Hot Iron News

A publication of the Northwest Blacksmith Association

Second Quarter, 2005
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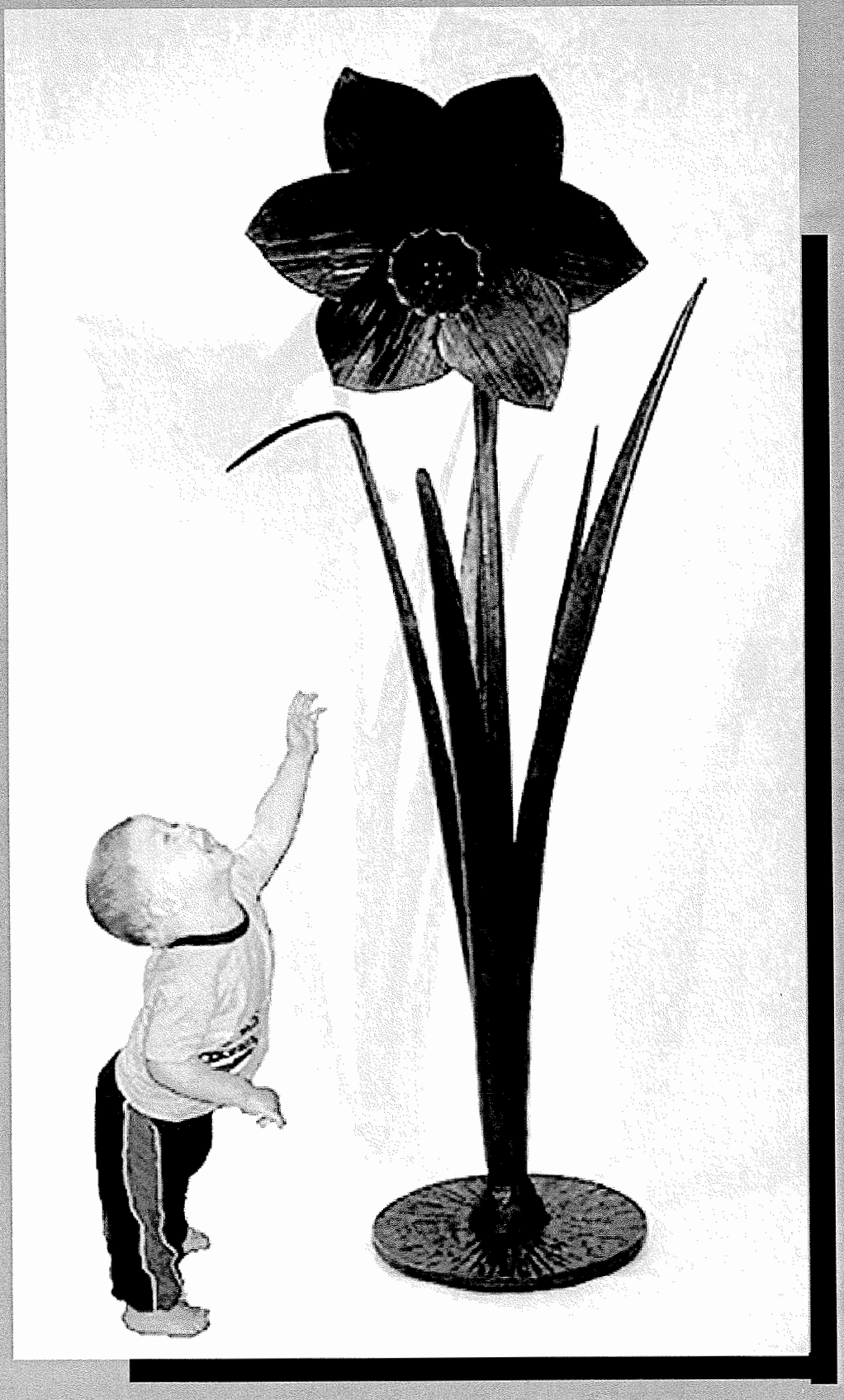

Photographer David Higgins' grandson is 30" tall, not enough to reach the flower at the top of Jerry Culberson's seven-foot, six-inch, four hundred pound daffodil, one of the featured pieces in the gallery at the spring

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Insurance: Ina Culberson
Website: Grant Sarver

NOTE TO ALL NWBA MEMBERS:
All Committees are in need of and welcome committee members. Contact any board member to get involved and get more out of your organization.

NWBA Website at www.blacksmith.org,
Kent Rudisill, Webmaster

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Annual Dues: $35, (foreign, $39), and include a quarterly subscription to the *Hot Iron News.*

MEETING ANNOUNCEMENTS

Board meeting Sunday, July 31, Northern Inn & Suites, Arlington. Meeting from 11a.m. to 7 p.m.
Directions: Take I-5 to exit 206, drive west on 172nd. 2 blocks to Smokey Point Blvd., turn right to the Inn at 16710 Smokey Pt. Blvd. Phone: 360-657-0500

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Spring Conference Crowd **The demonstrations were packed during the spring conference in Corvallis in May. More photos begin on page 12.**

Greetings from Illinois

Dear NWBA family and friends;

I just wanted to write and let you know Dave and I are fine, hanging in there. Working hard but that keeps us going.

Ina and Jerry Culberson thanks so much for the auction gift (Glass Ornament and Pendant). We are always with you in spirit.

Jim I want to also let you know that we loved the news letter that you put out. Keep it coming.

We are going to try to come out for the Fall Conference. Oct. 14-16th., 2005. Will be happy to meet you Jim and be with all our dear family and friends.

Love to you all.
Pa & Ma Blacksmith
Dave and Babe Brandon
52 Van Petten Rd.
Rock Falls, Il. 61071
815-359-4378

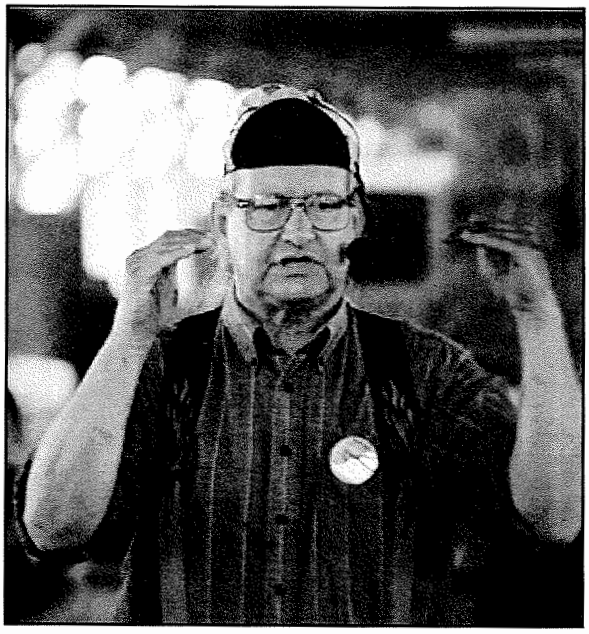
No dogs allowed

Dear Members,

Well I guess it's time to reinvent the wheel again.

Our conferences have grown dramatically since I joined NWBA.

We are fortunate to have world class demonstrators within our organization and have had many international demonstrators as well. It's something that we can all be proud of. The effort that all of the people involved put into these conferences is so tremendous that I feel they cannot be thanked enough.



Spring conference demonstrator Frank Turley enthralled the large crowds attending his sessions.

Jerry and Debbie "Z" and Mark put their hearts into our spring event and it showed. Fabulous job. Thank you.

One of the other ways we can all be respectful of our demonstrators and of our fellow members is to leave our pets at home when we attend NWBA events.

As a responsible pet owner I would never even consider forcing other members or our club to be subject to listening to my dog bark, much less bite some innocent person. My experience is personal as I was bitten by a dog someone brought to our fall 2004 conference.

As was told to me by one of our founding members at an early conference two dogs got into a fight at one of the guest demonstrators feet and another dog urinated on the anvil. After that I was told that it was pretty much an unwritten rule that no more dogs at conferences would be allowed.

Imagine that.

Pet owners should show as much respect for their fellow members as they do for their pets. Leaving your animals home while making a two-day trip is what pet sitters are for. If a sitter cannot be afforded then I guess some choices must be made by the pet owner.

As your elected board member I feel it is my responsibility to try and do something about this situation.

I honestly do sympathize with other pet owners. I love my animals very much and look forward to seeing them again after I've been gone.

So, at our July 31 board meeting, this topic will be discussed and a resolve to this subject will be sought, and, hopefully, reached.

Please contact your board members, officers, or, better yet, come to the board meeting yourself.

The NWBA belongs to all of us. So let's all error on the side of caution, be respectful of everyone else, and not force each other into undesirable situations.

There is nothing for the NWBA to be gained by allowing dogs at conferences, and way too much to lose. We cannot afford the sort of expensive lawsuit a bitten child or knocked over forge might entail.

Very truly yours,
Kris R. Ketchum

Frank says "Thanks"

Dear Terry Carson et al.,

I wish to thank the association for the opportunity of working with the membership at the recent Corvallis conference. I really appreciate all the help given during my demonstrations.

The association appears to be a populous and viable one, and the energy level is high. I pray that it may continue as such.

All Best Wishes for Future Meetings and Events,

Frank Turley
Director
TURLEY FORGE,
Santa Fe, New Mexico

The Argument as I see it, Redux

Dear Members,

Information is an amazing thing.

I'm not going to set out to make any enemies, but in the context of issues 2004/4 and 2005/1, it would seem that I was not only in the minority, but rather more vocal than I actually intended to be, to boot.

Again, I'll reiterate that I am not privy to all of the information on either side, nor do I care to be.

Concerning the previous Editor: If the information presented by Mr Carson is factual, and I have no reason to believe it is not, then I am sincerely disappointed in the behavior of our former editor. In the previous issue(2004/4), great pains were taken to illuminate the depth and breadth of his varied duties, and the effort he put into carrying out every one of them.... except perhaps the accountability for his actions.

Withholding receipts and documentation concerning the financial resources of our organization, and therefore the very right by law to exist as an organization, is indefensible.

Deft manipulation of figures (15% of total membership in support of a petition that was distributed via word-of-mouth, versus 75% of the membership that chose to sign said petition, for instance) shows weakness in his arguments.

Further, his attempt to martyr himself and portray himself as one of a handful that cared about the organization is betrayed by his current legal actions.

That is all I wish to say about the matter.

> Concerning the current editor: Touché my good man! I posited the question: "what [do] the detractors have in mind for a newsletter". Your response is one of the best written, best laid out, most informative, interesting, visually appealing, regionally relevant issues I believe I've read of any newsletter.

I congratulate you on your freshman issue of *Hot Iron News* and look forward to many more of this caliber.

Concerning the Board: Mr Carson's introductory letter to the Membership is exactly the sort of level headed response that will continue to earn him my vote. I feel it set the tone for the entire issue- well written, without malice toward the former editor, factual and most of all it reached out to the current membership to move on to make this organization better than it's ever been.

This sort of action is precisely what I was looking forward to when I issued the challenge "We need leadership to LEAD the NWBA membership [to] stop the rift from growing..."

Thank you Mr Carson.

Ina deserves additional kudos. We live in a time where passing blame, hiding errors and previous omissions, "fixing books", maintaining status quo because it's easier and lying to ourselves that because it's always been done this way, that makes it right, is rampant in the corporate culture.

I applaud her honesty in telling everyone that our documentation is not what it needs to be; that the fundamental structure of the organization has been at least lax on documenting events to the satisfaction of the laws set out for non-profit organizations; that this needs to change; and that in order for this entity to survive it needs a complete overhaul.

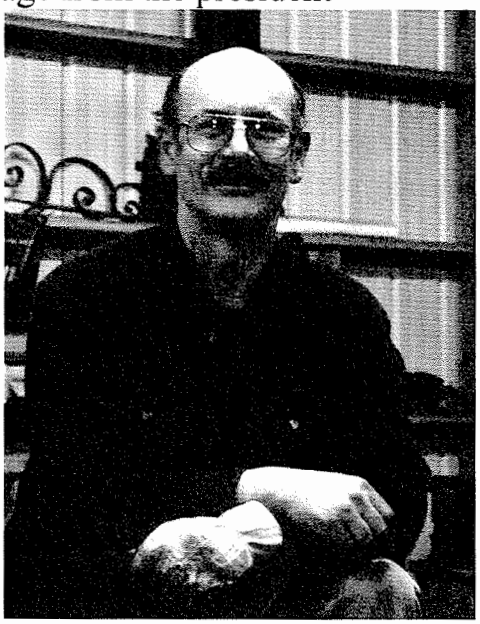
I won't end this with trite hackneyed clichés about tough times ahead, or needing healing for this group to survive (ok, maybe I just did).

What I will do, is pledge to look for ways to improve NWBA and do my part for Ina's third "R", "Revitalization".

Thank you everyone.
Kristopher Skelton

Carson's Comments

A message from the president



Dear Northwest Blacksmith Association Members

Thanks to all of you attending the spring conference in Corvallis last month.

Didn't Jerry Zygmuntowicz and Mark Manley do a knock-out job of organizing? The enthusiasm level of everyone was superb.

Maria Cristalli, Seattle smith, gave a very well prepared demonstration on the heavily chased leaf work she has been developing as well as other aspects of our craft. From Santa Fe, New Mexico, Frank Turley was able to give his audience about as much information watching a bar of steel cool down as some instructors do in a three day workshop. Jerry Henderson with his stake repousse work and Louie Raffloer with his stamp work gave some "added value" to the conference and all of us attending thank the demonstrators and the organizers.

These conferences are possible because people prepare well in advance to give us the learning experiences we all find beneficial.

There were 199 full pay attendees at this conference, setting a record for an Oregon conference. We're finding that lots of advance publicity helps people make plans; we're all busy and have lots of choices for our weekends so we'd like to get you information on conferences as far in advance as possible.

Our fall conference will be in Mount Vernon, Washington, October 14-16. Jorgen Harle and David Lisch are in charge of organizing the conference and have invited Steve Lopes of Port Townsend and Canadian smith John Adolph as the main demonstrators. The Spring 2006 Conference will be in Lynden, Washington with Renato Muskovic and Kris Ketchum doing the organizing. You'll get the details as we receive them.

Organizers for our conferences have stepped forward for the next several conferences giving us a chance to do the preparation we all want to see happen. Many thanks to people who put forth this time and energy.

The website committee is off to a running start with their first meeting happening in Corvallis during the conference. There's a lot of talent and energy putting things together into a format that will match the name established by Kent Rudisell before some of us were even on-line: www.blacksmith.org. I was told the site will show changes by early summer. Thanks to Kent and the others on the committee willing to pull us "Luddites" forward to the 21st Century.

It's a pleasure to be involved with a group having so many multi-talented people willing to share not only information on blacksmithing but also on many other skills critical to our healthy growth as a nonprofit organization.

With members' generous donations, the legal advice and defense fund has raised enough to pay attorney fees not covered by insurance and a legal proofreading of our proposed by-laws. Good job.

At the time writing this column, the lawsuit by Mr. Kagele against the NWBA

is nearing settlement and hopefully will be concluded soon. The text of a mutual statement is being printed elsewhere in this newsletter.

Our deepest sympathy and condolences to our treasurer Ken Williams and his wife Nancy who lost a son in a logging accident the week after our spring conference.

There are many blacksmithing events coming up in the next several years in addition to our northwest conferences: ABANA will host their conference next year in July and Can-Iron will take place in 2007 on Vancouver Island.

These are opportunities to be used to advance knowledge and skills for the continuing improvement of our craft.

Several recent email communications have shown an interest in having smaller groups within NWBA coming together for learning opportunities or just to pound on some hot metal in a small, local setting. I suggest if you want to participate as a teacher or host, student or guest, you send information including when, where and how much (if cost is involved) to the *Hot Iron News*.

Hopefully, as the website grows it will include a contact page so we can increase local gatherings. Saturday open forges or a one day basic blacksmithing class would be examples. Remember, blacksmithing is an inherently dangerous activity and at this time such events would not be covered by NWBA insurance.

Write, phone, email me or other board members or write to the *Hot Iron News* with feedback on this idea or any other suggestions you might have to increase awareness and participation in our craft and, please, never forget to work safely whether alone in your shop or with a group.

Thank you.
Terry Carson

Welcome New and Renewal Members!!!

New Members

John Glenn	Puyallup, WA
Jene Krikpatrick	Willits, CA
Sandy Sydnam	Sooke, BC
Andrea Lisch	Seattle, WA
Luke Henderson	Warren OR
Roel Miranda	Columbia City, OR
Ron Macy	Umpqua, OR
Paul West	Fairview, OR
Dave Zuber	Shedd, OR
Karen Randall	Blodget, OR
Donald Jamieson	Condor, OR
Thomas Powers	Hood River, OR
Jill Hagen	Salem, OR
Dan Speers	Philomath, OR
R. Brian Lindahl	Toledo, OR
Jim Almy	Tacoma, WA
Arthur L. Gnos	Lebanon, OR
Ethan Benatan	Portland, OR
Karl K. Christoffers	Portland, OR
Bob Powell	Shelton, WA
Samantha Wilson	Corvallis, OR
John Aguilar	Scio, OR
Clint Montgomery	Victoria, BC
Erik Newquist	Woodside, CA
Terry Vaughn	South Beach, OR
John Sechrest	Corvallis, OR
John Huskinson	Seattle, WA
Hayes Zirnhett	Williams Lake, BC
Daves Tearns	Scio, OR
Scott Wadsworth	Roseburg, Or
Reece Whitacre	Vancouver, WA
Paul Hinds	Milwaukie, OR
Ray Carpenter	Ridgefield, WA
Chris Porcarell	Seattle, WA
Arnon Kartmazov	Portland, OR
Marvin L. Smith	Salem, OR
Joe Elliott	Redmond,OR
Mike Carney	Olympia, WA
Chris Dunn	LaCenter, WA
Mike Cassidy	Burien, WA

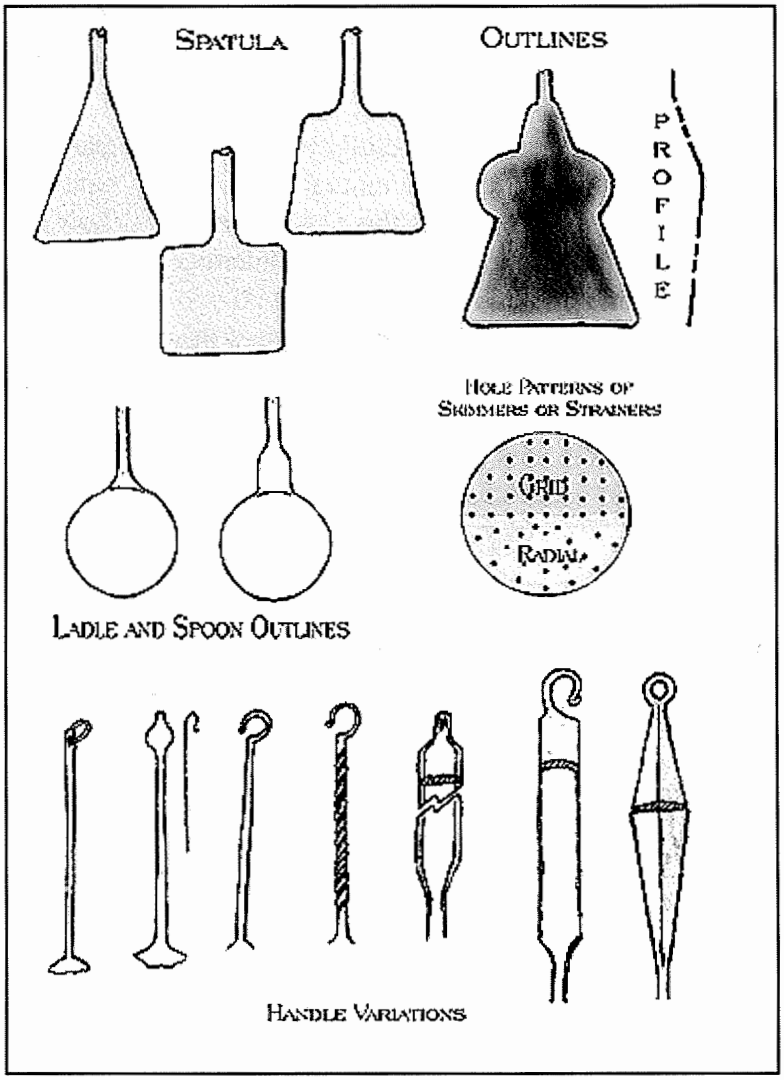
Renewing Members

Ron Wailes	Duvall, WA
Don Kemper Jr	Ridgefield, WA
George Rolstad	Chehalis, WA
Russell D. LoBue	Sacramento, CA

Making ladles and spatulas

by Bob Race

(Bob presented this class at the spring conference in Corvallis.)



Drawings from original pre-1850 pieces

THE EXERCISE

Learning to make simple pieces with the least amount of tools possible.

It does not take much imagination to make a triangle bell, nor a bracket to hold it; nor does it take a whole lot of effort to forge out a spoon, ladle, or spatula that is functional enough for the user to be happy. But it takes practice to achieve the skill to make any of these items look as though they were crafted to be pleasing to the eye.

The drawings on this page show variations of original pre-1850 pieces commonly found in museums and antique outlets. Searching the Internet is an excellent source, but be sure to realize which is original

Tasting spoons primarily had a side profile whose line went down the length of the handle and stem, with the lip of the bowl's line with that of the handle. The ladle's bowl lip line was nearly perpendicular to that of the handle.

The lines of holes in skimmers and strainers could go either way, but the bowl was generally two or three times that of the size of the spoon.

The profile of the handle may have been straight or had a slight curve. Most spatulas were straight in side profile. Remember, these are items of kitchenware and seldom used on the table.

Perhaps the best stock to use in making ladles and spatulas is 1018. It has a very low carbon content and there are only trace elements to mix with the iron. The down side is that it can be expensive, even if it is scrap. But when brought up to a near-welding heat it is so soft that it moves like pure lead and it takes quite a bit of pounding before it will start to crack. If you want to save money, use A-36, the final results will look the same.

(continued on page 9)

This information is primarily aimed at students who are in the beginning steps of basic blacksmithing and is only meant as a guide to make their future in this field a little easier to understand. Some of the things mentioned in here may have been pointed out to me numerous times in the past, but some of it did not come of age until the proverbial 'slap along side of the head' was repeated over and over again.

ladle and spatula making

(continued from page 8)

The Art of Fullering

There is no shame in using a spring fuller, guillotine, or similar tool to swage in corners of a piece of material, especially when one is a beginner who feels like he is threading a fine-eyed needle with a piece of limp cord in a bone-chilling wind storm. However, it would behoove everyone who is serious about becoming a good smith to practice fullering in from both sides by using the corners of the hammer and anvil to do the necking down process.

For some it may be a long row to hoe, but once the habit is acquired there is some sort of satisfaction achieved in being able to make do with less.

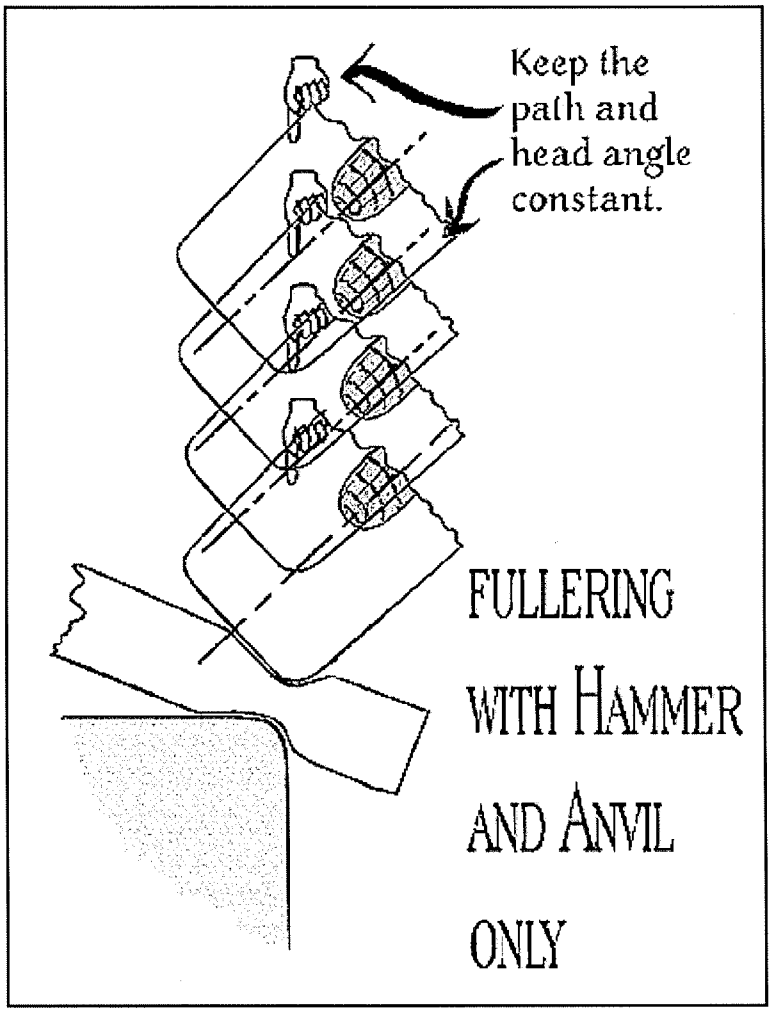
Find an edge of the anvil face whose corner profile matches the corner of the hammer's face. This will act as a double fuller and give you an initial setup for the stem between the bowl and handle.

ONLY go part way, because if you neck it down too small it will lose material with each heat and become weakened making for a fragile piece by the time you are finished.

Making a spoon or spatula is an exercise similar to learning to play 'Twinkle, Twinkle, Little Star' on a musical instrument. All you need is a 4"x1&1/4" piece of mild steel, neck it down in the right spot, spread out the bowl or blade, draw out the handle, and you are done. This should give you a bowl that is about 2 1|2" wide and a handle 6 to 10" long.

Making spatula profile is not any different than that of the ladle. It is just figuring where to put the lumps in the proper place. Use the "visualization" drawing as a guideline. It all depends on your design.

About an 1-1/2" from one end make a mark on the narrow edge of the piece. Heat this up to a near welding heat, take it over to the anvil and fuller in from both sides using a spring fuller or the method shown on the previous page.



Work on this until the necked down section is about 1/3 the width of the piece. Put the long end back in the fire and heat it up as before, bring it out so the wide part is flat on the anvil and taper back from the end about a third of the way until the narrow edge is a little less than 1/8".

Round off the two outside corners. Reheat, then placing the wide section back on the anvil, take your cross-peen and fuller down the center being careful not to get near the neck.

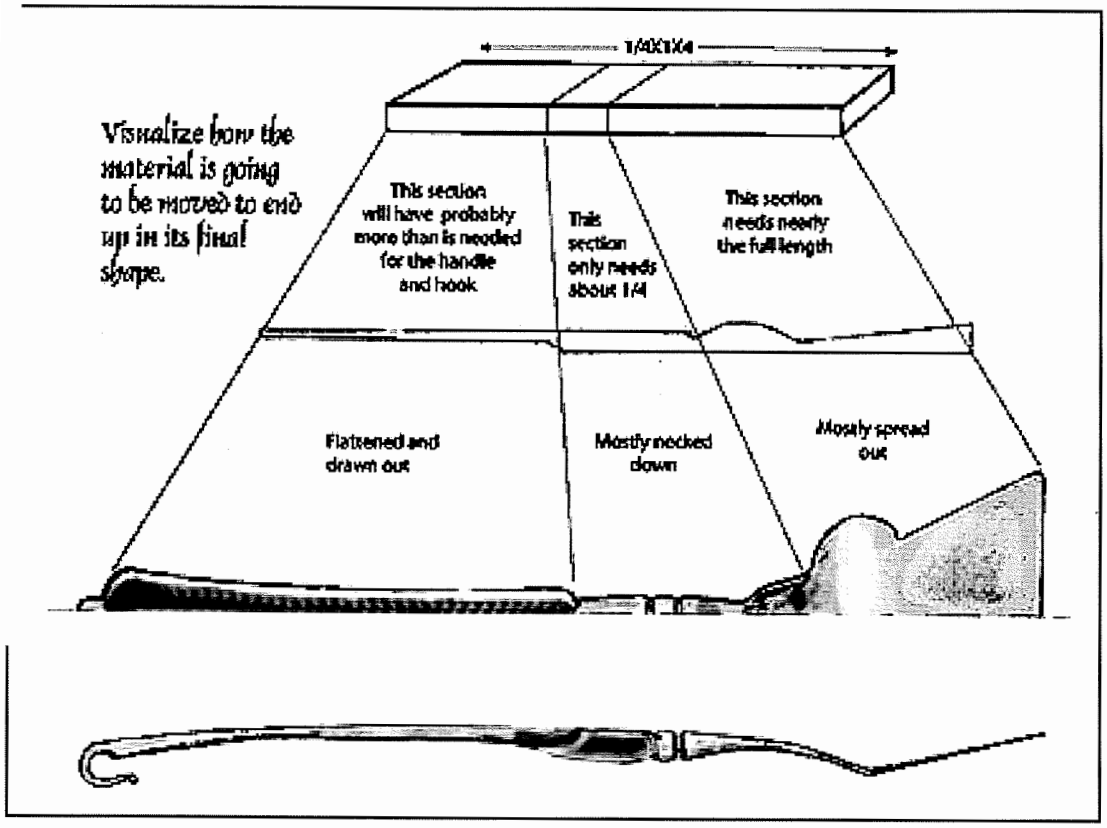
Reheat and spread out from the center to one edge; repeat the same towards the other edge.

Hopefully you will have a rounded outline of a flattened piece that is about 1/16" thick. Flip this end for end and heat up the short fullered out section.

Bring this to the horn and draw out the handle until it is near the shape you wish to have. Straighten and align the handle with the bowl, but try to keep the side profile on a straight line as much as you can.

Take a compass, or small tin can the right size for your bowl and scribe an outline so that the handle's axis is passing through the center of the bowl. Trim off this surplus stock with snips, chisel, or belt sander. Now put the final touches on the handle so that it looks symmetrical

(continued on page 10)



and utilitarian. Find a chunk of log which does not have any knots in its end-grain and set it on the floor near the forge. Heat the bowl up to a dull orange and place it over the end-grain. While holding it just immediately above the wood use a ball-peen hammer and shape the bowl.

When it starts getting black, reheat and repeat the process until the bowl is at the depth you wish.

Remember - this is an exercise in learning to neck down or spread out by fullering; nothing more.

Doing the Symmetrics

Even though nothing in this world is perfect, the pleasing effects of symmetry will add to the appeal of your final piece. There is a simple way to accomplish this task and it does not take long.

The first thing to do after you have the rough shape formed with hammering, is to straighten every section along the center line of the front profile; (the side profile should remain a straight line until the last). Make sure that the slightest twist between the handle and the blade or bowl is not visible while sighting down its length. When you are satisfied with the tweaks and twists, lay the piece on the face of the anvil, and with a wooden mallet, gently hit the high spots so that all is nearly flat to the world.

Take a piece of translucent paper that is wider than the piece and draw a straight line down the long way and in the center. Lay your piece on the paper so that its center-line coincides with the line you have just drawn. Firmly hold the piece down and trace its outline on the paper. Take the piece of paper and fold it in half along the centerline and hold it up to a strong light. Notice that the profiles do not perfectly line up. Draw a pattern to your liking on either side of the folded paper that will cover the existing material. Take a pair of scissors and cut this pattern out and unfold the paper. Usually the handle and stem section are pretty close to what you want, but the bowl or blade section can stand some correction with a belt sander or file. You can cut and paste the paper to the face of the bowl or blade with paper glue. It will dry quickly with a little persuasion from light passes of a propane torch. Sight down the handle and stem and make sure your bowl or blade center is on line.

You may need to apply a little heat, but usually a smart tap will put all in alignment. Then dress the sections down so that they are pleasing to the eye.

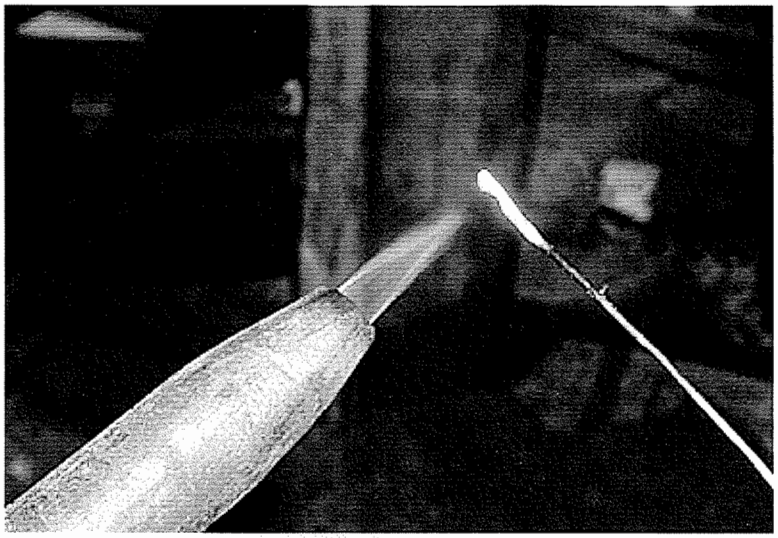
If you want to file finish the handle and stem and then put some pretties, don't hesitate to use your own imagination.

Most handles had either a closed or open loop at the end which allowed it to be hung on a nail, or a simple tail which was centered and then bent over the back side of the handle so that it could be hung on a rack overhead.

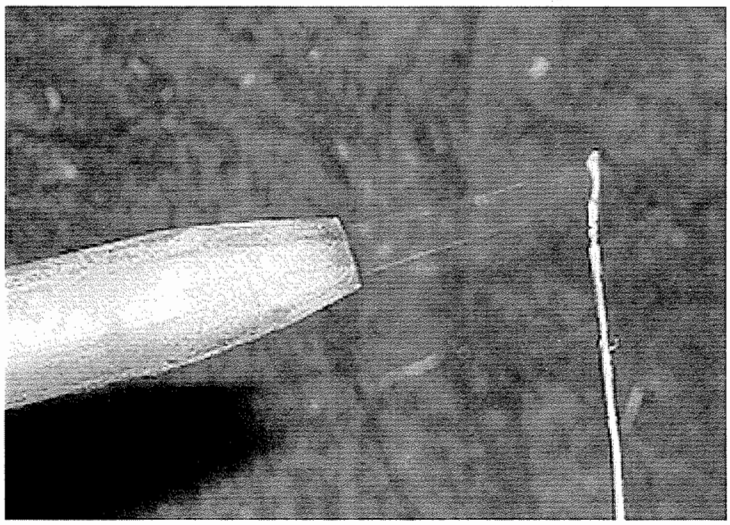
Early Americana seemed to favor five pointed stars, but your research into some of the antique books will give you plenty of ideas from which to start

Improvement of a Propane Forge Burner

by Steve Gschwend
s.gschwend@highstream.net



Burner shown with oxygen concentrator. The brightness you see is directly related to the temperature of the steel filler rod.



Burner shown without oxygen concentrator. This is not trick photography. The camera flash is on so the flame is nearly invisible

The burner is a 3¦4 inch black pipe with a conical end. It will fit into the same location as many burners. The conical end increases the reach of the flame.

How hot is your buddy's propane forge?

How many times have you wanted to get more heat out of the forge you were using?

You are at a hammer-in and the metal just is not getting that hot, it glows red but not very brightly. When you pound on the metal it quickly becomes cold.

The common solution is to turn the gas up. Does this sound familiar?

OK, much has been written about getting a propane forge hot. I have even posted a couple of notes myself. Lately, I have been making a significant increase in my forge temperature, achieving a temperature that is equal to a coal forge.

My operating assumption is that the burner needs to achieve a high temperature in order for the forge to reach one too. By building various burners and using wires that melt at different temperatures I could equate the heat of each design to the temperature of the wire that it can melt.

It should be noted that gas flame temperature is often reported under ideal conditions; what I'm reporting here is how I found the burner design that would actually melt steel.

The "standard" burners could melt brass wire (925C) and copper wire (1083C), but that was still more than 120C too cool for melting steel!

Using a blower with the burner or switching to purchased torch tip or making other burner sizes had NO EFFECT on the maximum temperature I could measure with the wire-melting test.

Why did this happen?

Since the purchased torch tip works the same as my home made ones I used the logic that folks like Victor went to great lengths to control heat flux loss. If I couldn't get their tip to melt a steel wire then I could assume the problem was elsewhere.

I therefore concluded the problem is not in the burner but in the gases used in the burner! However, when the higher temperatures are realized

(continued on page 12)

Improved propane burner

(continued from page 11)

the burner will be much too large for my forge.

The solution is to use a higher concentration of the oxygen gas in a smaller burner. The air we use is only about 21% oxygen. I calculated I needed something closer to 50% oxygen, so I set a design goal of using 66%, which would err on the hot side.

There are machines that are very effective at increasing the oxygen concentration built by the health industry for individual breathing aids. The machine works by pumping air through a filter. The filter traps the nitrogen and the oxygen moves freely, as much as 95% pure oxygen gas outputted at up to 5-psi.

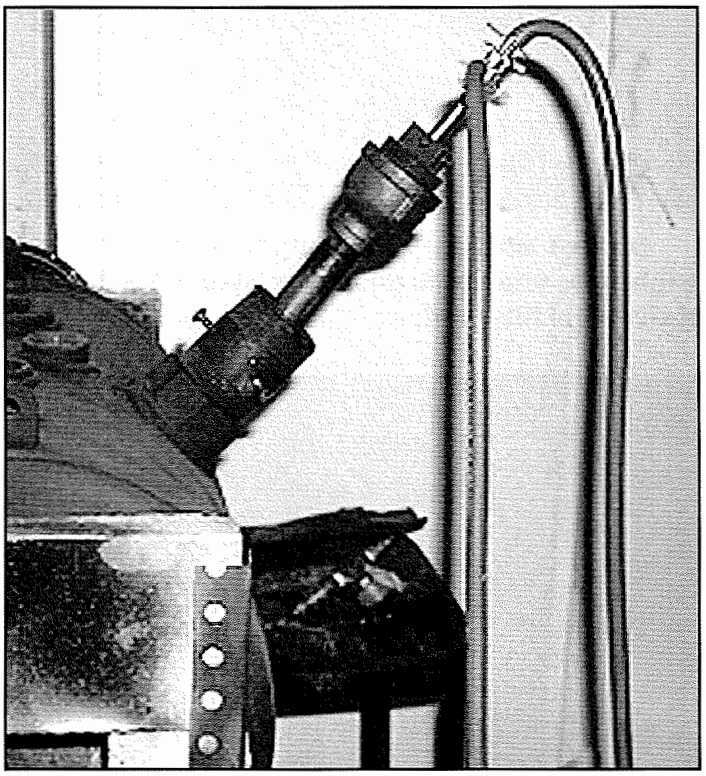
Glass blowing artists have been using oxygen concentrator machines to provide themselves with a cost effective torch. Purchasing the machine used at about 10% of the cost of new. Mine cost $160.

I have been successful in adapting this idea to a forge burner and can now easily obtain the temperature to melt steel.

I have a single burner in a 7.5-gallon tank size forge.

Today was the first day I used the new forge. There are several issues I need to accommodate before I can make a specific recommendation. The main issue is matching the capacity of the oxygen concentrator to the burner.

Burner in forge



Notes

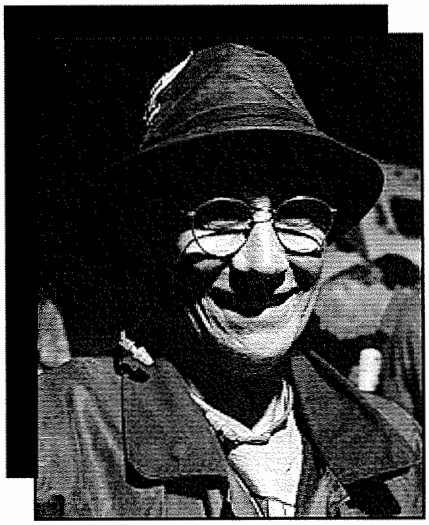
Burner consists of:
9" long 3/4 black pipe nipple.
3/4 to 1.5-inch bell
1.5-inch plug (drilled to accept brass pipe).
4" long 1/8 inch brass nipple/ T/valves/barb ends.

All combustion gasses are supplied, not aspirated.

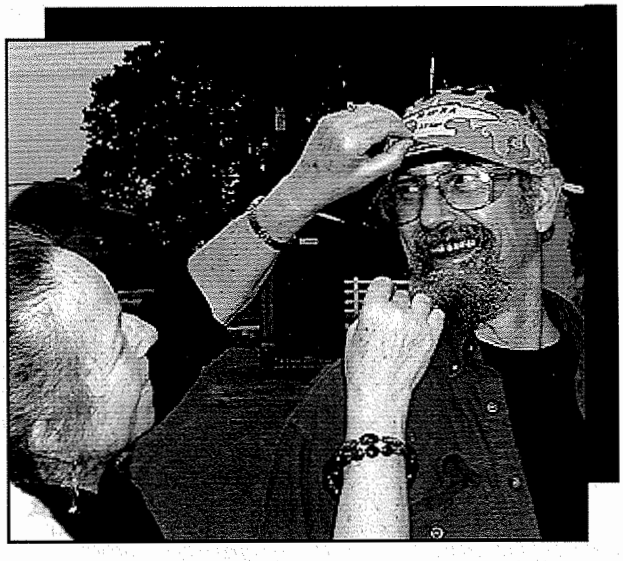
I have modified my burner to project the hot spot closer to the bottom of the forge, where the work pieces would benefit from the highest temperatures.

The need for the burner to have an air input has been eliminated, resulting in a much simpler design.

A second burner may be useful to help the forge heat up quicker and broaden the hot spot.

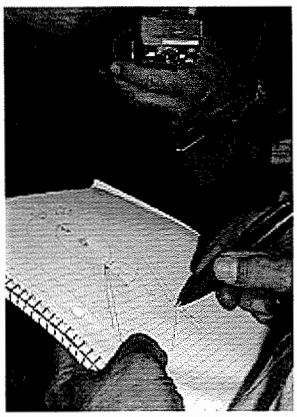


It's an official do-rag for the pres, bought by wife Louise at the auction, and an official smile from Whidbey Island smith Jeff Holdby.

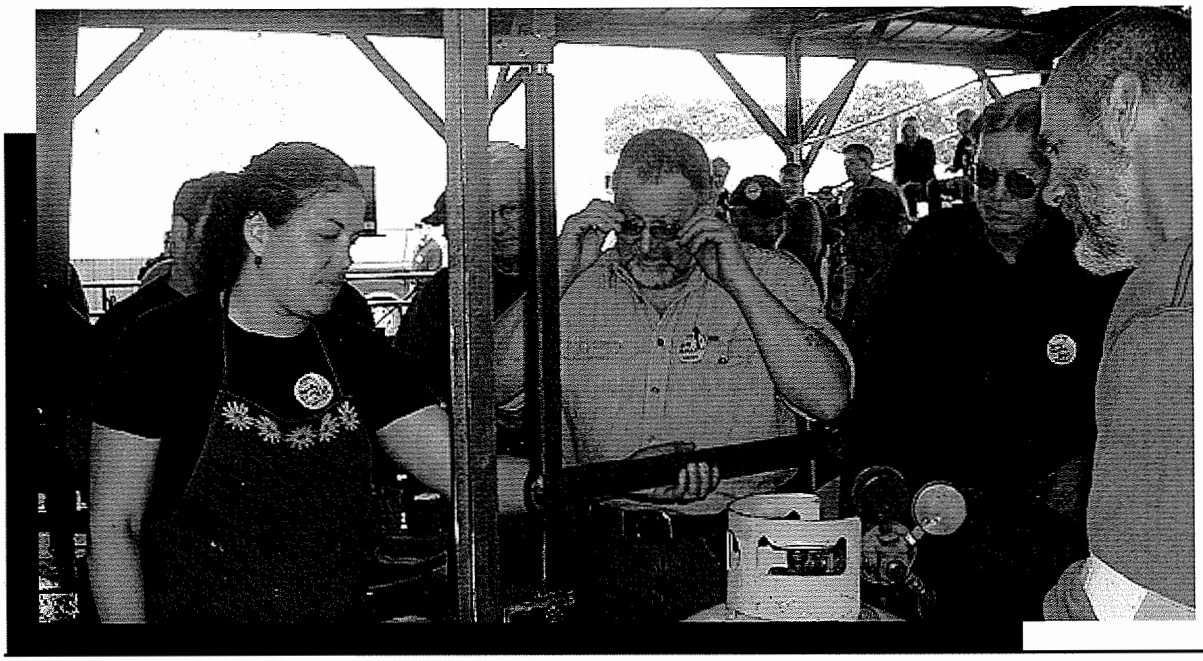


Spring conference great success, great fun

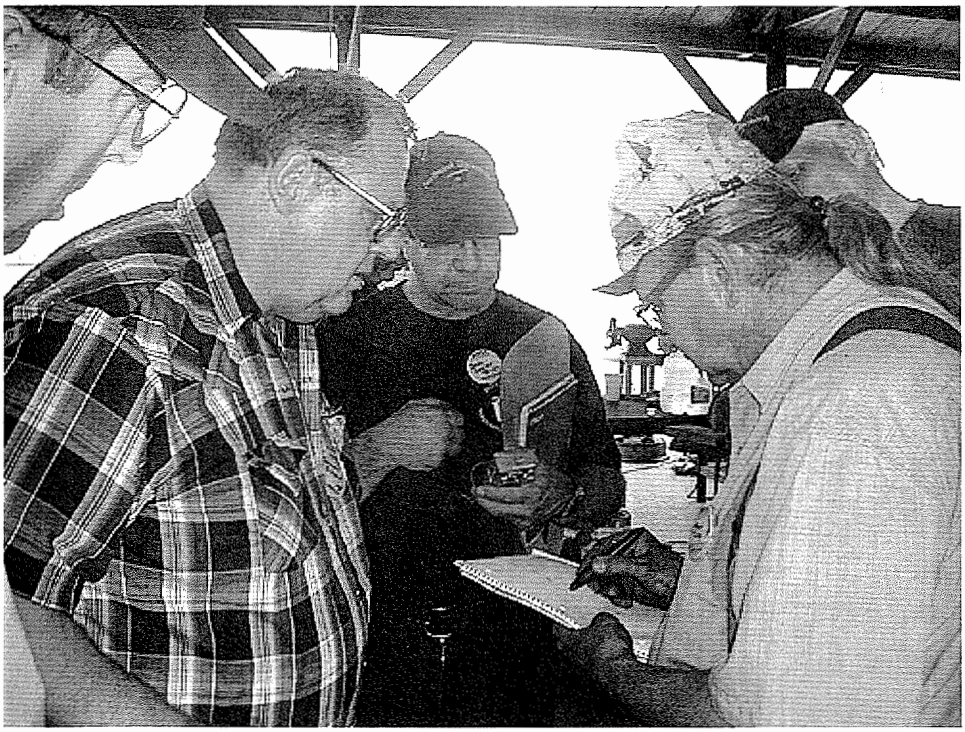
Lots of learning, seeing old friends and making new, exchanging tips and experiences, great food and drink, music, probably a couple questionable stories told along the way too.



Lots of notes taken (and photographed).



Demonstrator Maria Cristalli and fans admiring her self-closing gate hinge.



More information gets passed on after one of featured demonstrator Frank Turley's sessions. Turley's easy going delivery of stories between hammering offered decade's worth of insights and tips.

"Artifakes" and reviving blacksmithing

Blacksmithing almost died out after World War II until people like Frank Turley worked to revive the craft.

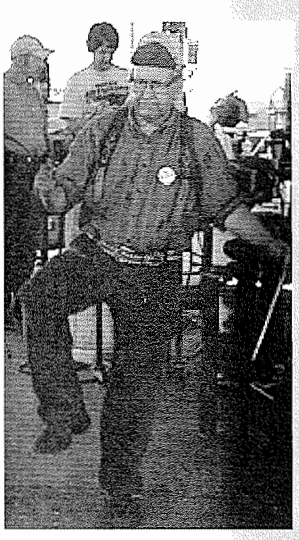
"There was no ABANA then and only two associations, the Illinois Horseshoe Association and the Southern California Horseshoe Association," Turley said when explaining how he helped bring life back to blacksmithing on the west coast and nationally.

"In order to open my first blacksmith school I ran a small blurb in the Whole Earth Catalog and started with a bunch of hippies," he said.

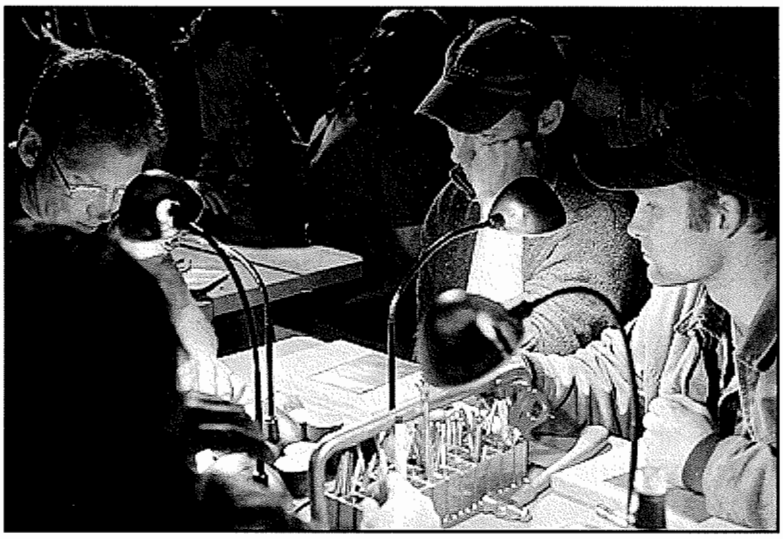
Turley called a Spanish Colorado Knife an "artifake," adding that he had made it and other "artifakes" for museums.

Tai Chi and other advice for keeping limber

Turley, who is a student of the martial art Tai Chi, says he uses that and other exercises to keep his joints loose and his hammering arm working. "Get on your hands and knees to relieve the stress on your back and flex your legs. Stand on one leg to take the load off. Let your arms dangle to loosen your shoulders and neck."

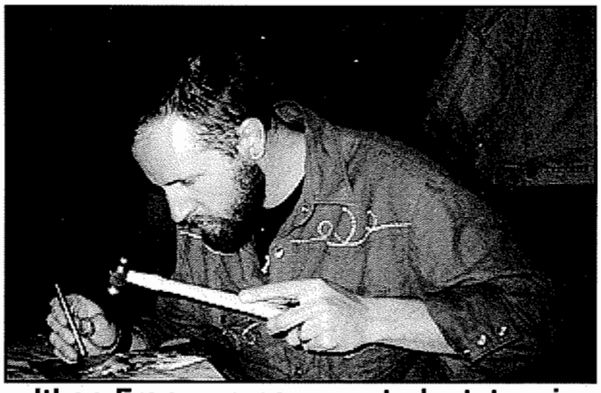


Repousee at midnight madness and throughout the day



A table of rapt students watch intently as Louie Raffloer demonstrates repousee during a midnight madness session.

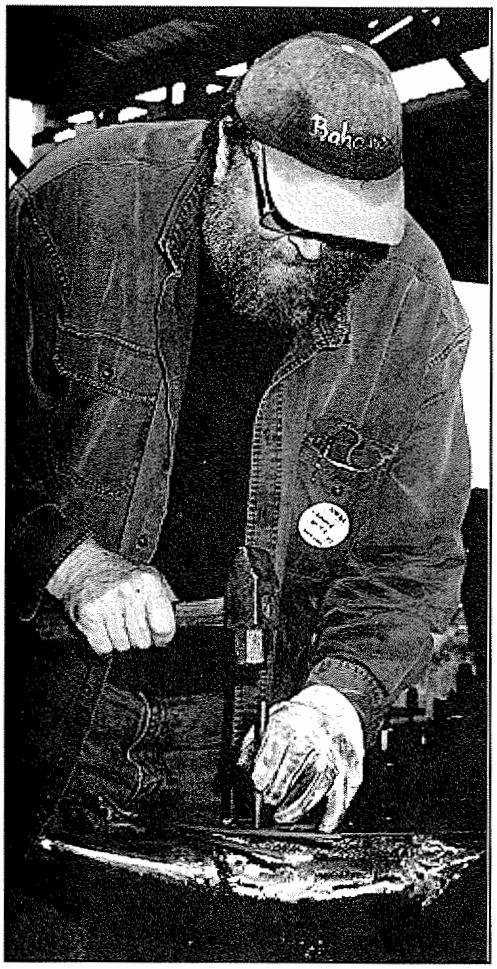
Luke and Tanner Henderson, grandsons of Jerry Henderson, set up to make final taps on a repousee piece.



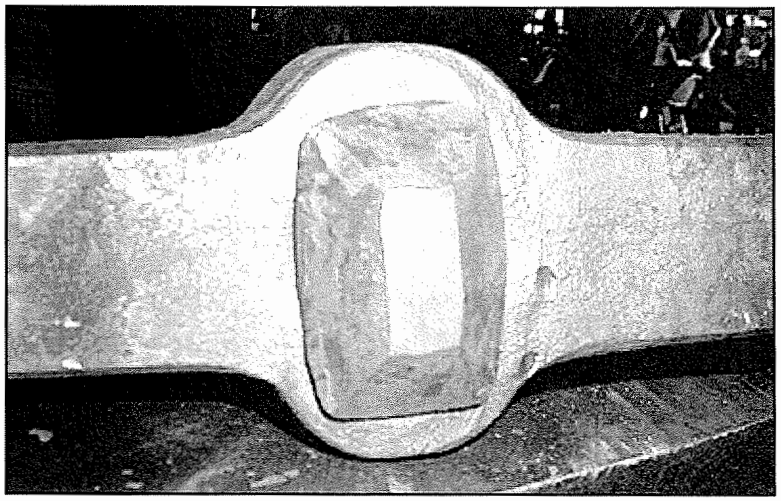
Ithan Froney, repousee student, tapping into the night.

Repousee demonstrator and acknowledged expert Jerry Henderson and grandson Luke. Concentration is part of the process.

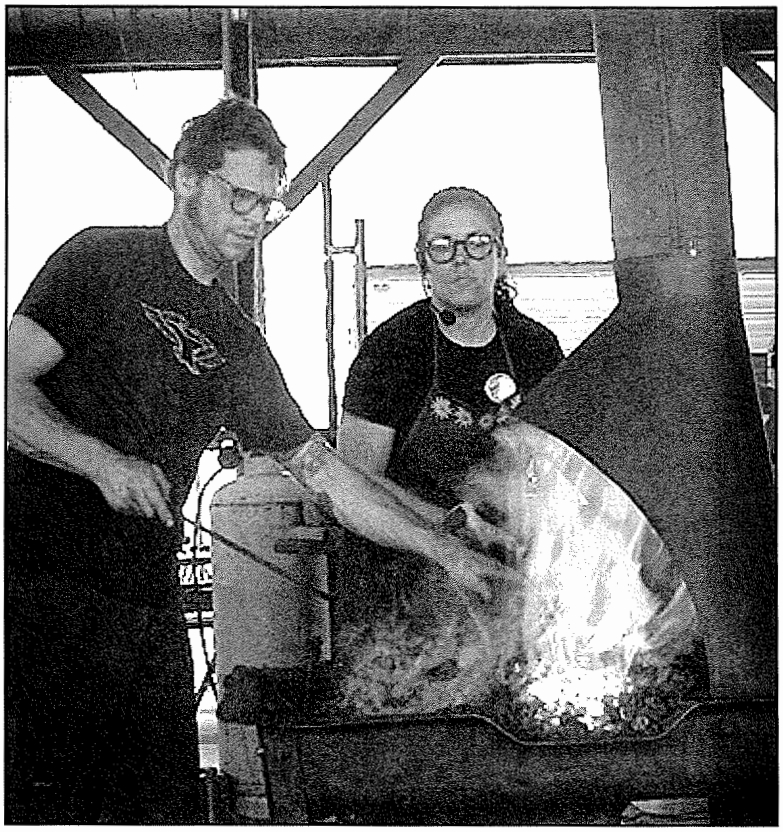
A fine demonstration of metal shaping art. It's all in the hands.



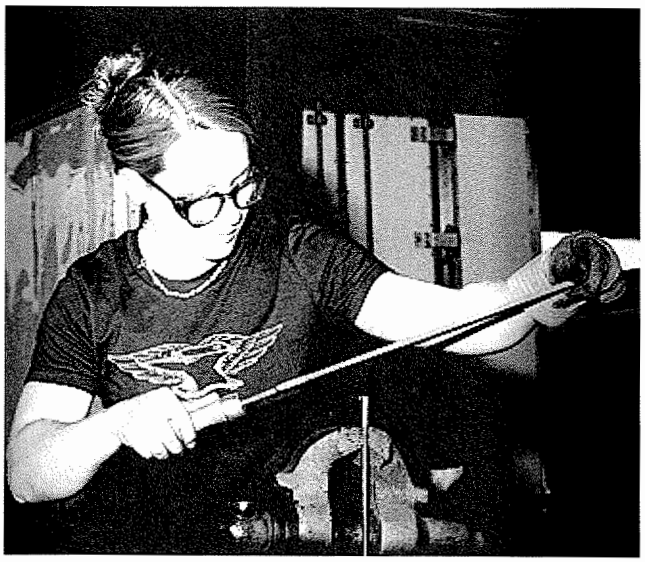
Leonard Mills punching a hole during a workshop given by Mark Manley.



Mortise and tenon piece hammered together by demonstrator Maria Cristalli.



Artist Maria Cristalli and assistant David Tuthill looking for the steel in the coal forge to reach the right color. The beauty of burning coal is that it's possible to get just the part you need in the hot spot. Once burning, coal reaches temperature quickly. Added benefit — it's just a pretty flame to look at.

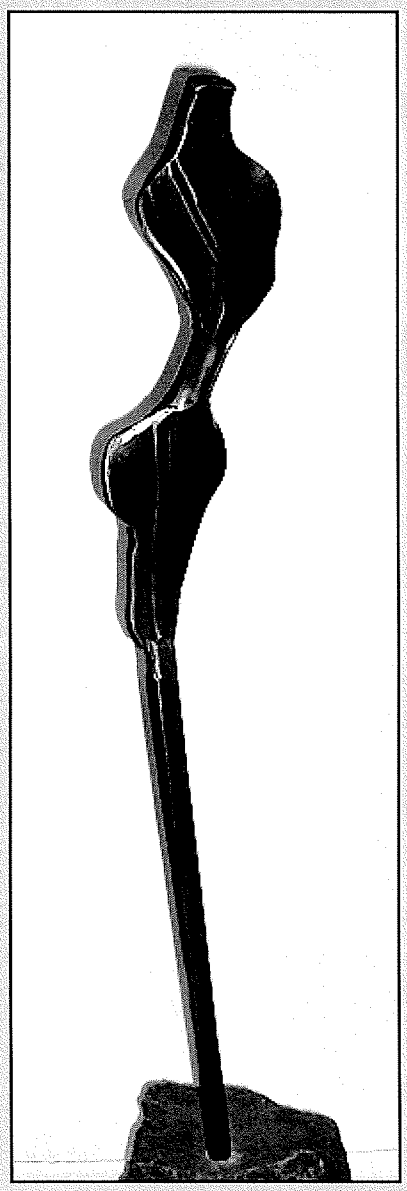


Lisa Goesten added some final touches during one hands-on demo.

Louie Raffloer took many of the photos on the last couple pages. Thanks, Louie.

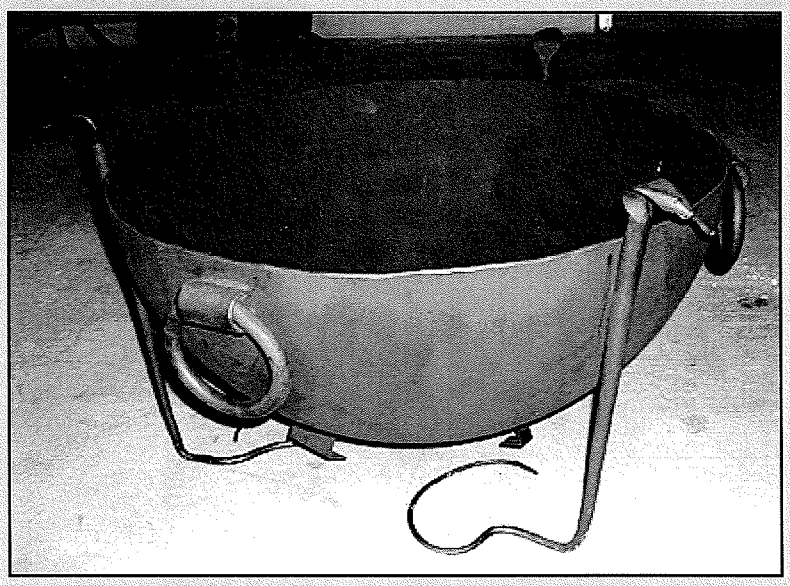
From the Spring NWBA Conference in Corvallis

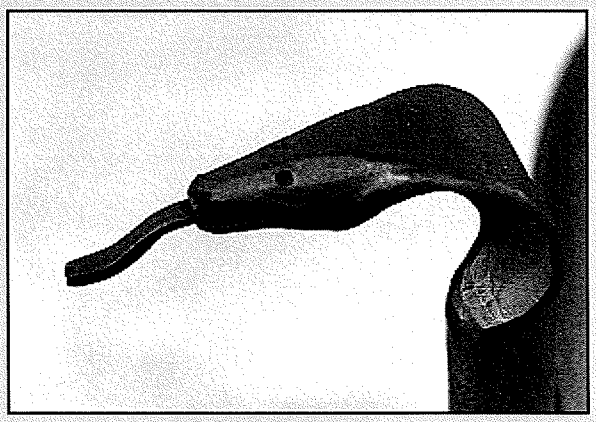
A Gallery of Fine Smithing



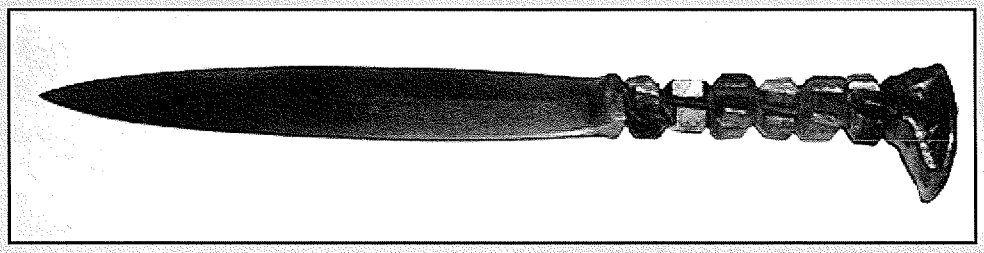
"Form" by Terry Carson

Cobra Firepit by Alan Graham





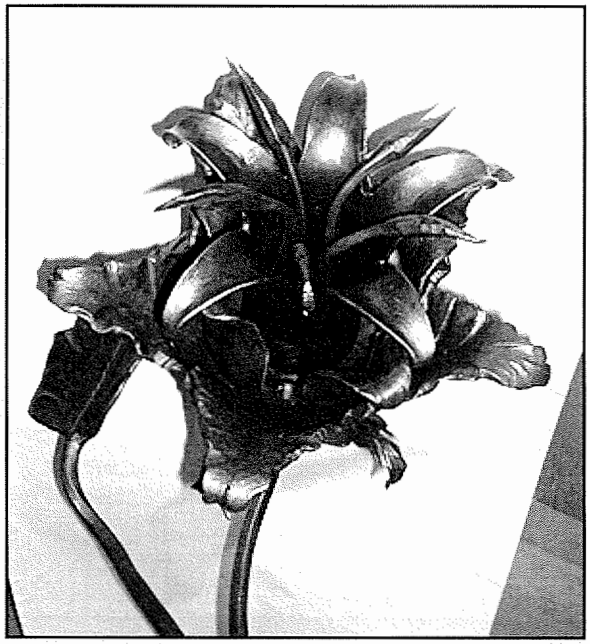
Detail of Cobra head



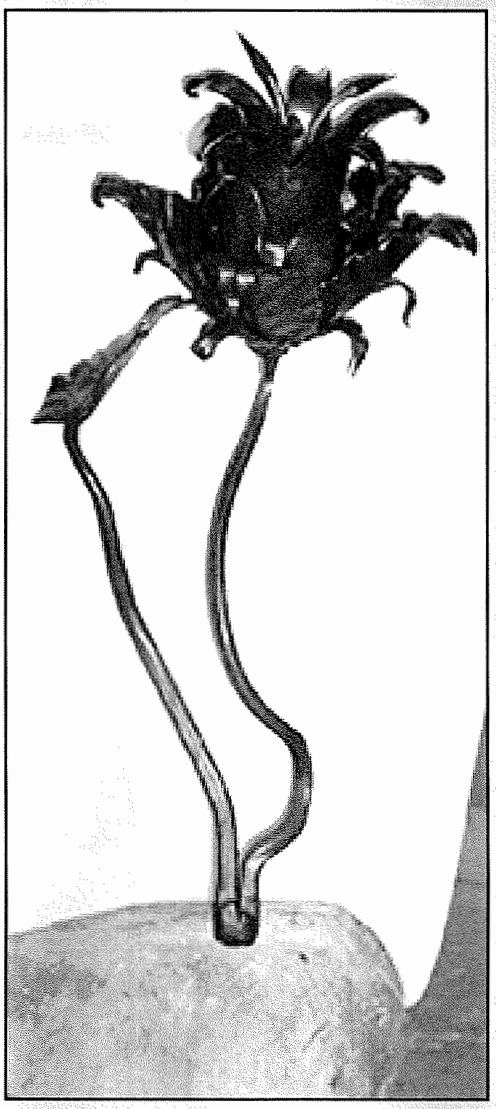
Grenude twist desk jockey commando knife

Railroad spike knife by Martin Brandt

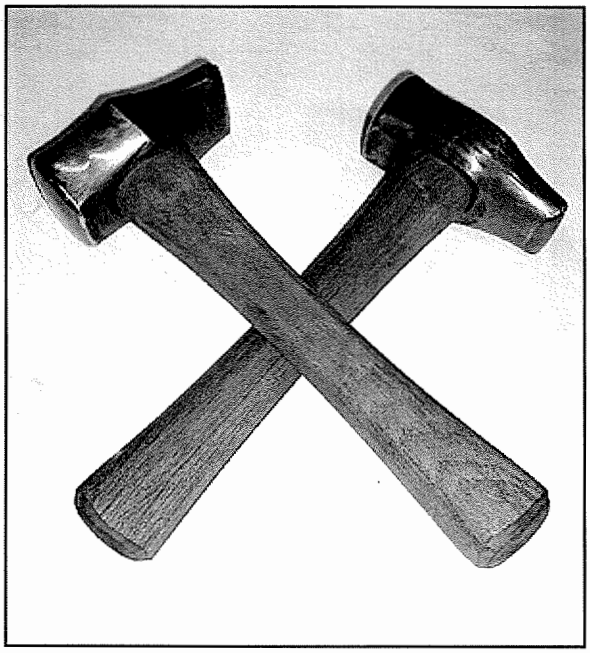
Spring Gallery



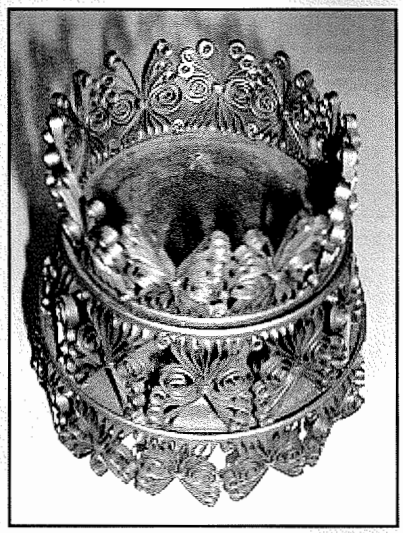
Detail of Carson flower



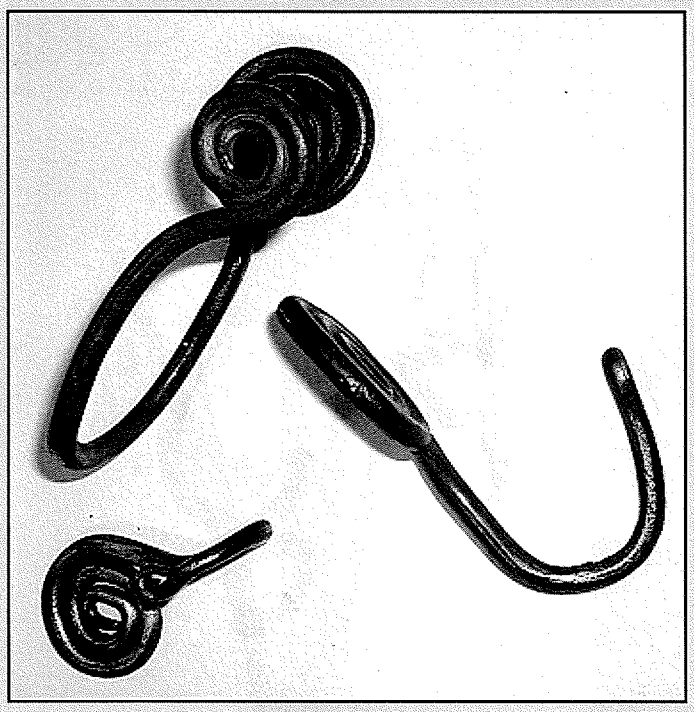
Flower by Terry Carson



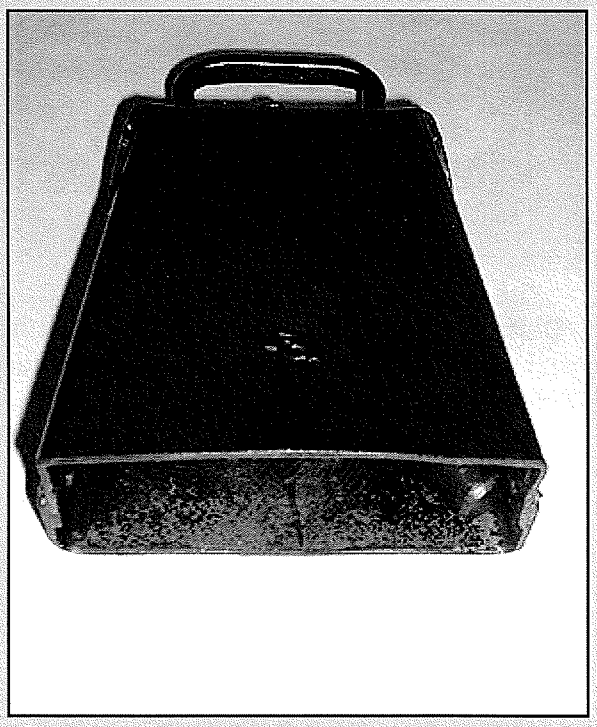
Metal Blasters by Alan Flashing



Spring Gallery

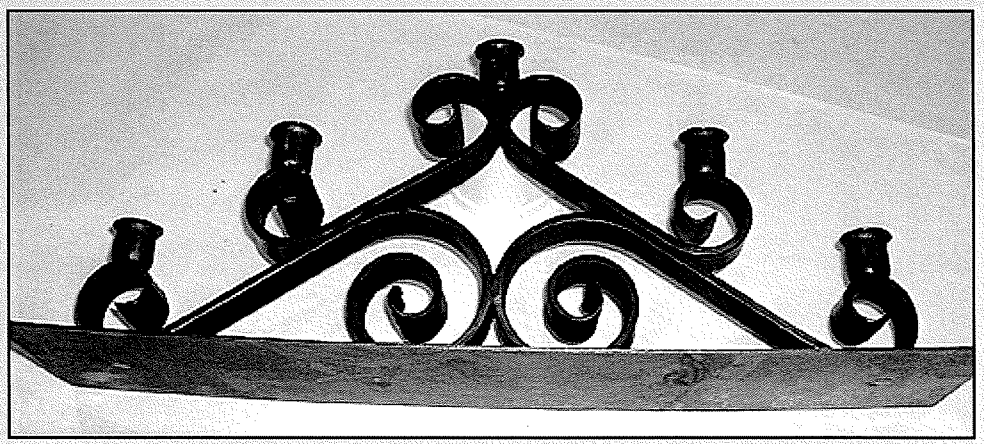


Hooks and Curtain Holdback
by Thaddeus Dancer



Cow Bell by Ray Carpenter

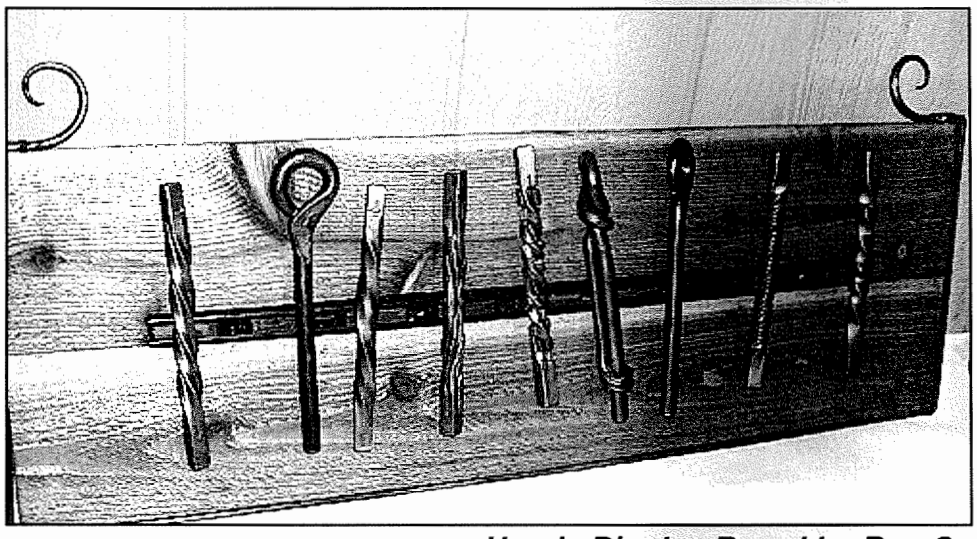
Ryan Wilson, 17, Poulsbo, WA, has been smithing for seven years. He often works with the smith at Fort Nisqually in Point Defiance Park, Tacoma.



Spring Gallery

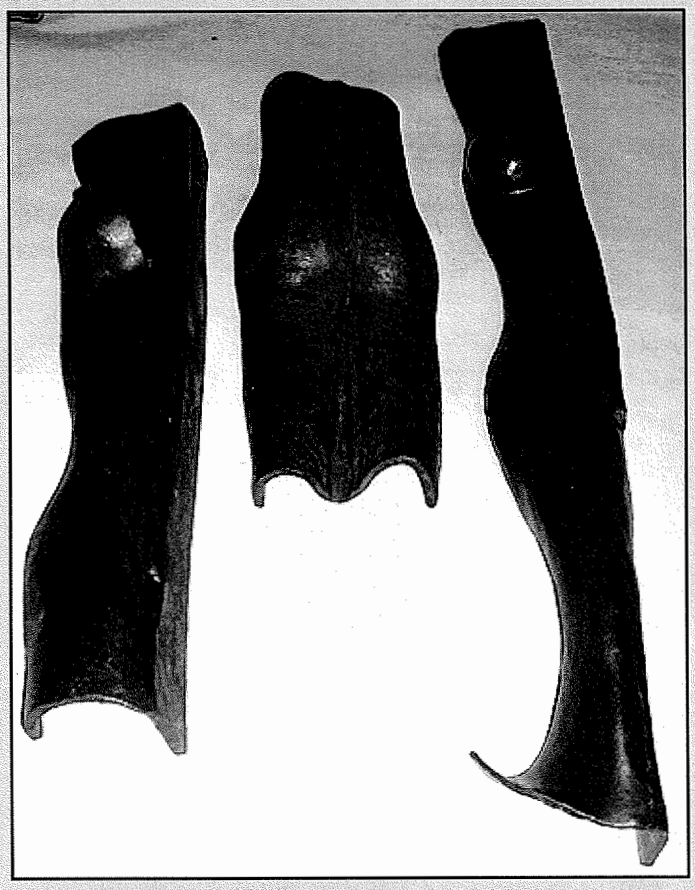
The star of the gallery was Jerry Culberson's "Daffodil", a seven-foot six-inch 400 pound beauty that stood gracefully over the assembled pieces. Elijah Burnett and Rick Walker, both 27 and both Jerry's apprentices, were vital to finishing the three-man piece of work. Elijah is a working smith in Poulsbo, WA, and Rick practices his art in Victoria, Australia.

Daffodil by Jerry Culberson



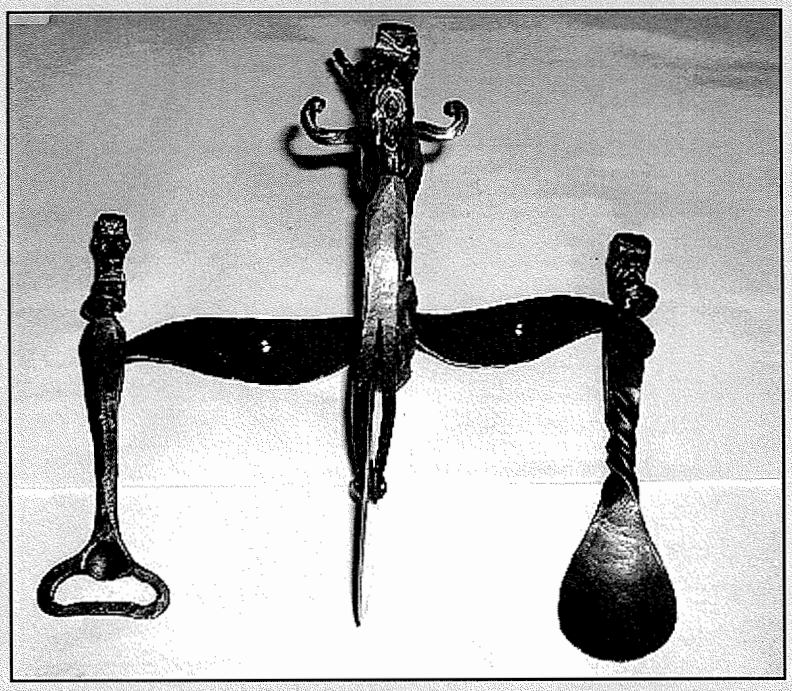
Handy Display Board by Ray Carpenter

Spring Gallery

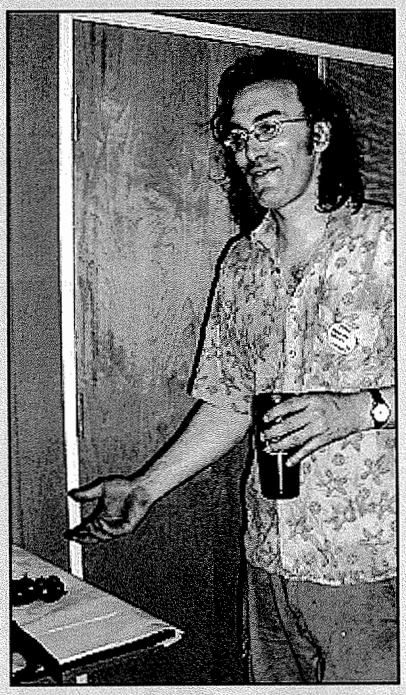


Nude "3 Graces" by Andrew "Jack" Frost

Detail head from American Party Set

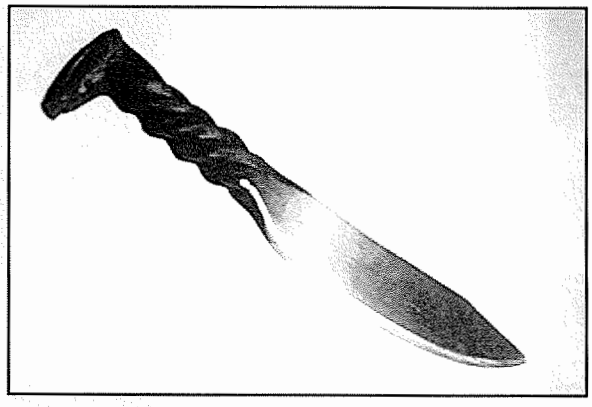


American Party Set by Andrew "Jack" Frost

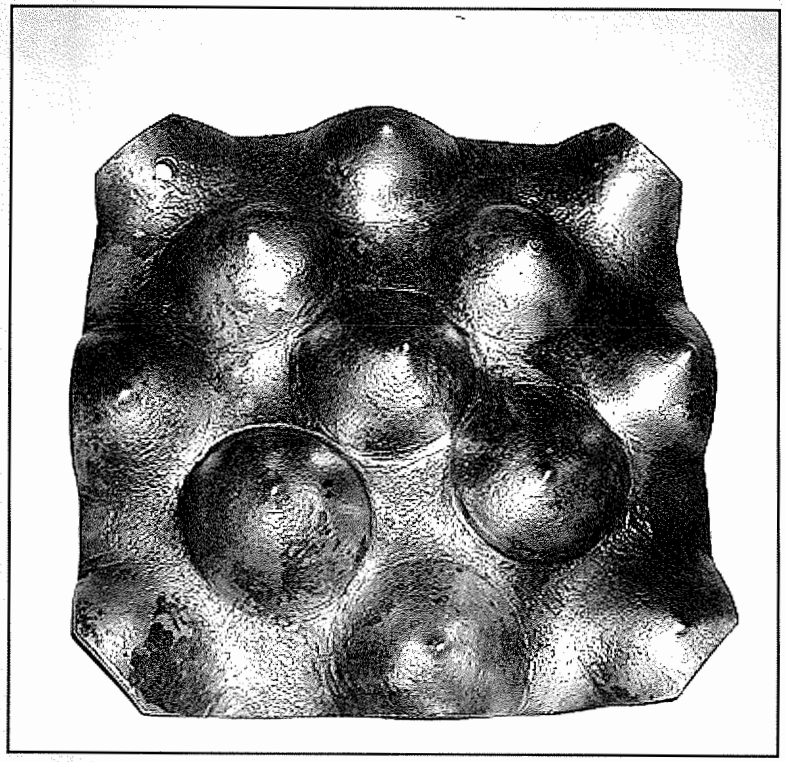


Andrew Frost (they call me Jack) explaining some of his gallery work

Spring Gallery

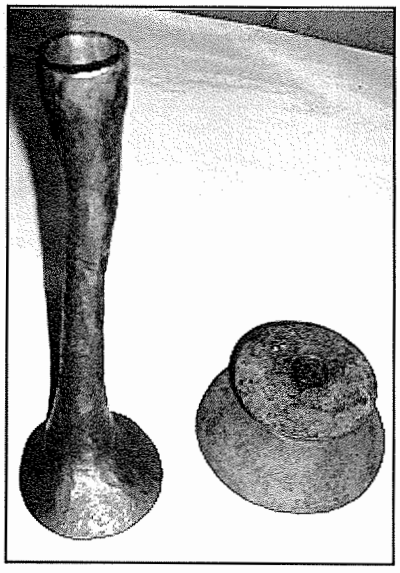


Railroad Spike Knife
by Jim VanMusch



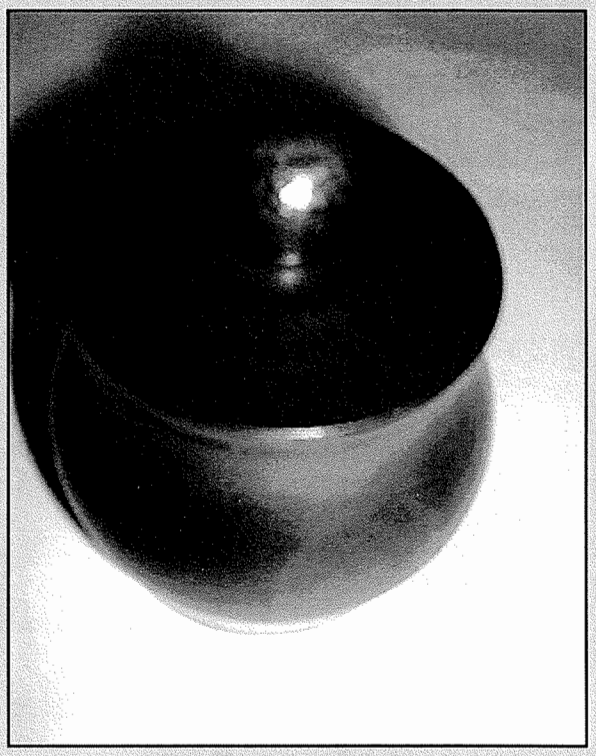
Odd Dream After The Fall Conference by Mike Neeley

"Untitled" by Tyler McCready and Darlene Armanhout



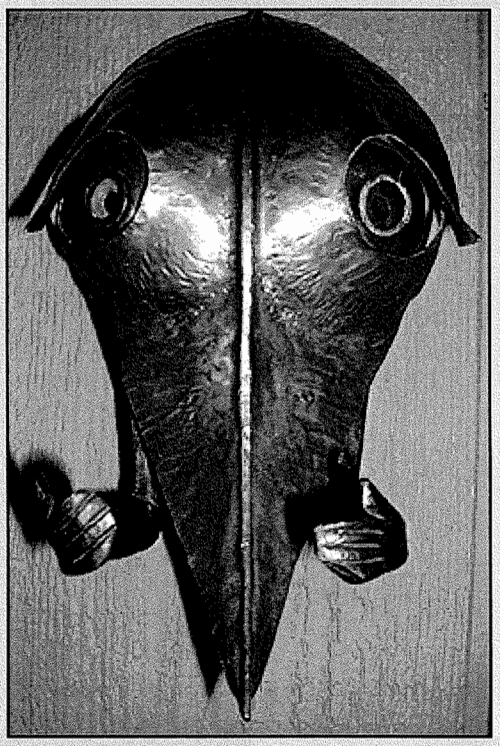
"Upsetting Times" with 1" and 2" cold rolled by Andrew "Jack" Frost

Spring Gallery

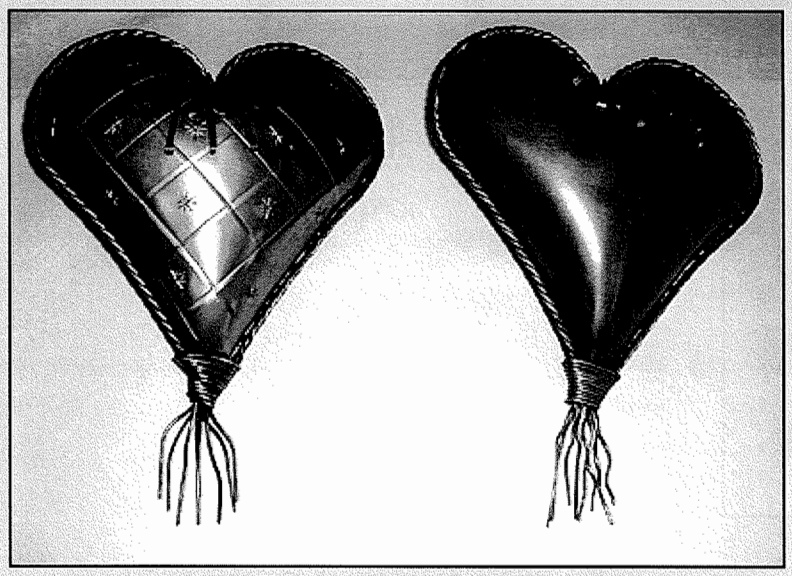


Pill Box by Kris R. Ketchum

Queen's Cup Flower Candle Holder by Hayes Zirnhelt

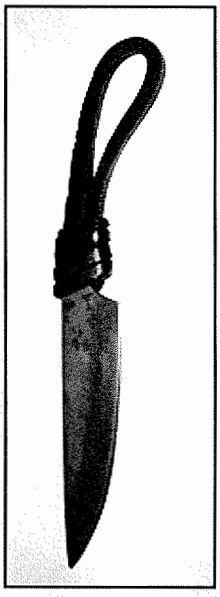


Mask by Lauren Osmolski, forged copper and steel

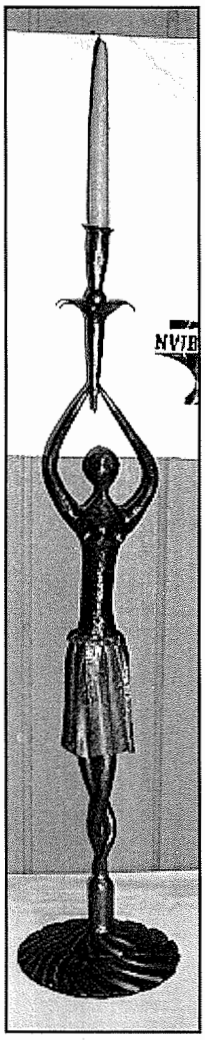


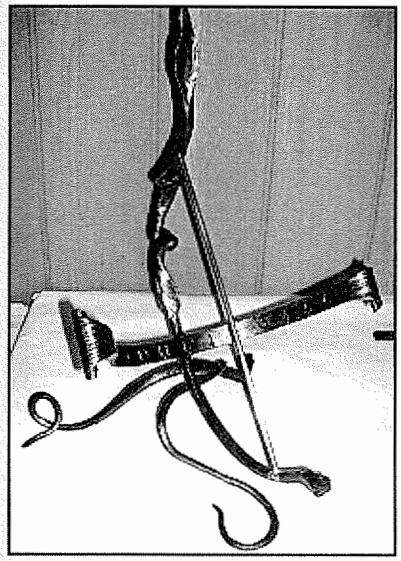
Hearts by Tim Ball

Spring Gallery

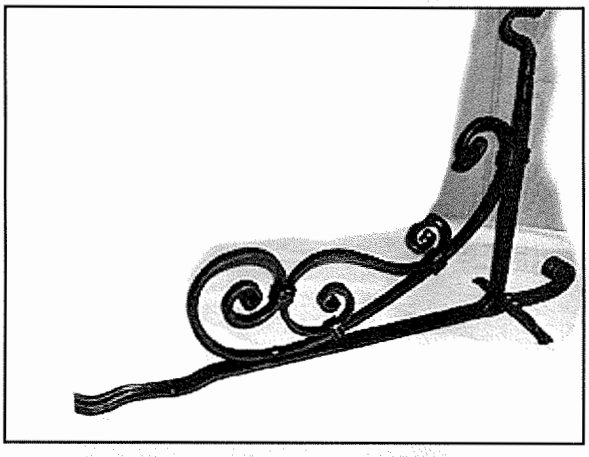


Fur Trapper Era Knife by Martin Brandt. Ball bearing race 52100, all one piece, edge quenched, aged finish



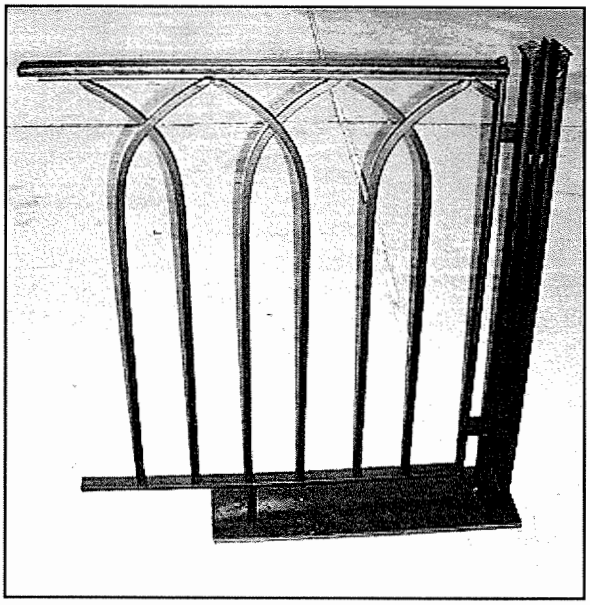


Bow String Armillary by Bert Romans

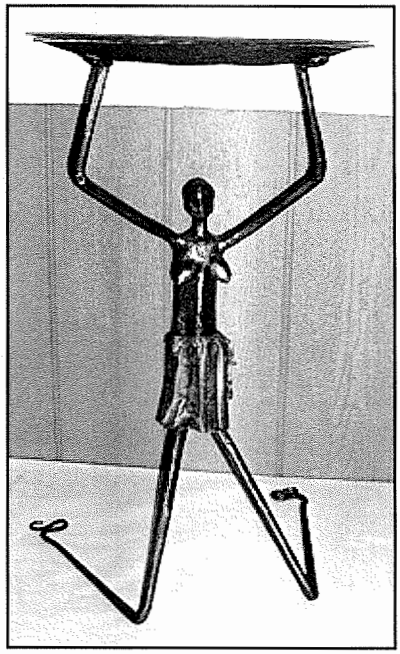


Plant Hanger by Jim VanMusch, a class project at Old West Forge

The Light Bearer and The Offering, both by David Lisch and both inspired by the fall conference



Rail Sample, Bear Dirinachter and Shasta Towler



We're moving forward with the 3 R's for 2005

Reorganization
Restructuring
Revitalization

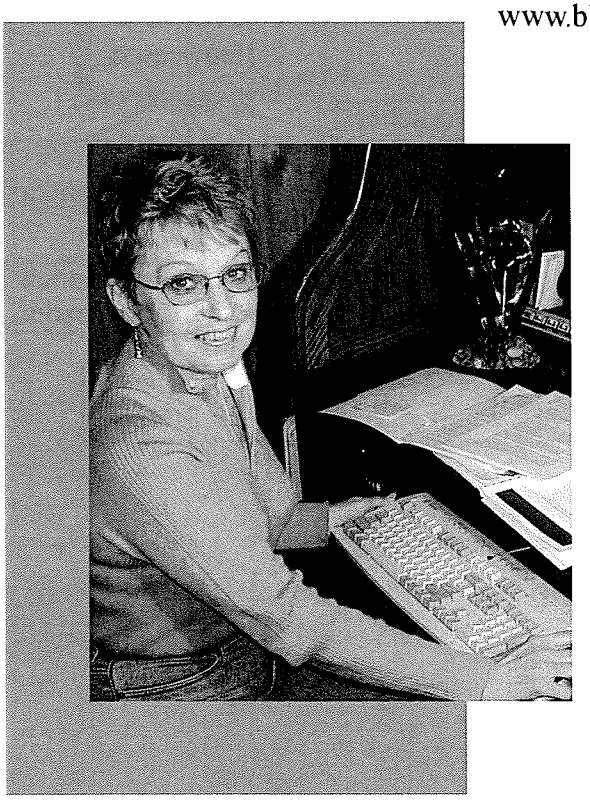
by Ina Culberson
NWBA Vice President

You members are awesome! You accepted the challenge. You came to the conference, you brought friends and family, you volunteered while at the conference, you signed up to serve on committees, you submitted information to the *Hot Iron News.*

By each making his or her contribution, much is accomplished. A big thanks to each one of you.

You are appreciated!

To keep the momentum going, the next step in the reorganization process is to present a copy of the revised NWBA bylaws to the membership. Copies of the proposed bylaws and the current (1996) bylaws were available at the Spring Conference.



Some have already provided their input/feedback. To ensure that every member is given the opportunity to participate in this process, both the proposed rewritten bylaws and the current bylaws are printed in this issue of the *Hot Iron News.*

These documents are also available on the NWBA website at www.blacksmith.org if you prefer an electronic version.

If you have questions or wish to discuss some items, please call me at 360-275-6769. While I am happy to have a phone conversation with you, all input must be submitted in writing.

My e-mail address is oldcedarforge@wavecable.com; US mail is 220 E Cronquist Rd, Allyn, WA 98524. The deadline for written input to this process is **AUGUST 15, 2005.**

By September 15, or earlier, another draft will be prepared and presented to the Board of Directors and the Bylaws Committee. Then the proposed bylaws will be mailed to each member along with a ballot to vote yes or no for adoption.

Every member's vote is critical to this process.

Restructuring is best presented visually with the organizational chart on page 26. You will note that there are four standing committees: Finance and Budget, Communications and Publications, Member Services, Events and Programs (which includes conferences).

There are two board members on each of these four committees, i.e., a working board.

The subcommittees round out the structure.

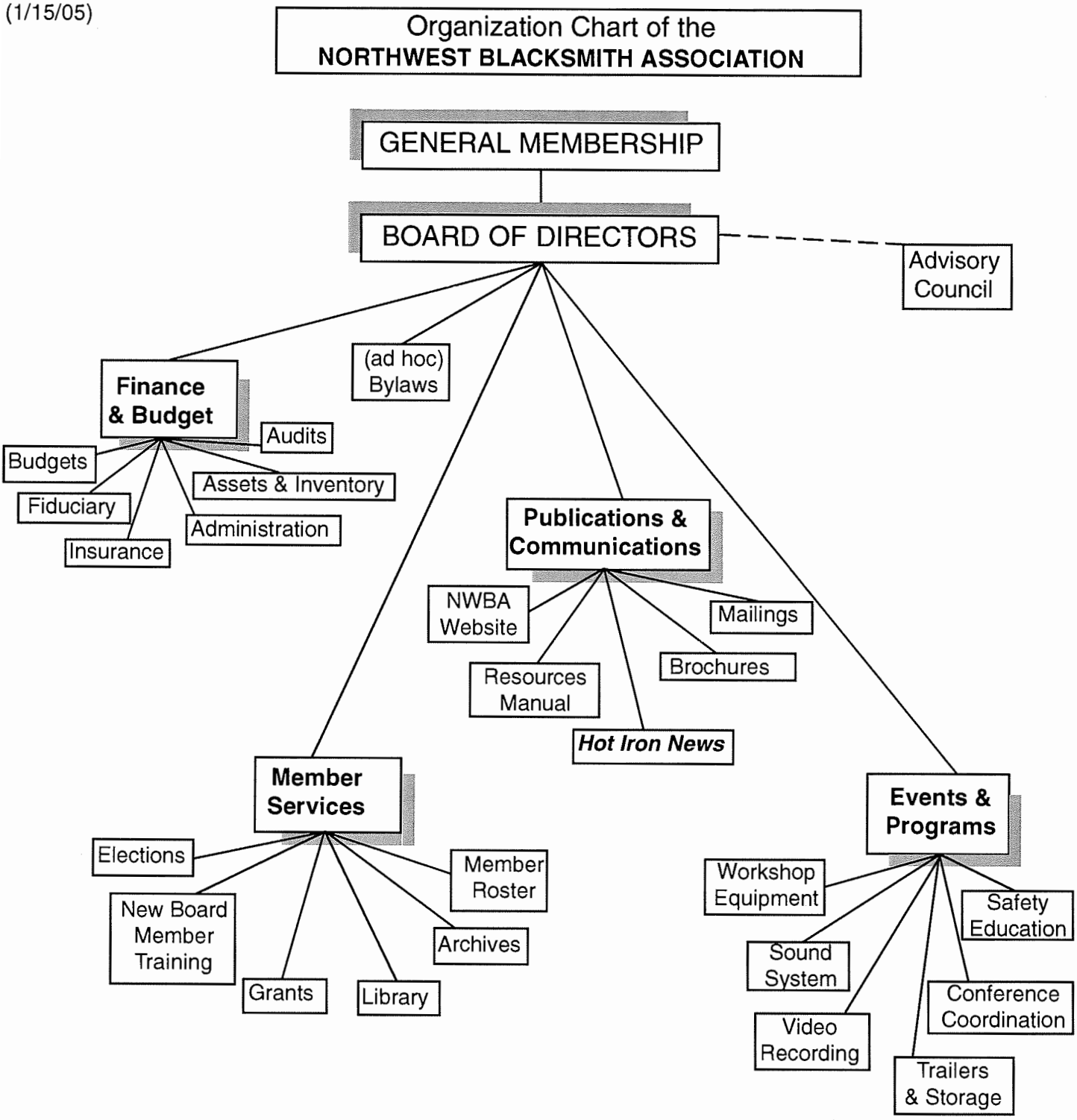
I am pleased and excited about the functionality of this structure, which the Board is emulating. There is professionalism, responsibility and accountability. We are all learning in the process.

If you would like to serve on a subcommittee, please contact any Board member.

Be a part of the excitement and vitalization.

We're on a roll now!

(1/15/05)


Organization Chart of the
NORTHWEST BLACKSMITH ASSOCIATION
GENERAL MEMBERSHIP
BOARD OF DIRECTORS
Advisory Council
(ad hoc) Bylaws
Finance & Budget
Audits
Budgets
Assets & Inventory
Fiduciary
Administration
Insurance
Publications & Communications
NWBA Website
Mailings
Resources Manual
Brochures
Hot Iron News
Member Services
Elections
Member Roster
New Board Member Training
Archives
Grants
Library
Events & Programs
Workshop Equipment
Safety Education
Sound System
Conference Coordination
Video Recording
Trailers & Storage

Proposed revisions to Northwest Blacksmith Association By-Laws

Questions or discussion can be directed to Ina Culberson at 360-275-6769. To be considered for change all input must be submitted in writting. You can reach Ina at oldcedarforge@wavecable.com or mail her at 220 E. Cronquist Rd, Allyn, WA 98524. The deadline for written input is **AUGUST 15, 2005.**

Proposed New By-Laws

Last Membership Vote on Changes Approved January 10,1996

NWBA BYLAWS REVISION–DRAFT DATED 5/11/05

ARTICLE I – NAME

The name of this non-profit corporation shall be NORTHWEST BLACKSMITH ASSOCIATION (the "Association"). The official acronym shall be "NWBA".

ARTICLE II – PURPOSE

2.1 Purpose Defined: The Association is organized exclusively for educational purposes, including, but not limited to, the following: to encourage and facilitate training programs and conferences for high standards of blacksmithing; to disseminate information about sources of equipment, literature and materials related to blacksmithing; to expose the art of blacksmithing to the public and interested groups.

2.2 Limitation of Methods: The NWBA shall observe all local, state and federal laws that apply to a non-profit as defined in Section 501(c) 6 of the Internal Revenue Code and the applicable statutes of the Revised Code of Washington. All NWBA meetings shall be conducted under Roberts Rules of Order.

ARTICLE III – BOARD OF DIRECTORS

3.1 Powers: The business, property and affairs of the NWBA shall be managed by a Board of Directors that has the power to: Initiate and approve plans and events for the welfare of NWBA members; print and circulate documents and publish publications supporting the purposes and objectives of the Association; communicate with other organizations interested in blacksmithing; engage, consult with and contract for services; adopt the annual budget; raise and disburse funds; determine policy as required; devise and execute such other measures as it deems proper to promote the objectives of the NWBA and to best protect the interest and welfare of the NWBA and its Members.

3.2 Number: The Board of Directors shall consist of a minimum of nine (9) elected Directors, individually and collectively referred to herein as "Director" and "Directors" respectively.

3.3 Election of Directors and Terms of Office: Board terms shall be split with an even number of seats open for election one year and an odd number the following year. Upon election, Directors of the Board shall proceed with the performance of their duties and continue in office for a period of two years. Successors shall assume their duties within thirty (30) days after an election.

3.4 Quorum: A simple majority of the Board of Directors shall be present to constitute a quorum for the transaction of business. In the absence of the President and Vice President, the quorum present may choose a chairman for the meeting. If a quorum is not present, a lesser number may adjourn the meeting to a later date, not more than thirty (30) days later.

3.5 Voting: Each member shall have one vote at all Meetings of the Board of Directors except in those situations where a member is precluded from voting by a conflict of interest. Motions require an affirmative vote of a simple majority of all members present.

3.6 Absence: Should any member of the Board of Directors be absent from three consecutive meetings of the Board without communicating to the President or Secretary the reason for such absence, or if said reason should not be found acceptable by the members of the Board, the seat may be declared vacant by a motion, approved by two-thirds (2/3) vote of the Board, and the President may forthwith proceed to fill the vacancy.

3.7 Vacancies: Whenever any vacancy occurs on the Board of Directors by death, resignation or otherwise, that vacancy shall be filled without undue delay by a majority vote by ballot of the remaining Directors of the Board at a Regular Board Meeting or at a Special Board Meeting which shall be called for the purpose. Such new director shall fulfill the term of office that was vacated.

3.8 Removal of Directors: Any one or more of the Directors may be removed by a two-thirds (2/3) majority of votes cast by mailed ballot to the General Membership. A separate vote is required for each Director sought to be removed.

3.9 Regular Meetings of the Board: There shall be a minimum of four (4) Board Meetings each year. Regular Board Meetings shall be held in January and July and during Spring and Fall Conferences. Written notice of the meetings shall be given to all Association members at least thirty (30) days prior to the meeting. Notice may be in the form of an announcement in an Association

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NWBA By-Laws Revision Proposals

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publication, by mail, or by electronic data interchange as determined by the Board of Directors. All Board meetings shall be open to any Member except when the Board has moved, during an open meeting, to go into Executive Session.

3.10 Executive Session: A motion to go into Executive Session shall state the nature of the business of the Executive Session and no other matter may be considered in the Executive Session. Attendance in Executive Session shall be limited to the Directors of the Board and any person whose presence is requested by the Board of Directors. Minutes of the Executive Session need not be taken. However, if they are taken, they may be recorded as a part of the minutes of that meeting.

3.11 Special Meetings of the Board: Special Meetings of the Board may be held at the call of the President, or the Secretary at the request in writing of a majority of the members of the Board, provided a notice of the time, place and purpose of the meeting is given to each Director. Written notice of Special Meetings of the Board shall be given to all Association members at least thirty (30) days prior to the meeting. Notice may be in the form of an announcement in an Association publication, by mail, or by electronic data interchange as determined by the Board of Directors.

3.12 Emergency Meetings of the Board: In lieu of a Regular or Special Meeting, the Board may conduct emergency business at the call of the President or of one-third (1/3) of the members of the Board. An Emergency Meeting may be conducted via telephone, electronic mail or in person. Any actions taken must be ratified at the next Regular Board Meeting.

ARTICLE IV – MEMBERSHIP

4.1 Member: A "Member" as used within this Article, shall refer to an individual who is vested with certain rights as further described within this Article. Any person who has an interest in blacksmithing and supports the purposes of the NWBA shall be eligible for membership upon payment of dues.

4.2 Honorary Life Member. An Honorary Life Member is an individual elected by unanimous vote by the Board of Directors at a duly organized meeting in recognition for having made an outstanding contribution to NWBA. Honorary Life Members shall be exempt from payment of any annual dues for their lifetime and shall be entitled to all the privileges of membership. At the Board of Directors' sole discretion, Honorary Life Members can be removed by a unanimous vote by the Board of Directors at a duly organized meeting.

4.3 Payment of Dues and Amount: Annual dues shall be determined by the Board of Directors. Dues shall be payable on the first day of the calendar year. A renewal statement of dues will be mailed to Members 30 days prior to the end of calendar year. Dues are non-refundable.

4.4 Default and Termination of Membership:

a) Any Member may resign from the NWBA by giving written notice to the Board of Directors.

b) Any member may be dropped from membership by a two-thirds (2/3) vote of the Board of Directors at a regularly scheduled meeting for conduct unbecoming a Member or detrimental to the purposes of the NWBA, provided that said Member shall be given written notice and the opportunity to be heard at the meeting.

c) Any Member may be terminated for non-payment of dues effective ninety (90) days from the due date.

4.5 Voting Requisite: All Members as defined in Paragraph 4.1 above, whose dues are paid current, shall be considered Members of record and shall be entitled to one (1) vote at General Membership meetings or by mailed ballot.

4.6 Membership Meetings: General Membership Meetings shall be held in conjunction with each NWBA Conference. Written notice of the meetings shall be given to all Association members at least thirty (30) days prior to the meeting. Notice may be in the form of an announcement in an Association publication, by mail or by electronic data interchange as determined by the Board of Directors. The Annual General Meeting of the Association, unless otherwise decided by the membership, shall be held at the Fall Conference, or at such time and place as the Board of Directors may determine.

4.7 Irregularities: The accidental omission to give notice or the non-receipt of any notice by any member will not invalidate any resolution passed or any proceedings taken at any meeting.

4.8 Proxies: No proxy votes shall be allowed.

ARTICLE V – COMMITTEES

5.1 Standing Committees: The Board of Directors shall establish Standing Committees. The President shall appoint standing committee chairpersons, including but not limited to Communications/Publications, Conference/Events, Finance/Budget, and Member Services. The members of such committees shall hold office until the appointment of their successors.

5.2 Ad-Hoc Committees: The Board of Directors shall establish Ad-Hoc Committees as required. The President shall appoint appropriate Ad-Hoc chairpersons. Such committees may contain Members of the Association who are not Directors, but shall have at least one Director as a committee member.

5.3 Nominating Committee: The President shall appoint a Chair and two (2) to four (4) additional Members to the Nominating Committee for the purpose of canvassing the entire membership for nominations and conducting the election. The Elections Committee shall solicit nominations from the general membership beginning with a call for nominations from the floor at the Fall Conference. Nominations will be open for 30 days, at which time nominations will be closed. Nominees will be provided information of the duties of a Board Member prior to being placed on the ballot.

5.4 Election Procedures: At the close of the 30-day nomination period the Nominating Committee shall prepare and distribute a ballot listing the nominees in alphabetical order with their statements. Ballots will be mailed to the address of each Member as it appears on the records of the Association. Members shall be instructed to vote for as many, but no more, positions as are available on the Board of Directors. Ballots will be returned to the Nominating Committee for tabulation. In the event of a tie for the last available position or positions, the Nominating Committee Chair shall conduct a coin toss to determine the final position or positions. The election shall be completed by December 31st of the calendar year. This date may be changed as deemed by vote of the Board. Results of the election shall be provided to the President for notification of the new Directors. At its first meeting in January of the new year, the newly elected Board of Directors shall elect the officers of the Board. The election shall be ratified at the Spring Conference General Membership Meeting.

5.5 Committee Quorum: The majority of any committee of the Association shall constitute a quorum for the transaction of business, unless any committee shall, by a majority vote of its entire membership, decide otherwise.

5.6 Committee Vacancies: The various committee chairpersons shall have the power to fill vacancies in their memberships.

ARTICLE VI – OFFICERS

6.1 Officers of the Board: The officers of this Association shall consist of a President, a Vice President, a Secretary, and a Treasurer. Only members of the Board of Directors of the Association shall be eligible to hold an office of the Association.

6.2 Method of Election: Election of officers shall take place at the January Board of Directors Meeting. These officers shall be elected for a term of one year. All incumbent officers may be elected to successive terms in office. A majority of the quorum present shall be necessary for an affirmative vote.

6.3 President: The President shall preside at all General Membership and Board of Directors meetings; shall be a member ex officio, with right to vote, on all committees except the Nominating Committee; make committee chair appointments; sign such papers as may be required by his or her office or as may be directed by the Board of Directors; make such reports and recommendations as necessary to the Board of Directors and to the Members of the Association at any meetings concerning the work and affairs of the NWBA; request from the Treasurer, Secretary and Committees such reports as in his or her judgment are necessary; and perform such other duties as may be incidental to the office. The President shall vote at Board Meetings only in the case of a tie vote. The President may vote at any ballot election.

6.4 Vice-President: The Vice-President, in the case of the death, disability or absence of the President, shall perform the duties and exercise the powers of the President; sign such papers as may be required by his or her office or as directed by the Board of Directors; perform such other duties as shall be prescribed to him or her by the Board of Directors or the President.

6.5 Secretary: The Secretary, or his or her designated representative, shall issue in writing all notice of meetings of the General Membership and the Board of Directors; receive and disburse all US mail; keep complete records of the meetings of the of all General Membership and Board meetings, including an accurate record of attendance of Board Members; present minutes from the described meetings in written form to the membership for acceptance at the next regularly scheduled meeting; mail such other notices as may be directed by the Board of Directors; be custodian of all records of the NWBA, except such records and papers as shall be kept by the Treasurer; sign such papers as may be required by his or her office or as directed by the Board of Directors; keep a list of the members of the Association; and perform such other duties as may be incidental to the office. At the expiration of his or her term of office, he or she shall deliver over to the successor all books, records and other properties, or in the absence of a Secretary-elect, to the President. In case of absence or disability of the Secretary, the President may appoint a Secretary pro tem.

6.6 Treasurer: The Treasurer shall keep an account of all monies received and expended for the use of the Association and shall make disbursements only upon written vouchers submitted; shall oversee the deposit of all received sums in a bank, or banks, approved by the Board of Directors; make written financial reports to the General Membership and to the Board of Directors at meetings or when called upon by the President; arrange for an annual review or audit of the books by an outside accounting firm, cho

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NWBA By-Laws Revision Proposals

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sen by the Board of Directors. The Treasurer shall be authorized to receive and disburse budgeted funds and shall request approval from the Board of Directors for disbursement of funds in excess of ten percent (10%) of any budgeted item amount. The funds, books and vouchers in his or her hands shall at all times be under the supervision of the Board of Directors and subject to its inspection and control. At the expiration of his or her term of office, he or she shall deliver over to the successor all books, monies and other properties, or in the absence of a Treasurer-elect, to the President. In the case of absence or disability of the Treasurer, the President may appoint a Treasurer pro tem.

6.7 Past President: The Past President shall serve on the Board of Directors for the year immediately following his or her term as President.

6.8 Compensation of Officers: The officers may receive reimbursement as the Board of Directors determines for reasonable expenses incurred in the performance of their duties. Such expenses shall be paid on the approval of the Treasurer and President.

ARTICLE VII – FISCAL YEAR

The fiscal year of the NWBA shall be the calendar year.

ARTICLE VIII – AMENDMENTS

These Bylaws may be amended, repealed or altered in all or in part by at least two-thirds (2/3) of the votes cast by members in good standing. Notice in writing of the proposed change must first have been given by mail or by electronic means or in the form of an announcement in an Association publication, as determined by the Board of Directors. Voting shall be conducted by mailed ballot.

ARTICLE IX - INDEMNIFICATION

Each Director or Officer, now or hereafter, serving the Association shall be indemnified by the Association to the extent of its treasury funds and as permitted by law against all expenses, judgments and liabilities, reasonably incurred by him or her in connection with any action, suit, proceedings or the settlement or compromise thereof, or payment of any judgment or fine resulting in which he or she may become involved by reason of any action taken or omitted by him or her provided that such action was taken or omitted in good faith for the Association. The foregoing right of indemnification shall not be exclusive of other rights to which such director or officer may be entitled as a matter of law. The Board of Directors may obtain insurance policies for the purposes of providing the indemnification referred to and may limit indemnification to the limit of the insurance policy(s).

ARTICLE X - DISSOLUTION

By two-thirds vote of all the members of the Association, the Association may be dissolved. Upon the dissolution of the Association, the Board of Directors shall, after paying or making provisions for the payment of all liabilities of the Association, dispose of all assets of the Association exclusively for the purposes of the Association in such manner or to such organization or organizations organized and operated exclusively for educational purposes as shall at the time qualify as an exempt organization or organizations under section 501(c) 3 of the Internal Revenue Code of 1986, as the Board of Directors shall determine. Any such assets not so disposed of shall be disposed of by an order of the proper court, exclusively for such purposes or to such organization or organizations, as said Court shall determine, which are organized and operated exclusively for such purposes. In no event shall the assets of the Association be distributed to or inured to the benefit of any individual member.

Your Opinion Is Important!

The By-Laws Committee, and Ina Culberson in particular, has worked very hard to bring the operational document for the NWBA up to date.

Your opinion is important!

Please forward any suggestions for added changes to Ina at:
oldcedarforge@wavecable.com
or mail her at:
220 E. Cronquist Rd., Allyn, WA 98524.

Remember, the **deadline** for written input is **August 15, 2005.**

Current Operating By-Laws

NORTHWEST BLACKSMITH ASSOCIATION
BY LAWS
AS APPROVED JANUARY 10, 1996

PURPOSE
The Association is organized solely for education purposes, accomplished by: encouragement of training programs and conferences for high standards of craftsmanship, disseminating information about sources of equipment, literature and material, and exposing the public to the Blacksmith's art.

MEMBERSHIP
Any person or organization interested in blacksmithing and accepting the purposes and bylaws of this Association may become a member.

FISCAL YEAR
The fiscal year of the Association shall begin on the first day of May and end on the last day of April of the following year.

DUES
The Board of Directors of the Association, with membership approval, may determine from time to time the amount of the annual dues payable, in advance, on the first day of each fiscal year. Presently dues are $20.00 yearly, $24.00 out of country.

PROPERTY
The property of this corporation is irrevocably dedicated to charitable purposes. no part of the net income or assets of this corporation shall ever inure io the benefit of any director, officer or member thereof or to the benefit of any private persons. Upon the dissolution or winding up of the corporation, its assets remaining after payment or provision for payment, or all debts and liabilities of this corporation shall be distributed to a nonprofit fund, foundation or corporation which is organized exclusively for charitable purposes and which has established its tax status under See. 501 .C.3 of the Internal Revenue Code.

MEETINGS
There shall be a minimum of two 12) meetings each year, location and dates to be determined by the Board of Directors with membership approval. Whenever practical. an agenda shall be mailed to all members before a meeting to permit member-ship participation by attendance, letter or phone. For major issues, voting shall be by majority vote of the members present and by proxy.

BOARD OF DIRECTORS
The Board of Directors of the Association shall consist of seven members plus two additional directors for each 100 N.W.B.A. members exceeding 300 (i.e., 300 members= 7 directors, 400 members= 9 directors.) Board terms will be split nearly equal, with an even number of seats open for election one year and an odd number the following year. The members of the Board shall upon election proceed with performance of their duties and continue in office for a period of two years. Successors shall assume their duties within thirty days after an election. Official address of the Association shall be that of the treasurer.

BOARD MEETING
There shall be a minimum of (4) meetings each year, locations and dates to be determined by the Board of Directors. A quorum consists of(4~ Board Members. The general membership shall be notified before a meeting to permit participation by attendance or letter. For major issues, voting shall be by majority vote of all members responding to ballot, which will be mailed out to the current paid membership. The Board of Directors may determine what constitutes a major issue, such as bylaw changes, elections, etc.

There will be a general membership meeting held at both the spring and fall conference.

OFFICERS
The officers of the Association shall include President, Vice President, Secretary, and Treasurer. whom shall be selected by the Board of Directors.

PRESIDENT
The President shall preside at all meetings of the Association and the executive committee; is ex-officio member of all committees with vote: shall communicate to the executive committee and the Association members continually on promotion. effectiveness, and welfare of the Association.

VICE-PRESWENT
The Vice-President shall act in the absence of the President.

SECRETARY
The Secretary shall maintain records and minutes of all Board meetings and will provide copies of minutes to all Board members, and to the newsletter editor for inclusion in the next Association newsletter. The Secretary maintains records of and conducts the annual election of officers by (mail) balloting: responds and initiates all correspondence to and from N.W.B.A., from other sources; is responsible for overseeing the timely production of the newsletter, and its distribution.

TREASURER
The Treasurer shall have custody of all monies belonging to the

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Current Operating By-Laws

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Association, deposited in Association's bank account(s); shall maintain all financial records of N.W.B.A.: will provide a quarterly financial report at Board meetings, or as requested by the Board of Directors: shall handle all financial transactions in a timely manner as to benefit both the Association to maintain acceptable credit, and to the membership: shall work with the newsletter editor to maintain current membership list.

NEWSLETTER EDITOR

The newsletter editor is a non-voting position in addition to the Board of Directors. The editor will be appointed from qualified applicants by the current board. Duties are: production and distribution of the Hot Iron News and the Informational Update Letter, on a scheduled basis. Dates of distribution will be approved by the Board of Directors. The editor shall maintain both membership and mailing list may be required to handle special mailings, as holder of the bulk mall permit.

All officers will maintain records required for their term of office and will relinquish all N.W.B.A. materials to their successors.

NOMINATION AND ELECTION OF THE BOARD OF DIRECTORS

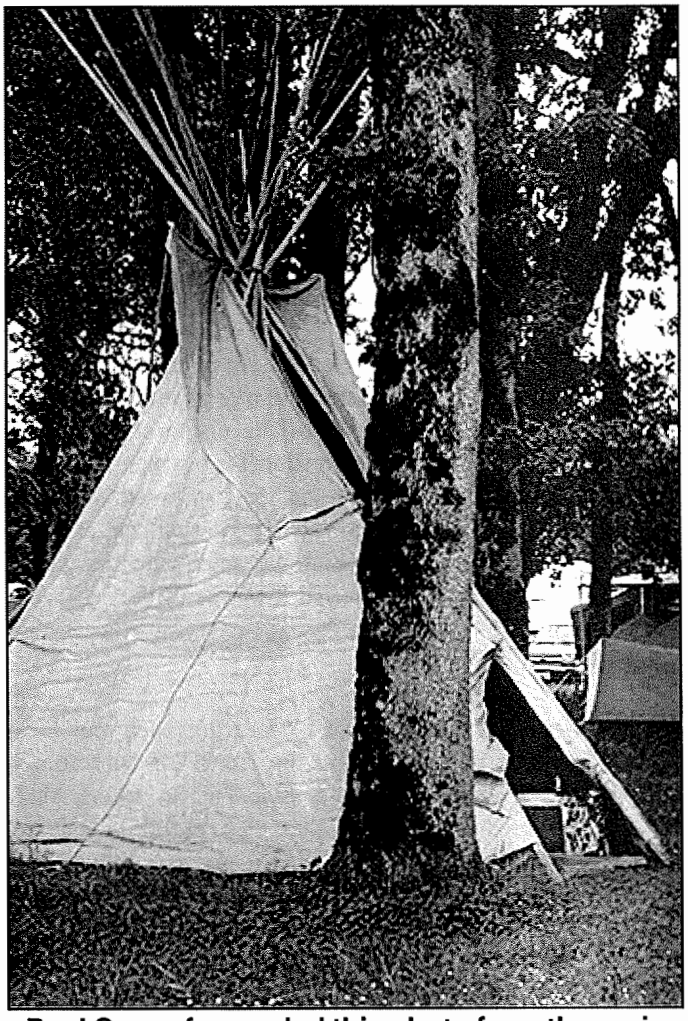
Nominations shall be opened at the annual Spring Conference for any open Board positions. Nominations viii be open for 30 days. In the event that ~ more candidates are nominated for Director's positions than there are vacancies, the Secretary shall specify the rules as the number to be voted for, validity of ballot, establishment of the right to vote, and similar matters. Ballots will be mailed to all members in good standing after the nomination period is closed. Polls will be closed 2 days after the mailing date. Ballots will be held by the I Secretary unopened until the polls are closed. The ballots shall then be canvassed by the Secretary with a deputy of the Association. The results of the vote will be determined by majority count of ballots returned. The results will be published in the next newsletter.

Persons having the most votes will assume the open Board positions (not an open officer's position, however' see "Officers"). When all open positions are filled, any remaining nominees will be considered as alternates, in order of the highest count. These alternatives may fill any interim Board positions between voting periods. If no alternatives are available, the Board may appoint-from the general membership.

AMENDMENTS

These by-laws may be amended, repealed, or altered; all, or in part, by a majority vote of those members responding by mail, who are in good standing in the Association. Proposed changes shall be mailed to the last recorded address of each member at least fifteen (15) days prior to the time of the ballot mailing, to allow time to consider the change(s).

Any changes to the by-laws are to be signed as approved by current Board members, and dated as to the date that changes are voter approved.



Paul Casey forwarded this photo from the spring conference. He thought it made a neat statement about blacksmiths (note case of beer by door).

Some details on self-closing hinges

by Jack Slack and Maria Cristalli

Sharp-eyed observers of the picture of Maria's 'Rose Garden' gate in our most recent issue may have wondered why the upper journals on the back stiles are longer than would seem necessary. For those who attended our (outstanding!) Spring Conference, Maria revealed the answer in one of her demo's - they're to accommodate the action of Self-Closing hinges.

For those who missed it, we thought we'd set out a few of the details.

Note that we're not talking here about Door (or Gate) Closers; that is, external devices such as weights, springs, motor operators, or the like, but about modifications to the hinges themselves, to make a gate close under its own power.

Hinges on Rose Garden Gate.

One common way to make a gate close by itself is to offset the hinge pins; those who have ever hung a gate or door will have discovered that for themselves!

Moving the bottom pin slightly out of plumb biases the gate to swing shut, whereas moving the top pin does the opposite.

A disadvantage, though, is that this method only allows swing in one direction. There are, however, commercially available hinges that rather cleverly allow swing in both directions. They're commonly used when safety is a concern; take a look at the swimming pool gate at the next motel you stay at.

If you'd like to find out more about this 'offset pin' method, Jock Dempsey has a brief write-up at <http://www.anvilfire.com/iForge/tutor/jdhinge/top_index.htm> (about halfway down the page).

But we're Blacksmiths, so we can make our own hinges!

The simplest method of making a self-closing hinge is to slice the hinge bearing surfaces at an angle. An example is shown (courtesy of David Lisch) in the photos on the next page showing the hinge disassembled, and showing the hinge as it would be with the gate partly open.

Note that there is no requirement that the hinge halves be circular in section, only that the sliding surfaces must provide for a circular path.

In situations where the gate is not too heavy, and where there is a lock bar for the gate to shut against, this method works fine, although there are a couple of disadvantages:

- without a lock bar the gate will waggle about a bit when closing, rather like the saloon doors in old Western movies. Also, the angle of the hinge faces is important; too steep and the

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Self closing hinges

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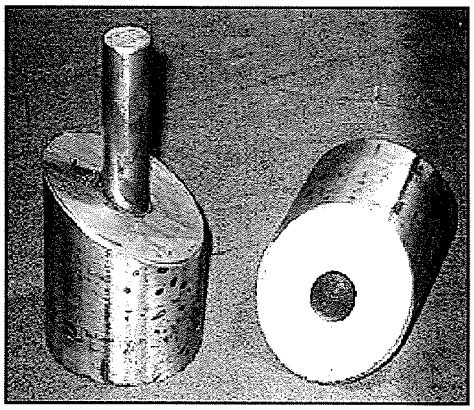
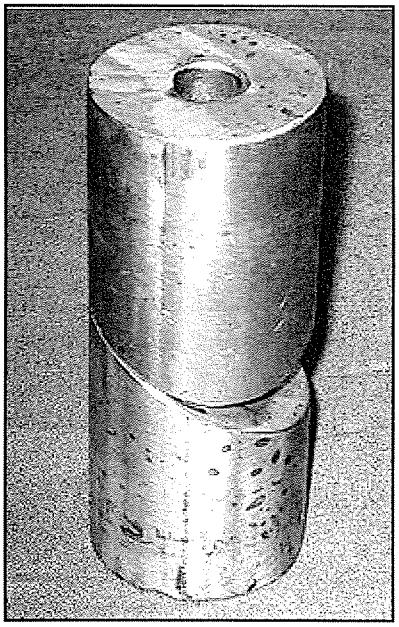


A simple solution for self-closing hinges — slice hinge bearings at an angle.



gate will be hard to open, and will slam shut (against any lock bar or stop) rather resoundingly (we'll have more to say about angles further on).

Maria's challenge was to find a system that would work on a double-leaf gate without a lock bar, and still close positively, without waggling about. She researched available commercial options and asked around the group; Jack was able to provide a solution he'd used in similar situations in the past, and that's what we'll describe here.

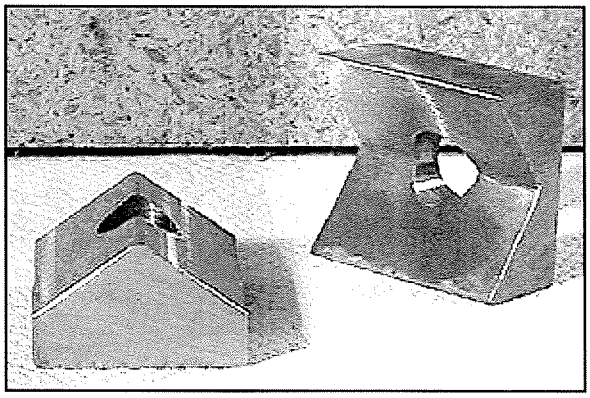
A gander at the top photo on the right reveals the secret workings; the lower element in bronze, the upper in steel. As in David's sample, the wear surface describes a circular path, so the section shape can be anything you want that will contain that path (Maria's is rectangular).

The second shot shows the hinge assembled with its pin in the closed position. Note how the hinge provides its own built-in stop.

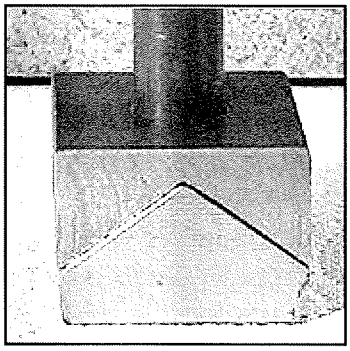
The photo that shows the hinge slightly ajar pictures it at about the point that positive 'close-to-a-stop' is taking effect.

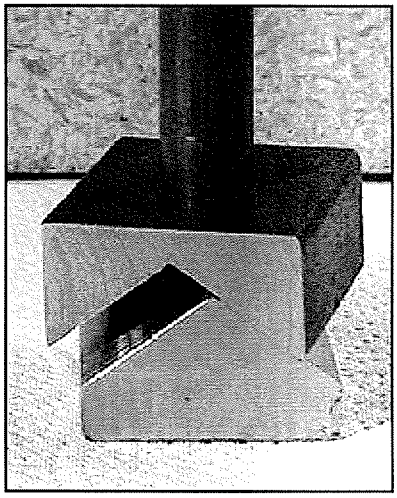
In the bottom shot you can see a perhaps unexpected bonus; when fully open (90 degrees), the gate will remain open by itself! While not strictly necessary, a small notch can be filed in each side of the upper member to provide for a small detent action in the open position.

Now that note about angles that we promised above. Too steep has already been discussed; too shallow and the gate may close too slowly (or not at all!), so some experimentation will be required. The most critical factor is the weight of the gate; a secondary consideration is the amount of lift that can be accommodated. Maria

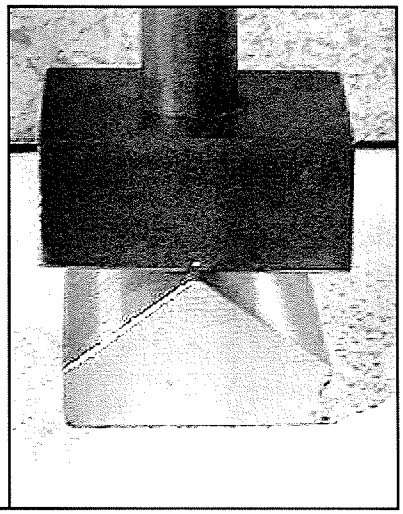


The wear surface of these hinge parts (above) describes a circular path.





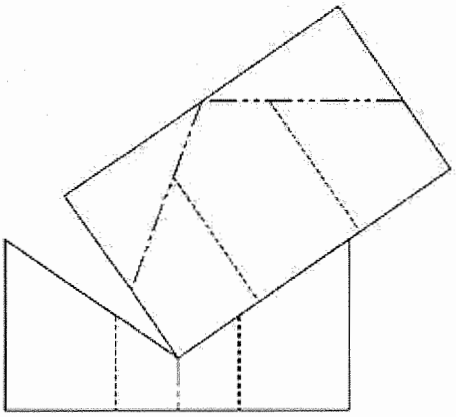
The closed hinge provides its own, built-in stops, while, when slightly ajar, there is a point that "close-to-a-stop" takes effect.



Fully open the gate remains open by itself.

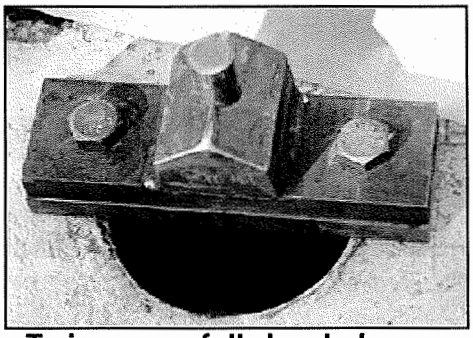
made a gate mock-up and several samples at different angles to determine the optimum angle to allow easy opening and positive closing without overshoot. The final angle chosen for this situation is 33 degrees (measured from the horizontal).

For the production hinges, Maria sawed out the top half, taking care to maintain equal angles and a smooth surface. As a milling machine was available, Jack milled the bottom half; a shaper, or careful work with hacksaw and files would have worked as well. A method for using the top half as a jig to aid in finishing the bottom half is shown here.



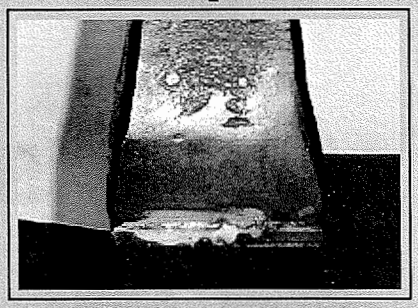
Production jig as another method for finishing the bottom half of the hinge.

For application to the gate, the back stile was upset to match the top half, which was then welded to the bottom of the back stile, and the stile drilled to accommodate the pin. A cross-hole in the stile intersects to allow installation of a grease fitting. The bottom half was welded to a small plate; this plate, with slotted holes to allow for adjustment, sits atop a T-piece which was carefully leveled and grouted into the foundation hole. Exceptional care taken to insure that everything was level and plumb.

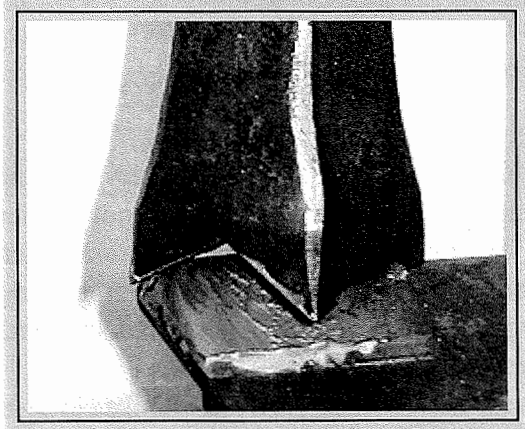


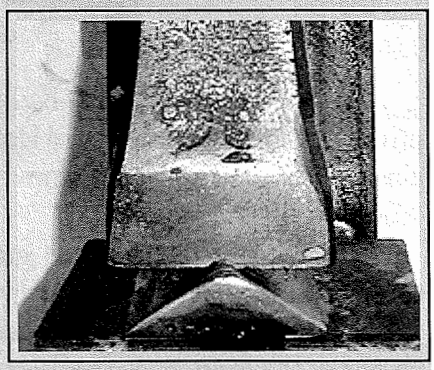
T-piece, carefully leveled in foundatin hole.

Test Bed samples

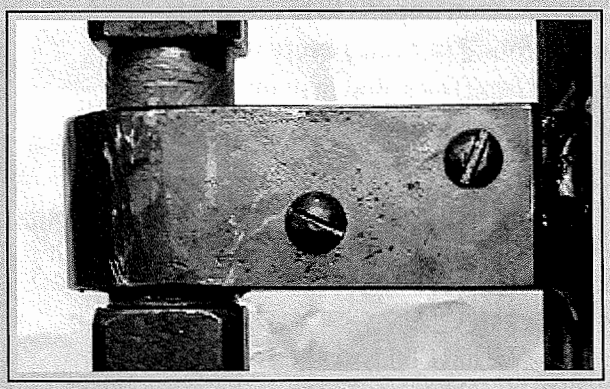


Bottom hinges closed, open, and (left) ajar. Note that bottom is well greased.

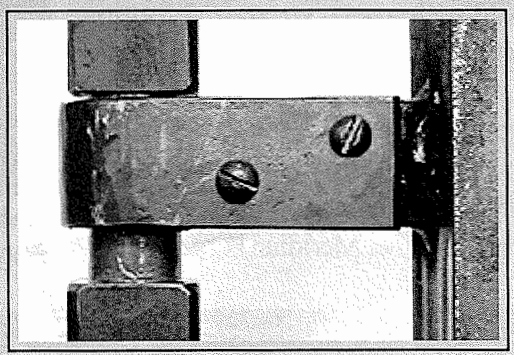




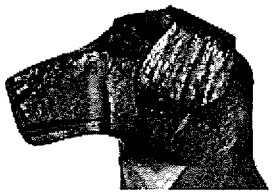
With the system in the fully open position one of the 'detent' notches can be seen on the top half. Also visible is a slight rounding at the apex of the bottom half, just to break the shart edges.



Over enthusiastic applicatin of the file is counterproductive, as the apex points form part of the principle wear path, and they'll soon bed in by themselves.



Heads, it's Meridian Forge



by Mike Neeley

(Mike Neeley was the beneficiary of an Al Bart scholarship from the Northwest Blacksmith's Association.)

On Easter weekend I had the privilege of attending the Animal Heads class at Meridian Forge in Eatonville, Washington.

Thanks to a generous grant from the Al Bart Memorial Fund, I was able to participate in what I consider to be one of the most important classes available for developing metal smiths.

The results of the skills that Darryl Nelson imparts to his students can be found in nearly every issue of the *Hot Iron News*, and in many of the hand forged products that are sold around the country today.

I'm Mike Neely. My brother, Dave, and I run Neely Brother's Blacksmith Shop in Woodland, Washington.

We have both worked for most of our lives with hammers in our hands, but we were usually hitting nails while building houses. We started forging together about six years ago in a lean-to shed. We opened our shop about two years ago.

The Animal Head class was my third class with Darryl Nelson and, when he put together Meridian Forge School, I was ready to sign up.

The thing about Darryl is — the guy can teach. It does not matter whether you are an amateur craftsman or full time working smith, you are going to learn a bunch of useful new skills and techniques.

The class size is limited to eight students or less so that Darryl can give everyone the time they need to have questions answered, and to offer students alternative techniques and encouragement.

On Friday, classes began after coffee and rolls and introductions. While the forge was heating up, Darryl talked about the sculpting of animal heads by moving and isolating mass to pre-shape the

Darryl Nelson teaches a popular animal head making class at Meridian Forge in Eatonville, WA. "It's all in the pre-shaping," says Mr. Nelson.

head. "It's all in the pre-shaping," according to Darryl. "If the shape is correct, the detail goes easy."

To demonstrate, he heated a length of 5/8" square rod and pre-shaped a Class C Dragon (a dragon with a closed mouth and no ears.) The entire head was pre shaped on the edges of the anvil in just a few well-placed blows with as much attention to what the anvil was doing as what the hammer did.

Using a simple little tool that holds a head shape at a nice angle in the post vice, Darryl chiseled a line for the mouth, punched the nostrils and eyes, and the dragon was alive.

Moving on to the Class B, or Bottle Opening Dragon, required the same basic pre-shape as before. The difference was in the mouth, which was chiseled open, given a tooth line for added fierceness, and angled just so, to open bottles. Of all the dragons, these are the most useful.

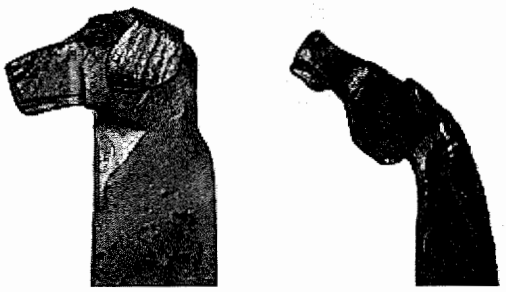
Class A Dragons are still more involved and required more tooling to help pre shape for the long tongue and ears. One of the very useful tools that we used was a guillotine fuller and butcher made by Grant Sarver. These tools are great for isolating mass and you are can really see what you are doing when you use them. Another tool Darryl introduced was a small side set, which we used to define areas like the lips and nose.

Our class did very well working our way through the stages of dragon forging.

A little mayhem ensued as we attempted to forge long ears and slinky tongues on our class A dragons. One of the hardest skills to learn is when to quit, especially when fullering and chiseling. By lunch, though, we were all much more confident and we each had a hand full of great dragons to show and tell.

From dragons, we moved on to bear and rams heads. Throughout the day it became evident that the proper pre-shaping of our animal heads was critically important to the finished product.

The shape of the head determines what kind of animal it is. The facial features define attitude.



After I forged an especially odd looking cross-eyed ram, Darryl explained to me that carnivore eyes face forward and that herbivore eyes look to the sides. He knows really neat stuff like that!

Saturday started with two-dimensional heads forged from 1/4" by 1" flat bar into horse, ram, hawk, bear and dog. The skills we learned on Friday helped us understand how these heads develop and we were all surprised at how quickly they can be forged. My animal eyes were getting better, and were generally pointing in the correct direction.

The school provided all of the tooling we used, including a big bucket full of eye punches. Darryl demonstrated his method of eye punch construction for the class, but students made no tools during the weekend.

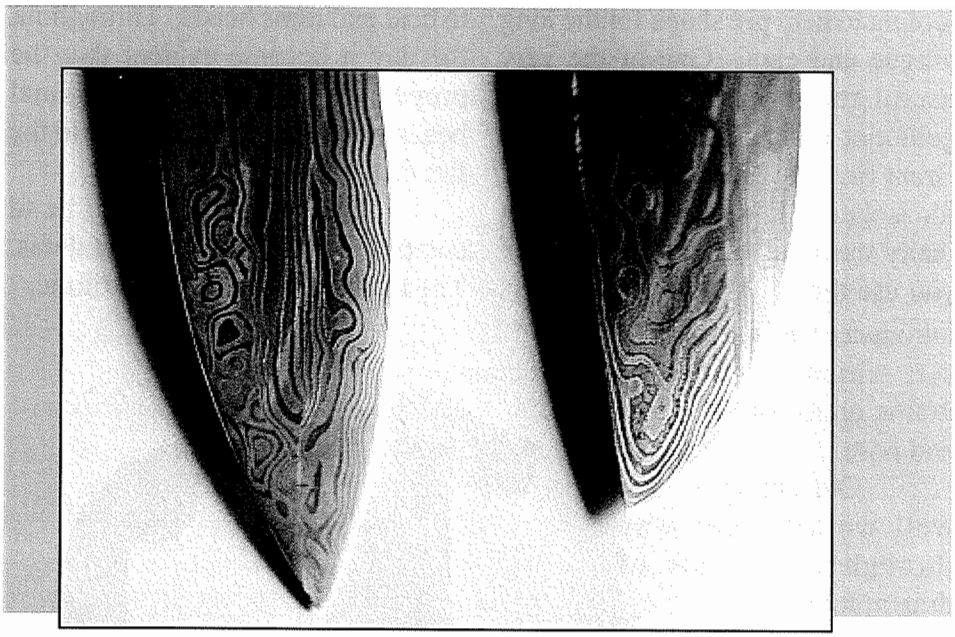
The last demonstration for

(continued on page 40)

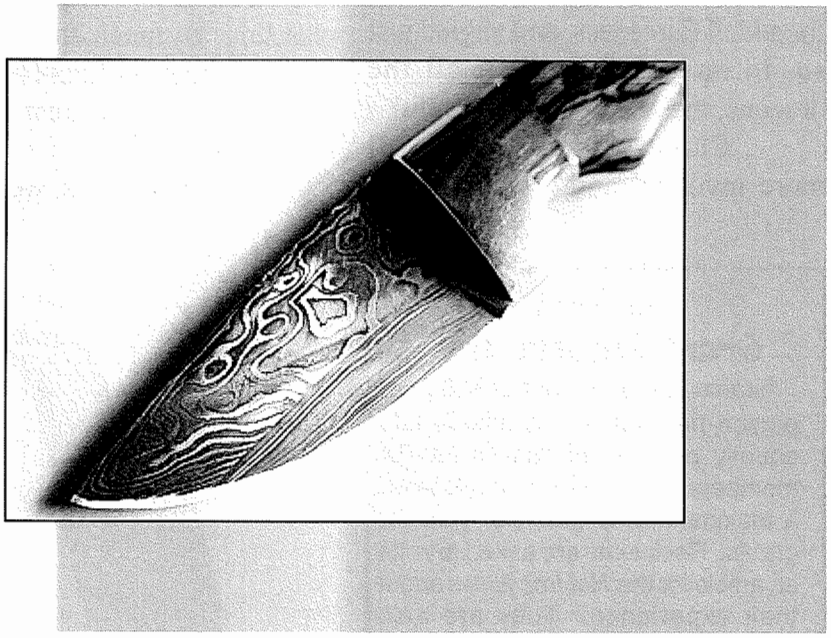
Al Bart Grant Information

Grants in the amount of $250 per person per year are available and equally open to all current NWBA members. The Board has allocated a maximum of $1,500 per year for grants. Recipients are asked to write an article for the *Hot Iron News* about their experience. They are also encouraged to demonstrate what was learned to other members, whether as an evening impromptu forging at a conference or a stand-up-in-front-of-the-crowd show and tell. Application blanks are available on the NWBA website at www.blacksmith.org, or call any Board member.

The Al Bart Memorial Grant



Beautiful blades, the tradition of the Damascus process



David Lisch makes knives with extraordinary blades, blades that shimmer with wavy metal patterns, blades that change appearance as the light plays across their surfaces.

It's a centuries old process, commonly known as Damascus. Favored for strength and the ability to hold an edge, Damascus was the favorite of sword swingers for all those years when war meant hand-to-hand combat and the last man standing could thank the fact that he may have had the last sword still intact.

Few such blades have such a grisley purpose today. They are favored for their stunning individuality, no two ever looking alike, all with patterns that are endlessly fascinating.

David's blades begin with a stack of fifteen 1/8" pieces of 15n20 and 1084 high carbon steel. Heated to very high temperatures and pounded into each other, as the original thickness falls to a little under an inch the stack is folded over onto itself and the process repeated. The billet is folded one more time, so that the final blade represents sixty original layers.

"The stacking, cutting and re-stacking must be done without any imperfections," David said. "That's the most critical part of the starting process."

Bob Kramer, another NWBA smith with a fascination for these type of blades, says that basic pattern

welding (as opposed to wootz or crucible steel) is also known as forge welding or diffusion bonding.

Beginning with as little as two layers or up to as many as a person likes or can manage the billet is heated to fusion temperature (varies depending on materials being welded but generally is around 2300F). At that temperature the material becomes very plastic so that when the layers are pressed together or run under a power hammer the surfaces begin to bond, Kramer said.

"Further time in the forge encourages more molecules to move from one surfrace to the adjacent surface, increasing the bond strength."

When the material is stretched out so that it can be cut and folded material is just being displaced, not increasing density.

Kramer explained that each time the material is drawn and folded a fair amount of material is lost in the form of scale.

"Towards the end of the process you forge to shape and save," he said.

Lisch makes his patterns using a drill.

"When the final blade nears 3/8-inch, I drill small bores into it, leaving little indentations. As the blade is forged down to 3/16th or so the ripples come to the surface, making the pattern," he said.

Making Handles

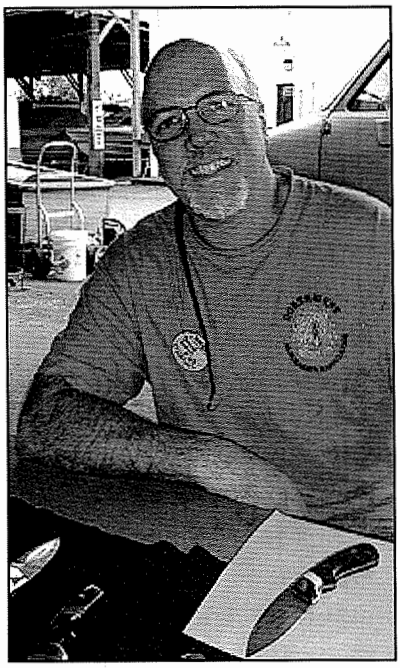
Lisch has also invested a lot of time learning how to make handles fine enough to compliment his quality blades.

"I took a class from Elliott Whitfield at Ray Rock Springs in Stephens Pass," he said. "Elliott is an old guy who stopped making handles himself a few years ago, but he knows all the skills and tricks and is happy to pass that information along."

Materials that end up as grips include most hard woods — Lisch had a great collection of desert ironwood at the spring conference — and other materials like buffalo horn.

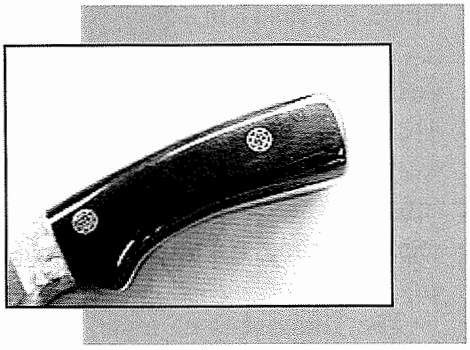
Even the pins that hold the handles together lend themselves to artistic creativity.

Lisch makes some pins by drawing epoxy into a brass tube and then filling the tube with other tubes of different shapes and sizes to create a pattern. Once the epoxy hardens the pins are cut to the proper length, installed and smoothed off.

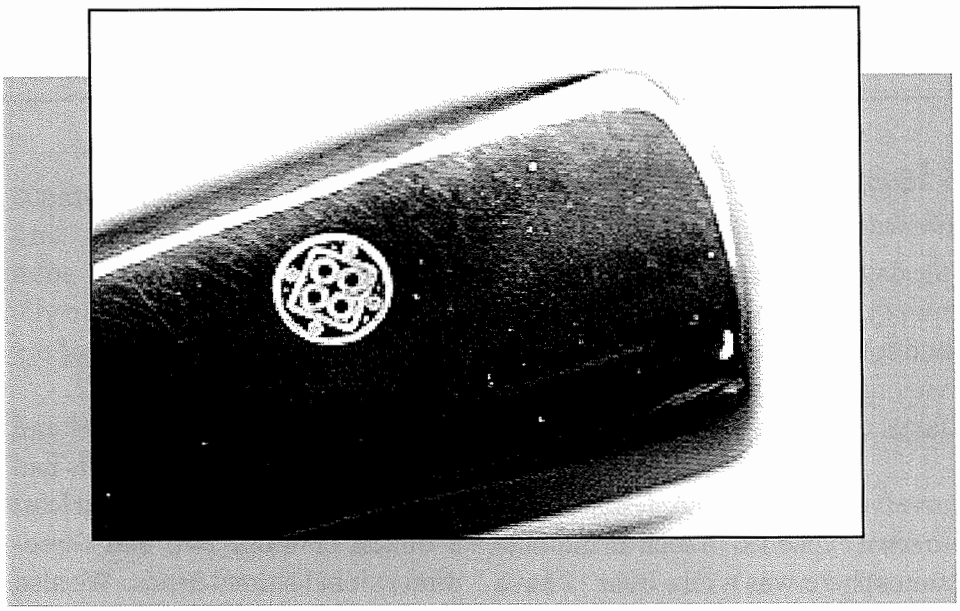


David Lisch

More on Damascus blades on page 40



Note the pattern of the pin that holds this bone handle together. It's various sizes of brass pipes pulled through an outer tube full of black epoxy.

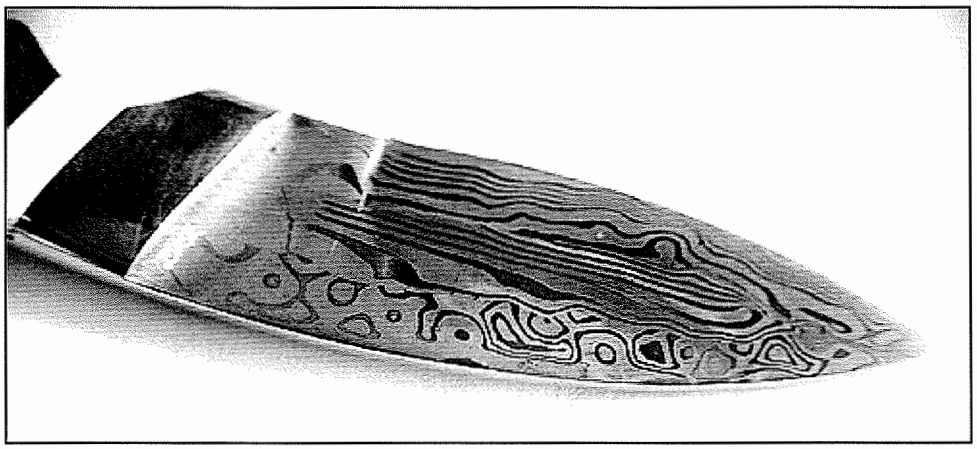


Some interesting facts about Damascus steel

From :*Damascus Steel: Past and Present By Motoyasu Sword Forum Magazine*

Just what exactly is Damascus steel? The word conjures up all kinds of connotations ranging from extremely beautiful to almost magical - even indestructable, when fused with diamond dust, supposedly!

In truth, Damascus is just steel. It has no magical properties and is not indestructible, nor is there any "diamond dust" in it (in any case, if you did put diamond in, it would just dissolve into the steel as regular carbon, it would not impart any special properties).



The Damascus of legend was also known as Wootz or Bulat and was a very high carbon crucible toolsteel. Bits of steel and iron and carbon are placed in a ceramic crucible and heated at very high temperatures until it all fused together. The high carbon content (usually above 2% - most steels used have less than 1% carbon) forms a lot of carbides, which precipitate out, forming lines on the surface of the steel. It is these lines of carbides that create the "watering" effect that Damascus is so famous for.

What we call "Damascus" today is really just pattern welded steel- smiths just weld together a few hundred layers of hard and soft steel and then etch in acid. The acid attacks the hard and soft steels at different rates resulting in a visible pattern on the steel that resembles the lines of carbides on Wootz. Neither Wootz nor pattern welded steels are anything magical though; the alternating layers of hard and soft impart a bit more flexibility and toughness to the steel than a solid homogeneous steel and the hard and soft in the edge act much like serrations and aid cutting, but it is still steel and will break if bent too far and cannot perform any fantastic feats of cutting.

Head making class

(continued from page 37)

the day was a bear head with an open mouth. The mouth had teeth, lips, and tongue. There is nothing like a vicious looking mouth full of sharp fangs to give a carnivore attitude.

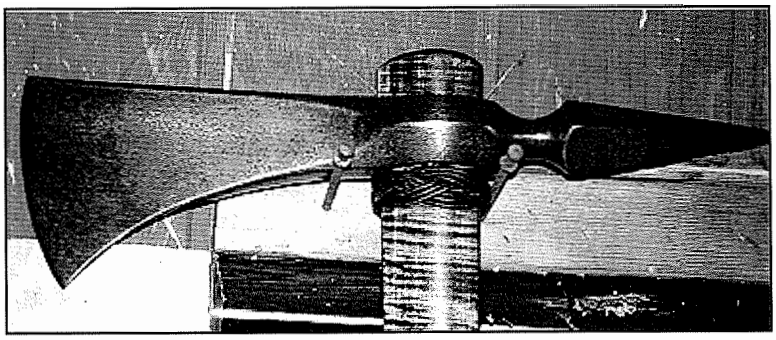
Darryl has demonstrated this involved process at conferences, but to see it explained in such an intimate atmosphere was a rare treat. I have looked at Samuel Yellin's famous forged heads for years and wondered how he created such incredible open mouths. Darryl's demonstration answered a lot of my questions.

By the time the weekend drew to a close, all the students had notes and forged examples of at least a dozen or more two and three-dimensional animal heads. We also had time to examine Darryl's personal collection of forged animals, which is a lesson unto itself, especially after we had some idea of how they were created.

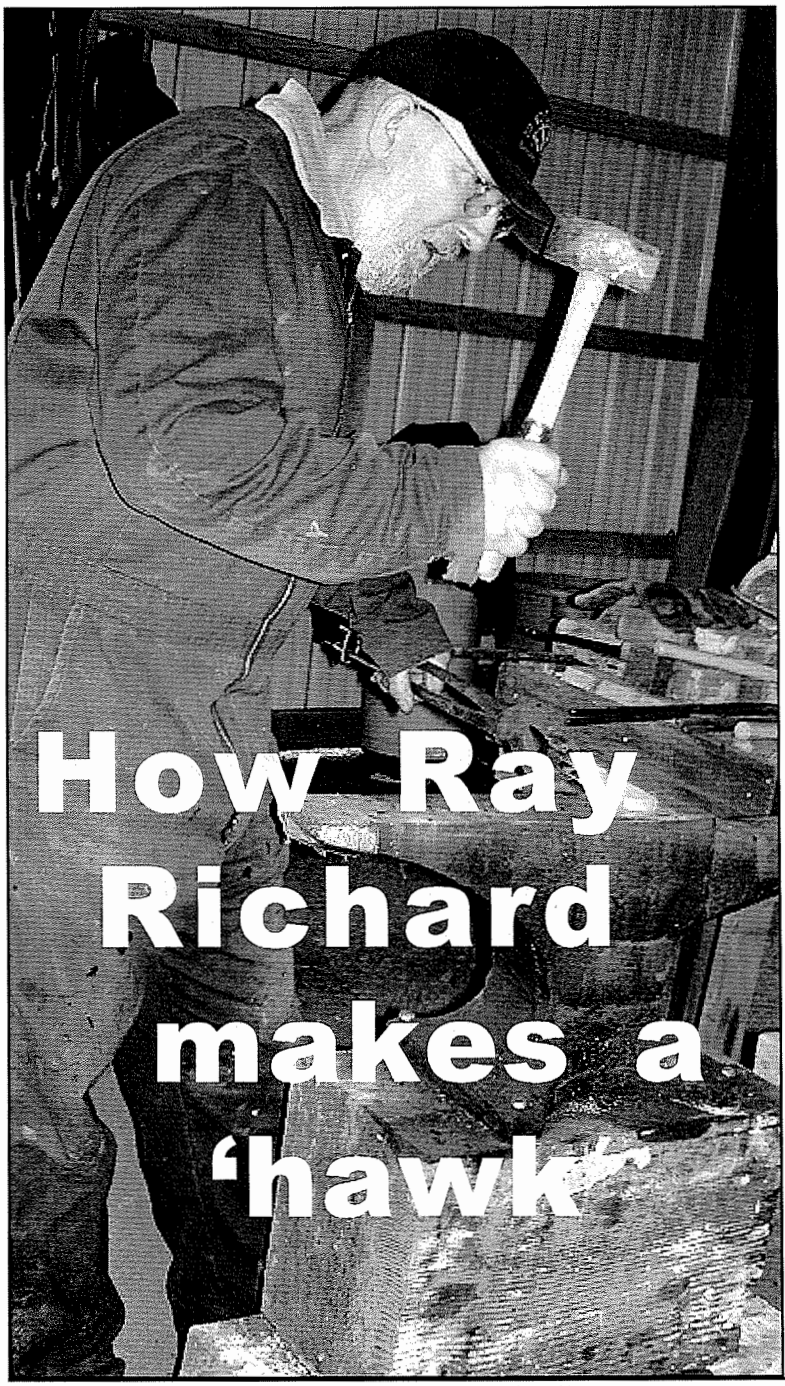
I believe we all went away with new confidence, and some new friends, too.

Thank you to the NWBA and the Al Bart Memorial Fund for this great opportunity.

There's no power hammer in this shop, but it doesn't keep Ray Richards from having a special way with making tomahawks.



Photos and Story by Ike Bay



How Ray Richard makes a 'hawk'

Ray is a successful maker of knives and other bladed tools but he has a special way of making tomahawks that seems to keep the customers coming back.

There is no power hammer in his shop but he has developed some interesting tools and techniques to get the desired results.

A bigger hammer and some basic tools are his solution to most problems. As with all forging the secret is to keep control of the piece as it passes through the forging process.

All through the forging steps the material is equally distributed along the center line of the front and back edges.

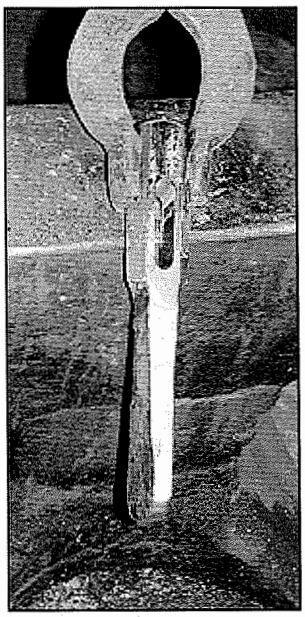
His anvils and eye stand are on concrete bases and rock solid, this reflects his construction background.

The eye is a stock removal operation so the eye wall is very near what he wants it to be on the finished hawk. This is done before any forging begins.

He used square and six-sided material depending on the look he is after on the finished piece.

The hex (6) gives an especially nice transition of lines from

(continued on page 42)



All through the forging steps the material is equally distributed along the center line.

Making a 'hawk

(continued from page 41)

the top down the eye and into the blade.

Tongs have adapted to a good fit on the parent stock.

Old jack hammer bits and new 1085 are popular materials for this work.

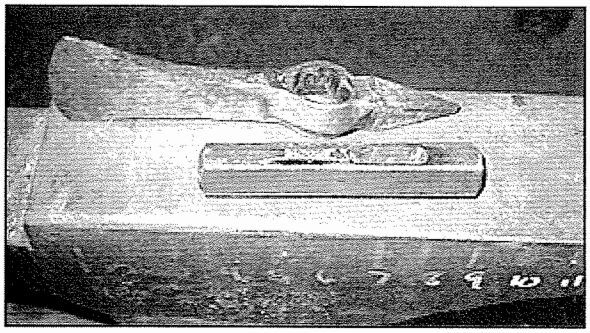
A large cup wheel is driven by electric motor and any time there is a hint of a cold shut forming it is ground out, many times at a full forging heat. This keeps the flow and rhythm in his work.

Near the end of the blade forging process there is some upsetting necessary to get the proper spread. A bar through the un-spread eye/hardie hole takes the force without scarring up the stock under the tongs.

The spike on top can have a neck or not. The neck is done on the fuller and the spike is drawn using the near side of the anvil and straight pein hammers especially made for this work.

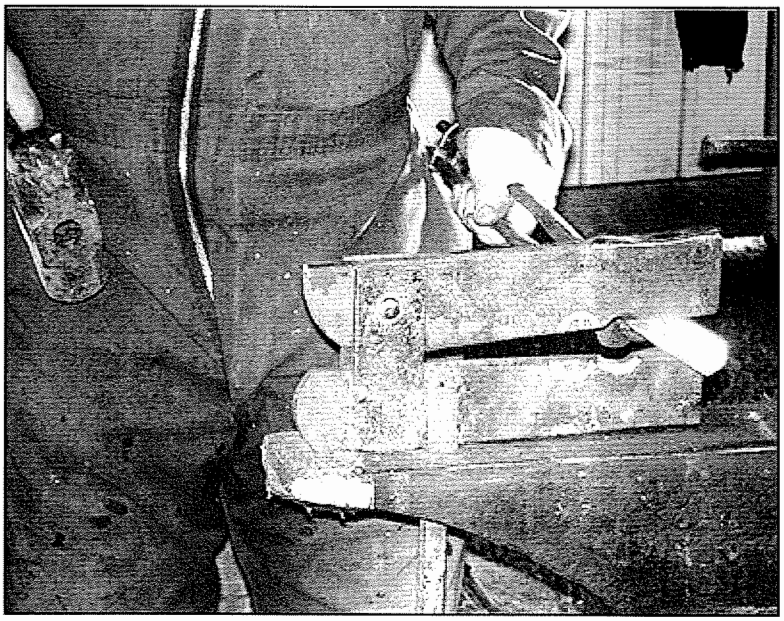
The eye is spread as the last step using a commercial drift and a special stand that supports the hawk blank on a floating plate cut out to fit the drift.

A good even heat on both

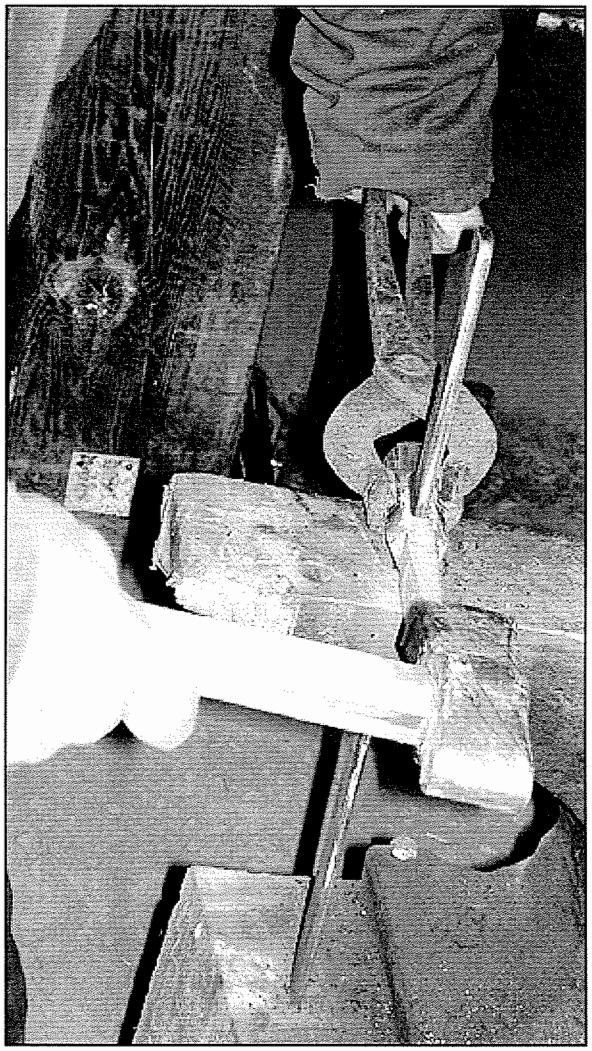


Old jack hammer bits and new 1085, popular materials for this work.

The roughing out of the blade is done with a lot of help from a fuller made from vehicle spring. He uses the radiused edge that is already on the spring stock. It works on both axis of the blade.



A vehicle spring fuller helps with the roughing out, working on both axis of the blade.

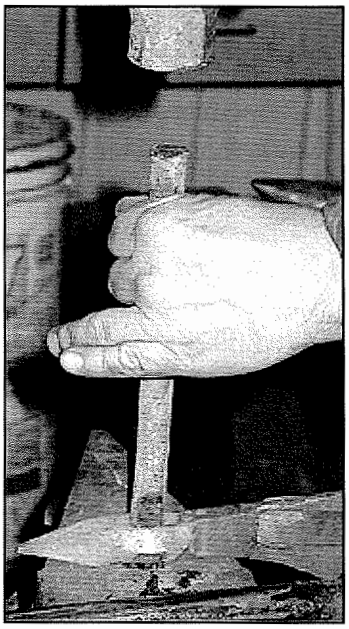


A bar through the un-spread eye/hardie hole takes the force without scarring up the stock under the tongs.

The spike is drawn using straight pein hammers especially made for this work.

sides gives you the best chance of a uniform eye, corrections must be done carefully so you do not distort the peaks on the eye wall.

The drift is slathered with Crisco before inserting into the hot metal, to act as a lubricant.



A good, even heat on both sides gives the best chance of a uniform eye.

A lot of filing, grinding to make a clean surface and any "corrections" necessary. The better you forge the easier this work is.

The last step after heat treating is a "pickling" process in Ray's secret brew.

Clorox is surely a part of this mystery blend. This gives a very pleasing antique finish that is not rusty.

Two sizes of drifts and matching wood handles in different wood species and grades are available from: Hawkins Knife Making Supplies, 110 Buckeye Rd, Fayetteville, GA 30214 or www.hawkins knifemakingsupplies.com (oneword) or sales@hawkinsknife makingsupplies.com (one word) or 770 964 1023.

It's worth the price of a phone call just to hear June Hawkins voice.

Shop Tips

Cheap and indestructible file and rasp handles

(continued from page 46)

sell more files. Think about it, hardened steel dulls files, right? File cards have bristles of hardened steel. If your file is not cutting well anymore, it can be reconditioned by acetone cleaning, then a brushed on muriatic acid bath several times.

Use a parts cleaning brush, and a plastic drywall mud pan.

After a number of acid dunks, rinse and test the edge. Give it a few more 'til it gets its bite back. Not as good as new but better than it was. Rinse with water with a little baking soda, and blow dry.

Use appropriate saftey precautions with the acid. Avoid splattering it on yourself and clothes, avoid breathing the fumes etc. Rinse with water if you get any on you.

It's not real nasty acid, it stings a bit if you don't notice it on you for a minute, but stops if you rinse well with water. Gloves and goggles are probably a good idea. And doing all this outdoors is also a good idea as acid fumes in a shop will put a nice rust patina on all of your steel tools. Dilute the acid well with water when disposing.

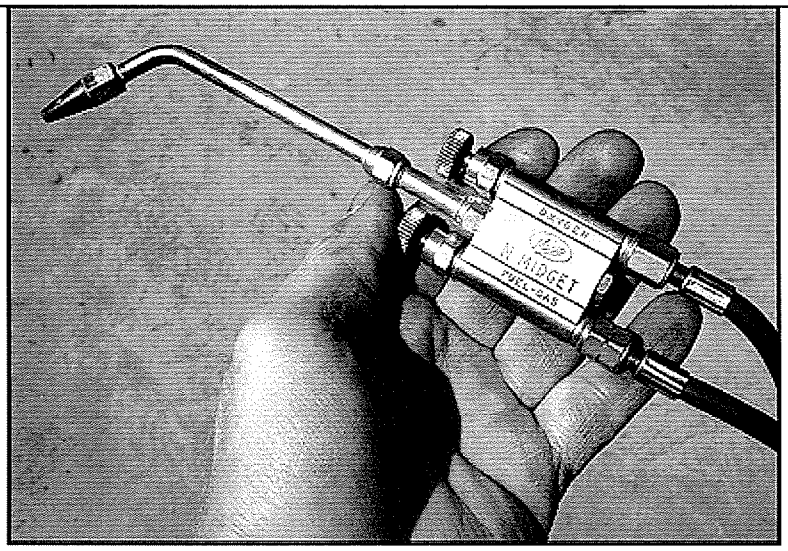
Well, that's it from another poor penny pinching blacksmith.

Good filing, Martin Brandt

Shop Tips

Brazing

John Emmerling
Gearhart Ironwerks
Gearhart, Oregon



The mighty Meco Midget torch

Several years ago I began to look for alternatives to tig and mig welding in the construction of lighting and components.

Since joinery cleanliness and ease of cleanup is paramount, mig and tig welding did not always work to my advantage. I wanted to use as little filler material as possible and have a strong joint that required minimal cleanup.

So, I began to explore brazing. I first used coated brass rod. The brazing worked well, but I did not like the excess flux on the brass rod while brazing because I couldn't see the joint clearly, its cleanup seemed excessive, and the strength was not up to expectations.

Next, I tried low fuming bronze bare rod and dipped it in the flux as necessary. It worked well and was an improvement over coated brass rod.

However, there were two drawbacks: one, the strength, while generally adequate, was not always so, and two, if the finish of the piece was to be natural buffed iron, the bronze color was a detriment.

After searching the internet, I found a nickel/silver rod that works well.

Allstate 11 comes in 1/16th and 3/32nd bare rod. Its equivalent is Harris-Welco 17. (Harris-Welco 17 is not available in 3/32nd bare). The strength of these nickel/silver rods is 50% greater than low fuming bronze and the color, while warmer in tone (platinum colored) than buffed iron, blends in nicely when buffed.

Since it is stronger than low fuming bronze, a smaller amount is needed which helps in color blending. Also, these rods have excellent capillary action and tend to follow the heat readily. A fillet can be obtained by simply pulling back on the heat source, adding more filler rod, and gently washing the joint with heat.

Cleanup is minimal.

The flux used is boric acid. I bought the Allstate recommended flux, read the label that said it was boric acid, and began using the same boric acid I use in mixing forge welding flux. I bought the boric acid at Nuremburg Scientific in Portland,OR. The boric acid is wetted and applied to the parts to be joined with an acid brush. Only a very dilute solution is needed. The flux can be removed with warm water and/or use of a wire wheel.

I also purchased a Henrob torch several years ago and had been using it regularly. Anyone who has used a Henrob to braze with knows that after a period of time the weight of the torch and hose combined with the ergonomics of the pistol grip becomes tiring.

Not long ago I discovered the Meco Midget torch and its lightweight hose. This little torch is amazing for its size, weight (6 oz.), maneuverability, and heating capacity. Tips available go from a zero to #3. I use the #2 and #3 tips most frequently.

Although it will not do everything a Henrob will do, at a cost of $105.00 for the torch and $8.00 for each tip, I consider it a good bargain.

For info on this torch, go to: www.tinmantech.com. The Harris-Welco 17 brazing rods were purchased thru Quimby Welding in Portland, OR. at $54.00 per 5 pounds of 1/16th bare rod. They are a special order item and can be drop shipped for minimal delay. I use more of the 1/16th in general and occasionally 3/32nd for larger gaps.

Info on Allstate 11 can be found at : www.fredparrcycledesign.com.

Shop Tips

Last minute tongs

John Emmerling
Gearhart Ironwerks
Gearhart, Oregon

Last year I had a client who ordered three sets of fireplace tools due by Christmas that included pickup tongs in addition to the usual poker, shovel and broom.

The tongs represented the greatest amount of work and I put them off until push came to shove.

Fortunately, my neighbor had a forged pair he bought at a garage sale (the wife was angry at the ex-husband who had paid $150.00 and wanted to get rid of them) for $15.00 and I used those as an idea for the starting point.

I'm not very good at making tongs as I don't do it enough to remember how. It always seemed like a lot of process, and was something I never cared to spend time doing.

The most difficult part for me was always the offset. After several hours and eight plus feet of 1¦2 " square stock trashed, I found what I think is an acceptable and simple solution. This can be done in the hydraulic press and/or the power hammer.

First, I cut a piece of 1¦2"x2" mild steel that was several inches in length. One end was given a slight radius and it was welded to a larger base piece.

Next, I repeated the procedure and welded the 1¦2"x2" to a handle.

The last part of the setup was to cut a piece of 1¦4"x1" flat bar about 10-12" long. Cutting the two pieces of 1¦2" square stock to the desired length for the tongs, I marked two lines an inch apart where I wanted the offset to be(Fig 1).

Taking those to the hydraulic press, I made the offset (using the 1¦2"x2" jig) on both pieces without heating the steel(Fig 2). (A power hammer would work well, but obviously it needs to be done hot.)

The last step was to heat the steel and, using the power hammer, drive the 1¦4"x1" into the offset at an angle almost perpendicular to the offset angle(Fig 3). The 1¦4"x1" was driven in only till the top power hammer die touched the parent stock, ie 1¦4".

From that point on it was simply a matter of drawing out the reins and making the pickup forks.

Figures 4 and 5 show the completed offsets and the jig components.

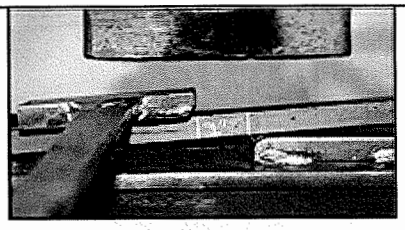


Figure 1

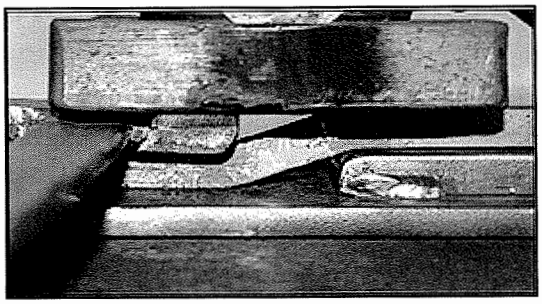


Figure 2

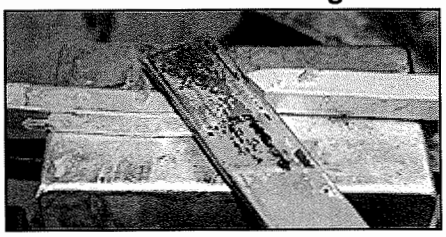


Figure 3

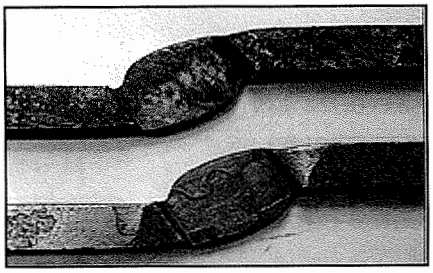


Figure 4

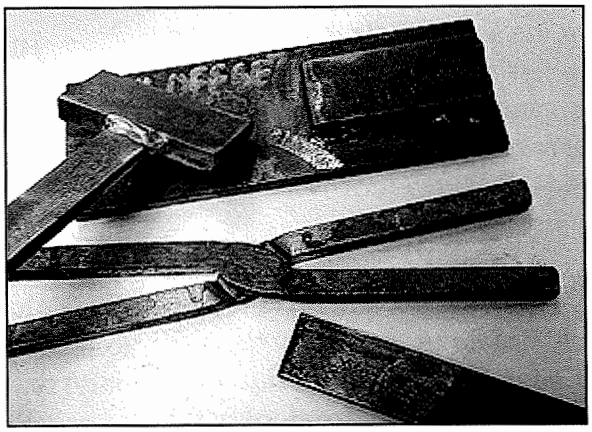


Figure 5

Shop Tips

Cheap and indestructible file and rasp handles

by Martin Brandt

For hand filling and, the best part, cheap and nearly indestructible file and rasp handles, I go to the nearby tried an true tool stores/read that pawn shops, and buy their screwdrivers.

I can usually find them for $.25-.50 each in sizes and can even color code for wood and metal filing, or for soft stuff m— wood and nonferrous only (that is saved for sharp new ones), and ferrous.

Stick blade down in a vise with a 1/2" gap between vise and handle.

Inscrt your favoritc prybar and heavc away. You now have a nice file handle, and a nice piece of tool steel for a new center punch, or another chasing tool.

Important: *If it is cold in the shop, stick the handle in warm water for a few minutes first or use a heat gun or set near warm forge until the handle is slightly warm. Otherwise the handle may crack when pulling the screwdriver blade.*

To make the screwdriver handle fit your file and stay on well: Insert handle in vise, hole up, nice and straight. Do this outside on a breezy day, or in front of your "running" exhaust fan at the bench inside.

CAUTION!!! Burning plastics can contain noxious and potentially toxic fumes!!! I don't wanna hear of any, "Oh yea Bob, he keeled over while putting some handles on his files a while back" stories.

OK now where was I.

Oh yeah, now you grind a few shallow notches in the file tang, heat the last 1" of the tang a nice orange color, (Remember the fan part!!!) and — while holding your breath

— shove it down into the ex-screwdriver handle.

It will smoke like crazy, bubble and stink, but once it's in far enough just back away and get a new breath, then go back and line it up straight.

It will smoke like crazy, bubble and stink, but once it's in far enough, just back away and get a new breath.

If it doesn't go in far enough pull it out and heat again until it's in to the depth you like. At this point it's nice to have a little slack tub water to pour on it (for big files & rasps only) to cool it all down and set it.

Walla!

You now have your own cheap custom file handle.

If the hole is too big for the tang to get a good fit, then fill in part way with hot melt glue first. Works best if you size the screwdriver handle to the file size. I like a big handle for hot rasping so you can get a real good grip.

The cheap file secret

As for getting files cheap, garage sales are great. You all know about those don't you. Check to see if the files are still reasonably sharp, and buy cheap. Don't let a little rust or grease scare you away. Acetone and a parts brush takes out the grease, and a BRASS short bristle brush takes out most of the rust and crud.

My BRASS brush is 2"x 1/2" with 5/8" bristles, and a stout plastic handle. Get them at an industrial fastener store or through MSC, catalog no.09301763.

As for getting files cheap, garage sales are great! You all know about those, don't you. Don't let a little rust or grease scare you away.

Clean the grease out of it before cleaning nongreasy files or they too will be greasy.

Avoid file cards

Avoid file cards like the plague. I think they were invented by file companies to

(continued on page 43)

NWBA Library, Books & Videos

Policies: Only NWBA members in good standing eligible to borrow. Rental fee is $4/book, $2/pamphlet (marked *), and $3/video. Three weeks for books, two for videos. Shipping boxes/envelopes are recycled so please try to tape for reuse. Rental fee covers postage fee to you, but you are responsible for return postage.

B-1 The Work Methods & Tools of the Artist Blacksmith
B-2 The Blacksmiths Cookbook, Recipes in Iron
B-3 Blacksmiths Manual Illustrated
B-4 The Blacksmiths Craft, England
B-5 Wrought Ironwork
B-6 Professional Smithing
B-7 Practical Blacksmithing and Metal Working II
B-8 The Blacksmithing, Ironworker and Farrier
B-9 The Art of Blacksmithing
B-10 Elementary Forge Practice
B-11* Blacksmithing
B-12* Blacksmithing for the Home Craftsman
B-13* How to Make a Blacksmith Bellows
B-14 1912 "Forge Work"
B-15* Machine Forging
B-16* Machine Blacksmithing
B-17* (Power) Hammer Work
B-18* Drop Forging
B-19* The Big Hammer
B-20* Treadle Hammer Tools/Operation
B-21* Plans for the Modified Treadle Hammer
B-22* Plans for the Simple Air Hammer
B-23 Special Steels, Types and Specifications
B-24 Hardening/Tempering/Annealing & Forging Steel (1907)
B-25* Heat Treatment and Properties of Iron & Steel
B-26* Hammers Blow 1/1 thru 4/1
B-27* Copper Candle Cups/Tools & Techniques
B-28* Early Ironware
B-29* Early Tools & Equipment
B-30 Edge of the Anvil
B-31 The Little Giant Power Hammer
B-32 The American Blacksmith (August 1914)
B-33 Metallurgy of Iron & Steel (an outline-1904)
B-34 The A.B.C.'s of Iron (early 1900's)
B-35 Punches, Dies & Tools for Manufacturing
B-36 Chasing (and some repousse basics)
B-37 The Colouring, Bronzing & Patination of Metals
B-38 Fold Forming Metal
B-39 Pounding Out the Profits
(mechanical hammers-Aaa thru Zzz)
B-40 Patina's for Small Studios
(simple formulas/advice-ferrous/non-ferrous)
B-41 Nautical Iron Prints circa 1914-1920
B-42 Anvils in America
(Anvils from A thru Z-who/what/when/how)
B-43 The Blacksmith's Craft
B-44 Catalogue of Drawings, Wrought Iron Gates
B-45 Metallurgy Fundamentals
B-46 Plain and Ornamental Forging
B-47 Mokume Gane, a comprehensive study
B-48 Colonial Wrought Iron (the Sorber collection)
B-49* Guide to Tool Steels-Composition & Trade Names
B-50 The Art of Wrought Metalwork for House & Garden
(schmidkunst am haus)
B-51 The Artist Blacksmith (der kunstschmied)
B-52 Wrought Iron Artistry
B-53 Modern Wrought Iron (schmiedeaebeiten von heute)
B-54 Samuel Yellin, Metalworker
B-55 Art Nouveau, Decorative Iron Work
B-56 Catalogue of Drawings for Wrought Iron Work
B-57 Wrought Iron Designs
B-58 Designs and Products of the Forge
B-59 Designs and Products of the Forge II
B-60 Iron Menagerie Various
B-61 Decorative & Sculptural Iron Work
(1970's metal artists)
B-62 Metal Designs (metalgestaltung)
B-63 The Shaping of Metal (stahlgestaltung)
B-64 Beautiful Iron, The Pursuit of Excellance
B-65 Architectural Ironwork (1990's metal artists)
B-66 The Golden Age of Ironwork
B-67 Fer Forge
B-68 A Blacksmith and Hammerman's Emporium

Videos

V-1 Samuel Yellin's Legacy
V-2 Knife Making-Cable Damascus
V-3A Basic Blacksmithing 1
V-3B Basic Blacksmithing 2
V-4A Forging Damascus DaggerJ.
V-4B How to Create Pattern Welded Blades
V-5 Power Hammer Forging (5 tape series)
V-6 Finishing and Detailing
V-7 Box and Poz Tongs
V-8 Repousee and Scroll Work
V-9 Fold Forming Metal
V-10 Euro Techniques
V-11 Japenese Blades & Bowl Raising
V-12 Forging Damascus Steel
V-13 Basic Blacksmithing Course
(2 tape series-5+ hours-covers
firebuilding to forge welding)
V-14 Patinating Steel

Book Review, by Tim Middaugh

The legacy of Francis Whittaker full of wisdom, Francisms

"I am a link with the past, remember that I am always looking over your shoulder."

Francis Whittaker, 1906-1999

A Blacksmith's Craft, the Legacy of Francis Whittaker Vol. I by George Dixon is a "compendium of process, tools, patterns and tips."

The book is a revision and expansion of Francis's old *Blacksmith's Cook Book.*

The result is a masterfully presented resource complete with step by step illustrations and photographs and a steady current of Whittaker's wisdom. Clay Spencer notes that the author is "an excellent blacksmith, illustrator, writer and teacher and does a fine job of presenting the material. Francis would be happy with this book."

In addition to the standard fare that you might expect, Dixon has included detailed chapters titled Joinery, Scrolls, Quatrefoils, Animal Heads, Mechanics of Basic Design and Drawing, Surface Textures, Finishes and Finishing.

In short, the book answers the question, "What makes the end result look right?" The answer to this question is broken down into several little steps. One of the best features of the book is an index that will let you find what have you learned, when you need it most.

Francis Whittaker has had a profound influence on blacksmithing in America and blacksmithing here in the Pacific Northwest. Several of our own journeymen, founding members, and master blacksmiths have taken at least one class from Francis. If you ask them, they will tell you about his influence on them.

The touchmark of Francis Whittaker is firmly forged on the heart of the NWBA. You old timers will appreciate the sprinkling of "Francisms" that appear throughout the book, for example:

•"There is no such thing as good enough."

•"When you work on material long enough, you begin to take on its characteristics."

•"There is never anything which will not be seen."

To those of you who are new to the craft, read the book. It is as close as you can come to shaking hands with the master. Volume II of the work is due out in 2007, so get ready for it. In the words of Francis, "Art is long.....Life is short....Get going."

Editor's note:

At the 2000 Spring NWBA Spring Conference members planted a tree in memory of Francis Whittaker. Former students and friends of Francis sprinkled some of his ashes at the base of the tree in his honor.

The book is available through Blue Moon Press (806) 627-6922

Louie Raffloer says he's making another hit for the NWBA, but it's really just batting tips for the Mariners.

Here's some questions for you

Scott Wadsworth sent in a classified ad and added some quesitons for which he knew *Hot Iron News* readers would have the answers. "Right now my learning curve is essentially vertical," he says.

Stout, I understand. Square, plumb and true I understand. But how do I make it Elegant? Where do I learn design?

Also, flux. How does it really work? Characteristics, sources, procedures. Anhydrous Borax vs. Regular Borax. What is "silver sand"? Are commercially available varieties worth the $?

How to really tend a coal fire? Is there such a thing as too much air, not enough, good coal, bad coal?

Is there a way to guage whether my forge is doing it like it should?

You can reach Scott at 541-673-3350 or maybe somebody would just like to answer all these questions in an article we can publish in the next edition.

Metal fume poisoning claims veteran smith

Jim "Paw Paw" Wilson was hospitalized on May 8th for Metal Fume Fever, after burning off heavy galvanizing from some steel pipe. It developed into double pneumonia, and Jim sadly passed away Friday, May 13, 2005.

Galvanized or other coated metal can give off very toxic fumes when heated to a high temperature. Metal fume poisoning destroys lung tissue beyond recovery.

A re-design of the popular NWBA website, blacksmith.org, began at the spring conference with the seating of a new committee and their discussions of new features for the site.

The pioneering and sustained work of webmaster Kent Rudisill was acknowledged for the strong base the site represents and for his forsight in obtaining the name "blacksmith.org" before its value was realized across the country.

In its first phase the committee set out goals to be completed within the next six months. Those include making the site's appearance consistent with the NWBA's standing as a large and high-quality group and providing more services on the site for members.

Some of those services will include event listings and information; a self-service classified listing; a list of links to other websites; a page of information on membership; and an archive of past newsletters.

The committee asked that you pass your suggestions on to members. They are Ina Culberson, Jerry Zygmuntowicz, Kris Ketchum, Grant Sarver, Kent Rudisill, Jim Almy, Brent Gaskey, Darrell Gehlsen, Ethan Benatan, John Sechrest and Don Kember, Jr.

Final notes concerning editor's suit

A Final Note Concerning the *Hot Iron News* Editorship

The Northwest Blacksmith Association and Jerry Kagele have mutually agreed to settle a lawsuit filed by Mr. Kagele in Spokane County Superior Court in February of this year over the removal of Mr. Kagele as editor of the *Hot Iron News*.

The Board had filed a counterclaim on behalf of the Association.

The Association and Mr. Kagele dropped the claims each made against the other and exchanged no money in the settlement.

The Board members and Mr. Kagele also have agreed to refrain from discussing their dispute or one another in a manner that disparages the Association, Board members or Mr. Kagele.

The Board and Mr. Kagele also have agreed to confine their remarks regarding this lawsuit to the statements contained in this final note, and have memorialized the settlement in a confidential written agreement, available only to the parties to the agreement.

In order to avoid any potential risk or conflict, the NWBA Board has also elected to forego official sponsorship of the 2006 ABANA Conference.

The NWBA Board encourages its individual members to volunteer and contribute to the 2006 ABANA conference as each member deems appropriate.

It is the sincere hope of the Board and Mr. Kagele that the mutually agreeable manner in which this matter has been resolved will permit the Association to move forward with its primary business.

Announcements

Fall NWBA Conference.

Friday, October 14 through Sunday, October 16 at the Skagit County Fairgrounds in Mount Vernon, Washington. Demonstrators will be John Adolph, a Canadian blacksmith, and Steve Lopes from Port Townsend. Jorgen Harle and David Lisch are hosting this conference. More details in the Sept. edition of the *Hot Iron News*.

Mountain High XV — Metal At Timberline

September 3 through October 9, 2005. This is a celebration of metal work at the 1936 WPA built Timberline Lodge on Mount Hood in Oregon. Mountain High is a bi-annual event which celebrates an art or craft used in the construction of Timberline Lodge, including weaving, carving, painting, metal work. Metal at Timberline will involve a five week long exhibit of works of over thirty northwest smiths who have done work for the lodge since restoration was started. There will be blacksmithing demonstrations on the opening weekend and guided tours of the ironwork at the lodge.

Catalog Find

Gene Chapman writes to say that he got a catalog from Surplus Center of Lincoln, NE. 160-plus pages of hydraulic components, electric motors, electric supplies, gears, gear boxes, reducers, and much more. They are online at www.surpluscenter.com.

Jim Wester edging tool, chisel making class

Jim Wester / North Bay Forge will be sharing the insights he has gleaned over the past two decades of making edge tools in a chisel making class. Although handles will be discussed, they will not be made during the class. The focus will be on the blades - choice of steel, forging, shaping, beveling, heat treating, and final sharpening. Students will each complete numerous blades during the class. One (long) day class, January 14, 2006 // Limited class size // $100 Contact Ike Bay or Darryl Nelson

Ongoing Repousse' Workshop

Pleae call or email one of the following numbers to sign up for, or ask questions about small class size workshops in the art of fine repousse'. The classes, held in downtown Seattle at Black Dog Forge, are taught by Armenian Master Garry Dadyan. Students get right to work creating detailed designs in light copper sheet. Classes are held every Wednesday from seven to nine in the evening. The cost is $50 per two hour class and there is a buy five, get six classes deal available. This workship is worth every cent.

The contact information is: call or write Viktorya Brichikov at 425-417-1269 or email: garridadyan@hotmail.com, www.melicdadyanart.com.

ABANA SEATTLE 2006 Conference.

Dates are set for July 5 through 9 at the University of Washington and Sandpoint Park. Now is the time to volunteer because the current list of things that need doing has reached a million items. Call 706-310-0323 to volunteer your services. The official ABANA Conference website is www.abanaseattle2006.com. It will be continually updated to provide comprehensive informatin about the conference and tourist information for out-of-region visitors.

Winthrop Blacksmith Shop for Sale.

Retail/Demo shop in beautiful mountain tourist town. Est. 15 years. Loyal customers. Great opportunity for energetic blacksmith. Original owner seeks retirement. Own building on main street. Fixtures, inventory. Price negotiable. D.J. Stull, Winthrop Blacksmith Shop, PO 63, Winthrop, WA 98862. 509-996-2703.

Forge-In part of Massachusetts blacksmiths festival

On Saturday, October 8, 2005, Achla Designs and the City of Fitchburg, Mass., will host the Second Annual Autumn Arts Ablaze festival, featuring as its highlight a Forge-In with blacksmiths from around the world. The festival is located in the city's new Riverfront Park on the banks of the Nashua River in the heart of Downtown Fitchburg. Cash prizes totaling $2,250 will be awarded throughout the day. This event is open to all blacksmith artisans to display and demonstrate their craft. You may contact us directly with any questions or comments at (978) 345-9603, x305 or j.thompson@net1plus.com.

From the editor

Here's my take on the spring conference, arriving new to the Association, and new as editor of the HIN.

I got there late afternoon Friday. By 7 or so people began to figure out who I was (probably about the time Ina suggested I stick a "PRESS" card in my hat).

Fully intending to set up my tent I started towards my car and the camping area. By 11 o'clock I realized that I'd moved less than fifty feet from where I started four hours earlier.

What an extraordinary bunch of friendly, open, interesting, garrulous people.

I saw a lot of great iron work being done, but never figured out how smithing fits itself into the flow of conversation, which seemed to continue non-stop.

The NWBA is the most dynamic group I've worked with in many years. I can't imagine that there is a more active group of smiths anywhere else in the country.

The things this organization is doing to bring itself up to the next level are needed, expected, and maybe even a little past due.

Everyone should take the time to read the new by-laws and give those suggested changes some thought.

Legal requirements, tax responsibilities, insurance needs, clear lines of authority and direction. Those are all parts that need review and revision from time to time in a growing association.

The other side of that coin, the one I'm wondering if everyone has considered, is the side that implies support from all members. That support can be in the form of praise or criticism. It can even be the kind of silent support that comes with annual membership renewal and dues paying.

When it's there, and it sure seemed to be the common currency at the spring conference, life is a little easier for the people out front breaking through the brush.

Jim Almy
1531 N. Prospect St.
Tacoma, WA 98406
253-879-8455
jma66mn@thewiredcity.net

Classifieds

One Man's Trash
Is another man's treasure. The Blacksmith Swap Meet. It's pure pleasure. Come with a little, leave with a lot. Put it in your truck. Let's see what you got. Sat., July 30, 10a.m. to 3 p.m. Vendor load in at 9 a.m. Fourth Annual Blacksmith Swap Meet, 3600 E. Marginal Way, Studio 3, Seattle. More info: 206-919-5431.

ATTENTION: POWER HAMMER ENTHUSIAST
Call for articles, pictures and designs for hammer installation, power and belt drives, brakes, dies and tooling, etc. Send to: Jorgen Harle, Orcas Island Forge, P.O. Box 341, Eastsound, WA. 98245

Square Platen Tables
Good shape, 3000# with square holes, with legs $750, table only $650. Will load on your truck. Also, representing Striker Pneumatic Hammers to Northwest blacksmiths. Call to test drive a 55 or 88# unit. Don Kemper, 360-887-3903.

Platten Tables
Two tables 42"x84"x5" thick, $1200 ea.; three tables 5'x5'x5" thick, $700 ea.; one table 5'x25'x5" thick, $3500; one steel table 7'x16'x3/4" thick, $1000. Steel saw horses for fabrication. Miscl. blacksmith equip. Call Dick Franklin at 253-862-9310, Buckley.

Want to trade portable sawmill for power hammer
Shop built, stationary headrig, 50 inch circular saw, 12 foot three block hand set Corley carriage, sawdust blower, six cyl. gas engine, good stout rig ideal for log home construction. Approx. $6000 value. Scott Wadsworth 541-673-3350

Anvil Stash
Anvils, top tools, tongs and stakes. Call Larry Langdon at Pacific Industrial Supply 206-682-2100. They have a huge supply at this time. (Jack Slack had earlier sent this info: probably connected. Anvil stash found at Murray-Pacific. New and used at $2/pound.)

For sale: Anvils, post vices, swage blocks, anvil repair, Bill Apple, 360-876-8405

SEND YOUR CLASSIFIEDS TO jma66mn@thewiredcity.net or call 253-879-8455

Hot Iron News

Classifieds are free!
Articles are invited — email (ideally by copying your text onto the email), jpeg your art, send original articles and pics. Let me know about stories.

DEADLINES
May 15, Aug. 15
Nov. 15, Feb. 15
(Sooner is always better than later)

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The Hot Iron News

2005/2

Mask
by Lauren Osmolski

Forged copper and steel

Spring Conference Gallery

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