New Jersey Blacksmiths Association "EAGLE"

N.J.B.A. Newsletter

Volume 4, Number 3 December 1999

December Holiday Party

Marshall Bienstock will be hosting the **December Holiday Party on December 12th.** Marshall and Jan will be hosting the **party and pot-luck** in their home located at **301 Casino Drive, Howell, N.J.** The party will be starting at **2pm** (ph# 732-938-6577). Please bring a covered dish (enough for 6-8 servings), drinks and some of your work to show off.

Directions; Take any N-S route to Rte. I-195 or Rt. 33 and from there to Rt. 9. Go North from I-195 or South from Rt. 33 to Casino Dr. Travel about 3 Miles to #301

Year 2000 Meetings;

January; To be announced by flier

February; Possibly at the Orange County Farm Museum or at Greg Phillips shop. Confirmation and details to follow.

March; Joint meet with Furnace Town Blacksmiths Guild, MD Date to be announced. Possible meet in Long Island details will follow.

April; Joint meet with PABA in Doylestown, PA

Contact Doug Learn, date and details to follow.

Future; Doug Learn is looking for suggestions as to a demonstrator or a topic for a possible October meet.

The Scholarship Program

The NJBA Scholarship program is on hold for the year of 2000. We instead are going to try to bring in demonstrators from outside of the group to educate the whole group. We will also be trying to organize workshops to improve our tools and abilities. Peters Valley may offer scholarships to us and ABANA has them available for members (could easily offset the cost of joining) Contact ; Dave Macauley for info on these programs, (732) 206-1568, (732)949-8422

Report on the October Meeting

The October 24th meeting began at 10:00 am at **Dan Cruzan's** shop. **Al Stephens** started things off with a demonstration on tongs. He talked about the importance of making your own tongs and used the power hammer.

Dan Cruzan followed with a talk on the importance of art in blacksmithing. Dan demonstrated how to use mathematical tools such as the golden mean to make the difference between stuff and art. At 12:00 the meeting broke for lunch. Dan provided some delicious soup and the NJBA provided sandwiches. The Iron in the Hat and tailgate sale was held at this time.

The meeting resumed at 1:30 with **Tim Suter**. Tim gave a great demonstration on a headboard and the various tools and jigs he used to construct it. **Marshall Bienstock** concluded the day with his brazing technique that got oohs & ahhs and literally got everyone up out of their seat. Marshall then showed how brazing was applied to make his "Betsy Lamp". There was a large turnout and everyone took home a head full of ideas.

Report by; **Steve Rhoades**

Open Forges

Monday Night Open Forge in N.J.

We want to encourage all to join us at ;Marshall Bienstock's shop on 7 pm almost every Monday night(Plaease call aheadd on holidays to make sure (732)780-0871)

Monday Night open forge in Orange County

Greg Phillips will be hosting an open forge in his shop in Orange Co., NY. For more information contact: Greg Phillips, Acorn Forge, 937 Route 17k, Montgomery, NY 12549, (914) 457-5671, suresign@frontiernet.net

Tuesday Night Open Forge on L.I.

Starting Tuesday, November 16, 1999 an open forge will be available at Jon Folk's shop in Central Islip. The forge is open to N.J.B.A. members only every Tuesday from 3:00 pm to 8:00 pm.
Questions call (516) 625-5667 or e-mail me at; blacksmith@alumni.sunysb.edu

Blacksmithing Workshops and Classes:

Peters Valley Craft Education Center
19 Kuhn Rd., Layton, NJ 07851 (973)948-5200
pv@warwick.net Http://www.pvcrafts.org/

Academy of Traditional Arts
Carrol County Farm Museum
500 South Center St. Westminster, MD 21157
(410)848-7775 (410)876-2667

Touchstone Center for Crafts
R.D.#1, Box 60, Farmington, PA 15437
(724)329-1370 Fax: (724)329-1371

Unclassified ad:

Wanted for my collection, eventually to be displayed with the **Fisher & Norris archives**:
Any Fisher & Norris anvils or vises.
Will buy outright or trade for post vises.
Over 20 post vises to choose from.
Contact **Joshua Kavett**
732-431-2152 E-mail: jakavett@aol.com

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osan@netlabs.net

Hello, From the New Editor

Hi, I would like to introduce myself. My name is Larry Brown. I have taken over the position of editor from Bruce Freeman. I started working with metal when I was about 19. I started by welding and finding a need to heat large pieces, started looking for information and advice on forges and forging. I worked for many years with very little in the way of information and resources about blacksmithing. The only books I was able to get were the Weygers' book, The Modern Blacksmith, and Richardsons', Practical Blacksmithing. I also had no luck finding anyone in my area to learn from other than your average railing shops.

In 1985 I found about ABANA, from a friend who had seen an Anvil's Ring. From joining ABANA I learned of other more local organizations. I joined New York State Designer Blacksmiths and later Northeast Blacksmiths.

I heard about the New Jersey Blacksmiths while at the ABANA conference in Alfred, NY. I joined right away, being happy to find a group closer to home and have been a member ever since.

I have taken the position of editor as I strongly feel that a newsletter is an important part of an organization such as this. I believe that a newsletter provides a common element between a very diverse group of members, where events can be posted and reported on, items sold and tips and techniques learned.

I feel that a news letter is like the glue that holds an organization together and that it is an important part of the whole.

You are able to reach me at;
Larry Brown
90 William Ave.
Staten Island, N.Y.
10308
(718) 967-4776 brownln@hotmail.com

The NJBA Newsletter

Some thoughts I would like to express about the newsletter itself are; that this is **our** newsletter, not the board of directors' newsletter or Larry Browns' newsletter.
This newsletter belongs to the dues paying membership of the **NJBA**. I would like to use material that pertains to us, and that we are interested in. If there is a subject you are interested in get in touch with me, and I will try to answer your questions in the newsletter or find information on the subjects that you are interested in.

We don't need long write-ups of events (I think most people don't read them if they are too long) A paragraph or two written by someone at the event or at an event outside of NJBA is all that is needed. If more than one person writes up an event that's great too, as different people remember things differently. If you attend an event out side of NJBA and can share your experience, we'd like to hear about it, others may have considered going and would if they knew more about it.

The tips and techniques section is comprised of articles from other newsletters from all around the country, written by people just like us. We can write some of our own, to share with them, also. If you have a jig in your shop and would like to share it, or a method you use to make something and would like to share it, let me know and I will try to help you put your ideas in print. Elaborate write-ups and drawings are not necessary. If you send me a quick sketch, I will get back in touch with you and we can try to get this together for printing. It could be nice to see you ideas on paper helping others.

Remember the more that is contributed the better our newsletter can be! I am able to be reached by telephone, E-mail or mail.

Anvil Repair Workshop Report

As one of the anvil repair workshop participants I would like to thank **Greg Phillips** on behalf of **NJBA** for his outstanding efforts in putting this workshop together .

Report by Greg Phillips;

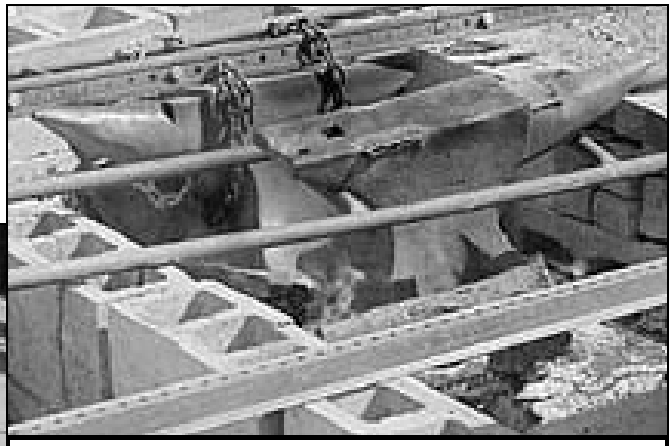
The anvil repair workshop originally scheduled to take place at the Orange County Farmers Museum was held at the the shop of Greg Phillips. It started at about 6 am on Sat. with the starting of the preheat fire. Lunch was served over at the Museum. Saturday afternoon there were as many as four welders operating at a time. There was a brief intermission Saturday night then workshop continued until about 4 pm Sunday afternoon.

Thanks to the Herculean efforts of Marshal, Larry, Bruce and others 13 anvils were repaired. Special thanks to those who donated the use of equipment to the effort.

Tom McDonald "McDonald & McDonald Inc.". of Newburgh NY for donating the use of three trucks, 2 welders, a box of rods and who knows what else.

Bob Ewald "Ewalds Logging" of Pine Bush NY for the use of a welder and MIG machine.

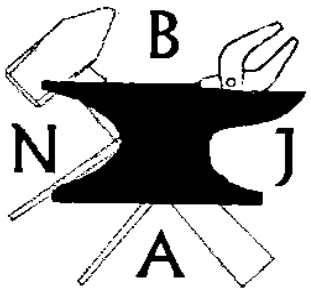
Safety equipment was donated by Dick Polich "Polich Art Works " Rock Tavern NY.



New Logo

I recently created a new logo featuring a Fisher Anvil (Being a New Jersey brand). I would like to know how the membership feels about it. Do we like it or do we stay with the old one? Talk to myself or another board member and tell them how you feel about it.

New Emblem



Old Emblem

Francis Whitaker
11/ 19/ 06— 10/ 23/99

The people who subscribe to the forge list had only recently heard that Francis was ill. They had posted an address to send cards to, I was still picking a card out, much less having sent one when the following post came on the list :

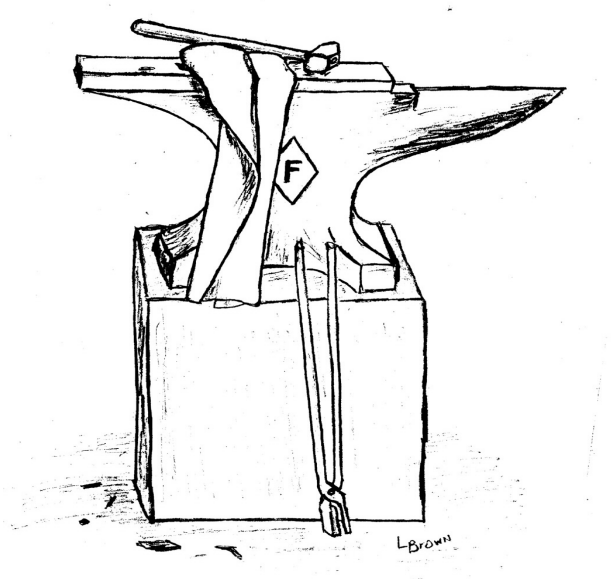
To All:
Francis Whitaker died Saturday 10:00 pm cst.
Tenative memorial at;
Colorado Rocky Mountain School ,
Carbondale, CO
Tuesday Oct 26 at 3:00 pm.
He will be missed by all of us who knew him.
Lou Mueller

So I never bought or sent a card, from myself or anyone else, and it's too late to say good-bye that way. Francis held to the traditional ways of forging iron and working metal. I feel that this was because he had seen the craft disappear once in his life time and felt that if people were to follow the old ways it wouldn't be lost again. I feel that Francis shared what he remembered in the hope that we won't forget.

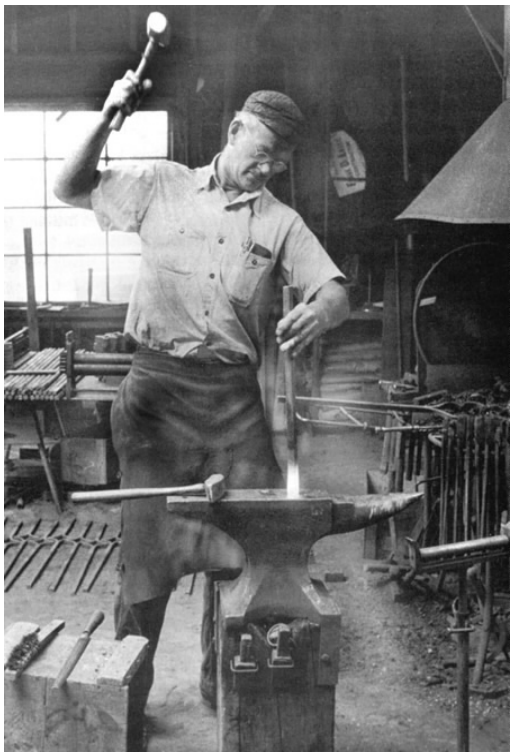
Here's his bio from the National Heritage Fellowship web site:

Francis Whitaker
Blacksmith/Ornamental Ironworker,
Carbondale, Colorado
Age 90, Born 11/19/06
(Extended Biography)

Tradition flows from a sense of community, a sense of shared destiny shaped over time from common activities, values, and lot in life. In the traditional arts, occupations, particularly those founded on the informal passing on of work skills, are an important kind of community. The bonds of work undergird mutual standards of behavior, ethics, and aesthetic expectations. A fine example is the occupation of ornamental blacksmithing, in which apprenticed learning and a strong feeling of dedication to a mutual sense of beauty and skillful excellence forge strong communal ties. Often referred to as "the dean of American blacksmiths," Francis Whitaker more than any other has strengthened the ties of tradition among blacksmiths across the United States.



Anvil at Rest



Some say it is difficult to tell whether he chose blacksmithing or blacksmithing chose him. Born in Woburn, Massachusetts in 1906, Francis Whitaker dropped out of high school at the age of 16 to apprentice with the premier ornamental blacksmith of the day, Samuel Yellin, in Philadelphia.

"The first time I took a piece of hot iron out of the fire and started to beat it with a hammer, I was hooked," says Whitaker. "There s a fascination to it that I have never lost. there s a magic to it, taking something, a stubborn material, and doing what you want with it." After a second apprenticeship in Berlin with the German master Julius Schramm, he returned to the United States during the 20th-century heyday of ornamental ironwork and settled in Carmel, California in 1927. It was the era of the Spanish Revival in California design, and work was plentiful. After working for a general contractor for seven years, he opened his own shop in 1933, during the depths of the Depression. Though times were difficult, "The Depression . . taught me that if you re dedicated to your work and do good work and are uncompromising about it, there will always be a place for you in society. The others can fall by the wayside, the second-raters." This iron-willed dedication to excellence marked his entire career, spanning nearly three quarters of a century. During his California years, he became friends with John Steinbeck, who used him as a model for a character in "The Long Valley"; his later writer/ acquaintance, Leon Uris, would base the heroic character Conner Larkin in his novel "Trinity" on Whitaker.

In 1963, he moved his shop to Aspen, Colorado. As interest in ornamental
ironwork revived, his mastery was sought out by younger blacksmiths hungry for the specialized techniques, skills, and knowledge that had been seriously eclipsed during the economic downturn of the Depression, the disruption of World War II, and the changing styles of American architecture. Then In 1976 I received the call . . . a mission in life ... I realized that I was a link between the heyday of wrought ironwork in the early years of this century and the present renaissance of blacksmithing. He spent the next 20 years selflessly devoting himself to passing on his knowledge to the next generation, teaching widely across the United States and founding the Francis Whitaker Blacksmith Schools at the Rocky Mountain School and the John C. Campbell Folk School in North Carolina. He has received numerous awards, including the 1995 Colorado Governor s Award for Excellence in Arts and an Honorary Doctorate in Humane Letters from the University of Colorado.
Jim McCarty
Father Helias Forge, Taos, MO
Editor, The Anvil's Ring
BAM Newsletter

I believe the biggest effect he had on me was seeing the effect he had on others. I only met him twice, once in R.I. And once at the Alfred Conference. Both times I watched him talk and share ideas with all who asked and have a profound effect on those around him. He will be missed by all. L.B.

Thoughts Behind Hammer Selection

©1998 Jerry Frost, Meadow Lakes, Alaska

Efficient metal working of any kind is more dependent on accuracy of tool use than strength and power. Choosing the most appropriate hammer weight means different things to different people, situations and materials. Using a six-pound hammer on ½" stock may do the rough work faster than a half-pound hammer, but the finish work will take longer and a misblow with six pounds may ruin it altogether.

On ⅜" stock or less, I notice little difference between a 32-oz. and a 24-oz. hammer, so I tend to use the lighter for accuracy and my arm's sake. It's easier to control a lighter hammer, and control takes energy, too. On the other side, if I were to try using a 10-oz. hammer I'd wear myself out swinging it and not get much done.

When you forge iron, you flatten and stretch the molecules; the laminar structure is what makes forgings so strong. It is this action that allows us to work the metal way over the temperatures where grain growth normally starts damaging it – the reason being that we are continually compressing it, controlling grain growth.

When you work heavier cross section material, the physics of how metal moves under crushing forces becomes more apparent. When the hammer hits, the molecules slide off each other and away from the center of impact in a compression wave front, and (hopefully) in the desired direction. The depth of movement depends on the combined inertia of the hammer, the anvil and the metal being worked, as well as the velocity of movement.

A light, fast hammer blow may have the same energy at impact, but there are real differences in the effects of that energy. The surface molecules accelerate away from the hammer rapidly, encountering increasing resistance from molecules farther in and ultimately the anvil itself. Like everything in nature, they take the path of least resistance. The molecules slide sideways fastest at the surface, where there is the least resistance.

The heavier, slower hammer blow gives the molecules more time to transfer energy to the next molecule in line. The greater inertia is harder to deflect, so the metal tends to move in the same direction as the blow until it encounters greater resistance.

Here are three easily reproduced examples to support this:

Strike a single blow from different weight ball peens; then lay a straight edge across the dimples. You will see a raised rim, just like an impact crater. You won't see much, if any, movement on the opposing side. The ratio of the raised rim to the depth of the dimple decreases as the weight of the hammer increases, until there is very little rim and the metal is deformed through to the opposing face.

It can also be seen when upsetting. A light hammer mushrooms the end of the stock. A heavy hammer causes it to bulge farther in from the point of impact.

Another easily seen example is to flatten the ends of two pieces of ½" square stock. Use the same heat and two very different weight hammers, such as a two-pound and a 12-oz. Flatten the bars just a little, and to the same degree. Strike one or two blows from the heavy hammer centered ½" from the end of the stock. Then strike as many blows from the light hammer as necessary to make the same draw. Compare the ends of the bars and you will see the heavy hammer caused the center of the bar to bulge out, convex; the lighter hammer caused the surface to overhang the center, concave.

Regardless of the physics involved, there are other things to consider when selecting hammers for a job. First of all, it must be comfortable to use and it can't be too heavy to control or cause injury to your arm. It must be appropriate for the job at hand.

You can't overwork a hammer; what you need is a strategy to get the most efficient work out of an arm. My strategy is to start with the heaviest hammer appropriate for the job and as my arm tires, progressively switch to lighter hammers. In a production job, this means doing the heavy, rough forging early in the day and the lighter finish work later as you tire.

Jerry Frost has been involved with metalworking since he was 12 years old. His work for the Alaska Dept. of Transportation as a remote area driller tested his skills to the maximum. This article began as a post on "theforge," the ABANA-sponsored email forum. It was edited and submitted by Carl Sharpenberg of Chino Hills, California. ♣

New Feature???

Many of us travel around a lot and we see a lot of ironwork in our travels that we really don't consider or mention. I'd like us to try this, if you see an interesting piece of ironwork, perhaps a traditional piece or just a real nice design write down its location and send it to me. Whenever we have a few locations to list I will put them in the newsletter. This way if we are traveling around we might know of interesting items that we might otherwise drive by.

I can start by listing a gate that I came across in Long Island, in a park called the Planting Fields, there is a large iron gate I believe imported from England made in the 1700's. I came across this gate quite by accident while I was in the park taking pictures of my children. I also saw a gate that I haven't been able to find again in Fairlawn, NJ while driving around lost. It was opposite an expressway, at the entrance to a cemetery. The next time I went there I couldn't get lost the same way and find it again (any members from around there know the gate I am referring to?) What I am trying to say is that there is a lot of iron out there that we take for granted that others might like to know about, so drop me a line!

Rates for photocopy ready advertisements

Photocopy ready advertisements must not contain photographs, solid backgrounds, etc and NJBA cannot be responsible if submitted copy does not reproduce well when photocopied.

Send all copy to Larry Brown (see directors list)

Size	Measurements (WxH, less margins)	Price
Full page	7" x9"	$50
Half page, Vertical	3.4" x9"	$30
Half page, Horizontal	7" x 4.4"	$30
Quarter page	3.4" x4.4"	$20
Business card	3.3" x 2" overall	$10
Business card (NJBA members)	"	$ 5

Rates for unclassified advertisements

Unclassified advertisements must be legible, preferably typed text or sent by e-mail

Type and size of ad Price	
12 lines (about 100 words)	$15
6 lines (about 50 words)	$10
NJBA members, 12 lines	$ 5
NJBA members, 6 lines	*Free*

Forge Hood Plans

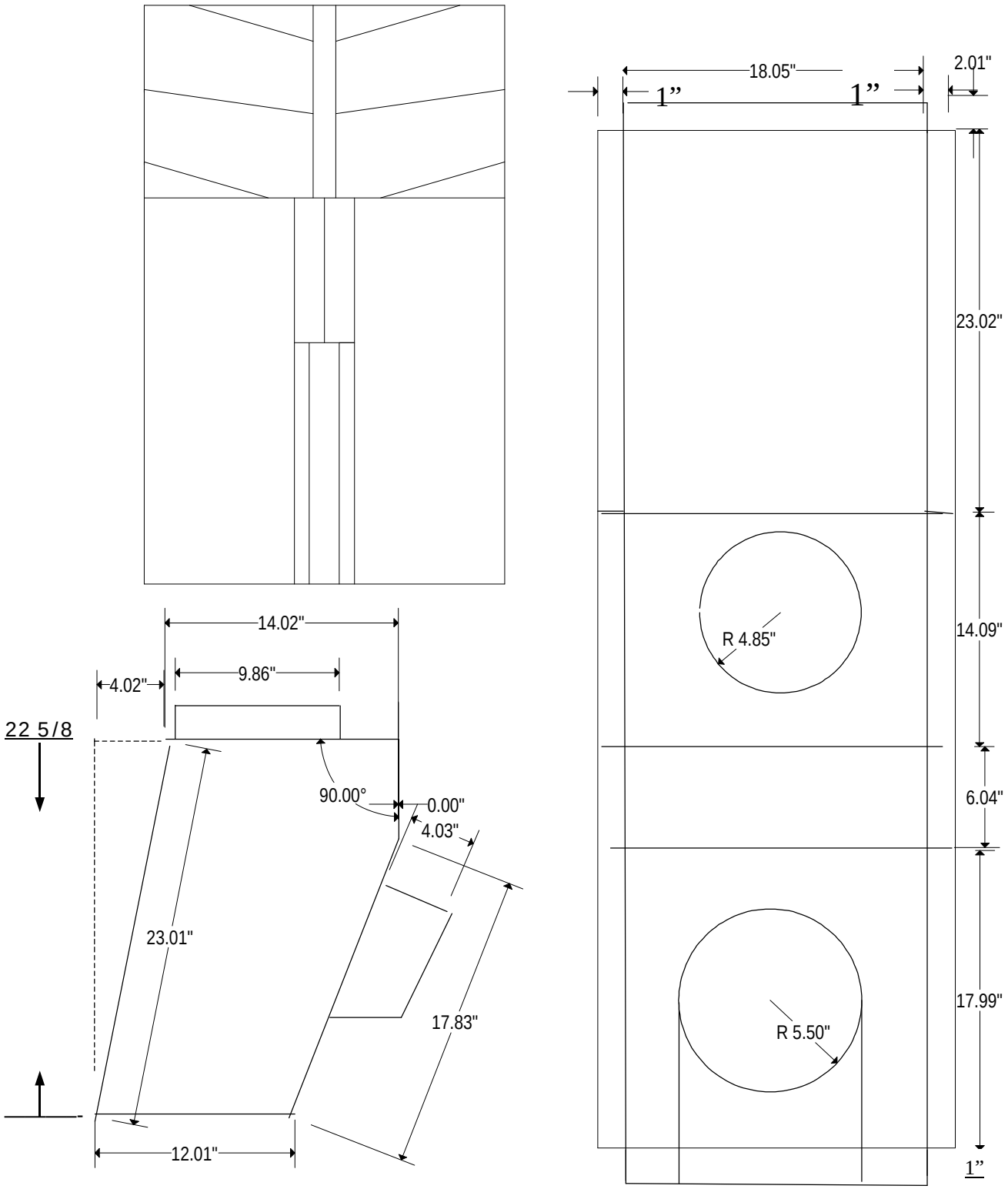
The forge hoods were designed so that 2 hoods could be made out of one sheet of 4'x8' 14 ga iron sheet. These forge hood plans were designed to be cut on a shear and folded on a large finger brake. The sides are designed to be pop riveted on. Adapt the plans to suit your own construction techniques.

The first cut on the sheet is to make 2 pieces, 64"x 48" and 32"x 48". The next cuts were on the 64" piece to make two pieces 64"x 20" and one piece 64"x 8". The large pieces are to be the front, top and back sides of the hood. Mark the fold lines out on the body panels.

Lay out the four side panels out on the 32"x 48" piece, A cardboard template might help. By using a compass you can bisect the angles and find out the size of the notches to cut in the sides of the main panel for the flanges. This is helpful when you bend the main panels as the notches will act as stops to help you gauge how much to bend each bend.

Bend the edges on the large sheets after cutting notches. Then bend the bottom front, turn the work around to the other end and bend the bottom back. Then bend the back to top bend. Then the top to front bend. Then the front face bend. After bending lay out and cut he front opening and the top cutout. The top ring was MIG welded on our design. The inside could be cut out later.

Cut two pieces out of the 8"x 64" piece, approximately 2"x 30 7/8" and two pieces 4"x 24". Roll the 2" wide pieces to form the rings to attach the 10" stove pipe the top. Drill a 3/16 hole in the hood front 1/2 " above the front opening. Slide small piece of 3/16 rod through hole MIG weld back and bend front into hook. Cut corners on the 4" wide pieces and bend around 6 1/2" radius from center to form the removable front piece. Lay the hoods on their sides line up the side panels and pop rivet on with rivets every 2" or so. Place the bottom front near firepot and try not to get sucked up the stack.


18.05"
2.01"
1”
1”
23.02"
14.09"
6.04"
17.99"
1”
R 4.85"
R 5.50"
14.02"
9.86"
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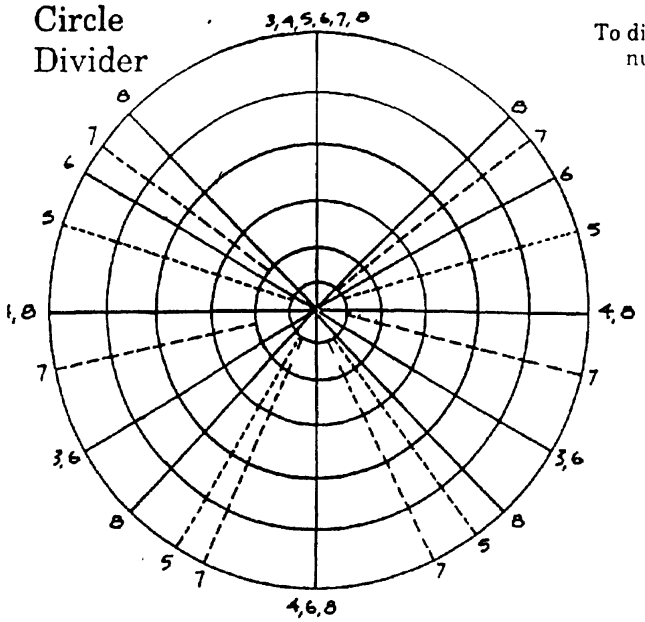
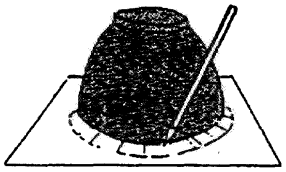
22 5/8
90.00°
0.00"
4.03"
23.01"
17.83"
12.01"

Circle Divider

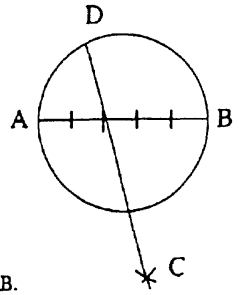


To divide a circle into a given number of parts, connect all points marked with that number. For instance, to divide a bowl into 5 segments, center it on the template and mark at every line that has a 5.



It might be helpful to enlarge this by photocopying it.

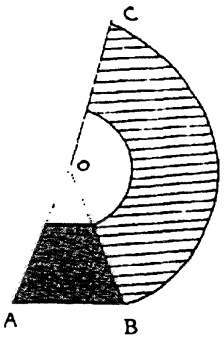
To Divide a Circle into a Number of Equal Parts



1. Draw diameter AB.
2. With A as center and AB as radius, describe an arc. With B as the center and the same radius, describe another arc crossing at C.
3. With a ruler, divide AB into as many parts as you wish to make, in this case five.
4. Draw a line from C through the second division, regardless of the number of parts being divided.
5. Step the distance AD around the circle with a compass to determine equidistant points.

Making a Cone Pattern

1. Draw the side view of the cone exactly as you want it.
2. If making a frustrum (shaded), extend lines to meet at o.
3. Set compass with radius ob and draw arc.
4. Multiply ab times pi (3.14). Mark this distance on the arc with a wire or string to find c.
5. Connect oc. The striped area is the pattern.



Useful Geometry

Here are a few tips on dividing up a circle to get the right spacing on your three leg stands or to space out the five hooks to hold your fireplace tools on the stand. They are taken from THE COMPLETE METALSMITH, An Illustrated Handbook, Revised Edition, Tim McCreight I found the book in the craft store at JCCFS. Most of it pertains to jewelry work but there is lots of neat stuff on all types of metal working I photocopied the Circle Divider, glued it to a sheet of 16 gauge brass and used a straight edge and scribe to cut in all the lines and points. It now sits in my tool box ready for use and won't get lost, dirty, or bend up like a piece of paper. Doug Merkel