

June 2015

BOARD OF DIRECTORS

Gary Phillips '18 President:

14800 N SR 167 N
Albany, IN 47320
(765) 789-8316
behere@netdirect.net

Steve King '18

1155 S. Paoli Unionville Rd
Paoli, IN 47454
(812) 797-0059
kingknives@live.com

Bill Conyers '19 Vice Pres

50964 Lilac Rd,
South Bend, IN
(574) 277-8729
billconyerssr@yahoo.com

Bill Newman '19

4655 Williams Rd
Martinsville, IN 46151
(317) 690-2455
ruralsmiths1@yahoo.com

Dominick Andrisani '16

3608 Capilano Drive
West Lafayette, IN 47906-8869
(765) 463-4975
andrisan@purdue.edu

Ted Stout '16

8525 W 700 S
West Point, IN 47992-9258
(765) 572-2467
stout8525@tds.net

James Johnston '17

Education Chairman:
806 Twyckingham Lane
Kokomo, IN 46901-1885
(765) 452-8165
kokomoblacksmith@comcast.net

Keith Hicks '17 Secretary:

5184 State Road 252
Brookville, IN 47012
(765) 914-6584
keithhicks2011@gmail.com

Librarian:

Larry Rosentrader
8715 E. 375 N
Churubusco, IN 46723-9501
260-693-3267
rosentrad@cs.com

Editor:

Bill Kendrick
1280 N 900 W
Seymour, IN 47274
(812) 445-3009
bill.d.kendrick@cummins.com

Treasurer and membership secretary:

Farrel Wells
8235 E 499 S
Dunkirk, IN 47336-8807
(765) 768-6235
flwells@frontier.com

Awards Chairman:

Charlie Helton
2703 South Water Plant Road
Westport, IN 47283
(812) 591-3119
heltoncs@frontier.com

THE FORGE FIRE

The Newsletter of the Indiana Blacksmithing Association, Inc.

An Affiliate Of The Artists-Blacksmiths' Association of North America, Inc.

IBA is a Not For Profit Indiana Corporation recognized by the IRS under section 501(c)(3)

9:30 AM is the regular meeting time for IBA Hammer-Ins
with beginner training available at 9:00 AM.

PLEASE MAKE SURE TO ASK FOR HELP!

**If you would like an IBA membership application form,
please contact Farrel Wells, Membership Secretary
(765) 768-6235.**

BULK LOTS ARE AVAILABLE TO DEMONSTRATORS,
SHOPS, SHOWS AND OTHERS WILLING TO MAKE THEM AVAILABLE.
WE APPRECIATE YOUR HELP.

The Indiana Blacksmithing Association, Inc., its staff, officers, directors, members, and hosts and the *Forge Fire*, specifically disclaim any responsibility or liability for damages or injuries as a result of any construction, design, use, manufacture or other activity undertaken as a result of the use, or application of, information contained in any articles in the *Forge Fire*. The Indiana Blacksmithing Association, Inc. And the *Forge Fire* assumes no responsibility or liability for the accuracy, fitness, proper design, safety, or safe use of any information contained in the *Forge Fire*.

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More nearby resources and organizations for blacksmiths:

Rural Smiths of Mid-America:
Meetings are on the first Saturday of each month
Call Ron Gill
317-374-8323 for details

IBA MEETING SCHEDULE

Check the latest *Forge Fire* for monthly IBA revisions.

July
17-19
2015

UMRBC (PONTIAC)

August
7-23
2015

**INDIANA STATE FAIR
PIONEER VILLAGE**



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Dates to Remember

July 17-19
UMRBC
(Pontiac)

August 7-23
Indiana State Fair

September 25-27
SOFA Quad State

Editors Message

We just concluded a great Conference. Unfortunately I experienced a technical problem with my computer and lost all of my photographs. Hopefully we will have some pictures to share in the next Forge Fire.

Perhaps the biggest highlight for me was seeing Carol Stout at the Gallery table on Friday evening. Most of you know that Carol has been battling cancer. She felt well enough to come out and visit for a while. It was great seeing her smiling face.

The pre-conference class led by Nathan Robertson was a big hit. The 2-day class resulted in every participant making a forging hammer and a sledge. Five of the students displayed their hammers in the conference gallery. All of them were first rate work. Clearly the pre-conference classes are becoming a popular tradition. Jim Johnston is already making plans for next year.

I had the pleasure of recording Michael Bendele's demonstration. That restricted my ability to see the other demonstrators, but I did pick up some very good tips. Michael worked with nonferrous materials on Sunday. The fellow beside me was as surprised as I to see Michael work a hot copper into a free form vessel. We had always been told to work copper cold by heating then quenching to anneal. We had not been informed that copper can be worked hot from a dull red to well into the black range. Another very helpful piece of information was to change the gas forge from 0.040" tips normally used for iron and steel to 0.030" tips for nonferrous. The forge was much cooler, running at a red heat, but more than sufficient for copper, bronze and brass. A number of details and comments about various nonferrous materials are listed on pages 6 and 7.

There are two upcoming antique power and steam shows coming up in August listed on page 8. The pioneer engineers are looking for blacksmiths to demonstrate in their shop south of Rushville on August 6-9. The shop is well appointed and looks spectacular. If you are interested, contact Phil Barnard (ph: 317-710-4337, E mail pbarnard56@gmail.com).

With the IBA conference concluded, we have the Upper Midwest Regional Blacksmith Conference (UMRBC or "Pontiac") coming next month. Details can be found at <http://www.umrbc.org/Home.html>. Bill Conyers is the IBA co-ordinator. If you want to help out or have any questions contact Bill at (574) 277-8729 or email: billconyerssr@yahoo.com

The State Fair is just around the corner. The IBA is continuing to support this event that provides education and outreach to the public. Bill Newman is co-ordinating work schedules and access passes. Contact Bill at (317) 690-2455 or email: ruralsmiths1@yahoo.com for details.

Visit the IBA website at: www.indianablacksmithing.org

IBA Satellite Groups and News

Sutton-Terock Memorial Blacksmith Shop

Meet: 2nd Saturday at 9 AM
 Contacts: Fred Oden (574) 223-3508
 Dennis Todd (574) 542-4886

Wabash Valley Blacksmith Shop

Meet: 2nd Saturday at 9 AM
 Contacts: Doug Moreland (217) 284-3457
 Max Hoopengartner (812) 249-8303

Maumee Valley Blacksmiths

Meet: 2nd and 4th Saturday
 Contact: Clint Casey (260) 627-6270
 John Schamber (260) 579-7303

Rocky Forge Blacksmith Guild

Meet: 2nd Saturday at 9 AM
 Contacts: Ted Stout (765) 572-2467

Whitewater Valley Blacksmiths

Meet: 2nd Saturday
 Contact: Keith Hicks (765) 914-6584

Bunkum Valley Metalsmiths

Meet: 1st Saturday
 Contacts: Doug Neukam (812) 259-4430
 Steve Stoll (812) 486-9668
 Kathy Malone (812) 725-3310

Satellite 13

Meet: 4th Saturday
 Contact: Bill Newman (317) 690-2455

Jennings County Historical Society Blacksmith Shop

Meet: 2nd Saturday at 9 AM
 Contact: Ray Sease (812) 522-7722

Fall Creek Blacksmith Shop

Meet: 4th Saturday at 9 AM
 Contacts: John Zile: (765) 533-4153
 Larry Singer (765) 643-5953
 Farrel Wells (765) 768-6235

St. Joe Valley Forgers

Meet: 4th Saturday at 9 AM
 Contacts: Bill Conyers (574) 277-8729
 John Latowski (574) 344-1730

The Southern Indiana Meteorite Mashers

Contacts: Billy Merritt (812) 338-2876
 Steve King (812) 797-0059
 Jeff Reinhardt 812-949-7163

One-Armed Blacksmith's Shop

Meet: 1st Saturday
 Contact: Tim Metz (812) 447-2606

"Doc" Ramseyer Blacksmith Shop

Location: 6032W 550N, Sharpsville, IN 46060
 Meet: 3rd Sunday at 2 PM
 Contacts: Mike Kelley
 Charles Gruell (765) 513-5390

Fall Creek Blacksmith Shop

The weather was beautiful. So nice that only three members showed up. Dave Kline, Eric Shotwell, , and Dave Wells. We worked our buns off, tweaking things, de burring, cleaning the project and prepping for a finish. We applied a first coat. The day was long and the three of us was tired. Eric decided to take the garden bench home and apply the second coat, before bringing it to the conference. No picture was taken. Reported by Dave Wells

Jennings County Historical Society Blacksmith Shop

The Jennings County Historical Society Blacksmith Shop was opened by Kenny Dettmer who started making a handle for our new tool box. He took six pieces of 3/16"round mild steel. He forge welded the ends together in a "V" block and explained why this method was used. Brad Weaver made two punches with wrapped handles, one round and one square. Ray Dean worked on a set of dividers and a leaf. Leland Dean made a heart stake. Alex Spellman was mentored by Jack Newcomb on basics. Tim Thompson made his world famous ,one-of-a-kind leaf. Charlie Helton and Brad Weaver made a hold down to hold objects on edge! We had 23 to attend. Our next get together opportunity will be the conference at Tipton Fairgrounds. Be there and have a great time! We will have our regular monthly meeting on the 13th. Hope you're not too tired to attend. Paul Bray

IBA Satellite Groups and News (continued)

Rural Smiths of Mid-America

Well another IBA Conference is in the books. It was another great job by all who worked so hard at putting this on. Thanks for all your hard work.

The RSMA will be at the Johnson County Tractor Show June 19-21. We will be doing demos all weekend in the blacksmith shop. come on down and give us a helping hand or just stop by and say hi, there will be lots of thing going on at the tractor show.

Our July meeting will be on the 11th of July, do to the 1st Saturday be on the 4th, we move to the next Saturday. We will be meeting at Bob Hesson shop. He has ask that we have 2-3 1/2 hour demos. I am working on setting these up, and should have this done by then. everyone is welcome to join us there.
Thanks, Ron

The Southern Indiana Meteorite Mashers

The mashers met at Jeff Reinhardt's shop in Floyds Knobs this month.

Had a new young smith to join in Isaiah was brought by Steve King and was given one on one by Steve King. Isaiah finished several items and has the makings of a good smith. Pete Riddle made a forged big hook with a drifted eye to hang a new wagon wheel lamp in his house. The hook involved the BFH favorite task team striking and then slitting and drifting a 2" eye on the hook. Butch Sparks meanwhile unloaded a pair of large wheels from a truck and Jeff Reinhardt welded them together and burnt an access hole to make a fire pit. Mike Mills made an angle iron flour de Lies that came out very nicely. Mike's



daughter Hermione brought a copper bracelet that she had chased a design into. Jeff buffed it for her. It was very nicely chased. Then Butch made a betty lamp that hangs from a hook. Very nice.

A great time was had by all, and at several times we had 3 irons in the fire with 3 smiths juggling for anvil space. Heck Butch and Pete shared the anvil doing 2 projects at once.

Next meeting is at Steve Kings shop in Paoli

The Indiana Blacksmithing Association (IBA) Facebook Group now has 202 members. This is a significant growth over the 9 month lifetime of this group.

I think the group is providing a real service to our community in terms of sharing information, photos of work in progress and completed and in promoting general blacksmithing camaraderie.

IBA Webmaster (webmaster@indianablacksmithing.org)
Dominick Andrisani (andrisan@purdue.edu)

IBA Satellite Groups and News (continued)

(editors note: The following was information that should have been included in last month's Forge Fire)

The Southern Indiana Meteorite Mashers

The meteorite Mashers met at Dave Kunkler's shop in Branchville. Joseph Gehl made a Damascus billet and then Pete Riddle made

a Hot cut and then a knife from some spring steel Jeff Reinhardt had brought. Mike Mills made a pair of Curtain hold backs which he presented to Donna Kunkler. Jeff Reinhardt made a small patch knife cheese spreader which he gave to Pete to take to his lovely young Bride. Steve King demonstrated grinding and heat treatment of the knife Pete had made. Dave Kunkler made a knife from a tiny roller bearing which when sharpened would shave hair just the paring knife Pete made. The photo shows both in Steve Kings hand!



Next meeting at Jeff Reinhardt's shop in Floyds Knobs



IBA 2015 Conference

Non-Ferrous Metal Tips From Michael Bendele

110 Copper, Electrolytic Tough Pitch (ETP) Copper

The hot forgeability rating of this alloy is 65 (forging brass is 100). Recommended hot working temperature is 1400 – 1600 F. Annealing temperature is 700 – 1200 F. Cold working is excellent.

Soldering is excellent, brazing good, welding such as TIG or MIG is good for color match up to 1/8", after that it is difficult. Preheat and helium helps in thicker cross sections. Oxygen free copper rods match color, or use parent material. Harris O and stay silv15 work well.

655 Silicon Bronze

The hot forgeability rating is 40 (forging brass is 100). Recommended hot working temperature is 1300 – 1600 F. Cold working is excellent. Annealing temperature is 900 – 1300F. Welding and color match is excellent. Mostly use silicon bronze rods for TIG. Brazing is also good and soldering excellent.

This is probably the easiest copper alloy to work with overall for blacksmiths but the most expensive by far. Reddish bronze ascension.

630 Aluminum Bronze

The hot forgeability rating is 75. Recommended hot working temperature is 1450 – 1700 F. Hot working rating is good. Cold working is poor. Machinability is rated as 30 (360 brass is 100).

630 is not my personal favorite.

464 Naval Brass

Hot forgeability rating is 90. Recommended hot working temperature is 1200 – 1500 F. Cold working is fair. Annealing temperature is 800 – 1100F. Machinability is rated as 30 (360 brass is 100). Welding and brazing are excellent.

This is a very nice alloy to work with. The price is far less than silicon bronze.

377 Forging Brass

Hot forgeability rating is 100. Recommended hot working temperature is 1200 – 1500 F. Cold working is poor. Machinability is rated as 80.

This alloy is very tricky for the blacksmith. It is almost too soft in the working range, but goes to glass hard almost between blows and cracks.

It is very difficult to weld large sections. Stay silv 15 works best for it and does color match okay with patination. It is cheaper than silicon bronze.

260 Cartridge Brass

Hot working is rated as fair. Cold working is excellent. It is the most malleable brass. Wonderful for repousse. Annealing temperature is 800 – 1400 F. Takes patination nicely.

360 Brass

Hot working is not recommended. Cold working is not really recommended. It is designed for machining. Machinability rating is 100.

1100 Aluminum

Hot or cold formed easily. Good machinability and weldability. Annealing temperature is 600 F. Forging temperature is about 800 F. It is fun to forge but easy to melt.

Recommended site for alloy information: www.suppliersonline.com/default.asp
(click on research tab of page)

Upcoming Antique Equipment Shows

Mid-America Threshing and Antiques 41st Anniversary Show

August 6-9

Tipton

Feature: John Deere

Venue: Tipton County 4-H Fairgrounds, St. Rt. 19 S

Contact: Curt Bannister, 765-431-4037

Website: www.tiptonthreshing.com

Pioneer Engineers 67th Annual Reunion

August 6-9

Rushville

Feature: Huber steam engines; CO-OP; Cockshutt

Venue: Caldwell Pioneer Acres, 3 miles south, off Hwy. 3.

Contact: Brian Vaughn, 812-346-7640

Website: www.pioneerengineers.com

The Pioneer Engineers are looking for blacksmiths to demonstrate in their shop August 6-9. If interested contact Phil Barnard (ph: 317-710-4337, E mail pbarnard56@gmail.com)





The DVD, *Beauty in the Shadows: An Illustrated Inventory of Wrought Iron in the Washington National Cathedral*, is now produced and available for purchase. The description on the back of the sleeve sums it up concisely:

"This disc is intended to complement "Beauty in the Shadows", a recently published book by Nol Putnam. The book is a work of art; a journey through the cathedral conducted by master blacksmith Nol Putnam. The photography is superb and the text captures the essence of the art form as only a master of the trade with a talent for writing could do. It includes major works and a sampling of detail.

From the early stages of planning the book it was intended to have a CD-based complete illustrated inventory, including the major gates and grilles with more detail, and all the railings, door hardware, light fixtures, statues and plaques. It includes all metals, distinguishing those that are wrought iron. Sit back and enjoy the wrought iron of the cathedral from the most magnificent gates to the most humble hinge strap or railing in 2,284 photos."



James Pittman is a retired physician who provided both general and specialty tours at the cathedral for ten years. Over these years he has been photographing every aspect of the cathedral art. The original intention was to have better resource material available to his fellow docents. He has produced a book and CD on the 721 carved boss stones, a CD based atlas of the stained glass windows, a CD based virtual tour of the cathedral, and several virtual specialty tours, none published for sale to the public. The wrought iron DVD has been five years in the planning and production, and is available for \$25.00 from Dr. Pittman, 6824 Derby Run Way, Gainesville, VA 20155, or on Amazon at:

http://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Daps&field-keywords=Beauty%20in%20the%20Shadows%20Pittman

Kvinde Kniv ~ Woman's Knife

Iron-Age Utility Knife

from Pre-Viking Scandinavia

Beth Holmberg, San Diego

In addition to organizing all of the hands-on workshops at Spring Conference 2013 at Vista, Beth Holmberg also led a workshop on making these small knives. As many of you know, Beth has a strong interest in historical and archeological blacksmithing – this knife comes from that interest.

Kvinde Kniv means “woman’s knife.” This design was thought to be typical of the kind of small knife used for everyday purposes by the woman in a pre-Viking Scandinavian household. It is a common find in Viking graves, along with a little whetstone.

High-carbon steel is best for this, but about half the archeological finds are low-carbon.

Construction Steps

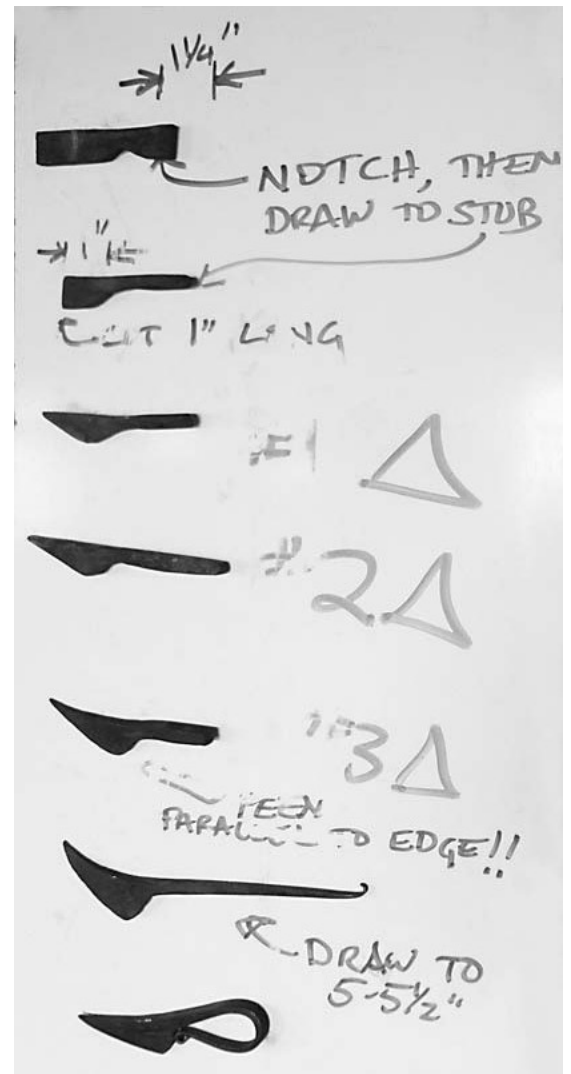
Stock. 3/4" x 1/4" hot-rolled or, optionally, higher-carbon steel.

1. Dent the stock on the anvil edge at 1 1/4" from the end, on the thick dimension.

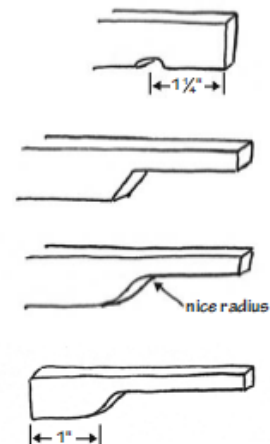
Forge the end down to a square stub that is 1/4" x 1/4" so that you can hold it well in tongs.

Radius the transition on the horn of the anvil.

2. Cut off the extra material where it has not been forged, leaving 1" to 1 1/8" of material for the blade.

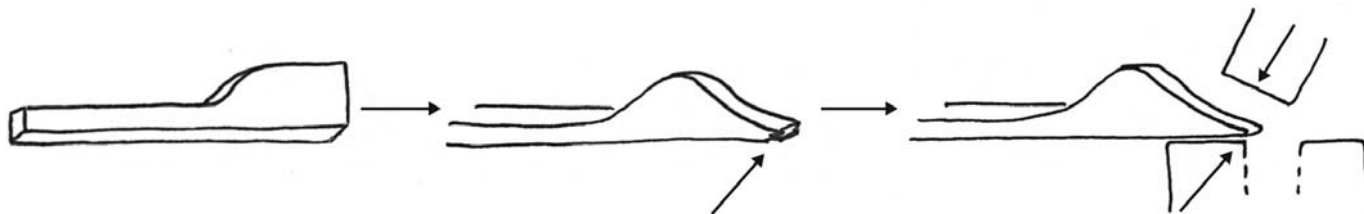


Beth's Storyboard



Kvinde Kniv

3. Forge the blade into a straight taper. Keep the thickness constant at $\frac{1}{4}$ ". The tip should be slightly rounded over $\frac{1}{16}$ ". Make the top edge of the blade flat. If you get fish lips, use your hot rasp to remove them.



4. Now taper the blade in thickness, from base to tip. Both tapers should stay flat, and the tip should remain a fat $\frac{1}{16}$ ".

5. Forge the blade to a thick edge, using the peen of your hammer. Keep the peen parallel to the blade edge. In order to avoid burning it, leave the edge a bit thick (i.e., don't make the actual cutting edge now).

6. Finish forging the blade, using the hammer face, and hammer out the peen marks. Now get the blade edge thinner than $\frac{1}{16}$ ".

7. Draw out the handle to a nice taper 5" to 5 $\frac{1}{2}$ " long. Round the taper by using the square-octagonal-round process.

8. Scroll the handle tip into a tiny round scroll, away from the blade edge.

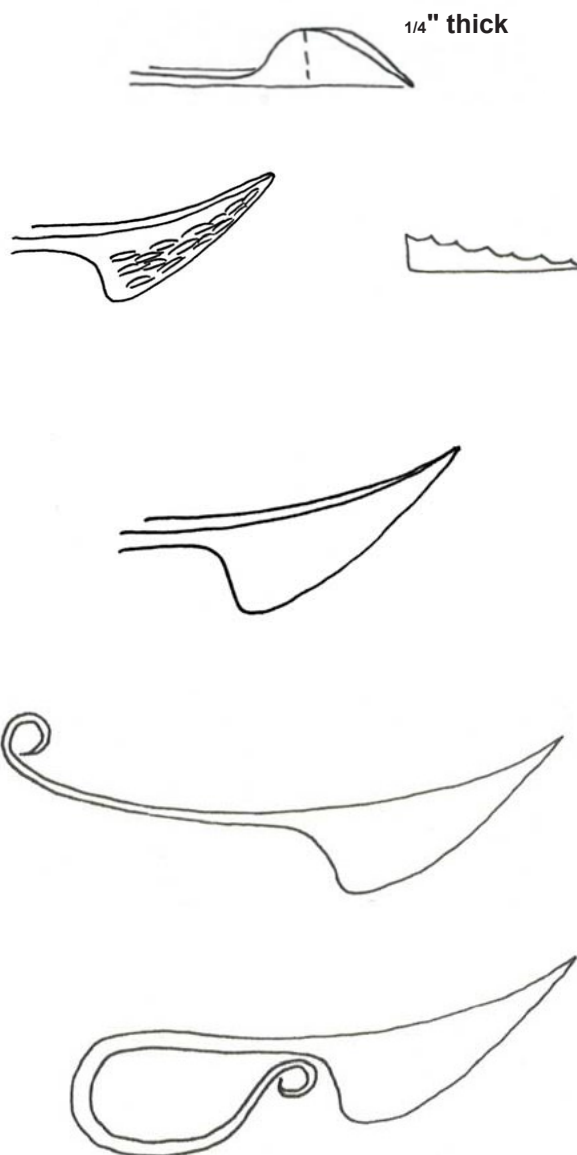
9. Bend/scroll the handle in a pleasant curve to meet the back of the blade.

10. Make sure that the knife is flat, with the edge well centered. Cool it off.

11. Cold file the edge to remove the uneven bits. You should see shiny metal along the whole edge.

12. Sharpen the edge by cold filing a 20° to 25° bevel from each side. Finish as desired using a whetstone.

13. Oil it if you don't like rust. □



Editors Note: This article reprinted from California Blacksmith Association newsletter, May/June 2015 edition



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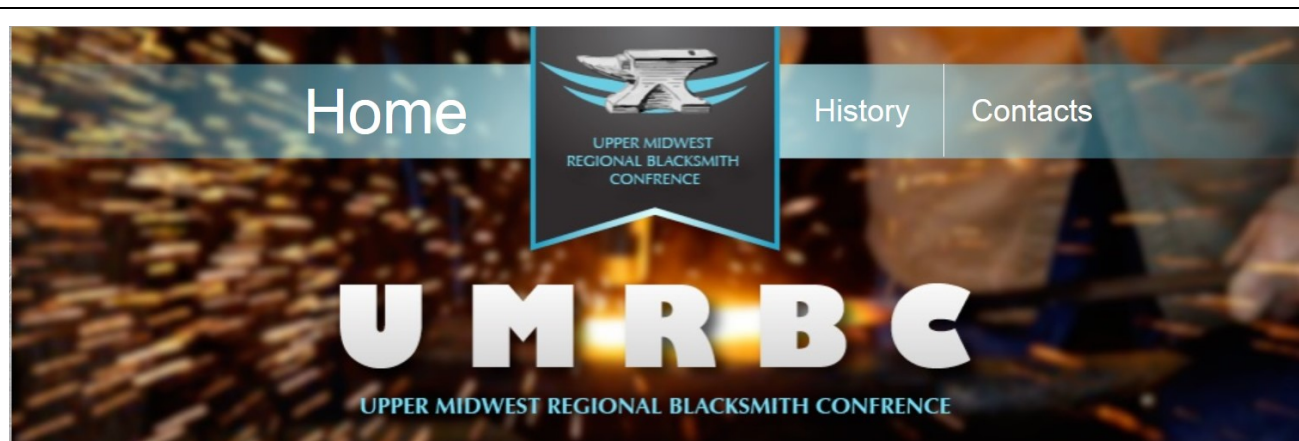
Farrel Wells *Membership Secretary*

8235 E 499 S

Dunkirk, IN 47336-8807

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If Undeliverable return to
sender



<http://www.umrbc.org/Home.html>

July 17-19, 2015

This Year's Demonstrators

Daniel Widolff: Friday (1pm - 4pm) & Saturday (9am - 4pm)

Jeff Farmer: Friday (5:30pm - 7:30pm), Saturday (9am - 4pm) & Sunday (9am - ??)

Roberta Elliot: Saturday (9am - 4pm) & Sunday (9am - 12pm)