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# 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)

10:00 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.

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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 Moe Handy  
(317) 862-5647 for details.

**IBA MEETING SCHEDULE**

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

Dec 14 2013	<b>Rocky Forge West Point, IN</b>
Jan 18 2014	<b>Fall Creek Blacksmith Shop Middletown</b>
Feb 15 2014	<b>Ken Dettmer Shop Columbus</b>
Mar 15 2014	<b>Annual Business Meeting</b>



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PGS 8-10 JIM CLAAR POWER HAM- MER
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#### Dates to Remember

Dec 14  
Hammer In at  
Rocky Forge

Mar 15  
IBA Business  
Meeting

## Editors Message

Normally I try to get the Forge Fire sent to printer between the first and second Saturday of the month. This months edition is coming a week early, due to the December Hammer In falling on the second rather than the third Saturday.

The December Hammer In will be hosted by the Rocky Forge Blacksmith Guild in Ted Stouts shop (see travel directions on back cover). Melvin Lytton will be the featured demonstrator. Ted Stout has a large shop, but be sure to come early to get a good spot. Also bring a dish to share for lunch.

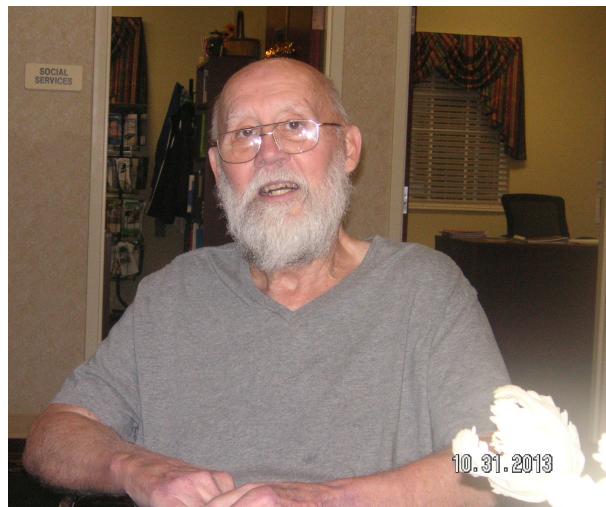
The November Hammer In was hosted by the One Armed Blacksmiths. We had a good turn out. It was a good squeeze to get everyone in. Tim Metz used the IBA 25 lb Little Giant to draw out some table legs. Then Charlie Helton formed scrolls on the ends of the legs.

I have not heard if Ken Dettmer has received any nominations for board of director positions. If you are interested in serving on the board, or if you know someone who is willing to serve, please contact Ken at 15721 S 250W, Columbus, IN 47201 or call (812) 342-4084.

Jim Johnston tells me that John Zile's health is improving. Jim provided this photo of John. John has been battling illness for a long time. I hope to see him in January at Fall Creek.

Hopefully you are all planning, if not working on, your 2014 Conference project. The quality of work has been outstanding at the past Conferences. I am looking forward to the variety of designs, styles and construction techniques.

If I do not see you at Rocky Forge, I wish you all a great Christmas and happy New Year.



## 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 Hoopengarner (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

### **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

### **Bunkum Valley Metalsmiths**

The Bunkum Valley Metalsmiths met on November 2, 2013. We had a lot of people show up for this meeting, around 27. The weather was pretty nice for this time of year. There was a lot of work going on all around. I tried to included a picture of the almost completed add-on to the shop that houses the helve hammer, but for some reason I couldn't get my pictures to load. Sorry about that. Some of the guys were doing some work out there. Alan Brazzel used the helve hammer and made several railroad spike knife blanks. There was a lot of work going on at the other forges also. Terri Byers made her first triangle dinner bell with help from Jim Malone and Steve Stoll. Steve Haywood, newcomer to the bunch, made a tripod set with help from William Pratt. Aaron Baker made a really nice railroad spike knife. Lonnie Salmon's daughter was here with her boyfriend and she made a fire poker, with the help of all those setting on the liar's bench, including Jerry Robinette, Ron Tincher, and Tim McNelis, while Lonnie kept the air moving for her. The boyfriend made something also but I am not sure what. Garrett Pickett was making some kind of weapon as usual. There were lots of others here that I haven't mentioned but you are all very special to our group. I had to be gone to a funeral so Carol Baker provided the main dish for lunch and we really appreciate it much, and Chuck Kryder helped too. It was delicious! Pat Sauer brought some of her delicious deserts and salads to share and CJ brought his quiet spirit and advice to share. Lots of people brought food to share. Thanks to all of you, it was a great day as usual. Until next time, keep hammering.

Kathy Malone, secretary.

## IBA Satellite Groups and News (continued)

### The Southern Indiana Meteorite Mashers

The Southern Indiana Meteorite Mashers met this month at Jeff Reinhardt's shop. This is the infamous "Smoked Turkey Hammer-in" held every year the Saturday after Thanksgiving with Hickory smoked turkey sliced and ready for sandwiches. Had a large crowd, great food, a great iron in the hat. Steve King donated a set of box tongs he made and Jeff donated a Christmas



spike header for door prizes. Jerry Robinette was the lucky winner of the tongs and Jeff won his own made spike header! A quick trade was arranged and Jerry now has a spike header. We had several new folks and lots of beginners working. Steve demonstrated making a set of box tongs and he is getting really good at tongs.

A special treat was Dennis Bennets display of anvils. He brought a duelly truck full and that was only 5 anvils with the biggest at 868#!! He also had a similar sized 7.32 # fiberglass replica, as well as a anvil that is the hardy tool and is on top of the big anvil in the photo.



Later when the Brotherhood of Friendly Hammermen were making the end of some 1 1/2" rebar square, he bravely backed the duelly up to the bank and we had 3 on the ground and 2 in the truck striking. Worked pretty well, and with that big an anvil the truck barely bounced.

A great time was had by all, and the planning has already begun for next years Smoked Turkey Hammer-in. Next meeting of the Southern Indiana Meteorite Mashers will be at Dave Kunkler's new shop in Perry County.



## IBA Satellite Groups and News (continued)

### Jennings County Historical Society Blacksmith Shop

The Vernon Historical Society Blacksmiths met at the Vernon Blacksmith Shop for the last time this year. The shop was opened at 7:45am Sat.Nov.9 . Charlie Helton built a roaring fire to start things off right. Using a length of mild round stock, Charlie forged the end into a triangle by using the cutting plate step for a "V" block. Satisfying himself that this was acceptable for his purpose, he opened the forge to anyone to use. Carson Harral voiced his desire to learn to form a real horseshoe. Charlie Helton gave him a free lesson in "Horseshoeing 101". It was just as interesting for the spectators as the student. Thanks Charlie! Brad Weaver used some 1/4" round to form a scroll and toyed with the idea of turning his project into a candle holder. After everyone who wanted to, had a shot at keeping warm--I mean, working the fire. We held iron-in-the-hat and, again used many items donated by Bill Miller and various others who felt generous. Thanks to you all. We had 14 in attendance on this brisk and windy day. Next month,( December) anyone who wishes to meet and doesn't plan on attending the state meeting, can meet at my house 139 South Park Drive, Seymour. It will be warmer than the Vernon shop. You can brown bag or go to one of the local eateries for lunch . We will also meet here in January and you shouldn't go home hungry this time! Hope to see you soon. Paul Bray--- If you get lost, call 812-522-1158 or 812-521-7177.



### Fall Creek Blacksmith Shop

Although the weather turned colder, 8 members showed up. As usual, Eric and Dave showed up a little late. As usual Kim arrived just before lunch time. Is there a reason why? After eating donuts and drinking coffee we talked about the contest piece for Junes conference. Decisions were made with everyone agreeing. After lunch Eric worked with Elizabeth and Kim worked with Elizabeth's mom. We learned that Elizabeth is getting a blacksmith shop built (on her grandparents place ?) and is need of a forge, an anvil and other blacksmith items that a young and inspiring high school smith might need. Gary had to leave early but the fun still continued. report by Dave Wells

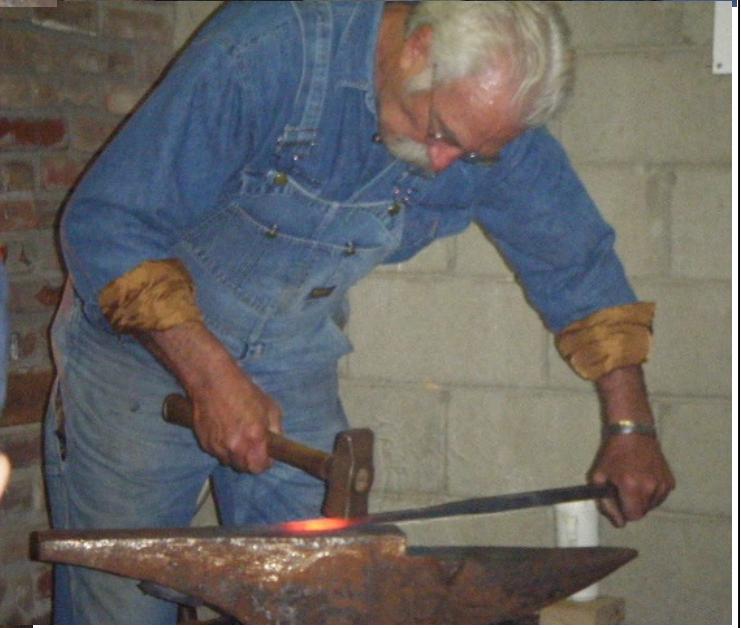


## IBA November Hammer In

The November hammer in was held at the One Armed Blacksmith Shop. Gary Phillips opened the hammer in and provided an update on IBA news.

Tim Metz introduced the demonstration project of making legs for a cypress slap coffee table. The design included four C-scrolls fastened to a center hoop and to the table top. The first order of business was to draw the four bars ( $5/8 \times 1$ ) down to about  $1/4 \times 1$  with tapered ends. Tim and the 25 lb Little Giant did most of the drawing work. Jim Jesse could not hold back and did some hard hammering by hand. Occasionally, Tim had too many irons in the fire, so I was nominated to be fire tender.

Photos courtesy of Dave Wells



## IBA November Hammer In (continued)

After the bars were drawn and tapered to match, Charlie Helton demonstrated making scrolls for the ends. Charlie hammered out a scroll while explaining the fine points of hammer control, parts of the anvil to use, smooth transition and balance of positive and negative space.. After the scroll was completed, Charlie compared it to the scroll jig he showed at the October hammer in. The hand fashioned scroll was almost dead on. Consequently the jig was used to form the remaining scrolls.



## The Jim Claar Power Hammer

Michael Wollowski

In this article, we describe the power hammer Jim Claar built for himself. It is a 1500 lb hammer that is well engineered and a pleasure to use. While this hammer is small compared to those used in industry, to an artist blacksmith, this hammer is massive. It is about 12' tall, 8' deep and 4' wide and it can destroy a railroad spike in a few strokes. As a matter of fact, even though Jim placed it on 16 cubic yards of concrete, it still shakes the entire building. Yet, when you ease off the gas pedal, you are able to gently touch the piece you are forging.

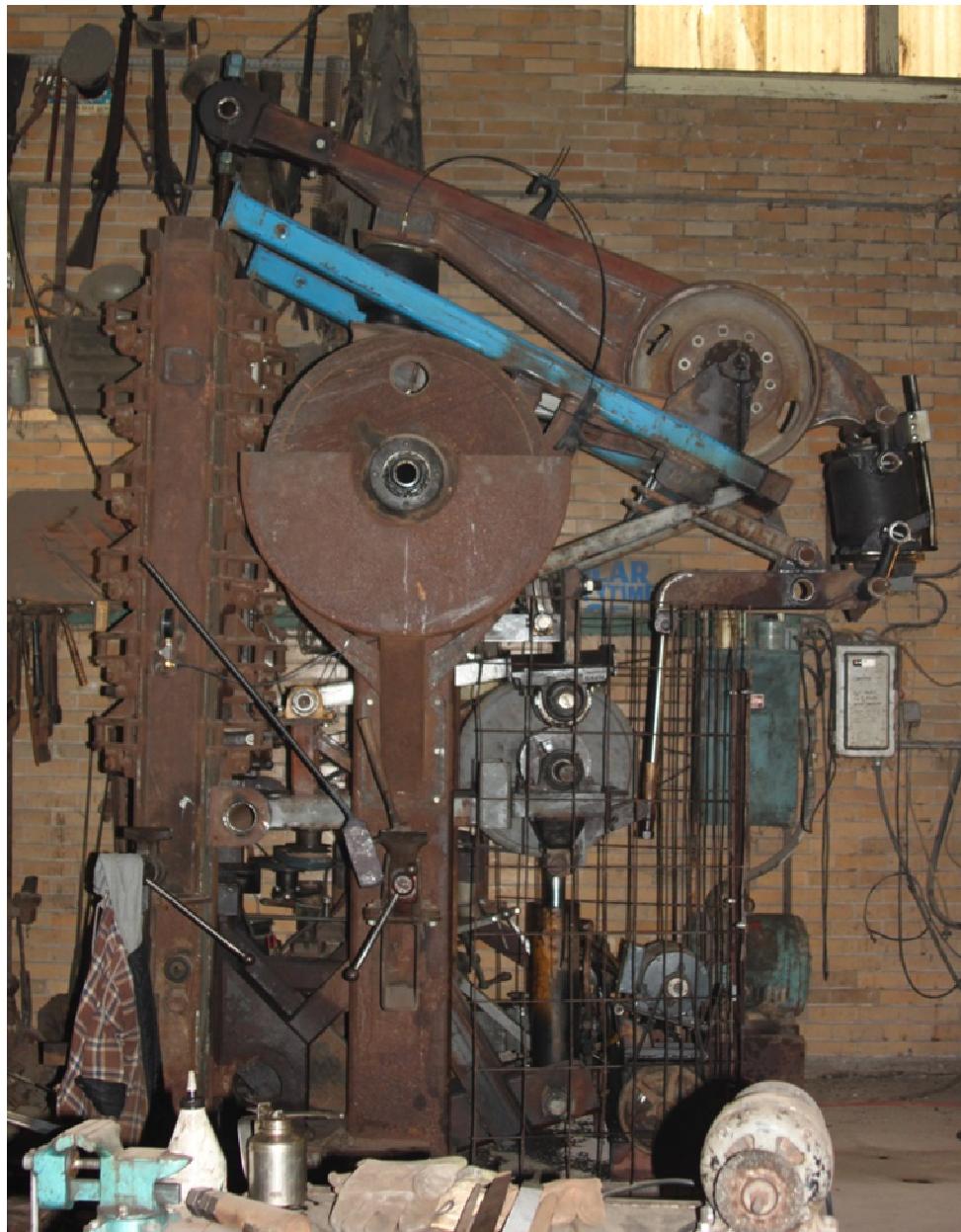


Figure 1: Side view of Jim's hammer.

Jim has been thinking about the design of this hammer for over a decade. Everything Jim builds is well thought out and advances the state of the art. This hammer is no exception. It is easily adjustable in critical ways - among others; you can adjust the height of the ram by a lever.

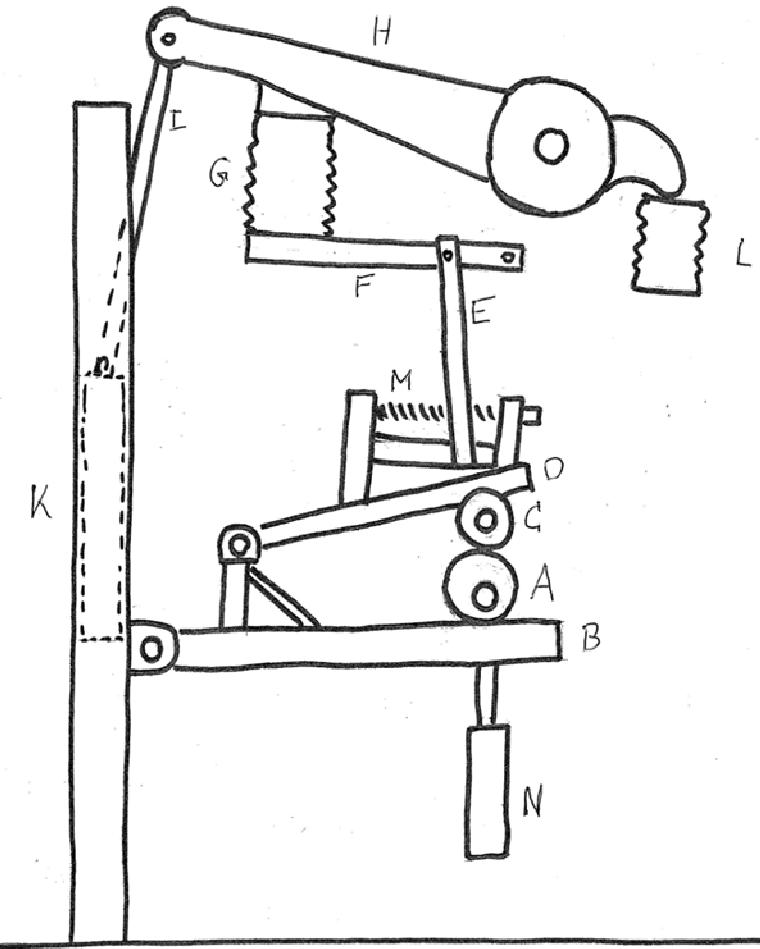


Figure 2: Schematic drawing of major components.

**Construction.** Jim built this hammer without plans. Please consider figure 2 which contains a schematic drawing of the major mechanical components that make the hammer function. The basic layout of this hammer is that of a non-vertically configured guided ram hammer. A key component is the camshaft **A** which is attached to a set of bars **B**. These bars are attached to the frame by pivots. The camshaft is attached to a flywheel as can be seen in figure 4. This flywheel is driven by an 18hp lawn mower engine. The cam lobe has a  $1\frac{3}{4}$ " lift and drives the concentric wheel **C** which is attached to the bar labeled **D**. Bar **D** is attached to bar **B** through a pivot. By a mechanism which we explain later, bar **D** drives the bar labeled **E**. Bar **E** drives bar **F** which is attached to the frame by a pivot (not shown) and in turn pushes a truck airbag labeled **G**. The airbag then drives the arm **H** of the hammer. The ram **K** is attached to the tip of the arm by a round bar labeled **I**. At idle, the stroke of the ram is about 6", at full throttle, it moves about 12".

**Adjustments.** A frequent adjustment on any power hammer is the idle position of the ram. It can be raised and lowered by a lever which operates the hydraulic cylinder labeled **N**. This can be done while the hammer is in operation.

A second adjustment is designed to fine-tune the hammer. It is accomplished by adjusting the air pressure of the air-bags, as well as the length of movement of the rear airbag. The travel of the rear airbag can be adjusted by a second hydraulic cylinder. For clarity, this entire assembly was omitted from figure 2, but it can be seen in the center right of figure 1. Notice that while the arm of the hammer is pushed up by airbag **G**, in the process of being pushed up, the arm compresses airbag **L** which then propels the arm downwards, thereby increasing the speed with which the ram hits.

A third adjustment centers around the mechanism labeled **M** (part of this mechanism can be seen in figure 4.) The worm gear can be used to move bar **E** back and forth. Bar **E** is attached to bar **F** by a bracket which can also be moved. Jim created this adjustment to control the general set-up of the hammer. At 1500 lb, it is probably not something he'll ever change.



Figure 3: Front of hammer



Figure 4: Drive mechanism

The reader may have noticed the large flywheel in the foreground of figure 1; it weighs 1100 lb. At first, Jim built the hammer as a board drop hammer and the flywheel stored energy for the hammer. Jim did not find that configuration to be operator friendly so he changed it to an air hammer. However, when fuel prices skyrocketed, he decided to change it to a reciprocating hammer.

You can see the hammer in action in the following YouTube video:

<http://www.youtube.com/watch?v=PmmEkb98RK4>

## Spring Blacksmithing Classes at Conner Prairie

### Basic Blacksmithing

-Feb 3 – March 10 Mondays  
6 p.m. – 9 p.m.  
\$225 (C.P. members \$215)  
Min. 6, Max. 10  
Instructor: Nathan Allen

This class will cover the basics of hand blacksmithing and bench-work techniques. Through a series of simple projects, such as hooks, chain links, cooking utensils and blacksmith, students will learn basic techniques such as tending a fire, drawing out, upsetting, welding, filework and finishing work. All materials provided. Ages 16 and above. Ages 16+

### Forge Welding

March 22 (Saturday)  
9 a.m. – 5 p.m.  
\$130, \$120 members  
Minimum 6, Maximum 10  
Instructor: Nathan Allen

The basics of forge welding in a coal forge will be covered. Fire control and fluxes, chain link welding, bunch welding, and lap welding will be covered. Previous blacksmithing experience preferred. All tools and materials provided. Ages 16+

### Blacksmithing: Fabulous Garden Tools

Saturday, March 8  
9 a.m. – 4 p.m.  
\$85/ \$80 C.P. members  
Instructor: Dwight Gallian

Use simple blacksmithing and metalworking techniques to construct a set of three practical garden tools. The class will use classic blacksmithing techniques to forge and finish a gardener's trowel, hand hoe and hand plow. All tools and materials included in class pricing.

For registration please call our Guest Services dept. at 317-776-6000

NATHAN ALLEN  
Manager of Historic Trades and Maintenance

Here are a few internet links of interest supplied by Jim Johnston

Tom Latane news article (Tom will be a 2014 IBA Conference demonstrator)

<http://www.startribune.com/lifestyle/234125001.html>

Irish Blacksmithing site

<http://www.irishblacksmiths.com/index.html>



## The **FORGE FIRE**

Newsletter of the  
Indiana Blacksmithing Association,  
Inc.

**Bill Kendrick** *Newsletter Editor*  
1280 N CR 900 W  
Seymour, IN 47274

First Class Mail

Address Correction Requested  
If Undeliverable return to sender  
With original address legible

### **December 14 Hammer In Rocky Forge Blacksmith Guild** **8525 West 700 South, West Point, In.**

From I-74, exit at Waynetown (9 miles west of Crawfordsville). Take highway 25 north thru Wingate. Proceed north to the flashing light where highway 28 intersects with 25 at Odel. (The sign reads Odel on both sides). Continue north for 2.5 miles to county road 700 South, turn west (left) on 700 south, Ted's shop is the first building on the left.

From Lafayette follow Highway 25 west to West Point. Proceed on 25 for 2.0 miles to road 700 south, turn west (right).

Lunch is a pitch in. Bring a dish to share.

### **January 18 Hammer In Fall Creek Blacksmith Shop**

3380 W 650 N, MIDDLETOWN, IN 47356

SULFUR SPRINGS IS 3 MILES WEST OF IN. 3 ON US 36 AND APPROX. 12 MILES EAST OF PENDLETON ON US 36. GO NORTH AT THE FLASHING LIGHT (300W), TRAVEL NORTH FOR 1 1/2 MILES, TURN LEFT (WEST) ONTO 650 NORTH. JOHN'S HOUSE IS THE FIRST DRIVE.

CALL JOHN AT (765) 533-4153 IF YOU HAVE ANY QUESTIONS.

LUNCH WILL BE AT THE IRON KETTLE IN SULFUR SPRINGS.