A special message to chapter newsletter editors. We give a big thanks to the editors who have been publishing the Chapter Liaison Letter in their chapter newsletter. How nice it would be if all editors could find space to publish our letters. Let the watch word be communicate. More on this topic in future letters to the chapters.

MEMBERSHIP LISTS

Those persons who make the short and long range plans for ABANA find your membership lists to be so very useful. These lists help us to identify potential ABANA members and to answer the continual question as to the number of blacksmiths within the reaches of ABANA. The next step for us is then to see how we can increase ABANA membership. These lists are for ABANA internal use only and will not be used for any other reason.

A requirement for ABANA Chapter status is to annually send to ABANA a copy of the chapter membership list. This seemingly small detail is easy to forget, especially when chapter officers change frequently. With this reminder, please send a copy of your membership list to ABANA, PO Box 816, Farmington, GA, 30638. You may also send LeeAnn a copy of your list in ASCII format (text with tabs) as an attachment to an e-mail if you wish. If you choose this option please put your chapter name and the words 'membership list' in the subject line and e-mail it to: abana@abana.org. Thanks!

INSURANCE

Liability insurance is the most frequently asked question that we receive. *You can help us provide a useful service to chapters by giving us information on your chapter insurance.* We will then compile this information and share it with chapters. Please send us the name of your insurance company, coverage, price basis (per event, per person, blanket and riders for special events.) Include other information that you believe may be useful to other chapters.

We will inform you about the results of this survey. Just when we will get back to you depends upon when we hear from the chapters. This is a top priority item! Thanks to the Indiana Blacksmithing Association and the Western Reserve Artist Blacksmith Association who recently sent in their insurance information. Have a safe and happy holiday and best wishes for the new year!

Bob Fredell, Chairman
Member Services Committee
3500 45th Ave South
Minneapolis, MN 55406
H. 612-721-2298
bfredell@qwest.net

Message from the NJBA Chairman;

I would like to discuss communication. I, for one, have not been very happy with the communication between the ABANA board and the ABANA Chapters and membership. Without dwelling on details, suffice it to say that there was much I didn't know about ABANA, and didn't even know to ask. I am hopeful that over this next year the ABANA board will work through many of these problems and make ABANA a better organization.

These circumstances have made me wonder how NJBA is perceived by its membership. For the most part, the feedback I've heard has been good. However, it may be the "feedback" that we don't get that is most important.

So, the first point I'd like to make is that the NJBA directors list our names, phone numbers and email addresses in the newsletter specifically so that the NJBA members can contact us. Please feel free to do so. I suggest you call the director who is geographically nearest you, both to save on phone bills and so that a few of us don't get all the calls. (Actually, email is more convenient, if you have it.) It may happen that the first director you happen to call might not be able to answer your question, but it's likely that he will be able to direct you to another director who can.

The second thing I'd like to point out is exactly how the NJBA directors got to be directors. Quite simply, they showed the interest. NJBA is unusual in that we directors can elect new directors between (May or June) election meetings. (Please read the bylaws -- published in a past issue of the newsletter -- if you'd like to better understand how NJBA operates.) This means that anytime a member shows sufficient interest to carry part of the load of directorship, he can quickly be elected to the board. I have made most such nominations, and in most cases my judgment of who was ready, willing and able to serve has proved correct. The result is a large but active board of directors who keep NJBA going ahead. If you feel you'd like to be on the board and we don't know you well enough to nominate and elect you, then come to the elections meeting and nominate yourself. (It's been done already.)

If helping to run NJBA doesn't appeal to you, then we still encourage you to show up at meetings, at least occasionally. We have monthly membership meetings and weekly open forge meetings, and you're welcome at both. If you think we've been off target on meeting programs, then speak up and let us know what (or who) you'd like to see. We will pay attention to your feedback.

In any event, give us your feedback. It's the best way for us to know how we're doing and for you to get the NJBA you want.
-Bruce Freeman, Chairman and Director, NJBA

Foundations

A Resource for Beginners... by Bud Oggier

Part 2. The Anvil's Ring/Summer 1986

Foundations is a new column designated for the novice and we are fortunate to have Bud Oggier as its' author. While this material is not geared for the experienced smith, I think anyone who has tried to teach the craft to a beginner will appreciate and profit from Bud's words. For the person who is attempting their first time at the anvil, let Bud guide you along. It doesn't get any clearer than this!

Hello, Jean, nice to see you again! Do you still remember how to upset from the last time? Let's try it again, and this time we'll put two upsets in the same bar, a given distance apart. We're going to take a piece of 1/2" round steel and put two upsets in it 6" apart. This is just an extension of what we did the last time.

"1 want one upset 3" from the end. Remember that the stock for the upset has to come from the bar and thus, will shorten the bar. I have these two pieces 18" long already cut off. Since we don't know without a lot of figuring how much the bar is going to shorten, we'll measure the overall length now, and then again after we've made the first upset to see how much stock it took. Also, since we don't know how much the bar will shorten, let's leave an extra inch on the end and cut it off after the upset. I'm going to put a punch mark 4" from the end and another at 6", heat the piece, cool it off a little past the punch marks, then upset it.

"Jean, while this piece is heating, last time when we upset, what did we do to the piece to help control the bending?"

"You mean before upsetting?"

"Of course."

"Let's see, we put a blunt taper on the end to concentrate the force in the middle."

"Great! I hoped you'd remember. Time for me to put on the taper, here we go!"

"Remember, hit, turn to the left! Hit, turn back, hit! Keep your holding hand at the same level. Your turn. Good!

"Jean, your taper turned out well. Time for the upset. It will be difficult to find the two punch marks when the piece is hot, so let's put a chalk mark on the cold end in line with the marks that will make them easier to find. Another thing that helps is to fill the punch marks with chalk. Strange, but when the piece is hot, the punch marks appear black with the chalk in them. Let's do that.

"O.K., put the piece in the fire, straight in, and cover it with coke. Notice, I kept the chalk mark on the cold end up. That's so the chalk in the punch marks doesn't fall out. When I bring the piece out, I'll cool the long end first with a water can and then dip the other end in water. The piece is ready, here we go. See the two black dots where the punch marks are? I'll pour water over the back end until most of the red is gone. Now, dip the other end leaving only about ¾" hot and go to the anvil.

"Darn, my piece is bending— need to straighten it. It helps to turn the piece while upsetting. I think it helps control the bending. Just twist your holding hand about a quarter turn back and forth as you hit. There, now I'll straighten it and get another heat. This time I won't have to find the punch marks. The swelling from upsetting will show me how much to cool. The piece is hot enough now. Notice, I let it get a bright yellow before I took it out. The high heat lets it upset faster and we lose quite a bit of heat while we're cooling it. See, the bright yellow is now almost red, but it will still upset. Look at my two punch marks now. They were 2" apart to begin with, but now they are only about 11/4". The stock has gone into the upset.

"When you have to make several upsets and you want the same amount of material in each one, one good way to do this is to upset until the punch marks on each piece are the same distance apart. One more heat and this upset is finished. There! Now my punch marks are only 1" apart. Your turn, Jean. Be quick while you cool your piece because you are losing heat fast. That's good! Go! Keep your piece straight, Jean,

because if you keep upsetting after it is bent you are likely to get a fold in the stock called a "cold shut". If that happens it's very hard to get rid of, so the time spent keeping the piece straight is well spent. In light stock like this 1/2" round, light blows not only will upset faster, but I think the stock doesn't bend as much.

"Get another heat, Jean, and go again. Don't get discouraged if your piece doesn't upset as quickly as mine did. Remember, I've done this exercise many, many times. Like most things you improve with practice. Remember, to keep the hot section short (only about 3/4" after cooling) and to start your upset in the middle, between the punch marks.

"Good! let's look at your punch marks now. They have closed up to 1 3/8" so you still need another heat or two. Go again!

"O.K. Jean, that looks good. Now round up your upset with a few light hits to make it uniform throughout its length.

"Now, let's measure and see how much stock it took to make the upsets. Remember, the piece was 18" long to begin with. Now, it's only 16¾". While the punch marks closed only 1", the piece got shorter than that; that's because the upset section extends partly beyond the punch marks. We want another upset 6" from the one we just made, so how far away should we put the punch marks? The stock for the upset came equally from each end of the piece. The short end was 4" to the punch mark and now it's only about 3 3/8"; that stock went into the upset and the rest came from the other end. Since the stock came equally from each side of the upset, we need to provide half of the total stock to be upset, plus the 6" we want, so that when we're finished the two upsets will be 6" apart.

I know this is confusing, but we have to provide stock for the upset and the piece will shorten during the process. Half of the amount of the stock needed has to be provided on each side of the upset. So, if the piece shortens by 11/4", we need 5/8" of stock for one side of the upset plus the 6" distance between the upsets or 6 5/8" in total to the first new punch mark. O.K.? Now, we'll put in the punch marks. The first punch will be 6 5/8" from the first upset and the other 2" from that. Here we go now, into the fire, same as before. Cool, upset, reheat. Cool, upset reheat.

"Your turn, Jean. Hold everything! The heat is too far to one side of your marks. Cool it off.

Now hold your piece over the fire so the marks are about in the center of the fire. Lay another piece of steel to where the end of your piece comes, at the hand end on the forge. Now put your stock into the fire and align it to the other piece of steel, so the heat will come in the right place. Now cool and upset.

O.K. Fine. One more heat. There, your upset is done. Let's measure and see if we got what we wanted. Good, the upsets are within a 1/16" of 6" apart and that's pretty good. I'll save these pieces and we'll work on them some more later on.

"Well, that's enough for now. See you next time."

This article was reprinted courtesy of the author Bud Oggier, The Anvils Ring and ABANA. It was originally published in the Summer Issue of the Anvils Ring 1986, Volume 14 Issue 1. Reprinting of this article must be cleared through the ABANA publishing committee.

Early Peruvian Platinum

People think of older races as being primitive in their metalworking and related adventures. This is far from true. Yes, their equipment, smelting, and refining processes were primitive by our standards, but what you have to realize is that their processes were high tech for their time. What they lacked in technology, they made up for in imagination. Take for instance, platinum, the royalty of metals. (I'm sure those of you who can afford to have played with it.) Platinum melts in the steel range. The original inhabitants of Peru had not the capacity to melt this tough but precious metal, so what they would do is powder the metal and mix 20 % granulated gold with 80 % platinum dust. The gold (with a lower melting point) would bind the platinum together. By not mixing chemically, the two elements would yield a lump of metal that could he heated and hammered like gold. After final shaping, the piece would have been burnished with quartz (in stone and powder forms), then possibly with a burnishing bone and maybe leather for that final sheen. What you appear to have is a wonderful platinum piece that almost defies explanation when you think, without knowing, how did they cast that!

Paul Tuger, Printed in the **Tuyere**

Building Blocks

A "Back to Basics" project

By Dorothy Stiegier

The Anvil's Ring Winter 1986/87

At the 1986 ABANA conference, I served as a temporary liaison between the Board of Directors and the chapters. Through this experience I learned that many smiths feel they are still stuck on the basics. This brought to mind a conversation I once had with Tom Bredlow in which I told him of very similar concerns I was having about my own work. He explained to me that everything a blacksmith does, regardless of the level of proficiency, is some form of the basics. After giving it some thought I recognized the truth of his statement. I took a complex looking piece of work and mentally broke it down into the steps taken to produce it. I then realized that by putting a number of smaller basic forgings together into one project, I could make some pretty complicated looking things myself.

In response to those of you who are feeling "stuck", I am offering a series of simple projects in the next few issues of the Anvil's Ring which will ultimately be combined into one great-looking piece. Part of the fun will he in trying to guess what the end result will he! For some of you these projects will be "old hat". If the rest of you follow the step-by-step instructions in each issue, you should have no trouble producing the finished piece.

In the first project we will make 5-7 leaves. You will need the following materials: a piece of 12 ga sheet steel approximately 18" sq.; one thin tip chisel or an acetylene torch for cutting out the leaves; a rounding hammer; 2 pair pick-up tongs.

I think the best leaves are fashioned after those found in nature. I pick a few off the trees near my house, trace around them and cut out a pattern. In order to avoid a mass produced look, I trace around 5-7 different leaves instead of tracing the same leaf 5-7 times. The leaf I've used in these diagrams is an oak leaf simply because I've got a million of them where I live. Yours can be any kind maple, alder, ash. I would suggest a leaf about 6" long and 3" wide, to which you should add a long fat stem approximately 1/2" wide and 3" long. After transferring the pattern to the 18 ga plate, either cut the leaf out with the torch and grind and file the edges or use the cold chisel to cut around the shape, then file. File until the edges of the leaves are no longer sharp to the touch.

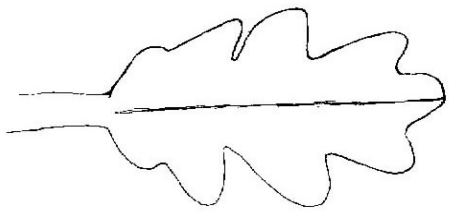


Fig. 1

Notice how the oak leaf in Fig. 1 lends itself to being folded lengthwise? Choose two of your leaves that look good as a pair and using a silver pencil, draw an imaginary center vein on each. After opening your vise approximately 1/2", grip the base of one leaf (with pick-up tongs) just in front of the stem and heat to a dull red. Next put the leaf into your vise lengthwise so that the vein" is just a hair higher than the vise jaws and the stem protrudes from a point just at the base (Fig. 2).

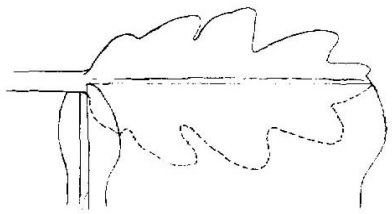


Fig. 2

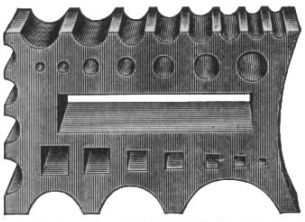
Now strike from behind the leaf and towards its edge (rather than down at vise level) and fold towards yourself. It's fine if your vise is longer than your leaf, but if it is shorter you will need to move the leaf to the left (or towards the stem) and continue to bend, making sure it is at the same angle. Fold over to a 90° angle, or more if you have a vise with a sloped jaw. As the angle gets sharper raise the leaf so that the jaw holds the lower third it should turn down nicely. If at some point the vein gets off-center, reheat the midline area, put the piece back into the vise and continue to work it.

Next place the partially folded leaf into the fire with the midline down. When the center line is hot, grip just ahead of the stem (to one side of the line) and hold one side of the leaf flat on the anvil. Fold the opposite side towards you and close it up, leaving the width of the tong jaw as the front opening. Now you have a rounded fold at the back (down the middle) of the leaf and a place in the front to hang onto with the tongs.

Put the leaf back into the fire (folded edge down) , heat to orange, then grasp the same area of the leaf but one thickness only. Position the folded edge on the far side of the anvil face and deliver sharp quick blows at an angle to the anvil, catching the center line of the leaf and closing it along the length of the edge. Flip the leaf over over and strike the other side too. This will insure that the line is centered when it is opened up. Don't close the last 1/4" (nearest the stem) -- when the leaf is opened it leaves a nice bulbous area similar to the one found near the stem of a real leaf. At this point reheat if necessary and use two pair of tongs to pry open the fold. If it is completely closed in front, use a thin hot chisel to slip between the edges and pry open. It is very important to open the work evenly from both sides.

Reheat, hold by the base and with the vein down on the anvil, begin to open the leaf with light hammer blows (the area you are working on will become the back of the leaf). Use light flat overlapping blows to carefully flatten, then flip over and work from the front (this side will have raised veins). Once you get the hang of this, the vein will lie flat without any folded—under areas; but until then allow yourself to make a few mistakes as you learn.

Now heat the stem of the leaf to orange and hold it to the face of the anvil on its edge. Hammer straight down carefully and lightly. I find that if I don't get in a hurry I can get the stem to fold into a round tube.

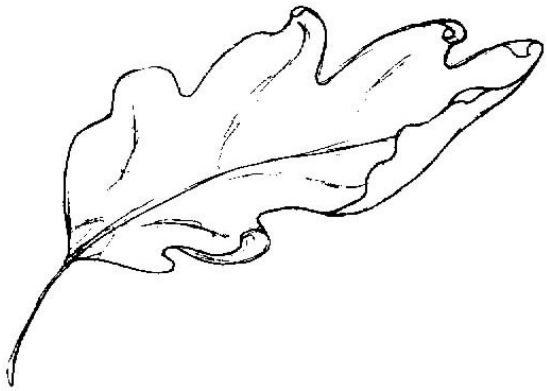


Reheat as needed and roll it under your hammer with light flat overlapping blows.

At this point look at the original leaf you gathered from outside and note where the auxiliary veins diverge from the main vein (maple leaves need three main veins but other leaves generally only need one). This time heat to red-orange and working on the front of the leaf (the side with raised veins) use a thin chisel blade and hammer to score in the smaller veins. The largest of the auxiliary veins need to he carefully done but the others are optional and can even end up looking bad if not done precisely.

Before going to the next step, it's a good idea to use a power brush to remove all scale. In general, I always brush with a wire hand brush before each reheating to keep the work clean. After heating your piece, move to the horn and gently curve the end of each tip up, down or over slightly. You should now have a flat leaf with curved edges - some up some down (Fig. 3).

Now for the last step. Hold the leaf (veins up) perpendicular to the anvil step and gently tap the center as you move the leaf back and forth. Flip it over and do the same with the last 1/3 of the length (towards the tip). This gives a nice rolling leaf Fig. 3). Curl the stem only at the tip (we will curl it more later as we incorporate it into the total piece). Wire brush and lay the leaf flat on the anvil. The base needs to touch the anvil in two spots. These spots will he used as



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Measured Square:

Use this chart to verify if a layout or project is square. If the frame is 42" x 60", measure from the corner up the shorter side and mark it at 3'. Measure diagonally from the tip of the 60" side to the 3' mark on the shorter side. If the frame is square, the diagonal measurement will be 5' 9 31/32". You can also use this onsite to verify that a wall is square with the floor.

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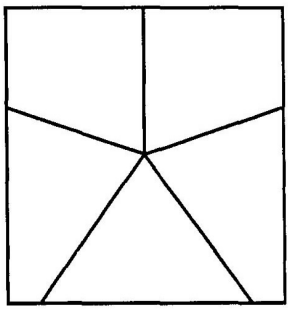
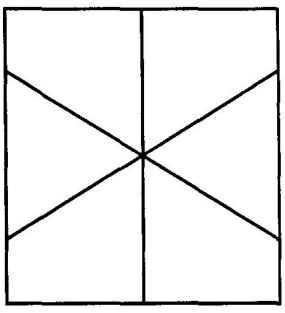
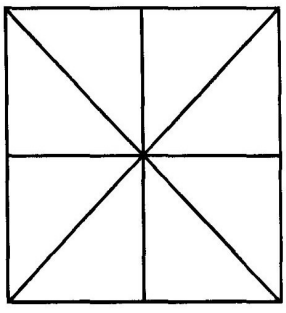
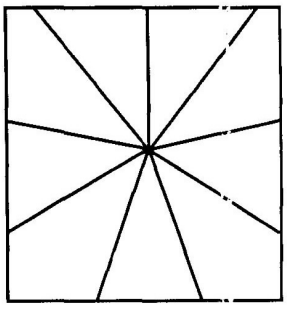
	1'	2'	3'	4'	5'	6'	7'
1'	1.4142 1' 5 1/32"	2.2361 2' 2 53/64"	3.1623 3' 1 61/64"	4.1231 4' 1 15/32"	5.079 5' 1 3/16"	6.0828 6' 1"	7.0711 7' 0 27/32"
2'	2.2361 2' 2 53/64"	2.8284 2' 9 13/16"	3.6056 3' 7 17/64"	4.4721 4' 5 21/32"	5.3852 5'4 5/8"	6.3246 6' 3 57/64"	7.2801 7'3 23/64"
3'	3.1623 3' 1 61/64"	3.6056 3' 7 17/64"	4.2425 4' 2 29/32	5 5'	5.8310 5' 9 31/32"	6.7082 6" 8 1/2"	7.6158 7' 7 25/64"
4'	4.1231 4' 1 15/32"	4.4721 4' 5 21/32"	5 5'	5.6569 5' 7 7/8"	6.403 6' 4 27/32"	7.211 7' 2 17/32"	8.0523 8' 0 3/4"
5'	5.079 5' 1 3/16"	5.3852 5' 4 5/8"	5.8310 5' 9 31/32"	6.403 6' 4 27/32"	7.0711 7' 0 27/32"	7.8102 7' 9 23/32"	8.6023 8' 7 15/64"
6'	6.0828 6' 1"	6.3246 6' 3 57/64"	6.7082 6' 8 1/2"	7.211 7' 2 17/32"	7.8102 7' 9 23/32"	8.4853 8' 5 53/64"	9.2195 9' 2 5/8"
7'	7.0711 7' 0 27/32"	7.2801 7' 3 23/64"	7.6158 7' 7 25/64"	8.0623 8' 0 3/4"	8.6023 8' 7 15/64"	9.2195 9' 2 5/8"	9.8995 9'10 51/64"
8'	8.0623 8' 0 3/4"	8.2462 8' 2 61/64"	8.544 8' 2 61/64"	8.9443 8'11 21/64"	9.4340 9' 5 13/64"	10 10'	10.6301 10' 7 9/16"
9'	9.0554 9' 0 21/32"	9.2195 9' 2 5/8"	9.4868 9' 5 2732"	9.8489 9' 10 3/16"	10.2956 10' 3 35/64"	10.8167 10' 9 51/64"	11.4018 11' 4 13/16"

Layout guides

These four boxes contain evenly spaced center lines for laying out multi-petal or piece effects. Draw one-half petal. Trace it, flip it under tracing paper and trace it again. You now have a symmetrical template of a petal or leaf Strike a center line down the petal. Use a layout box, taped to the tracing table as a guide. Tape a sheet of paper over it. Place and align the petal template over each layout line and trace. You will have a very even, multi-petaled pattern ready to glue onto metal and chisel.

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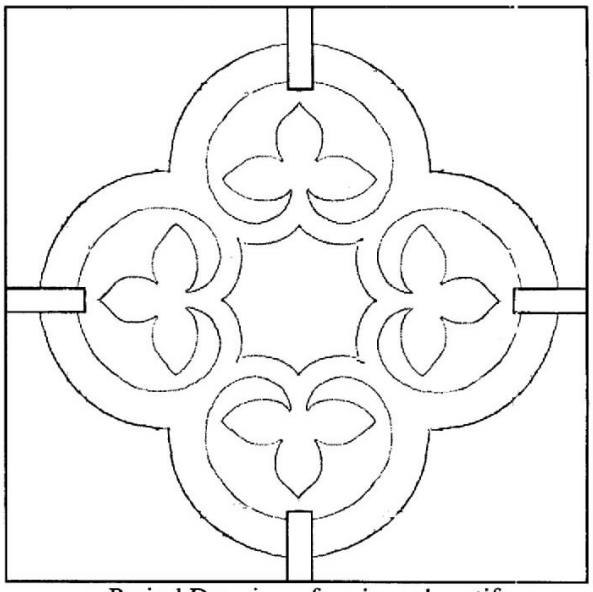
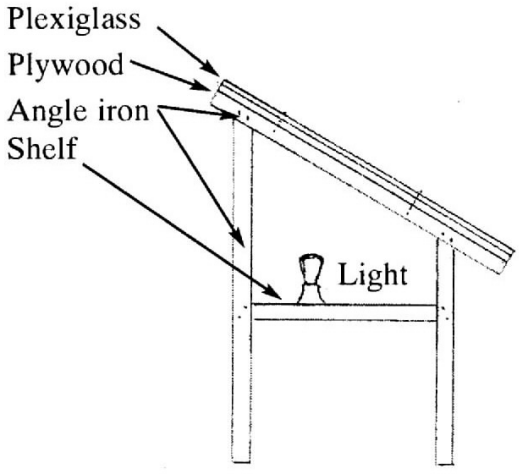
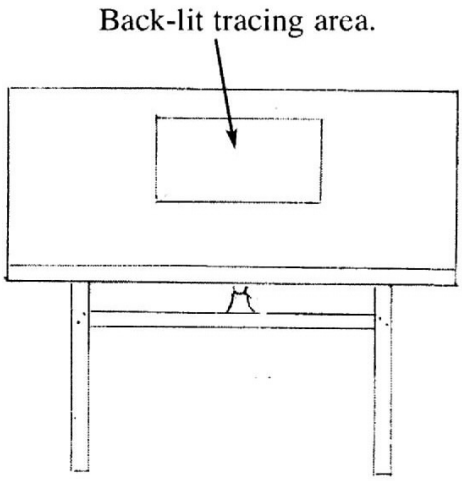
Drawing & Tracing Table

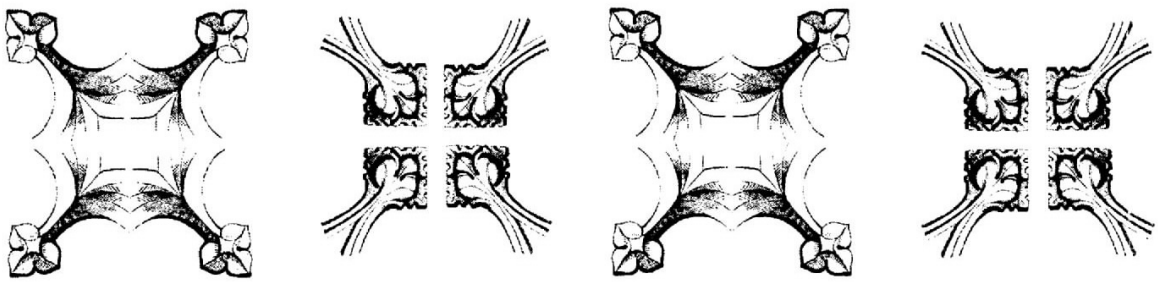
This basic drawing-tracing table is inexpensive and easy to build. The frame is " x 1" x 1/8" angle iron. The shelf and top are 1/2" plywood, the top piece of plywood has a 12" x 18" cutout as shown. The plywood is covered with a piece of 1/4" plexiglass which has been spray painted flat white, on the down-side, to diffuse the light which is cast by a fixture on the shelf below.



Period Drawing of a pierced motif.
Copy and resize as you wish.







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Join ABANA or Check out other area chapters!

Northeast Blacksmiths Association

Northeast Blacksmiths holds its meets twice a year at the Ashokan Field Campus in New York State.

The Ashokan campus is located in Olivebridge, N.Y., several miles west of Kingston, N.Y. The meets are held the first weekend in May and in the first weekend in October every year. The main demonstration is in the blacksmith shop and there is a "Hands On" workshop for beginners. A main demonstrator is brought in for each meet, food and bunk-house style lodging are provided as part of the cost of the weekend long meet.

Contact : Tim Neu
to register for hammer-ins
or subscribe to the newsletter;
Tim Neu, Ashokan Field Campus,
447 Beaverkill Rd.
Olivebridge, N.Y. 12461 [914]657-8333
For more information check out the web site; <http://nba.abana-chapter.com/>

Join The Pennsylvania Blacksmiths Association!

Name _____

Address _____

City, State, Zip code _____

Home / work Phone # **E-mail (optional)**

ABANA Member? O **Yes** O **No**
Can you host a PABA meeting? O **Yes** O **No**
Are you willing to demonstrate at a PABA meeting? O **Yes** O **No**

Suggestions for PABA demonstrations _____

What is your skill level?
O Beginner O Intermediate O Advanced O Professional

Send your completed application with $ 10 (one year dues) to;
Treasurer Gene Degenhardt
271 Stoney Lane
Lancaster, PA 17603

PABA Membership Application
Membership is from
Jan. 1 — Dec. 31

PENNSYLVANIA Artist BLACKSMITHS' ASSOCIATION

New Jersey
Blacksmiths Association
90 William Avenue
Staten Island, New York 10308
Attn: Larry Brown, Editor

How to Join or Renew your Membership in NJBA:

NJBA Dues are $15 per year. Please make out your check to:

"New Jersey Blacksmiths Association"

Please send your check to:

NJBA, 222 Laurel Place, Neptune NJ, 07753

Please include your check with the information below. You will receive the most recent newsletter as an acknowledgement of your membership. Annual dues are due on June 1st. If you join in April through June, you will not owe renewal dues until June of the following year. If you join at another time of year, you will owe dues the following June.
(The following information will be listed in a roster available to other members.)

Name _____ Home Phone _____
Address _____ Day Phone _____
City, State, Zip _____
_____
E- Mail Address _____
Comments _____
_____