

March 2008

*The Florida*

# Clinker Breaker

Florida Artist Blacksmith Association - Established May 18, 1985

## *President's Corner*

*Rex Anderson*

I attended Eric Velleca's January meeting in West Palm Beach. The demonstrator, Toby Hickman, did a great job. Eric's shop is perfect for large projects and demonstrations.



Steve Bloom has offered to tell you about the January Board Meeting that was held at Eric's shop and by conference call. Well.....I guess I had better tell you since Steve did not attend the meeting (*I was ready for that call - on Sunday...perils of retirement, I guess - Steve*).

I think it was a productive meeting. We covered a lot of ground. I do need to bone up on proper procedures. I could not have gotten through the meeting without Anne Reynold's help.

Skeeter Prather has resigned as Historian and the Awards and Honors Chairman. He served in these positions for five presidents. I figure that's about ten years. He has been a dedicated servant of FABA and deserves a rest and our gratitude.

To replace Skeeter, Patty Draper has been appointed Historian. John Butler was appointed Awards and Honors Chairman. I know that Patty and John will do an outstanding job.

John and Dot Butler have agreed to be FABA's representatives for the Madison Conference (SBA). They have been involved with the Conference for some time now. I believe they will be a great asset.

The Board had two vacancies, the North East Trustee and the South East Trustee. Tom Kennedy asked to resign from the North East position to become Program Chair. Due to unexpected reasons, Tom asked to resign as Program Chair. He will be sorely missed. With his experience at the 2007 Conference and his enthusiasm, I'm sure he would have done a great job.

Keith Andrews asked to be replaced as the South East Trustee.

The Board appointed Kathy Thomas as the North East Trustee and Ralph Nettles was appointed as the South East Trustee. We appreciate Kathy and Ralph's willingness to serve. I'm sure they will do a great job.

The Board appointed Mark Stone as Program Chair. I appreciate Mark's willingness to step up this late in the game. He will have to work hard to pull everything together. I expect he will be calling on members for help with various tasks. I know he can count on this crew.

Charles Pate (our Vice President) made a motion to increase the scholarship to \$1,000.00 from the previous \$700.00. With increased travel expenses, I'm sure this will help.

I want to remind everyone of Clyde and Vi Payton's Quarterly Conference on March 8th. It sounds like Clyde has lots of things going on. I hope to see you there.

## **The Soap Box - the Editor**

Things are moving on the teaching trailer/coal forge workshop. We have one member who wants to build his own and Tom Kennedy pushed us along the way with a generous donation of trailer parts, i.e.,



So far, no one has requested any classes- remember, if you don't ask, no one can respond. The subject of my meeting in May is also open, so if you want to see something, please let me know. My e-mail address is on the last page, so don't be shy!

If you have angle iron lying around or other building materials that you are tired of tripping over, think of FABA.

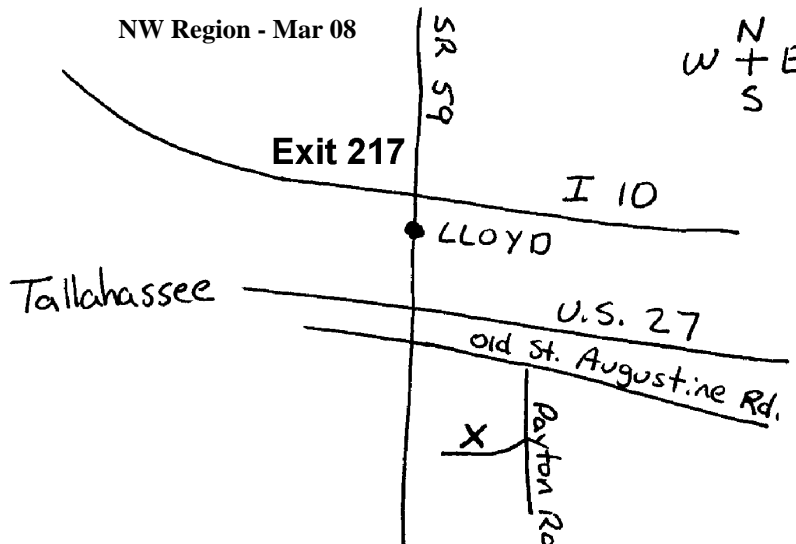
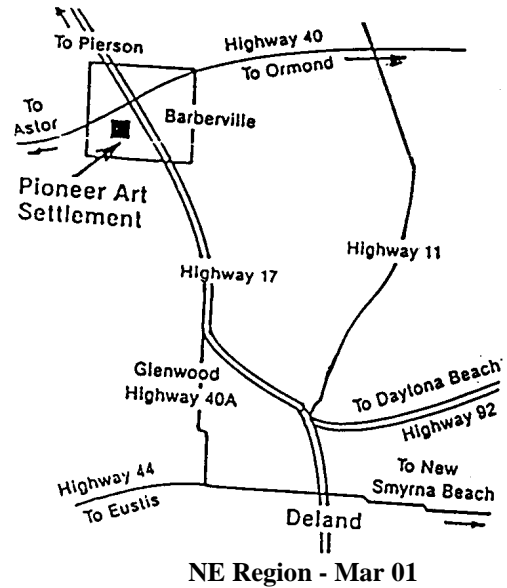
### Upcoming Events

The calendar includes events of interest to the blacksmithing community. The regions have no boundaries - everyone is welcome everywhere. Come to more than one if you can. We hold regular meetings in each region on the following Saturdays of each month: NE-1st, NW-2nd, SE-3rd, SW-4th except for quarterly Statewide meetings. The actual dates vary so check the schedule below. Our meetings are informal gatherings around the forge. Prospective members are always welcome. Come for all or any part of a meeting, bring your tools or just watch. Most meetings run from 9AM to 4PM and you'll need to bring lunch if not otherwise noted. If you have any questions about meetings, please contact the Regional Coordinators:

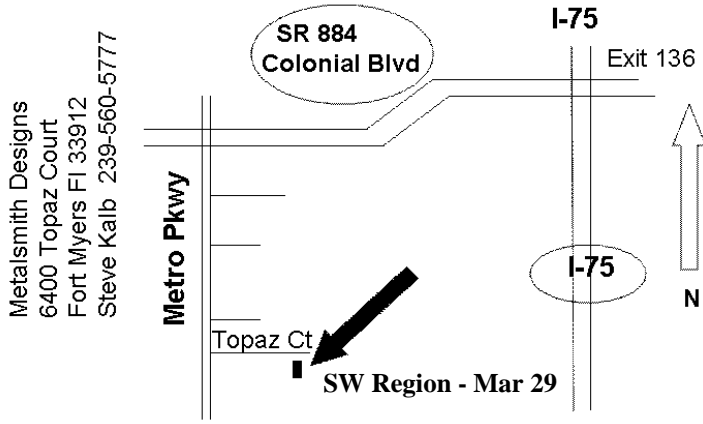
Northeast Region	Ken Knight	352-339-0629	Ironken@AOL.com
Northwest Region	Billy Christie	850-421-1386	chriswoodforge@embarqmail.com
Southeast Region	Ed Aaron	561-748-9824	edaaron9824@bellsouth.net
Southwest Region	Jerry Wolfe	941-355-5615	wolfeforge@juno.com

### March 2008

- NE 01 Barberville workshop
- NW 08 Clyde and Vi Payton; Monticello, FL (see NW report for details)
- SE 15 Boy Scout Camp - Tanah Keeta
- SW 29 (NOTE: It's the 5th SATURDAY) at Metalsmith Designs



From I-10, take **Exit 217** (SR59) south past Lloyd and Highway 27. Turn east on Old St. Augustine Rd, the next road south of Highway 27. Go about a mile east, then turn south on Payton Road (unpaved). Head south about a half mile, and watch for the anvil on the right.



Boy Scout Camp: from I-95 exit go east onto Indiantown Rd, go north (left) onto Island Way (1st traffic light). Stay on it until it ends at Country Club Dr. Go left—it ends at the entrance to Boy Scout Camp.

### SE Region - Mar 15

Metalsmith Designs  
6400 Topaz Court  
Fort Myers FL 33912  
Steve Kalb 239-560-5777

### Current Events

**SE** Mar 29 (NOTE: 5th SATURDAY) at Metalsmith Designs 6400 Topaz Court Fort Myers. Steve Kalb will be demonstrating Repousee' for steel using the stake method and some finishing techniques. Also a special treat with cooking techniques demo on how to cook bread and desserts in the fire on a dutch oven. I'm sure we will eat "real good" along with Steve's BBQ ribs. Please bring a dish to share and we will certainly have a great meeting. Also bring an Iron in the Hat item.

### Future Events

- NE** - Apr 5-Ronnie Fowler's - Salt Springs  
**NW** - Apr 12 – Panhandle Pioneer Settlement, Blountstown, FL with Jesse Frank making an iron bloom using a Kodai furnace (type used by Vikings, Romans, and Japanese)  
**SE** - Apr 19 - at Artswork with demonstrators Susan Dunsmoor, Phil Herrmance and Art Ballard plus a shop tour  
**NE** - May 03 - Steve Bloom's shop, near Archer FL  
**NW** -May 10 -Rex & Mary Ellen Anderson, Monticello  
**NW** - June 14 – Jim and Ann Hartman, Perry, FL  
**NW** - July 12 – Rick and Joyce Jay, Fountain, FL

### Report from the Northeast

*Ken Knight*

We had great weather on 2 February and a great turnout of 36. The day started on a somber note with Lester Hollenbeck delivering a eulogy for Mike and Melinda Sluss, whom we lost a year ago when a tornado ripped there home apart. Although we lost them in body they will be in our hearts and memories for ever.

Several new people were at the meeting and the food was fantastic. All had a great time, and the buck in the bucket was real different. If this was not the largest idem ever it has got to be up there in the top 2 or 3. One of our members left that day with a V bottom fiberglass boat with an outboard motor. All on a boat trailer and all for a one dollar ticket. The boat, motor and trailer were all donated by our very own infamous Marine Jim Corbet. Way to go Jim!!! Marine's must have some of the neatest stuff laying around the homestead. Thanks Jim and all the rest of you for bringing those fine collectable treasures.

Juan Holbrook will be demonstrating, come 1 March, with railroad spikes at Barberville. After his demonstration in the morning all the forges will be fired up and the afternoon will be a competition to make the same idem. I will bring one of my firkin buckets as a prize. So bring your tongs and hammers and be ready to show that mother in of yours that you really can make more than smoke and noise at the forge.

### NE - or- NW - Steve Bloom

There will be more pics of Juan's meeting next issue but for now...

Rex was demonstrating making a paper towel holder (or so I was told). As always the food was great, the Iron-in-the-Hat redistributed our junk..er..treasures and it was good seeing all of those who could attend.



*Juan drilling (with his "little*



*Hippie's bumper*

### Report from the Northwest

*Patty Draper; photos by Juan & Linda Holbrook*

FABA member Susan Dunsmoor, Art Director for Art's Work Unlimited in Miami, gave an outstanding demonstration to a crowd of 40 members and guests at the January meeting. Art's Work, started by Art Ballard who was later joined by Philip Heermance, is one of the premier architectural metals firms in the Southeast (see for yourself:\*) Sue has been with the firm for the last three years. Prior to that she worked with New Castle Iron (Bo Davis and Sharon Blondet).

Sue gave us an overview of her work with slides projected onto a sheet hung on the inside of our shop wall. It includes large and small gates, grilles, fountains, even speaker covers; these items are primarily intended for exterior use and are usually made of aluminum, although she sometimes uses copper. After seeing this excellent slide show, the group was



Susan showing the watchers the bird



and one more vertebrate order...

artwork with the structural requirements of the project. That is, how to connect the artistic elements so that the piece

primed. South Florida flora and fauna typically decorate Sue's work. She finds drawings and pictures of egrets, porpoises, jelly fish, mangroves and water lilies, for example, from books, internet sites, magazines or newspapers and sizes them to fit her final project. Then she makes a heavy paper template which she uses as a pattern for cutting the image from sheet metal. I was relieved to learn that to do this work, you don't need complicated computer programs or to be able to draw. To size the image you can use grid paper or a scanner.

One of the challenges Sue discussed is balancing the

doesn't fall apart or blow away. Normally, this wouldn't be a problem in a gate with regular vertical or horizontal bars, but many of the gates Sue helps create don't have any straight bars except in the outer frame.

The decorative images can be one sided sheet or two-sided (as in three dimensional). In the latter case, Sue cuts out mirror image pieces of her material (with some extra material for rounding the edges). She said that: the edges don't have to meet up exactly around the whole piece—just tack weld the best fitting areas, and then forge the remainder into shape, weld and grind off the overlaps.

The highlight of the demo for me was coloration. For a bronze finish, Sue uses Benjamin Moore Iron Clad Enamel paint and dry brushes on a "highlight" of bronze paint; for a steel finish she uses the same Iron Clad and dry brushes on an enamel aluminum paint. Those of us who work in steel could not see the difference between Sue's steel colored finish on aluminum vs. the "real thing"--steel. In addition, she showed us how to add beautiful colored patinas over the bronze or black base by dry brushing it with artist's acrylic, either regular or interference, or both. The interference paint contains mica particles and yields a three-dimensional luminescence. And, no, you don't need to add another layer of clear protective finish—according to Sue these finishes hold up just fine in outdoor applications in South Florida.

While Sue primarily works with aluminum because the material withstands South Florida's coastal environment, her methods for developing the artwork and coloration are totally adaptable to steel projects.

This meeting at Applecross Forge, Tallahassee, would not have been possible without the help of many including Sue Dunsmoor, who drove all the way from Ft. Lauderdale to be with us, Linda Holbrook, Esther Gurr and Dot Butler who engineered the lunch service, Lloyd Wheeler, who helped with the Iron in the Hat drawing (which brought in \$121) and all of the great FABa members who brought covered dishes and donations to the "Hat." Bill and I thank you all.

\*= <http://www.artworkunlimited.com/home.html>

### REGIONAL MEETING - Clyde Payton

The MARCH NORTHWEST REGIONAL MEETING will be held at Clyde and Vi Payton's shop on Saturday, MARCH 8, 2008. We are putting together a series of demonstrations and classes to fit several interests.

- THE NAIL HEADER & MAKING NAILS
- MAKING A REPOUSE'
- BAMBOO FROM TUBING
- THE COOKING TRIPOD – BUILD YOUR OWN
- BEGINNERS AND INTERMEDIATE CLASSES

In addition to blacksmithing there will also be several other

crafters demonstrating: FORGING IN MINATURE, A. POTTER, SILVER/COPPER SMITH, LEATHER WORKER, WOODCARVER AND A JEWELER have promised to make presentations. We are especially inviting you to bring SHOW & TELL items to display at this meeting - bring your own folding table for this use if you possibly can. TAILGATE SALE is always a big feature of this meeting; so load up your extra "stuff" and let's do some serious bartering! THE IRON-IN-THE-HAT raffle is likewise a popular feature, not to mention LUNCH served at 12:00 noon.

precutting each petal; positioning on a stem (double headed nail) and then forming each petal to look like a rose.



SOooo, ...here's what to bring – covered dish for lunch, donation to the raffle table, your show and tell items, folding table, a folding chair, tailgate sales merchandise, your spouse, all the kids, and Grandma too!

Look to the March issue for a map and directions to PAYTON FORGE, at 250 Payton Road, Monticello FL 32344. For further information or directions call 850/997-3627 or 850/210-5177.

Hope to see all of you on March 8th.



### Report from the Southeast

*Ed Aarons*

The Southeast Region's meeting was held at Eric Velleca's Shop which was also the Quarterly Statewide Meeting. There were 27 (actually more than that, but not all signed in) in attendance. Toby Hickman from Lost Coast Forge was our demonstrator. Toby showed us several techniques for forging on a power hammer, marking pieces so that they can be reproduced and much more than I can recall.

Eric does a good job of getting Demonstrators and providing food and camping on site. Very giving of him to give us 3 days of activities. Some of the food was provided by other members-Thanks everyone and thanks for the donations. Eric tries to make these meetings worthwhile for everyone that attends and for the good of FABA. Thanks, Eric, his family and Jordan.

I would like to have our group (SE) hold more workshops, with tool making and techniques for making other items as our goal. Get your ideas together for discussion and action at our future meetings..



### Report from the Southwest

*Jerry Wolfe*

Our January 26 meeting was attended by seven smiths desiring to see Trez Cole make roses. Trez did an excellent job with a Russian rose made from 3/4 inch square stock. The process involved cutting 5 grooves about 3/4 inch apart; forging each petal flat; bending the petals around the stem and shaping all to look like a rose. A multi-petal rose from sheet steel was also made by



## Florida Artist Blacksmith Association-Quarterly Board Meeting-October 12, 2007 Pioneer Arts Settlement-Barberville, Florida

**Board members in attendance:** Bill Robertson, Juan Holbrook, Jerry Wolfe, Steve Bloom, Ron Childers, Tom Kennedy, Jeff Mohr, Anne Reynolds

**Board members absent:** Keith Andrews, Clyde Payton

**Guests:** Patty Draper, Rex Anderson, Marjory K., Jim Labolito, Eric Velleca, Ed Aaron, Kathy Thomas, Lisa Anne Conner, Don Shedlock, Ray Reynolds, Esther Gurr, Kimmy Bloom, Greg Cumbaa, Rick Jay, Charles Pate

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- President Bill Robertson called meeting to order at 6:00 p.m.
  - Call was made for additional agenda items. None were added.
  - A motion was made by Jerry Wolfe and seconded by Ron Childers to accept the minutes from April 17, 2007's board meeting as presented without change. Motion passed unanimously.
  - **PRESIDENT'S REPORT:** Brief President's report, conference was moving along smoothly as this point.
  - **TREASURER'S REPORT:** Juan Holbrook presented the report for the quarter ending September 30, 2007. A brief discussion occurred concerning how the income and expenses are shown on the report. Profits from SBA were received after the September 30<sup>th</sup> quarter ending. A motion was made by Jerry Wolfe and seconded by Anne Reynolds to accept the Treasurer's Report as presented without change. Motion passed unanimously. The audit committee has been formed: Vi Payton, Skeeter Prather and Patty Draper. Records will be given to Patty Draper by the end of November, with the audit to take place after that.
  - **ELECTION RESULTS:** Anne Reynolds reported the 2008 election results as follows:

President	Rex Anderson	Vice President:	Charles Pate
Secretary:	Jim Labolito	Program Chair:	Tom Kennedy
NW Trustee:	Ron Childers	SW Trustee:	Jerry Wolfe
  - With the win for Tom Kennedy as Program Chair, there will be a vacancy for the NE Trustee position in January for the remainder of his term. Kathy Thomas has expressed an interest to serve.
  - **SBA REPORT:** Bill Robertson reported that after a successful conference in May, John Butler has transferred chair responsibility to the Alabama chapter. Rex Anderson becomes the automatic representative for FABA on the SBA board.
  - **CONFERENCE CHAIR REPORT:** Bill Robertson reported for Clyde Payton. Discussion centered on future conferences and ways to handle demonstrators to get the most bang for the buck, and using local regional talent. Ideas floated were paybacks for scholarships; and better promotion for main demonstrators. Board members could seek member input on demonstrator selection. Coal was purchased in case the Pioneer Settlement did not receive theirs. The high sulfur content coal was about seven bags and approximately 700 pounds. A motion was made by Anne Reynolds and seconded by Steve Bloom to split the remaining conference coal from the conference between each region. Motion passed unanimously. A board member asked what the expenses were so far for the conference. Patty Draper estimated that the expenses were about \$8350, with the main demonstrators receiving \$250 per day honorarium along with travel and board. Teachers receive \$75 per class and room and board and travel.
  - **NEW BUSINESS:** The subject of a donation to the J. C. Campbell Folk School for the new blacksmith shop was discussed, with no action taken. Several reimbursement requests were brought to the board. The first was reimbursing Charles Pate \$150 for transporting Juan Holbrook's power hammer to Blountstown. A motion was made by Jerry Wolfe and seconded by Steve Bloom to reimburse Charles \$150. The motion failed. A new motion was made by Tom Kennedy and seconded by Ron Childers to reimburse Charles Pate \$225 for the transportation. The motion passed by majority. The second reimbursement request was for giving Skeeter Prather travel reimbursement to SBA meetings as treasurer. A motion was made by Jerry Wolfe to reimburse Skeeter Prather for two round trips with dollar amount to be determined by Bill Robertson and Juan Holbrook based on mileage. The motion was seconded by Ron Childers and passed unanimously. The final reimbursement request was made by Bill Robertson for \$119 for lumber used to build the power hammer platform. A motion was made by Jerry Wolfe and seconded by Tom Kennedy, and passed unanimously.
  - ? A motion was made by Anne Reynolds and seconded by Steve Bloom to expend up to \$200 for the NW region's January, 2008 meeting to pay Susan Dunsmoor travel to Tallahassee from Ft. Lauderdale to demonstrate. NW iron in the hat funds already collected, would be used to offset that expense. Motion passed unanimously. The next quarterly meeting will be held on January 19<sup>th</sup>, 2008 at Velleca Metal Design in Loxahatchee. A request was made to increase the quarterly regional meeting budget to \$850. A motion was made by Tom Kennedy and seconded by Anne Reynolds and passed unanimously.
  - **NEXT MEETING:** Saturday, January 19<sup>th</sup>, 2008 at noon in Loxahatchee.
  - Meeting adjourned at 7:15 p.m.

Respectfully submitted, Anne Reynolds

**Florida Artist Blacksmith Association-Quarterly Board Meeting Minutes**

January 19, 2008-Loxahatchee, FL/Statewide Conference Call

Board members in attendance: Rex Anderson, Charles Pate, Jim Labolito, Juan Holbrook, Tom Kennedy, Ron Childers, Bill Robertson, Keith Andrews.

Board members absent: Jerry Wolfe, Steve Bloom.

Guests: Patty Draper, Eric Velleca, Kathy Thomas, Mark Stone, Anne Reynolds, Clyde Payton.

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1. President Rex Anderson called meeting to order 12:02 PM
  2. Call made for additional agenda items:
    - a) Amendment to bylaws concerning Ph.D. committee
    - b) Raise in scholarship fund
  3. Previous meetings minutes – October 12, 2007:

Motion to approve w/o change by: Ron Childers; Motion was seconded by: Charles Pate; Vote: Passed Unanimously
  4. President's Report:
    - a) Skeeter Prather resigns as Historian and Awards and Honors Committee Chairperson. Patty Draper Appointed as Historian – John Butler appointed as Awards and Honors Committee Chairperson. Both accepted their appointments.
    - b) John and Dot Butler agree to be the FABBA representatives to the Southern Bladesmith Association.
  5. Treasurer's Report:

Motion to approve w/o change by: Bill Robertson; Motion was seconded by: Keith Andrews; Vote: Passed Unanimously
  6. Secretary's Report: None made
  7. New Business:
    - a) Approval of 2008 Budget:

Discussion about T-Shirts and/or their elimination. No motions made. We will keep getting T-Shirts for the Annual conferences.

Motion to approve w/o change by: Bill Robertson; Motion was seconded by: Keith Andrews; Vote: Passed Unanimously
    - b) Ph.D. Award:

Discussion of Bylaws changes, in regards to what, and or, who constitutes the "Standing Committee," (Article IV, Section 1, Sub-section A, Paragraph 2). Said Paragraph to read as follows:  
2. The Standing Committee for the Ph.D. degree award shall consist of the chair of the Awards & Honors Committee, the President, and, unless they are unable to act or decline to participate on the committee, the last recipient of the Ph.D. award, and all past Presidents. A two-thirds affirmative vote of the members of the committee shall be required for the award of the Ph.D. degree to an individual.

Motion to approve as presented by: Bill Robertson; Motion was seconded by: Juan Holbrook; Vote: Passed Unanimously
    - c) Trustees:

Due to resignation of Tom Kennedy from the N.E. Trustee position and Keith Andrews for the S.E. Trustee position, the need to appoint two new Trustees was brought to the table. After a brief discussion, the out come was:

Motion to appoint Kathy Thomas to the N.E. Trustee position was made by: Tom Kennedy  
Motion was seconded by: Keith Andrews; Vote: Passed Unanimously  
Motion to appoint Ralph Nettles to the S.E. Trustee position was made by: Juan Holbrook  
Motion was seconded by: Ron Childers; Vote: Passed Unanimously
    - d) Walt Anderson Scholarship Fund:

Discussion to raise scholarship fund as tuition, housing and gas prices have increased.  
Motion to increase fund to \$1000.00 made by: Charles Pate; Motion was seconded by: Bill Robertson  
Vote: Passed Unanimously
    - e) Program Chair:

Due to the resignation of Tom Kennedy as Program Chair, Mark Stone was asked if he would accept the duties of the Program Chairperson. He accepted.

Motion was made to appoint Mark Stone as Program Chairperson by: Charles Pate; Motion was seconded by: Bill Robertson; Vote: Passed Unanimously

8. Old Business: None

9. Date and place of next quarterly meeting: Thursday, April 10, 2008 Conference Call @ 6 PM

10. Items left for future thought:

- a) Increase of membership
- b) Convening of Membership Committee
- c) Email notices
- d) Top quality demonstrators (Nationally or Internationally known)

11. Motion to adjourn made by: Tom Kennedy; Motion was seconded by: Jim Labolito; Vote: Passed Unanimously; President Adjourns meeting at 12:45 PM

**Proposed Budget 2008**

**FABA Treasurer's Report for 4<sup>th</sup> Quarter 2007**

Equity as of 9/30/2007	\$32,320.87
	DEBITS
Newsletter expenses (CB)	\$2,080.97
Bank Fees	6.00
Expenses to move power hammer	344.21
2007 Conference expenses	9,300.21
Office expenses	247.51
SBA expenses	520.00
	Total: \$12,498.90
Conference income	\$10,479.00
Membership dues	1,636.00
Income from raffles	
NW	40.00
NE	155.00
Merchandise sales	1,160.00
Coal sales	154.00
SBA share	1,000.00
Petty cash returned	150.00
Refund from Juan Holbrook for hotel night	191.85
	Total: \$14,965.85

Credits exceed debits by \$2,466.95 which when added to the balance as of 9/30/2007 (\$5,982.70) gives us a new balance for account 1010 of \$8,449.65 as of 12/31/2007.

The balance of the various bank accounts as of 12/31/2007 follows:

Acct. 1010 Bank of America – checking	\$8,449.65
Acct. 1012 Bank of America – savings	4,652.37
Acct. 1020 Wakulla Bank – credit card account	2,636.90
Acct. 1102 Vanguard Group – investment	21,553.29
	Total Liquid Assets: \$37,292.21
Liabilities:	0
Equity as of 12/31/2007	\$37,292.21

**INCOME**

Membership Registration	
Conference Registration	\$ 6,655
Conference Auction	6,170
Sales	5,479
Regional Raffles	1,150
Interest	1,451
SEC Share (Madison, GA)	600
Misc. Income	0
	500

**\$ 22,005**

**EXPENSES**

Conference	
Bank Charges (including cc)	\$ 11,000
Clinker Breaker Expenses	300
Office Exp (board travel, post)	6,800
Dept. of State (IRS, Licenses)	1,150
Merchandise for Resale	100
Regional Mtgs. (Honoraria)	500
Scholarships	1,600
Misc. (including insurance)	750
	700

**\$ 22,900**

Respectfully submitted, Juan A. Holbrook;FABA Treasurer



## Florida Artist Blacksmith Association- Walt Anderson Scholarship

This scholarship was established to honor the memory of Walt Anderson, one of our charter members. Its purpose is to further the craft of blacksmithing and is available to any FABAA member in good standing. The award is limited to the actual cost or \$1000 whichever is lesser. It may be used for materials, tuition, lodging and transportation (paid at the rate of 43.2 cents per mile or the actual cost of public transportation, which ever is lesser).

A letter of application or a detailed email may be submitted provided the applicant answers the following questions:

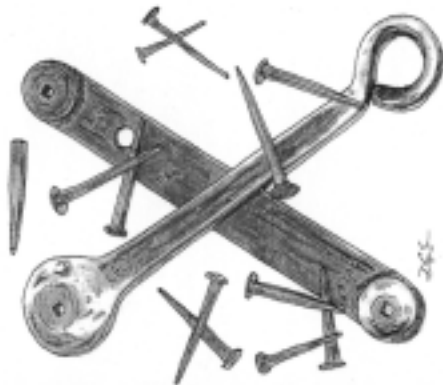
1. What is your name, address and phone number?
2. How much experience in blacksmithing do you have?
3. How will this instruction help you with your blacksmithing craft?
4. What is the name of school you wish to attend?
5. What is the name of the course and the name of the instructor teaching the class?
6. What costs will be incurred (tuition, materials, lodging, transportation, etc.)?

Note: By accepting the Walt Anderson Scholarship the applicant agrees to provide a demonstration of skills learned and write a report of the learning experience, including "how-to" for publication in the Clinker Breaker. This next item not required but strongly suggested that an article made by the new knowledge be offered for auction at the Annual meeting.

Completed letters of application or emails should be sent to me: John Butler, Chair, FABAA Scholarship Committee, 777 Tyre Road, Havana, FL 32333 or emailed to [jgbutler@sprintmail.com](mailto:jgbutler@sprintmail.com).

Deadline for receipt is June 15, 2008. The scholarship committee will review all applications and recommend three finalists to the Board. The decision of the Board will be final. The successful applicant will be notified.

**Editor's Note:** Our thanks to Dave Smucker for creating this great article. Man, those are beautiful drawings – also by Dave.



## Making Nails

by Dave Smucker

with illustrations by the author

**Making Nails?** Why an article on nail making? After all, nail making is easy or at least looks easy when you see someone else make nails. Many books on blacksmithing show a nail header and devote only a page or so to nail making.

Well here are some of my reasons you should try it and I hope to show you some things that are not in all of those books.

- Nail making is one of the very oldest forms of forging.
- Square hand made nails have 4 times the holding power as a round wire nail.
- It is a great way to learn better hammer control.

- If you want to change the "style" with which you hold your hammer and use it then nail making is a great item to practice on.
- It is a great way to warm up when starting out forging for the day.
- Even though factory nails are cheap, there is a market for hand made nails.
- It is a great demo item, and something that you can make and give away to kids. (Adults should pay for them.)
- Making a good nail header is not hard, unless you follow the information in all of those books.
- It is a fun contest item to test you skills against other blacksmith at local forge meetings.

### The Basics

To make nails we start with a round or square rod usually in a size from 3/16 up to say 5/16 in either diameter or square. The ideal material would be very low carbon steel but we can make good nails from either hot or cold rolled mild steel.

We first heat our steel and then draw out the shank of the nail, working on two sides at right angles to each other.

Then using our hot cut hardie we cut most of the way through the stock rod leaving just enough material for the head.

Now, placing the shank of the nail into our nail header we break off the stock rod with a twist and then follow by forging the head on the nail.

Sounds quick and easy - and if you are really really good you can do this in one heat. Most good nail makers will do it in two heats. One to form the shank of the nail and cut almost through on the handle and then a second heat to heat the now cool head area and forge the head.

Starting out making nails you will need 3 or 4 heats and should not feel bad about more until you get the speed and rhythm down.

There are several variations on this basic method and we will discuss what I will call the "Peter Ross", "Jerry Darnell" and "Tom Clark" approaches later in this article.

### A Short History of Nails

Man has been making and using nails for a long time, at least 5000 years and maybe longer. A long with forging of weapons and knives, nails were one of the first metal items made in volume from copper and then iron. Copper and bronze nails continued to be used in shipbuilding as iron came into wide use in other construction. Iron nails from the Romans have been found in Britain.

All of these nails were hand forged one at a time. For centuries, the stock for nails would be hand slit into square cross section from iron that had been pounded out. The "sheet" was most likely made with waterpower heavy hammers. Then in 1606, a major improvement was made with the invention of the slitting mill by Englishman Bevis Bulmer. This slitting mill could cold shear a series of square sections from a thin bar of wrought iron. Bundles of these nail rods were "loaned" to local folks who would convert them to nails often using the home hearth as their forge. They would then be paid by weight of good nails returned less some allowance for waste. Most of this work took place on British farms and everyone made nails from kids to grandparents. The pay was very low.

Nail making in America followed a similar pattern with most of the nail stock coming from England. Nail stock has been found at Jamestown so local forging of nails took place from the very start in the USA.

In 1775, Jeremiah Wilkinson, a Rhode Island inventor devised the first machine to make cut nails from iron sheet. By 1795 there were machines that could cut and head nails in one operation.

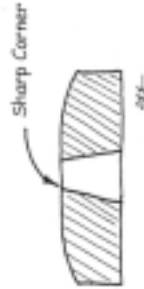
Nail making didn't really change again until after the large volume production of mild steel by the Bessemer Converter process. By 1880, mild steel wire was being produced and the wire nail became king because of its lower material / high volume production. Most nails today are wire based with some cut nails still being produced. Increasingly, nails being driven by pneumatic nail guns to the point where some construction workers today don't seem to know how to hand drive a nail.

### Making a Nail Header

First, we need a nail header and you can easily make your own. Or you can purchase a very good nail header from Tom Clark for about \$35.00. Tom makes these himself and they are not something that he imports.

If you want to make your own, there is one very important thing to keep in mind "DON'T MAKE IT LIKE WHAT IS SHOWN IN THE BOOK." Now what do I mean by that strong statement? Well, I have looked in 7 different books I have on blacksmithing and all 7 show a form to the nail header that will not work without modification and none of these books tell you what to do.

They all show a form like the following for the opening in the header. A square tapered hole in a domed forged with the taper larger at the bottom and a sharp top edge. In other words a square hole, punched from the bottom of the tool.



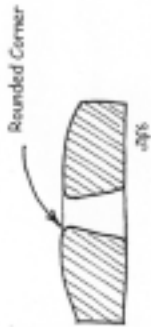
### DO NOT make a nail header like this

If you make a nail header like this with that sharp top edge what happens? When you go to head the nail a small amount of metal is forged downward into the hole in the header. Because of the mass of the metal in the shank of the nail and because the metal right at the head is usually hotter you will get a small amount of upsetting just below the sharp edge of the nail header. This upset is now larger than the opening at the top of the nail head and locks the nail into the header. "Game Over".

However, if we look at all of the old historical nail headers, they were made this way - how did they get them to work?

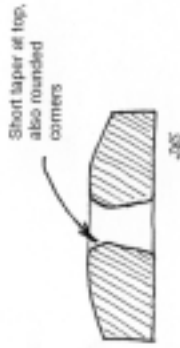
One of two ways, and swearing wasn't one of them. One of the ways was to very carefully file or dress that sharp edge to remove it and give some top relief to the header.

It looked something like this.



### This will work.

The second method was to first punch through or nearly through from the bottom side. Then reverse the punch and punch gently through from the top forming a somewhat hourglass form. I say somewhat because the waist of the hourglass is close to the top of the tool. This form may also have been dressed with a file. I think that this is the most common form on historical headers.

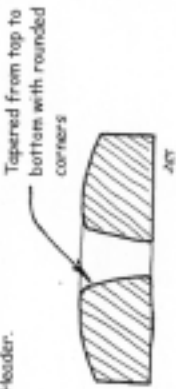


### I have had good luck with this form.

I find that in making nail headers rather than using a very small needle file required to fit the hole that I can dress the hole using a small strip of emery cloth.

Now Tom Clark has done just the opposite. He puts the taper hole in the nail header with the large side at the top and small side at the bottom. He is also very careful to make sure that the header has no sharp edges. Looking carefully at the Top Clark Header my guess is that he dresses the hole with emery cloth as I do.

Here is the way the section looks through a Tom Clark Nail Header.



### This form also works very well

### What steel should you use for a Nail Header?

I have seen workable nail headers made from mild steel. Not my choice because when I take the time to make a tool, I want it to last a long time. Tom Clark makes his nail header from 5160 - a good choice. The nail header that Jerry Dornell has with which he has made 1000's of nails is made from the end of automotive steering or suspension rod. I also like W1, O1, 4140 or 4340. S7 or H13 would also be good choices. The problem with the last two steels, since they are air hardening, once you get them hot, you can't drill or file them, any finishing work is going to be by grinding or polishing them with emery cloth. Historically, W1 or similar high carbon plain steel would have been used. The W1 tool steel "bit" would have been welded to a wrought iron boiler bar as a handle.

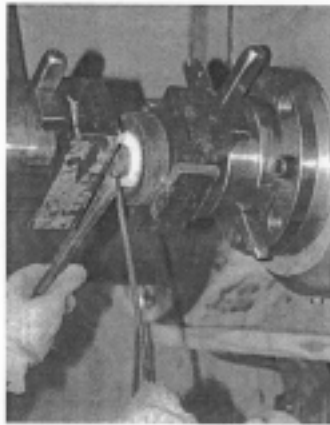
5160 is a good place to start because most of us can put our hands on a used leaf spring - which is most likely 5160. Tom Clark, since he is selling his nail headers only uses new 5160 material, but for most of us, a leaf spring will do.

### How Tom Clark makes a Nail Header.

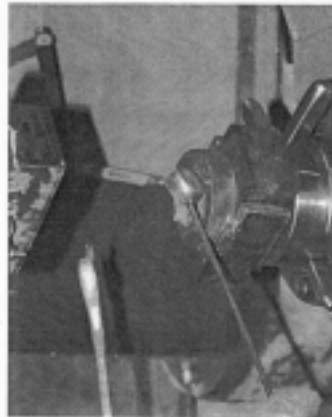
Tom makes the Header shown here by first drawing out the handle on the power hammer and then forming the head. He rounds that on the power hammer and then takes another heat and dresses the head using a fixed female bottom tool and a hand held mole top tool.

He then puts in the taper hole and dresses the tool. Before he sells it, he makes a nail to make sure there are no problems.

It will be some work, but you can do all of these steps without a power hammer. Or you can weld a handle onto a smaller piece of leaf spring and then dish the tool in a swage block, especially if you have the help of a str-haz.



In this photo Tom is putting the dome in his nail header under the power hammer.



In this photo are both the bottom tool and the top tool used to form the dome on the working end of the nail header.

To purchase nail headers from Tom, Contact him at:  
 Tom Clark, Ozark School of Blacksmithing, Inc  
 20183 West State Hwy. 8  
 Potosi, Missouri 63664  
 phone 573 438 4725 fax 573 438 8483  
 email ozark@theural.net

My method is a little different and you might say it is a machinist or welder's approach.

I first grind a domed surface on the end of a round piece of tool steel.



I just do this free hand on a 2 X 48 inch belt sander but you could also do this with a 4 & 1/2 inch angle grinder. Or, being a blacksmith, you could forge it on.

Then I cut off a small slice of the tool steel about 1/4 inch thick. The reason to dome the end before cutting it is that is much easier to hold and grind a piece that is a foot or so long. You can try making this cut in a horizontal band saw if your tool steel is annealed, but a chop saw will work with hard material and save your saw blade for mild steel.

Now, weld your disk of domed tool steel to a mild steel bar which will become both the backing material and handle. I do this with a disk on each end so that I can have two nail header sizes in one tool.

Then anneal your welded up tool. To do this, heat the whole tool to above critical temperature and then place in vermiculite. If you don't have vermiculite, wood ashes or lime will work. By heating the whole tool - the tool steel part will anneal better because the overall tool will cool slower. You will not be able to anneal S7 or H13 using just a forge, you just can't cool it slow enough.

If using S7 or H13, drill your hole in the disk before welding to the back bar. It should be "soft" as it comes from the supplier.



Now drill a hole in the center of your domed areas. This hole wants to be about 2/3 of your finished nail square dimension. (You could also punch this hole but you will get less distortion by drilling.) I also add a hole so that it can hang on the wall.



Backside of Header, note the relief drill in the backer bar. The other hole is for hanging.

## Making Nails

We now have a nail header - So let's get on with making nails. As noted before, you can use either square or round stock. Depending on the size of your header, a stock size from 3/16 to 5/16 of an inch is common. Historically, nail stock was square in cross section. It was first cut by hand from flat forged bar stock of wrought iron and later cut on a slitting mill into nail stock.

In the "Tom Clark" method of nail making, we heat our stock and then extend a short portion on the anvil and draw out a taper working back and forth between two faces. Typically, we will get a nail length that is about 3 times the length that we lay onto the anvil. So for a 2-inch nail we would start with about 3/4 of an inch on the anvil. By not laying more material than this on the anvil we retain heat in the stock we are going to use for the head. We don't worry about and don't really want a sharp point.

Once we have our taper we now use a hot cut hardie to cut most of the way through our stock just back from the taper leaving enough material for the head. We don't want any more material here than about the diameter or width of the stock. Too much material for the head and it will fold rather than upset when we forge the head.

If your vise is at hand consider putting your hardie in the vise rather than into the anvil. This way you can leave it in place as you make nails. Please don't leave your hardie in the anvil while doing other operations at your anvil - it is very easy to cut off a finger or seriously hurt yourself with that hardie sticking up in your anvil. (Watch for it in the vise too, but here at least it is usually out of the way.)

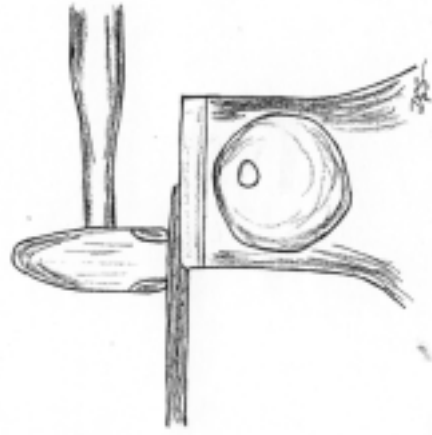
Tom Clark now does a neat little thing just before he takes a second heat to make the nail head. He tugs the partly cut through nail and stock so that he gets a form that looks like this.



This allows him to go back into the fire with the nail tip up and out of the hot part of the forge. Now he goes to the header, twists off the stock rod and forges the head using a central upsetting blow followed by four quick blows to forge the facets of the nail head.

The Peter Ross Method, I haven't seen Peter make nails so I am basing this method on what Ron Howard has told me and the way he learned to make nails from Peter. In many ways, this is similar to Tom's method except that Peter makes a point of setting off the head area at the start of nail making. He uses a half-on-half-off blow to set down the stock from two sides of the nail stock. The nail is then drawn out.

The half-on-half-off blow looks like this.



Now heat your tool up and drift your hole to a tapered square form. Like Tom Clark, I drift this one from one side so that the hole is bigger at the top. I have also made nail headers with taper in both directions, just make sure you have that top taper that goes about 1/3 of the way through your tool steel.

Last step is to dress your tool. To do this I use 120 or 180 emery cloth. Tear some very narrow strips (1/8 to 3/16 inch wide) and work them back and forth through the hole to polish all surfaces and especially the edges. This is the most important step in making a nail head - so that the nail doesn't stick.

You can also make a Nail Header similar to mine using the head of a Grade 8 bolt.

Because Grade 8 bolts are made from a high strength alloy steel, they will make a good nail header. A 3/4 inch bolt makes a nice size. You first dome the head of the bolt by grinding and then drill your starting hole that will be drifted square in the center of the bolt head. Next cut off the bolt head leaving a few threads. These threads can then be used to attach the bolt head to your backing bar / handle by tapping a hole. Alternatively, you can cut the head off flush and weld it to the backing bar / handle. If you go the threaded route, you will want to drill from the underside with a larger hole so that you will be drifting only a depth of 1/4 to 3/8 of an inch.

Making your square tapered DRIFT.

In all of the methods for making a nail header that we have shown here you will need a square tapered drift for completing the hole in the Header. This drift should have a taper of 10 to 12 percent over its working area. In other words, taper of about 1/8 inch per inch of length. A very shallow taper such as 5 percent or less will not work for a header because such a taper is self-locking and the last thing you want is a self-locking taper. What is a self-locking taper? Think of the Morse Taper you will find on some drill bits and in the spindle of your drill press. Once set you have to drive out a Morse Taper. A Morse Taper is approximately 5 percent.



To make my square drift shown here I start with a square lathe tool bit. I dress one end flat with rounded corners and then grind the taper onto the lathe tool bit. To do this grinding I hold the tool bit in the jaws of a vise set at the approximate angle I want for the taper. I then use a 4 and 1/2 inch angle grinder to grind the taper on one side at a time. If you work slowly and carefully, you can produce a very good drift this way. Because a lathe tool bit is made from high-speed tool steel, you will have a drift that will handle hot temperatures and never wear out. You can buy lathe tool bits from MSC or Enco or find a machinist friend to give you a few. For these nail headers I used a 1/4 square bit. You can also use a 5/16 or 3/8 square bit. One major caution - **DO NOT DRIVE THIS DRIFT WITH YOUR GOOD FORGING HAMMER.** The tool bit is very very hard and you will damage the face of your hammer. That is why you need a "junk face" hammer at your forge. I use an old stonemason's hammer for that function.

You can make your drift from other steels besides a lathe tool bit. W1, O1, S7, H13, 5160, 4140 or 4340 will all make good tapered drifts. You can forge the taper of such a drift and finish it by grinding. I would not use mild steel (A36) You can drift a few holes with a mild steel drift - but if you are going to make a tool and put time into it why not make one that will last. Round drifts can be made from mild steel. They are easy and quick to make and they are uniformly loaded in use. Square drifts take more time to make and the corners of a square drift are highly loaded when drifting. Make them from a tool steel.

After the shank of the nail is drawn out the unfinished nail look like this.



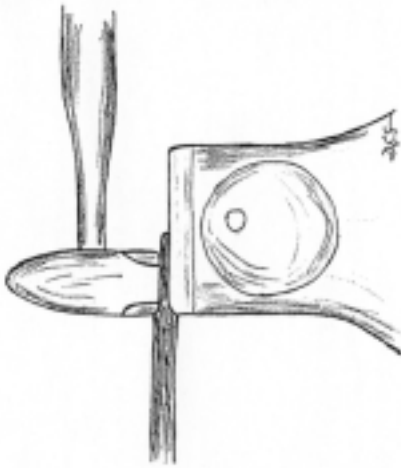
Two quick half-on-half-off blows can then move the shank to the center when used on the other side of the shank.



Now cut nearly through with the hardie, place in header, break off and forge the head. Historically a good nail maker could do this in one heat. A good smith could make 100 nails an hour and do it for 10 hours a day. If you have to take another heat, it is not a sin.

One important result of the Peter Ross method is that the shank of the nail is nearly straight with not as much taper as in Tom's method. This means that for the same given amount of metal, Peter's nail is longer. Not a big difference, but in the days of very high price metal vs. labor cost, getting the most nails per pound was important.

The Jerry Darnell Method. Jerry's method is similar to Peter's but with an important difference. Rather than use the half-on-half-off method of shouldering that Peter teaches, Jerry uses the hammer to shoulder from the top and the anvil edge to shoulder the bottom.



This means that when the nail shank is forged only the final steps of cutting off and forging the head are left. Also, because there is no contact with the rest of the stock it retains most of its heat. While it may be hard to believe, I have seen Jerry make two nails in one heat. Each nail was about 1 inch in length.

Historically, really good nail makers would have used this high hammer control method. (I suspect that Peter would use the same method as Jerry when making nails himself but teaches the half-on-half-off method of shouldering because it is much easier to learn.)



Here is a sketch of two Jerry Darnell nails I have from one of his classes at the Folk School.

Light that forge and go make some nails. Have a nail-making contest at your local forge group. It's fun. If you can advance to the Jerry Darnell method of nail making, then your hammer control will have advanced to the point that you will be a much better smith.

## The Great Myth about burning

houses for the nails. In many books on blacksmithing and all kinds of articles on the internet you will see repeated the story that during colonial times nails had such high value that if some family was going to move west to a new area that they would burn down their house and collect the nails before leaving.

I think that this is pure Myth. Just repeated and repeated - yet no one gives any original source or even a reference to an original source for this story. No one who has built a house and could sell it would burn it just for the nails. It just does not make sense.

Where does this Myth come from? Most likely, it is the fact that nails did have high value and when a building or house did burn, the owner would always take the time to sift through the ashes and recover the nails. Fires were not uncommon and destruction was often rather complete so this could have happened many times.

A few buildings that had not been used and had failed roofs might well have been burned for the nails but I think this would have been rare. Log cabins and out buildings of a simple nature were built mostly using wood pegs etc. so they didn't have many nails to go after.

Think I am wrong about this? Well I'm always open to new information. Why don't you send me an original reference where some record of the time says that "Thomas Jones burned the house on his farm so he could take the nails with him as he headed to Ohio territory." Dave

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# The Florida Clinker Breaker

FLORIDA ARTIST BLACKSMITH ASSOCIATION  
Juan Holbrook, Membership Records  
6418 NW 97 Court  
Gainesville, FL 32653

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1st Class  
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