

NOVEMBER 2019

CLINKER



BREAKER

Florida Artist Blacksmith Association

Established May 18, 1985

PRESIDENT'S MESSAGE

We want YOU at the Ocala conference

The time is now upon us for the 2019 Florida Artist Blacksmith Association Annual Conference.

Last month I addressed a number of points each of you should do in preparation for the conference in Ocala, Fla. Now, I will expand some more on the conference needs.



John Boy Watson

The first, and most important need, is you. What this means is you need to attend the conference because it is for you. You need to support all the work the staff has done in preparation for this year's conference. The gains in knowledge you stand to glean will outweigh any cost you have in attending. So please take the time to attend and be a part of this conference.

The next thing you can do is to look around your shop and storage areas for tools, jigs, steel, used books or other items a fellow blacksmith could use or want that you now have no use for. These items now have a worth, and that would be to put them in Iron-in-the-Hat or have a tailgate sale at the conference.

Keep in mind that one person's trash in another person's treasure. An example of this would be the repair garage that replaces a coil spring. To the garage, it is a piece of scrap iron, and to us it is tool steel. Remember we are the makers of tools.

There will also be a need for help at different points during the conference. This starts at the setup and continues to the fold-up at the conclusion. Our help needs include the moving of tools, equipment, products, and artwork through out the conference period.

This year, we will be bringing forward members who have been working on the Journeyman Blacksmith requirement to be recognized as a Journeyman.

For those of you who have not been in the



organization long enough to know what the requirements are, you can go to our FABA website. Once there, go to "Resources," and on the pull-down menu, go to "Search our Article Archives." Once there type in "Journeyman standards." The top Clinker Breaker edition, 2016-06-cb, includes a listing of the journeyman requirements.

Once you have requirements in hand, check with your Regional Coordinator or Trustee to see if they can assist you to follow this quest.

I look forward to seeing all of you at this conference and wish you safety in your travels mentally and physically in your blacksmithing quest.

Think Safe and Be Safe,
John Boy Watson

FABA Announcements



FABA 2019 Election results

Results are in from FABA's 2019 election, and the following board officers have been elected:

President - Mark Stone

Vice President - Lisa Ann Conner

Treasurer - Doug Hayes

NW Trustee - Ron Childers

NE Trustee - Kirk Sullens

Secretary - Tia Kitchen

Jerry Grice Scholarship application now open

Applications are open for the 2019 Jerry Grice scholarship. This scholarship was established to honor the memory of Jerry Grice, one of our charter members. Its purpose is to further the craft of blacksmithing and is available to any FABA member in good standing.

The award is limited to the actual cost or \$1,000, whichever is lesser. It may be used for materials, tuition, lodging and transportation (paid at the rate of 43.2 cents per mile or the cost of public transportation, whichever is lesser). A letter of application or a detailed email may be submitted provided the applicant answers the

following questions:

1. What is your name, address and phone number?
2. How much experience in blacksmithing do you have?
3. How will this instruction help you with your blacksmithing craft?
4. What is the name of the school you wish to attend?
5. What is the name of the course and name of the instructor teaching the class?
6. What costs will be incurred (tuition, lodging, transportation, etc.)?

Note: By accepting the Jerry Grice Scholarship the applicant agrees to provide a demonstration of skills

learned and write a report of the experience, including "how-to" for the Clinker Breaker. Strongly suggested (but not required) is that an item be made using the new knowledge and be offered for auction at the Annual meeting.

Completed letters of application or emails should be sent to John Butler, Chair, FABA Scholarship Committee, 777 Tyre Road, Havana, FL 32333 or jgbutler@sprintmail.com. Deadline for receipt is December 31, 2019.

Three finalists will be recommended to the Board. The decision of the Board shall be final. The successful applicant will be notified.

Florida Artist Blacksmith Association (FABA)

is a not-for-profit organization chartered with the State of Florida and is dedicated to promoting and expanding the horizons of architectural, artistic and practical blacksmithing while preserving the rich heritage of this craft. FABA Officers and members assume no responsibility or liability for injuries or damage caused as a result of the use of any information, materials, design, techniques, etc. contained in this newsletter, our website, <http://www.blacksmithing.org>, our Facebook Page or provided at meetings or demonstrations.

Contributions to FABA are tax-deductible to the extent provided by law. FABA publishes the Florida Clinker Breaker monthly and FABA membership includes a subscription. We solicit correspondence and unpaid articles on any subjects related to FABA's purposes. Send to editor@blacksmithing.org. Materials submitted must be your own work, and citations of others must be clearly identified. By submitting materials, you are allowing FABA to edit, print and post them to FABA's website. ABANA Chapter newsletters may reprint non-copyrighted material, if it is credited to the author and this newsletter. You need the publisher's permission to reprint copyrighted material unless otherwise noted.

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Calendar of Events

The calendar includes events of interest to the blacksmithing community. The regions have no boundaries – everyone is welcome everywhere. Come to more than one if you can. We hold regular meetings in each region on the following Saturdays of each month: NE-1st, NW-2nd, SE-3rd, SW-4th except for quarterly Statewide meetings. The actual dates vary, so check the schedule below. Our meetings are informal gatherings around the forge. Prospective members are always welcome. Come for all or any part of a meeting, bring your tools or just watch. Most meetings run from 9 a.m. to 4 p.m., and you'll want to bring a bag lunch if not otherwise noted. If you have any questions about meetings or events, please contact the Regional Coordinators:

Central Northeast Region	Heinrich Hole	386-848-6982	heinrich.faba@gmail.com
North Northeast Region	Ben Thompson	617-388-5695	thompsoncrafted@gmail.com
Northwest Region	John Pfund	850-528-3280	johnwpfund@aol.com
Southeast Region	Shaun Williams	954-274-4119	chevaliervaliant@yahoo.com
Southwest Region	Antony Fenn	617-320-4781	antony.fenn@gmail.com
Far West Region	Dave Sandlin	850-974-1548	traditionsworkshopinc@gmail.com



Central NE event, Nov. 2-3

There is no official Central NE meeting in November. Instead, I invite you all to come out to the Pioneer Settlement for Jamboree on Nov. 2-3. It is a celebration of all things handmade and the old crafts. There will be smiths working on both days, so come on out, even if you only want to see some metal getting beat on. On that note, I'd love to hear from people interested in demonstrating during the event. You are encouraged to set up a sales table if you choose to demonstrate. Contact me at 386-848-6982 or heinrich.faba@gmail.com. I'll see you all at conference.

— **Heinrich Hole, Central NE Coordinator**

Northwest Meeting, Nov. 9

The Northwest Region will be having its Nov. 9th meeting at Millstone Plantation, 6500 Old Millstone Plantation Road, Tallahassee, Fla. 32312.

This is our second time having a meeting here, and we're going to have "Open Forges under a Big Oak Tree" like we did before. Bring a project to work on, something good for a Christmas gift would be timely. I'll have some challenges, if you want to try something new. Majken is going to provide lunch for us, so there is no need to bring an entree, but feel free to bring a favorite side or dessert you want to share. Tailgate sales are invited, and don't forget to bring something for the Iron in the Hat raffle! I bet we're going to have some cooler weather, and I hope to see you there!

— **John Pfund, Northwest Coordinator**

North NE Region

There will be no meeting in North NE meeting in November.

— **Ben Thompson, North NE Coordinator**

Southwest Meeting, Dec. 7

As per previous years, the next Southwest meeting will be held in December on Saturday the 7th.

It is time for us to travel closer to our northern members. The meeting will be held at Robert Graber's home in Zephyrhills northeast of Tampa.

At this meeting, we will demonstrate how to make scrolls and then open the forges for guided practice for our beginner members. We will also dedicate an open forge for the use of our more experienced members who want to work together on more advanced projects.

As Robert is a new member, I'm sure he would appreciate the SW tradition of us all bringing a donation tool to help get him going.

Please also bring something for the pot luck lunch and an item for Iron in the Hat.

Robert's address is 4623 Ryals Road, Zephyrhills, FL 33541.

Tony can be contacted at antony.fenn@gmail.com or 617-320-4781.

— **Tony Fenn, Southwest Coordinator**

Far West Region meeting, Nov. 23

We have decided to add a meeting in November since the fourth Saturday does not conflict with Thanksgiving this year. The focus will be on showing off projects and revealing lessons learned at the annual conference. Hope you can join us at Traditions Workshop, 418 Green Acres Road, Suite 4, in Fort Walton Beach on Nov. 23 from 9 a.m.-2 p.m.

For those interested in some additional blacksmithing opportunities in the far west there are several demonstration events on Saturdays this fall:

Nov 2 - Farm Day, at the Rocking B-A-B Ranch, 2652 Woodyard Road, DeFuniak Springs, Florida; a fantastic family oriented one day Christian witness event on a working farm where we have been asked to forge a little iron.

Nov 2 - Annual Baker Heritage Day Festival, 9 a.m. to 3 p.m. This is a chance to sell some of your products!

Nov 9 - Pioneer Day at the Fred Gannon State Park with “old tyme” demonstrations, we will be using our hand pumped bellows with the forge this day. Contact David@TraditionsWorkshop.com if you want to join us as a demonstrator for this event.

Dec 14 - Yule of Yesteryear at the Heritage Museum in Valparaiso FL.

In 2020 the first far west regional meeting will be on January 25 at Traditions Workshop; topic to be announced.

We have also been asked to provide demonstrators for a “western town” weekend event in Marianna, Fla., that will occur on the 2nd weekend of January, the 2nd weekend of April and again on the 2nd weekend of November. Contact David@TraditionsWorkshop.com if you want to participate or demonstrate at any of these events.

— **David Sandlin, Far West Coordinator**

Southeast event, Nov. 16

The Southeast Region will not be hosting a regular meeting in November, as we will be performing our annual public service to the Boy Scouts of America teaching the Blacksmithing portion of the Metalworking Merit Badge at Tanah Keeta Boy Scout Reservation in Jupiter, FL, on Saturday, Nov. 16, from 9 a.m. to 5 p.m.

Lunch will be provided by the BSA, and we are still looking for more volunteers to help us with this activity.

Contact me directly at 954-274-4119 if you are interested in joining us.

— **Shaun Williams, Southeast Coordinator**

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FABA

Statewide Conference 2019



MONICA COYNE



DENNIS DUSEK



JOSE GOMEZ



DAVID PONSLER

Questions, concerns,
suggestions,
Vendors & Volunteers
please contact
the Program Chair at
Programs@Blacksmithing.org
For more details and registration
visit the conference website:
www.FabaConference.org

October 25-26-27, 2019

Hilton Ocala,
3600 SW 36th Ave,
Ocala, Florida 34474

WWW.FABACONFERENCE.ORG

Review: “The Everyday Blacksmith” by Nicholas Wicks

By David Sandlin, Far West Regional Coordinator

The Everyday Blacksmith is a quick read with numerous projects that will take you considerable time to master. The book is peppered with a large number of full page pictures with opposing title pages, reducing this 160 page volume to around 120 working pages.

After skimming the introduction and removing the glossary, you will encounter a few pages dedicated to setting up shop, a brief page on safety, two pages on finishing techniques, a few more on forging technique and on hand tools for the trade. All of these topics are given a once-over lightly treatment, so you will want to reference other books to find sufficient detail if you are new to blacksmithing or want a more in-depth study for these areas.

But wait until you get into the project pages! There are 10 introductory projects followed by another 45 projects that are organized into the areas of Tools, Around the Home, Kitchen and Bath, Cooking, Outdoor, Jewelry and Hardware. This book has more “how to” than a dozen other blacksmithing

books I’ve recently referenced.

Each project is introduced with a picture of the completed item, list of suggested materials, tools and processes. If the project is contributed by a different smith, then credit is given and a short sidebar is provided talking about the contributor. Each sidebar is a great aside into the personalities that make up our trade.

Each project is then broken down with step-by-step instructions, complete with pictures or a storyboard.

If you are a visual learner, this is a real go-to resource to expand your skill set. There is also the occasional shop tip. For example, I will be adding to my shop the use of a heavy bicycle chain as a holdfast. The chain is anchored to the stump on one side and then laid over the working piece on the anvil with a stirrup on the free end that hangs about an inch above the floor, so with a little foot pressure you can control your work.

The clear project instructions and these shop insights make this book a worthy addition to the advanced beginner’s or instructor blacksmith’s bookshelf.

“The Everyday Blacksmith” pages 110-111

RAM’S HEAD MEAT FLIPPER

SUGGESTED MATERIALS	SUGGESTED TOOLS	TECHNIQUES
1/4" (10 mm) square stock run long	Hot cutter Flat chisel Scrolling tongs	Tapering Curling Punching

The ram’s head is a traditional blacksmithing design element, especially for handles. While there are many different variations of the ram’s head, this version is nice because it can be made with only a hot-cutting chisel and a center punch.



RAM'S HEAD

- Forge a 3" (75 mm) square taper to a dull point. Keep the width of the taper at 1/4" (10 mm).
- Use the chisel to make a series of closely spaced indents on the top and sides of the tapered section.
- Cut the tapered section down the middle, work from the tip backward so you can see the line you are cutting. Clean the split on the corner of the anvil and then dress the edges of the "horns" with a file.
- Round off 3" (75 mm) of the square stock starting 1 1/2" (40 mm) from start of the horns. This will be the "neck" of the ram.
- Hammer the horns over the edge of the anvil and then back onto the piece to create a "V" shape. Taper the end slightly, keeping the tip flat and blunt with backward blows as necessary. This "V" will become the face of the ram (the fourth step in the progression photo).

- Hold the face (the part closer to the curved horn) at a half turn against the curved horn of the anvil and hit downward. Do this on both edges of the face to create a beveled surface that defines the nose and eyes.
- Clamp the rounded neck into the vise. Use a center punch hammered at 45 degrees to the head to make the eyes. Use several blows as necessary. Make two more indents with the center punch for the nostrils. Finally, use a hot cutter under those holes to create the mouth. This step may take two or more hits.

- Get a good heat along the first 6" (150 mm), quench the horns and face, and then form the "head" and "neck" into a curve shaped like a question mark.
- Use scrolling tongs to curve the horns into their final shape.

MEAT FLIPPER

- Cut off the square stock at 8" (200 mm) from the head.
- Taper this section to 20" (510 mm). Keep the first 10" (250 mm) from the head squared and the final 10" (250 mm) to the point rounded.
- Quench. Heat the top portion of the shaft and head. Clamp the head into a vise and twist the first 2" (50 mm) of the shaft. A nice touch is to offset the twist by 45 degrees so that the shaft edge is aligned with the ram's head.
- Quench. Heat the tip. Forge a half circle 1" (25 mm) in, then bend that half circle over the bevel of the anvil. Finish the bend by holding the shaft above and perpendicular to the anvil and hitting down on the half circle.
- Clean the piece thoroughly, especially the tip, and coat with a food-safe oil.

Southwest Region Report



Every SW meeting keeps on pushing the boundaries of art and creativity.

We had the pleasure and good fortune of watching Marek Gawalek create a wonderful, nature inspired, sculpture at this month's FABA-SW meeting.

In addition to explaining the use of his tooling, he showed how and why the tools were used. It was a productive, educational, and well attended meeting.

We can't thank Marek enough for sharing his hard-earned experience with us, and making the time for demonstrating at Tony Fenn's shop.

— **Albert Rasch, SW member**



Southeast Region Report

Hello everyone and welcome to another wonderful edition the Clinker Breaker Southeast Region report. The September Southeast Region meeting was well attended. Nathan Nettles put on a preview of the class he will be teaching at the upcoming statewide conference, making forged chili pepper key chains from 3/4" black pipe. Our own Clinker Breaker editor Jennifer Jhon and Michael Goldstein participated with Nathan practicing the techniques of forging steel pipe into decorative objects.

Just a reminder, I am administering a Facebook page for the Southeast Region. I try to post helpful tutorials, vendor information and other valuable blacksmithing resources. Look us up and request an invite at Florida Artist Blacksmith Association Southeast Region. I look forward to hearing from all of you.

— **Shaun Williams, SE Coordinator**

Central NE Region Report

It was a nice cozy meeting in the beginning of October. We had all of 8 people come out to enjoy each other's company and a good fire. Steve Estenson demonstrated how to use a rivet cutter that he very kindly donated to yours truly. It was nice to get a little more perspective on rivets. It was a good reminder that our understanding of things that appear simple can still have vastly more to be explored. Loads of metal bar stock was also donated to the region to be used for Iron in the Hat or as materials for our meetings. Again, thank you, Steve, for all you do.

— **Heinrich Hole, Central NE Coordinator**

Northwest Region Report

Our NorthWest meeting was held on Saturday, Oct. 12, at Aunt Louise's Farm in Waukeena, about 20 miles east of Tallahassee. The farm has a lot of attractions, including a corn maize, petting zoo, tractor rides and several other attractions. We had a picket fenced area to house our blacksmithing. The program featured a contest to make something out of a railroad spike. The made items were a fork, cooking hook, a trivet, a haloween goblin, two tomahawks, a knife, and a few more miscellaneous items. All items were donated to the Iron in the Hat drawing, with the winner determined by the number of tickets. The winning item was a tomahawk made by Roger Bell and Ron Childers. The Iron in the Hat drawing produced \$208 for the club. We had 33 people signed in and a lot of farm visitors watching the competition. We had grilled chicken and along with covered dishes plenty to eat.

— **Ron Childers and Roger Bell, NW Region**

North NE Region Report

The North NE assisted in organizing a three-weekend build at Kirk Sullens shop. Metal Supermarket Jacksonville is the 2019 FABA Conference official materials sponsor, and



we received the first sponsor donation in late September. They provided enough material to build new coal forges, anvil stands and vise stands, in addition to all class materials. During the work days, we worked diligently to build as many of these items as possible, prep for the conference, clean and organize trailers, etc... It was a huge undertaking and assistance will undoubtedly need to continue



after conference to finish everything. A huge thank you to Kirk and Helen for opening their shop and home for such a long time. Thank you to everyone who came from all around the state to assist!

— **Ben Thompson, NNE Coordinator**

Far West Region Report

Can't blame it on the weather, it was a beautiful day. Can't blame it on the lack of coverage, we had a full page article in the entertainment section of the newspaper. Maybe because of the college games? Old Miss vs Alabama plus the UWF Argonauts had a home game at the Blue Wahoos Stadium in Pensacola; well, maybe. Or perhaps this FABA Far West regional meeting was a work call to get ready for our trip to Ocala, but I doubt that, too, because I've never seen blacksmiths afraid of hard work.

Whatever the reason, our September 28th "hammer in" was one of the lowest-attended events for this year. We had seven members/visitors. But that is not to say we didn't get our objectives accomplished.

We successfully unloaded the trailer and performed a proper weight and balance. Once the steel welding table was removed from the front of the trailer, we discovered the tongue weight for the 16 FABA trailer was only 230 pounds vs the over 600 we had been working with. We were also able to set up the weight distribution hitch, and now the whole rig travels level! We are ready to see everyone later this month at Ocala.

Not that our little get-together was all work and no play. Jewelry making was added to our agenda for this "hammer in," and several items were accomplished, including troll crosses, a Celtic dragon pendent and a penannular brooch.

The most touching story for the day was when a much



older couple dropped in to visit. He was curious but the lady was on a mission to "visit her grandpa." She told us of how in 1937 she would sit in a wagon in her grandpa's blacksmithing shop reading books while all the men folk of the town would gather around the forge at the end of the day and discuss politics. These must have been very fond memories of her childhood because at the end of their visit, as they were leaving, she took time to reach out and, touching one of the anvils, she said, "I miss you, Grandpa, bye, bye".

"We teach – we preserve," this was a day to preserve.

— **David Sandlin, Far West Coordinator**

The Saga of the Rusty Forge

By David Sandlin, Far West Regional Coordinator

The Smedja on the tree “farm” in Savsjo, Sweden, has been standing for four generations — a small timber frame building, maybe 10 by 12 feet with a shed roof so low an average man cannot take a full swing with a hammer for fear of knocking the shingles off the roof. Not that many of the original wood shingles are left. Sometime back, the roof was covered with corrugated steel, which has kept the building mostly dry.



The “new” farmhouse was built in 1928, and this was the blacksmith shop for the farm at that time. During the years of his life Karl, our children’s great-great-uncle, was a master craftsman working in wood and metal. He built this building with the same care he used in building his house and his impeccable furniture: tight joints, quality work and an eye for detail.

I’m told the forge was in active use until just after WW II. Then as age crept up on Karl, the forge was allowed to go cold. The door was nailed shut, opened only occasionally as the building was relegated to junk storage.

Over the past 20 years, I’ve peered into the old shop through the broken window, even pried open the door once or twice only to look around and then close it back up with a sigh — there were other more pressing matters to be dealt with during our short visits to the farm.

The trip is over 4,800 miles: 16 hours if you can get all the right connections, but more typically 20 hours. There are chores to be done, buildings to be repaired, decks, steps, ramps to be built, firewood to be chopped and stacked. On a farm, if you are not doing something, it’s getting worse.



The blacksmith shop was a low priority until this visit, when I had my adult children to help. I noted the nails holding the door together were cinched over on the back side as we pried open the door. The hinges must have been removed for another purpose, so as the door fell away, we were greeted by the sight of the rusting forge. The legs had rotted off, and the whole thing was now upside down.

Looking around, we found much of the tooling just as it was left by Karl when he closed up shop 70+ years ago. We discovered a #1 post vice still attached to the leg of the small workbench by the window, plus various tools of the trade in rusted cans and dusty bottles. We found dies for cutting bolt threads, unique because they were built with a double dovetail shape so they could be placed in a large wooden handle to cut right- or left-hand threads.



The three galvanized slack tubs were in excellent condition. Most everything else had light rust and a LOT of dust. Masks were an absolute must for working.



An unexpected find was a very large, hand-cranked drill press. Part of the roof beam was notched to accommodate the flywheel of the press, allowing it to spin freely. The flywheel is about 3 feet across and must weigh about 100 pounds. Talk about inertia.

At one time, there were springs and gears that would help drive the bit down into the material being drilled. One can only wonder if they are still somewhere on the farm in one of the other shops. The only maker’s mark is a large “8” with three unreadable letters under the number, all in a circle. It will be a major project to move and restore this press.

To the right of the press is the twyer for the forge with the fire bowl and a flap fan bellows. At one time, the bellows was powered by a foot peddle that attached to an eccentric crank between the forge’s legs. The crank powered the now partially rotted flywheel with a belt from the wheel on the forge stand to the blower that mounted somewhere below the fire table.

We did find a small stake anvil sitting on top of one of the floor beams. The hardy hole on the tail had been broken, but the working surface of the anvil was still flat. Most of the high carbon steel punches can still be used, but the files are probably too far gone to be recovered.

I’d surmise that the day-to-day work of this smithy was repair of farm equipment. There were numerous long strap hinges, pintles, gate hooks and hasps as well as several spring steel rake tines from a horse-powered farm rake.

On other parts of the farm, we have found numerous horse shoes, but I don’t think this shop was used for farrier’s



Saga of the Rusty Forge

work. However, used horseshoes were often repointed on the ends so they could be driven into posts allowing a fence rail to pass through the resultant loop making a simple gate.

Eric, Karl's son, continued in the old traditions of the farm until he retired shortly after the turn of this century after the death of his last working horse, Bleneure. Eric did not inherit his father's craftsman skills, but was happy raising milk cows and chickens using the tools and techniques of a bygone era.



As we emptied the old smithy we loaded everything on the wagon that used to carry the 50 liter (13 gallon) milk jugs back when this farm filled the dairy section of the supermarkets. Here you can see the top of the metal forge table. The fire bowl may have been attached to this table at one time but rust has taken its toll. There was probably a short wood fence around the table to help keep the coal in its place.

The milk cart is probably one of the most important pieces of equipment we have since there was never a tractor on this farm. Today all the logging work is contracted out.



A view of the rusty forge from the other side. To keep the hot iron table from brining the legs, the table was raised up ¼" on iron washers. This small air gap plus the distance from the fire bowl to the legs was all that was needed to prevent charring of the wood.

Unfortunately, the little bit of rot on the flywheel is enough to make it unusable. But we had a mission to get the forge running again so we decided to build a new fire table using as many of the old forge parts as possible.

It was quick work with a hand saw to cut the materials for a dirt box forge. Once built, we immediately started using the future dirt box forge as a workbench.

With a little persuasion, the blower slipped off the twyer and eventually the clinker breaker was shaken free of the stand pipe. I've seen this type of clinker breaker on other forges. There is no lever to move the breaker up and down, or even a place to attach such a lever on this twyer. We can only surmise the threaded cover on the bottom was the ash dump, although the screw style threaded dump was totally seized and could not be opened.



The bowl is only an inch deep and had also become rust welded onto the twyer pipe, so we had to grind the straps off.

The new dirt box fire table was constructed entirely of

wood found on the farm. The "sandbox" table is 2 feet by 2 feet and around 6 inches deep. The legs bring the table top up to a comfortable working height of 36 inches. All the boards are a nominal 1-inch thick. We cut a hole in the middle of the table and passed the original twyer through the hole, keeping it in place with some metal pipe hanging strap. We slipped the clinker breaker back into the pipe because we didn't have any other practical way to cover the updraft twyer. Next we simply placed the bowl back on top. Again, we had no way to fix it in place but we knew the dirt would hold everything together anyway.

We were planning to use a hair dryer to provide air to the fire but this particular \$10 hair dryer had a thermal limit switch that turned the fan off almost as soon as it started. Fortunately we were able to get the original paddle fan blower working. More on that later.



We filled the dirt box forge with the critical element, DIRT, packing the soil down as we went. The rock on top of the fire bowl is to keep dirt out of the twyer, as the only way to dump the ash in this system will be to turn the whole forge upside down.

Sand is better than dirt but we don't have access to sand on the property. Probably because this part of Sweden, called "Smaland," is famous for its rocks. However you do not want to use rocks in a dirt box (or sandbox) forge, as rocks may contain water that will boil and potentially cause a rock to explode.

Our next problem to solve was fuel for the fire. We had an abundance of hardwoods and softwoods for the fire. Yes, you can forge on an all-wood fire, but it is a hungry beast requiring a lot of air and fuel. If using raw wood, you need to have a deep fire pit for forging, because what you are actually doing is burning the wood down to charcoal, and the charcoal at the bottom of the pot is doing the work.

However, making charcoal requires cooking the wood in an oxygen-deficient environment. Using an angle grinder, we cut up a couple of 55 gallon drums, one to make a "can" to hold the hardwood that becomes the charcoal and the other to hold the softwood cooking fire. DO NOT seal the can as the expanding gasses must have somewhere to go. With this, it took around 4 hours to make a load of charcoal.

During the charcoal-making process, you will notice a lot of flammable wood gas venting from the cooking can. Let it burn off. Once the gas stops escaping from the can, then things are probably ready. We used a couple of long boards to lever the can out of the fire and then popped the lid off. As expected, the hot charcoal caught fire immediately upon exposure to oxygen so we picked up the slack tub and quenched the conflagration.

Saga of the Rusty Forge

At Traditions Workshop, we have both propane forges and steel forges that can burn coal or charcoal. To heat a knife-size blank of spring steel to forging temperature takes 5 minutes in our propane forge running with the big burner. Using coal, it takes 10 minutes and about 1/2 cubic foot of coke. But when using charcoal, it takes 12-15 minutes, and 2-3 times as much charcoal as coal. This one load of charcoal would be barely enough for our final project.



We had fuel but we still needed air. The old forge blower was attached to the forge and after some monkeying around, we were able to get it to turn again.

The four bladed paddle fan was designed to be driven by a belt, air is pulled in from the side and pushed by the paddles out the pipe into the twyer.

We already established that the flywheel was damaged beyond our ability to repair so we experimented with using a rope to drive the fan. We found that by pulling the rope briskly in one direction and then slacking the rope to return it in the other direction we could generate significant air flow.

So now it was time to fire up the resurrected “rusty forge.”



Christopher got to play the role of apprentice blacksmith as I did the work. Fortunately our forging session only lasted a half hour, so no one was worn out by this “zip line” process.

Don't let someone tell you that you don't have what you need to do blacksmithing. They are not using their imagination to solve the problem, instead using their imagination to see potential obstacles. But you

know the history of blacksmithing and you know the incredible amount of work our forefathers did with just their simple sandbox forges. Dig back to the roots of blacksmithing so you can solve the problems that other modern thinkers cannot.

With the forge working, it was time to prove the concept.



We drilled a large hole in a log and then hammered the stake anvil into the log to use it as a stump base. The whole set up probably didn't weigh 35 pounds. Plus the anvil made a distinct “thunk” sound instead of a nice ring. But it still did the job! And was more than enough to

forge a 3/8 inch rod into a hook for my bathrobe.

We punched a hole in the hook for the nail to run through using one of the punches we found in the old smithy. Since there was no step or pritchard, we used the small but broken hardy hole as a punch plate to finish the punching job.

Unfortunately I broke the hardened steel punch by trying to straighten it when it was cold. Lesson learned the hard way.



We found one small chisel in the tool collection that we used for decoration work.

We didn't have a hot cut, so I fullered the rod over the horn of the anvil to create a tight

leaf-shaped taper and finished the cut with this same chisel.

We also did not have any tongs but solved the problem by using a couple of sticks as “chopsticks” tongs to pick up and quench the hook.

To finish the project we used some “food grade” linseed oil we found in the kitchen. “Food grade”? You're kidding! However, remember some parts of the farm are older than the 1928 house and maybe at one time they considered linseed oil (made from flax which grows abundantly on this farm) to be eatable. I do know linseed oil can be used in the production of soap, so maybe it wasn't farfetched to keep linseed oil in the kitchen.

There we have it, a hand forged hook with a hand forged nail that we found in the shed with the rusty forge.

Yes, only a blacksmith could spend 20+ hours to rescue a workshop, build a forge, bake charcoal, and hand pump a blower just to bang out a single hook, especially when something similar could have been purchased at the local hardware store for 50 cents. But some things are worth so much more than money simply because of the experience they impart, and the Rusty Forge in the summer of 2019 is one of those experiences.



As our summer adventure on the tree farm drew to a close, we dumped the dirt out of the forge, packed the tools into the much cleaner and dryer chicken coop, and screwed the door shut. The story of the Rusty Forge is closed for now, at least until the next time we can visit.

By the way, we didn't spend all our time this summer on the farm. We got a chance to blow glass vessels, visited several blacksmith shops and stopped in several history museums, including one with Viking era re-enactors who were working this very traditional dirt box forge.

But that is another saga.



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