

# EUGENE 5160 CLUB ~ JULY 2018

<https://www.facebook.com/5160Club>

newsletter archive: <http://www.elementalforge.com/5160Club/>



## JULY'S REGULAR MEETING CANCELED

The Thompsons are once again generously offering their shady lawn for a 5160 Club hammer-in!

### **HAMMER-IN JULY 21<sup>ST</sup>**

Show up no earlier than 9:00am – we'll go until we get tired or the Thompsons kick us out!

Experienced smiths will have their forges set up. Watch them in action - have a chance to try your hand at it if you ask nicely and behave yourself.

If you have steel, tongs, and hammer, bring 'em! If you have a transportable forge & anvil - bring 'em! Gloves, safety glasses, leather apron, and ear plugs are a plus. Synthetic clothing is not recommended as it can melt to the skin – cotton is good if it isn't fuzzy.

Participate at your own risk. Even black iron can burn - steel doesn't get red until around 900°f.

Bring drinking water and your lunch (or plan to eat at the food carts next door at Jerry's).

Request from the Thompsons:  
“Please **drive very slowly** down our lane. The maintenance is all ours. Thanks.”



## NOTES AND REMINDERS

\*\*\*

**Northwest Handbuilt Invitational** – Saturday July 7<sup>th</sup> in Portland is a limited-attendance event. Contact [@northwesthandbuiltinvitational](mailto:@northwesthandbuiltinvitational) for tickets.

\*\*\*

**Northwest Blacksmith Association** – Mentoring at Cowlitz Expo – Longview WA. Classes & Blacksmith Week at Government Camp. Intro Blacksmithing classes at White Salmon, WA; SwaptoberFest October 26-28 Longview, WA <http://blacksmith.org/events/>

\*\*\*

**California Blacksmith Association** puts on a slew of events to the south of us. Check out their list: <http://calsmith.org/CBA-Events>

\*\*\*

**Bent River Forge aka Farrier Supplies** – north of Monroe, OR has blacksmithing tools and supplies and ongoing intro to blacksmithing and other classes: <https://www.facebook.com/FarrierSuppliesOR/>

\*\*\*



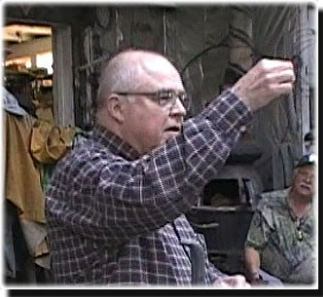
**David Thompson** – has coke and coal for sale (near Jerry's in Eugene, OR) – Talk to him at one of our meetings or call 541 688-2348.

\*\*\*

**Blade Show West** returns to the Portland Convention Center on October 5-7. A table goes for \$350. <http://www.bladeshowwest.com/>



## JUNE MEETING NOTES



**DENNIS ELLINGSEN** started out the meeting with a give-away. Some scrapped cable is available through one of his former mill customers. Dennis asked if we were interested (yes). "...the question came up 'what can you do with cable?'" Make knives, of course!

Dennis then passed around one of Wayne Goddard's cable Damascus blades:



And another of Wayne's blacksmith style knives:



Dennis's last pass-around was another Goddard cable knife that was paired with a piece of the cable partially welded:



*Dennis has handed off some of the cable to me – I will quench test a piece and if it shatters nicely (is hardenable in water) I'll chop it up and bring it to the hammer in. ~ Michael Kemp*

**NOAH** shared the news that he is moving across the country and downsizing to an apartment – so he had some of his knife making materials and tools for sale. Some of which he had in his rig for folks to look at/purchase after the meeting.



**ERIK LAND** said "I started these two the day after the knife show – then life just kind of fell in on me and I haven't been in the shop since – I haven't even put an edge on 'em... I've had pretty good success with selling kitchen cutlery – I'm still playing with that, trying to find just the right shape." He noted that in using the same stock he uses for folders, his kitchen knives are a little thicker than some others. "3/32 inch – and that's pretty stout for a kitchen knife."



**JIM JORDAN** was up next with something old and new. "Here's a knife that I made last year – a little kukri. A2. Curly koa handle – stabilized... I sold this at the knife show and the guy begged me to make a sheath for it."





The friction-fit sheath is curly holy from Ireland – courtesy of Jove Lachman-Curl – from a tree he played on as a boy. Jim joined the sides with a strip of inlay – the seams are reinforced inside with copper.



**FRANK BOBBIO**

said “I only brought one knife.” First up he shared a knife made from concrete cable (for prestressed concrete) “maybe 5/8 diameter with only six strands”. His quench test of

the cable shattered nicely “it hardened better than other cable I've worked with”. He offered the work-in-process blade to anybody that wanted to finish it up – and had a quick taker on it:



“OK – well I did bring one more – this is my favorite knife so far! Completely sole authorship – I made the Damascus – my first time grinding a fuller... I'm surprised I pulled it off – forged the guard – stabilized the wood myself – the wood is maple burl... I forged the skull [pommel] – heat colored the skull – I blued the guard...”

In response to a question Frank said that the Damascus was pallet strapping and bandsaw blade – about 60 layers. *See the January 2017 newsletter for Frank's notes on selecting pallet strapping suitable for knifemaking.*

Frank said that to give the Damascus some texture he

used a press die with little welding nubs scattered across the surface (3/16” diameter and 1/4” tall). He found that this was not really any faster than drilling holes for a raindrop Damascus effect. “First off the die sucks the heat out so you've got a whole bunch of heats to texture the whole bar... then you've got an hour of grinding” [to get the bar smooth to the bottom of the dimples] With drilling out the holes you just flatten the bar under press or hammer. “So you've got an hour and 10 minutes drilling the holes or an hour and 10 minutes grinding [if you press in dimples].”



Somebody asked Frank how he did the fuller. “To start with I ran a 3/8” ball in the milling machine...” and then went to hand grind it with a 5/8” small wheel – but the wheel kept catching the blade. To clean up the wobble he used a diamond wheel on his flex shaft tool – and using his finger on the edge as a guide he took 1/8” off the sides of the fuller. Then back to the grinder with a 1” wheel and used a slow speed to finish it up.

He's got more options on order for milling the fuller next time but “Even if you machine the fuller you still have to use the grinder for finer grits to get the scratches out.”

One of the mock-ups he did for the guard was a couple of claw-hands reaching up – but he thought that might be too much.

There was quite a discussion about silver soldering guards versus press fit and adhesives.

**BROME MCCREARY** started with a heartfelt thanks to Martin Brandt for mentoring his son for a school project (making something under the guidance of an experienced maker – in this case





Damascus steel). “I really want to honor [Martin's] skill set... many of us know things, but it takes a different skill set to teach it really well...” Brome's son finished one knife and got another partly done. Here's a photo off Brome's phone – nice!:



He then dug into his bag – bringing out a variety of items – and a set of throwing stars. “This is to remind us that knifemaking should be fun. My son and I like to throw blades...” he picked up some bandsaw steel off-cuts from a company in Albany when they went out of business. He's also made a bunch to tomahawks and throwing knives from it. He's left them unhardened. “So again, it's just something fun to throw around – they get all beat up but you don't worry about 'em.” He roughs them out with a cut-off blade on an angle grinder then grind to shape. A downside he noted is that they are thinner than professional throwing knives and tend to vibrate when thrown – but so light and fun!



Next Brome passed around a pair of small scissors that he got at the knife show – simple & effective loop design... and a pair of hand forged bonsai shears. The seller had a whole story about them having something to do with WWI demolition that Brome was not buying into – but just nodded and talked him down to a price that he thought was about right for them.



“I have a fondness from my childhood for Schrade's Uncle Henry – that whole line...” The Case knives were a bit more expensive so Schrade it was – and is! He eased off the hard corner on the back of this one:



Next he moved on to some of his sanding sticks and jigs. He makes a variety of stick shapes for different contours – and sometimes uses clips to hold the sandpaper to avoid hand cramps from gripping the sandpaper for hours.





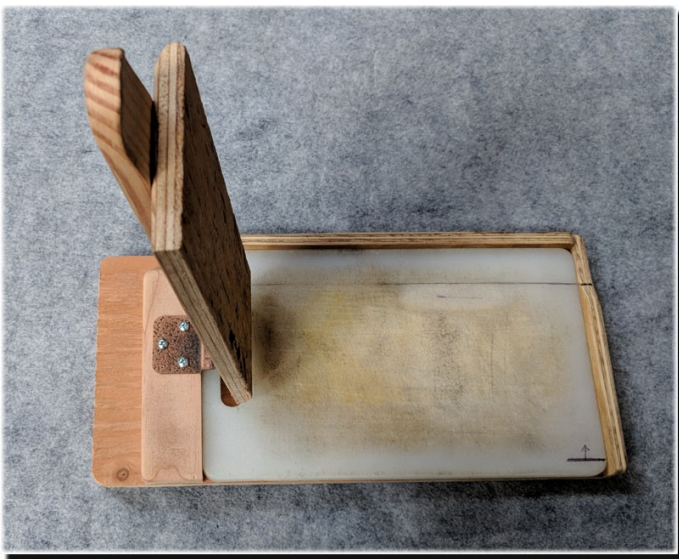
Gluing on a layer of leather or soft rubber will give sanding for an eased edge. Gasket material or mild steel facing gives you a firmer or sharper edge to work flat or corner areas.

For getting into tight curves, dowel or rod works great. Brome adds some plastic tubing or radiator hose over the dowel “I find that if it's got a little bit of give the sandpaper lasts longer.”

He uses 3M wet & dry – and really likes RhynoWet sandpaper. Lynn Moore mentioned using sticky-back sandpaper rolls – like from body shop supply. I believe Lynn was talking about Wesco Auto Paint (APS) that's just north of George Sutton RV on the side road by Hwy 99 as the place where he bought a few rolls of sticky-back sandpaper in various grits. He loves using it!

Brome uses a tacky 3M spray on the back of regular sandpaper. I've done this too and found that you have to get VERY low tack spray or you spend extra time scraping the paper off your sanding tool. I've had good luck with Krylon Easy-Tack – but I may have to pick up some of the auto body sticky back rolls!

Brome passed around a template he has for cutting sandpaper sheets to the specific size he uses with his sanding blocks – the sandpaper is clamped inside on specific marks – drop the cover down and run a knife down the edge of the cover (on the embedded cutting board) to cut the correct width of sandpaper:



**STEVE GODDARD** introduced us to “Flipper” - definitely NOT a knife – but his new favorite estate sale find. A cocobolo carved dolphin!



“About a month ago I was in Idaho Falls...” and visited Robert Martin's shop (Tears of the Sword). “He manufactures Damascus and has a guy there that grinds the blades... it was pretty amazing to watch these guys... he wears a forge out every 6 months... he also sells steel... go to [tearsofthesword.com](http://tearsofthesword.com) and you'll see everything he has.” This is the same guy that has (had?) a power hammer for sale.

Then Steve brought out a couple of knives that he's completed since the April knife show. They are based on his dad's designs in D2 steel. One has a handle in G10 with mosaic pins:



And the other has green Micarta from Robert Martin:

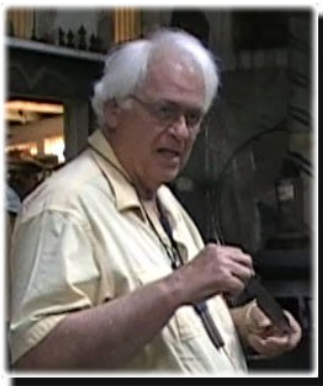




“This is some ironwood I got in Tuscon last Fall... in the last 5 or 6 years since I've been making knives again this is the most popular model... I got it out of the San Francisco Knifemaker book.”



“I wanted to build one bigger than that – and hopefully, next meeting I'll have one even bigger...” On this one he added tube stock around the mosaic pins – which bulks them up for the bigger knife.



**PAUL HAINES** was up next “I took 2 weeks off – helped a farmer over near Fort Rock... This is the san mai I brought over last time – did a little more work on it. The core seems to be pretty straight. I put a light etch on it so you can see the core.” The outside layers are cable Damascus – the core is “some Spear & Jackson steel.”



I prompted **MIKE JOHNSTON** “Mike – you drove all the way here...” which got him up to the front.

“I've been a little bit busy with building a power hammer. Welding and whatnot...” He's building a guided helve hammer based on the design by James Helm. *Here's the YouTube video of James' description of his hammer:*

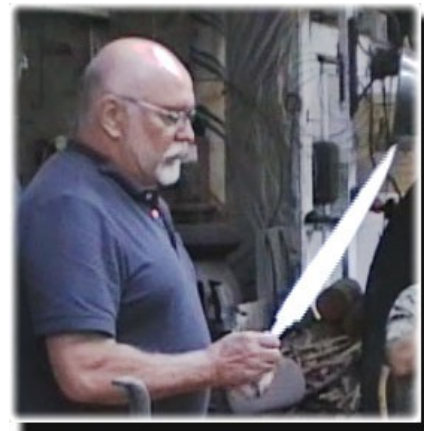
<https://www.youtube.com/watch?v=uzruqYkKGNM>

“His is a little light in the anvil department – about 550 lbs but a 100 lb hammer – and he says he wished he had a heavier anvil. Well, over in central Oregon there's a scrapyard that had big stuff in it – and I picked up two 12” rounds (15” long to 18” long) – weighing 550 lbs to 600+ lbs. That's what I'm making the anvil out of, then I'll have a 100 lb hammer. The base plate is 60” x 24” by 1.5” - about 560 lbs. Just mass. Just a lot of mass.”



“The nice thing is that the shop that I used to work at lets me use their equipment. I can cut up to 18” material. It took about 45 minutes to cut a clean end on one of those rounds. If anybody needs big rounds, the scrapyard has more of it... the nice thing is, it's 30 cents a pound – anything in their yard... they've got 100 stacks of material as big as this shop and as tall as the ridgeline... if anybody needs anything get hold of me... but they wouldn't sell me the 2” road plate that was brand new – they were selling that to a road building company...”

But Mike has taken time to forge & rough grind another long thin Bowie. The steel is from spring harrow tine. “It seems like 1080ish steel... from back in the 1920s or 30s – some may be older than that because they came







from a horse drawn harrow.” Mike has been using this stock with great results. 17 inches of beauty.

“So, just because I was having fun, I decided to forge one out of a portion of a John Deere field mower blade.” You can see where he's forming the hole in the blade into a finger notch. Mike plans on using the root beer Micarta that Dennis Ellingsen has provided for the handle.



In response to a question Mike said that for heat treatment, he starts by normalizing three times - 1<sup>st</sup> at 1500°f, then drop down to 1400°f then down to 1300-1325°f. He brings the blade up to temp then will typically hang the blade in still air and let it cool to black then go to the next normalizing cycle. This is for grain reduction “and to make all the bad juju go away.” For hardening he brings it up to 1550-1570°f and quench point first in 120°f canola oil. Tempering is just throw it in a toaster oven at 400°f for an hour, let it air cool, put it back in for an hour, air cool, one more cycle in the oven for an hour, air cool. That's for 5160 – which gives him Rockwell hardness 58-59 HRc. Different steels are different.

In response to a question he said he doesn't have any reason to anneal (before grinding) “because I'm not draw filing any more. The only thing I'll draw file is the clip.”

Last up was a little kitchen knife in cable Damascus that he's almost finished with - copper bolster and bocote octagonal handle, Sally Martin pin.



**LYNN MOORE** came to the front briefly to offer copies of info he gathered at the NWBA conference.



**MARTIN BRANDT** continues his quest for a good san mai blade. “I finally got off my duff and sanded it out and etched it...” The outer layers are chainsaw Damascus – the core is from a Black Diamond file from Wayne's treasure trove.

This is Martin's 3<sup>rd</sup> san mai “and the thing I've figured out is that unless you're better than me, probably a lot of people are, I quit trying to forge my bevels in to the san mai. It's better to forge it close to shape [without bevels] and grind it and center it to get [the core layer] back to center.”



In response to a question Martin said that he ground off the teeth (and depth gauges) down to the chain before forge welding it.

Martin noted that for straightening a blade post heat-treat he tried something he'd never done before. He took a bar of mild steel, used some street sweeper tine to shim the blade and clamp both ends so that you are reversing the bow in the blade (just slightly) – then putting it in the oven for another tempering. Straightened the blade right out!

And that wrapped up the “formal” <cough><cough> part of the meeting. We planned the hammer-in on July 21<sup>st</sup> – and opted to cancel the standard meeting that would have been on July 5<sup>th</sup>.



We are very grateful to the Thompsons for hosting the upcoming hammer-in!!!

Have fun and work safe -

Your Scribe ~ Michael Kemp



## WEBSITE LINKS

### 5160 CLUB

5160 Club Newsletters are archived at:  
<http://www.elementalforge.com/5160Club/>

Hint: to Google the archive for a specific knife style or presenter name, use a search like this:

**sami site:**<http://www.elementalforge.com/5160Club>  
or this:

**ron lake site:**<http://www.elementalforge.com/5160Club>

### OREGON KNIFE COLLECTORS ASSOCIATION (OKCA)

The OKCA hosts monthly dinner meetings where you are guaranteed to see treasures from the wide world of “things that go cut!” OKCA also puts on a small show in December and the big knife show in April – if you haven't seen it you've been missing something special!

<http://www.oregonknifeclub.org/index.html>

Go to the “Knewsletter” link and scan a recent newsletter for a membership form and contact info.

### FORUMS

Bladesmith's Forum aka Don Fogg Forum  
<http://www.bladesmithsforum.com/>

Knifedogs Forum (USA Knifemaker)  
<http://knifedogs.com/forum.php>

American Bladesmith Society  
<http://www.americanbladesmith.com/ipboard/>

Usual Suspects Network  
<http://www.usualsuspect.net/forums/forum.php>

Blade Forums  
<http://www.bladeforums.com/>

Hype-Free Blades  
<http://www.hypefreeblades.com/forum>

Peter Newman of Bent River Forge/Farrier Supplies has a closed Facebook group for Oregon Blacksmiths  
<https://www.facebook.com/groups/173156733117832>

### REFERENCES

Wayne Goddard's books are available at Amazon:  
<http://www.amazon.com/Wayne-Goddard/e/B001JS9M10>  
And you can email the Goddards directly for his DVD at [wgoddard44@comcast.net](mailto:wgoddard44@comcast.net)

Most of the companies in the “Knife Maker General” links (below) have a section for how-to books and DVDs.

Verhoeven's Metallurgy For Bladesmiths PDF – this is a very deep dive, not an introduction.  
<http://www.feine-klingen.de/PDFs/verhoeven.pdf>

Verhoeven's updated book:  
<http://www.amazon.com/Steel-Metallurgy-Non-Metallurgist-J-Verhoeven/dp/0871708582>

ZKnives – Knife steel composition/comparison/etc.  
<http://zknives.com/knives/steels>

Kevin Cashen's Bladesmithing Info  
<http://www.cashenblades.com/info.html>

Tempil Basic Guide to Ferrous Metallurgy  
[http://www.tempil.com/wp-content/plugins/download-monitor/download.php?id=Basic\\_Guide\\_to\\_Ferrous\\_2010.pdf](http://www.tempil.com/wp-content/plugins/download-monitor/download.php?id=Basic_Guide_to_Ferrous_2010.pdf)



From the Heat Treating Society of the ASM – the Heat Treater's Guide Companion for Android devices. Look up heat treating details on hundreds of steels in the palm of your hand.

<https://play.google.com/store/apps/details?id=com.pfiks.mobile.heattreaters&hl=en>

My own “Knife Info” has some of my knife musings and cheat sheet charts – plus Oregon and Eugene knife laws:

[http://elementalforge.com/tips\\_notes/](http://elementalforge.com/tips_notes/)

## **CLASSES FOR KNIFE MAKING, ETC.**

Gene Martin offers personal instruction at his shop south of Grants Pass for a daily rate.

<http://www.customknife.com/>

Michael and Gabriel Bell of Dragonfly Forge offer an ongoing series of small group classes in Japanese style sword forging and fittings. Located on the southern Oregon Coast.

<http://dragonflyforge.com/>

Murray Carter offers small group classes in a variety of subjects, primarily focused on traditional Japanese cutlery. Located in Hillsboro, Oregon.

<http://www.cartercutlery.com/bladesmithing-courses/>

David Lisch is an ABS Master Smith who has taught classes in Washington. He recently moved his shop and has not restarted classes yet – keep an eye out on this page:

<http://www.davidlisch.com/Learn.html>

Jim Hrisoulas now offers both formal classes and mentoring sessions in 2 hour blocks at his shop in Henderson, Nevada:

<http://www.atar.com/joomla/> and click the “Bladesmithing Classes” link.

The ABS (American Bladesmith Society) offers classes in Washington, Arkansas and elsewhere – if you are up for traveling across the country to take classes, check out their “Schools” link:

<http://www.americanbladesmith.com/>

James Austin offers forging classes in Oakland, CA – axes, tongs, viking anvil, etc.:

[http://forgedaxes.com/?page\\_id=148](http://forgedaxes.com/?page_id=148)

Blacksmithing classes at Farrier Supplies aka Bent River Forge

26729 99W, Monroe, Oregon

Coal, coke, forges, parts, tools, classes...

<https://www.facebook.com/FarrierSuppliesOR>  
(541) 847-5854

Blacksmithing and some bladesmithing workshops are hosted regularly by the Northwest Blacksmith Association: <http://blacksmith.org/>

USA Knifemaker has a lot of fun & informative videos on their YouTube channel:

<https://www.youtube.com/user/USAKnifemaker/videos>  
... and hey - “free” is a hard price to beat!

Nick Wheeler also has a good YouTube channel with a lot of how-to videos:

<https://www.youtube.com/user/NickWheeler33/videos>

## **GENERAL TOOLS & SUPPLIES**

Woodcraft of Eugene – thanks to Joe & the crew for six years of hosting 5160 Club meetings – we've had to move on, but the hospitality was appreciated.

<http://www.woodcraft.com/stores/store.aspx?id=515>

MSC Direct

<http://www.mscdirect.com/>

McMaster-Carr

<http://www.mcmaster.com>

Grainger

<http://www.grainger.com>

Surplus Center

<http://www.surpluscenter.com/>

Victor Machinery Exchange

<http://www.victornet.com/>



Zoro  
<https://www.zoro.com/>

## **KNIFE MAKER GENERAL**

Knife kits, steel, tools, machines, supplies such as handle material, fasteners, belts, glues, finishes, etc.

Jantz Supply – Davis, OK  
<http://www.knifemaking.com>

Texas Knifemaker's Supply – Houston, TX  
<http://www.texasknife.com>

USA Knife Maker's Supply – Mankato, MN  
<http://www.usaknifemaker.com/>

Knife and Gun (K&G) – Lakeside, AZ  
<http://www.knifeandgun.com/>

Alpha Knife Supply – ?Everett, WA?  
<http://www.alphaknifesupply.com/>

True Grit – Ontario, CA  
<http://www.trugrit.com>

Especially Abrasives – lower cost 2x72 belts  
<http://www.especiallyabrasives.com/>

## **KNIFE STEEL SOURCES**

New Jersey Steel Baron  
<http://newjerseysteelbaron.com/>

Kelly Cupples (High Temp Tools) – Alabama  
<http://www.hightemptools.com/steel.html>

Niagara Specialty Metals – New York  
<http://www.nsm-ny.com> (click Products/Knife Steels)

SB Specialty Metals – New York & Texas  
<http://shop.sbsm.com/>

Bohler Uddeholm – numerous U.S. locations  
<http://www.bucorp.com/knives.htm>

Sandvic – stainless steels – Texas & Pennsylvania  
<http://www.smt.sandvik.com/en/products/strip-steel/strip-products/knife-steel/sandvik-knife-steels/>

Pacific Machinery & Tool Steel – Portland, Oregon  
<http://www.pmtsco.com/tool-die-steel.php>

Alpha Knife Supply – ?Everett, WA?  
<http://www.alphaknifesupply.com/>

## **KNIFEMAKER EQUIPMENT**

Beaumont (KMG) [Ohio] – the industry-benchmark  
2x72 belt grinder  
<http://www.beaumontmetalworks.com/shop/>

Travis Wuertz [Arizona] – premium versatile grinder  
[http://www.twuertz.com/Home\\_Page.php](http://www.twuertz.com/Home_Page.php)

Pheer [Gresham, Oregon] – affordable grinder made in Oregon  
<http://www.2x72beltgrinder.com>

Oregon Blade Maker [Oregon] – affordable chassis and accessories, good reputation – you supply the motor  
<http://stores.ebay.com/oregonblademaker>

AMK [Ohio] – affordable grinder, quick-change between platen & contact wheel  
<http://amktactical.com/>

Northridge Tool [Ohio] – precision manufactured belt grinders  
<http://www.northridgetool.com/>

Coote [Port Ludlow, Washington] – affordable, simple grinder – you supply the motor  
<http://www.cootebeltgrinder.com>

Marinus Kuyl [Hillsboro, Oregon] – another affordable grinder made in Oregon – and parts – you provide the motor.  
<http://oregonblademaker.com>

Grinder-In-A-Box – grinder kit, assembly required  
[http://www.polarbearforge.com/grinder\\_kit\\_order.html](http://www.polarbearforge.com/grinder_kit_order.html)



The “No Weld Grinder” plans can be purchased from <http://usaknifemaker.com> either as a booklet or as a download – just use the search box to enter “no weld grinder”

Wayne Coe [Tennessee] – grinders, motors, VFDs...  
<http://www.waynecoeartistblacksmith.com>

Contact Rubber Corp – wheels etc.  
<http://contactrubber.com/contact-wheels.asp>

Sunray – drive wheels  
<http://www.sunray-inc.com/drive-wheels/>

Renaissance Metal Art [Mulino, Oregon] – 80# ram air hammer  
<http://www.rmetalart.com/tools.htm>

Anyang [Texas] – air hammers from 20# to 165#  
<http://www.anyangusa.net/>

Meyer Machine Tool [Ohio] – treadle hammer  
<http://www.meyermachinetool.com/Blacksmith-div-.html>

Spencer/Clontz tire hammer plans/workshops  
[http://www.alaforge.org/Trading\\_Post.html](http://www.alaforge.org/Trading_Post.html)

Appalachian Power Hammer plans  
<http://www.appaltee.net/rusty/index.htm>

Helve Hammer and Quick-Change Dies Video – from a BladesmithsForum.com thread.  
<https://www.youtube.com/watch?v=uzruqYkKGNM>

True Grit – under “Machines & Accessories”  
<http://www.trugrit.com>

## **FORGE & REFRACTORY**

Chile Forge  
San Marcos, Texas  
<http://www.chileforge.com/>

Mankel Forge – Muskegon, Michigan  
<http://mankelforge.com/forges.html>

Western Industrial Ceramics Inc.  
All things refractory – Tualatin, Oregon  
<http://www.wicinc.com/>

High Temp Tools (scroll down the page for the category buttons) Tuscaloosa, Alabama  
<http://www.hightemptools.com/supplies-mainpage.html>

High Temp Inc. has also been recommended for Kaowool etc. Portland, Oregon  
<http://hightempinc.net/>

Omega – thermocouples & measuring equipment Stamford, Connecticut  
<http://www.omega.com/>

Auber – more thermocouples and controllers, etc. Alpharetta, Georgia  
<http://www.auberins.com>

Hybridburners – home of the venturi T-Rex Smithville, Georgia  
<http://www.hybridburners.com/>

Pine Ridge Burners – for ribbon burners and all associated fittings, blowers, valves, etc. Conway, Massachusetts  
<http://www.pineridgeburner.com>

Zoeller Forge – low cost venturi & parts: Z Burners Lanesville, Indiana  
<http://zoellerforge.com/>

Here's the original article on making a ribbon burners that John Emmerling wrote back in 2005 for the NWBA Newsletter:  
<http://blacksmith.org/2005-1-hot-iron-news/>  
You can download the PDF from that site. John's article starts on page 11.

## **BLACKSMITH**

Farrier Supplies aka Bent River Forge  
26729 99W, Monroe, Oregon  
Coal, coke, forges, parts, tools, classes...  
<https://www.facebook.com/FarrierSuppliesOR>  
(541) 847-5854



Blacksmith Depot  
<http://www.blacksmithsdepot.com>

Pieh Tool  
<http://www.piehtoolco.com>

Centaur Forge  
<http://www.centaurforge.com>

Quick and Dirty Tool Co.  
<http://quickanddirtytools.com/>

## **LOGO/ETCHING/STAMPS**

Ernie Grospitch – Blue Lightening Stencil  
<http://www.erniesknives.com/>

IMG International Marking Group  
<http://img-electromark.com/>

Electro-Chem Etch  
<http://www.ecemmi.com/products.html>

Steel Stamp, Inc.  
[www.steelstampsinc.com](http://www.steelstampsinc.com)

## **HEAT TREAT SERVICES**

Here are some folks who provide heat treating services for blades. While all of these have been recommended by one reputable person or another I have not had experience with them. If you use one, let us know how it went!

Paul Bos Heat Treating at Buck Knives. Paul Bos has retired and handed the torch to Paul Farner. Highly reputable. Post Falls, Idaho:  
<http://www.buckknives.com/about-knives/heat-treating/>

Peters Heat Treating is another highly reputable operation. Meadville, Pennsylvania:  
<http://www.petersheattreat.com/cutlery.html>

Texas Knifemaker's Supply offers heat treat services. Houston, Texas:  
<http://www.texasknife.com/vcom/privacy.php#services>

Tru-Grit provides heat treat services. Ontario, California: [https://trugrit.com/index.php?main\\_page=index&cPath=34](https://trugrit.com/index.php?main_page=index&cPath=34)

K&G also provides heat treat services but I can't find a reference on their web site – you'll have to contact them for details. Lakeside, Arizona:  
<http://www.knifeandgun.com/default.asp>

Byington Blades heat treat service is in Santa Clara, California: <http://www.byingtonblades.com/>

It's my understanding that Chris Reeve Knives uses ACE Co in Boise Idaho – which is enough for me to add them to the list:  
<http://www.aceco.com/heattreat/index.html>

## **WOOD SUPPLIERS**

Burl Source – handle blocks/scales – So. Oregon  
<http://www.burlsales.com/>

Shelton Pacific – stabilized wood – Shelton, WA  
<http://stores.sheltonpacific.com/>

Gilmer Wood – N.W. Portland  
<https://www.gilmerwood.com/>

North Woods Figured Wood – Gaston, OR  
<http://www.nwfiguredwoods.com/>

## **WOOD STABILIZING**

K&G (Knife and Gun) – Lakeside, AZ  
Good reputation with everybody.  
<http://www.kandgstabilizing.com>

Gallery Hardwoods – Eugene, OR  
I've purchased stabilized blocks from them at the April show. They tend to be heavier, presumably more durable/stable but less wood-feel than others.  
<http://www.galleryhardwoods.com/stabilized.htm>

WSSI (Wood Stabilizing Specialists International, Inc.) – Ionia, IA – some folks have had issues with them, some folks are totally happy.  
<http://www.stabilizedwood.com/>

Alpha Knife Supply – ?Everett, WA?  
<http://www.alphaknifesupply.com/>

Turn Tex Woodworks – San Marcos, TX  
“Cactus Juice” and pressure chambers etc. for the do-it-yourself folks – your mileage may vary.  
<https://www.turntex.com>

## **OTHER GOODIES**

Sally Martin Mosaic Pins – So. Oregon  
<http://customknife.com/index.php?cPath=13>

Oregon Leather – 810 Conger Eugene and 110 N.W. 2ND Portland  
<http://www.oregonleatherco.com/>

Coyote Steel – wide variety of new steel, scrap, copper, brass, bronze – Garfield & Cross St. Eugene  
<http://www.coyotesteel.com>

Cherry City Metals – Salem, Oregon – metal recycling and useful objects  
<http://www.cherrycitymetals.com/>

Amtek – tool steel & cutting tools  
<http://websales.amtektool.com>

Rio Grande – jewelry tools/supplies  
<http://www.riogrande.com>

Otto Frei – jewelry tools/supplies  
<http://www.ottofrei.com>

M3 Composite – space age mokume & other  
<http://www.m3composite.com/>

Voodoo Resins – striking resin handle material  
<http://www.voodooresins.com/>

Minarik automation & control  
<http://www.minarik.com/>

The Engineering Toolbox (formula & info reference)  
<http://www.engineeringtoolbox.com>

Valley Stainless (that does water-jet cutting) is one of Craig Morgan's customers. They told Craig “bring in a pattern” and they'd work with you on small batch cutting. They don't have a website yet. 29884 E Enid Rd, Eugene, Oregon 97402 (541) 686-4600.