Rocky Forge News

Volume 8, issue 7 – July, 2009

Meetings

The Rocky Forge group will meet on July 11th at 9:00 A.M. in Ted's shop to discuss the upcoming Illiana Show and the Indiana State Fair. The show dates are July 18, 19, 20th, which is the weekend following our meeting. In the past we have made a really good showing and I trust you guys will do the same this year. You would have to really look around the country to find a group of working blacksmiths that would equal our setup. I hope to see blacksmithing, cooperage, Lewis and Clark information and some neat projects being demonstrated.

We will be raffling our kitchen set so some of you or your spouse can help sell tickets.

At the meeting on the 11th we will have an iron in the hat drawing so bring stuff to the meeting. Carol will have sandwich makings and iced tea available, so bring a covered dish to help with the meal.

Have a safe 4th of July and see you all on the 11th.

Ted

Newsletter improvements

By David Childress

I have some newer software and am trying to become proficient enough to upgrade. I should be able to get you a better newsletter and make Jeff's job a little easier. Maybe you will even see the pictures where I thought I put them. By the way, this first time with getting all the bugs out is taking forever.

Smoke and Noise

Articles from e-mail and the Internet

Compiled by David Childress

About treadle vs. Power hammers

From: Mark Novak
Date: Wed, Jun 17, 2009 at 2:30 AM

Sigh. I'm having... discussions with my wife about the idea of spending the time and money on building a treadle hammer instead of getting a power hammer at the moment. My business is just gaining momentum, and I just got a multi-thousand dollar job creating a large hammered window display and a couple railings for a yarn shop, so I have to have mechanical assistance to make it cost effective. What are some opinions out there? Is it worth building a treadle hammer, or do you think I should just jump to the power hammer, since I know I'm going to need one eventually (i.e. within a year or so).

Also, I'm located in Portland, Oregon, so if there are any hammers for sale nearby, I'd love to hear about them. I can't really afford the trip to Pittsburgh for that $3k one.

Thanks,

Mark

I'm considering buying an old style Little Giant power hammer for $1650. It doesn't have a motor, but, according to the photos the seller sent, it looks pretty darn good. The part that hides the inner ram and link connections (I don't know the part name - it acts as a shield from the moving parts at the point above the striker) appears to have suffered a couple not-so-great repairs, but everything else looks intact, unbroken, and the seller swears by the fact that all of the parts move freely by hand... nothing is frozen shut.

Any thoughts on the price or product?

Mark

From: CGRAF
Date:Mon, Jun 22, 2009 at 2:03 PM

The two are not directly interchangeable in function. There is some overlap sure, but designed for two sets of needs.

Think of the treadle as one striker good for coining and chiseling, any operation that requires two hands plus a hammer. You need to supply the energy to make it happen. Great for detail work.

Power hammer, think a crew of strikers with sledges Great for shaping and for texturing endless runs of stock with minimum exertion of your part.

For the most part I do not think of them as detailing tools.

You can or course texture and shape with a treadle and do some details using dies on a power hammer, but in each case you can do it better and faster using the correct tool.

That is my .01 worth

Mike Graf

From: ries
Date: Mon, Jun 22, 2009 at 1:26 PM

I really don't see a treadlehammer as being a substitute for a power hammer. I know they both "hammer", but they are not the same tool, and don't do the same thing.

I have had a treadle hammer for 20 odd years, and a power hammer for almost ten- and don't find them interchangeable.

I never really found, even with bolt on tooling, that, for hand hammer stuff, a treadle hammer replaced hand forging.

And I can't think of a single process I do on both the power hammer and the treadle.

I use the treadle for fine control single hits. ornamental stamping, mostly. I find it quicker, when doing real material moving, to just hand hammer.

Now maybe I never really mastered the treadle- but I have much better control by hand. And the treadle hammer just doesn't compare to even a 25lb little giant, in terms of being able to move metal.

Personally, I would skip the treadle, and find a power hammer.

Usually, the NWBA meets are good places to network and find one- of the 175 or so blacksmiths at the average meet, there are probably 200 hammers, and a few of em are always for sale. Next one in the fall.

Hammers are scarce and expensive in the Pacific Northwest, though-especially compared to Midwest prices.

Ries Niemi, Industrial Artist

http://www.riesniemi.com/

Fire Clay Info

From: Earl Schacht
Date: Wed, Jun 3, 2009 at 7:19 PM

Hello The Forge members,

I have been subscribing to The Forge for some time (back when you were all talking goats, fences, etc.) now and have thoroughly enjoyed all the info., and banter. I really enjoy it when you all drift off topic, I pick up unexpected extra knowledge along with links to sites for more info and or suppliers whose URLs I greedily bookmark.

I have a question. Where can I obtain fire clay? I have a small portable Farmer's forge that needs lining. I live in Western Massachusetts and when I contacted a local farm supply store was told that fireclay is not available in Mass. Is there another product that I could use without breaking the bank?

I am new to blacksmithing, I've only taken a beginner's course, and so any help would be greatly appreciated!

Thanks in advance,

Earl Schacht

From: Daniel Kretchmar
Date: Thu, Jun 4, 2009 at 12:11 PM

I got my clay out of several different holes in the ground at various reenactments. I have found that regular pure (no additives) clay will eventually crack, particularly if you are forge welding or getting a big fire going like we sometimes do for demos.

I have been making my own fireclay for a while now and it seems to work. I got the recipe from a book on how to make an adobe oven. Take a lot of small dry irregular chunks of clay (1" diameter or smaller), the smaller the better and fire them in your forge (A gas forge works best for this). If you don't have a gas forge (which considering the thread, you likely don't, broken clay garden pots work too! The trick is to get clay that has been fired already. Break it into tiny pieces. I put on my boots and crushed them on the concrete floor. It doesn't have to be powder, but it has to be smaller enough to stir. I also put fiber in mine for strength. I use natural rope fibers (manila/ hemp/ sisal/ even grass clippings). I cut the rope into 1" pieces and separate

the threads. My recipe is: 2 cups wet clay, 1-cup white sandbox sand, 1 cup crushed fired clay/ 1 loose quart of fiber rope cuttings. I mix until it is uniform. I add enough water that a 1" ball of the mixture will deform slightly but stay together when being dropped from 4 feet off the ground. I then pack it just like Wes does using a hammer and a 2x4. I have several forges that have this lining that has lasted for years without any repair.

Danr www.irontreeworks.com

From: Barry Myers
Date: Thu, Jun 4, 2009 at 7:54 PM

One thing that no one has mentioned is moisture.

If you are not lucky enough to have a forge in a dried in place or can at least store you forge in the dry, you need to worry about your new forge rusting through if you put fire clay in the bottom. Coal produces a lot of sulfur that quickly turns to acid that will eat up your forge.

My advice: if you can't keep it inside, don't get it too hot and don't clay it.

If you are starting out, make your forge from a wooden box and clay that. It will hold up fine and not rust.

Barry Myers

Books for the Blacksmith

terry l. ridder wrote:

I know this question has been asked before at least I thought it has been asked before but I am not able to find it in the archives. What books are considered the 'must-haves' for the blacksmith/metalworking shop? If you had to choose 12 books which ones would they be?

From: Mike Linn
Date: Fri, May 29, 2009 at 7:18 PM

here are mine...

In no particular order...

Process and How-to:

The New Edge of the Anvil - Jack Andrews

A Blacksmiths Craft Vol1. - George Dixon

The Complete Metalsmith - Tim McCreight

Professional Smithing - Donald Streeter

Werk und Werkzeug des Kunstschmieds - Otto Schmirler

The Artist Blacksmith - Peter Parkinson

Matering the Fundamentals of Blacksmithing - Mark Aspery

The Complete Modern Blacksmith - Alexander Weygers

Design & Ideas

Hooks, Rings and Other Things - Frank Barnes

Der Kunstschmied - Oto Schmirler

Antique Iron: Survey or American and English Forms 15th through 19th Centuries - Schiffer

The Contemporary Blacksmith - Dona Meilach

Wrought Iron - Fritz Kuhn

Schmiedekunst am Haus - Wasmuth

IL Ferro Battuto - Giuseppe Ciscato

Decorative and Sculptural Ironwork - Dona Meilach

Mike Linn
Artisan Blacksmith
McCalla, AL

From: Chuck Robinson
Date: Sat, May 30, 2009 at 11:57 PM

You folks left out Early American Wrought Iron by Albert Sonn. No library is complete with out it.

Chuck

From: David E. Smucker
Date: Fri, May 29, 2009 at 5:37 PM

If I could have only one book it would be -- Machinery's Handbook. It is the one book I carried when traveling worldwide trouble shooting problems.

I have copies for here in the house and out in the shop too.

Dave

From: Craig Schaefer
Date: Sat, May 30, 2009 at 10:54 PM

Speaking of Machinery's Handbook, later editions gloss over or don't even mention blacksmithing to the extent that the earlier editions do. I think you would want one of the printings before the 1960s, but I'm not sure when they started leaving the important stuff out.

CraigS

Gresham, OR

From: ries
Date: Sun, May 31, 2009 at 4:55

A lot of people have covered the basic How To blacksmithing books pretty well. But I think a decent metal shop library ought to have a few other things in its as well.

As mentioned,

Machinery Handbook

- but not for the blacksmithing section- for feeds and speeds, thread charts, info on grinding wheels and pulley sizes and reamers and Morse taper measurements and a thousand other things.

I also refer quite a bit to the ASM (American Society of Metals) Metals Handbook, Desk Edition. This is not worth paying new retail price for, at around $250, but if you can find a used copy (mine was $25 at a used bookstore) it is the best all around reference book for metals composition and processes I know. It has pages and pages of info on aluminum alloy numbers and what they mean, or the exact composition of the hundred or two things we ignorantly call "bronze", or what is forgeable and what is not. It's dense, and technical, but has more info in a smaller package than anything else I know of.

Another book I really like is the late, great, Oppi Untracht's book, Metal Techniques for Craftsmen. This is oriented towards jewelers and benchworkers, but is an incredible source of info about all kinds of techniques- soldering, sawing, filing, using all kinds of tools, info about actual experience working with all kinds of metals.

Then, I find myself referring to two books on sheet metal quite often - Metal Fabricators Handbook, by Ron Fournier, has all kinds of great, practical info about cutting, welding, riveting, hammer forming, and shaping sheet metal into 3D. Written from the perspective of an auto guy, but applicable to ANY metalworking. A great book, cheap and easy to use. And Sheet Metal Shop Practice, by Leo Meyer- this is the apprentice textbook for most sheet metal Union Apprentices, and it is clear, simple, and goes start to finish thru sheet metal- layout, tools, info on gages and types, how to actually make most anything from sheet metal. http://www.amazon.com/Sheet-Metal-Shop-Practice-Meyer/dp/0826919022/ref=sr_1_1?ie=UTF8&s=books&qid=1243802496&sr=1-1

For machining, my standard reference is the Kibbe book- Machine Tool Practices.

Again, a textbook. Unlike Machinery's Handbook, which is more like a reference book of facts, this one has photos and drawings of step by step how to run a mill, or a lathe, using a rotary table, reading a vernier caliper- for an occasional machinist like me, its the go to book for something I did once, 20 years ago, for a refresher.

http://www.amazon.com/Machine-Practices-Richard-Roland-Warren/dp/B000MYFQQM/ref=sr_1_2?ie=UTF8&s=books&qid=1243802448&sr=1-2

A few other books I really like having in the shop- I don't use em often, but when I need em, I am sure glad I have em - Moving the Earth, by Nichols- EVERYTHING about bulldozers, surveying roads, drainage, and heavy equipment of all sorts for BIG construction.

Moving Heavy Things, by Jan Adkins- basically, a kids book for adults, which has big drawings of simple tricks from the old days.

Lineman's and Cableman's Handbook - How those electrical linemen do it.

Handbook for Riggers - by Bill Newberry - tiny, pocket-sized, and has everything about wire rope, knots, hand signals for cranes, and, in general, how to lift things safely.

A lot of these books, new, are expensive- because they are the standard reference books for the industry, up to date and FULL of great info.

But I almost never buy em new. I haunt used bookstores wherever I go, and more and more, I buy used from either Amazon or ABEbooks online. virtually any book you can think of is available from one or the other of these, usually much cheaper than new, and delivered right to your door.

Ries Niemi, Industrial Artist

http://www.riesniemi.com/

Learning Styles

From: Bruce Freeman
Date: Sun, May 31, 2009 at 6:50 AM

It was good that educators recognized dyslexia for what it was, rather than continuing to call kids stupid.

That said, "dyslexic" itself has become a label that may hinder rather than help.

What everybody should know and keep in mind is that the human brain is not a computer, but a complex assemblage of active centers each of which is slightly computer-like and each of which as a particular function. Even that is a gross oversimplification, but it helps understanding. A person can have a stroke and completely lose the ability to speak without it affecting his intelligence or ability to learn one whit. So if a person's reading ability is not strong, he can and will learn by some other means.

In my case, my reading ability is excellent. I read faster than many people, though it doesn't feel fast to me. Reading is my preferred mode of learning.

My father apparently was not this way at all. He would read a book into a tape recorder and play it back to learn it. It worked well for him and he encouraged me to do so too. But it never worked for me.

If a person gives me oral instructions, the first thing I do is write them down so I can learn them. Once I write them down, I may never have look at my notes - the memory is complete.

Demonstrations and videos may or may not be good learning tools for me. I think they're intermediate between reading and hearing.

My point is that it is not profitable to label oneself "dyslexic" or anything else. Rather, figure out how you best learn, then see to it that you get your instruction in that manner - or modify the instruction so that it works for you (like taking notes or recording a book).

Bruce

From: Rob Fertner
Date: Sun, May 31, 2009 at 9:18 PM

Tactile learners are hands on learners. To help kindergartners learn numbers they stack blocks to match the number they are learning, for example. Kinetic learning is through movement. Think dancing or athletics.

Or even 1st graders moving around the classroom doing a group project.

Visual is seeing the lesson and Aural is hearing the lesson. For the primary learning mode most people are either visual or aural learners with the rest of the modes in lesser combination. Both are easier to deal with in the classic school setting. When you get someone whose primary mode is tactile or kinetic then you'll be making the teacher work for their money. :-) I'm talking regular education students here.

Now, for example, if a student has an auditory processing problem severe enough to get them into special education. The special ed teacher should be teaching them how to learn in a way that works around the problem emphasizing their strengths. Such as relying more on visual learning or hands on methods to learn the lesson.

Now to apply this to blacksmithing. Some can see a technique done and they now understand it. Some can hear the explanation and understand it. Some just have to go and beat some metal enough times to get it. Then there are those you are constantly moving around the shop from the anvil, to the powerhammer, to the vise, etc. doing different techniques until they get where they want. :-)

Rob

Making a Nail Header

Nail Header

Demonstration by Ralph Douglass

April 19, 2000

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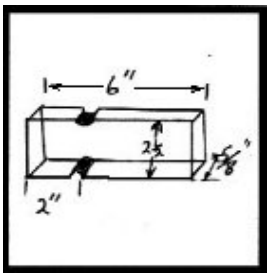
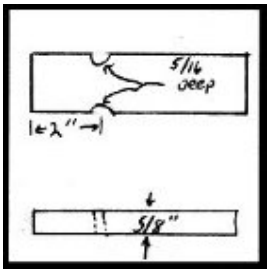
Jock-D : 01:37:40 Folks tonight we have a NEW demonstrator. Ralph Douglass is doing a nail header and nail demo tonight.

Ralph: Well suppose I should get started. I will try to show how I make a nail heading tool and also how I make nails....

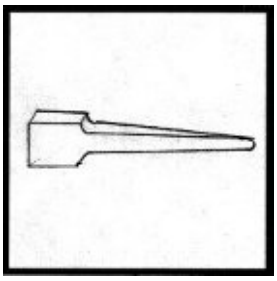
Ralph : this is a drawing of the finished tool. Any questions!? :) ha! ha!



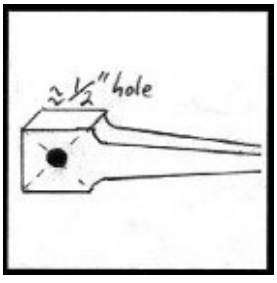
I start with a piece of mild steel that is 6" X 2" X 5/8"



Two inches from one end fuller the edges. I go about 3/8 in deep and use a fuller that is made from 3/8 round rod.

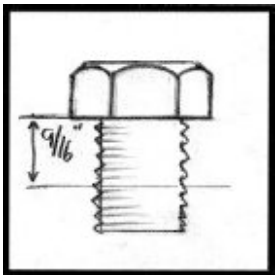


Now the only hard part is to draw the bar down till it is a comfy fit to the hand. Mine ended up about 10 in long. If you have a pwr hammer no problem, but I did it with a 2.5 lb hammer.



Now I punch a hole, or you can drill it. Use either a 35/64 or a 9/16 drill. I will explain why in a min.

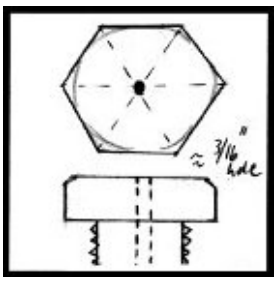
Now we are done with this piece for now.



Take a number 8 HC bolt - a 3/4" one

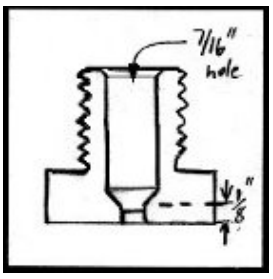
Cut the stud off till you only have about 9/16 left.

BTW it helps if you have annealed this bolt first!



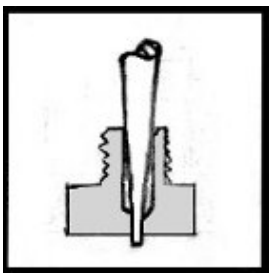
Find the center of the bolt. I scribe lines so they intersect. Then drill a 3/16 hole thru it.

Helps if you center punch it, and if you have a drill vise it will be easier to hold



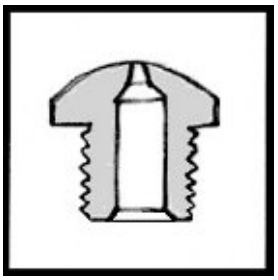
Now flip the bolt over and drill a 7/16 hole from the bottom. But DO NOT go all the way thru. Stop about 1/8 from the edge

Now the fun stuff!

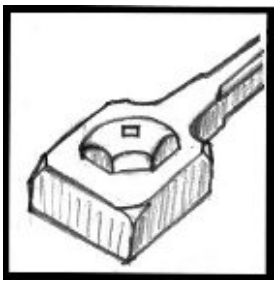


Get it nice and hot. Yellow works for me. Then use a square punch of the size nail you want... And punch the round hole to make it square.

I do this over the pritchle hole. Or you can use a punch block and do it on the face



Now file the top to a nice dome shape. But keep some of the flats on the bolt as you will need them later.

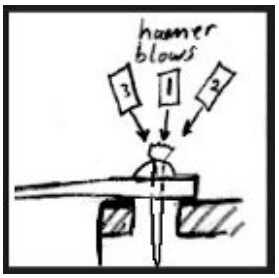


Now we take the handle and tap it to take the bolt insert. If your bolt was 5/8-11 then used the 35/64 drill if it was 5/8-18 then use the 9/16.

Or you can also do what I did on my first one. Use a bolt to cut the threads in the handle while it was at a yellow heat. Either way works.

Now screw it into the handle and you have a nail header that you can change inserts on for different sized nails.

Now a quick demo on nails.



Start with some 1/4 stock - I use square.

Make a shoulder on the bar, on two sides. How much well depends on size nail. For a 2-3 inch nail I use about 1".

Remember two sides for shoulder

Draw till the nail will fit in the header

Cut almost thru using a C/O hardy. About the same thickness as the stock is what I use to gauge where to cut.

Now twist off in the header and then hit straight down a good blow. Then a quick 3 or 4 all around and you should get a nice 'rose' patter nail.

Questions:

BTW in the 1840 a pro nail smith could do about 100 an hour for 10 hours a day!

Bill : When did you point the nail??

Ralph : Also do not head the nail if it is not red.

Bill: The point occurs during the drawing out

BenThar: I like using a bolt for an interchangeable set, good idea

Aaron: Any particular reason you made the hole from the back larger? If it fits into the smaller top hole I wouldn't expect it to get stuck.

Ralph: If the bottom hole is not bigger the nails get stuck most of the time... Not sure why tho

Jock-D: Do you harden the "bolt"?

Ralph-Oh yes I forgot. I do heat treat the insert. Take it to cherry and oil quench. Shine it up and draw to a blue temper

P-F: Good demo Ralph, thanks. HOW DO YOU GET THE HEAD CENTERED?

Ralph: Pete, you mean in the handle? It just takes a bit of care. I also scribe an X on the header to find the center of the Pad

P-F: no, I meant, seeing as it is only necked on one side, why does the nail head come out centered on the nail shaft?

Ralph: It sometimes is not centered. But as you draw it out you can center it or as you head it you can hit off center to move it over.

Bill: how many heats do you take to make a nail Ralph???

Ralph: Bill now you are putting me on the spot! :) If I have not made nails in a while I use two, but eventually I can do a nail a min for a while. But then I am exhausted!

Announcements

The Rocky Forge News is available by E-mail and on our website (`http://www.rockyforge.org/`). If you wish to receive the newsletter via E-mail sent Dave Childress a note at `trollkeep@gmail.com`, or e-mail directly to `rocky@rockyforge.org`.