

Thin Custom Finials

By

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A.K.A “[turbowagon](#)”

This tutorial was downloaded from

<http://www.penturners.org>

The International Association of Penturners



A few people expressed interest in my method for turning thin finials to replace the stock finials for some of the popular pen kits like the Gentlemen's and Jr. Gentlemen's. This is not a new idea, and there are several articles in the library already on the topic, but I thought I would take some pictures and show my preferred method.

This is a great mod that isn't too difficult and the end result is worth the extra effort. Do not attempt to follow these instructions unless you are capable of performing each step safely. Eye protection is a must.

Start out by knocking out the stock finial from the pen kit. Here is an article in the library by JohnCrane that shows how to knock out the stock finial, and also shows his method for turning custom finials:

http://content.penturners.org/articles/2008/custom_finial.pdf

Measure the diameter of the finial you will be replacing. In this example, it is a finial for a full-sized Gentlemen's pen.



I begin by gluing a cutoff to the end of a hardwood dowel that is sized to fit in my collet chuck using Thick CA.



Bring up the tailstock with a scrap for support and begin to turn the cutoff with a skew until it is smooth and concentric with the axis of rotation. Do not turn down to the final diameter yet because the next step may result in skate marks which you will need to clean up.







Remove the tailstock and face the end with an arcing cut with the skew. This is a difficult cut and should be practiced on scrap first. When mastered, you can produce conical shavings and a glass smooth surface. If the skew skates across your work, don't worry... you should have enough meat left to clean them up. You may need to make a few cuts until you are happy with the shape of the profile.



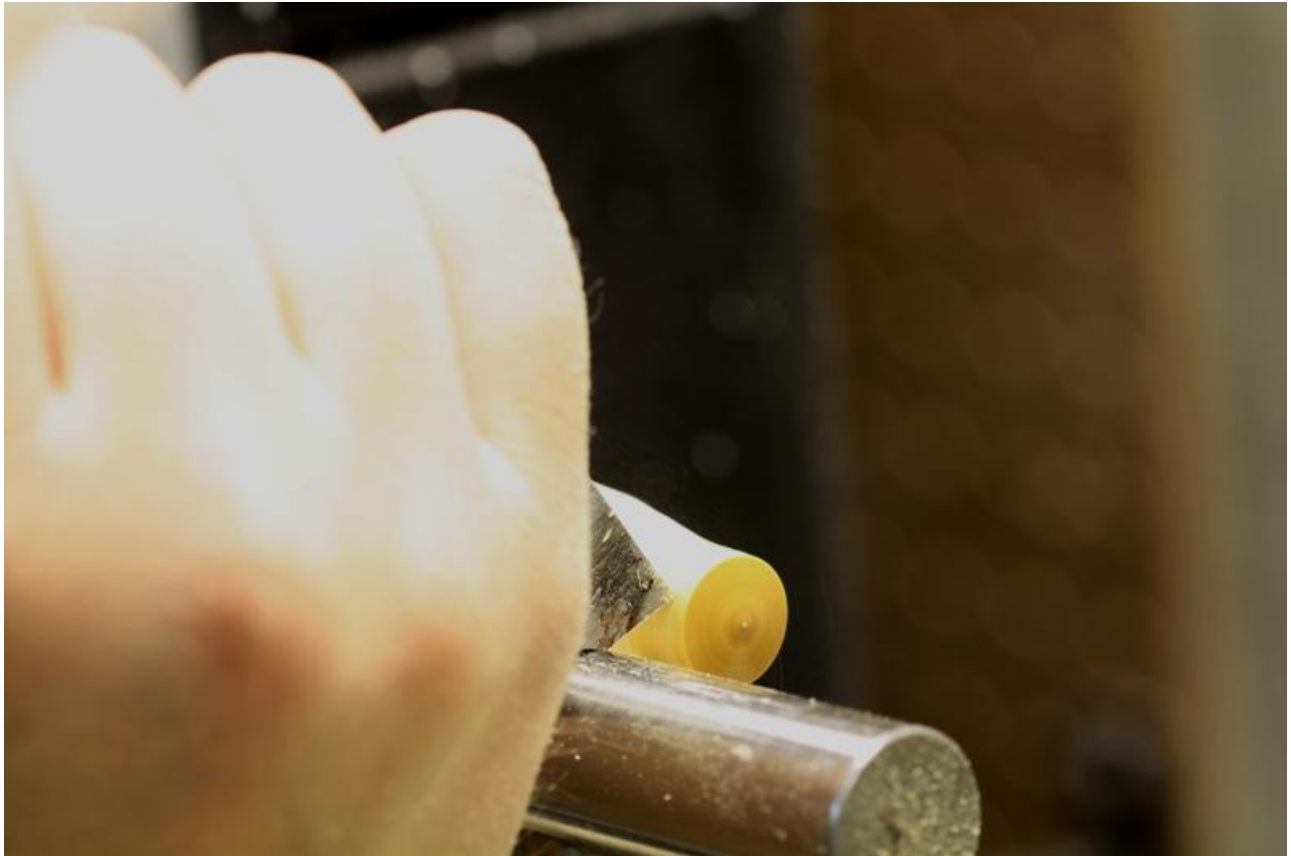


Take the diameter down further, cleaning up any tear out or skate marks from the previous step. Keep checking with calipers until the end matches the diameter of the stock finial.





With a thin parting tool, begin to part a groove, leaving only the last 1 millimeter or so at full diameter. Do not part down all the way yet.





Double-check the diameter of the finial. In this case, it needs a little sanding. I will be using a CA finish, so the target diameter is about .002 short of the stock finial. Sand to at least 600 grit, remembering to sand with the lathe off as well with each grit.







Apply a CA finish using your favorite technique and polish it with micromesh. **VERY IMPORTANT:** be sure you are satisfied with the finish at this point. If not, redo it now, because you won't get another chance later.





Check the diameter of the stock tenon. Start to create a tenon on your own finial with a parting tool.





Once I create some clearance room, I like to take the final cuts with the toe of a small skew.



For a *really* good fit, you'll want to undercut the finial (again I use the toe of a small skew), to match the domed shape of the cap mortise. This might not apply for all pen styles.



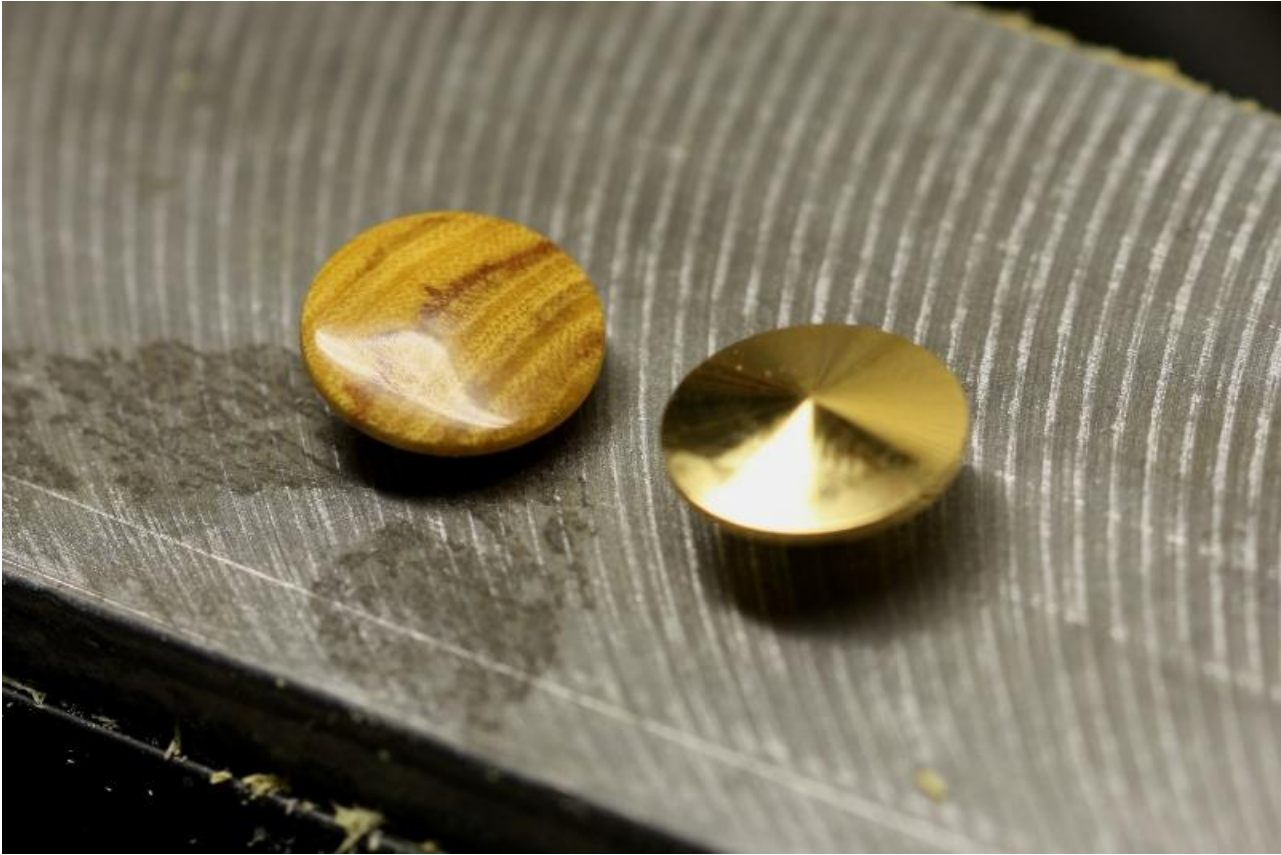
Here's the finial after the tenon was checked to be the proper diameter.

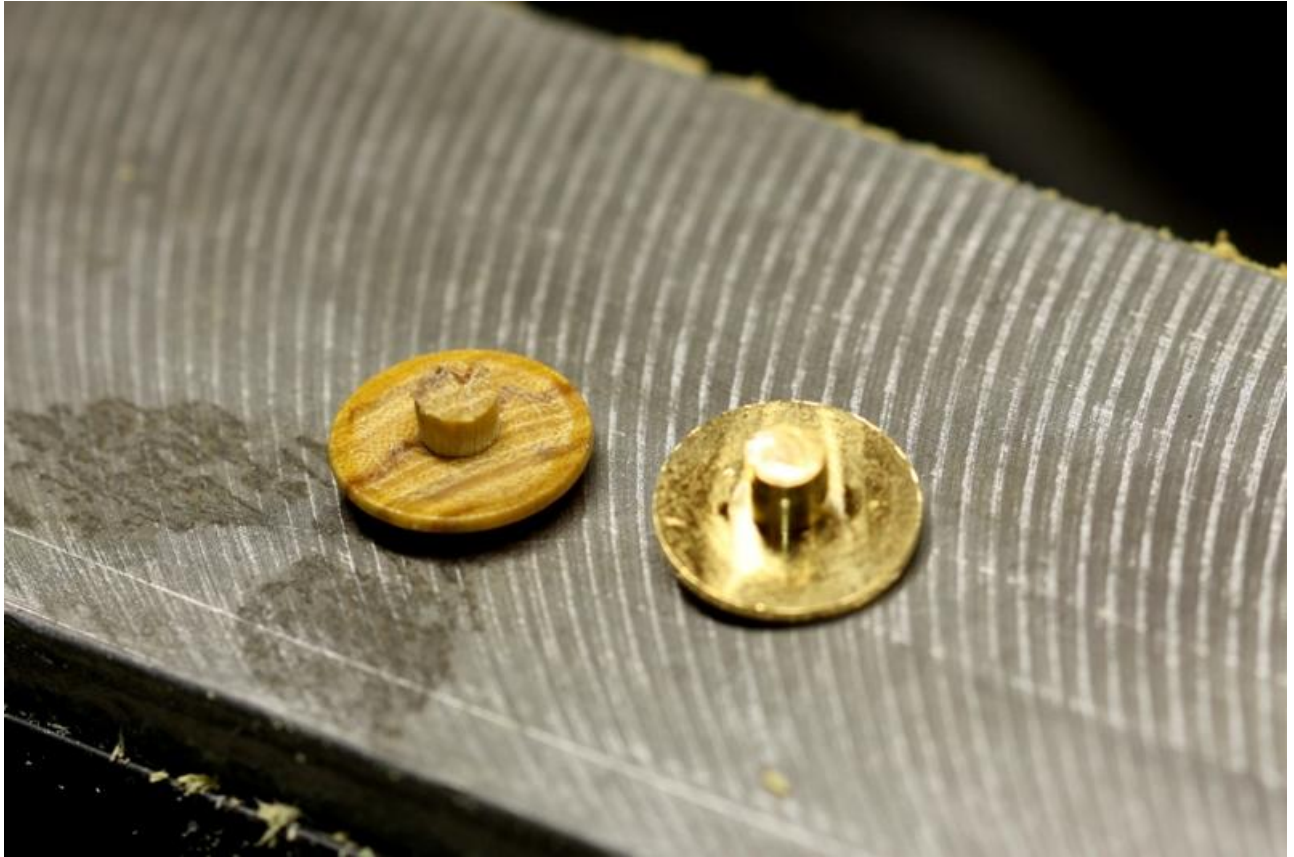


If you're brave and skilled, you can now part the finial off with a thin parting tool or skew. I am neither brave nor skilled, so I use a hacksaw WITH THE LATHE OFF.



Here's the custom finial next to the stock one:





Test the fit in the cap and admire your work.



IMPORTANT: do not epoxy in place yet! Remove the finial before pressing the kit together. Only after everything is assembled, you should epoxy the finial in place. Otherwise, you risk marring your finial or finish during assembly. If possible, use a cutoff adjacent to the cap barrel for the finial and align the grain to match before gluing in place.