

# Rocky Forge News

Volume 7, issue 11 – November, 2008

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## Next Meeting

Hello everyone! We have a meeting coming up for Saturday November 8th at Ted's shop. Doughnuts and coffee at 8:30, (notice ½ hour earlier), meeting at 9:00 and blacksmithing from there till noon. Eat lunch and then more blacksmithing, sounds like fun to me. If the weather is good we can forge outside, if not we can have two gas forges and one coal forge inside. One thing we need to do is straighten some **wrought iron** rebar from Dale's metal and we need to go through the metal from Dale and decide what to keep and what to send to the junk yard. (Scrap is down to about \$80/ton from \$300.) Everyone should go home with some metal.

For lunch Carol will prepare a pot of chili or soup and we will buy some cold meat and buns so no one has to worry about bringing food unless you want too. Just pitch in a little cash to help pay the cost. Will someone pick up a couple dozen doughnuts, heavy on the chocolate? Please let me know so we don't have four dozen or six dozen. (492-2194)

David, Dominick and I went to the Wabash Valley group's new shop grand opening at Fowler Park on the south side of Terre Haute. We had a good time and used their new masonry forges (four of them). It is a very nice building; I will have photos available to see at the meeting. One of the key items is a central system to remove coal smoke from all four forges. The forges were tied into a manifold with a large exhaust blower upstairs. Gene H. could help us engineer such a system for our new building. I have a blower that may be large enough to do the job and sheets of galvanized metal for ductwork. It will take some engineering, but I think we should start heading in that direction. More on the building details at our meeting.

I am looking forward to the meeting, hope many of you can make it. Don't forget iron in the hat items, show and tell and bring some tools to work with. If it looks like bad weather and you have a 20# gas cylinder bring one along. Bring any guests that may be interested in blacksmithing.

See you on the 8<sup>th</sup> - Ted

## Smoke and Noise

### Articles from e-mail and the Internet

*Compiled by David Childress*

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From: Wayne  
Subject: [blacksmiths] Seeking a  
Blacksmith In Indiana area  
Date: Sunday, November 2, 2008, 1:01 AM

I am Wayne A. Mercer, President of Central Indiana Gold Prospectors Association of America. We are looking for a blacksmith in the Indiana area willing to help our group refine and use our black sands recovered during gold prospecting activities. These "black sands" are mostly Iron and various types of Hematite. We are having an outing November 9th details can be found here:

[http://groups.yahoo.com/group/Central\\_Indiana\\_GPAA/](http://groups.yahoo.com/group/Central_Indiana_GPAA/)

I know this is short notice... basically we would like someone to talk about blacksmiths and their art. Someone willing to help at a future outing with metal refining casting etc... {possibly at a location they select due to equipment requirements} would also be a huge help. Our group of prospectors has many pounds of black sands... a large quantity of which is magnetic and easy to separate from our other concentrates. We would like to refine and use them with a blacksmith's help.

If you're interested in the "project" please email me at [wam27in@yahoo.com](mailto:wam27in@yahoo.com) thanks for keeping this old art alive!!!

Central Indiana GPAA President,

Wayne A. Mercer

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From: Ron Childers

I just sent several tons of heavy scrap to the salvage yard- Useless stuff like cutting drops and old parts- nothing useable. Prices are way down from just a couple of weeks ago. Also took a hit on 660# of aluminum and copper was really low. Anybody know why? A few months ago the copper fascia was stolen off the building across the alley and all of a friend's welding leads were stolen out of his shop. Prices were high enough to take the risk.

Maybe now is the time to buy rather than sell.  
Ron C

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From: terry l. ridder

hello;

deklab iron and metal ( dimco ) no longer allows looking for useable scrap in the yards. nothing. no scouring for metal.

i asked about copper prices, that i had 780 lbs in 5 lb ingots, was told that i would only get \$1.72 usd per lb.

i asked about the aluminum prices, that i have 600 lbs in hard drive cases. was told that i get \$1.39 usd per lb.

i told them that i would wait to sell the copper and aluminum.

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From: David E. Smucker

terry, et al.

If wanting to sell scrap at a good price you may have to wait a long time -- years at least. Scrap is very market driven, even if you don't think so. Demand is down, the price is down. Demand is low, the price will stay low. With what is going on worldwide right now demand may be low for a long time.

Aluminum scrap runs about 10 to 20 cents below what it costs to produce new base metal. New metal costs depends of the price of power and the price of alumina. Simple, I know some think the game is rigged but it isn't. It really is supply and demand.

Dave

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From: Todd Rich

On Mon, 27 Oct 2008, James Binnion wrote:

Virtually every commodity price was highly inflated by the economic distortions of the past couple of bubbles. Now that some form of reality is setting back in the prices are beginning to return to something closer to their true value (what it actually costs to produce them)

Yep. China is also cutting back on their demand, so that is helping to drop the prices as well.

Also played heck with my plan to buy up 3 old TIG welders that had 400#s of copper in each of them for a total of \$1125, and sell the copper and use the profits to buy a decent TIG welder. Glad I checked it out right AFTER the price dropped from \$3 something a pound to \$1.86/lb. rather than before.

Oh well.

If anybody is interested in old Miller 330 A/BP TIG welders, I can point you to a place in Philadelphia that has them cheap. However their low amperage control isn't great and the HF probably needs work.

Todd

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From: Jonathan Barnhart

I've been looking for a bigger anvil to work from lately. My 70lb. Swedish Kolswa is a nice anvil, but I need more working space. While digging through and selling scrap from my Grandpa's old farm we found the top of an old anvil. When I say top, I mean the base was cut off of it at about the point where most anvils neck in. The narrow spot between the top and the legs of the anvil. So, it has no base to mount it. Also it has no maker marks visible on it. They must have been cut off with the base. It's somewhere around 2-2 1/2' long. I'd guess that at one time it was between 125 and 150 lbs. The working surface is long and narrow. It has a small offset working surface on one side of the horn. It has one hardie and two pritchel holes. There is no step on the horn. I can't afford a new anvil right now, but I might be able to put a base on this one using scrap that I already have. Or at least devise some sort of cradle to mount it solidly. Any suggestions or tips? I have pics, but I'm not sure how to post them safely on here.

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From Jerry Frost

This very situation is currently being discussed on IFI. My thought is to drill a couple holes into it from the bottom and if possible thread them. Screw several pieces of allthread into the holes leaving a foot or so extending out the bottom.

Next buy a piece of sonotube (cylindrical cardboard concrete form) about the same width as the stand, wood block, etc. and after making up some rebar and trimming it so it's all the correct working height fill it with concrete.

This shouldn't take much more than a hearty drill motor, bits, a tap or two and a bucket to mix concrete in. I'd use readycrete and call it a done deal. Heck, you can even buy pigment and make it wood color or paint it to look like a stump.

If you wanted to get fancy you could make the portion of the concrete form in contact with the remains of the anvil look like the bottom half of an anvil. I'm not sure what color pigment to use on a concrete mock anvil though, would black be right or rust red more authentic? <grin>

Anyway, it'd get it functional for minimum money, expertise and time.

Frosty

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If it ain't forged  
it ain't real.  
Wrought iron is.  
The FrostWorks  
Meadow Lakes, AK.

From "dann@\*\*\*\*\*.net"

I fixed something like this by drilling 4 bolt holes through the waist of the anvil and using long 5/8 inch thick bolts to run all the way through, bolting a healthy pieces of plate steel on each side. I imagine putting front and back as well as sides on the new steel base so it would look more like a pyramid of steel supporting the anvil. From there it would be easy to add on a 5th base steel plate.

I was dealing with steel being joined to old cast iron, so I elected to grind / clean the joint and fill it with "liquid steel" just prior to tightening my bolts to my patch / splice. So far it has held.

Dann

From : Jonathan Barnhart

I'm leaning towards Ron Childers ideas of fixing it. I Just remembered that I have a friend who is an excellent certified welder (he used to weld for the navy in their shipyards) and could help me get the welds made. My reasoning for this is that I think that the weld will last longer and with this sort of fix we can add mass back to the anvil in the form of real steel. If you look at the anvil building articles on Anvilfire, the basically advise against using

concrete to make an anvil for important reasons. So, I'll quote them here:

*"This is a sore subject with the "guru". When anvilfire was only a few months old a fellow wrote off-line about his concrete anvil. It was an old concrete post with a cap attached to it and a wide bar of steel for the work surface. The fellow was so full of himself that I didn't argue the point and said, "It'll work" and then suggested a number of other methods that I indicated were MUCH better.*

*The next thing you know the fellow was advertising concrete anvils with steel tops at real anvil prices quoting "the guru" that IT WILL WORK. . . The quote was taken out of context nor did he have my permission to endorse his scheme. We had some heated public discussions about his concrete anvils.*

*So, here are the problems.*

- *Concrete is less than 1/3 as dense as steel.*
- *Concrete is less than 1/100th the strength of steel.*
- *Concrete shrinks and loses weight over time.*
- *Concrete spalls (explodes) when exposed to high heats.*

*SO, while filling a hollow box with concrete may seem like a good way to make an anvil it is not. It does not weigh very much unless a LOT of it is involved. The concrete immediately under the steel will start to separate and crumble fairly soon under heavy use. AND even if it doesn't loosen from use it will eventually shrink and become loose.*

*There ARE good points to concrete. It is cheap and easy to use and it deadens noise. There are methods that improve its usefulness if you insist on using it."*

So, in conclusion I think that steel and welding is the way to go. I'll be working out the final details of the project. So, if anyone can think of anything that hasn't been mentioned yet or a better way of doing something that I'm about to do, please speak up. When I'm (we're) done fixing it, I'll send out some pics.

From: "xlch58@\*\*\*\*\*.net"

Peter Fels & Phoebe Palmer wrote:

Hi Andy;

More steel or good cast iron with the maximum mass directly under the hammer and the best possible fit up: Minimum # of horizontal cold laps/joints, too please.

If you were going to use it for embossing or some other use where a dead blow is better, then lead is the right material.

I sound positive, but I'm only guessing as usual...pf

Unless he can make a full penetration weld ( that would be a hellavava lot of rod) then most of the mass you are adding in the base won't count for diddly. If it isn't contiguous mass, then it does not respond the same. The only point of adding noncontiguous mass to the anvil is to anchor it so that it does not bounce around, but it does not add to the blow like a true solid anvil will. Try banging on an anvil that the face has separated on. That is the point of the concrete on the knife makers anvil. Lots of contiguous steel directly under the hammer blow where it can reflect the stress waves back to the work in a number of high speed secondary impacts with each hammer stroke, and the mass of the concrete to steady the anvil and keep it from bouncing around. Really a neat idea. As far as lead goes, I think it is excellent to bed the anvil and help keep it from bouncing around. I also think that it won't make one whit of difference to the hammer action because of the reasons I have cited above. The only problem with lead is that it is not as easy to come by as it once was. I don't like concrete as it is not that heavy, and it does not hold up to impact very well. You might make a credible base from cast aluminum and bolt it all together (one company used to have an anvil called a futura that was exactly that, as steel face and horn with a cast aluminum base). I think whoever suggested welding a couple of long spike to it and driving it into a large stump had the right idea. Simple, quick and if you don't like it, you can try something else later. My guess is if you do it, you will find a half dozen things about the setup you really like. And if you hate it, torch off the spikes and try again.

Charles

From: "dann@\*\*\*\*\*.net"

Of all the writings on this subject, I like Jerry Frost's idea best.

Drilling, tapping and threading long bolts / ready-rod into the bottom of the anvil.

I think he also wrote about adding some re-rod, and then pouring a new base from concrete.

Making a discarded old tool work, makes me feel good about myself. So if the anvil top becomes a working anvil again... wonderful. If it kind- of-works and you get a year or three of use out of it, then it probably paid for the time. If it doesn't work, you gain something in the effort. I've paid for a lot of education after finishing college.

Dann

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From: Richard Rozinski

I submitted this question/request for advice a couple of days ago and I'm not quite sure how this site works???????? Is anybody out there ?????

Does anybody hear me???????

I have some A-R (Abrasive Resistant) Plate that I have tried to drill multiple holes in as part of a project I'm working on. I need to use the AR plate because I have it and I really can't afford to go out and purchase a piece of steel equal in size. I looked on line and saw companies/ fabricators that offer to "drill your AR Plate for you"... How can I drill all the holes 20ea. (1/4") in this plate that I need without burning up the rest of my years supply or my total budget for consumables for the rest of the year in drill bits. Anybody know some tricks?????

Richard Rozinski

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From: Jerry Frost

RPM and feed speed are not the issue when trying to drill A-R, Abrasion Resistant, materials it's the abrasion resistance. This is not accomplished by using a hard alloy, it's typically accomplished by the addition of grains of super hard materials like carbide, tungsten carbide in rare applications diamond, in a specifically designed impact resistant matrix metal.

It seems counter intuitive but the harder the material the AR has to deal with the softer and more resilient

the matrix has to be. This is so it wears away leaving the carbide, tungsten carbide, etc. in direct contact. Harder matrices would chip away under the impact wearing faster. Dealing with softer formations though means the harder matrix is preferable to maintain the carbide, tungsten carbide, etc. particles.

So what happens when you try to penetrate AR materials mechanically, saw, drill, etc. is it does it's thing as designed. Namely any erosion by the blade only effects the matrix leaving the super hard, impact resistant particles, carbide, tungsten carbide, etc. to eat your bits.

Using a carbide bit sounds workable unfortunately the matrix only gives under the impact, gums it up and over heats it. The wear particles then chip out the edge and the bit rapidly dulls.

Using diamond will work unfortunately the matrix will gum the bits, over heating them and the diamonds will start popping out. Using diamond on AR is a fire with fire situation only you're stuck using the forest fire against back fires, you're on the wrong side of the equation. Heck, a diamond core bit or burr is nothing but AR using diamond in a matrix.

Hot punching is the industry standard for making holes in AR alloys. Torches are industry standard for holing it after market. I'd still go with water jet for precise holes though plasma might work if it isn't deflected too much by the AR particles. Same for laser, refraction and explosive reaction from AR particles might make it a non-winner.

Frosty

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## Comments

*From David Childress:*

This is a collection of things that are of interest to me. I have not had any suggestions and while Ted would like to see project plans the skill level of our members is so broad that I have a hard time determining what you might appreciate. Any thing submitted that I can figure how to include I will present to you.

I try to bring you information and insight. The technology and how things are made are my main interest and without direction from you this is what I include.

If there is something you want to know or wish to share tell me and I will do my best to include it.

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## 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](mailto:trollkeep@gmail.com), or e-mail directly to [rocky@rockyforge.org](mailto:rocky@rockyforge.org).