



# THE HABA LETTER

The Newsletter of the Houston Area Blacksmith's Association Inc. (HABA)

HABA Web Site: [www.habairon.org](http://www.habairon.org)

May 2001 Edition

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## **BOARD OF DIRECTORS:**

**David W. Koenig – President**  
7418 Branch Point, Houston, TX 77095-2649  
281-855-2869  
[76021.3660@compuserve.com](mailto:76021.3660@compuserve.com)

**Larry Newbern – Vice President**  
4918 Foster School Road Needville, TX 77461  
979-793-4362  
[brazosforge@cs.com](mailto:brazosforge@cs.com)

**Larry Hoff – Treasurer**  
8026-Durklyn, Houston, TX 77070-3747  
281-890-8822

**Frank Walters – Secretary**  
13703 Larkway, Sugarland, TX 77478  
281-491-7328  
[oteroforge@wtez.net](mailto:oteroforge@wtez.net)

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## **June 16 HABA Meeting – 9 AM**



Paper Sculpture

**“TOUCHMARKS” BY FRANK  
WALTERS  
MAKE A PUNCH TO IDENTIFY YOUR**

# **The HABA Letter May –2001 Edition**

## **WORK AT TUDOR FORGE.**

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### **JUNE HABA MEETING –June 16, 2001 – 9 AM.**

The June HABA meeting will take place at Tudor Forge. Frank Walters will spend an hour or two showing us two different ways to make positive and negative touchmarks. Tudor Forge has plenty of coil spring steel to use for this project if you are interested in using it. If you would like to use another kind of steel, please bring it.

#### **What to Bring**

Here are a few things to bring with you:

- ☞☞ Safety glasses with side shields.
- ☞☞ Your favorite hammer.
- ☞☞ A vise and forge if you have them.
- ☞☞ Center punch.
- ☞☞ Files – big ones and little ones i.e. Swiss files.
- ☞☞ A sack lunch unless you plan to eat out.
- ☞☞ Something for the Show-N-Tell table.

#### **Directions to Tudor Forge**

Take 249 NW from Houston. Travel through the towns of Tomball, Decker Prairie and Pinehurst. At Pinehurst 249 changes to 1774. Stay on 1774. About three miles ahead on 1774 look for a Texaco station on the west side of the road. One half mile past the Texaco station, turn left or west on Tudor Way. You will find the forge about a mile down the road.

From the intersection of 1488 and 1774 in Magnolia, go south on 1774 about 4 miles. Look for Tudor Way just after the Country Jamboree building. If you see the Texaco station you went too far.

### **MAY HABA MEETING SUMMARY**

Tim Bailey, Instructor, Art Metals, at North Harris College hosted the May HABA meeting at the College. The meeting was all about sculpture. This meeting was one of our smaller ones with a total of twelve people. The



college welcomed us with open arms. We met first in a classroom Tim uses. After lunch we moved to one of the welding labs where Tim demonstrated a motorized hand held oxy-acetylene torch. The day finished with a tour of the campus grounds to

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see a sculpture exhibit that was installed several months before. The meeting came to an end about 5:30.

Tim got things started with a CD show of the work included in the Flagstaff 2000 ABANA Conference. The quality and the variety of work in the Conference Gallery were most impressive. I am sure everyone came away more excited about trying something new.

Deborah Ellington, Associate Dean, Visual, Applied & Performing Arts joined us for lunch that the college graciously provided. We had a fine visit and received a couple of invitations. One was an invitation to use the college facilities for more HABA meetings. The second was an invitation to use a campus gallery for a HABA Iron Show. As most of you know, putting together a HABA Iron Show was talked about almost from day one of HABA.

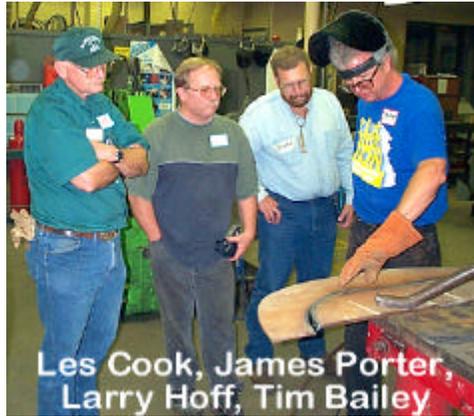
Well, opportunity is knocking. It is now up to us to decide how to take advantage of this opportunity. I can see a show that includes some gates, railing samples, sculpture, tools and a broad range of small utilitarian objects. The show could also be juried.

Please think about what you could contribute to such a show and we will talk about this opportunity more at the June meeting.

After lunch we got a little more hands-on. Everyone was asked to bring a piece of metal they hammered-on but ended up on the scrap pile. There were

exciting pieces to consider. Two projects got started and one got finished. The other went back to the scrap pile.

The finished piece was taken to IronFest. It got named by a girl visiting the Public Demonstration Area, "Doomed Acupuncture Claw" and was sold at the IronFest Auction for about \$40. HABA succeeded in making a piece of sculpture and turning it into dollars!



Les Cook, James Porter, Larry Hoff, Tim Bailey

The second hands-on project was to create a paper sculpture. Tim found some heavy stock paper and it soon got changed into forms that could be increased in size

and replicated in plate steel.

The next stop was the welding lab where Tim demonstrated his motorized hand-held cutting torch. The torch cuts as cleanly as any plasma cutter. Because it was motorized clean cuts were possible along any straight, curved or zigzag lines. If we had more time and a large heat source cutting and bending one of the paper forms would have been a great project.



Photo by James Porter

Charles Sherborne with Elk

By this time the group was down to about six people. The final activity was to make a tour of the sculptural pieces that were installed around the beautiful North Harris County campus. One of Tim's jobs this year was to curate the show. He did a great job too.

We all managed to leave Tim to lock up the facilities about 5:30.

Very Special Thanks go to Tim Bailey for his informative program about sculpture and introducing us to the facilities of North Harris College. With

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a little luck it may not be too long before each of us will have the opportunity to take blacksmithing classes there. North Harris College is reviewing the possibility of beginning a program in Metal Arts similar to that offered at Austin Community College.

A Very Special Thanks also goes to Deborah Ellington, Associate Dean, Visual, Applied & Performing Arts, for making HABA feel so much a home at North Harris College and offering space for a HABA Iron Show.

## HIGH-RELIEF CHASING

By Dave Koenig  
Part 3 of 4

### Summary of Subjects

**Part 1 – High-Relief Chasing, Chasing vs. Repoussé and Tools**

**Part 2 – Consumables, Chasing Metals, Chasing Theory**

**Part 3 – The Chasing Process**

**Part 4 – More Than Chasing, Visitors.**

### THE CHASING PROCESS

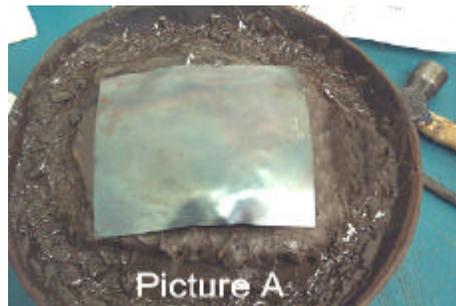
With a pot full of pitch, a hand full of chasing tools, a piece of 18-gauge sheet forging bronze, a plumber's torch and a few other tools, here is how the chasing process begins.

The first step is to pick a design to chase. The easiest way to begin is to look in a magazine for a picture of an animal, flower or some other form that is appealing. Be sure to choose something that will fit the pitch pot.

Cut out or trace the form and glue it on the bronze sheet. Be sure to leave about three inches of bronze sheet all around the edge of the pattern. Take a center punch and trace the outline of the form with a series of dots. Trace just enough of the interior details of the form to be able to connect the dots.

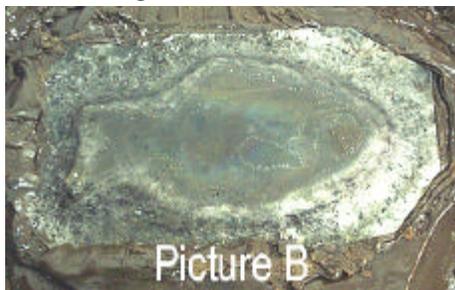
Remove the paper form the metal to reveal the dotted pattern. Keep the

picture and refer to it as the project progresses.



Take the sheet and a hammer to the stump or anvil and begin to bend the edges of the sheet down. Start bending about an inch and a half from the pattern. (Picture A)

When all of the edges are generally pointing down, turn the metal over with the edges pointing up and go the pitch pot. Chisel out small pieces of pitch and cover the bottom of the upturned pattern. Light a torch and slowly melt the pieces in the pattern. Avoid making smoke as much as possible. The smoke means the oil is being burned out of the pitch. When the oil is gone the pitch is in bad shape.



At the same time move the torch flame over the pitch in the pot to soften it. Move the torch between the pitch in the pattern and in the pot. When both are very soft, take the pliers and flip the pattern

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pointed side down onto the pitch pot. With the head of the hammer or a stick or the nose of the pliers, gently push the pattern into the pitch in the pot. Push only until the corners are covered and the pattern with the border is flat on the top of the pitch.

Go grab a cup of coffee or make a quick call while the pitch sets up. It will not take long to set.

Then take a one pound ball peen hammer and strike the sheet about an inch and a half away from the pattern forcing the metal downward. Go around a few times until there is an even trench an inch or so from the pattern. (Picture B)

By now it will be time to take the metal off the pitch. Light a torch, warm the metal and lift the metal slowly off the pitch with the pliers. Lean the metal up against something that will not burn and burn the film of pitch off of the metal. Do this step outside or in a well-ventilated area. All that will remain is a layer of clay.

Brush the clay off with a wire brush and heat the metal to a dull red color with a plumber's torch. Since the metal in this example is bronze, have a container of water handy to quench the bronze when it reaches the dull red color. The water quench is what will anneal the bronze.

Take the bronze out the water and go to the stump or anvil. Straighten the background a little so it is parallel with the top surface of the pattern. The pattern might be raised above the border about a quarter of an inch or so.



Turn the metal upside down and fill it with small pieces of pitch like before. Carefully heat it and put it back into the pitch pot. Take the hammer peen and begin making a trench about an inch and a half out from the edge of the pattern. Work towards the wall of the pattern raising it a little higher.

The process of hammering, cleaning and resetting the metal might be repeated three or four times. It becomes obvious when the

hammer is not the right tool for the job. When that time arrives, start using the chasing tools.

Choose a blunt rectangular tool for example and keep moving the edge deeper and closer to the pattern. The object is to get the wall high at the corners first and then on the

sides. If the corners are not done first they will be bent down while working on the adjacent walls. (Picture C) Once the walls are up, detail needs to be added to the interior of the pattern. Some of the same and some new chasing tools are used to create the desired detail.



When the form chosen looks good, it is time to think about texturing parts of the form and the background. (Picture D)

The chasing process is moving metal slowly and methodically with hammers and chasing tools to the desired location within the pattern. Sometimes it is better to push the metal out from the back to raise an area. The repoussé area is then usually chased to provide still more detail. (Pictures E and F)

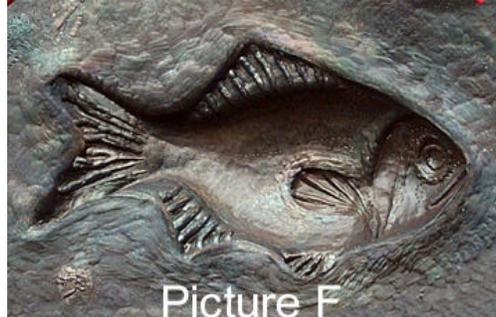


A good rule of thumb for chasing is 'slower is better!' 'Speed chasing' or 'chasing fast' are oxymora.

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(For those who may be thinking about demonstrating chasing for the public, beware! Chasing is not really a spectator sport! To almost any spectator, watching someone chase is very much akin to watching grass growing or iron rust.)

By day two of the class, the first time student gets a feel for the metal and the chasing tools. The pattern is rising above the surface. The walls are taking shape and yes there are some cracks in the piece.



By the end of day three most of the class is finishing their first piece, searching for another pattern and deciding to try another piece of bronze or to switch to steel.

By day five most students have two almost finished pieces. It is also time to clean the studio, pack the tools and take the weeks work to a temporary gallery. It is quite a sight to see what was produced in each class.

End of Part 3.

## IronFest<sup>®</sup> Blacksmithing Regional Conference

IronFest was a grand success! About 175 blacksmiths from around the country registered to see the featured demonstrators, Frank Turley, Mike Boone, Jeff Mohr and Wendel Broussard. Just over \$6,000 was raised at the IronFest Auction. There were 65 tailgaters signed up including vendors like Norm Larson Books, Kayne and Sons Tools, Jere Kirkpatrick Tools and Old World Anvils. Eighteen different demonstrators participated in the Public Demonstration Area that HABA sponsored.



Very Special Thanks go to the following HABA members for providing tools for the Public Demonstration Area:

- ✂✂ Dave Cruey for providing his anvil and vise.
- ✂✂ Frank Walters for providing his bellows and forge, slake tub and tables.
- ✂✂ Dave Koenig for providing his wooden forge, blower and shop tools.

the public.

Very Special Thanks go to HABA Members Frances Trahan and Tim Cowden who looked after the needs of the demonstrators and answered questions for

And Very Special Thank go to all of the public demonstrators who made the Public Demonstration Area an important and unique part of IronFest for the public and all of the blacksmiths who came by to watch.

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Here are the demonstrators' names in order of appearance:

- ☞☞ Dave Koenig – Houston, TX
- ☞☞ Richard Rumpf – Nogal, NM
- ☞☞ Charles Stolte - Taylor, TX
- ☞☞ Tim Bailey – Houston, TX
- ☞☞ Ed Cotton - Huntington, TX
- ☞☞ Mike George - Alva, OK
- ☞☞ Jerome Le Grand – Texarkana, TX
- ☞☞ Bill Bastas – Mc Dade, TX



- ☞☞ Rob Kirby, LaFayette, LA
- ☞☞ Jerry Baker, LaFayette, LA
- ☞☞ John Hawkins – San Antonio, TX
- ☞☞ Chuck Robinson – Picayune, MS
- ☞☞ Buddy Leonard - Covington, LA
- ☞☞ Doug Hendrickson –

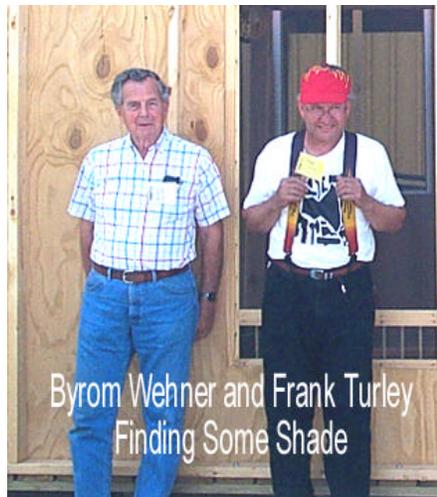
- Lesterville, MO
- ☞☞ Ruth Carter – Austin, TX
- ☞☞ John Crouchet – Marble Falls, TX
- ☞☞ Larry Crawford – Marble Falls, TX
- ☞☞ Tom Leining – Wimberley, TX

Without all of your efforts there would not have been a Public Demonstration Area.

## IMPRESSIONS OF IRONFEST

E-mail by Scott Little

... Personally, I was most intrigued by Frank Turley. He is an enigmatic fellow...totally down-to-earth and simple-minded about his approach to things while at the same time extremely literate, especially about metallurgy. The forge weld he performed Sunday morning went so smoothly and perfectly...at a heat FAR below what I've been trying...that I could hardly believe my eyes. Speaking of forge management, I took a short turn at the coal forge that Mike Boone was using (and Rick Dowdy slaved over constantly). I never had so much trouble with a forge in my short blacksmithing career! I was not surprised to see Larry Crawford reject it completely Sunday morning and switch over to a different forge.



If any of you are considering building a coal forge, let me encourage you NOT to go with an electric blower. To me a manual blower is the ideal. For one thing, the blast automatically cuts off when you turn to work at the anvil. The result is a great savings in coal consumption and a generally much smaller fire (very important this time of year). For another, the slow cranking motion seems to be therapeutic for an arm that's tired of hammering.

Wendell Broussard's repoussé work was just fantastic. I watched in amazement as he plinked away nearly endlessly forming beautiful flowers and leaves out of sheet steel. He

had a really nice collection of shaped stake tools on which to fashion his work...and he had a very nice workbench design that incorporated a leg vise into the structure.

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Mike Boone's work was very interesting to me. His approach reminded me considerably of George Dixon's, very traditional with little or no resort to modern methods like arc welding. The grillwork piece that he made was adorned with 4 leaves made by Wendell Broussard and it brought in \$1000 at the auction Saturday night!!!



I didn't watch much of what Jeff Mohr was doing, except to observe with admiration his versatility as he sat down and stitched the straw onto a broom handle he forged. Perhaps someone else could give an account of his work.

The Public Demonstration Area was also a great benefit to me. Bill Bastas showed an excellent way to make a twisted basket (completing it in FAR less time than did

George Dixon) and Larry Crawford demonstrated a really nice-looking strap hinge, employing a cool 1-man top-bottom fullering tool that I never saw before.

I also availed myself of the tailgate sales area and picked up some interesting hammers, punches, a big V & B bottom fuller (\$20), a few books, and 400 lbs. of Virginia coal for \$15/cwt!

I met some really interesting characters, too. Perhaps the most memorable was Jerry Baker, a farrier from LA with a dry wit and very respectable blacksmithing skills.

My only regret was not being able to be in 5 places (the 4 demonstrator tents and the Public Demonstration Area) at the same time.....

## GAS FORGE PRECAUTIONS

One of Two E-mails by Bill Bastas

In my experience using ceramic refractories, I am aware of some precautions that should be exercised when building forges and using them. From my understanding, Kaowool ceramic refractory as well as the pressed board versions such as Insboard (these are proprietary names for A.P. Green products) are produced by superheating kaolin clay to over 3,000 degrees Fahrenheit and spinning this mud as if it were cotton candy.

The resulting fibers are long strands, enmeshed to trap air to aid in the insulation. They are available in different densities to provide higher heat insulation. The material not only withstands 1800-3000 degree f. temperatures; it also reflects the heat almost entirely, so a chamber constructed with these products heats quickly.

Traditional refractories based on hard firebrick must absorb and be saturated with heat before the chamber efficiently conducts the heat. Heating that takes place below 2300 degrees does not affect the fiber of Kaowool. However, above 2300 degrees, the Kaowool undergoes crystobolization that fractures the fiber. As long as the fiber remains undisturbed, the shortened fibers do not become airborne. Disturbing can be defined as displacing the blanket or board material by trying to fit too big a scroll into the chamber, then scraping or pulling out the refractory while removing it.

I used to use Kaowool in the forges at school because it is very convenient and efficient, but I did not want the liability nor did I want to be subjected to the daily cotton balls coming out of the forge with the resultant shortened fibers. I use an air-curtain, a

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blower placed under the tool-rest that blows straight up and thus changes the direction of the flame and heat to straight up. This makes it more comfortable to work at the forge, particularly a forced air one. The blower also allows more heats before the bar becomes too uncomfortable to handle. However, the air curtain exacerbates the issue of shortened fibers, awkward stock and cotton ball removal.

I now only use castable on abrasion or wearing surfaces, and if I do use a blanket type of ceramic it is on the upper walls and ceiling, out of the way of disturbance.

I am concerned about the air quality for students and myself and have to be the devil's advocate when it comes to potential air quality issues. As far as ventilation, it is a given that you work with a flue to exhaust the by-products of complete and incomplete combustion such as carbon dioxide, carbon monoxide, volatilized hydrocarbons, paints, alloys such as chromium (feeling a bit agitated lately?) and any other muck that stuck to the bar.

Just thought I would comment.

William J. Bastas, Austin Community College.

### **Second E-Mail by Bill Bastas**

A couple other things I thought about. The forge releases infrared energy and ultraviolet. The infrared is damaging to skin at close proximity and the ultraviolet is damaging further away. I suggested to some of my students who have sensitive skin to use sun block to avoid sunburn from

the light. Proper ventilation will evacuate CO<sub>2</sub> and CO as well as heat.

We had close calls with overheating, especially in the summer. Drink extra water as you are going to sweat more while working at the forge.

I like to run a slightly reducing heat to minimize scaling. Too reducing actually causes more scaling by cracking the hydrocarbons to produce oxygen, as well as difficulty in getting the proper heat. Proper heat cannot be achieved by running too oxidizing either. You can see when you reach neutral when the chamber is the brightest without too much flame exiting. The slightly reducing is noted when a small amount of flame is coming out of the opening.

When using propane, the chamber is up to ultimate heat when you can see a green flame exiting the chamber. The forge is a positive pressure oven that will cook when the doors are closed. Tailor the openings with sliding doors or firebricks to nearly close in the forge, although the forge does need an opening to exhaust. If the pressure within the chamber exceeds the pressure of the incoming gas mixture, burn-back will result. Resolve this by opening the chamber a little or increase the pressure at the regulator.

If propane odor is detected, check all fittings with a commercially prepared soap solution. The pH in household soap is enough to form a patina on the brass fittings.

The malodor that is used in propane is ethyl mercaptan. It is similar to the odor of rotting flesh. Thus the flies are attracted to propane.  
See ya, Bill.

### **WANTED**

Dear Dave, I am a maker and collector of railroad spike knives. I was wondering. Are any of the 20 or so knives your group completed last January for sale? I amassed around 43 RR spike

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knives from different smiths across the country. Any info (pictures, prices, availability, etc) would be appreciated. Thanks, Carl

<http://www.geocities.com/rdanvl>

## **FOR SALE**

### **FORGE TOOLS**

1. Big Shear
2. 150 lb. Trenton Anvil
3. 100 lb. Fisher Anvil

**Contact Byrom Wehner – 936-931-9254**

### **CUSTOM-BUILT AIR HAMMERS**

1. 6# table top model \$1300
2. 20# table top model \$1900

3. 20# floor model \$2200

4. 40# floor model \$2600

Some modifications to the basic hammers can be made to your specifications.

Also custom metal spinning in copper, brass, pewter, and steel.

**Contact Maurice L. Ellis**, Route 1, Box 1442, Belgrade, MO 63622-9709. Phone: 573-766-5346, E-mail: [mbellis@misn.com](mailto:mbellis@misn.com).

## **JANUARY 2002 DEMO**

TABA has Robb Gunter lined up as a demonstrator January 26 & 27, 2002. Mark your calendars. Robb is a really great demonstrator. More details are coming as they become available.

### **THE FINE PRINT**

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Dave Koenig  
7418 Branch Point  
Houston, TX 77095

## **TO MAKE LIFE SIMPLER**

### **Know How To Put Out A Clothing Fire**

- ?? Do not run to avoid fanning the flames.
- ?? Shout for help. If possible wrap yourself in a rug or blanket starting at the neck. Roll on the floor.
- ?? Try not to inhale the flames. Put hands on opposite shoulders and pull your arms up toward your face.
- ?? Douse yourself with water if possible and roll in the spilled water on the floor or ground.
- ?? To help another with a clothing fire shout for help, douse with water and roll the person on the floor or ground.