



**BGCM's 17th Annual Blacksmith Days
May 21-22 2005**

By Dick Smith



**Iron Masters
Blacksmith Team**

From left to right: Igor Lozynskyy, Miroslav Luchynskyy, Nikolai Pakhomov, Aleksandr Osipchuk, Mirza Mukhamedov, Viktor Savchuk, Igor Rymaruk, Rudik Anatoliy. Tree in background



Luc Fiedler

Luc Fiedler and an example of the forged pipe floor lamp he will be demonstrating.

The Blacksmith Guild of Central Maryland will hold its annual Blacksmith Days at the Carroll County Farm Museum in Westminster, Maryland on May 21 and 22. Our Featured Demonstrators this year include Iron Masters, Inc., a team of smiths from Eastern Europe, and Luc Fiedler, a new member to the guild recently arrived from the west coast. The IronMasters team will be forging, fabricating, and surface finishing a spectacular eight-foot tree created entirely from solid iron. Flowers, vines, birds, etc., also forged from solid

See **Blacksmith Days** Page 3

IN THIS ISSUE.....Page
 President's message 3
 Coal Report..... 4
Forged Iron Auction 4
Samuel Yellin Blacksmith Day. 5
 ABANA Affiliate Letter 6
Coal Forge Fire Management .. 7
Basic Joinery..... 9
 (NEW!)Historic Forge Calendar 15
 Touchstone/PAABA Event 16
 Blacksmith Events Calendar..... 17

The Blacksmith Guild of Central Maryland, Inc.*

BGCM is dedicated to preserving and promoting the art and craft of hand forging iron. The guild meets monthly to share blacksmithing information and techniques at the Carroll County Farm Museum, Westminster, Maryland.

BGCM Officers

President **Ted McNett**
(717) 646-9839 tedneck@aol.com

Vice President **Bob Nagle**
(717) 646-8306

Secretary **Charles Struble**
(410) 871-2168 CStruble@gaf.com

Treasurer **Judy Heinekamp**
(410) 922-1246 judy529@qis.net

Board Member **Mark Judge**
(410) 848-1929 judgefam@msn.com

Board Member **Allen Dyer**

Board Member **Ken Strosnider**
(410) 751-7762 mountainviewforge@hotmail.com

BGCM Committee Members

Awards Committee **Albin Drzewianowski**
(410) 848-0731 dski1045@qis.net

Blacksmith Days Chairman **Dick Smith**
(301) 309-2289 rsmith@lofstrand.com

Blacksmith School Administrator **Ted McNett**

Forge Masters

CCFM **Walter VanAlstine**
(301) 725-4826 waltervanalstine@juno.com

Jerusalem Mills **John Larson**
(410) 592-5058 jolarson@comcast.net

Eastern Panhandle **Dave Merceruio**
(304) 263-2970

Historic Forge Volunteer Coordinator.. **Kevin Thomas**
(410) 848-4869 kbt62@direcway.com

Librarian **Kevin Thomas**

Assistant Librarian **Judy Heinekamp**

Guild Web Master **Rob Dekelbaum**
(240) 882-5288 deker@slackdot.org

Newsletter Editor **Bill Clemens**
(570) 568-2158 newky2@dejazzd.com

Newsletter Editors Emeritus..... **Albin Drzewianowski**
Judy Heinekamp

Scholarship Committee **Judy Heinekamp**
Ross Hughes

BGCM Yahoo Group

Administrator **Albin Drzewianowski**
To join: BGCM-subscribe@yahoogroups.com
To participate: BGCM@yahoogroups.com
To leave group: BGCM-unsubscribe@yahoogroups.com

Guild Website www.bgconline.org

* BGCM is a non-profit 501c3 educational corporation founded in 1986 and incorporated in 1995 and is an affiliate of the Artist-Blacksmith's Association of North America, Inc.

The **HAMMER & TONG**

BGCM's newsletter is published bimonthly. We welcome and encourage you to contribute articles, book reviews, trip reports, or just your thoughts on blacksmithing. One of the main purposes of the Guild is to promote the exchange of information and ideas associated with blacksmithing. We are glad to publish classified ads to assist members in the sale of blacksmith related items, or to help locate wanted tools, anvils, steels, etc. Ads must be renewed for each issue.

Submissions may be sent to the editor:

Bill Clemens 160 2nd Street, New Columbia, PA 17856
e-mail: newky2@dejazzd.com

Deadline for Jul/Aug Issue: 1 June 2005

All original articles printed in this issue are placed in the public domain unless the author states otherwise. Anyone using items from this newsletter is requested to give credit to the author and **The HAMMER & TONG**. For reprinted or quoted material the copyright restrictions of the originator apply.



Blacksmithing, involves Fire, Hot Steel, Hammers, etc.

It is not an activity to be taken lightly.
Safety and caution must always be in the forefront of any blacksmith's mind before they pick up a hammer and begin hitting Hot Metal.

Safety Rules

1. **Wear eye protection** at all times in the shop area.
2. Know location of first aid kit and fire extinguisher.
3. Turn on exhaust blower before lighting the forge.
4. Turn off blowers on forges when not heating iron/steel.
5. Do not knock hot coals/embers on the floor.
6. Advise when preparing a forge weld by yelling: "**WELDING**".
7. Dress ends of steel.
8. Obtain permission from Forge Master before using power tools.
9. Maintain and leave an orderly work area.
10. Return unused coal to the coal bin.

Please observe these safety rules when working in the Guild's forge areas

BGCM, its officers and its members assume no responsibility or liability for the accuracy, fitness, proper design, safety or safe use of any information contained in this newsletter and disclaim any responsibility or liability for damage or injuries as a result of its use.

Guild Address

Blacksmith Guild of Central Maryland, Inc.

P. O. Box 593,
Randallstown, MD 21133

Guild Telephone Number **(410) 386-9150**

President's Message

Warm weather and outside chores are here. I hope you have time to weed and mow between blacksmithing. I am sure everyone else has been as busy as I have so **cherish the time you can find to get out in the smithy.**

We have been making **great progress on the forge rehab** project. A **huge thank you to all who have shown up to the workdays**, this project is not possible without the generosity of time, energy, and materials these people have given. There has been a workday almost every weekend since January and we have needed them all. We encountered some unforeseen challenges requiring some redesign and time schedule change. Even with these challenges there will be 8 forges operational by Traditional Arts Week.

The **coal pile is all bagged and stacked.** If you need **coal it is \$6.00 a bag** at any meeting or open forges. Thanks to all who helped with this.

The other big event on the horizon is **Blacksmith Days.** Remember to send in your pre-registration. Take some time to **forge an item to put in the public 50/50 auction** and/or the forging contests. We currently have items ranging from a set of 6 S-hooks to a candle holder made by the Habermanns at Gichner's. Contact Dick Smith to help with the event, enter an item in the 50/50 auction, or the silent auction. There are also **three raffles to be drawn at Blacksmith Days**, the Quilt rack and quilt made by the anonymous BGCM quilter, a Dave Morgan knife, and a brand new Porter-Cable cut-off saw. Tickets are \$1.00 each, 6 for \$5.00, or 13 for \$10.00, in any combination of items. If you need tickets to buy or sell see Bill Clemens or a Board member at the April meeting.

Check out the **new guild website at bgcmonline.org.** Thanks to **Rob Dekelbaum** for undertaking this job. Thanks also to Ross Hughes for creating and maintaining the site for so many years. We changed from a **.com** to a **.org**. If you have any comments or suggestions please let us know.

Keep the forge lit,

Ted McNett



Blacksmith Days from Page 1

stock, will complement the tree. When finished, this tree will be donated to the Guild and will be featured in the Guild's Auction on Saturday evening with an appropriate reserve price.

Luc Fiedler is a renowned artist/blacksmith working in cast bronze by the lost wax method and cold and hot-formed metal. He will be executing a very unique floor lamp as well as some other items employing a variety of metal forming techniques. Luc's demonstration pieces will also be featured in the Auction.

In addition to a full schedule of blacksmithing demonstrations, there will be activities for the children, including a tractor-caravan ride around the grounds of the Farm Museum. All events, including an Iron-in-the-Hat and a raffle for a Hand-Made Quilt complete with hand

made iron quilt rack, will be under the cover of tents, so come rain or shine!

Additional demonstrators from BGCM include Dave Morgan (Bladesmithing), Walter VanAlstine (Metal Casting) and Marvin Shipley (Leatherwork). John Larson is providing two of his Iron Kiss power Hammers for use by the demonstrators and will glad to discuss them with you and let you try them out when they are not being used by the demonstrators.

There will be a forging contest for all smiths, whether beginners or journeymen. The task will be to forge a ring made from iron rod to specified dimensions within a specified time limit. Join in and have some fun pounding iron!

The after dinner speaker Saturday night will be Tina Chisena. Tina will present a retrospective of her work and the work of others that have influenced her.

At 7pm there will be a Public Auction of forged items submitted by area blacksmiths and the demonstrators.

For additional details there is a pdf version of the Blacksmith Days flyer and registration form on BGCM's website: www.bgcmonline.org. If you have any questions or want to request a flyer and registration materials for this event be sent to you please contact Dick Smith the Blacksmith Days chairman at (301) 309-2289 or via email at rsmith@lofstrand.com.



Coal Report

Albin Drzewianowski

I bought 2 bags of the new coal that the Guild purchased from West Virginia. This is POCHOHANTIS #3, if I remember correctly. Recently, I had a chance to test it. I completely cleaned out the forge of all previous coal and coke. I built a fire with newspaper and kindling, and then slowly added the green coal. As it coked up, I kept adding coal to the outside edges. Once I had a good bed of coke, I did some forging.

Findings:

- Coked up nicely.
- Did not seem to ooze out any tars and oils while coking.
- Did not produce much clinker, maybe just a little bit more than the Sewell Seam Coal I have been using. But that is a subjective assessment.
- Seemed to give very good heat.
- Did a few test welds and this coal seemed to work as well as the Sewell.

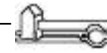
Conclusions: This seems to be a premium forging coal. I really could not tell much difference between it and the Sewell coal.



For those Coal Analysts out there, here is the data for both the Sewell and Amanada Pocahontas #3 Coal

	Amanada Pocahontas	Green Valley Sewell Seam
Size	Stoker	Pea
	1 1/4-3/8"	<1/2"
Moisture	3.00 - 4.00	

Volatiles	21.50-23.00	30
Ash	6.00-7.30	2.95
Sulfur	0.65-0.80	0.65
FSI (coking button)	8-9	
BTU/lb	14600-14850	13800-14000
Oxidation	96-99	



Blacksmith Coal

Blacksmith Guild of Central Maryland

50 Lb Bag \$6.00

Available at:

Monthly Guild meetings and Open Forge Nights
Or Contact any Board Member



Forged Iron

AUCTION!



**Saturday Evening 21 May 2005 at 7 Pm
Carroll County Farm Museum Westminster, MD**

This is an opportunity for you to see what the public thinks your forging is worth and to make a profit too. Submit items that represent your best work and you'll get 50% of the winning bid. Not sure the public will want to pay what you think your work is worth? Then set a reserve price on the items you submit. If no one bids above that price the item will be returned to you after the auction. We're working on advertising the auction to the public. You can help by submitting items (or high quality photos of them) as soon as possible so we can use them in promoting the auction to the public. **To submit items contact:**

Dick Smith rsmith@lofstrand.com (301)309-2298

Bill Clemens newky2@dejazzd.com (570)568-2158
Or any BGCM Board Member



Samuel Yellin Blacksmith Day

“Magic From Fire The Artistry of Samuel Yellin”



Saturday, October 15, 2005

Morning & Mid-Day Seminars

Public Demonstrations

Good Company

at

The B & O Railroad Museum

901 West Pratt Street

Baltimore, Maryland

Tour, Dinner, Lecture & Slide Presentation

by

Clare Yellin and Jack Andrews

at

The Bank of America Building

10 Light Street

Baltimore, Maryland

The BGCM sponsored Samuel Yellin Blacksmith Day has moved into the initial operations planning stage. Two primary locations have been selected: The Bank of America Building & The B&O Railroad Museum. Preliminary plans call for activities from 10am to 4pm at the B&O Railroad Museum and from 4pm to 8:30pm at the Bank of America Building lobby.

Railroad Museum: Current plans call for three hot forging demonstration sites and a BGCM sales table. In addition the Guild will be conducting educational programs at the Education Station, the Colonial Dining Car and

Blacksmith Guild of Central Maryland

the Freight House wedge in the roundhouse. There will be a reduced admission fee to the Railroad Museum (regular admission is \$14.00) and no catering is currently planned. But the Museum serves food at the Iron Horse Café. Attendees will have full access to the entire museum. Free parking is available.

Bank of America Building: Due to security concerns at the bank, attendance at the **Magic from Fire** activities will be restricted to those who register in advance and will be limited to 200. Participants will have access to the lobby and portions of the mezzanine containing Samuel Yellin works. In addition to tours, slide shows and a talk by Clare Yellin there will be a catered meal. The Guild will be responsible for the extra security expense (we will have exclusive access to the Bank of America lobby a wonderful environment!) and for the catered dinner. A silent auction of blacksmith artwork is planned and attendees may take photographs of all the Yellin works. There will be a registration fee in the vicinity of \$50 to cover the extra security cost and dinner.

What can you do to help?? This is a major reach out to the public event. There will be hundreds of non-blacksmiths at the Railroad Museum, many of them young, who will be hungry for knowledge about blacksmiths and blacksmithing. The educational facilities are first rate and we have plenty of open time slots. Think about what you would like to present to the general public and offer to organize or co-organize such an activity. Make items for the BGCM sales table. All smiths will receive 50% of their works selling price. You can also create a work for sale at the silent auction and again, you will receive 50% of the auction price. The time to start your projects is right after you finish putting your touchmark on the works you make for Blacksmith Days at Carroll County Farm Museum.

Your ideas and suggestions are solicited. Please contact:

Allen Dyer

Phone 410-531-3965,

Email: aldyer@lawlab.com





Artist-Blacksmith's Association of North America, Inc.
PO Box 816
Farmington, GA 30638 USA
706-310-1030 tel * 706-769-7147 fax
abana@abana.org * www.abana.org

ABANA Affiliate Liaison Letter

April, 2005

Hello! This month I would like to introduce Wayne Coe, president of the Alex Bealer Blacksmith Association. Wayne has some very good ideas for promoting blacksmithing. Take it away Wayne.

ABANA Publicity Committee

At the ABANA Board meeting in Richmond, Kentucky a committee was formed with the intent of getting more shows on television which feature blacksmithing. The committee members are Dan Nauman, Elizabeth Brim, LeeAnn Mitchell and Wayne Coe.

I notice that there is an abundance of woodworking, quilting, gardening, painting, etc. shows on public television. Even on the home improvement and home construction shows, Do It Yourself (DIY) and Home and Garden (HGTV), rarely is there any mention of iron work or the work that blacksmiths can and do provide. I have also noticed that on RFDTV, a cable and satellite network, there are a number of farm/human interest shows that could, and on occasion do feature blacksmiths (Texas Country Reporter, Georgia Farm Monitor, Louisiana Agriculture, American Backroads, California Country, Prairie Farm Report, Dakota Lands, as well as others).

I feel that the job of this committee is multi-faceted, to show the public that blacksmithing is alive and well, that it might be something that they would be interested in doing and how to get involved in a local group, what blacksmiths can do for them, and who they can go to in order to get those special items that they want.

LeeAnn is looking into the possibility of obtaining grants so that ABANA can get periodic shows made and presented to the various networks.

This is a request to each affiliate to designate a committee to approach networks, local channels, show producers, and others to let them know what events are going on in their area and who individual blacksmiths are who might be suitable for exposure on their shows. It is obvious that the producers of these shows will be more interested in information from individuals in their local areas rather than some unknown person from Georgia. Please designate these committees and then get that information to Dave Mudge, as ABANA Affiliate Liaison and board member and to LeeAnn as a member of the Publicity Committee.

We, as members of ABANA and the blacksmithing community will be doing ourselves and the blacksmithing community a great service by pursuing these goals.

Sincerely, Wayne Coe
coe_wayne@ellijay.com

Dave Mudge
Affiliate Liaison
Member Services Division
Chairman Internet Committee
985.735.0049 / davemudge@abana.org

Beginner's Corner

By Albin Drzewianowski

Fire Management in a Coal Forge

OK, we have built our coal forge and now we are ready to light off the first fire.

Fire Tools: You will need certain tools to manage the fire.

- **Forge Poker** - The poker should have a blade to allow you to push and pull coal onto the fire. I use two: one is the one we teach in the Blacksmithing-101 class and has a pointed blade with a goose neck; The other has the end of the poker flattened into a blade or spatula shape and just has a gentle curve to it. It is this 2nd one that I find most useful.
- **Spike poker** - It is handy to have another poker which is just a long tapered rod, so that you can poke down to the bottom of the fire pot and open up where the air comes into the fire without really disturbing the fire very much.
- **Drip Can** - A soup can on the end of a handle for watering the fire. (Be very careful in watering the fire, it is very easy to crack your cast iron forge or fire pot.) Use the drip can to gently water down the outside edges of the fire to keep it from getting to large. You don't want to drown the fire.
- **Coal Shovel** - Get (or make) a good sturdy one. Many of the small fireplace/firestove shovels that are sold are fine for removing ash from the fireplace, but do not stand up to use around the forge. You may have noticed that some of the shovels in the School have been bent and otherwise mutilated, those are the ones I am referring to .
- **Pick-up Tongs** - A very light duty pair of tongs with long reins and very long thin bits. I consider these as part of my forge tool set. (They are not used to hold steel while hammering.) Use them to pick out pieces of clinker, adjust coke to critical locations, and most importantly, to fish out that small piece

of steel that has slipped down toward the bottom of the fire pot.

First Fire: Since this is the very first fire, let's assume that all you have is fresh coal, also known as green coal. Start a small fire with newspapers and kindling. Once the kindling catches, slowly increase the air supply. Next slowly add the green coal to the outside edges of the fire. Gradually work the coal in. If you take your time, you will not create a terrible amount of coal smoke. You always want to have flame coming out of the fire. The flame consumes/burns the smoke and you will have less smoke. This first fire is going to take a good 30-45 minutes to get to the point where you can forge. You want to end up with about a 3-4 inch high mound of coke in the center with a supply of green coal around the perimeter. In your fire, the green coal will be converted into coke - a clean burning carbon fuel. In the coking process, the volatile impurities go up in the smoke, the tars and oils present in the will burn off and you will be left with the coke.

SUBSEQUENT FIRES: For future fires you take the coke left from the previous fire and use that to start your next fire. I have found that it is worth the time to sift the remains from the previous fires to remove the ash. Also, pick out any clinker you see. I don't sift, each time I start a fire, but about every 2nd or 3rd time. For sifting, I took a small bucket and cut out the bottom and replaced with 3/8" hardware cloth. That size seems to work well. If the hardware cloth is too large, good coke falls through. Start your fire using the coke like you did your first fire. With a supply of coke, you can get the fire going just using newspaper. Most beginners have problems starting a fire with newspapers, because they don't use enough. I like to roll up the newspapers into a tight tube and then tie into a knot. I usually use at least 4-5 knots. Again, get the newspapers lit off, start the air, very gentle, slowly add the coke on top of the burning newspapers. Slowly increase the air supply as the fire gets going. Once you start to see the coke glowing orange add green coal around the outer perimeter and slowly work it in.

Managing the Fire While Working: At all times you want to have a mound of burning coke to stick your steel into. As a general rule you should be able to stick your piece of steel into the fire horizontally and have a good 2-3 inches of coke above the steel. You will never get to forging temperature if you just lay the steel on top of the fire. Always add fresh coal to the outside and let it work its way toward the center. If you simply dump the green coal on top of the fire you will immediately generate a great deal of smoke. On my forge, I like to pile the green coal at the back of the fire, because it is easier to pull the coal to the edges, than to try and push it in place. You should be touching your fire tools every 2 to 3 heats: rebuilding the mound pulling green coal in from the edges. I like to use my spatula shaped forge poker to push down the inside edges of the fire pot and that helps to heap up the coke and add green coal to the bottom sides of the firepot. The coal shovel is also useful in pulling the coke up into a mound. A common mistake for beginners is to let the fire burn into a depressed hollow. Your steel will never get hot under those circumstances.

Putting Out the Fire: When done forging, I take my forge shovel and shovel the burning coals out of the firepot onto the tabletop of the forge (my forge table is large enough to allow me to do this), right next to the firepot. Then, using the drip can, I carefully water down the burning coals, making sure that no water falls onto the cast iron of the firepot. In the past I have seen references that letting the fire go out in the firepot leads to extra wear and tear on the firepot due to the acidity of the coal. This is especially true if you water down the coals in the firepot to help put out the fire. **Make Sure The Embers From The Fire Are Completely Out Before Leaving The Smithy.**

(If you have any questions about what has been presented in the BEGINNERS' CORNER, send them in and I will answer them in the next issue. Also, looking for future topics for THE BEGINNERS' CORNER. What else would the "wannabe" blacksmiths like to see explained in excruciating detail??)



Shop Tips

By Albin Drzewianowski

Some time back, Allen Dyer made a suggestion on the Guild Email Group, to prepare a checklist and use it before coming to a Guild meeting so that you don't forget something important like: contribution to pot-luck lunch, Iron-In-The-Hat donation, camera, safety glasses, etc.

Recently I did a demo/workshop at a local school and needed to load up all of my equipment. I found that it would have been handy to have a checklist so I would not forget any critical part of my "traveling show". I remember once in the past I drove off leaving my leg vise leaning against the garage, having forgotten to put it in the truck. Having such a checklist and reviewing it before driving off would prevent those kinds of problems. Some of the items on my list: anvil, anvil stand, forge, forge blower, nut/bolts to attach forge blower to forge, vise, key and wedge for vise, etc. Its, the small not so obvious items like the nuts/bolts for the blower that I am likely to forget.

I made such a checklist in EXCEL and now I can print one out when I need it. I recommend putting everything you could possibly need on the list. Then you can put a check mark when you load and an "X" if the item is not need for that particular demo. It also helps to group related items together. This system will help to remember key items, especially if you do not "go on the road" all that often.

Do you have a useful SHOP TIP?

Something that makes your smithing easier, more organized, etc? Share it with the rest of the GUILD. Send it in. If necessary, we will re-write and make drawings. And of course, we will give you credit for making the suggestion.



Basic Joinery

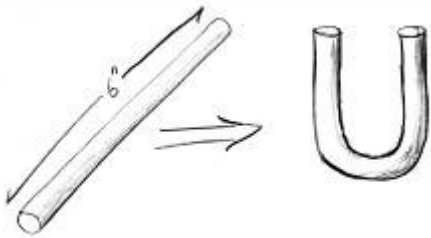
By Bill Clemens

There are numerous ways to join two pieces of metal. I'll discuss the basic types here and give an example or two of why each is used.

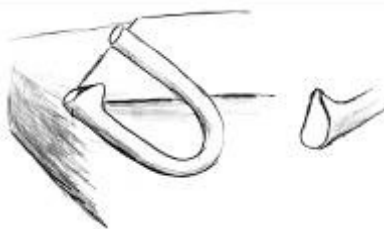
Welding:

Forge Welding is often discussed as one of those mythical practices of smiths long ago and is avoided at all costs by many. Admittedly forge welding of wrought iron is easier (that is if you have are experienced in forging wrought) than mild steel and (should I say it) A36. But like most things the key to forge welding is practice, practice, practice.

A good way to practice is to weld chain links. Take a 6 inch length of 3/8 round and forge into a "U"



Next, scarf the ends on a the corner edge of the anvil.



Overlap the scarfs. Flux at orange and bring slowly to welding heat. Watch for green tint of borax in flames as an indicator that you are near welding temperature.

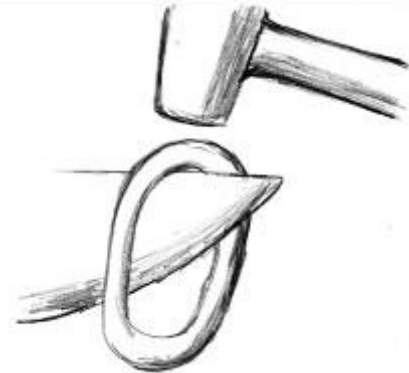


Hold directly on the face of the anvil and tap with a moderate blow. If it sticks repeat moderate blows turning link over to ensure the thin edges of the scarf are stuck on both sides.

Blacksmith Guild of Central Maryland



Then form link over the horn. If it drops below welding temperature stop and reheat. Practice making several more single links. Once you have several you're happy with on your next link, slip two onto the "U" after making the scarfs but before closing the end.



A hook from 1/8 inch rod can be used to hold these links back with the same hand holding the tongs. Weld as with the single link. You now have a 3 link chain! Etc. Etc. until you have the length of chain you want and/or until you're confident in your forge welding abilities.



Other types of welding Arc Mig Tig etc.

Just as forge welding is considered mystical, these types of welding are often scoffed at and considered "cheating". I think that they have there place but should only be used sparingly.

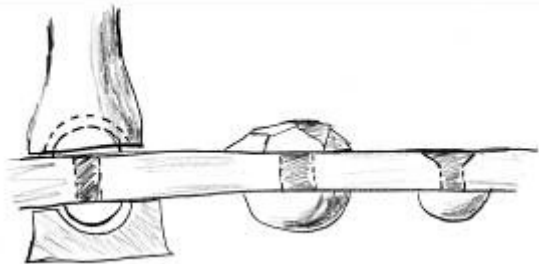
Often to justify using these types of welding, the comment is made that "if those smiths back then had had a welder, they would have used it". I agree with this and believe it's unfortunate that they didn't. If they had had

May/June **HAMMER & TONG** 9

welders, **today we would know how to use them to make welds that look good and fit in with artistic forging.**

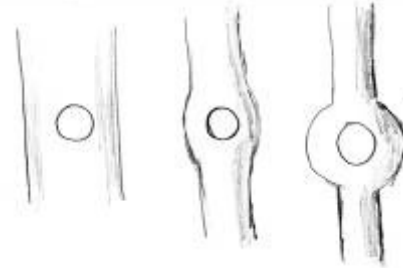
The biggest complaint I have is that welds often stick out like a sore thumb on an otherwise artistically executed forged piece. If you do use them take the time to clean up the weld and make it blend with the rest of the piece. This will involve time grinding, filing, sanding and even light forging of the welded area. Caution should be used in forging a weld, especially one that has not penetrated through the entire piece. Heavy forging can cause the welded pieces to separate internally stressing the weld, causing cracks, and result in the failure of the weld. Unfortunately the time required to properly dress a weld is often sacrificed to the detriment of the overall look of an otherwise fine forging. If you weld something, the job's not finished til the cleanup it done!

Rivets: A good way to join two pieces that are lapped where rotational motion is not a concern. If it is, and there is enough width to the lap, two smaller rivets can be placed to prevent this. Rivets heads can be hammer finished or finished with a rivet set (a tool with a concave end to form a round head as the rivet is set. Exposed rivet heads can be decorated then backed with soft metal(copper, brass, lead) to protect the head while the other end is set.

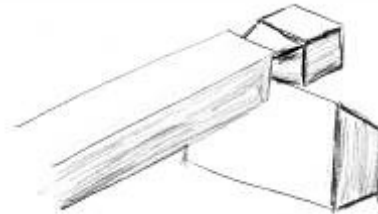


The holes for the rivets can be formed in various ways. Drilling provides an accurate and clean hole for the rivet without disturbing the metal around it. Similarly a hole can be punched with little or no distortion and if done while forging the piece without much additional effort or heat. Punching a small hole and then drifting it to size will result in a slight bulge in the stock and provide a visually pleasing effect. Finally the hole can be slit and then opened,

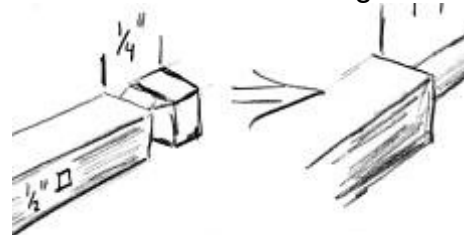
upset and drifted to shape (more on this in the pass through discussion).



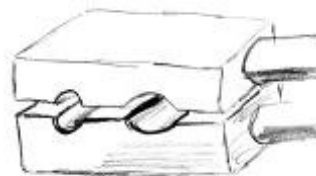
Mortise and Tenon: A tenon is just like a rivet that is formed on the end of a bar. As such it is ideal for attaching stock at right angles to each other, such as pickets to a top and bottom rail of a fence or railing. The tenon is formed by isolating the end with a side cut hardy or a side cut in a smithing magician.



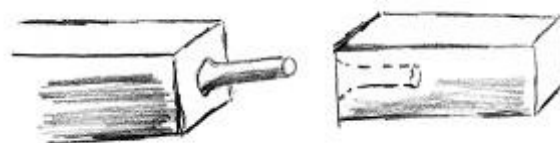
It doesn't take much stock to make a tenon. 1/4 inch of a 1/2 inch square bar will make a 1/4 round tenon 1.25 inches long.



The tenon can be easily formed using a spring swage or on the edge of the anvil with a top set tool.

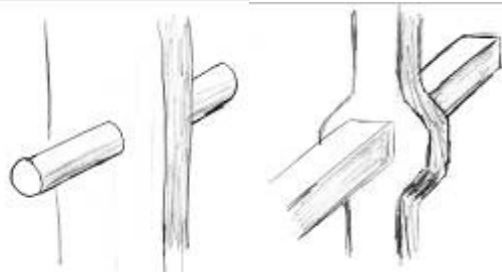


Finally use a monkey tool to square up the bar at the base of the tenon.



Make the appropriate size and shape hole in the piece to be joined. A tenon can be round square or rectangular. A square hole will keep a bar from rotating and can be used to ensure pickets in a railing are properly aligned. A round tenon can be made to not rotate by nicking the inside of the hole with a chisel before setting the tenon. The nicks will fill with tenon stock and prevent it from rotating. The head of the tenon can be hammered round or flush into a beveled hole. A set tool can also be used to shape the tenon head.

Pass Through: If two bars in a grille or railing intersect at right angles they can be joined by passing one bar through the other. For stock of different sizes, a hole is made in the larger stock for the smaller stock to pass through. By slitting and drifting a hole, it is possible to pass a bar of the same size stock through another one.



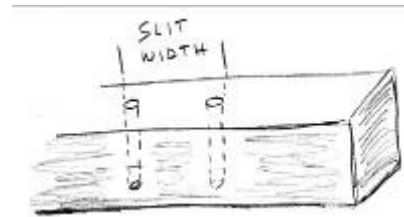
The size slit required is determined by the perimeter of the stock to be passed through the resulting hole. The following table is from A Blacksmiths Craft, The Legacy of Francis Whitaker, Vol 1 by George Dixon:

**Francis Whitaker's
Slit length chart for drifted holes**

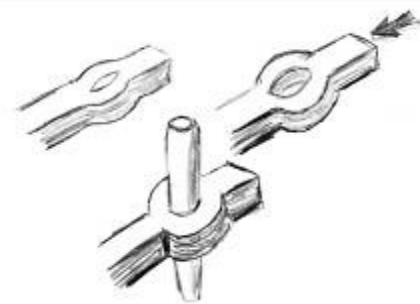
Hole Size	Round Hole Slit Length	Square Hole Slit Length
3/8"	9/16"	5/8"
1/2"	3/4"	7/8"
5/8"	7/8"	1-1/8"
3/4"	1-1/8"	1-3/8"
7/8"	1-1/4"	1-5/8"
1"	1-3/8"	1-7/8"

Round hole slit length: Hole diameter **Plus** 40%
 Square hole slit length: Hole perimeter **Times** 45%

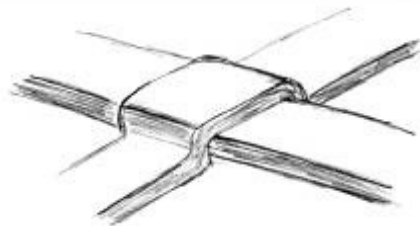
The hole is slit from both sides. Two small holes can be drilled at each end of the slit to aid in lining up the slit chisel on each side of the bar.



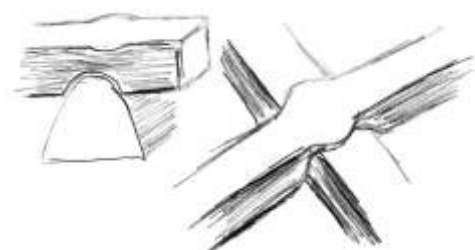
Once the slit is opened with a small narrow drift and then the bar is upset to further open the hole which is then drifted to shape with a round or square drift.



Lap Joints: If two bars of thin stock intersect, they may be joined by forging one bar down over the other. A rivet is typically used after this to hold the two bars together.



Larger square or rectangular stock may also be joined by forming a lap joint by first fullering each with a wide radius fuller to nearly halve its thickness and then with both at a high yellow heat, driving them together until they are flush.



Again this joint is typically held together with a rivet but depending on how the ends of the bars are secured and the distance between the lap and other joints, no rivet may be needed.

Collars: A thin piece of bar stock used to join two or more elements together. The surface of the collar may be decorated with chisel cuts or

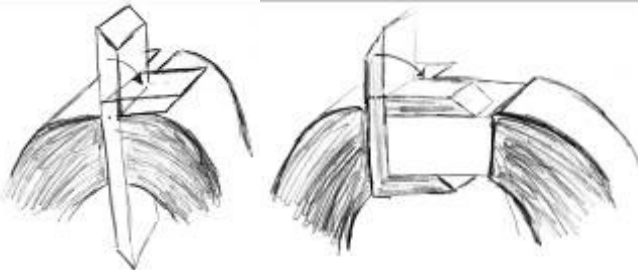
forged to a radius. The collars may be cut to butt join on the back of the piece, both ends forged to a taper to lap or may be cut to join diagonally.

Francis Whitaker's rule of thumb for collar length is the perimeter plus 2 1/2 time the collar thickness. For example for joining two 1/2 inch square bars with 1/4 inch thick collar material, the perimeter is $1/2 + 2 \times 1/2 + 1/2 + 2 \times 1/2$ or 3 inches. Add $2 \frac{1}{2} \times 1/4 = 5/8$, so the collar should be cut 3 5/8 inches long.

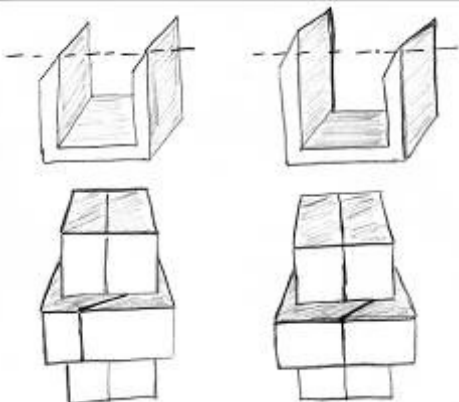
The collar material should be decorated prior to cutting to length. For lapped ends, opposite ends should be tapered one from the front side and the other from the back side.



The collar should be bent in a "U" shape in the vice using a bar of material the same thickness as the width of the elements being joined.

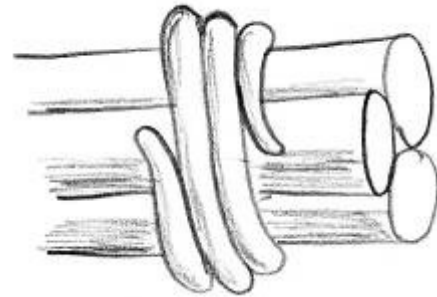


To make tapered joint collars with a joint line in the center of the back, the legs of the "U" must be offset in length by 1/2 the length of the taper, with the leg tapered from the back shorter and hammered down last when installing the collar.



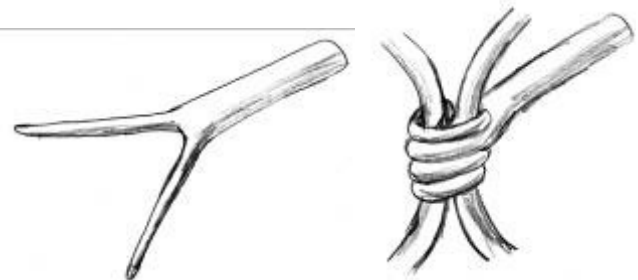
The collars should be installed hot and can be held with tongs or held with a backer block forged to the size and shape of the outside profile of the collar. If you hear a "tinking" sound as the collar cools it is tightening and the joint will be secure

Wrapping: A variation of the collar is a wrapped joint. Thin typically round material is wrapped around the elements to be joined two or more times. This works well for joining three or more round elements where a collar would be difficult to install.



For a tight joint, this must be done hot and quickly! With the aid of a torch the wrapping material not yet wrapped can be reheated if more than 2 wraps are done. If done properly the joint will tighten as it cools. Trying to reheat and tighten more loose wraps is difficult. If it doesn't tighten, the best way to proceed is to heat the wraps with a torch, remove them, and try again.

I used a variation of this to join a perpendicular element to two other elements on a quilt rack. The ends of round cross members were split and tapered, then heated and wrapped to two intersecting scrolls on each end of the rack.



I hope this brief introduction to basic joinery helps you to understand the various ways metal can be joined and how to accomplish these basic joinery techniques.



Blacksmith Book Review

By Bill Clemens

A Blacksmith's Craft The Legacy of Francis Whitaker Volume 1

**A Compendium of Processes, Tools,
Patterns & Tips**

Written and Illustrated
by

George F. Dixon

Available from: Blue Moon Press, Ltd

Blue Moon Road

Huntingdon, PA 16652

Toll Free: (866)627-6922

<http://www.bluemoonpress.org>

This is the first of a two volume set that is a major revision to "The Blacksmiths Cookbook" written by Francis Whitaker in 1987. This volume covers the fundamentals of blacksmithing. Volume 2 will show where these fundamentals will take you and will be published in 2007.



BGCM New Members

The Guild welcomes the following new members. Take a minute to look over the list and see if you find someone who lives near you. If you do, contact them and offer them a ride to the next meeting, invite them to your smithy, or just welcome them to the guild.

Tom and Donna Anderson
53 Hixson Lane
New Columbia, PA 17856
(570) 568-8265
ttinker@ptd.net

Jim Whitman
5131 Greenbridge Rd.
Dayton, MD 21036
(301) 596-9432

Rod Whitman
2245 Forest Hill Rd.
Marriottsville, MD 21104
(410) 446-6345
xxvoicexx@hotmail.com



Blacksmith Guild of Central Maryland

The **HAMMER & TONG**

**E
D
I
T
O
R
S

C
O
R
N
E
R**

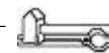
Well they say three's a charm, I hope that's true for newsletters! I've included an article on basic joinery in this issue. It relates to the contest for Blacksmith Days, specifically the Grille. I hope that some of you will make a grille and enter the contest. Each issue I plan to include an "how to" article that relates to one or both of the trade items. If anyone has suggestions or wants to tackle a similar article for a future issue I'll accept it and include it.

I know some out there have thoughts and ideas on what you'd like to see in the next issue. You don't have to write the article but I need to hear from you. I'm doing my best to put out a quality newsletter that meets your needs but if you remain silent I can only guess at what you want to see. I tried forging a crystal ball but all I could see in it was scale and Iron! When you attend a blacksmithing event, read a book on blacksmithing, or just have some thoughts on smithing to send me a note with a picture or sketch and I'll put it in the newsletter.

I wish to acknowledge, with gratitude the contributions made for this issue of

The HAMMER & TONG by:

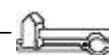
Albin Drzewianowski
Allen Dyer
Ted McNett
Dick Smith



This Space reserved for you contribution to:

The HAMMER & TONG

Send your article in today, and don't worry this space is designed to expand to fit whatever you send in.



May/June **HAMMER & TONG** 13

The Blacksmith's Bookshelf

By Albin Drzewianowski

DOVER PUBLICATIONS is an excellent source for books that would be of interest to a blacksmith, especially an artist blacksmith. The books available from this company are not about forging, rather they are a resource for ideas and designs. The books are available through catalogs or its website. I have seen Dover Publication books in bookstores, usually in the art section.

Dover has a section of their catalog and website devoted to historic iron work. They also have books on art, drawing/how to draw, design, etc. I recently got two books, one on Celtic design and one on Viking/Nordic design. They are both part of the Dover Electronic Clip Art series, each book came with a CD-ROM containing all of the designs in the book. Once loaded on the computer you can re-size as needed, and cut and paste to combine designs into a single drawing (very handy for those of us who are somewhat artistically challenged).

On my wish list are art books describing Art Deco and Art Nouveau styles, both of which are heavily represented in ironwork. So to expand your horizons and give you ideas for future projects this is a publisher worth getting to know.

Dover Publications, Inc
31 East 2nd St.
Mineola, NY 11501

www.doverpublications.com



First Aid Tip

By Albin Drzewianowski

Have you noticed that when you need to use a band-aid, the average one does not stick on very well when blacksmithing? Invariably you get a cut on a fingertip, or other spot where band-aids just don't want to stay stuck. I have found that the BAND-AID SPORT STRIP, made by Johnson & Johnson, stays on where other band-aids end up falling off after a short while. It is wider and it seems to have a more durable water/sweat-resistant adhesive allowing it to hold up under the adverse conditions of working in the smithy.



Contractor Looking for a Blacksmith

By Albin Drzewianowski

Recently I was contacted by a Jonathan Herman in Sykesville, 443-463-5622 cell / 410-795-8511. He is a contractor that does restoration work.

He is looking for someone to do a railing down some exterior stone stairs on an upscale house. He wants someone with artistic ability and who has done railings before. He is close to the end of the project, so there is a pretty short fuse on getting the railings done.

If anyone is interested in taking on this job, give him a call.

He also said that since he does restoration work, he is interested in establishing a long-term relationship with a blacksmith for those times that he needs that type of work done.



BGCM 2005 Historic Forge Volunteer Calendar

JANUARY							FEBRUARY						
						1			1	2	3	4	5
2	3	4	5	6	7	8	6	7	8	9	10	11	12
9	10	11	12	13	14	15	13	14	15	16	17	18	19
16	17	18	19	20	21	22	20	21	22	23	24	25	26
23	24	25	26	27	28	29	27	28					
30	31												
MARCH							APRIL						
		1	2	3	4	5					1	2	
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28	29	30
MAY							JUNE						
1	2	3	4	5	6	7				1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30	31					26	27	28	29	30		
JULY							AUGUST						
					1	2		1	2	3	4	5	6
3	4	5	6	7	8	9	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30	31			
31													
SEPTEMBER							OCTOBER						
				1	2	3							1
4	5	6	7	8	9	10	2	3	4	5	6	7	8
11	12	13	14	15	16	17	9	10	11	12	13	14	15
18	19	20	21	22	23	24	16	17	18	19	20	21	22
25	26	27	28	29	30		23	24	25	26	27	28	29
							30	31					
NOVEMBER							DECEMBER						
		1	2	3	4	5					1	2	3
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30				25	26	27	28	29	30	31

Gray Shaded dates are
School Tours 9:30 AM -2PM

Black Dates are Events
Listed Below

Cross Hatched dates are for
Union Mills Forge

To Volunteer Contact :
Kevin Thomas
(410) 848-4869
email..... kbt62@direcway.com

25-28 Apr... Traditional Arts Week
30 Apr Flower & Plant Market

1 May.. Flower and Plant Market
7-8 May..... Civil War Living History Encampment
21-22 May..... Blacksmith Days
4 Jun Spring Muster
Antique Fire Show

4 Jul Old Fashioned 4th
9-10 Jul Common Ground
Music & Art Festival
9-10 Jul Civil War Camp
Ice Cream Social
11-15..... Living History Camp
18-22..... Living History Camp
25-29 Jul..... Living History Camp
6 Aug .Old Fashioned Corn Roast

9-11 Sep Steam Show
17-18..... Maryland Wine Festival

1-2 Oct Fall Harvest Days

2-4 Dec Holiday Visit
3 Dec Poinsettia & Greens
Festival
9-11 Dec Holiday Visit

Upcoming Events

In addition to BGCM's Blacksmith Events Calendar, as we get closer to the time of the events, we will provide more details. When you attend these events, remember it is considered common courtesy to bring items for the Iron-In-The-Hat raffles and auctions. It is the money raised by the raffles and auctions that make these hammer-ins possible. Don't forget your safety glasses. Also, if you attend an event, please consider writing up a brief description of your experience and/or taking some photos to share with the rest of the Guild and send it to the editor.



Iron Age Antiques Sale

"Bill Gichner Yard Sale"

The Good The Bad and The Ugly

May 7-8, 2005

This is sale (not an auction) with prices marked on everything and they will negotiate.

Iron Age Antiques
10 Central Ave
Ocean View, DE
302-539-5344



Auction: Jim Sorber Collection

**American Wrought Iron
Architectural Hardware, Utensils, & Tools**

Friday, 13 May 2005

Go to <http://www.pookandpook.com> for directions and complete details about the sale. There will be an online catalog starting on 1 May.

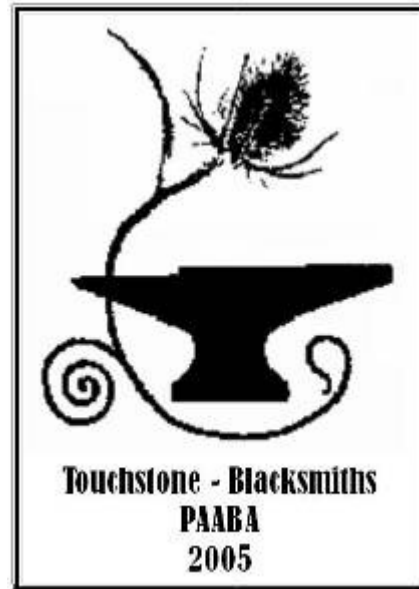
Pook and Pook auctioneers
463 East Lancaster Avenue
Downingtown, PA 19335
Phone: (610) 269-4040
Fax: (610) 269-9274



Touchstone/PAABA Conference 2005

May 13,14, 15, 2005

Touchstone Center
1049 Wharton Furnace Road
Farmington, Pa 15347



www.touchstonecrafts.com
1-800-721-0177

Pittsburgh Area
Artist-Blacksmiths Association
<http://home.comcast.net/~paabasec/>

Questions:

John Steel 724-774-6757
Bob Rupert 724-573-4569
Chris Holt 412-741-6171

Demonstrators:

Doug Wilson Deer Isle, Maine
Kim Thomas
Steve Moorhouse
Lou Kruse
Robert Mazza

\$35 Pre registration \$40 at the gate

Meals Separate
Breakfast \$5.00
Lunch \$7.50
Dinner \$9.50
Pig Roast \$9.50
Lodging Available

BGCM 2005 Blacksmith Events Calendar

JANUARY						
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Fancy Hook

FEBRUARY						
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28					

Something with a Heart

MARCH						
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Garden Tool

APRIL						
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Bar-B-Que Tool

MAY						
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

BSD Contests – Grille - Sculpture

JUNE						
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

Flower

JULY						
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Animal/Wizard Head

AUGUST						
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

From a Railroad Spike

SEPTEMBER						
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

From a Horseshoe

OCTOBER						
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Leaf

NOVEMBER						
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Boot Scraper

DECEMBER						
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Ornament

8-9 JAN..... Gichner's Hammer-In
16 JAN.....BGCM Meeting

20 FEB.....BGCM Meeting
 26 FEB. Dan Boone's Pasture Party

Mar... No Furnace Town Joint Mtg
20 MarBGCM Meeting
 16-17 Apr.....BGOP Spring Fling
24 Apr.....BGCM Meeting
 25-28 Apr.....CCFM Traditional Arts
25-28 Apr ...4 Day Beginner Class
30 Apr-1 May..... Cable Damascus

7-8 May..... Gichner's "Yard Sale"
 13 May.. Sober Collection Auction
 13-15 May.... Touchstone/PAABA
14-15 May..... Beginners Class
21-22 May..... Blacksmith Days

4 Jun..... PABA Blacksmith Day
 10-11 Jun.. Rough & Tumble BSD
18-19 Jun Intermediate Class
26 JunBGCM Meeting

17 Jul.....BGCM Meeting

21 AugBGCM Meeting

30 Aug-2 Sep..... CANIRON V

10-11 Sep..... Wrought Iron Conf
25 SepBGCM Meeting

8-9 Oct..... Intermediate Class
16 Oct.....BGCM Meeting
29-30 Oct..... Beginners Class

5-6 Nov Blacksmith Christmas Show
12-13 NOV..... Basic Knife Class
20 NovBGCM Meeting

10 Dec BGCM Holiday Party
10-11 Dec. Forge Welding Class

2006

Jul ABANA Conf(Seattle, WA)
 May/June **HAMMER & TONG 17**



FIREPOTS



GENERAL PURPOSE FIREPOT \$255 + S/H



KNIFEMAKERS FIREPOT \$275 + S/H



PORTABLE ROUND FIREPOT \$215 + S/H

For More Information/Availability Contact:

Bob "Ironmonger" Cruikshank
1495 W. Possum Rd
Springfield, OH 45506
ironmonger40@woh.rr.com
(937) 323-1300

<http://www.creativeironforge.com/>



Blacksmith Coal

Blacksmith Guild of Central Maryland

50 Lb Bag \$6.00

Available at:

Monthly Guild meetings and Open Forge Nights
Or Contact any Board Member

ROBERTS OXYGEN



KURT BECHTEL

SALES REPRESENTATIVE

ROBERTS OXYGEN COMPANY, INC

TEL: (410) 840-0400

96 JOHN STREET

FAX: (410) 840-1912

WESTMINSTER, MD 21157

CELL: (443) 506-0924

EMAIL: kbechtel@robertsoxygen.com



STONEMILL PLUMBING & HEATING

**24 HOUR
EMERGENCY
SERVICE**

RESIDENTIAL • COMMERCIAL

PUMPS-BOILERS-WATER HEATERS

NEW CONSTRUCTION & SERVICE

e-mail: stonemillgh@aol.com • www.stonemillplumbing.com

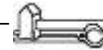
(410) 848-7661

GEORGE L. HUGHES

Fax: (410) 848-8872

Master Plumber #12916

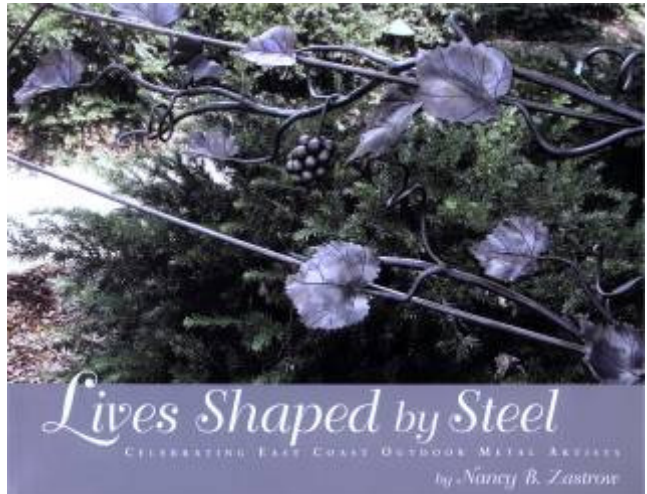
Cell: (443) 375-7359



Lives Shaped by Steel

Celebrating East Coast Outdoor Metal Artists

By Nancy B. Zastrow



Metal art can bring life to its surroundings. A gate or railing may so perfectly adorn a garden or building that the place would seem bare and ordinary without it.

This book is about that kind of metal and the artists who dream it and create it. Interviews with East Coast artists tell how they started, what inspires them, and how they meet the challenges of the work. Color photos show examples of gates, railings and fountains that beautifully complement their settings. These smiths love what they do, and do it against all odds, leading and leaving lives enriched.

<http://www.ironartists.com/Homepage.htm#>

Blacksmith Guild of Central Maryland

Open Forge

Check the Guild's telephone number (410) 386-9150 to see if there will be an Open Forge



Carroll County Farm Museum 2005 Calendar of Special Events

Apr 25-28 Traditional Arts Week
May 7-8 .Civil War Living History Encampment
May 21-22..... Blacksmith Days
Jun 4... Spring Muster and Antique Fire Equipment
Jul 4..... Old-Fashioned July 4th Celebration
Jul 9-10..... Common Ground on the Hill's
American Music & Arts Festival
Jul 11-15, 18-22, 25-29 ... Living History Camp
Sep 9-11 Steam Show Days
Sep 17-18..... The Maryland Wine Festival
Oct 1-2..... Fall Harvest Days
Dec 2-4, 9-11 Holiday Tours

Demonstrators for the Museum's Historic Forge are needed for the above special event dates as well as anytime the Museum is open. To volunteer contact:

Kevin Thomas (410) 848-4869



Union Mills Homestead Looking for Blacksmith Demonstrators

The Union Mills Homestead, located just north of Westminster on Rt. 97 is looking for blacksmiths to demonstrate in their historic forge. Rules of conduct and dress are pretty much the same as in the Historic Forge at the Farm Museum. Event dates are published on the Historic Forge Volunteer Calendar in this newsletter. If you are interested please contact:

Kevin Thomas

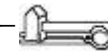
(410) 848-4869

Email: kbt62@direcway.com

There is more information about Union Mills at their web page:

<http://www.unionmills.org/>

Dick Peeling (717)359-5520



LIABILITY RELEASE

I understand that blacksmithing and other metal work are inherently dangerous activities and agree to attend and participate in any and all **BLACKSMITH GUILD OF CENTRAL MARYLAND** events at my own risk. Further, I agree to wear all required safety equipment including, but not limited to, safety glasses. I understand if I am not wearing said safety equipment, I may be asked to leave and agree to do so.

I release **THE BLACKSMITH GUILD OF CENTRAL MARYLAND, INC.**, its members and officers from liability should there occur an injury or accident while I am participating in any Guild sponsored activity.

Signed: _____

Date: _____

BGCM Guild Meetings

The Guild meets monthly in the Blacksmith School on the grounds of the Carroll County Farm Museum, 500 South Center Street, Westminster, Maryland. The school is **open at 9:00 a.m.** for open forging. **LUNCH: Potluck.** Please bring a hot dish, salad or dessert to share. Drinks and paper products will be provided. **Iron In The Hat** after Lunch, bring items of use to blacksmiths to donate and some money for tickets. There will be a **business meeting at 1:00 p.m.**

May 21- 22, 2005

17th Annual Blacksmith Days

Iron Masters - Luc Fiedler

BSD Contests: Grille and Sculpture

Sunday June 26, 2005

DEMONSTRATION:

Bill Clemens .. Tools for Animal/Wizard Heads

TRADE ITEM: Flower

BGCM Open Forge Evenings

There is a monthly Open Forge, on the 2nd Thursday of each month from 6-9 pm.

If you want to come forge check the guild phone message to confirm the Forge will be open

Thursday May 12, 2005

Thursday June 9, 2005

BGCM Inclement Weather Policy

If Carroll County, Maryland, Schools have been closed for Thursday or are already closed for the next day, Friday; then OPEN FORGE is cancelled for that Thursday night

If the winter weather seems bad or threatening on the day of a meeting or open forge, or if it has snowed on the weekend, we may have to cancel since the Farm Museum is closed to the public during the winter and often the County does not plow out the Farm Museum until Monday.

Call the BGCM phone number, 410-386-9150, to check if the event has been cancelled.

MEMBERSHIP APPLICATION / RENEWAL

Name _____

Address _____

City _____ State _____ Zip _____

Phone (____) _____ - _____ Email : _____

- New Member Individual Check if you are you a member of ABANA
 Renewal Family (list ages of dependant children _____)

Read and Sign liability release statement on reverse side of this form

Dues : \$25 - Individual / \$30 - Family

Membership dues are for the period:

January 1 through December 31

Includes a subscription to the Guild's bimonthly newsletter, **The HAMMER & TONG.**

Make checks payable to Blacksmith Guild of Central Maryland and mail with completed and signed application form to:

**BLACKSMITH GUILD OF CENTRAL MARYLAND
P. O. BOX 593
Randallstown, MD 21133**