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Blacksmiths of Central Texas

President's Corner...

November 2009

With the holidays coming up, have you thought about giving nice, hand-forged items as gifts? They don't have to be big gifts. Hooks, bottle openers, steel jewelry and things like that make great stocking stuffers. What about a nice meat flipper? Here in Texas, we do lots of grillin', so that would be a great gift for someone who likes grillin' steak or fajitas. My family has a great appreciation for hand-made items. They mean you took your time to actually make something especially for person receiving the gift. We all look forward to seeing what each other has come up with each year. There is still plenty of time to step up to the forge and hammer out something cool and creative to give, so.... get out there and see what you can come up with.

Sue Murray, President

**MEETING DATE IS NOVEMBER 21
START TIME IS 9:30am**

Remember, Mapquest will get you there!

MEETING INFO

Join Balcones Forge at the New Rockdale Blacksmith Shop in Rockdale, Texas on November 21, 2009. Note the special date!

If you missed the dedication of this beautiful forge last month, here is your opportunity to see what you missed.

The Rockdale Historical Society has built an excellent shop -- come out and see. Bring your favorite hammer and help christen the new forge.

If you have extra blacksmith tools, such as tongs, hammers, chisels, etc. around your shop you no longer use, bring them out to donate to the new shop. They will be in use for many years to come.

Directions:

Once in downtown Rockdale, look to the right (one block) for the train depot with the red cupola -- the new blacksmith shop is behind the depot on the same property.

TRADE ITEM

Since the new forge is located next to the train and depot, it is only fitting to create something from a railroad spike.

Remember.....oh, you all know by now!!!

SECRETARY'S REPORT

October's meeting was at Johnny Stout's shop in New Braunfels, Texas. He is known around the world for his custom knives incorporating exotic materials in the handles and high alloy engraved metals in the blades. The hand tooled mechanisms in his folding knives rival the highest quality machine made knives anywhere on the planet. We were honored to be invited to his shop and hear his advice and observe some of his techniques.

President-wahoo-I'm-outta-here-lets-have-the-election-for-officers-I-gotta-new-boyfriend, Sue

Murray opened the meeting with announcements of upcoming events and opportunities for free stuff by buying ABANA raffle tickets for tools and equipment. These tickets are still available from Sue via the Balcones Forge website.

The November meeting will be in Rockdale at the old train station, and (there was, by the time you read this), an event at Conservation Plaza in New Braunfels for blacksmiths to demonstrate to school kids on a field trip to the plaza. Albert Paley will be in San Angelo on the 13th and 14th of this month, or perhaps, by the time you read this, was in San Angelo. I hope you saw the announcement on the web site and were able to go see the most famous blacksmith in the United States. There was a discussion about having a future meeting in Oldenburg, TX in conjunction with Houston Area Blacksmith Association (HABA)'s annual event there.

There was a call for members to volunteer for service on the Balcones Forge Board of Directors. Dave Guerrero volunteered to be on the board and Elise Guerrero volunteered to be co-historian with Leah Adams who was in haloween garb very creepily dressed as the living dead. She frightened away the UPS man, two itinerant salesmen and anyone who wanted to be president or secretary of Balcones Forge. Jim Elliott has volunteered to be treasurer, however; no one has volunteered to be president, vice president or secretary. I turned down the straw vote, (taken in my absence, I might add) for me to be president, as anything to do with public speaking or organizing anything other than lunch seems to be totally beyond me. Just for the record, I will be the interim secretary until a new one steps up.

The new position of historian of Balcones Forge promises to provide members a look at our past via pictures posted on our website. We look forward to seeing old photos of our meetings and anyone who has some is encouraged to forward them to any member of the board, either in person at a meeting or via e-mail.

Johnny Stout opened the meeting with a discussion about marketing to the public, explaining that

ABANA BOARD MEETING

only 1% of the people who are in the market for your product know you exist. He explained that the internet is one of the most valuable tools you can use to increase sales of your creations. Johnny markets his knives at select gun shows because he knows that there will be a lot of people there who are interested in custom knives. He also expressed the importance of having the ability to accept credit cards as most purchases are spontaneous and sometimes people just don't have the cash on hand, but they will "whip out the plastic". He says to try for volume sales of items and have good pictures of your products to show to people and follow up each sale by contacting the customer, Johnny supplies his customers with a calendar with a picture of the knife they just purchased so they can show it to people who are interested and may contact him for a knife.

Johnny has templates of the standard knives he sells and uses them to transfer hole patterns for hinges and pins onto new knife stock so he doesn't have to lay out the hole pattern on each new blade. This speeds up the production of his stock blades and saves valuable time for finishing. He uses special vices to hold blades for grinding and has specific ways to grind each part of the blade.

At the end of his demonstration he showed us how he cuts a spiral rope pattern on the back of his blades and passed around some truly remarkable examples of his craft.

There were 11 knives made for trade items representing hundreds of hours in fitting and finishing. It was a very nice showing, proving once again that there are some truly talented people in Balcones Forge. Put last months showing to shame. Way to go, Balcones Forge!

Tom Lupton
Interim Secretary
Balcones Forge

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Greetings from ABANA! This is a courtesy notice for the 2009 Regular Annual Board of Directors Meeting. The 2009 Regular Annual Board of Directors Meeting will take place at the National Ornamental Metal Museum on December 3rd through the 5th. Location: 374 Metal Museum Drive, Memphis, TN 38106-1514.

The Regular Annual Board of Directors meeting schedule times as follows:

Thursday December 3rd starting at 6pm end at 8pm - Preliminary Business Only

Friday December 4th starting at 8am, Lunch Break, Dinner Break end at 8pm

Saturday December 5th starting at 8am, Lunch Break, Dinner Break end at 8pm

All ABANA Members are welcome! Please contact our Central Office or any Board Member if you are planning to attend. If you have comments and/or any suggestions you want the Board of Directors to know about, please contact our Central Office or any Board Member. Email addresses, phone numbers and street addresses for your Board of Directors can be found on the ABANA web site or by contacting our Central Office.

Respectfully Submitted:

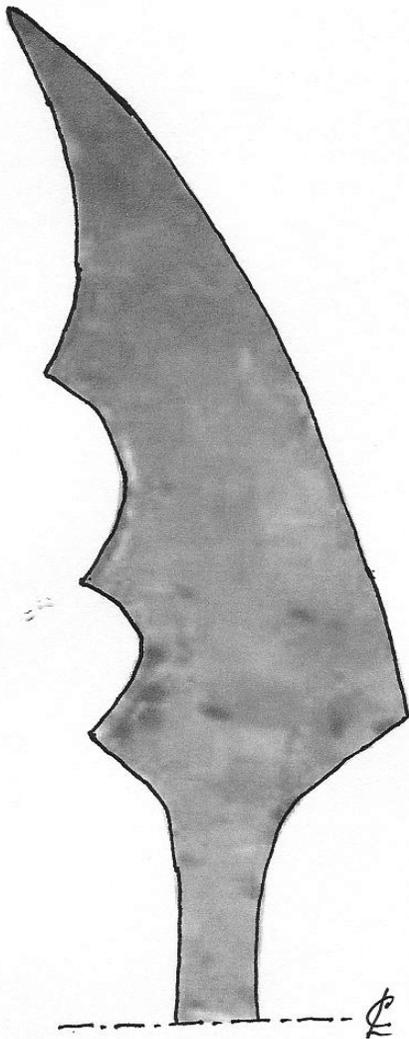
Peyton Anderson, ABANA Secretary

FORGING DRAGONS

An article on Steve Williamson's methods of forging dragons.

by Dave Smucker: Part Four

You have now finished much of the dragon and it is now time to move on to the wings, talons, forked tongue and beak. Let's start with the wings. Steve makes the wings – both wings at the same time from a single piece of 16 or 18 gauge mild steel. (Steve used to make two separate wings and join them in the body slot – but one day he decided that he could make as one piece and fold them.)

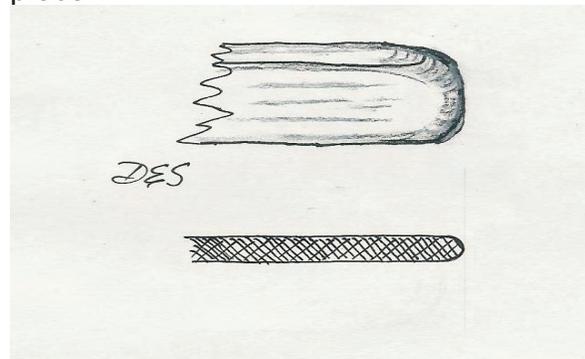


I have included one half of a general pattern (about 3/4 size) for the wings based on a photo I took of one of Steve's blanks – it is not an exact copy but should be good enough to give you an

idea to work with.

Base your own pattern on your ideas and a little experimentation. The long section in the middle of the two wings may seem longer than necessary but as you will see, much of it is captured inside of the dragon's body.

Start by tracing your wing pattern on your sheet steel and the cut it out. In my shop, I would do this on the vertical band saw, but you can do it other ways too. You could use a Beverly shear, a plasma-cutting torch; you could burn it out with an oxy-acetylene torch, cut it with a hand fret saw or with a cold chisel. I think Steve uses a Beverly shear to cut his. The plasma torch does a nice job but unless you have one you're not going to buy one for just dragon wings. The oxy-acetylene gives a somewhat rough job unless you have a very small tip. The fret saw does a beautiful job and is a low cost tool but is too slow for some of you. Last, but not least, is using a small cold chisel to do this. If you have never tried this it goes much faster than you would think. Your chisel needs to be sharp. I like to do this kind of thing seated at a solid bench working on a heavy piece of steel plate as my cutting anvil. If your wings have rough edges, clean them up using a file. If you hold the wings vertical in the vise with the working edge close to the vise jaws, you can quickly move all the way around the piece.



Working end of typical repoussé tool for forming wings. Round polish the working surfaces.

For the next operation we are going to form the wings, giving them both shape and depth. Steve does this under the treadle hammer using a re-

poussé technique. First it is important to anneal (normalize) the sheet steel. To do this heat it above the non-magnetic point and let air cool. This is technically a normalizing or partial anneal but is effective for what you are doing here. Steve uses two very simple rounded end tools to form the major wing “veins” from the backside of the wing. This gives the wings a structured detail and produces a natural wing curvature at the same time. After you have the veining, you can further refine this curvature or add more dishing by using a ball bean hammer or rounding hammer. Steve does the veining working on a lead surface as the anvil. He made this by welding a bottom onto a short section of 3-inch pipe, forming a cup in which he melted the lead. Caution – about lead, breathing the fumes from lead or ingesting lead or lead oxide is bad news and can cause serious lead poisoning. Lead fumes are not an issue at room temperature but melting lead without good ventilation is a hazard. Lead or lead oxide dust can also be a problem as can transferring lead from your hands to your mouth, i.e. wash your hands before eating. Other surfaces will also work for this. One good surface is wood end grain in the form of a wood block or stump. Another is pitch (which I have not tried) or a very hard urethane rubber.

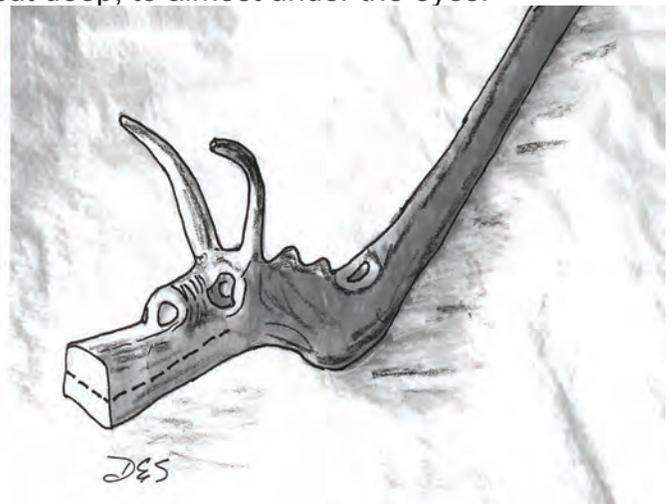


The completed and folded wings – ready for welding into the body.

The advantage of working under the treadle hammer for this is that it allows holding the tool with one hand and the wing with the other. Use very

light blows. It can also be done with just the tool and a hammer to provide the blows. With a little practice, you can learn to hold the work (wing) with the tool and slide it to the next position for the next blow. Light blows, small steps, this is bench work. Don't over work an area or you will go through the material. You may find you want to anneal a second time. If this is your first use of these methods, do a little practice on some scrap. You should now have a set of wings – that just lacks the centerfold. To make this fold start by gapping you vise and then gently driving the center of the wing into the gap using a rounded tool. Now heat your wings and you can the bend the wings together. Then clamp about 1 to 1 1/2 inches in the vise or tongs and bend the wings down to a natural position. Set the wings aside, we will install them after we finish the beak.

To make the beak Steve first makes a deep sawed slit for the mouth. Sawing is the way to go here since so much of the dragon is already done. Steve uses a Milwaukee Portable Band Saw for this operation. It makes quick work of this and lets him see both sides of the mouth while cutting. You can do this on a vertical band saw too – but watch that you make an even cut since the bottom side is hidden from you. Before Steve got his band saw, he made many of these cuts using a hand hacksaw. The hacksaw does a good job – have a sharp (new) blade and take your time. Make the cut deep, to almost under the eyes.



Another view of the dragonhead before completing the tail – the dotted line shows the location of the saw cut for the mouth.

Now take a good deep heat on the mouth area and then set your dragon vertical in the vise holding it in the body / wing area. Take a chisel and open up the mouth. Now - this is very important - take a punch and establish the location in the center for a drilling to install the tongue. After the metal is cool you can then drill a 3/16 hole for the tongue. If you don't use a punch to establish this opening for the drill, it will grab and most likely break the drill as well as damaging the dragonhead. Do the punching now, don't put off for later. You can then drill for the tongue when all of the rest of the mouth is done.

With the mouth cut, opened and the punching done for the tongue, take another heat and the draw out the top beak much like you would the tine on a roasting fork. Steve now cleans up this upper beak with his sanding disk. He then heats the beak and makes the "S" bend in the upper beak. This both finishes the upper beak and gets it out of the way for drawing out the lower beak. Repeat the steps on the lower beak of drawing out, cleaning up and making its S bend.

Make the forked tongue out of 1/4 diameter round stock. On one end draw it out to 3/16 dia. For installing in the mouth and on the other end flatten and then split into the two halves – to form the forked tongue. Steve installs the tongue by peening on each side of the tongue using a small diameter punch.

Now let's make the talons. In Part I of this article I told you that more than 15 years ago Steve set out to learn two things, make dragons and forge weld. He has learned both well and uses a forge weld to assemble the talons. He uses 1/4 dia stock for the "leg" portion and 3 pieces of about 1/8 to 5/32 dia stock for the three "claws". Most likely the 1/4 dia material will be cold rolled mild steel, this will work well. For the small diameter, a good material is common 16-penny nails (with the heads cut off). This is 1006 steel and very low carbon and that makes for good welding. If you can find them, 40-penny pole barn spikes are about the right diameter for the 1/4 inch and 1006 too.

Tack weld the three pieces of 1/8 inch material together. Upset the end of the 1/4 inch material and then form your scarf. Now heat your pieces, flux and then bring up to a welding heat. Make a drop tong weld. Reflux and finish the weld if necessary. With small welds like this, it helps to preheat your anvil and some folks place a small anvil (piece of railroad rail) right on their forge. This saves heat in moving from the forge to anvil. Use a small hammer and light blows – remember it is largely the temperature and not the force of the blows that make the weld.

You can then draw out the talons and form them into the shape you want. The leg end needs to be thread using a 1/4 / 20 die. You will then drill (# 7 drill) and tap the dragon body for installing the legs.

It is now time for the other welding operation – installing the wings. Steve does this using an anvil swage block held in the hardie hole. This allows clearance for one wing to hang over the side of the anvil while closing the weld. Before starting the welding operation, make sure your wings fit into the slot in the back and adjust if necessary.

Take some time to plan the set up for your weld. When coming out of the fire you will have the dragon in one hand and the wings held by tongs in the other. For a right-hander make your arrangement so that the wings are held with the left hand and the dragon with the right. Then have something at the correct height for dragon tail to set on when the body is in the swage. This will allow you to insert the wings, and "drop" the dragon (really set it down) and quickly pick up your hammer with your right hand to make the weld. The wings remain held in the tongs by the left hand. It is kind of drop tong weld. To make the weld heat, flux, and then bring to welding heat both the body and the wing tang. Keeping in mind that it will take a lot longer to heat the body than the wings. You will want to heat with the horns up and it is good to cool the head portion of the dragon once or twice as you bring the body up to temperature to prevent damage to the head. You make the weld by forging the wing slot closed, striking the body on the side.

With the wings in place you can drill and tap for the talons and then install. You can also install the tongue if you haven't done that yet.

All that remains is to shape the dragon body and tail into its final coiled shape, and then clean up and finish your dragon. Steve uses a scrolling jig to help form part of the coiled shape to his dragons.

I have discussed other methods of attaching the wings, tongue and talons with Steve. First, Steve is not 100 percent sure that he gets a true forge weld with the wings – but he is sure that they in fact are very tightly held and will not come loose. It may be possible to hold the wings with a small amount of brazing rod and flux placed in the bottom of the body slot. When I last talked to Steve he had not tried this on the wings. One caution here is to not use too much brazing material or it will show on the finished dragon. Steve has used a small amount of brazing rod to install the tongue. With this technique, you can make your assembly and then heat to brazing temperature with a torch. This could also possibly be used as the attachment method for the talons. I suggest experimenting first on some scrap pieces to get a feel for how much brazing material to use and how well it might work.

I want to close with a special thank you to Steve Williamson for freely sharing his methods with other blacksmiths and demonstrating at Tannehill last fall. As I noted in Part I of these articles, I hope that you will use this information to make your own version of a dragon and not just a copy of Steve's work. Remember that Steve and Clay Spencer will be teaching a class on Wizards and Dragons this coming fall at John C. Campbell Folk School.

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www.BalconesForge.org

Balcones Forge is a non-profit organization and an affiliate of the Artist-Blacksmith's Association of North America (ABANA). Our organization provides opportunities for its members to learn and grow through interaction with other professional and hobbyist blacksmiths, as well as access to an extensive library of books and videos. The organization also strives to educate the public about blacksmithing through demonstrations at many Central Texas events.

Come join us!

Examples of events members have demonstrated at are Pioneer Days and Founders Day in Fredericksburg, the Wurstfest School Days event at Conservation Plaza and at the Folk Fest in New Braunfels, the Texas Natural and Western Swing Festival in San Marcos, various events at Zilker Botanical Garden in Austin, and at the Texas Folk Life Festival in San Antonio. Members also demonstrate at Mission Espada in San Antonio many weekends.

New Members Welcome!

Balcones Forge has restored three historic blacksmith shops throughout Texas. Members rebuilt the stone forge at the Pioneer Museum's blacksmith shop in Fredericksburg. The era-authentic forge and bellows at Mission Espada in San Antonio were created. Most recently, the stone forge at the blacksmith shop at Zilker Botanical Garden in Austin was rebuilt, tools made, and new security gates created and installed.

Return Service Requested

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