



I saw one of these at the NWBA conference. The electric motor sits on a pivot – it engages with the tire when you press the foot bar. Releasing the foot bar engages a brake on the tire. It has a “little giant style” ram action. The dies that I saw were a combo of flat and drawing, placed at a 45° angle to the front of the hammer. You could make up other dies and swap them in.

At the moment I don't find a video of knife making with one of these hammers – but here's a one of custom metalwork being done:

<http://www.youtube.com/watch?v=oMS1t3x7-Cs>

I watched knife maker Bob Kramer use one of these hammers at the NWBA conference – it was Bob who alerted us that Larry would be doing a build-your-own hammer workshop. In answer to questions, Bob said he had used this design tire hammer for some serious work and was completely satisfied with it.

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OCTOBER MEETING

The 5160 Club will meet at Woodcraft of Eugene (Delta Oaks – Beltline & Delta Hwy) October 3rd at 6:00 pm. Bring your show-and-tell!

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BUILD-YOUR-OWN “TIRE HAMMER” WORKSHOP

This is not affiliated with the 5160 Club – but it's an opportunity that I wanted to alert our folks to.

The “tire hammer” is a 50# power hammer. I believe it was originally invented by Ray Clontz. Clay Spencer worked up the drawings and has popularized the build-your-own hammer workshops. Several hundred of these hammers have been built in the East and South. To my knowledge this is the first build-your-tire-hammer workshop on the West coast.



Larry Langdon (<http://www.monstermetal.org>) will be hosting a workshop to build your own tire hammer January 10-12 2014. The shop is located at:

Monster Metal
2809 Academy Dr SE
Auburn WA 98199
206-240-1414

That's out the East side of Auburn, a few miles East of I-5 between Tacoma and Federal Way.

A deposit of \$800 will get your name on the list . Larry expects the total cost to be between \$1200 and \$1400 (dependent on actual material cost).

For comparison, an "Iron Kiss" 50# goes for around \$6000. Bert Romans in Mulino, OR advertises an 80# hammer for around \$5000. A 65# Blu Max goes for \$5000. And in the used market you can pick up an old Little Giant for a few thousand. Add shipping – and in most cases, add an industrial air compressor.

If you are seriously interested, contact Larry Langdon for details. larry@monstermetal.org



SEPTEMBER MEETING

A big **THANKS!** to Mike Johnston for covering for me while I was out of town tending to a client for my "day job." Mike took the notes and photos – so all I had to do for the newsletter is a little cut/paste/format. Here's Mike's report:

Wayne started off by showing a board that he had just purchased at Woodcraft. Wayne said the crotch grain in this piece would make good spacer material. He said the board would not be strong enough to make a full handle because of the grain.



A student took Wayne's ABS school in Arkansas and said he was going to come to Wayne's shop to do his knife testing. When the student brought in his test knife, Wayne thought something was wrong because the dimensions in profile were wrong for a test knife. The student started the test and the knife broke at the tang while attempting to cut through a 2X4. Wayne looked at the break and could see the grain structure of the steel was very course.



Wayne silver brazed the break back together and was able to bend the knife to 90 degrees at the braze.



Wayne attributed the failure to three things. The student overheated the steel while making the knife, they did not do any testing on their knives before coming to Wayne's and the student did not have the correct blade dimensions for a test knife.

Wayne said the student left the test knife at Wayne's shop, which was a mistake because Wayne uses it for a "what not to do" prop all the time.

Wayne showed us a Corn Knife similar to one he used as a kid. The spine showed a very narrow band of blue heat color. Wayne said as an experiment he ground off all the teeth from a Nicholson Black Diamond file, which has 1.25% carbon. He used a 000 tip on his Oxy-Acetylene running not to a cutting temp (he described it as "small and hot") to heat the "spine" of the file. The result was a very thin blue band on the spine of the file like the corn knife. This soft back draw heat treating allowed Wayne to successfully bend the file to 90 degrees without breaking.

Bear mentioned that one of the recent photos of Wayne in Blade Magazine showed Wayne standing in front of a CLEAN work bench. Wayne said that photo was

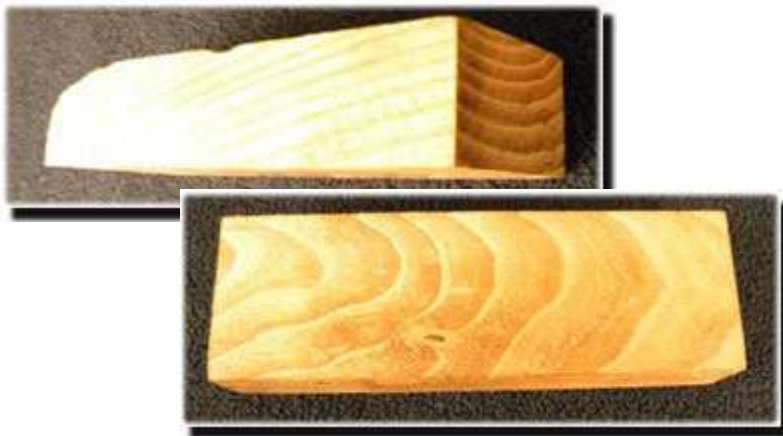
meant as a joke and that there were two 5 gallon buckets of “stuff” from the bench on the floor.

Everyone agreed that Wayne's articles in Blade Magazine will be missed. Wayne assured us that if something really sparked his interest, he would submit an article.

Marty Brandt brought in a small bucket of wood that he had been working with to talk about different ways to cut wood to get the maximum figuring in the grain for making handles.



Typically, when a piece of wood is cut directly in line with the end grain, the sides of the scales or handle will be very plain. When the same piece of wood is cut at slight diagonal to the grain lengthwise, the side will show a banded “U” or “V” pattern:



Each piece of wood will be different and Marty said the wood determines how it needs to be cut to show the most figures grain. Marty said he tries to make the rough cuts to the wood so the end grain is as straight up and down as possible. That way when he re-saws

the blank he can alter the angle in relationship to that end grain.

Marty and Wayne have been experimenting with boiling different woods before drying them in an attempt to keep them from cracking. Green Oak and Madrone have a tendency to check badly when it dries. Some other green woods check worse than others as they dry. When the Green Oak and Madrone were boiled for one hour per inch of thickness, the wood did not show any checks after drying. The boiled green wood also seemed to dry faster than unboiled green wood. The theory is that the boiling both reduces the stress in the green wood and removes some or all of the sap from the wood.

Wayne said he has been getting some very strong “tea” from boiling wood and is going to experiment with it as leather dye.

Mike Johnston commented that during a discussion with Jim at Gilmer Wood in Portland, they suggested that when boiling wood, the water be changed often. Marty suggested that Gilmer Wood works with large pieces of exotic woods on a much larger scale, so they probably need to change water more often than the home wood cutter.

Marty suggested that by cutting your own wood you can experiment with different ways of cutting different types of wood for different effects. He said he has found numerous pieces of wood just for the asking while driving around town. One time he found a tree that had been removed but the stump was waiting to be ground down. The stump was surrounded by burl at the base. Marty asked the owner if he could cut away the base of the stump, which he was allowed to do as long as he didn't leave a mess. On another occasion Marty found a Black Walnut burl. The burl was so soft you could carve it with your thumb nail and was useless.

Marty looks for the ugliest, knurliest pieces of crotch wood he can find. Most wood cutters hate them because they are very difficult to split for firewood. Marty cuts away the two outsides of the “Y” and uses them for firewood. The center section of the “Y” is then cut across the “Y” to reveal some amazing grain patterns such as flames.

Marty showed an interesting piece of wood that

showed the graft of English Walnut and Black Walnut. One of the audience said that English Walnut doesn't have a good root system, so it is grafted onto Black Walnut root stock. He said all the local walnut trees were raised in this way.



When cutting Fiddleback Maple, Marty orients his cuts diagonal to the end grain so there is fiddleback showing on all four sides.

Questioned about roots, Marty said roots can have some very nice burl and playing with the cuts can develop some nice handle material. Marty said when trying to cut wood to get the highly figured cuts there may be as much as 80% waist.

Having bought some expensive Boxwood for a specific knife, Marty found that Photinia is virtually the same. It is grown as hedges and has evergreen leaves that are red on one side. When left unattended, the hedge can grow quite tall and are often cut down.

Mike Johnston said that if anyone sees a piece of wood on Gilmer Wood web site (<https://www.gilmerwood.com/>) and wants a first hand evaluation, and/or needs him to pick it up and deliver it to the 5160 Club meeting, he would be happy to go there as it is only about 25-30 miles from his home. This also gives him a change to dig through the "scrap bins and barrels" for cheap odds and ends that are perfect for knife scales and handles.

Marty said he would probably offend some people at the meeting, but said anyone who is not using a good respirator while cutting wood or steel is an idiot. There was a general discussion about the members various reactions to various types of wood. There were several different types of respirators

discussed. Marty said he uses a North brand with bottom filter cartridges so his glasses don't fog behind a face shield. Eugene has two safety supply businesses, Sanderson's and Norwest. Both of these will fit a customer with a correct filter mask.

*Scribe's Note: After having grinder grit bounce behind my safety glasses and into my eye socket – I changed over to a full face shield. I've shopped at both Sanderson's and Norwest Safety and purchased gear from both – good folks. But after a couple of years of frustration with the fit of the mask on my beard and glasses I ponied up for one of the forced air masks sold at **Woodcraft of Eugene**. The forced air keeps things from fogging up, and that combined with the stretch-lining fit mean that I don't need a perfect seal around my beard either. I'm a satisfied customer!*

Mike Johnston presented his Black Wave Bowie for show and tell. There was a general consensus that the knife was at least acceptable.

Scribe's Note: I'd call that an understatement. See the photo at the top of this newsletter plus the following.





Wayne told us that Frank Gamble passed away a few days ago. Gamble was a knife maker in the 60's and 70's.

Here's another photo from the meeting:



Erick Land brought in two knives and a piece of stainless that he had used his new etching tool and printed resist masks. Erick had used one resist mask on 10 blades and it appeared it would last for several more blades. Erick said he liked the way the Direct Current etches the blade while the Alternating Current deposits carbon back into the etch making it permanently black.

And Wayne sent along this photo of the extremely rare and elusive Frog Wood:



Thanks again to Mike Johnston for covering for me.

Keep Well & bring your show-and-tell to the meeting!

Your Scribe ~ ~ ~ Michael Kemp

Marty demonstrated his technique of laminating spacer material before assembling the handle. Marty began by building a short sided box just larger than the pieces of spacer material. An oversized piece of Saran-wrap is placed in the box. The spacer material is stacked with adhesive, then clamped until dry. This way the spacers are a solid piece before fitting them to the tang and handle. Unfortunately, no photos were taken of this. Maybe Marty could bring it back for another visit at a later date.



WEBSITE LINKS

Send me a note if you have a favorite site to add or have comments about a site I've posted.

5160 CLUB

5160 Club members and presenters, past and present: Send me a note if you have a web site you'd like listed in future newsletters. If you want to be listed w/out a web site I can post your email &/or phone number. A sentence or two on your specialty or what you offer would be good as well.

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

FORUMS

Knifedog Forum
<http://knifedogs.com/forum.php>

Bladesmith's Forum aka Don Fogg Forum
****This URL Changed in August****
<http://www.bladesmithsforum.com/>

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

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

Blade Forums
<http://www.bladeforums.com/forums/forum.php>

REFERENCES

Many of the sites linked under "Knife Maker General" have book & video sections. Our own Wayne Goddard's books are available at Amazon:
<http://www.amazon.com/Wayne-Goddard/e/B001JS9M10>
And you can email Wayne directly for his DVD at wgoddard44@comcast.net

Here's a few other useful references:

Verhoeven's Metallurgy For Bladesmiths PDF
<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

GENERAL TOOLS & SUPPLIES

Woodcraft Eugene – special thanks to Joe & the crew! 1052 Green Acres Rd Eugene, OR 97408 (Delta Oaks Shopping Center) 541 685-0677
<http://www.woodcraft.com/stores/store.aspx?id=515>

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

Grainger
<http://www.grainger.com>

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

KNIFE MAKER GENERAL

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

Jantz Supply
<http://www.knifemaking.com>

Texas Knifemaker's Supply
<http://www.texasknife.com>

USA Knife Maker's Supply
<http://www.usaknifemaker.com/>

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

Alpha Knife Supply
<http://www.alphaknifesupply.com/>

KNIFE STEEL SOURCES

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

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

SB Specialty Metals
<http://sb-specialty-metals.com/products/knifesteels>

Bohler Uddeholm
<http://www.bucorp.com/knives.htm>

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

2X72 BELT GRINDERS

Beaumont (KMG) – the industry standard
<http://www.beaumontmetalworks.com/shop/>

Travis Wuertz – premium brand
http://www.twuertz.com/Home_Page.php

Pheer – affordable, satisfied customers on the forums
<http://www.2x72beltgrinder.com>

Coote – affordable, reliable – you supply the motor
<http://www.cootebeltgrinder.com>

Grinder-In-A-Box – low cost – assembly required
http://www.polarbearforge.com/grinder_kit.html

Wayne Coe – grinders, motors, VFDs, etc.
<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/>

True Grit – grinder belts
<http://www.trugrit.com>

FORGE & REFRACTORY

Chile Forge
<http://www.chileforge.com/>

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

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

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

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

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

BLACKSMITH

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

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

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

LOGO/ETCHING

Ernie Grospitch – Blue Lightening Stencil

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

IMG International Marking Group

<http://img-electromark.com/>

OTHER GOODIES

Sally Martin Mosaic Pins – So. Oregon

<http://customknife.com/index.php?cPath=13>

Burl Source – handle blocks/scales – So. Oregon

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

Gilmer Wood – N.W. Portland

<https://www.gilmerwood.com/>

Oregon Leather – 810 Conger Eugene and 110 N.W.
2ND Portland

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

Coyote Steel – misc., 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>