Kuksa - A Camper's Drinking Cup

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Wood Choice

A Kuksa is traditionally hand-carved from Birch burl. Usually it would be carved by its owner, or is given as a gift from the carver to a friend. I make turned “Kuksas” for friends I hike and backpack with.

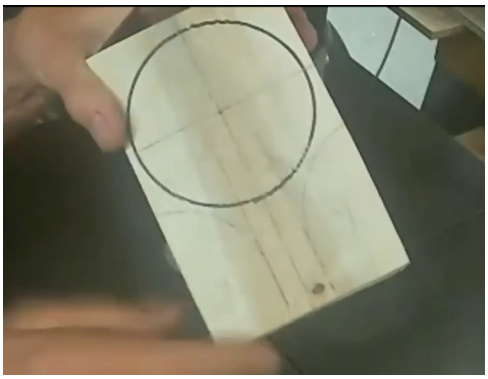
The burl in a traditional, carved Kuksa “randomizes” the wood grain, and that helps keep the cup from cracking, and there is little leakage because there is essentially no end-grain. But burls can be expensive.

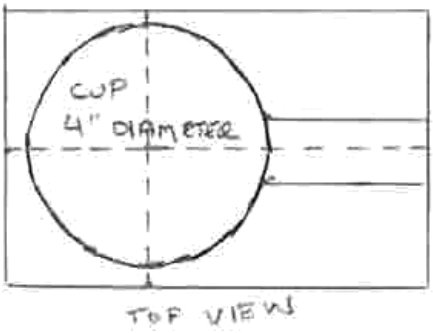
I have found that just about any closed-pore, tight-grained wood without defects will hold liquid just fine. I have used Birch and Maple (because I had some) and Aspen (because it is native where I live). Other similar woods would work just as well. Avoid Oak, Ash, and other porous, open-grained woods. I would also avoid woods with lots of “flavor” (like Walnut) or those with funky smells (Elm, Cottonwood), as they will impart undesired flavors to your drink. And obviously anything toxic should be avoided as well.

We are going to make a 4” diameter hemisphere cup, which will hold about one cup of liquid.

Preparing The Blank

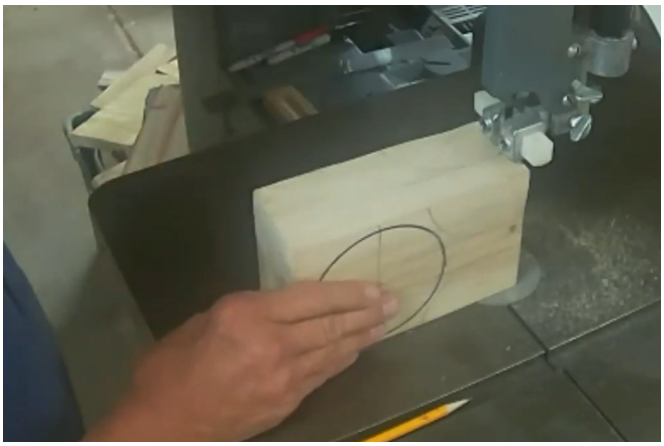
I cut a blank about 7 ½” long by 4 ½” wide by 2 ¾” high. The grain runs along the length, and growth rings across the width. Mark a 4” circle (and its center) on one end - this will be the mouth of the cup. Leave about ¼” space at the end of the blank (the drive center will mount here and we’ll need some waste wood). Trace the 4” circle with a marker so it is distinct and visible. Mark about a 1” square, centered along the length of the blank, for the handle.





This could go right on the lathe, but there's a lot of off-center wood to remove around the handle. To cut away the excess wood around the handle on the bandsaw, transfer marks around the piece so that you can see where to cut.

Cutting away the handle can be tricky, as cutting in the wrong order can remove support for the remaining cut(s). Cut away the bottom of the handle first.

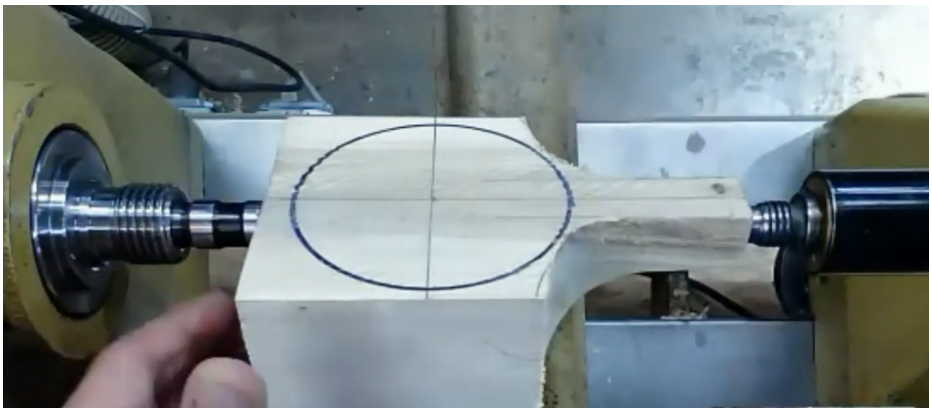


Transfer the marks for the sides of the handle to the just-cut surface.

Now you can cut away either side of the handle with a safe, supported cut.

With all three cuts, leave an “arc” of extra wood between the handle and the cup, so you have enough wood to turn a transition between them.

Mount the blank between centers. The drive center should engage on the cup end, and the live center centered on the end of the handle.



Check that your tool rest is not going to bump into the off-center cup. Carefully turn on the lathe, and bring up the speed to something comfortable (probably around 1000 RPM). Turning off-center pieces can be a bit uncomfortable, but speed does help you ride over the missing wood. Don’t turn at a speed that feels too fast for you - just take your time and make steady cuts.

When cutting the handle, watch out for the big off-center cup spinning around! I use a long enough tool rest so it extends past the cup and becomes a “guard” - I keep my fingers on the safe side of the rest.

Next we want a hemisphere for the cup. If you watch the spinning block, you should see the 4” circle you marked. A piece of paper or cardboard, taped to your banjo behind the cup, provides a background and can help you see the circle. Make careful cuts just down to that circle - you’ll end up with a hemisphere (half of a ball). The bottom of the cup might be flat (uncut), that’s ok. Just make sure your cuts match the circle around the cup edge.

Finish a transition between the cup and the handle.

You can do some sanding on the handle now, but be very careful of the off-center cup. You really can't sand the cup while it's spinning, so sand that off the lathe. I usually sand very little as the tool marks sort of prove that I turned it - maybe just a light pass with 120. This is an "outdoorsy" piece, intended to be used (and abused), so a somewhat rugged look is appropriate.

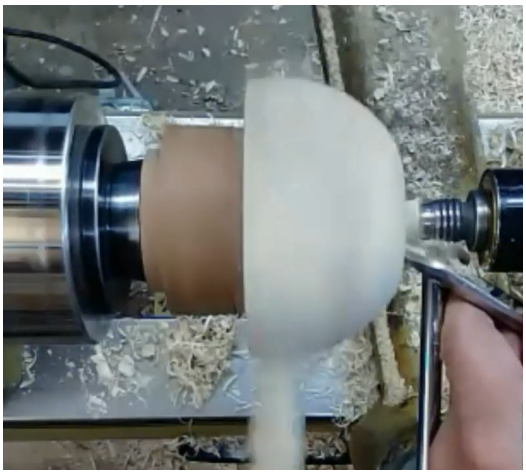
Remount the piece with the drive center in the center of the cup (where the opening will be), and bring up the tailstock to find the bottom-center (by trial and error). Cut a small tenon in the bottom of the cup.

Watch out for the handle spinning around! Set up the tool rest as a "guard" and keep fingers on the safe side.

Turn it around and mount it in a chuck. Now you can hollow out the inside. Try to leave a nice edge around the rim of the cup - not too thin or too fat. Drinking from the side of the cup should "feel right".

Some light sanding inside the cup is appropriate. Be very careful of that handle if you choose to sand with the lathe running. Much safer to hand sand or power sand with a 2" disk, with the lathe stopped. You don't need a perfect surface - 120 or 180 grit should be sufficient.

Turn it around again, using a scrap block in the chuck to make a friction drive (between the scrap and the live center). Now you can turn the tenon away. Make a nice transition from the round cup to a flat bottom.



Some off-lathe sanding will be needed to remove the nubs at the bottom, where the drive center was at the end of the cup, and at the end of the handle. Also sand around the edge for a “nice feel” on your mouth.

Button and Loop for the Handle

Drill a hole in the end of the handle for a short loop of cord to hang on your backpack or belt. The size of the hole depends on the cord you will use. Leather cords looks nice, but my Kuksa is usually hanging off my pack (and is the only cup I carry), so I now prefer to put my trust in parachute cord.

For a fancier loop, use a length of cord with a loop in one end, and make a button for the other. The button goes in the loop to secure the Kuksa to your belt, pack, etc.

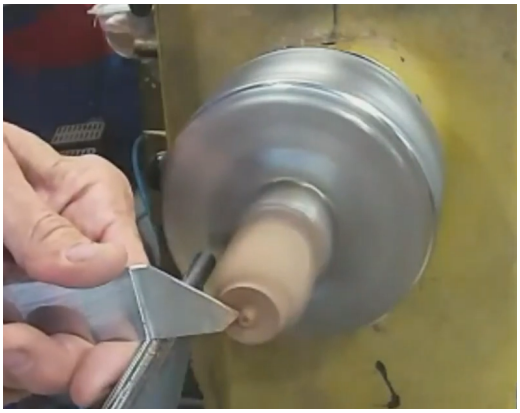
To make the button, start with a short length of nicely figured wood, about ¾” or 1” diameter. The button is turned from the end of this blank.

Mount the wood in a chuck. Pin jaws work well here. Drill a hole, big enough to fit your cord. Drill just a bit deeper than your button will be thick. I usually end up with a button about ¼” thick and ¾” diameter. So maybe drill about ⅜”.

Turn one side of your button profile on the end. I like a simple domed shape. A small scraper works nicely on endgrain.

Sand the button and part it off.

Now make a jam chuck from the remaining wood. Make a small spigot the same diameter as the hole (use the bottom of the hole from drilling the button as your initial sizing guide). Make the face around the spigot a bit concave to match the face of the button you just turned.



Jam the button on the spigot. If your jam chuck is a bit loose, add a bit of paper towel to make it snugger.

Turn the other side of the button, sand it, and remove it from the jam chuck.

Tie a loop in one end of your cord (just a little bigger than the button), pass the other end through the Kuksa handle and then the button, and tie a simple knot in the end.

Finish and use your Kuksa

My next step is testing. There are sometimes hidden defects in wood that you won't discover unless you actually fill the cup with water and let it sit for a few minutes. It shouldn't leak. A little "weeping" out the end grain near the handle and across from the handle is usually ok. Hopefully your Kuksa passes the test. (If not, you get to make another and your next one will be better!)

Now is a good time to sign your work. If this is a gift, you might choose to add the recipient's name and/or a personal message.

Finish by simply wiping on walnut oil. After that cures a day or so, brew a strong black tea, and use that to "season" the inside (just pour it in and let it sit for a couple hours). This helps get rid of excess walnut oil, and gets the inside patina "started" for you.

Initial drinks from a new cup might have a bit of the walnut oil flavor, but after a while your Kuksa will take on the character of what you've been drinking.

I use mine for water, coffee, tea, whisky, wine, etc. I just rinse it out after each use. Don't wash with soap - that would impart a new and unpleasant flavor to future drinks (this also means you shouldn't use it for anything that might require soap to clean up).

The ones I've made for myself and friends all have stains on the outside, where various liquids have soaked into the wood. Each one has its own look based on how its owner has used it.

Tool and Equipment List

The following are some of the tools that I use for this project. Other tools are certainly useful - my tool choices are often based on what I happen to have. Most tools are available from several sources; links are provided for your convenience..

Steb Center aka Apprentice Safety Drive Center -
https://www.woodturnerscatalog.com/p/107/4396/apprentice-Safety-Drive-Center
Also available from other makers (like Sorby) but the above is what I use and is economical.

Bowl Gouge - ⅜" (I have a Henry Taylor M42 with an Ellsworth grind) -
https://www.woodturnerscatalog.com/p/129/6894/henry-taylor-M42-Stay-Sharp-Bowl-Gouge

Bowl Gouge - ½" (I have a Crown Pro PM with an Ellsworth grind) -
https://www.woodturnerscatalog.com/p/129/1558/crown-Pro-PM-Ellsworth-Gouge

Spindle Gouge - ⅜" (I have a Crown Pro PM, ground with a 35º or 40º bevel angle) -
https://www.woodturnerscatalog.com/p/130/3485/crown-Pro-PM-Spindle-Gouge

Small pointed scraper used for the button - a ⅜" aircraft drill bit, with flutes cut off and sharpened like a point tool.

Thin Kerf Parting Tool (mine is a Sorby) -
https://www.woodturnerscatalog.com/p/135/3132/robert-sorby-Narrow-Parting-Tool

Vicmarc VM100 Chuck, standard jaws -
https://www.woodturnerscatalog.com/p/100/328/vicmarc-VM100-Chuck-w-Jaws
Or - https://www.packardwoodworks.com/lathes-acc-fourjaw-vm-vic100.html
The VM120 chuck and pin jaws I use for the button are also available from the above suppliers.

Mahoney's Walnut Oil - https://bowlmakerinc.com/product/utility-finish-oil-16-oz-bottle/