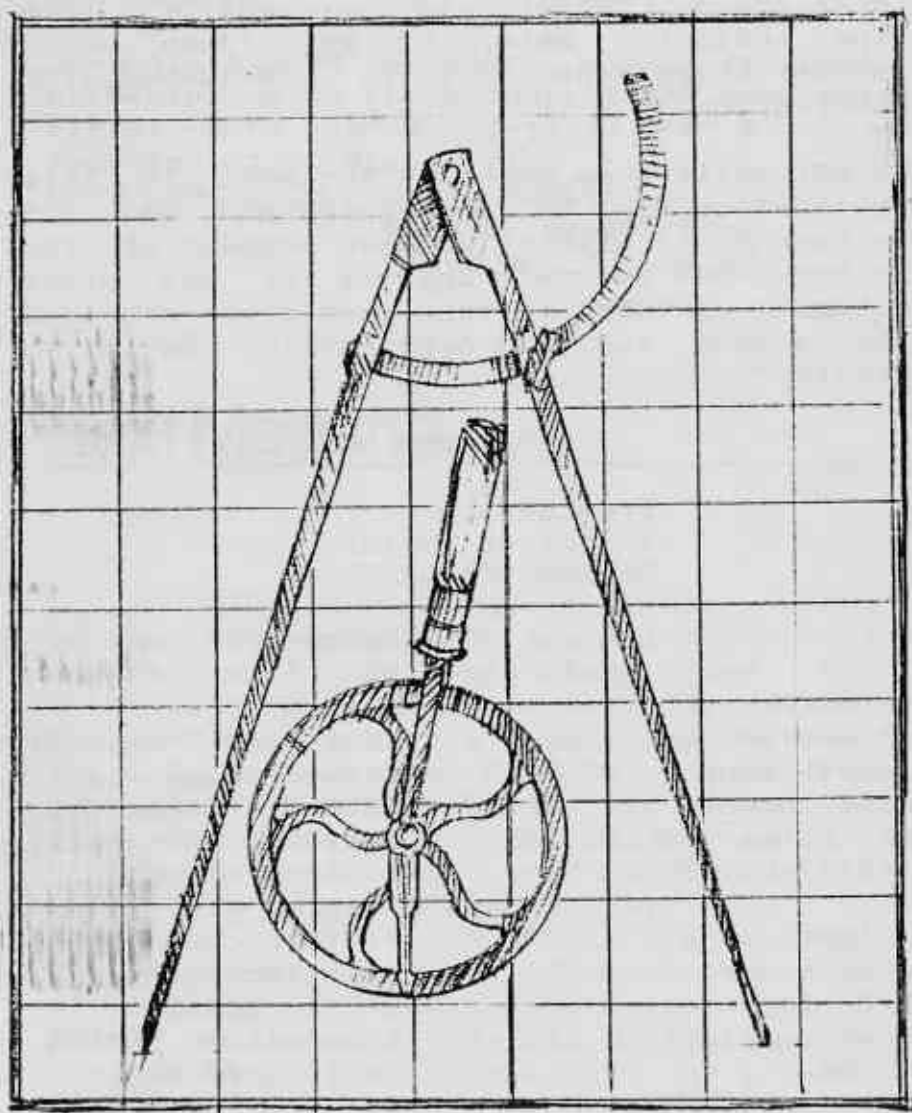


Newsletter ^{of the} Blacksmiths Association of Missouri



June - July 1989

vol. 7 no. 3

The Blacksmiths' Association of Missouri is a chapter of The Artist-Blacksmiths' Association of North America. This organization is devoted to preservation, advancement, and communication between blacksmiths of Missouri and surrounding areas. BAM's newsletter's goal is to support these ideas. Letters to the editor, tech tips, tools for sale, or any ideas which further these ends will be considered for publication.

Occasionally some material included in this publication will be copyrighted and may not be reproduced without written consent of the author. BAM welcomes the use of any other material printed in this newsletter provided the author and this organization be given credit.

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BAM MEMBERSHIP APPLICATION

Name: _____:
Address: _____:
City: _____:
State: _____ Zip: _____:
Telephone: _____:
New Member: _____: Renewal: _____:

Dues are \$15.00 per year, which includes a subscription to the bimonthly BAM newsletter. Please make checks payable to Blacksmith Association of Missouri.
SEND CHECKS TO: Steve Austin
44 N.E. Munger Road
Claycomo, MO 64119

Next Meeting

JULY 22-23 MEETING

As has become a BAM tradition, our July meeting will be at Doug and Bonnie Hendrickson's forge in Lesterville, Missouri. Doug and Bonnie have a small beach on the Black River where on Saturday, kids, dogs, husbands, and wives can sun and splash while the rest of us work. On Sunday we'll all take our annual float trip. Saturday nite we'll camp on the Black, talk, swill, play music and generally do what blacksmiths do when they get together. There is a motel 5 miles away in downtown Lesterville, the Silver Dollar 314-637-2214, .If you don't want to camp, give them a call for a room.

Things to be dealt with at this meeting will be the election of BAM officers. President and Treasurer are up for grabs. Hopefully Walt Hull will have the food center project in hand and will be ready to pass out assignments. All are encouraged to get their rings finished so we can assemble them. There will be 3 or 4 forges going for whatever needs to be done.

Doug needs to reserve canoes and space at the camp ground so let him know as soon as you can if you plan to camp Saturday night and float on Sunday. Camping is about 4 bucks a head and the canoes are \$20 each.

Don't forget to make a shovel for the July trade.

map →

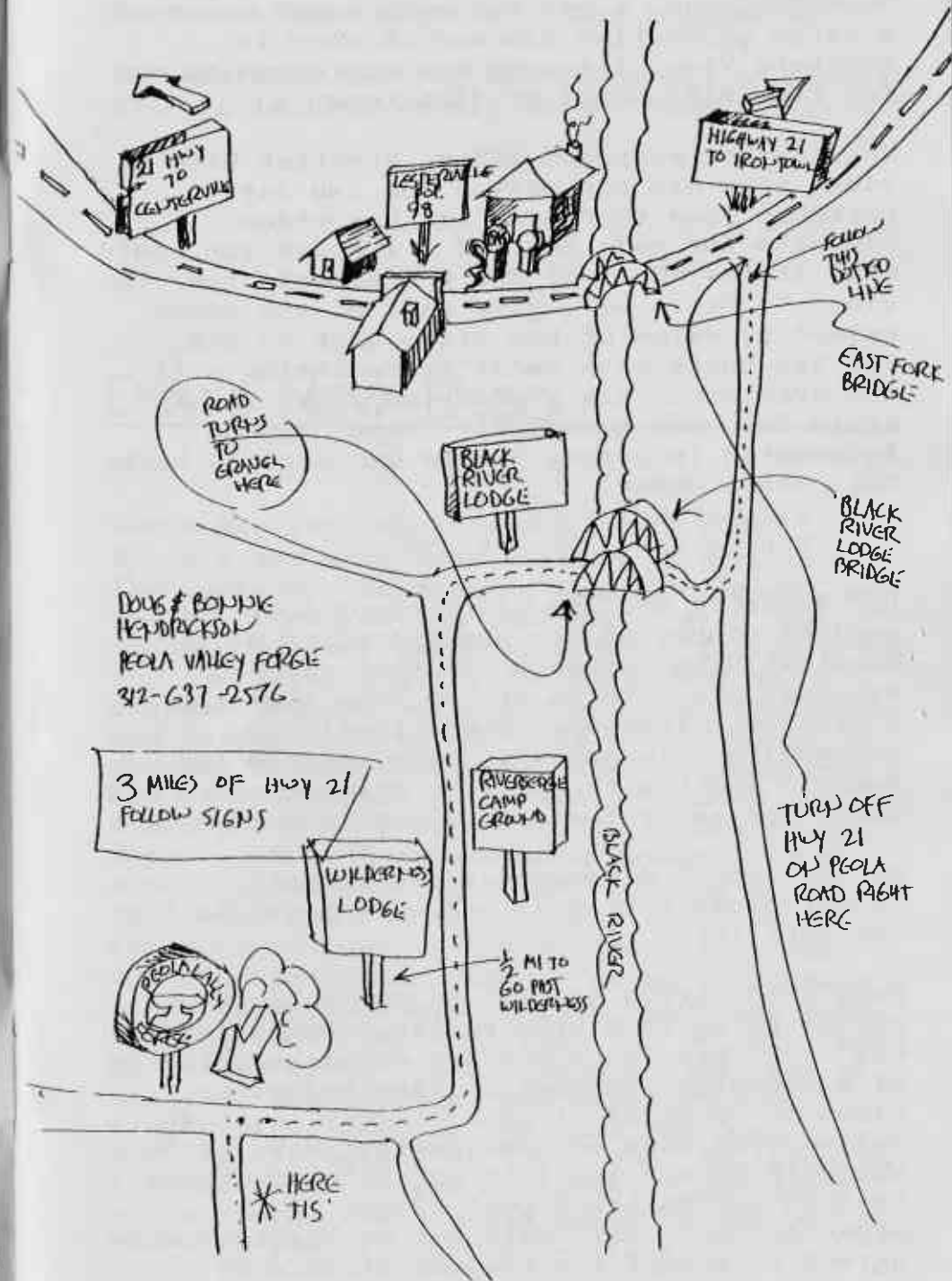
May Business

May Business Meeting

Bernie Tappel called the meeting to order at 12:00 on May 20th.

Under old business Colin Campbell reported on progress to retain Peter Ross, Blacksmith at Williamsburg, for our 1990 two day work shop. Colin has talked with Mr. Ross and it looks like he's open. Peter gets \$450 per day plus expenses. It was estimated that the total cost would be in the neighborhood of \$1500. Treasure Steve Austin felt BAM can afford him and all present voted to have Colin firm up a deal with Mr. Ross.

Our treasure reported \$3600. in the coffers.



New Business

Dave Matthews, a new BAM member and owner of a large production blacksmith shop in Mountain View, Arkansas was nominated to run for the ABANA board of directors.

Steve Baker recorded BAM's Greatest Hits on video tape and has edited the two day workshop down to 6 hrs. and has video cassetts for sale for \$20. I guess you could call it the "Best of BAM's Greatest hits, the video." Steve will give half of the money raised by sales of his video back to BAM. The ten bucks each he'll be recieving will not even cover his production cost. Thanks again for your generosity Steve. Anyone interested in buying a tape can send 20 bucks to:

Steve Baker
411 Catherine St.
Monroe City, Mo. 63456

Dan Whitmore and Tom Clark brought up the subject of paying the demonstrators at our Greatest Hits workshop now that all the expenses are covered and we know what the profit is. Treasurer Steve Austin, addressing this subject, said that he had been in touch with all four demonstrators and that each has refused to accept any payment.

Bernie Tappel discussed the Missouri Master/Student program and said to write him for more info.

Doug Hendrickson brought up the subject of our on going food prep center, commenting on the fact that Jerry Hoffman should be relieved of the design responsibilities before he blows an overload circuit. Jerry is always called upon when we need design work. It's not fair to him and it's not fair to others to miss out on the aspect of our organization. Walt Hull has enthusiastically agreed to accept the responsibility of seeing this project through. Expect to get your assignments from Walt soon.

Vernon Fischer accepted the job to design the cover for this edition of the newsletter.

The business meeting was adjourned to do whatever it is that we all do at these meetings.

Don's New Shop

BAM's May 20th meeting was held at Don Asbee's new shop near Hartsburg, Missouri. The topic of the meeting was shop layout and design. Don, having just dealt with these questions, lead the discussion. If there is one overlying quality in Don's shop it is flexibility and versatility. Very few tools and benches are permanently bolted down. The obvious things, like the Hossfeld, forge, and chop saw, are permanently located and every thing else is either on a boom or wheels. One ingenious boom swings from a steel column and covers much of the shop. On this boom Don had his cutting torch on a retractable reel, a mig welder, electrical outlets and an air chuck. Along with these basic things Don also talked about the boom holding tools for what ever job he is working on at any given time. The big advantage of the tool boom is that you have, at your finger tips, exactly the tool you need. Nothing cluttering up the floor. No leads to trip on. No actylene or hoses to accidently cut or burn. And you can swing it out of the way when you are through working.

Don's approach to layout tables, benches and tools is very interesting. All work surfaces

in his shop are at exactly the same height, the advantage of this is obvious. His bench/layout table is on wheels, can be locked in place and has leveling devices. The years Don worked in his small shop in Bland taught him how important a well thought out orderly workspace really is.

The following are concerns, and ideas Don addressed while laying out the new space.

1. Steel rack should be by the door for ease of off loading from the truck.
2. Have a smaller steel rack by the chop saw for short lengths.
3. Hossfeld iron bender needs a 15 feet space to operate effeciently. The 15 feet are to the front and sides. Space is not as critical to the back of the machine.
4. Keep a layout table close to the forge to check work against the drawings. This is especially important when forging elements for gates, furniture and other large or complex works.
5. Keep your space flexible.
6. Don designed his tool boom to give him the same kind of efficiency that a dentist work station has.
7. Carts on wheels for storing and moving work from one area to another.
8. 5/8" plate is a good thickness for a layout table.
9. Store paints and other flammable materials well away from hot work area.

10. Compressor should be away from the grit and dirt which will wear it out. Filter help.
11. Keep arc welders off the floor where the cooling fans can suck up fly ash and other ambient abrasives.

Tidbits

SMITH VERSES SMITHY

Are you a Smith or a Smithy? I don't know about you but I'm tired of people interchanging these two words. As your editor I recieve numerous newsletters from all across the country as well as several commerical blacksmith publications. It is appalling how many people, supposedly in the know, still don't understand the difference between these two words. My Random House College Dictionary defines smithy as "1. The workshop of a smith, especially a blacksmith. 2. A Forge." Smith is defined "1. A worker in metal. 2. A Blacksmith."

The next time someone says "How ya doin, Smithy?" quietly explain the difference to them.

DIDYMIUM CLIP ON SAFETY GLASSES

Didymium clip on safety glasses are available from Ed Hoy in Chicago 1-800-323-5668. Ed Hoy is a supplier of tools and materials for stained and fused glass. The catalog number is 49701 and the cost is \$23.50. The lens size is 48mm. They flip up and only clip on glasses with plastic frames.

COAL

Judd and Ben are using the Collinsville Fuel and Ice Co. coal. They brought me a bag to see what I thought of it. Not bad, it welds, gets hot, cokes up good, and only has a moderate clinker. Next time I need coal I'm going to get 500 lbs. and really check it out. The best thing about it is that it's not in Brazil, Indiana. It's close to home.

The city coal yard in Brazil, Indiana has great coal from West Virginia. If you call ahead they will bag it up for you for \$4.00 per 50 lbs. Their number is 812-448-8128.

Progress report on the maple top food center,
pot rack what-cha-ma-call-it.

This project has never really had a leader. Dan is collecting utensils. Jerry has done some design work. Colin located the maple top. Steve forged several snub end scrolls, and others have contributed in various ways. With all these folks involved you would think we are really moving. WRONG!! The progress report is that we have made no progress. Don't worry, be happy, Walt Hull has agreed to accept the roll of project engineer, designer, and assigner of duties. Even as you read these words, Walt is at his drawing board desperately trying to bring it all together by the July 22-23 meeting. Be prepared to receive your assignments. Thanks Walt, we needed that.



Safety

by Walt Hull

Dear Prof. Safety,

I'm starting to gather a small collection of power tools, and everything I buy seems to have a guard that makes the damn thing impossible to use. I don't want to take an unnecessary risk, but I don't want to spend money for a tool and not get the good out of it. What do you do?

Unguarded moments

Dear Mom,

I do the best I can. You're right, many guards, especially on tools of recent manufacture, are a hindrance. For example, most abrasive chop saws have a guard that falls right down on the work so you can't see your tape measure or chalk mark. You see these guards in the store but not in anyone's shop.

When I buy a tool with an unfamiliar guard on it I first try to figure out what injury that guard was meant to prevent.

While I think about that, I try to learn to use the tool with the guard in place. Sometimes a slight change of habit or technique will do the trick. I may even find a way to use the guard to advantage, who knows?

If this fails I try to figure out how to use the tool without putting myself in a position

to incur the injury the guard was meant to prevent.

A good example is the handheld angle grinder. The first thing you notice about these is your sanding disk or wirebrush or something won't fit under their guard, and off comes the guard. So learn to keep the body of the grinder between your knee and the blade. Learn to stop the wheel against the bench when you shut it off instead of letting it run while you set it down. Wear your leather apron.

One thing which should never be left unguarded is a drive belt. A V-belt will take a finger off. I've seen this. A flat belt will make a hand look like a record album. This happened to my father. Expanded metal isn't that expensive, and shop time is lots cheaper than hospital time, so cover that puppy up.

Keep a-mashin', but carefully.

Prof. S.

Dear Professor Safety,

My thumb and first two fingers keep going numb on me and I can't quite figure out why. It does seem to bother me more if I've been hammering a lot. Do you think there's a connection somewhere?

Former Hitchhiker

Dear Former.

Have you been hammering on your thumb and fingers? Probably not. This one had me stumped so I asked myself, "What would Ann Landers do? Give up? Certainly not!" In a blinding flash of inspiration (wear those hoods, guys!) I turned this over to BAM's

own blacksmith/physiologist, Bert Elliot-Francis. This is what she said:

It sound to me as if Former is suffering from carpal tunnel syndrome. This problem is experienced by many people whose work requires repeating motions over and over which involve the flexing of the palm and thumb muscles in a way that pinches the nerve that serves the hand and fingers at the point where it passes under the ligament that holds everything together at the wrist. If left unchecked, surgery to enlarge the area the nerve passes through (the carpal tunnel) is the only known cure at present. If proper precautions aren't taken, the nerve can become permanently "dented." One of the repetitious motions that can cause carpal tunnel syndrome over time is gripping a hammer, which is probably the source of Former's problem.

So, should Former give up blacksmithing? We think not. He should probably have his present condition evaluated by a medical professional to make sure he's not already to the point of needing surgery, but there are some things he can do to avoid the syndrome.

Exercises:

The following series of exercises, repeated three to five times daily, Should help to prevent the nerve from becoming "dented." IMPORTANT! Don't stretch too far, only until you feel it start to pull. The more you do, the more the muscles will stretch. It's important, though, to build up to the level of reps slowly.

1. Slowly clench fists, hold for a count of five, then slowly open hand as wide and open as possible, hold for a count of five.
2. Rotate hands at wrist in both directions five times.

ABANA

Artist-Blacksmiths' Association of North America



P.O. Box 1181, Nashville, Indiana 47448
Executive Secretary, Janelle Gilbert

Office Hours: 7:30-11:30am & 1:30-4:30pm
Phone: (812) 988-6919

PRESIDENT'S MESSAGE June 1989

Dear friends,

We are well into the second quarter of the year and we have accomplished a lot in the last three months. A report from Bill Callaway, Treasurer of ABANA, shows ABANA in excellent and stable financial condition. I noticed by viewing the general bank account in Bloomington, Indiana, that ABANA has never looked better reflecting the present financial situation. We continue to remain solid in our financial dealings.

Our new accountants are working with Treasurer Bill Callaway on the 1988 income tax and although we will be filing for an extension, we will have the 1988 income tax filed by the end of May. I do not believe that in the history of ABANA we have ever accomplished this goal to date. They report that 1987 and 1986 are now cleared and all back fees and penalties have been paid. It does not appear that there are any other financial dragons in the books for us to discover at a future time.

Michael Bondi, 1st Vice President, has returned from meeting with Charlie Orlando, the Site Conference Chairman for the 1990 ABANA Conference in New York. They have nailed down the demonstrator list and are currently working with ABANA Library Director Joe Pehoski on documentation for the conference and gallery. We want to pay attention to the gallery show, its lighting format and many other details that have been so long overlooked. We want to pay strict attention to professional documentation of this upcoming conference for the benefit of all of us in the future and also for the archives of ABANA. There are many people in our organization who will not be able to attend the conference and we want to be sure to have a thorough and professional documentation for them to rent through the ABANA Library so they may remain current with America's blacksmithing achievements.

The Anvil's Ring Committee is working at this time on the selection of a new editor for the Anvil's Ring. They had a conference call at the end of April with current Editor Robert Owings, to discuss the job profile from Robert's point of view. The editor of the Anvil's Ring as we all know is extremely crucial to our organization and the board is taking great pains not to rush this selection. They are reviewing the many applicants and I am very confident that we will have a new editor of the Anvil's Ring who will reflect the high quality of the magazine and the honesty and integrity of organization we have experienced in the past. For those of you who are waiting for the results, please bare with us as we conclude this very important task. We will be letting you know who the new editor will be immediately upon confirmation.

I received a notation last week that Mr. Kenneth Lynch has passed away. Mr. Lynch was very generous to ABANA, donating tools that he bought all over the world to be auctioned off at our conferences. His son, Timothy, has carried on that tradition. We are very sorry to see his passing and we thank his family for the dedication that they have shown to ABANA.

I want to thank all of you who have donated scrolls and finials to the Great Gates Project that Richard Quinnell from England and his staff have created for the National Ornamental Metals Museum (NOMM) in Memphis. The dedication ceremonies formalized a ten year dream. If you have an opportunity to be in Memphis at any time, please make a point to go to the NOMM and view this exceptional piece of work that has been created by the hands of blacksmiths all over the world. The NOMM as we all know is a museum that has very generously extended the opportunity for many blacksmiths to display their work over the past ten years and it is truly exciting to see that it now has a proper and fitting set of gates.

Secretary Hans Peot is preparing a ballot for the election of five board member positions open in the fall. If you have someone who you wish to run for this position, please send your nominations to the ABANA Executive Office immediately because the deadline is July 1st. The ballots will be mailed to you by bulk mail from the ABANA Office by August 7. At the same time you receive your ballot for the board member election, you will also have an opportunity to vote on the passing of some changes on the ABANA by-laws. Most of the changes deal with the wording rather than the subject content. Please look this over carefully and exercise your right to have a say in how this fine organization of yours is run by returning your vote to the ABANA Executive Office.

The ABANA Board is counting upon the full membership to have input on these issues of board member selection and by-law revisions. We appreciate your time and attention to these matters.

Warm regards,

Dorothy Stiegler
ABANA President

DES/jrg

TO: ABANA Chapter Presidents & Newsletter Editors
FROM: Ward Brinegar, ABANA Chapter Liaison
DATE: June 1989

Summer is almost here and a busy one it will be! Regional conferences are underway beginning with the Southeast Regional last weekend. I'm sure it was a great one as always with five chapters cooperatively sponsoring it. This kind of inter-chapter effort is one of the fruits of the chapter system as can serve as a model for other events.

PRINTING ABANA MEMOS.

I want to thank all of the editors who printed my memo about ABANA brochure distribution. The response has been somewhat limited but every effort helps.

NEW ABANA CHAPTER

Congratulations to the Northwest Ohio Blacksmith Association who recently became an official chapter of ABANA. A group in Texas is ready to submit material to apply for chapter status.

NEWSLETTERS

I've received newsletters from eleven chapters in the last month or so. Thanks to all of you. The amount of activity and interest in the chapters continues to amaze me. You're all doing a great job to promote our craft.

"ELECTRONIC BULLETIN BOARD"

Clayton Carr's request for information about computer usage among editors has only netted one reply. If we don't hear more from you, we'll conclude that there is not enough interest to proceed. Let Clayton know how you use the computer and if you're interested in setting up an "electronic bulletin board" for ABANA.

ABANA - CHAPTER RELATIONSHIP

Finally over the next few months, Clayton and I will be working on defining and clarifying the ABANA - Chapter relationship. The requirement to become a chapter are pretty well defined but I would personally like to see them rewritten, particularly specified that a percentage of chapter members be ABANA members rather than a number (5). Although the ongoing relationship, once a chapter has been accepted, needs to be put down in black and white so that all of us know what benefits and responsibilities we share. Please let me know how you feel about this issue. I want to approach the ABANA Board in November knowing your views on this important matter.

Hope all of you have a wonderful summer!

ABANA

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PRESIDENT'S MESSAGE July 1989

Dear Friends,

We have a couple of new and exciting things happening in ABANA that I want to tell you about and the first one deals with the library. Joe Pehoski, Director of the ABANA Library, indicates that the rent on slides and videos have been reduced as much as 40% and that new material is being introduced in the next issue of the Anvil's Ring. Also, the "First International Festival of Iron, August 27 - September 2, 1989" promotion video tape is now available through the ABANA Library at no cost other than postage (\$2.00). This is a tape that must be returned. The tape is very entertaining, professionally produced, five minutes long, and cannot be watched just once! This tape features American smiths and is a real hooker. Unfortunately, the tape will not be available after September 1st. If you wish to view this tape, please contact our ABANA Office very soon.

ABANA now has full sized, professionally drawn blueprints of a totally atmospheric propane forge. This forge is a regenerative heating type of unit that preheats itself to 1,000 degrees and will jump from room temperature to 2,300 degrees F in six minutes. It is not electric in any way and is a totally reducing fire atmosphere. It runs for eight hours on five gallons of propane and weighs approximately 30 lbs. The plans are for an entirely portable unit. The approximated cost to build the forge is in the neighborhood of \$175 and all the parts are easily accessible in all locations. It comes complete with full scale drawings and accompanying information sheet to explain the process and assembly. The forge plans were a gift to ABANA from the Sandia Laboratories Rocketry Testing Unit in Albuquerque, New Mexico and built under the guidance and supervision of Rob Gunter, blacksmith at Sandia Laboratories. The forge was under heavy use at Sandia for over a year and has been shown at many conferences in the U.S. in the last six months. All the blacksmiths who have used this forge or have seen it in operation have felt that it is indeed the Cadillac of the propane forges. Nothing has been left to chance and no technology has been spared in the completion of this project. Francis Whitaker recently used the forge at the Western States Conference in Carbondale, Colorado and thought that it was by far the finest propane forge he had ever worked on and the most practical and inexpensive of its type to build. If you would like a set of these plans, you may obtain them through the ABANA Office at a cost of \$15 for ABANA members or \$20 for non-ABANA members plus \$2.00 postage. It is hoped that any of you who are interested in changing to propane or are at this time using a propane forge will see the advantage of an economically produced unit.

Thank you to all editors for printing the ABANA monthly update and thanks to each of you members for continued support of ABANA and blacksmithing throughout America.

Sincerely,
Dorothy Stiegler

Dorothy Stiegler

DS/jg

Opps. & Intrests

PLEASE POST

OLD COWTOWN MUSEUM-JOB OPENING
INTERPRETER: BLACKSMITH

NATURE OF WORK

This is technical work in public relations, blacksmithing, and live-stock care under the supervision of the Assistant Director. Work involves the interpretation of the Blacksmith Shop and early Wichita and Sedgwick County for the public through demonstrations, tours, and presentations. Work is performed according to set guidelines and is reviewed for results upon completion of various assignments.

ILLUSTRATIVE EXAMPLES OF WORK

- Conducts blacksmithing demonstrations for visitors, including school groups and adult tour groups.
- Leads certain education program tours (i.e. A Visit With the Blacksmith).
- Assists with planning and production of materials and content of educational programs and classes.
- Visits elementary and secondary classrooms to present educational programs to students.
- Feeds and waters livestock (longhorns, horses, and chickens), orders and picks up feed. Cleans livestock area on a regular basis.
- Creates needed objects in the Blacksmith Shop for Museum projects.
- Trains and schedules volunteer Blacksmith Shop interpreters.

REQUIREMENTS OF WORK

Graduation from high school, supplemented by college or vocational training in the fields of museology and blacksmithing education, or an equivalent combination of training and experience which provides the following knowledge, abilities and skills:

- Knowledge of the techniques of blacksmithing.
- Ability to properly handle and use antique tools.
- Some knowledge of Kansas history.
- Skill in operation and care of blacksmithing equipment.
- Ability to rapidly acquire considerable knowledge of Wichita and Sedgwick County history.
- Ability to express oneself clearly and concisely, both orally and in writing.
- Ability to lead and instruct children and adults in group-learning situation.
- Ability to learn to care for livestock.
- Ability to establish and maintain effective working relationships with fellow employees, the general public, and the news media.
- Ability to work with initiative and with a minimum of direct supervision.

SALARY

\$7.458 an hour (\$15,513 per year).

TO APPLY

Submit a letter of interest to Old Cowtown Museum, 1871 Sim Park Drive, Wichita, Kansas, 67203. Contact Elizabeth D. Kennedy, Assistant Director, for an interview, (316)264-0671.



National Ornamental Metal Museum

FOR
IMMEDIATE
RELEASE

FOR
IMMEDIATE
RELEASE

RELEASE FOR PUBLIC INFORMATION

JUNE 14, 1989

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"CONTEMPORARY IRON"

JULY 16 - SEPTEMBER 10, 1989

An exploration of the current applications of ironworking, "Contemporary Iron" celebrates the variety of uses of this simple yet essential element. In the exhibition, organized for tour by the Southern Arts Federation and curated by the Louisville Art Gallery, iron reaches a status much beyond the traditional and utilitarian, climbing to the realm of art.

Sculptural, decorative and utilitarian works have been included. 25 artists created 52 pieces for this touring exhibit; the iron alloys used to craft the objects in "Contemporary Iron" have been cut, welded, forged, cast, and otherwise manipulated to achieve a brilliant variety of shapes, textures, and designs. Included in the exhibition are several iron objects meant to be touched and handled by visitors.

The Museum is open 10 :00 A.M. until 5:00 P.M. Tuesday through Saturday, and from Noon until 5:00 Sunday.

CONTACT : ELEANOR DOWNES (901) 774-6380

KILL DATE: SEPTEMBER 10, 1989

National Ornamental Metal Museum
Memphis, TN

BLACKSMITHING CLASSES AND WORKSHOPS

	Tuition:
1989	
September 23 & 24 (Saturday and Sunday)	\$80.00
Beginning Blacksmithing Workshop Instructor: Museum Staff	
October 21 & 22 (Saturday and Sunday)	80.00
Two-day workshop focusing on the design and forging of traditional iron hardware Guest Instructor: To Be Announced	
November 7 - December 12 (Tuesday Evenings)	\$225.00.
Six week class which meets for three hours on Tuesday evenings from 7:00 - 10:00 P.M. with open studio time on Saturday mornings from 9:00 - Noon during the session. Instructor: Museum Staff	
1990	
March 10 & 11 (Saturday and Sunday)	80.00
Beginning Blacksmithing Workshop Instructor: Museum Staff	
March 24 & 25 (Saturday and Sunday)	80.00
Two-day blade forging workshop. Students will design, forge and finish a knife blade. Guest Instructor: To Be Announced	
March 28 - May 2 (Wednesday Evenings)	\$225.00
Six week blacksmithing class which meets for three hours on Wednesday evenings from 7:00 - 10:00 P.M. with open studio time on Saturday mornings from 9:00 - Noon during the session. Instructor: Museum Staff	

Other special classes and workshops will be announced through mailings to interested students throughout the year.

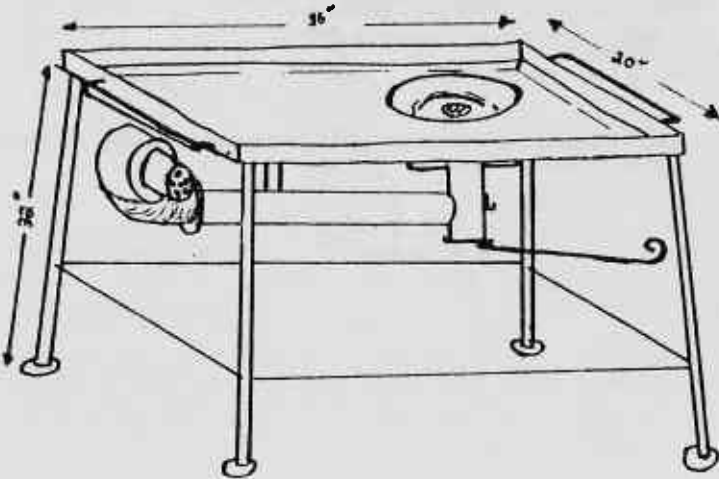
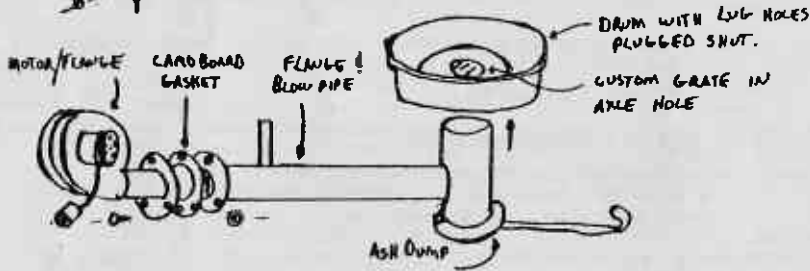
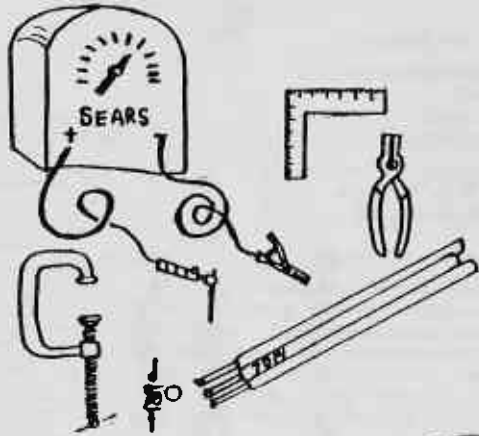
CHEAPSKATE'S FORGE



HIRSCHFELD

MATERIAL SHEET:

- 1/8" x 1 1/2" x 1 1/2" ANGLE - 10'0"
- 7/8" ROUND BAR - 11'0"
- 1/2" ROUND BAR - 12'0"
- 3/4" ROUND BAR - 1'0"
- 2" PIPE - 3'6" x 1/4"
- 1/8" SHEET APPROX 2'x3'
- FORD TRUCK BRAKE DRUM
- 5/8" FLAT WISHERS - 4
- PIECE OF CARDBOARD - 1
- MOTOR/BLOWER ASS'Y. - 1
- SMALL BOLTS & NUTS - 4ea.



SEARS, ROEBUCK & CO., Incorporated, Cheapest Supply House in the World, Chicago.

SEARS ROEBUCK & CO'S BLACKSMITH TOOLS



Do Your Own Work
...ON THE FARM...
*Sharpen the Plows, Shoe the Horses,
Set the Loose Trees, Mend the Machinery.*

WITH AN OUTFIT selected from this list, every farmer, ranchman and mechanic can be his own blacksmith.

NO DELAY FOR REPAIRS IN A BURNING SEASON while the team and a man has gone to the blacksmith shop. Again, if you have an outfit you will forever miss the time of going to the town blacksmith.

THE GUY OF A COMPLETE OUTFIT is not hard. You will save it all in one year's blacksmith bills, or anything of the sort in time.

DO NOT SAY YOU CAN'T DO THE WORK. Thousands of farmers have bought outfits from Sears & Roebuck, and many take it from neighbors, who are willing to get work and their own blacksmith.

A PORTABLE FORGE, ANVIL, DRILL, TANK, STOCK AND DICK TAPER TAP, TONGS AND SHOULDER OUTFIT, and you are prepared for any kind of blacksmith work.

SEARS WILL BUY SUCH AN OUTFIT. On the start you may not want a complete outfit, but later you will surely add until you have a complete outfit, and you will sell it the best investment you ever made.

SPACE WILL NOT PERMIT our showing everything in the line. We show here the tools most commonly used.

WE SHOW A SPECIAL CATALOGUE of blacksmith tools, showing everything in the line, and will gladly mail it free on application.

EVERY TOOL WE SELL IS GUARANTEED STANDARD QUALITY, the product of the best manufacturers. We do not handle cheap, cheaply made goods.

OUR PRICES, quality considered, you will find by comparison, are the lowest any establishment.

OUR TERMS: Any goods will be sent by freight, C. O. D., subject to examination, on receipt of ONE-FOURTH the amount of order, balance to be paid in full by date.

THREE PER CENT. DISCOUNT, for cash or full with order.

FRESHMEN IN VERY LOW on this class of goods, and will add but very little to cost.

BARGAINS IN PORTABLE FORGES



WE BELIEVE WE ARE HEAD-QUARTERS FOR EVERYTHING DE-SEARABLE IN PORTABLE FORGES. WE HAVE MADE OUR CONTRACTS WITH THE VERY BEST MANUFACTURERS and most reliable manufacturers in the world, and we are strictly headquarters for the manufacture of the highest grade portable forges on the market.

THERE ARE MANY CHEAP, SAFE, HIGH GRADE PORTABLE FORGES, and even some of our competitors may attempt to meet or cut our price, but when a forge is offered at within 10 or 20 per cent of the price we are able to name, you can depend on it for the very best quality and delivered on board the next in Chicago. You pay the freight, but you will find the freight very or somewhat less than you will find in your own town. There is perhaps no more important fact in the world than that we offer the very best quality portable forges. One reason is that we have the best of the best in the line of portable forges, and we are strictly headquarters for the manufacture of the highest grade portable forges on the market.

WE WOULD ASK YOU TO COMPARE OUR PRICES with those of other forges, to compare the illustrations and descriptions, and then if you are not thoroughly satisfied that we are offering you a better forge for less money than you could possibly buy elsewhere, send us in a few lines and we will send you a copy of our catalogue, and if you are in a hurry to see our catalogue, the best forge ever seen for the money, reason it at our expense and we will send you a copy.

No. 11000. OUR SPECIAL LEADER AT \$75.00. AT THIS WE OFFER YOU A COMPLETE HIGH GRADE, fully guaranteed Forge which you could not duplicate elsewhere in a wholesale way at less than \$100.00, and a Forge that would retail at \$130.00 or more.

THIS FORGE IS ESPECIALLY DESIGNED FOR boiler, boiler and tank builders, when, upon occasion, altered railroad buildings, farmhouses, etc.

WE ARE ABLE TO GET THE PRICE LOW, \$75.00, that every farmer in selecting a Forge should order this in preference to a cheaper one. The reason is very simple. It is made from the very best material. You have in it a complete set of tools which would cost you a very high price. It requires a very slight movement of the lever to get the strongest blow. **THIS FORGE IS SUPPLIED WITH A SIX INCH PAN, HEARTH IS 24 INCHES IN DIAMETER.** Same as the three feet, it stands 24 INCHES HIGH. **HEARTH IS 24 INCHES IN DIAMETER. HEIGHT OF HEARTH IS 24 INCHES.** This is the latest Forge we ever saw offered at anything like the price, and it is a very fine one.

WE WANT TO TELL 5,000 OF THESE SPECIAL \$75.00 FORGES during the coming year, and with the exception of that we will sell at a price of \$75.00. If you are in a hurry to see our catalogue, the best forge ever seen for the money, reason it at our expense and we will send you a copy.

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NO. 11004. Sears, Roebuck & Co. Double Barrelled Forge. with half sized boiler. 24 inches high. 24 inches diameter. Weight, 55 lbs. Price, each.....\$12.50

NO. 11006. Sears, Roebuck & Co. Double Barrelled Forge. with small boiler. 24 inches high. 24 inches diameter. Weight, 55 lbs. Price, each.....\$12.50

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