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To: HABA Distribution List

Re: The Newsletter Of The Proposed Houston Area Blacksmiths' Association (HABA)

INTRODUCTION

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SPECIAL NOTICE

Note: The next *HABA Letter* will be published in April. This letter contains directions to the next Two HABA meetings. You might want to put this letter up on the refrigerator!

MEETING SUMMARY

Triple-S Steel Supply Company hosted the February 6 HABA meeting. HABA presented Bob Bergman and Nana Showalter from Blanchardville, WI as the featured demonstrators.

The hospitality afforded by Triple-S was warm and generous. The demonstrations covered traditional and modern smithing techniques. People's attention was riveted on the professional presentations of Bob and Nana and the fifty-inch TV monitor that brought the demonstration up-close and personal.

The entire Triple-S plant was open for exploration and learning. A Miller representative afforded everyone the opportunity to try his or her hand at welding and cutting. Bob and Nana sold a number of hand smithing tools. The Show-N-Tell table was filled with work from a master to aspiring masters. The HandOut table included copies of the last HABA Letter, ABANA Application forms and a generous supply of Centaur Forge Catalogs. The Iron-In-The-Hat table included ironwork and other donations from local smiths and Centaur Forge.

One hundred and nine people signed-up at the demonstration and many more just stopped by for a few minutes to see what was happening. Forty-two people said they would like to get on HABA's *HABA Letter* mailing list. To these people we say welcome. We hope you enjoy your first *HABA Letter* and look forward to seeing you at future HABA meetings.

Shirley Stein and Joe Mignongna began the meeting at 9:00 by welcoming everyone to Triple-S. We knew it was going to be a good day right from the start.

Nana began the demonstrations by showing us how she forges and assembles one of her many production pieces. In this case, it was a candleholder of steel, copper and stone.

The heat source for a majority of her work is the oxy/propane torch. She uses this heat source because it is most functional for the work she does and it is the most economical. The top and bottom of the candleholder are two dished cups. The stem between the cups is a vine-textured piece of round rod. From the rod she suspends the copper and rock pieces.

The rock and copper pieces are held in place on the stem by wrapping small diameter rods. The torch is used to heat the small rod and to make a tight fit on the stem. The wrap is made after it is textured and tapered with a hammer on the anvil and using the torch as the heat source.

The length of rod needed for each wrap is determined by wrapping a silk cord of the same diameter as the wrap material around the vine-textured stem. (Silk is an optional material for use as a measuring tool.)

The copper pieces are cut with a jeweler's saw, edge filed and textured with chisels and a ball peen hammer. The forged copper is then buffed to a bright shine and clear coated. The steel components of the candleholder are thoroughly cleaned and clear coated too. The copper and stone pieces are added and the piece is complete.

Bob started demonstrating basic forging with a hammer and anvil about 10:30. He then reproduced similar pieces much quicker using the KA 75 air hammer that he builds, markets and sells. The hammer is quite compact and is able to strike in ways that mechanical hammers and other air hammers usually are not capable. For example, one application of the KA-75 is to think of it as an air operated treadle hammer.

The focus of Bob's demonstration was to show that about anything that can be done with a hammer and anvil can be done with flat dies and hand tools on the KA-75 air hammer. The morning part of his demonstration ended about 11:30. By 12:30 he was forging again and did not stop until about 3:30. It was easy to see that Bob had a lot more techniques to demonstrate than he had time available.

Between 11:30 and 12:30 Triple-S served a great catered BBQ lunch for everyone at the plant. What a treat! Nell, from Triple-S also kept us supplied with doughnuts, soda and coffee throughout the day. She had a longer day than we did.

A sampling of what Bob demonstrated with the hammer and anvil and then with the air hammer include: tapers at the end and in the middle of bars, a snub-end scroll, a variety of twists, leaves, balls and acorns with swage dies, a forge weld without using any flux (The secret is in a clean fire and the heating.) and concluded by texturing a leaf and a horse that Triple-S cut out as a demonstration of their plasma-arc cutter.

For repetitive work, it is hard to beat the efficiency and cost of having Triple-S cut out the blanks you can texture and include in your work. Give Triple-S your pattern and get a price. You will probably be pleasantly surprised at the cost.

At 3:30 HABA conducted an auction of the Iron-In-The Hat items. By 4:30 there was an empty spot in the middle of the Triple-S warehouse. It was a great day for everyone who had the opportunity to come and learn.

ARTICLE

The Urban Forge

By Fon Stonum

For those blacksmiths of us not lucky enough to live in the rural areas of this great nation, we have to contend with that scourge of humanity, our neighbors. I've had the run of neighbors myself, from the one who called the cops on me for mowing the lawn before 10:00 AM to the ones you love that only show enthusiasm for all the weird things that happen in your sector of space.

You really have to plan out a forge and blacksmith shop or you will alienate your neighbors to the point of all out war. Nothing worse than firing up the coal forge and finding out there is a wedding two doors downwind in the yard. The urban blacksmith has to be aware of these things and be sensitive to the community or blacksmithing will be a curse rather than a cure.

Your shop has to fit, depending on your neighborhood, to the local. One that is well behind the house and out of sight can get away with more slack than one that is almost in the front yard. All those old appliances and car parts really have to be camouflage to keep the urbanite of the third millennium from getting testy and calling the cops or EPA on you. One of the biggest considerations is your forge and chimney style.

It would be easy to say that a gas forge is the answer, and that's not untrue, but I like coal and the way it burns and heats metal, is for me, a big part of the whole experience. To build one that is friendly to the neighborhood is a challenge. I built a coal forge from a 21" truck wheel, split and widened out to an oval shape with a flat bottom and fire pot. An electric blower rounds it out to be a fair forge and an easily maintained fire once it is going. Nothing special, just a good solid fire table.

The chimney is a side draft affair built to the specs of the "Blacksmith Journal". It works well, but only after the fire is going strong and it builds up a great deal of heat to get the draft rolling. The chimney has gone through a few changes in the evolution to what it is now, but it works real well and starts drafting right away. I started cheating the physics of a good draft by adding a blower to the chimney above the ledge and creating an artificial draft. This is better than burning a newspaper in the box to get the thing hot because people around here get a little upset when half burnt paper ashes start falling out of the sky in the pool or prize petunia bed. The other thing I did to modify the smoke extraction was to build a detached hood that drops down on a cable from a counter weight with a 4" flex hose that ties in to the chimney. It can be raised or lowered to catch all the smoke created when the fire is starting or out of the way to get a large piece in the fire. This puts 90% of the smoke up the stack rather than out in the shop.

Another thing neighbors get weird about is copious amounts of smoke coming out of every opening in the building. They naturally assume the worst and call the fire dept. Nothing worse than to have to stop a heat treatment on a prize tool to explain that all is normal to a fireman with a 4" hose pressured up and dripping with venom. Ruins the heat treat and fries the fire dept. A definite "no win" situation.

Another thing is the chimney design. A small diameter chimney will draw harder than a large diameter chimney within the limitations of a regular shop forge. I've seen all kinds of chimneys from oil drums welded together with the bottoms cut out, to brick chimneys, to every other conceivable kind of pipe arrangement. The ones that draw the best are 6" to 8" in diameter and tall enough to really get a suction going when they get hot. A large diameter chimney does not get as hot. A large one draws a large volume of air, but not at any velocity, hence less draft.

The other thing is, mine is sky high over the roofline. Most experts recommend the height about 3 foot over the peak of the roof. Mine goes 10 foot over the top of the peak and is supported by guy wires to keep it on the roof in a storm. Smoke rolls out that baby and by the time it hits human elevations it's a block away from ground zero and well dispersed.

It appears that the firebox is one thing that differs a lot. Now that I've used several different forges I think the ones that have a smaller tuyere get the coal hot faster for the same reason as the chimney diameter. The smaller diameter increases the velocity of the air coming in and gets the heat up with the increased airflow. The one I have is a big diameter affair with a grating like clinker breaker and when you dump ashes, you lose a good portion of your fire into the ash bucket. I originally thought I liked the arrangement I have, but now, I lean more to the traditional 3 sided clinker breaker as the better mouse trap, because of the reason stated above. You get a smaller fire that gets hot faster. If you don't need a big fire, don't have one. It also keeps the shop from reaching critical mass in the summer.

So with these things in mind, when you plan out your forge in the suburban wasteland of Urban America, keep a thought in

mind of the poor soul next door with the manicured lawn and crystal blue pool. You could either end up by his pool, as a good friend, sipping a cool one, or bunkered down under a steady barrage of hate and discontent from an angry neighbor.

MACHINERY'S HANDBOOK

Following are a few interesting exurbs:

Areas of Circles and Squares

The area of a 0.5inch diameter circle is equal to the area of a square with sides of 0.44 inches.
The area of a 1.0inch diameter circle is equal to the area of a square with sides of 0.89 inches. p. 168

Rivets

The book lists 18 different rivet heads. Some of the names are: Steeple, Cone, Rose, Machine, Wheel, Round, Globe, Flat, Wagon Box, and Trunk. p. 409

Forge Welding

Classes of Welds – Welds are classified according to the way the ends are formed prior to making the weld. The different welds ordinarily made in hand forging practice are the scarf weld, butt weld, lap weld, cleft or split weld and jump weld.It will be seen that the surfaces, in most instances, are rounded or crowned. This is done so that when the heated ends are brought together they will unite first in the center. Any slag or dirt which may have adhered to the heated surfaces will then be forced out as the welding proceeds from the center outward. When making a lap weld, the hammering should begin in the center in order to work all the slag out, as the faces in this case are not rounded.

Welding Heat – When two pieces of wrought iron or mild steel are heated until they become soft and plastic and will stick together when one is pressed or hammered against the other, they have reached what is commonly known as a welding heat. The quality of the weld depends largely upon the welding heat. If the ends to be heated are not hot enough, they will not stick together; inversely, if the work remains in the fire too long, it becomes overheated and burned, which greatly injures the metal. Iron, which has been over heated, has a rough, spongy appearance and is brittle. The danger of burning is increased when the air blast is too strong and the fire is oxidizing. It is important to heat the work slowly to secure a uniform temperature throughout the ends to be heated. With rapid heating, the outside may be raised to the welding temperature, while the interior is much below it; consequently, the weld will be defective.

Fire for Welding – When heated iron comes into contact with the air it absorbs oxygen, thus forming a scale or oxide of iron on the surface, which prevents the formation of a good weld. A fire for heating parts to be welded should have a fairly thick bed between the tuyere and the work, so that the oxygen in the air blast will be consumed before it reaches the parts being heated. When there is only a thin bed of fuel beneath the work, or if too strong a blast is used, the excess of oxygen will pass through and oxidize the iron. The hotter the iron, the greater the formation of scale. The surface being heated can be given an additional protection by covering it with some substance that will exclude air. Ordinarily, the air blast from a forge fire should have a pressure varying from three to five ounces per square inch.

Fluxes for Welding - When iron is being heated preparatory to welding, the heated surfaces are oxidized to some extent or covered with oxide of iron, which form a black scale when the hot iron comes into contact with the air. If this scale is not removed, it will cause a defective weld. Wrought iron can be heated to a high enough temperature to melt this oxide so that the latter is forced out from between the surfaces by the hammer blows: but when welding machine steel, and especially tool steel, a temperature high enough to melt the oxide would burn the steel, and it is necessary to use what is called a flux. This is a substance, such as sand or borax, having a melting temperature below the welding temperature of the work, and it is sprinkled upon the heated ends when they have reached about a yellow heat. The flux serves two purposes: It melts and covers the heated surfaces, thus protecting them from oxidation, and when molten, aids in dissolving any oxide that may have formed, the oxide melting at a lower temperature when combined with the flux. Wrought iron can be welded in a clean, well-kept fire without using a flux of any kind, except when the material is very thin. The fluxes commonly used are fine clean sand and borax. When borax is used, it will give better results if burned. This can be done by heating it in a crucible until reduced to the liquid state. It should then be poured onto a flat surface to form a sheet: when cold, it can easily be broken up and pulverized. The borax powder can be used plain or it can be mixed with an equal quantity of fine clean sand and about 25 percent iron (not Steel) filings.

Fuels or Forges - Coke, coal, charcoal, oil and gas are uses as fuel for heating iron and steel preparatory to forging and welding. For general work, a coke fire is the best, although bituminous coal is extensively used. With anthracite coal, it is

difficult to get a hot enough fire, especially on a small forge. Coke or bituminous coal should be low in sulphur, because sulphur makes the iron "hot short" or brittle while hot. Sulphur, lead, bronze or brass must not be in the fuel or fire to be used for heating iron or steel. A weld may be spoiled by throwing brass filings into a fire before heating the work. p. 1361

SPECIAL THANKS

This meeting requires some extra special thanks to:

Triple-S Steel and Bruce and Gary Stein for opening their doors and welcoming HABA and their customers to enjoy a most informative day of forming steel.

To Paul Kruppa and the staff of Triple-S who made sure we had enough room, plenty to eat and drink, lots of cheerful helping hands.

To Nana Showalter and Bob Bergman for conducting two great demonstrations that helped HABA and let people in Houston are know that smithing is truly alive and well right in their own back yard.

To the HABA members and families who made everything work on the big day:

- The 'Bleacher Pick-Up Crew': Neal Goza, Charles Heathcock, Jim Wheeler, Dave Koenig, Jason Neumann, Frank Walters and Larry Newbern
- The 'Bleacher Return Crew': Charles and Sharon Heathcock, Keri Phillips, Frank Walters, Dave Koenig, and Larry Hoff.
- The 'AV Gurus': Frank Walters, Lee Webb and Larry Hoff.
- The 'Visual Arts Team': Keri Phillips for the six foot long anvil, and door prize designs that Triple-S cut out with the plasma-arc cutter. Cathy Rylander and Tim Cowden for the professional signage.
- The 'Fireman and Set-Up Mechanic': Larry Newburn.
- The 'Front Desk' crew: Sharon Heathcock, Marilyn Koenig and Keri Phillips.

- The 'Front Gate Greeters': Lee Webb and Charles Heathcock.
- The 'Answer Men' at the tables: Tim Cowden and Dave Koenig.
- The 'Still Photographer': Jason Neumann.

Everyone who stopped by to enjoy the event. Without you all of the time and effort would have been for naught.

NEXT TWO HABA MEETINGS

The March 20 and April 17, 1999 HABA meetings will be dedicated to the 42 new people on the *HABA Letter* mailing list and HABA members we have not seen in while. The primary purpose of both meetings is to allow people who have little or no experience at a forge to rise up on the learning curve.

Anyone who has a portable forge is encouraged to bring it to both meetings and to share forge time and expertise with others. No specific demonstrations are planned. These meetings are intended to be experiential, a time to try something new, maybe a time to allow yourself to fail with grace, a time to find out how much fun forging iron really can be.

Everyone needs to bring something. Something includes food and drink for lunch, tools you would like to try out at the forge, a pair of gloves and most importantly, a pair of safety glasses with side shields.

There will also be a table for Show-N-Tell items. These items take many forms like a book, a catalog, a new piece of work, a problem to be solved...anything you would like to show someone else. This table is always a catalyst for many discussions and new ideas.

The March 20 meeting will be held at Jesse H. Jones County Park. The park has a series of log structures and one of these buildings is a forge complete with a bellows. For those of you who have never used a functional bellows to heat iron, here is a golden opportunity.

The April 17 meeting will be held at Tudor Forge. This small shop in the woods near Magnolia, Texas is a regular meeting place for HABA. The power and light at this shop are all free. The light comes from the sun and the power from people.

The directions to Jesse Jones Park and Tudor Forge follow.

DIRECTIONS TO JESSE H. JONES COUNTY PARK – MARCH 20

Jesse Jones Park is located North of FM 1960 between Interstate 45 and Highway 59 North. The park address is 20634 Kenswick Drive, Humble, Texas. The park phone number is 281-446-8588.

Kenswick Drive is located a good mile west of Highway 59 North. Turn right or North from FM 1960 onto Kenswick Drive. Drive through the subdivision and go the end of the road. You will end up in the park parking lot.

From Interstate 45 going east on FM 1960. Use Lee Road from Bush Intercontinental Airport as a landmark. Go about one mile past Lee Road to Kenswick Drive. Turn left or North from FM 1960 onto Kenswick Drive. Drive through the subdivision and go the end of the road. You will end up in the park parking lot.

DIRECTIONS TO TUDOR FORGE – APRIL 17

Take 249 NW from Houston. Travel through the towns of Tomball, Decker Prairie and Pinehurst. At Pinehurst, 249 changes to 1774. Stay on 1774. About three miles ahead on 1774 look for a Texaco station on the west side of the road. One half mile past the Texaco station, turn left or west on Tudor Way. You will find the forge about a mile down the road.

From the intersection of 1488 and 1774 in Magnolia, go south on 1774 about 4 miles. Look for Tudor Way just after the Country Jamboree building. If you see the Texaco station you went too far.

WEB SITES OF INTEREST

http://www.wild.net/~lama/LAMA
http://www.abana.org/ABANA
http://www.flash.net/~dwwilson/ntba/North Texas ABA
http://www.bham.net/afc/index.htmlAlabama FC
http://www.baba.org.uk/index.htmlBritish ABA
http://www.history.org/Colonial Williamsburg
http://www.artmetal.com/ArtMetal Village
http://www.blacksmithsjournal.com/Blacksmith's Journal

COMING SMITHING EVENTS

1. The North Texas Blacksmiths Association has a big event coming-up:

April 10-11, 1999, Dancing Hammers, Blacksmith Junction, Old Mill Mountain, Canton, TX,

Phone 972-878-5921. Doug Hendrickson will be the guest demonstrator.

Visit NTBA Web Site: <http://www.flash.net/~dwwilson/ntba/>

2. Pat Cheatham, Concho Forge of San Angelo, TX is organizing a Repousse Tooling Workshop for April 29-30 and May 1, 1999.

Wendel Broussard, a nationally known Texas repousse smith, will lead the workshop. Pat is trying to get a feel for the number of people he can expect. This workshop is intended to be 'hands-on'. Space will be limited to 10 or 12 people. So, if you have an interest in exploring this facet of blacksmithing, this is an opportunity not to be missed. Talk to Pat about the program, the tools you may need to bring and most importantly, get your name on the list. Pat's number is: 915-949-0419. His e-mail address is cforge@wcc.wcc.net.

DEMONSTRATION OPPORTUNITIES

Here are some events and contacts looking for demonstrators.

1. Washington on the Brazos State Historical Park
February 27 and 28, 1999
Texas Independence Day Celebration
Contact: Bill Irwin
Box 305
Washington, TX 77880
409-878-2214 Ext. 224

2. Stephen F. Austin State Historical Park
March 27, 1999
Colonial Texas Heritage Festival
Contact: Anne E. Presley
Box 125
San Filipe, TX 77473
409-885-3616 Ext. 22

3. Jesse H. Jones County Park
Texas Heritage Days
March 6, 1999

Contact: 281-446-8588

4. The City of Navasota, TX
March 20 and 27, 1999
Herb Days Spring Bazaar
Contact: Mary Katherine Crawford
409-825-3222 or
Grimes County Chamber of Commerce
1-800-252-6642

MONTHLY SMITHING MEETINGS

1. The East Texas Blacksmith Alliance meets the second Saturday of each month at the Heritage Village Museum in Woodville, TX. The Museum is on the north side of highway 190 on the West Side of Woodville. You cannot miss it. For more information, call 409-283-2272.
2. The Balcones Forge, a sub-chapter of the Texas Artists Blacksmith Association, meets in the Austin/San Antonio area the last Saturday of the month. Call Gary Evensen, 512-266-2430, for more information.
 - The February 27 meeting will be at Kirby Junior High School in San Antonio. The meeting starts at 9:30. Rick Dawdy and Jerry Achterberg will host the meeting. A plasma-arc cutter demonstration will be provided by a representative from Airgas.
3. The North Texas Blacksmiths Association meets monthly. Contact Dave Planz, 972-335-9097, or docjvp@aol.com for more information about the next meeting location. You can also visit the NTBA Web Site: <http://www.flash.net/~dwwilson/ntba/>.
4. The Louisiana Metalsmiths' Association (LAMA) meets monthly. Contact Dave Mudge at 504-735-0049 or lama@wild.net for more information about the next meeting location. You can also visit the LAMA Web Site: <http://www.wild.net/~lama/>.

FOR SALE

1. Looking for some good forging coal? Call Robert Robinett, 409-721-6199. The cost is \$150 per ton or \$15.00 per hundred pounds bagged.

2. Buddy Ayers in New Orleans has a 250# Fisher anvil for sale for \$350.00 and he travels to S. Texas quite often. If anyone is interested, contact Buddy at budbon@msn.com
3. Bob Wolford from San Saba, TX. has a 25 # Murray Power Hammer. He would like to sell it for \$1500. He says it is in good shape. His number is 915-372-3449.

WANTED

Bill Bastas is looking for a supply of Bois D'Arc or Osage Orange as it is known in some parts. If you know of anyone knocking down a tree or of someone who has some for sale, Bill would appreciate a call at 512-447-9091

THE FINE PRINT

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