A dramatic painting of a volcanic eruption. A large volcano in the center is erupting with a massive plume of dark smoke and ash rising into a dark, orange-tinted sky. Bright orange and yellow lava flows down the slopes of the volcano and into a town at its base. The town consists of several buildings, some of which appear to be partially destroyed or engulfed in flames. In the foreground, a street is visible with several figures in 19th-century attire, including a man in a top hat and a woman in a blue dress, looking towards the volcano. The overall scene is one of a catastrophic natural event.

Multimedia Bowl Hard Rock Maple and The Red Hot Steel Band

Roy Holmberg

December 12, 2020

Santa Cruz Woodturners

Photos by Wells Shoemaker

This is where we'll wind up



Multimedia Bowl Roy Homberg Demo
Santa Cruz Woodturners

Roy's bowl—clasp detail



We'll take you step by step



Our demonstrator:
SCW's Own Roy Holmberg
*Portrait of the blacksmith
as a young man*



Roy Holmberg a few years later: A Man of two shops In 2020



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At home with hard wood



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And sharp steel



Equally at home with hot iron



And showers of sparks



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And that Hammer, of course



A journey of a thousand miles
starts with a single step...let's begin!



Original Clasp Concept: Gamble House Architectural Scale



Gamble House Clasp Detail



Roy's Forge of 20 Years Ago



Roy's first steel banded bowl: 1998



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First banded bowl: Clasp detail



That was then...This is Now



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Using a jig to cut a circular blank



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Bandsaw knows this maple is Hard



Drilling center hole for screw chuck



Blank mounted on screw chuck



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Truing up the edge first



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Heavy gouge 60° bevel



Gotta love PPE when the chips fly



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Truing the face



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Just about flat



Verifying plane before gluing



Mark circle



Three's a Charm



Paring off bulk



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Developing the contour— easier before installing glue block



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Glue block in place



Use tailstock for both centering and pressure



Options: Leave it overnight, or
use symmetrical clamps and then remove,
or use fast setting CA glue



Assembly off the lathe



Make the dovetail in the waste block (77 degrees w scraper)



Grasp tenon in scroll chuck



Measure thickness in trued up blank



Measure depth of central hole
Essential to leave thickness...
And mind the point of the bit



Mark depth on shank



Forstner bits are boring



Almost at depth



Begin shaping top of bowl



Debulking



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Begin shaping central depression



Incrementally widen and deepen



Measure opening. Know when to stop



Begin undercut



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Check proportions for deep undercut



Undercut is rough duty...special tool,
difficult angle, catch liability



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Starting to look familiar



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Dig a little deeper



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Feeling for contour



Not the most ergonomic posture...
but sacrifices must be made
Note length of this Roy-made tool



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Ready to clean up bottom



Approaching undercut with custom scraper



Last cuts with the long tool



Periphery done, now remove bulk in center and shape curve



Large radius scraper



Blend the curves...go carefully now!
Wall thickness almost "there"



Keep that scraper sharp—no time for
tear-out now!



Just about there!



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Find ridges with your fingers



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Now true up the rim...Must be flat
to receive the metal band



Mark the margins of the groove for the band



Time to cut the groove

Define the margins with a spear point



Spindle gouge is a little small for
this task in hard rock maple



Parting tool, you're up!



Groove needs flat bottom, $3/32$ " depth



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It's about to get dusty
Who was that masked man?
I just wanted to thank him...



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We live near the beach It's sanding time again in Aptos



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Pause for Day 1



A little homework for the blacksmith-turner:
Make some new hand forged tools to better
reach the undercut for the next bowl



More homework: Apply sanding sealer to freshly turned wood



This seals grain and protects blank from stains

Will eventually finish with multiple coats of spray matte lacquer

It's a glorious new day
to get back to the shop



First task: Make a jam chuck to secure the bowl while removing the tenon



Cut out jam chuck blank $\frac{3}{4}$ " ply



Vertical pilot hole for screw chuck



Jam chuck has a penetrating member and flange—mark carefully, then refine



Approaching diameter for jam chuck Use parting tool for square corner



Jam chuck done



Tape edges to avoid scuffing bowl



Ready to receive the mouth of the bowl



Bowl snugly mounted on jam chuck .
Tailstock engaged. Now take down the
waste block tenon



Refining bottom

Make a subtle rim for the foot



Going after the nub— All that's left of the tenon



Tape blank to jam chuck after tailstock removed:
Security to delete nub without launching a
flying saucer. (That's Maarten's day job.)



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Tailstock retracted. Now work down the nub with a spindle gouge



Sand foot while it's easy to access



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Nice when the foot accommodates
a 3" disc! (not accidental)



Ready for dismount



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Sidebar—Wells can't resist chirping in



Another way to mount a small undercut bowl:
Expandable jaws to grip bowl.
Faster when you're making more than one



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Bowl mounted OK for light cuts, sanding, finishing



Measure the diameter of the rim Must be exact



Cut another blank to slightly larger diameter and refine on the lathe



Turn this blank precisely.
We'll use this in the blacksmith shop



Sign your work before finish coats



Turning begins and finishes with...logs. This is Roy's project #619



Wood phase is almost done—
Next we get to the forge for hot steel



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Another pause for the night



Day 3: Forging Ahead



We'll make the custom metal band to wrap around the bowl



Blacksmiths and Turners Love Racks of Tools



And they have their hang ups, too



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Heavy Metal everywhere, needless to say
...and ear protection, of course



Seriously Cranky Machines



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Buoys in the Man Cave



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OK, Where were we?

Bowl was turned with a circumferential groove, and we made a template disc that exact size. We'll use it today.



Start with measuring circumference of the groove on the bowl. Add 2"



Transfer that measure to a steel bar and cut it to length



Gauge width of groove on bowl with scrap wood



Grip scrap between jaws of vise to create an effective steel form for the band



Are we close? Yes, we are.



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Heat that bar red hot...first of many times it's going into the forge

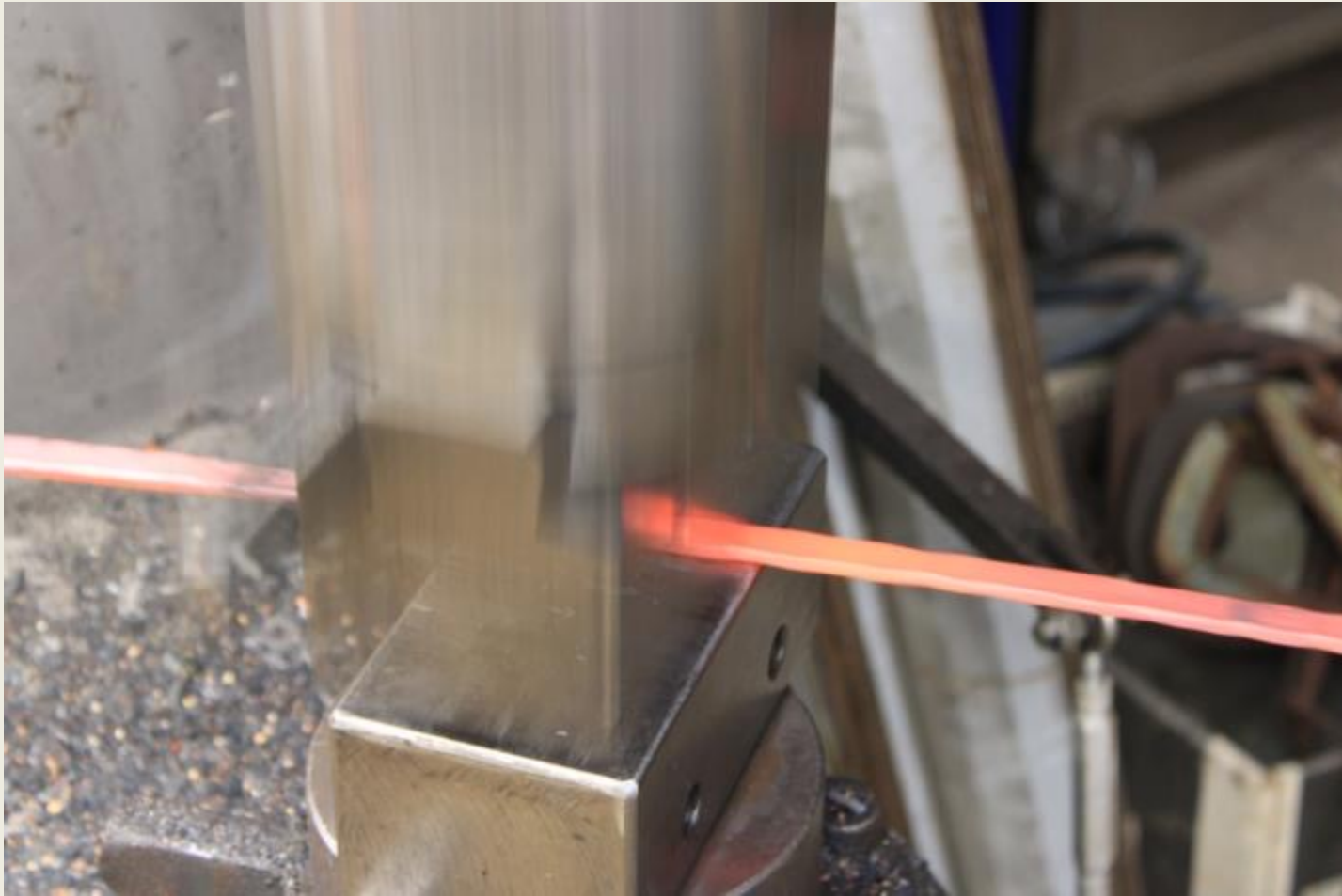


The Man and his Power Hammer



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Red hot bar into the power hammer for shaping



Back into the forge

Work one end of the bar at a time



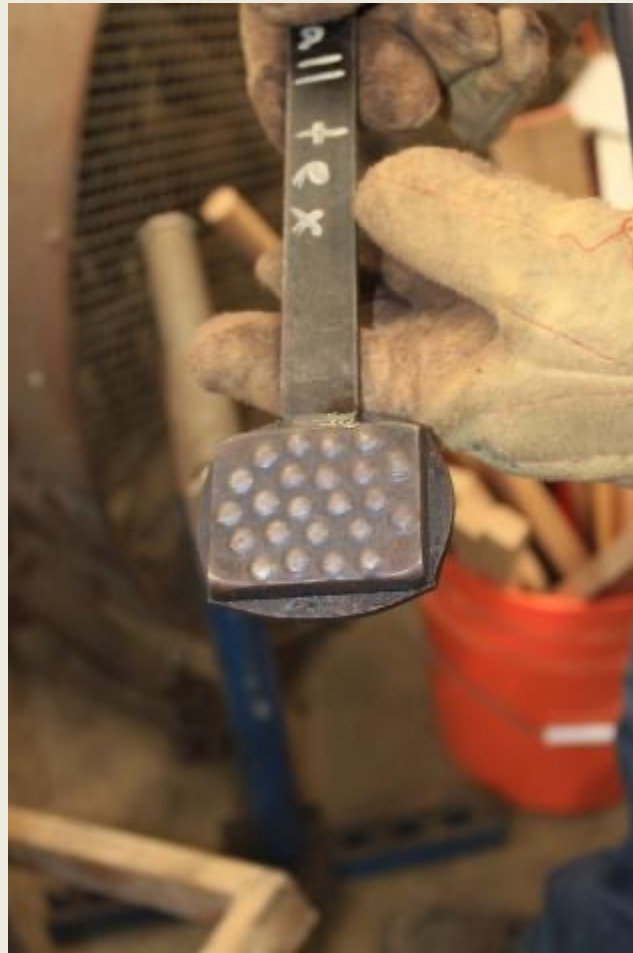
Use power hammer to refine dimensions of the bar



Flatten it out Old School



Texturing tool



Now use power hammer with
texturing tool



More hand work to straighten edges



Back into the forge...get used to it!



Starting to look right



Wire brush off the scale



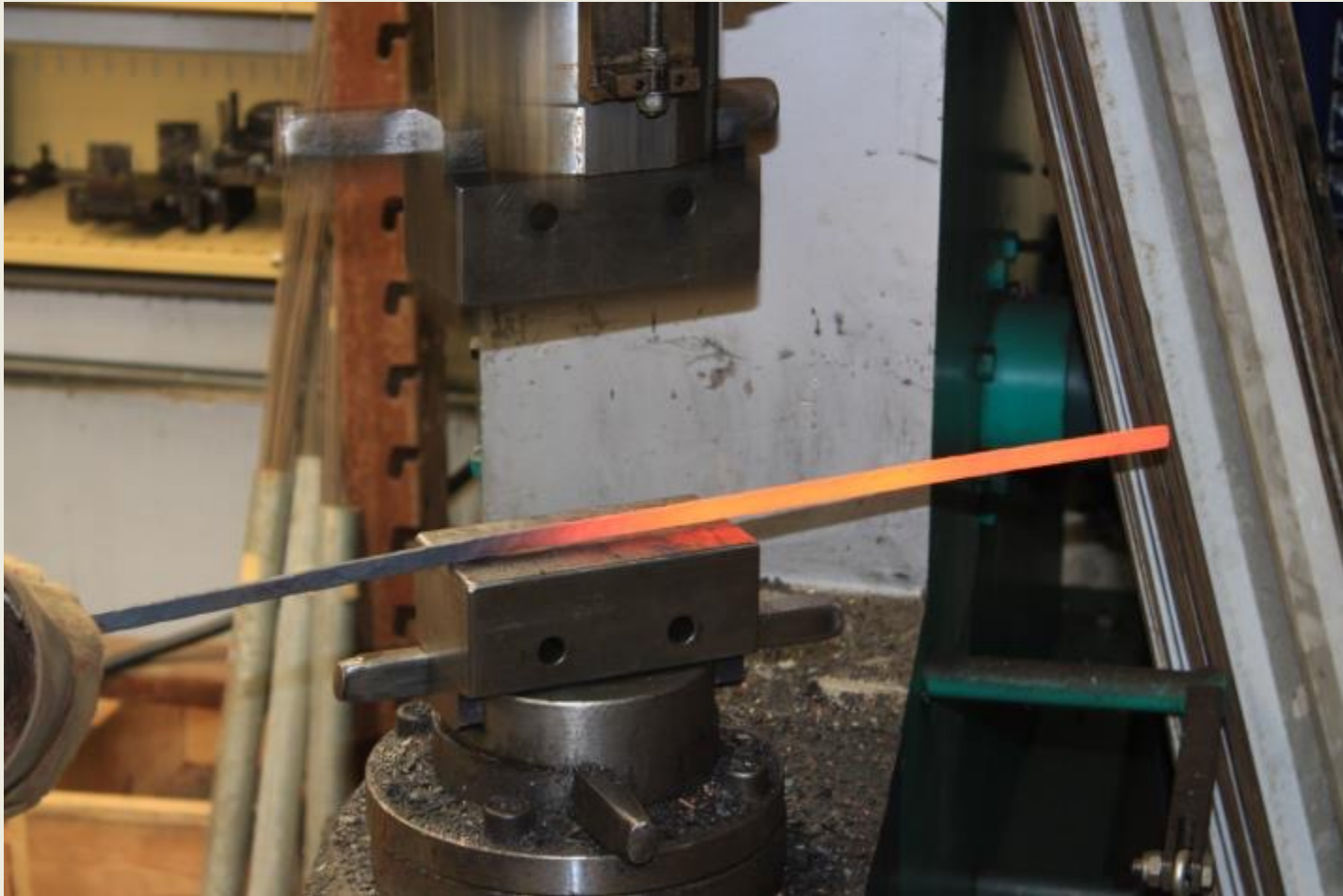
Steel band with texture done



Check for fit in the vise groove
Sure enough...there's a tight spot



Use the power hammer to compress proud spots



Now it fits perfectly



Work on the tip—back to the heat



Score the hot tip to begin making a “Y”



Time to Split



Y Hot and Cold



Into the vise—copper cheeks to prevent marring the texture



Steel bends with pliers when hot
Y is going to become a **T**



Now it's a T



Flatten persuasively



Need to heat this repeatedly to make these shapes



Back into the vise: Turn the T into a Fork



It's a fork now, but more
shape shifting to come!



Smooth the tips while they're accessible



Create a 1/8" offset—you'll see why



Start bending the fork into its destiny as a clasp



Taking shape but needs work



Even out the gaps using a bar



A little touch up with a big hammer



Soften the sharp edges—Fingers will eventually trace these contours



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Double check

Verify the band fits into the groove



Heavy bar to hold the stunt disc



Stunt disc ready for duty. Big surprise coming



Bend hot steel over a wooden template? Yes, Virginia, it's on fire



Secret weapon: Non-marring rawhide hammer

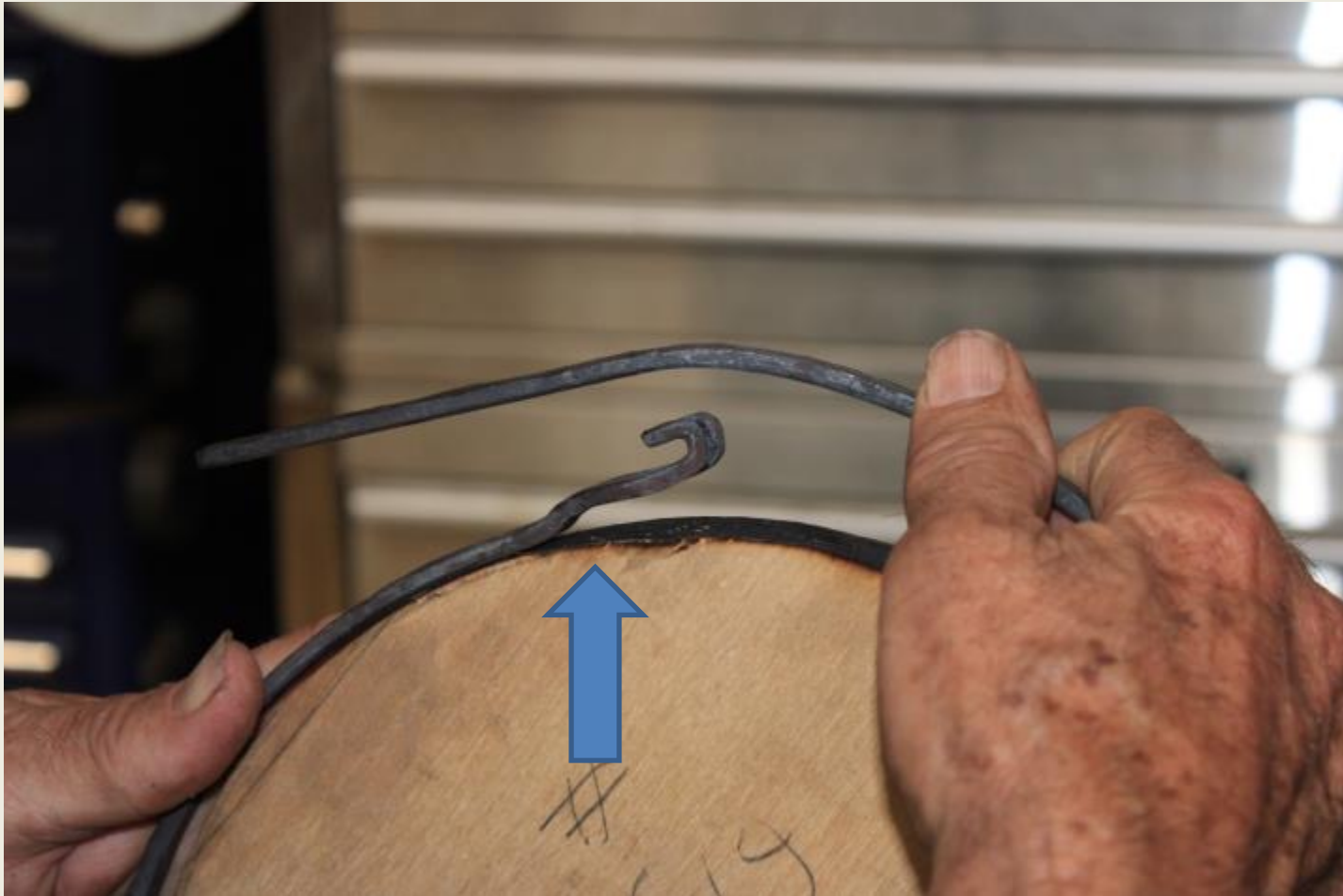


Checking the fit...not quite there yet



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Here is the delicate fit test
Notice the offset



Mark the line for the bend-over



Heat them up and persuade them to cooperate



Yes, Sir, Master Chief Roy!
I *will* cooperate. Stop hitting me, please, Sir!



This is going to work



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Use a shop made tool to secure the two ends and bend over tight



Hammer the fold over



Cut off the excess



Make two sliding wedges to secure the clasp



That's about it for Forge day #1
Take a rest, and let's
Meet back at the Forge for day #2



On Forge day #2 we will

- Heat up the shaped band, dip into wax, let it smoke to create a dull black sheen.
- The wrap it around the bowl, fine tune the wedges and drive them into place.
- And then maybe make another belt of copper.
- Final finishing the wood will come at the end.

Forge Day One was a success This clasp fits, and now the fine touches

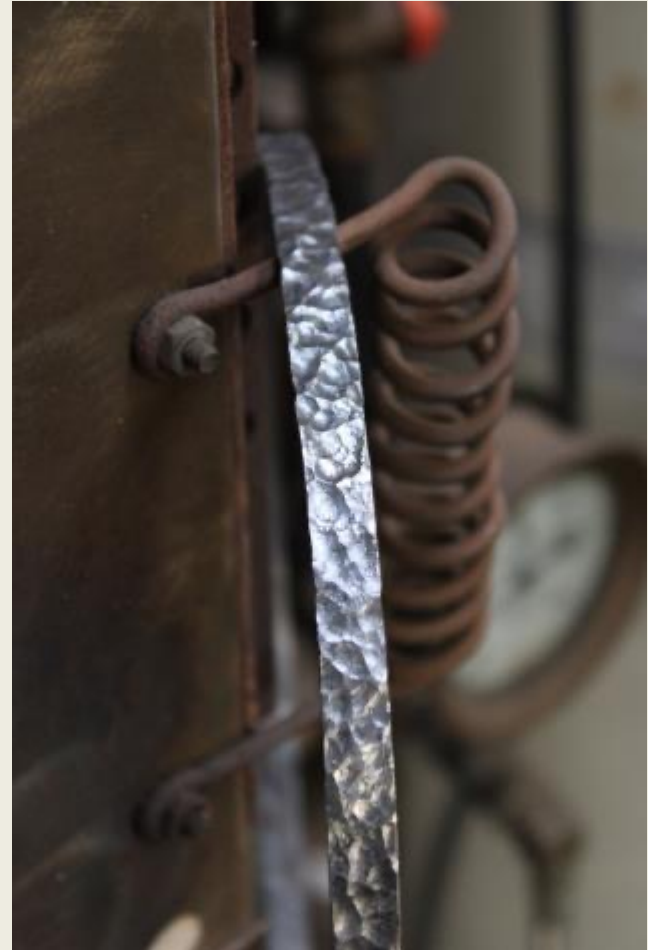


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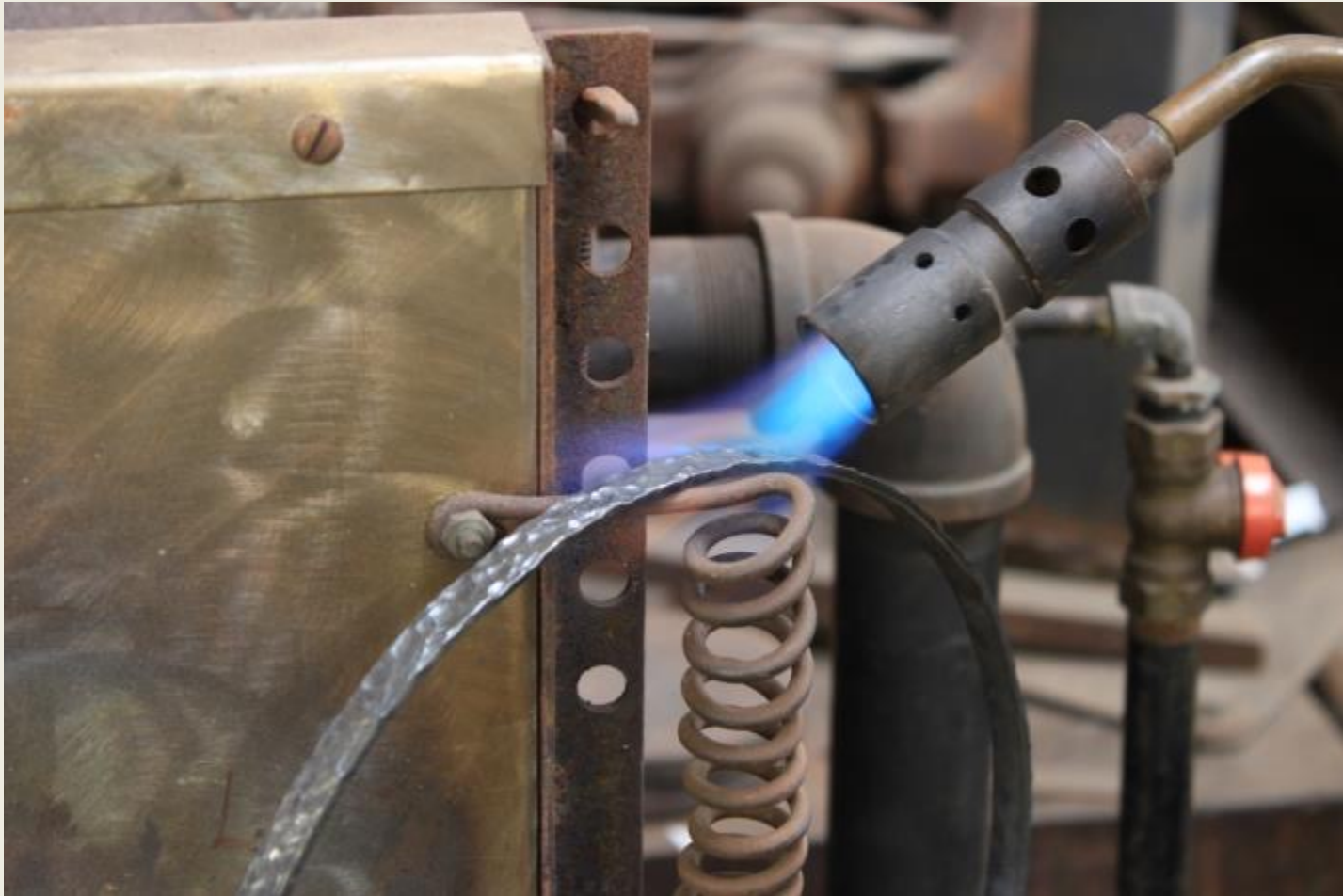
Smooth off any rough edges



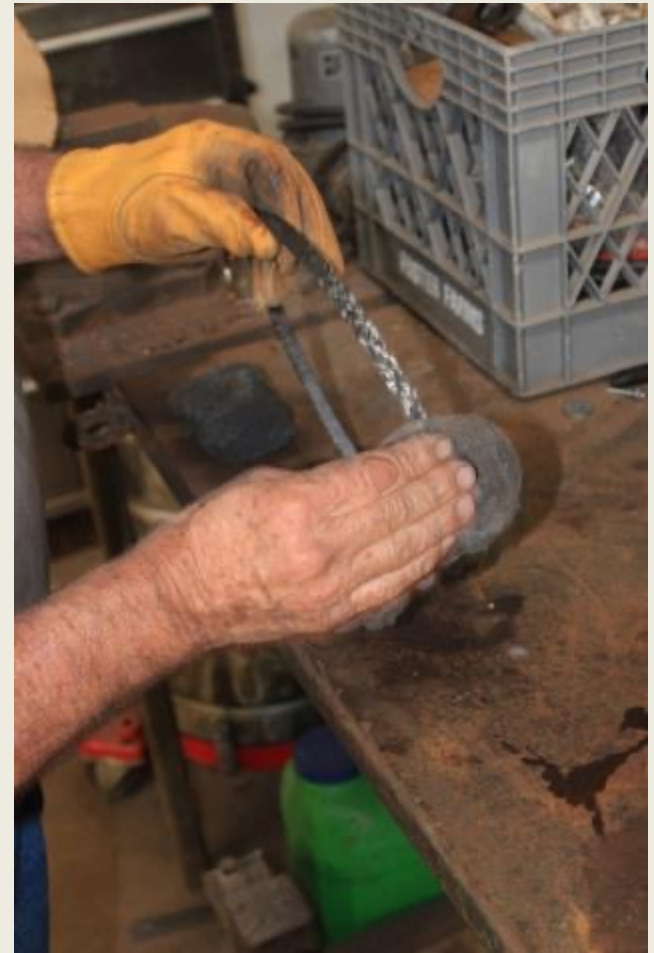
Touch up any remaining scale and make this shine



Heat and blue the steel



Apply wax to the hot band with steel wool



Passes inspection



Let it cure outside



Fit the wedge—this takes patience
More hammer & grinder work



Squeeze it home



Wedge engaged, band pulled tight



OK, forge work is done on this one
Finish sanding and lacquer still to go



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Copper is not as stiff as steel



Driving 2 wedges brings band to snug fit



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Copper Clasp is Done



Ready to go home



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Roy's bowl in the Bright Light



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Steel clasp detail



Imitation is The highest form of flattery



Wells' ash imitation...band by Roy



Questions



We have earned a rest



Lots of December to Come!

- Geminid meteors with a new moon Dec 13
- Great Conjunction of Saturn & Jupiter Dec 21
- Christmas and Hanukkah
- New Years Eve
- Thank you, Turners, and Good Riddance 2020
- January, your new board picks up the reins
- Next meeting January 16: Kirk deHeer & *Demystifying Catches*