

Our cover photo this issue is Tom Joyce forge welding in Russell Jacqua's shop in Port Townsend. Tom took us step by step through several recent projects and work he is involved in now. He also explained and demonstrated some of his door hardware he does so proficiently. Tom also showed us several elements of a floral cresting on a job he is hoping will be in the near future.

Tom is about the most sought after demonstrator in the country right now; at the national convention in Depere, Wisconsin, he was absolutely inundated with requests to demonstrate all over the country. While it is quite an honor to be asked by so many, it makes things rough to care for a family and keep a business going while you are running here and there. I'm sure Tom is struggling trying to decide what time he will allot to

teaching. The reason he is in such demand is obvious, he is Damn good, not only as a smith, seemingly able to create any form he desires, but also as an instructor. He tells you what he is doing, he shows you what he is doing, then he explains what he has done, articulated in clear, understandable terms. We in the Northwest have been fortunate in that we have already seen Tom twice, and have been exposed to his talents and information due to the efforts of our board of directors. Hopefully, Tom will find a way to balance the teaching with the rest of his time. Everyone I have talked with is looking forward to Tom's next visit to the Northwest. No matter what we arrange, if we are lucky, enough to procure some of Tom's time in the future, it will be of high quality. We seem to realize such quantum leaps in our own growth when we can receive the guidance of a qualified instructor, especially if we the students are intensely interested in the subject. Keep your eyes on the mailbox, we have lots of great events coming up.

However, before we get ahead of ourselves, I want to say some words about May and June. Wow! what a couple of months, May with its metal munching madness and the national conference in June. The national was absolutely mind boggling with its array of demonstrators' lectures, slide shows and two fantastic galleries, one containing the work of Cyril Colnik, and Samuel Yellin, and the other the work of the ABANA membership, whomever wished to display their work.

Cyril Colnik was written up in the "Anvils Ring" winter 1981-1982, Volume 9, page two is a detail closeup of the center of his masterpiece, a grill, which is something to behold. He was to have done this piece when he was only seventeen years young. That pictured detail is the focal point of the piece, however, you could choose any area of this piece and single it out for incredibly beautiful workmanship.

Several of the pieces of Samuel Yellin's work were ones which had never been out of the Yellin Museum on public display. The Yellin work is always such an inspiration to observe, often times for the intricate shapes and designs achieved with some very simple, amazingly clever, straight forward moves. The galleries were something one had to visit again and again for all the detail could not be digested in one visit.

The ABANA gallery held work of any and all ABANA members wishing to transport and display. The layout and presentation was very tastefully done. Every imaginable configuration and application that could be, seemed to be there. There were guns, swords, sculpture miniatures, gates, window guards; just an amazing amount of work and so very well done.

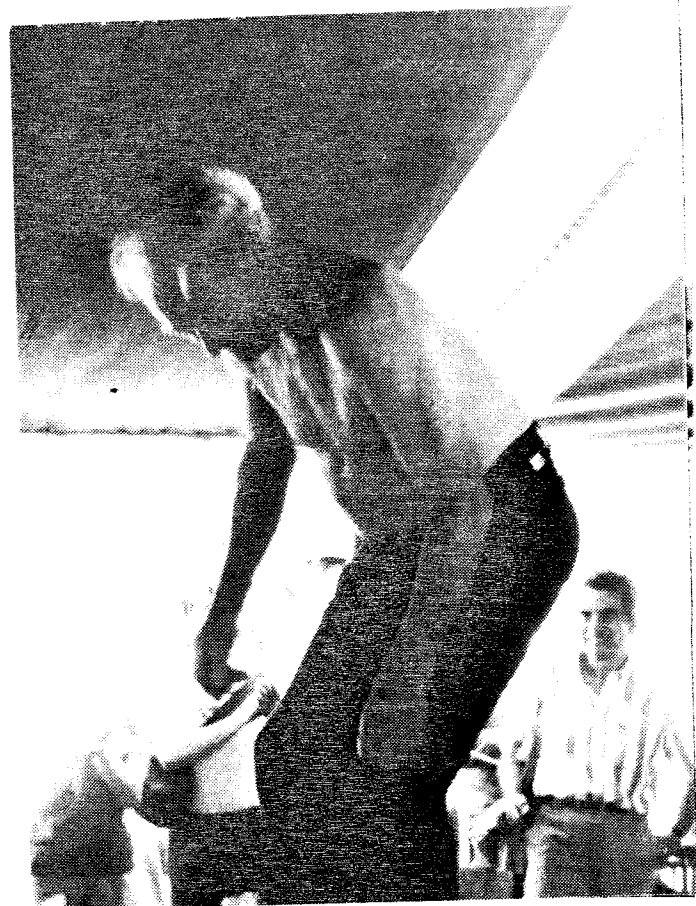
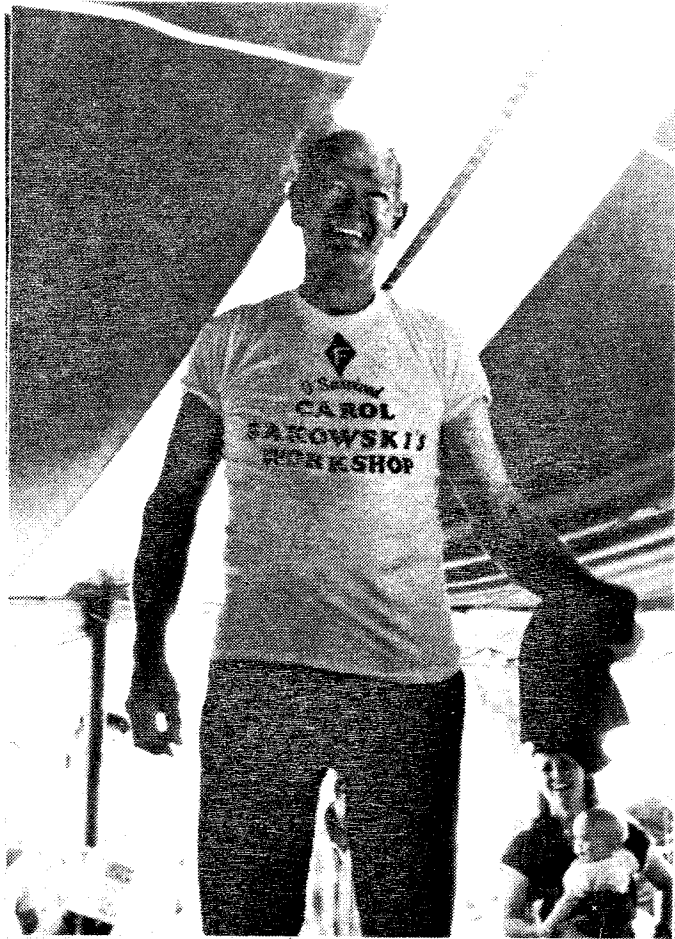
Affred (call me Freddie) Hauberman showed up at the last minute, he was not expected to be able to come from behind the iron curtain. He was able to demonstrate one evening in a midnight madness sort of fashion. Because of the limited time beginning at 8:00 in the evening, he was given three forges and three men to tend them, and a chambersburg air hammer to do the forging at a frantic



pace. He also had an assistant which helped hold the pieces of hot iron while the forging was being done. They were approximately 1/2" x 4" x 30" forged on one side to texture the metal and shape it into a ring somewhat naturally. These rings remained open as you can see in the photo of Freddie, his assistant, and the finished sculpture. Freddie, after hours of work, through the interpreter explained the meaning and significance of the sculpture. He told us the rings represented broken links of chain. The chains which hold him back from freedom, the freedom he so dearly loves. The freedom he loves more than the breath of life itself; well, needless to say there wasn't a dry eye in the house. It so strongly brought home what

a gift we possess, this abstract thing we call freedom. What an impact this small powerfully built man has had on the people who have been fortunate enough to see and listen to what he has to say. Freddie also gave a slide show with many slides of work we had not seen, and new work.

Francis Whitaker took on another mammoth project. He and nearly a dozen smiths of varied backgrounds and abilities designed, built and assembled a gate to completion in only the four days of the conference. It was a thing of beauty and grace using many innovative forms of joinery to achieve a design very pleasing to the eye. Francis is such a cohesive force in joining the talents of a group of smiths and coordinating their efforts



to achieve a final goal. The man never ceases to amaze.

When all was finished with the project, Francis set a time he would return that afternoon and titilate and delight the crowd with a strip-tease. As promised, Francis showed up wearing a rainbow of colored T-shirts, one on top of the other, from nearly every blacksmith group clear across the nation. He effortlessly hopped up on a table in the center under the large tent, where his gate building project took place, and proceeded to remove each T-shirt with comments of their origin and significance - and with some wiggles and jiggles that reminded me of the days of Madam Boom Boom. Finally only one T-shirt was left and that too came off, amongst the cat calls and whistles. As



Francis gracefully dismounted his table, money was observed being slipped into his remaining clothing - near the back center belt loop of his trousers. Notice the photos that are provided for your confirmation - such activities actually took place! You should have been there!

The rest of the conference was just as fantastic and amazing as one could imagine, with something of interest in every direction we turned. The campus where it all took place was very serene, set along the banks of the Fox River with huge shade trees and plush grassy grounds.

This was my first national conference, and it was well worth the trouble, time and expense to attend. If you were unable to attend, and you live on the west coast, you have a special opportunity - in 1986 the national conference will be held in Flagstaff, Arizona - a very beautiful place and referred to as the "city of seven wonders" - referring to nearby 1) Grand Canyon; 2) Wupatki; 3) Sunset Canyon; 4) Walnut Canyon; 5) Oak Creep Canyon; 6) Meteor Crater; and 7) The San Francisco Peaks, at an elevation of 7,000 feet; it is a very pleasant place to visit. There will probably be no better opportunity in the near future to attend a national conference on the west coast, as it is surely to go back to the east coast after 1986.

Plan your family's 1986 summer vacation with everyone in mind, the parks and sights for you and the family, and the conference for those in your family who are interested - something for everyone in '86! It's really not too early to really start thinking about this one, so plan to attend.

In 1985 the western states conference is coming up. It will be held at Mt. Hood's Timberline Lodge in Oregon. This will be an especially exciting location because of its direct historical significance. With the vast collection of iron work that is already a part of the main lodge, it will help relate the ironwork that is happening today with excellent examples of yesteryear. Timberline is a high traffic area in the summer; its planned through media coverage on many fronts to inform the public what iron work is doing today. It's one of the most important tasks we have, and that is to get out the word there is excellent hand forged ironwork being produced today. Both functional and sculptural. Much of what we can do at this conference can be directed at the public.

That's the long range planning now for what is coming sooner than you think. Believe me, they are going at it hammer and tong getting ready to provide you with lots of information, participation and a good time. The first event we have is coming August 25th, an open forge at Vic Nelson's new shop in South Park. This is more of a party and chili feed - it will take place from 2:00 p.m. to 10:00 p.m. There will be plenty of examples of the type of work Vic does and how he does it. Vic is a production smith working mostly with jigs and producing large quantities of a number of items. When it comes to a party, rumor has it that Vic will put on a party for any worthy cause. 767 6008

Next, for the second year in a row, Thadious Adams is having an open forge at his shop which has the acclaim of being the oldest

operating blacksmith shop on the west coast. Thad is a super host; he has another complete forging station set up and a new little giant trip hammer. He welcomes open exchange of related technique and participation by all who have something to offer or something to learn in this forging out of a livelihood he has undertaken. Thad's place of business is located in the town of Mount Angel, Oregon, which is not at all difficult to locate, and once you get to Mount Angel anyone in town will know where the blacksmith shop is. Thad is planning a southwestern style Barbeque and from my personal experience last year, the man knows how to cook a pig, and is a qualified expert at having a good time. The coffee and soda are free, and only a \$3.00 donation will be requested for all the food you can eat. This one is must do, so mark the first weekend of September to be in Mount Angel, September 1st and 2nd - See You All There!

October holds our annual hog feed at the Fire Mountain Forge. This will be a special treat for those who are NWBA members in good standing, in other words, paid members. This gala event we all look forward to all the year long, and we have all been willing to pay up to \$35.00 to watch the demonstrators and eat the heavenly hog, basting in his own juices over an open fire pit. The whole thing is free, that's right FREE, to the membership - those ones who have paid their dues, this one is for you! It is the first weekend in October, the 6th and 7th. The demonstrators will be Daryle and Terry, the owners and operators of Fire Mountain Forge. They have recently developed some great techniques for sculpturing animal

heads on the end of a bar of steel. The two of them have made great strides in developing lions, tigers, and bears - even elephants - on the end of a bar of steel. They will demonstrate how they have gotten to this point, so look forward to some lively forging and a great hog all for free. Non members who wish to attend must pay, so get your membership current and look forward to a great October hog feed!

November will hold for those wishing to attend a conference-like weekend with Jim Wallace and Phil Baldwin demonstrating and then a four day workshop on design and execution with Jim Wallace instructing. There will be discussion on design and then the workshop will focus on applying that information to a project of your own.

Jim wants you to have a project in mind so you will be ready to begin. This workshop nearly filled up very fast, there are just a couple of spots left, so get in touch with Daryle Nelson, President of NWBA at 1-832-6280 to secure your place in this great workshop.

Just one more quick note, we are making plans to get Bernard Herr to the Northwest this January, he has demonstrated most recently at the national and we also saw him at the western states conference in Petaluma, California. He is a very talented smith with lots of very innovative techniques. It's amazing to me to watch him bring a bird out of the end of

a 5/8 square bar. So look forward to hearing about this one.

We hope to get alot of enthusiastic participation from the membership on these and other projects to come. The help and support has been growing right along with a steady growth in the membership - lets keep up the good work! Remember, the benefit is ultimately yours, so take advantage of the opportunity and help yourself grow - its right there for the taking.

*Corky*

#### WANT ADDS

Antique Farriers Forge 30", som tools, vertical stroke drive - make offer - 839-9028 - Jim Knannele

#### COAL FOR SALE

\$12.00 a hundred, \$200.00 a ton  
S 2 blanks \$2.50 each - Call  
Fire Mountain Forge 1-832-6280

#### MORE COAL FOR SALE

Only a couple tons left \$9.00  
sack while they last - call  
Corky (206) 432-1468.

#### FOR SALE

Contact George Moon, The Dales, Oregon  
(503) 296-3001. Power hammer, forge,  
tongs, etc.

The second annual open forge and hog feed at Bayview Farm in Hillsboro, Oregon was a huge success.

The hog was rather large too, 202 pounds! After fifteen hours over a charcoaled fire the pig was done to perfection. Hot coals and cold Bud make it look easy! Thank you Larry for another great job.

Harry Robinson, when presented with a plaque proclaiming him the Grand Old Man of NWBA, said he liked everything but the "old"! He demonstrated chain and hook making, then everyone who wanted to, made a link or two - we ended up with ten feet of usable chain.

It's always fun to watch new people catch the blacksmithing bug. Thanks for the participation folks!

Craig Rowland, the wood bender, brought a steam box and showed us lots of knotty things to do with wood.

Pat Wall, Metalurgist from Pacific Machinery and Tool Steel, gave a very instructive talk on high carbon and alloy steels.

Other demonstrations included knives, pipe forgings, animal heads, etc. Thanks to Dave Thompson, Jim Fleming, Thad Adams and Fire Mountain Forge.

Saturdays, forging continued until 3:00 a.m. Sunday and re-started at about 6:00 a.m. I guess blacksmiths just don't know when to quit!

Our heartfelt appreciation to our hosts, Ike and Kathy Bay. They really know how to throw a party!

Sincerely: TERRY CARSON

Dear NWBA Members:

I would like to take a moment to thank those members who participated in the Francis Whitaker workshop and all those who attended the Spring Conference at Fort Warden. Thank you one and all for sharing your time, energy, and talents with the rest of us! It is only through your participation, that these events are possible and not only have you made them possible, but you make them a pleasure to host, and a really positive experience to attend. I would especially like to thank Darryle Nelson for his consistent leadership and unflagging energy throughout the blacksmith month of May. It is only through efforts like yours that NWBA exists at all.

It is my sincere desire to see the workshop schedule continued in the future. I think that it is important to hear from the members - what their interests are regarding workshops, and who they would like to see teach. I am therefore requesting your input early on so that plans can be made accordingly.

I would also like to again request the members' input on any matter concerning NWBA. I realize a lot is said at the various events, but it's nice to have these ideas in writing so that they can be brought up later at the Board meetings. Again, let me thank you all for making NWBA work!!

Sincerely: RUSSELL JAQUA



# RUSH JOB CALENDAR

Neg.	Fri.	Fri.	Thu.	Wed.	Tue.	Mon.
8	7	6	5	4	3	2
16	15	14	13	12	11	9
23	22	21	20	19	18	17
31	30	29	28	27	26	24
38	37	36	35	34	33	32

1. EVERY JOB IS IN A RUSH. EVERYONE WANTS HIS JOB YESTERDAY. WITH THIS CALENDAR, A CUSTOMER CAN ORDER HIS WORK ON THE 7th, AND HAVE IT DELIVERED ON THE 3rd.
2. ALL CUSTOMERS WANT THEIR JOBS ON FRIDAY — SO THERE ARE TWO FRIDAYS IN EACH WEEK.
3. THERE ARE SEVEN EXTRA DAYS AT THE END OF THE MONTH FOR THOSE END-OF-THE-MONTH JOBS.
4. THERE WILL BE NO FIRST OF THE MONTH BILLS TO BE PAID, AS THERE ISN'T ANY "FIRST". THE "TENTH" AND "TWENTY-FIFTH" ALSO HAVE BEEN OMITTED — IN CASE YOU HAVE BEEN ASKED TO PAY ON ONE OF THESE DAYS.
5. THERE ARE NO BOTHERSOME NON-PRODUCTIVE SATURDAYS AND SUNDAYS. NO TIME AND ONE HALF OR DOUBLE TIME TO PAY.
6. THERE'S A NEW DAY EACH WEEK CALLED — "NEGOTIATION DAY".

# SILVER WIRE INLAID IN STEEL



T. M. Latané

Though one might not expect it, there is a pleasing contrast between sterling silver and polished steel. This contrast becomes more pronounced as the steel mellows to gray.

Mild steel is a good base for inlaying. The process involves hammering a softer metal or metals, (copper and brass work, as well as silver, and all three may be combined,) into a recess in the steel which is wider at the bottom. Thus the metal being inlayed is trapped with a surface exposed, forming the desired design.

The simplest design to inlay is a ring or 16 gauge wire around a round or rectangular bar - a poker handle or similar object. The groove can be cut with a hack saw blade with a kerf a little less than the diameter of the wire to be inlayed.

A chisel to do the undercutting can be quickly ground from a case hardened cut nail. The corners of the end that is struck by the hammer should be rounded. One side of the point must be ground to a bevel, leaving the cutting edge where the metal is hardest. The bevel must be acute enough to undercut one side of the groove while damaging the other side as little as possible. At the same time, the very tip should be more bluntly beveled to prevent the curling or chipping of the chisel.

The groove is undercut by hammering the chisel perpendicularly to the groove, along the bottom corner. The wall of the groove will lift up some as one proceeds. Some damage will probably be done to the opposite side as the first side is undercut, but when the second side is undercut, the groove should have widened just enough so the completed first side is not marred. The undercutting does not have to be beautiful and need not be drastic. It doesn't take much to hold the silver in place. Neatness is important along the top edge of the groove because this is where the line is formed between the silver and steel that makes the visible design.

The groove must be checked to see that both sides are truly undercut and not just pushed back. If the walls are still square with the bottom of the groove, the chisel was not sharply beveled. Places that are too wide can be narrowed again by pounding down the raised ridge where the edge of the groove was pushed up. When the groove looks even, the raised metal is filed down flush with the surface. Some more chiseling may need to be done to get the groove lips parallel. The groove should, at the surface, be a width equal to the diameter of the wire being inlayed.

With the edges of the groove trimmed and all filed flush with the surface, the steel is prepared to receive the annealed silver. The silver is annealed when heated to a cherry red. It can be cooled slowly or plunged into water or pickle bath when no longer red. The grey fire scale will not matter as the surface will later be filed. Copper and brass anneal in the same way.

The first few hammer blows to the silver wire should spread it into the undercut of the groove to hold the end in place. The wire should not be spread out and hammered into the groove all at once. If this is done, the wire will stretch and buckle up anywhere that it is less firmly imbedded.

Starting at one end, the wire must be completely inlaid  $\frac{1}{4}$  inch at a time. The other end of the wire should be held clear of the steel and centered over the groove so one hammer blow brings  $\frac{1}{4}$  inch of sterling wire

down into the groove and the next couple of blows force it into the chiseled recesses. The wire should not be flattened out on top of the steel if it happened to be of a greater diameter than needed to fill the groove. Excess wire can be filed away later. When the groove has been filled, the wire can be cut off with the chisel and the two ends that have met, pounded to obliterate the joint.

A variation may be obtained by tightly twisting copper and silver wires. In this case, finer wire must be used or a larger groove must be cut.

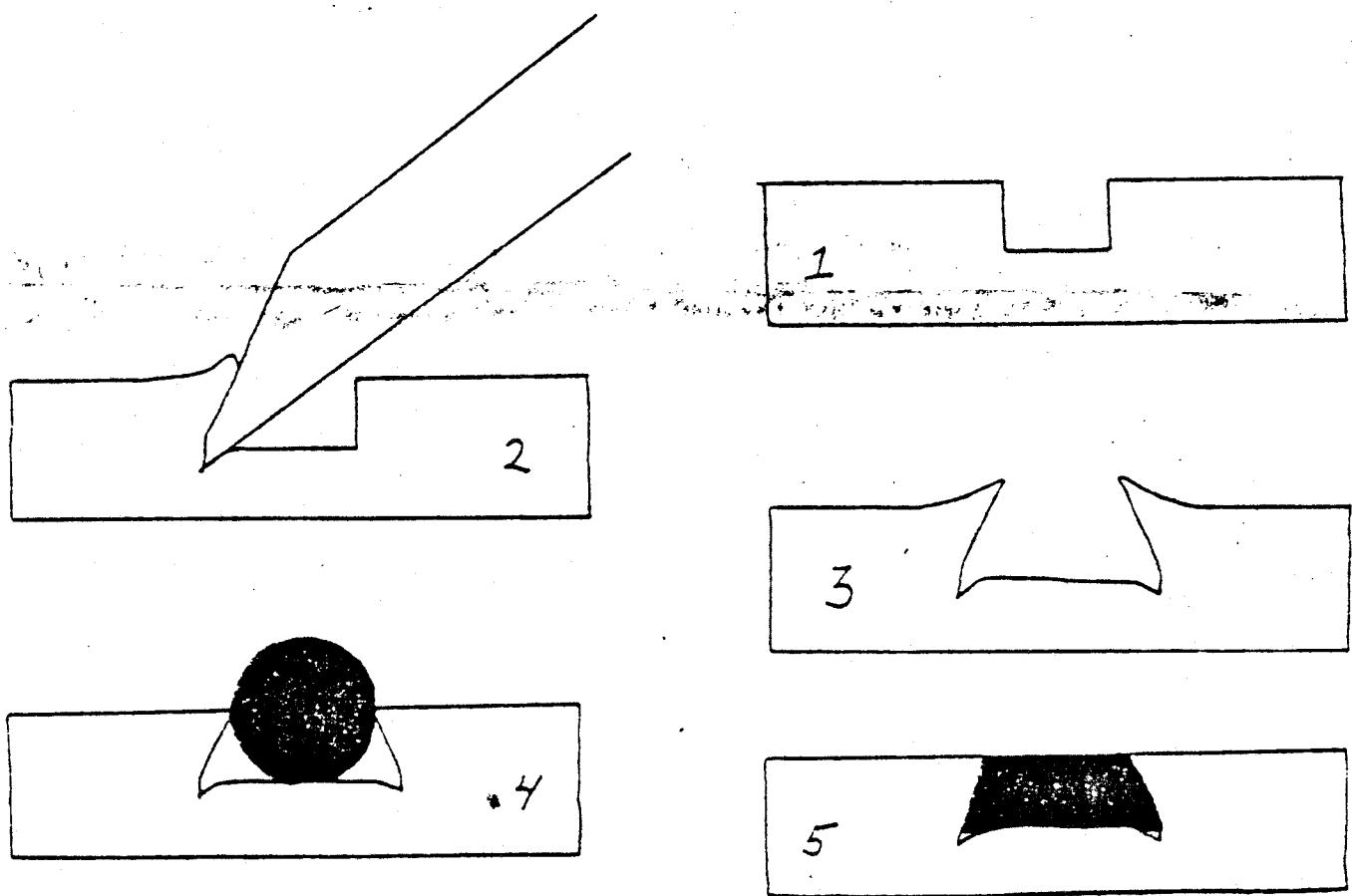
To inlay a wider band rather than wire, two or more saw cuts can be made and the metal between chiseled out. Undercutting in a wider groove is easier.

For making other than straight grooves, the hack saw cannot be used. The grooves must be entirely chiseled. This can also be done without fancy engraving tools. Another case hardened nail chisel, beveled on two sides, is used to stamp a "V" shaped groove following the design lines marked on the steel. This groove should be deeper than the final depth desired.

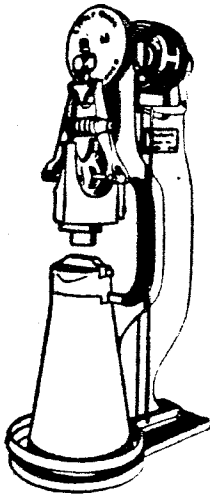
Next, a chisel ground with a flat tip is used to square up the groove. The bottom of the "V" groove will fill in as the steel is tamped down to form a square channel. At this point, the groove is like that made by a hack saw and undercutting is the same.

Some interesting contrasts can be produced by treating the steel with mild acids, such as tomato soup, which causes the steel to turn a dull gray and has no effect on the silver. The steel can be browned or heated to a brilliant blue temper color. The blue color must be protected with some clear coating as it scratches easily.

I decided to try inlaying silver in steel when I saw a picture of a Viking axe which was so rusted that the inlaid silver design stood up like embossing. Though I've not done it yet, I've always intended to start one of my inlaid projects rusting on its way to such a finish.



★Little Giant Power Hammers (F)



80-Lb. Belt Drive

The very latest in hammer design and construction. Smooth running at top or slow speed, heavy or light blow with perfect and continuous control, quickly adjustable for all sizes material within their range, they will render many years of severe and continuous service.

The ram is a steel casting, travels in adjustable V guides assuring accuracy and precision and perfect alignment of dies for matched die work.

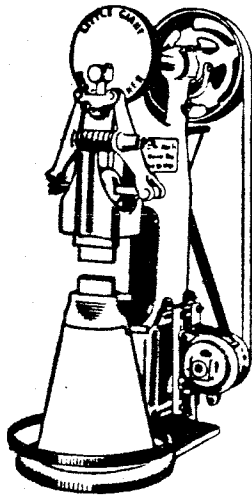
The ram connection is an original and exclusive spring tension type, providing perfect cushion at the upper extremity of stroke and greatly increasing the power of the blow. It is adjustable to extremes without changing the action.

The friction, cone type spider is equipped with hard maple block contact surface. The pulley bearing is babbitted with high grade metal (250 lb. to 500 lb. sizes bronze bushed) operated by foot lever, giving perfect control on both weight and speed of blow with positive instantaneous release.

Bearings are of high grade babbitt metal and bronze.

Dies are of high carbon alloy tool steel, accurately machined and carefully heat-treated, fitted into machined slots and held into position by taper keys and dowel pins.

All hammers are equipped with separate die blocks; the 250-lb. and the 500-lb. sizes with detachable saw blocks.



80-Lb. Motor Drive

Model.....	H	K	P	S	T
Belt Driven.....each	\$140.00	\$210.00	\$420.00	\$950.00	\$1600.00
Motor Driven with Motor Base and Pulley, without Motor.....each	170.00	255.00	475.00	1035.00	1725.00
With 60-Cy. 2 or 3-Ph. Motor (State Voltage).....each	215.00	308.00	540.00	1245.00	2000.00
With 110 or 220 Volt 60-Cy. Single Phase.....each	225.00	333.00	600.00	.....	.....
With 230-Volt Direct Current Motor and Rheostat.....each	255.00	367.00	625.00	1332.00	2148.00
Pick Point Bit Dies.....each	30.00	30.00	45.00	70.00	.....
Combination Pick Point and Chisel Bit Dies each	.....	85.00	100.00	120.00	.....
Heavy Endless Drive Belt	7.00	9.00	12.00	15.00	25.00
Extra.....	.....	.....	.....	.....	.....
Wire Belt Guard for Motor Driven Hammer.....each	30.00	35.00	40.00	60.00	75.00
Enclosed Approved Safety Switch.....each	8.00	8.00	8.00	.....	.....
Size (Weight of Ram).....lbs.	25	50	100	250	500
Forging Capacity—					
General Work.....in. rd.	2	3	4	6	7
Quantity Production.....in. rd.	1 1/4	2	2 1/2	4 1/2	5
Will Handle Flats Edgewise without Adjustment.....in.	3	4	5	15	15
Maximum Capacity.....in.	6	6	7	15	15
Upper Die Size—					
Round Face.....in.	*3x1 1/2	*3 1/2 x 1 1/4	6x3	8x3 1/2	10x4 1/2
Flat Face.....in.	3x2	3 1/2 x 2 1/2	6x3	8x3 1/2	10x4 1/2
Lower Die Size Face.....in.	3x2	3 1/2 x 2 1/2	6x3	13x3 1/2	16x4 1/2
Max. Length Stroke.....in.	8	11	13	20	24
Throat Room—					
Height.....in.	6	6	7	12	14
Depth.....in.	10	14	14	14	15
Belt Pulley Size—					
Belt Driven.....in.	10x3 1/2	12x4	14x5	18x8	24x9
Motor Driven.....in.	12x3	15x3 1/2	21x4 1/2	28x4 1/2	32x7
Height Over All.....in.	5'4"	5'11"	6'6"	7'	8'4"
Floor Space Required.....in.	16x27	20x30	28x42	30x54	32x62
Revolutions (Strokes) per Min.....	375	325	275	195	160
H.P. Required.....	1	2	3	7 1/2	15
Weight—					
Belt Driven.....lbs.	870	1600	3000	5000	10000
Motor Driven with Motor.....lbs.	1000	1800	3300	5500	10700

\*25-pound and 50-pound hammers furnished with rounded face dies unless otherwise specified.

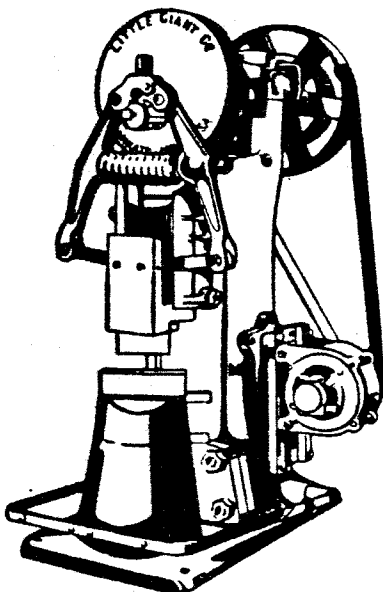
†Include hand compensator with over-load and under-voltage protection. If across the line remote control switch with over-load and under-voltage protection is acceptable deduct \$50.00.

Quotations on 25-pound, 50-pound and 100-pound motor driven hammers do not include switch.

Belt not included in any unit quotations shown above.

All Prices on Application

★F.O.B. Mankato, Minn.



250-Lb. Motor Drive

NORTHWEST BLACKSMITHS ASSOCIATION  
 PO Box 81041 Seattle, WA 98108

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Atherley	Ben		98761
Baker DDS	Allan S.	(206) 334-8245	98290
Carr	Clayton	(509) 586-9278	99337
Casey	Paul	(206) 789-0087	98103
Chisham	Mike	(707) 664-9019	94953
Coomes	Ray		98070
Day	Monty	(509) 732-4515	99114
Dycus	John J.	(206) 631-2203	98042
Falk	Mike	(206) 334-2169	98273
Farrin	Bill		97119
Grier	Charles C.	(206) 668-1360	98290
Jackson	Allan	(206) 225-7498	98603
Jansky	Lou		97225
Jette	George		97119
Joyce	Tom	(505) 471-3971	87501
Katka	Ken	(206) 231-4292	98603
Kelsey	Clifford	( ) 470-3052	CAN
Kinman	Gerald M.		97368
Luark	Gregory A.	(206) 249-3841	98563
McLaughlin	Donald	(206) 623-4484	98702
Petty	Neil B.	( ) 638-7441	97062
Snyman	John T.	( ) 476-2721	98844

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97062 Neil B. Petty ( ) 638-7441  
 22985 SW 82 Tualatin, OR

97119 George Jette  
 Rt 3 Box 234 Cherry Grove, OR

97119 Bill Farrin  
 Rt 1 Box 73 Gaston, OR

97225 Lou Jansky  
 3305 SW 87 Portland, OR

97229 Mark Anderson (503) 643-3852  
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97368 Gerald M. Kinman  
 Rt 1 Box 736 Otis, OR

98042 John J. Dycus (206) 631-2203  
 15026 SE 309 Kent, WA

98070 Ray Coomes  
 Rt 3 Box 408 Vashon, WA

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PO Box 81041 Seattle, WA 98108

\*\*\*\*\* CORRECTIONS \*\*\*\*\* 07/18/84 \*\*\*\*\* Page 1

Adams	Thad C.		97045
Bay	Ike	(503) 645-2790	97123
Holdaway	Robert T.	(206) 365-6257	98125
Howard	Robert		98020
Molthen	Bill	(206) 328-4043	98122
Watt	Michael	(503) 283-0866	97202

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20180 S Henrici Rd Oregon City, OR

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Rte 1, Box 909 Hillsboro, OR

97202 Michael Watt (503) 283-0866  
3625 SE 17 Portland, OR

98020 Robert Howard  
PO Box 94 Edmonds, WA

98122 Bill Molthen (206) 328-4043  
1719 E Spring #203 Seattle, WA

98125 Robert T. Holdaway (206) 365-6257  
Holdaway Lock & Tool Co.  
10810 12th Ave NE Seattle, WA

98103 Paul Casey (206) 789-0087  
 107 N 83 Seattle, WA

98273 Mike Falk (206) 334-2169  
 1836 Skagit City Road Mt. Vernon, WA

98290 Charles C. Grier (206) 668-1360  
 12109 202 SE Snohomish, WA

98290 Allan S. Baker DDS (206) 334-8245  
 1324 7 St Snohomish, WA

98563 Gregory A. Luark (206) 249-3841  
 OK Welding & Forge Shop  
 PO Box 449 Montesanto, WA

98603 Allan Jackson (206) 225-7498  
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98844 John T. Snyman ( ) 476-2721  
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