

Capital District Blacksmiths' Association

Volume 1 Number 2

Newsletter

November, 2002

CDBA Officers Elected

With the Senseney demonstration and Burden tour a big hit, the membership directed their efforts to organizing CDBA.

Attention was called for by Jim Moran who introduced and handed the floor to Jack Connell.

Jack Connell recapped the work that had been done by the "Core Group" on the Articles of Organization. Each section of the Articles was then read before the assembled members, discussed and ratified.

Discussions included concern over liability issues and the methods with which it they were addressed in the opening paragraphs. No final consensus was made other than to continue gathering information about insurance and actual liability for CDBA. Of note, further detail was added regarding new potential members, friends or visitors to CDBA events; the CDBA member who brings them will be responsible for them.

A discussion ensued regarding the organization's name. An alternate name (Association of Blacksmiths in the Capital District [ABCD]) was suggested and voted down by the general membership.

The **Officer** section was revised to include a sixth position of Assistant Treasurer and specify that the President

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Steel Items Produced at Burden Ironworks Again First time in 30 Years!



Front entrance to the Burden Iron Company offices.

For the first time in 30 years, steel was once again worked at the Burden Iron Company. Once a prodigious manufacturer of horseshoes, railroad spikes and spikes used by shipwrights, all that remains is the main office building and some artifacts in the surrounding yard.

None the less, a museum documenting the industrial revolution of Troy is contained inside the Burden Company offices.

Of particular note are the exhibits of the USS Monitor's armour plating, and the reproduction Liberty Bell created by Meneely & Kimberly for the nation's Centennial. Both items were manufactured in Troy.

Tom Carroll, the Executive Director of the Hudson Mohawk Industrial Gateway (of which the Burden Iron Co. & the museum are a part), welcomed the members of CDBA and allowed use of the grounds for their fourth meeting.

The membership was treated to demonstrations from Mastersmith Bill Senseney from Massachusetts.

Mr. Senseney demonstrated a variety of techniques including several methods for making decorative twists. He also showed multiple items made from the "lowly" but common 1/4" square stock.



Bill Senseney incises one of four lines during the demonstration of the "English Vine" twist.



Display of the original armour plating made for the USS Monitor.

Afterwards a general membership meeting was held, CDBA officers elected, and the Articles of Association were accepted.

Tools & Tips

“Rust Removal Made Easy”
by Aaron Silver

Well, if you're like me (heaven help you!), you've got a pile of rusty pieces of metal lying around your shop, waiting for your spouse to get rid of them while your back is turned. So far I've been able to keep my wife away from this pile, and in fact have been lucky enough to add to this pile fairly regularly. In my pile is a fair number of actual tools that have seen better days, and were pretty daunting for me to actually contemplate – gasp – cleaning them! Take for instance a pipe wrench on which rust has frozen the adjustment knob. All those little grooves and such... just what I need... another couple hour project.

Then I remembered and dug out of my archives an article about electrolytic rust removal. Sounds intimidating, huh? Well, I am living proof that the name is much more scary than the actual process. The process requires that you have a plastic (nonconductive) tub/tank/pail to put a couple of gallons of water in, a battery charger, a little baking soda or washing soda, and a sacrificial piece of metal (I've got my humble pile getting larger every day that's just screaming for a useful end to the agony of my mangling!)

Once you've got these items, simply put a couple of gallons of water in the pail. Throw in a teaspoon of baking soda for

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Everything you need for electrolytic rust removal. 5 Gallon bucket, baking soda, abrasive for making sure contacts are secure, battery charger, scrap metal (not shown) and a rusty item (monkey wrench)

Letter from the Editor

Happy Holidays to all! Well, here we are with our second News Letter and a full boat of officers. I thought being a “real” organization would feel different but it all seems the same, save the increased motivation of the membership and officers alike. I have little to add that has not been covered elsewhere in this publication, but I have been told I am required to write this (Dan is such a pain).

So I will make one last call for “Classified” ads. There is no charge for this service as it stands, although this could change as circulation increases and we need to raise funds to keep it going. (I love free but as with the dues I usually lose these debates).

I am currently working in collaboration with The Mohawk Hudson Industrial Gateway on a reconstruction of an iron gate. I will share more as this project progresses.

Dan and I both look forward to seeing all of you at the gathering in January in our Smithy. I realize we are a bit out of the way but our Smithy is heated, and I think that makes it worth the trip.

Well, that is all I have for this Newsletter. Again, Happy Holidays to all and be safe and

FORGE ON.

Sarah Ritchie-Crowther
SRLadySmith

Next Gathering!

January 19th, 2002 - 12:00pm-4:00pm

This Gathering will be designed to allow hands on forging for all participants. Jim Moran has offered to demonstrate the making of chisels. Because this meeting will be in smaller area than those before and so we can plan for equipment needs we ask that you please RSVP.

Directions are located on the last page of this newsletter. If we have more than 8” of snow, ice, or really nasty weather, the “Snow Date” is January 26th same time.

If you have any questions or wish to RSVP please contact:

Dan or Sarah Ritchie-Crowther
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Valley Falls, NY 12185
518-753-6910
smiths@oakandacorn.com

Behind the Scenes

Several Core Group and general meetings have occurred since the first publication of the CDBA Newsletter. For those that were unable to attend or simply want to keep abreast of the current plans, “Behind the Scenes” will summarize in chronological order those previous meetings.

June 23rd, 2002

On June 23rd, the third meeting of the Capital District Blacksmiths was held at Merli Mfg. in Duaneburg. The meeting was attended by a dozen or so smiths, and the general public. Three forging stations were set up and showed various techniques.

Starting off the gathering was a general meeting of smiths with discussions of CDB organization, pros and cons of New York State Designer-Blacksmiths “Affiliate” status, group goals, and the format of future gatherings. After an hour of presenting ideas, and arguments it was decided that a second meeting for CDB organizational business would be held. See “Behind the Scenes” this issue, for more information.

After the “business” meeting, smithing got into full swing with Jim Moran and Pat Grossi demonstrating scrolling, and basic smithing concepts. Dan Crowther created a 400AD penannular cloak pin, and John Earl made hooks and demo'ed general smithing.

Nearly half way through the demos, the clouds opened up and deluged participants and spectators alike. Although many of the spectators fled to the safety of their cars, the remaining hearty souls returned to see the demonstrations to their completion once the rain stopped.

By 5:00pm the event was over. Joe Merli graciously offered the use of his shop and land for future events and meetings should we wish it.

July 10th, 2002

Aaron Silver presented copies of various “Purpose Statements” from other blacksmithing organizations and drafted a potential one for CDB. Only a few minor changes were suggested. He will draft another one incorporating the suggestions. [This document eventually morphed into the Articles of Association and was ratified by the general membership 9/8/2002 - Ed]

The topic of standardizing the organization name was raised. Sarah

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Simple Science for Blacksmiths

by Jim Moran

Iron is usually the main ingredient in our work. Most of it has carbon combined with it, though. "Low carbon" steel contains less than .12% carbon. This is similar to "wrought iron", but wrought iron also contains about 2 % slag. Steels typically contain 98% iron with up to 1.5% carbon with other trace metals. "Cast iron" is 94 % iron and up to 4 % carbon with the rest being impurities.

This carbon in the iron causes physical changes to its properties: greater strength, less malleability, lower melting temperature and reduced weldability. Once the carbon exceeds 1.5 % it begins to combine chemically with the iron and produces even greater changes. At 2 % carbon, it is classified as cast iron. This carbon in steel changes the properties that affect the blacksmith's work.

Hardening of steel is one property affected by carbon content. Hardening of steel is done by quickly cooling from above the "critical temperature". We can detect that temperature by checking to see if the steel is still magnetic. This magnetic property is lost in pure iron above 1650 degrees F, while 0.9 % carbon drops the temperature to 1300 degrees F. Hardening is greatly affected by the carbon content. A "high carbon" (above .6% carbon) steel may severely crack during rapid cooling. The rate of cooling is controlled by the following properties of the quench medium: temperature, heat conductivity, viscosity, specific heat and volatility. If we consider water as a middle range, oil is slower, salt water faster and Super Quench the fastest. Water will boil upon touching the hot steel and form a vapor layer that slows down cooling. Oil may not boil but it does not conduct heat very well. Salt water boils at a higher temperature and the salt also helps conductivity. Super quench works because of the salt and soaps, which help wet the steel.

Another property affected is melting point. Pure iron melts at 2800 degrees F but at 4 % carbon it is down to 2000 degrees F.

Hammer or forge welding is best done near the melting point which is lowered by carbon and other impurities. However, iron wants to weld to iron, the other stuff gets in the way and makes welding harder. Remember, even pure iron will absorb

"Science" Continued on Page 4

Name that Steel

Ever pick up a chunk of iron/steel and wonder what it really was? As it turns out there are a couple of really simple ways to determine carbon content.

The first is the spark test. High carbon steels spark very brightly (white-yellow) and fan out considerably when ground on a grinder or belt sander. Low carbon steels spark more in the orange-red range and each sparkler will shoot straighter.

The second test is to bring the steel above "critical" temperature. (The color at which this occurs varies from steel to steel but it is always just a little hotter than when it loses magnetic attraction.) Quench quickly in water. Once cool, try to file the metal. If the file bites in pretty good or the same as it would before quenching, you're dealing with low carbon. If the file "skates" off or has a tough time, you're looking at medium to high carbon.

So what about the stuff you find in the junk yard? Well, as it turns out there are some general rules of thumb you can use for steel off of junk vehicles and other metal scrap.

Scrap	Steel Type
Axles	1040
Ball Bearings	52100
Band Saw Blades	L6
Bolts, anchor	1040
Bolts, heat treated	2330
Bolts, heavy duty	4815
Bolt Cutters	S2, S7
Cam Shafts	A6, S7
Clutch Disk	1070
Coil Springs, auto	5160, 4063
Cold Chisels & Punches	A2, O2
Cold Rolled Structural	A36
Connecting rods	1040
Drills	M2
Files	W2, 1090
Gears, car transmissions	3115
Hammers	L6
Hay Rake Teeth	1095
Jack Hammer Bits	S5



Low Carbon



Medium Carbon



High Carbon

Leaf Springs, auto	5160, 1085
Leaf Springs, heavy truck	6150
Lock washers	1060
Plow Disks	1080
Pneumatic Tools	L6, A6, S7
Roller Bearings	4815
Router Bits	M2
Tie Rod	4042
Universal Joints	1145
Valve Springs	1060
Woodworking Chisels	O2, O6, L6
Woodworking Knives	O2, 1080
Wrenches	L6, S2

This list is by no means definitive, but it will give you a good idea of the type of metal a majority of manufacturers use for those items.

About half the steels listed use the SAE numbering system. This system is used to identify the composition of the steel.

The first digit indicates the type of steel ("1xxx" is carbon steel, "2xxx" is nickel steel, "3xxx" is nickel-chromium steel, etc). In most cases the second digit indicates the percentage of that alloying element (51xx means chromium steel with approx 1% chromium). The last 2 digits indicate the fraction percentage of carbon (5160 for instance means chromium steel with approx 1% chromium and .60% carbon).

With this information any SAE steel number can be decoded and you can easily determine its alloy and carbon content.

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the sacrificial piece of metal to the positive contact from your battery charger and place it in the water. Make sure the water doesn't contact the battery clamp or the CLAMP becomes the sacrificial piece of metal. (\$1.25 later I learned that lesson the hard-way) The negative clamp connects to the piece of metal you are trying to de-rust. That goes in the water, but not touching the sacrificial metal. Voila! In a couple of hours you've got a nice de-rusted piece of metal. It really is THAT SIMPLE. There's no rocket science needed here. The instructions I read mentioned using a battery charger with a capacity of 2 amps or greater. Mine is 1 amp, and working just fine.

The water you're using is not acidic and won't burn your hands, but it is probably a good idea to wear rubber gloves when taking stuff in and out of the bath. Also, you should rinse the de-rusted item off, and you may wish to rub it with a scotch-brite pad to remove any loose gunk. After that, oil that nifty item and go find more stuff to de-rust!

Scrap yard Etiquette

by Andrew VanSchoick

In my pursuit of metalworking as hobby (some might say sickness), I've found that scrap yards are not only good for cheap materials (and some other great finds too) but they can be an entertaining way to kill a few hours. In the Albany area we have some large-scale metal recycling companies that will allow people in to scrounge. Scrap yards are dangerous places laden with sharp corners, falling objects, heavy equipment, and hazardous materials. They are also full of cheap metals of all shapes and sorts and many other useful items ranging from storage cabinets to hydraulic valves. We all know that in these days of excessive litigation we are lucky that the companies let anybody in, so hopefully relating my scrounging experiences will be useful to others, and avoid some problems.

Some things to consider:

- ◆ Safety need to be your first thought. You should be wearing boots, long pants and long sleeves. Bring with you gloves, hard hat, and a safety vest. One of the yards I go to requires that you be prepared, the other does not.
- ◆ Don't climb the piles of scrap. If you can't reach it forget it. As many of the steel piles are 25' tall I don't even get that close, there will be plenty of stuff on the ground and in smaller piles.
- ◆ Bring some hand tools; you never know what you might find and need to take apart. The large yards have a lot of scrap machinery that can be used for parts.
- ◆ Flat tires are a real possibility, be prepared and watch where you drive.
- ◆ The ground and steel on it can be covered with oil or worse, so be wary of what you put your hands in. Also be aware that the stuff on the metal could become worse stuff when it burns off in your forge.

The yards I have visited are Hudson River Recycling in the port of Albany and Ontario Scrap in Albany. Ontario is small so they clean out often, but its good for a quick look, I've gotten angle iron, round stock and some flat bar. Last time I was there they let me walk freely around the yard and charged me 10 cents a pound for the stuff I picked up. Hudson River is huge they have scrap of all shapes and sizes, plus an abundance of machinery to pick over. I have found usable storage cabinets and shelve units, as well as angle iron of all sizes, cable, round stock, square stock, tubing, I-beam, railroad track and

spikes...you get the Idea. To scrounge you will need safety gear, and you need to ask at the office, if you don't look like a nitwit they'll let you scrounge anything for 13 cents a pound. If anyone has info on other yards that are scrounger friendly let us know.

Happy hunting!

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some carbon from the fire as it is raised to welding temperature.

Welding heats creates stress in any steel. Many find that the work fails not at the weld but 6 inches away. It is always good practice to anneal the piece after a weld.

Total annealing is done by heating between 1300 and 1800 degree F (critical temperature) and cooling slowly. Tempering is removal of a small amount of stress so that the tool does the job but doesn't crack. This stress relief can be done between 400 and 900 degrees F. Sometimes this can be done in one step by using an oil quench. We usually temper by reheating a hardened piece that has been polished and observing the color of the oxide formed on the surface.

These colors start at a light yellow at 435 degrees F and end as a dark blue at 575 degree F. The darker the color means the higher the temperature and the more hardness (stress) removed. Note that tempering takes place more than 1000 degrees F below hardening. Remember this fact when working with hardened tools on or near hot metal.

Case hardening was done in the past to give the iron a thin surface of steel. Lamp smoke or burnt fat was coated onto the iron and then the piece was heated. A temperature between 1500 and 2000 degree F was required for 8 hours to get 1/10 of an inch thick coating. Hot steel will also lose carbon at these temperatures. As the iron gets hot, the molecules bounce around faster and the carbon can leave the steel. We have all seen the molecules bounce off and burn at bright yellow heat.

This is not a technical paper. I'm sure a metallurgist would be aghast at reading this description.



“Scenes” Continued from Page 2

Capital District” so initials would be “ABCD”

After much discussion the final suggestion was a name change to “Capital District Blacksmith’s Association” or “CDBA”.

Dan and Kevin each passed around a sketch of possible logos they had drawn. Dan’s was generally liked, although several suggestions for changes were made. Sarah said she will modify Dan’s logo with the suggested changes and resubmit.

Sarah asked the status of Insurance fact finding (coverage, ballpark cost, organizational requirements, etc)

At that time Jack’s lawyer friend was recovering from surgery and he would follow up as soon as practical. He also mentioned that perhaps a waiver may help until we have insurance.

Sarah volunteered to ask an insurance agent she knows for general information regarding policies. Jim said he would do the same.

Several options were considered for the location of the next meeting. In the end two factors guided the decision.

Jim suggested next meeting on eastern side of the Hudson for traveling fairness; and Burden Ironworks seemed a good central location for the eastern Capital District.

Sarah put out a general request for articles, so the Newsletter would not be biased with Dan and Sarah’s interests only. Although Dan said he could fill the newsletter for some time with info about medieval blacksmithing, Sarah was sure there were other topics the membership would like to read about.

Kevin suggested the Core Group write a bio on themselves for the next newsletter with picture so the general members will have an idea who the “Core Group” members are.

Aaron wanted to know what “dues” would be needed in the future to support the newsletter. Sarah will generate some projected costs on a spreadsheet

August 10th, 2002

See the cover story “CDBA Elects Officers.

November 19th, 2002

The very first topic to be brought forth was the location and date for the next CDBA Gatherings.

Of particular note was the offer from the NYS Dept of Parks and Recreation for

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may not hold any other position (any other officer may).

An election of officers occurred at this point.

Candidates

President: Pat Grossi, Sarah Ritchie Crowther

Vice President: Membership decided that it would be filled by runner-up in the Presidential vote.

Secretary: Daniel Crowther

Treasurer: Kevin McGlynn, Aaron Silver

Assistant Treasurer: Treasurer candidates decided that loser would fill this position to double check treasurer while sequestered during vote. General membership liked this idea and officially created the position.

Events Coordinator: Pat Grossi

Final Results

President: Sarah Ritchie-Crowther

Vice-President: Pat Grossi

Secretary: Daniel Crowther

Treasurer: Kevin McGlynn

Assistant Treasurer: Aaron Silver

Events Coordinator: Pat Grossi

The **Meetings** section was accepted as-is.

The **Dues** section was accepted.

The **Newsletter** section was modified indicate the *current* address for article submissions and editor contact.

The **Website** section was modified to indicate the *current* address of the website.

After the ratification the President and Officers officially thanked Tom Carroll for allowing us to use the Burden Iron Company for our meeting and demonstration. Tom Carroll mentioned that this was the first time in 30 years that iron was worked on the premises.

Some members queried Tom about the possibility of a permanent CDBA "home" (possible structure, forge, etc). Tom could not entertain the idea without presenting it to "the board" (Board of Directors for the Mohawk-Hudson Industrial Gateway), but did not dismiss it outright either.

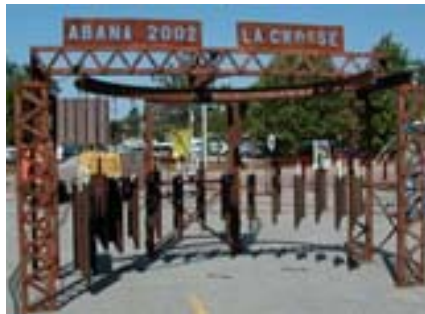
After Mr. Carroll reiterated this stance several times to answer similar questions from other members, the meeting concluded.

**ABANA 2002 Conference - LaCrosse Wisconsin**

Over all the Conference was good. It was, however, plagued by communication issues. There was no info about what the demonstrators would be doing in the guide book, and very little additional info even on the day of the event. Basically if you wanted to know what was going on you had to stand near the bulletin board all day to see what new demos and changes were happening or you'd missing hearing about it until it was over.

Some of the demonstrators included: Tyana Stiegler (daughter of Dorothy), **and a bunch of others look up names in program brochures.**

In addition to the demonstrators, two large galleries of work were on display at the Conference grounds and a third collection was located in a private gallery in downtown LaCrosse.



Railroad track chimes that played "God Bless America" and "Oh, Canada" during the opening ceremonies

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CDBA to have a Gathering at the Copake Ironworks State Park. This information was passed to us through Lee Harvey. At this time the Park has suggested a spring demo. Both Sarah and Pat will be working closely with Lee and the Park officials to arrange the specifics.

In addition to any results from the Copake Gathering, the Core Group was interested in having a midwinter Gathering. After consideration of possible "winterized" venues, the next Gathering will be at Dan & Sarah's house on January 19th from 12:00pm-4:00pm. The basis of this Gathering will be a workshop designed to allow members hands on and walk away with a useful tool in addition to skills learned. As of this printing Jim Moran has offered to teach how to make cold chisels. This "simple" project will cover basic tapering and heat treatment.

Since this meeting is at a private residence Andy suggested that members RSVP so that enough seating, accommodations and other supplies can be procured.

Sarah relayed a conversation that she had with Tom Carol, of the Hudson Industrial Gateway, regarding the restoration of Burden Ironworks. In short the Burden building is missing much of its original architectural ironwork. Although Mr. Carol originally wanted to have a wall of horseshoes with the former employees names on them, CDBA has only one farrier in the membership, so this would be difficult. Another suggested CDBA project, therefore, was to reconstruct the railings, gates, fences, chandelier or similar ironwork. The Core Group really liked the idea of a large CDBA Team Project so, Sarah will get in contact with Mr. Carol to get the ball rolling for the early stages of one of these projects.

Aaron suggested a tear off section (or entire page) for the return of dues. At this time it was suggested that any checks be made to Kevin McGlynn with "CDBA Dues" written in the memo field. This page should also include a check box indicating whether the person wishes to be a "Forge Buddy" and/or wishes to be published in the membership directory.

Aaron also pointed out that dues should probably all be due at the same time because the overhead of keeping track of individual due dates would be too great. In addition, it was suggested that dues not be prorated since they are only \$10.

Pat wanted to know about the status of the CDBA Logo. Currently there are three variations. Since the logo would be used in large and small formats, with the small format being the most stringent, each will added to the Newsletter cover page and sent to Core Members. They will then vote on which on works best.

Gatherings

FORGE WEEKEND

December 14th, 2002

Join us at Bauder Country for a weekend of hot and cold steel.

If any of you have not seen the tripod that was made at the last Forging Weekend you are really missing out. It is a true example of what we can do when we get together at Forge Weekend. We are planning on making a caldron to go on the tripod. The fire will be up as well for those of you that wish to be creative on your own.

Directions to the "Forge Weekend" continued on Page 9

iForge - Anvil Stands Demo

by Jock Dempsey

Originally appeared on www.anvilfire.com August 14, 2002. Reprinted with the permission of anvilfire.com.

Because anvilfire.com demos are done in a "chat" format this version has been modified to fit the format of a newsletter.



Figure 1



Figure 2



Figure 3

The Peter Wright anvil on a red oak stand at top is a classic [Figure 1]. This is a short section of log that sets on the ground and the anvil sets on top. Usually there are some spikes driven in the stump to keep the anvil from walking off from vibration.

Some smiths strap their anvils down to reduce the ring. I prefer to be able to lift mine off the stand if needed.

In old shops with permanent forge and anvil locations longer sections of logs like this were often set deep in the ground. When you do this you want to be VERY sure that you will not want to change your anvil location. Most modern smiths prefer some degree of portability.

This old German anvil is setting on an oak stump that was trimmed to fit. [Figure 2]

The piece of oak was collected after an ice storm. Often after wind or ice storms you can have your choice of log sections if you ask and have a way to haul them home.

Don't forget that a taller section of log is a handy stand for a swage block OR to carve depressions in the end for forming sheet metal.

But, we are not always so lucky to have windfalls of large logs available OR the chain saw to cut to size. OR have them available when we NEED a stand.

There are numerous ways to build an anvil stand. They can be wood or metal.

This anvil stand was built by Steve Barringer of B2 Design in Mooresville, NC [Figure 3]. It is a solid section built up by laminating pieces of 2x12 framing lumber. The unique and HANDY thing about this design is the offset Steve put in the pieces as he stacked them up.

NOTE: When I was making my drawing below I had not looked at this photo for a year. I'd forgotten that Steve's end boards



Figure 4



Figure 5

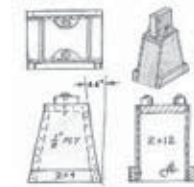


Figure 6

were 1-1/2" taller than the others to retain the anvil. [Figure 4]

Each board is offset about 1-1/2 to 2" as they are stacked up. I suggest using yellow carpenter's glue and glue coated nails.

If you look at the ends of the anvil stand you will notice the 1/2" threaded rods that hold the thing together. There are no nails or shims and the anvil sits on a bed of silicone caulking (really helps the ringing). The threaded rod actually clamps the anvil in place.

Steve attached a metal strap to make "pockets" to hold tools. In my drawing I show how to do it if you have an even number of boards and the ends do not come out the same. I show 8 boards, Steve used 9. To create the right fit you may need an extra "shim" made of plywood so the stack of lumber comes out the proper dimension to fit your anvil.

The tool holding strap could also be a strip of hardwood. There are a lot of ways to adapt this design to suit yourself.

The Figure 5 style of stand I have been using for 28 years. When this photo was taken for a magazine, I had not put the blocks on that keep the anvil in place.

This is a hollow light weight stand that is VERY solid. I can not tell it from a solid section of log in use. The hollow center also helps it sit flat on uneven surfaces. I have used these stands on all sorts of surfaces ranging from concrete to soft wet ground.

This stand is built from 2x10 or 2x12 (nominal construction size) lumber depending on the size anvil you have [Figure 6]. But 2 x 12 seems to work best for most anvils. The anvil above is a 300 pound Kohlsua. It just does fit. A 200 pound anvil leaves a little space around the edges.

Two sides are 2x12 and the other two are covered with 1/2" plywood. A 2x4 reinforces and stiffens the bottom edge of the plywood. This also make the base a little larger.

The angled side is 4 to 6 degrees from square. I usually measure this as 1.5:18 or 2:18 in inches as I layout the lumber. This stand is approximately 17" tall to fit me and the large anvil. Other stands I built the same day were 18" for smaller anvils.

I glue and nail all the joints including the plywood. The plywood is also nailed to the 2x4's from the inside. I use sheet rock nails on the plywood because they have large heads and anti-pullout ridges.

Many smiths also make steel stands. This photo is of a stand NOT to make [Figure 7]. The legs are spindly, and there are no diagonals or feet. On stands of this sort that I have used the anvil bounced around and made clanking sounds. [This is 100% correct. I have made one of these stands. It was an error I will not repeat. - Ed]

It appears (see addendum) to be too tall for general work so it may be a light duty stand for close detail work. But you don't want to use this on soft ground or asphalt due to the lack of feet. It will end up embedded in either surface and leaning precariously.

This is a Hoffi anvil on a steel stand [Figure 8]. Although the legs have no diagonal bracing it is made of very heavy angle iron that is very stiff (3/8" x 4 x 4) and a piece of 1/2" steel plate.



Figure 7



Figure 8



Figure 8



Figure 9



Figure 10

This stand has some handy and unique features [Figure 8] The base is cut to fit around the anvil feet. This lets you use the space in between to brace a piece being upset using a swage block or floor anvil.

There is a little built in container to catch punching "biscuits" that can be filled with water to cool them as they drop out. And the other end has a rack for hardies and other anvil tools.

I am not a proponent of steel stands but this one seemed to work well.

A common stand in Europe is a container filled with sand or coal ashes [Figure 9]. The anvil sets in the fill and can be leveled or the height adjusted by giving it a twist. With the base partially buried in sand the ring is dampened somewhat.

This type stand is VERY heavy with the fill and can be made of a cut off oil drum or a fabricated container. The Peddinghaus stand above is a commercial rectangular box stand with handles. I don't think the handles will do much good with 400 pounds of sand in a 75 pound box.

[The original iForge demo ended here. However, later on other people sent in their solutions for anvil stands. What follows is the "Addendum" portion of the iForge file -Ed]

Woody in Nebraska [Figure 10]

This anvil has a ring that will make your toes literally double over! After setting it into the form fit stand, the ring transferred down one of the legs!

Looking back the ring could have been reduced with a magnet on the leg.

However, I'm extremely pleased with the 3 cu ft of concrete cast into the steel base which reduces the annoying ring to a pleasant dull thud. Mounting the anvil which has a rough cast convex base was solved by placing lead wheel weights in the corners, has worked very well! The flat iron straps transition to threaded bolts for tightening work extremely well! My only grief about the base is that I didn't offset the perimeter ring for upsetting long corners. Occasionally I entertain the idea of cutting the iron and welding a band underneath to replace it. Then chiseling a groove though the cement.

Can't say enough about my enthusiasm for the concrete! Today I bent a 3/4 bending wench on a close bend using a fork placed in the anvil, didn't move the anvil around at all.

It's not my choice to endorse this anvil (you get what you pay for, and it is a serviceable anvil at a low price!)

Rob Pierce from Ohio [Figure 11]

I built this one out of 2x12's from my scrap pile with no out of pocket expense :-). That's what I like! Now I'm building my gas forge stand out of an old grill.

Pierce Productions
Media Project Studio
Cincinnati, Ohio

From Jim. C (CSI) [Figure 12]

This is another 3 legged stand like Woody's and the Hoffi stand by Tom Clark. This one is a little fancier.

Legs are 2 x 2 sq. tube 1/8 - 3/16" wall Plate above legs 3/8" thick. Wood is 2 x 12 pine with pattern sections cut and added to hold anvil. Spikes are cut short and drilled and tapped at the bottom; bolts & washers hold spikes against the anvil. Surrounding kick plate is 10 gage.

Legs are cut to 22° angle; the back legs are rotated 45° from centerline. Legs are plugged at the bottom. Plug is about 1/2" up inside tube.

This stand is similar to Tom Clark's; I like it because I can work up very close to the anvil. Note (thanks to Paw-Paw): The hardie hole is open to the ground for an upsetting plate.

This stand sits solid on dirt (portable / demo) or on my shop floor. It does not ring.

I still personally like a plain wooden stand but if you want a steel stand with tool holding capacity I really like the details of this one. The tool rack made of stove rack or barbecue grill, the Rail Road spike hold downs, tong rack.



Figure 11



Figure 12



Figure 12 completed

For detailed photos of these homemade anvil stands see Page 8

Classes

Begining Blacksmithing -

One on one basic blacksmithing by appointment. \$30/hr.
Daniel & Sarah Ritchie-Crowther
Valley Falls, NY 12185
518-753-6910
smiths@oakandacorn.com

Blacksmithing I, II, & III

For information and to register, contact the instructor:
William Senseney - Master Blacksmith
413-458-5641



Figure 1



Figure 2



Figure 3



Figure 4

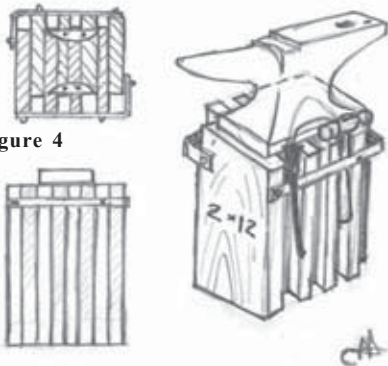


Figure 5



Figure 6

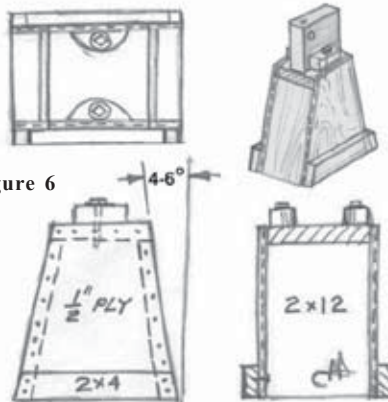


Figure 7
The one NOT
to do!



Figure 8 (Below)



Figure 10



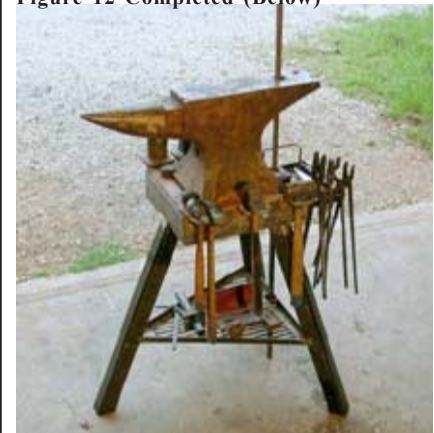
Figure 11 (Below)



Figure 12



Figure 12 Completed (Below)



January 19th CDBA Gathering Directions

You will be going to:
35A State St.
Valley Falls, NY 12185

Use your best route to Rte 7 East & the Collar City Bridge in Troy.

From the base of the bridge get in the leftmost lane. Go to the next light and turn Left onto Rte 40 North (Oakwood Ave).

Follow Rte 40 North out of Troy and to Schaghticoke (approx 7-9 miles). Some landmarks on the way will be in order of passing: dual Cemeteries [one on either side of the road], Rte40 Takes a dogleg [quick Right, then quick Left], Speigeltown hamlet, Grant Hollow hamlet, Melrose hamlet, Hoosic Valley Rescue Squad.



General overview of the area surrounding Valley Falls

Just outside of Schaghticoke Rte 67 merges with Rte 40. Follow 67&40 through Schaghticoke until 67 breaks away and heads East.

Turn Right onto Rte 67 East. Follow 1 mile until you cross a bridge. At the end of the bridge Rte 67 turns Right.

GO STRAIGHT. This is State St. Valley Falls. We are #35, on the Right hand side. It's a big tan & brown house with a matching barn set behind. Parking in the driveway and out front are fine. Depending on the amount of snow at the time, additional parking may need to be sought on the side streets on the Left. There are no parking restrictions on any of these streets; simply find a spot.



Detailed Map of Valley Falls

One note for those of you who use internet mapping services. **DO NOT USE** randmcnally.com to find our house. Their maps are incorrect; you will end up on the wrong side of the Hoosic River on Bunker Hill Rd. not on State St.

“Forge Weekend” Directions continued from Page 5

Directions to Bauder Country:

Treadwell, New York from the east: Take your best route to route I-88 West - Oneonta exit 15 - (Rt.28/23) - Left off exit - go under Rt. I-88 - two traffic lights and turn right on to Route 28/23 stay

on that road (you will be heading over a mountain) follow for 5.8 miles - after you go down a steep hill and into a left horseshoe turn (intersection of Rt 28 and Rt 357). Take the first right hand turn (less than 1/4th of a mile - Case Hill Road is the name of the

road but there is no sign - but it is right after a little church - across the street is a yellow 2 story building - follow Case Hill Road for about 3.0 miles - **STAY ON THE PAVED ROAD** - at the 1st “Y” in the road (red barn) stay to the right - when you come to a 90 degree turn to the right with a row of evergreens on the left there will be another “Y” - stay to the left heading downhill - you will come to a farm - barn on right house on left - about 1/8 of a mile, past the farm, you will have to take a Wide Sharp Left Turn onto a Dead End Dirt Road (it is hidden coming in this direction - if you see a house on your right you missed the road). 2nd house on left - Log Cabin - turn into the bottom driveway.

Please note: Supper will be potluck. Everyone bring a dish so we will all eat well. Crash space is available. Please RSVP so we know how many will be coming. I can be reached at the cabin - 607-829-6689, in Bloomingburg (845-733-5845) or e-mail Norse@hvc.rr.com

Local Resources

Coal

Garnsey Coal & Trucking
952 Route 4 South
Schuylerville, NY 12871
518-695-3346.

JP's North
Route 32 Box 11
Greenville, NY 12083
1-800-237-4488
<http://www.jpnorth.com>

Morrell Metalsmiths
C. Leigh Morrell
446 Marlboro Rd. (VT Route 9)
Brattleboro, VT 05303
1-800-371-1146
<http://www.morrellmetalsmiths.com>

Safety Products

North River Supply
John Earl
412 Cedar Lane
Greenville, NY 12083
jwkearl@cs.com

Steel

Albany Steel
566 Broadway
Menands, NY 12204
518-436-4851

Kivort Steel
380 Hudson River Rd
Waterford, NY 12188
518-590-7233
<http://www.kivortsteel.com>

Welding & Abrasives

Northeast Gas Technologies
84 Karner Rd
Albany, NY 12205
1-800-248-1215
<http://www.newelders.com/>

Local Shaklee Distributer

Rooney Health Associates
Clifton Park, NY 12065
518-371-6453

Wanted!

Other Publications

ANVIL Magazine

Rob Edwards
P.O. Box 1810
Georgetown CA 95634
<http://www.anvilmag.com>

Anvil's Ring & Hammer's Blow

ABANA CENTRAL OFFICE
PO Box 816
Farmington, GA 30638-0816
<http://www.abana.org>

Blacksmith's Gazette

P. O. Box 2168
Snohomish, WA 98291-2168
<http://www.fholder.com/blacksmithing/default.htm>

Blacksmith's Journal

PO Box 1699
Washington, MO 63090 USA
<http://www.blacksmithsjournal.com>

Irony

Stephen McGehee
PO Box 925
Corydon IN 47112
irony@epowerc.net

The Traditional Metalsmith

George Dixon
1229 Bee Tree Lake Road
Swannanoa NC 28778
<http://www.traditionalmetalsmith.com>

Scrap Bin

Capital District Blacksmiths Homepage

<http://www.oakandacorn.com/cdblacksmiths>

Blacksmithing Clipart

<http://www.oakandacorn.com/clipart.html>

Blacksmithing Links

<http://www.anvilfire.com/links>

For Sale

Blacksmithing & Metalworking Tools-

Carl Davison
carlrd@worldnet.att.net

Plasma Cutting -

Contact for pricing & specifics
Andrew VanSchoick
Albany, NY 12209
518-433-0527
avansch1@nycap.rr.com

Like Minds - Other Organizations of Interest

ABANA - Artist-Blacksmith's Association of North America

ABANA CENTRAL OFFICE
PO Box 816
Farmington, GA 30638-0816
<http://www.abana.org>

New York State Designer- Blacksmiths

Pres: Bill Banker
P.O. Box 174
Almond, NY 14804-0174
607-276-6956
<http://www.nysdb.abana-chapter.com/>

Northeast Blacksmiths Association

Pres: Jonathan Nedbor
496 Tow Path
High Falls, NY 12440
845-687-7130
joned@earthlink.net

Berkshire Blacksmiths Association

William Senseney
30 Frenier Dr.
Williamstown, MA 01267
413-458-5641
bmre@mediaone.net

Contact Us

You can get in touch with us for submissions, requests and information by a variety of means:

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