing Club

Tucked beside Bowen Hall, the Princeton Blacksmithing Club has become a lively hub of hands-on craftsmanship within the university community. Recently revitalized by student leaders including Soloman Khan '26, Sterling Hall '25, and Joseph Roberts '27, the club has grown into an active space where newcomers and experienced smiths come together to learn, create, and keep the ancient craft alive.



The club's work centers around monthly open-forge nights, held outdoors on the Bowen Hall lawn. These sessions give students the chance to work with propane forges, anvils, and hand tools in a structured, safety-focused environment. Participation ranges widely—engineering majors, artists, humanities students, and complete beginners all gather around the fire, united by a shared curiosity and a desire to create something tangible.

A meaningful part of the club's recent growth has come from strengthening connections beyond campus. Here, a special thanks is owed to Ryan, whose past service as President of the Princeton Blacksmithing Club and ongoing enthusiasm helped establish a strong relationship between the club and the Old Millstone Forge Foundation. His efforts have opened doors for collaboration, cross-community support, and shared educational opportunities between the two forging communities.



The club has also benefited from instruction and demonstrations with skilled regional smiths, including work with Daniel Lapidow of the Blacksmith of Trenton, whose professional insight and engaging teaching style continue to enrich student experience and reinforce safe, effective forging practices.

With increased campus participation, strong regional partnerships, and a renewed spirit of collaboration, much of the club's momentum comes from the dedicated efforts of Soloman, whose leadership has played a central role in revitalizing the Princeton blacksmithing community. Thanks to his initiative

and steady commitment, the club is forging a meaningful and lasting place within Princeton's student life.

Become a Member of the Old Millstone Forge Foundation!

Help preserve **America's oldest continually operating blacksmith shop** and play an active role in keeping 330 years of history, craftsmanship, and community alive. The Old Millstone Forge isn't just a museum—it's a living, working landmark sustained entirely by people who believe in its mission.

When you become a member, you're not only supporting the preservation of an irreplaceable piece of American heritage—you're joining a passionate community dedicated to education, hands-on history, and local engagement.

Annual Membership: \$100

Your membership directly supports:

- Restoration and care of our 18th-century forge and museum
- Tools, materials, and maintenance that keep the forge operational
- Public demonstrations, educational programs, and community events
- The continuation of a historic craft in its original setting

Ready to join? We'd love to welcome you.

Please email info@oldmillstoneforge.org with:

- **Name**
- **Age**
- **Email address**
- **Phone number**

Membership is one of the most impactful ways to keep this historic site alive for future generations.

Take your place in the Forge's story—become a member today!