

The Journey from Penturning to Penmaking

by Kurt Hertzog

Practice Makes Perfect

One of the things that I struggle with when I am teaching is how to get the students to **practice** after they have been exposed to the initial joys of penturning. Many are not experienced woodturners, so their repertoire is limited and they want to make *things*, not practice the basics. They don't want to practice anything; they just want to make pens. In the same way that people learn to play an instrument and practice their scales to refine their skills, penturners need a way to hone (no pun intended) their skills in the various aspects of penmaking without breaking the bank. Following is a simple, low-cost, and fun method to work on every facet and have an end result. Making a "stick pen" seems to be one of the best methods of "practicing your scales."

Travel through any discount stationery store or shopping club facility, and you'll run across more than enough low-cost pens. Most are packaged and sold by the gross at modest costs (see **Fig. 1**). You can choose from a large selection of styles, shapes, and colors. The inner workings are all similar in function, but differ considerably in size and ease of usability. Since they all cost about the same when bought smart, the choice really boils down to which brand you like the feel of and which works best for your application (see **Fig. 2**).

Since long, thin diameter drillings take more time and are problematic, you may wish to standardize on pens with shorter inkfills. The drilling for these is much easier with

less likelihood of error or wall breakout later on (see **Fig. 3**). If your only source of drills is a big box store, you'll have difficulty finding the longer length and special diameter drills. You may have to go online and visit the folks at McMaster-Carr, MSC, Enco, etc., to locate the necessary drills. They aren't expensive, but because they aren't needed by the average homeowner, the big box stores don't carry them (see **Fig. 4**).

The entire process, in a nutshell, is to select a low-cost, easily separated inkfill source that requires the least difficult drilling; drill the larger diameter of the shoulder only as deep as needed, followed by the smaller diameter of the inkfill only as deep as needed; use a drill chuck and mandrel to drive the drilled blank between the mandrel and tail center; turn, sand, and finish the pen body; and part it off. Finito! Now let's take some time and walk through the steps.

Drilling the blank can be accomplished by just about any drilling process desired. The blank can be clamped in a vise and drilled with a pistol drill, or it can be mounted and drilled in a drill press. Both have drawbacks from stability to quill travel and neither are ideal; however, I find that drilling on the lathe with an appropriate bit gets the job done nicely. I use the spigot jaws on my Talon chuck to hold the shop-cut blank (square is easier to hold, but rectangular can be safely accommodated).

Fig. 5 shows my typical setup, but rig your own based



Fig. 1

A wide assortment of these types of pens are available in bulk quantities at discount warehouses for under eight cents each.



Fig. 2

Depending on which style you choose, there will be different sizing on the nose and a different inkfill length.



Fig. 3

Because deep drillings are more difficult, I like to use the Papermate version with the shorter inkfill.



Fig. 4
Using a longer infill requires a much longer, special diameter drill in order to be able to have sufficient length to hold in the drill chuck.

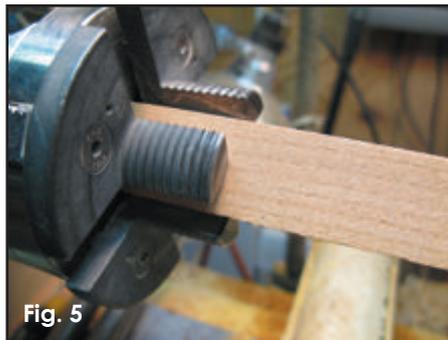


Fig. 5
I find that the spigot jaws on my chuck hold the blank well for the drilling.

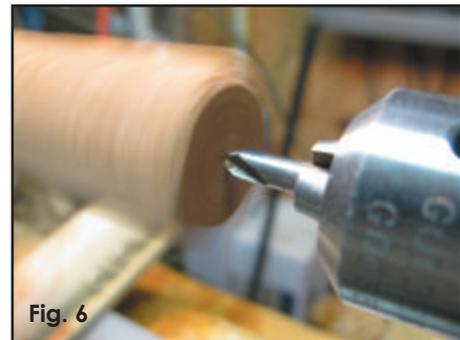


Fig. 6
Using a center drill to create a good starting point for subsequent drillings will prevent a wandering start point.

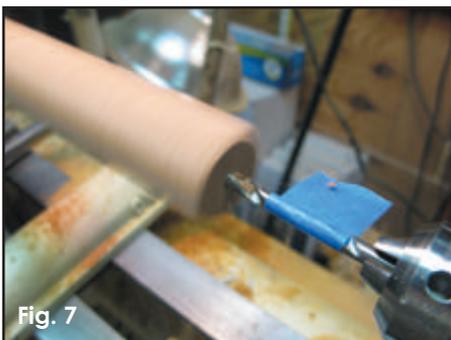


Fig. 7
Tape can easily and visibly mark the drill for the desired depth, rather than using a magic marker, which is less visible and can leave confusing depth marks over time.



Fig. 8
A drive mandrel, sized at the minor diameter size, can be made from an inexpensive piece of drill rod.



Fig. 9
Grinding the end of the mandrel to a screwdriver-like set of flats will let it seat in the bottom of the drilled hole and provide a good driving grip.

on your equipment. I try to always give the drill the best starting position possible and find that using a center drill works quite nicely (see **Fig. 6**). Since it gets used often, I keep a short center drill always mounted in a drill chuck with a No. 2MT and have it in my rack under the lathe. With a good starting center, the subsequent drillings begin exactly where you want, as opposed to wandering around when trying to start them.

Drilling on a lathe is the same as drilling by any other method. It requires a sharp bit with appropriate speeds and feeds. Breaking the chip and clearing the flutes as needed also goes a long way toward a quality drilled hole. Rather than marking the desired drill depth on the drill with a magic marker, I use a piece of tape (see **Fig. 7**). This method has a few advantages: First, you don't get confused, since the bits usually end up with many different marks on them over time for various uses. More importantly, the "flag" sticking out in the breeze will let you know immediately when you've gotten to the depth indicated. Once done, the tape comes off easily with no remnant marks to confuse you later.

Now that the blank is drilled, you need to drive it. If there is one key point in this article, it is that we'll be driving

on the axis we drilled. Right, wrong, or indifferent, the axis drilled will be our rotational axis regardless of its relationship to the outside edges of the wood. We don't have to worry about breakout as much, since we'll turn away the outside of the wood around the drilled hole/axis. I make a mandrel from a piece of drill rod that is the same diameter as my minor drill diameter (see **Fig. 8**). This drill rod is held in a chuck in the headstock. When the mandrel is inserted into and bottomed in the hole, I can bring up the tail center and "pinch" the wood between the tail center and the mandrel in the bottom of the hole. You can help yourself dig into the bottom of the hole for good gripping by filing some teeth or grinding flats much like a screwdriver on the end of the drive mandrel (see **Fig. 9**).

There is a lot of incentive not to cut the drill rod or have the universal length rod for all occasions. I highly recommend that you have a mandrel sized in length and diameter for each of the types of infill you plan to use. The best recommendation I can give is not to have any more length than you need to work safely at the headstock end. The longer the mandrel, the more flex you'll have to deal with—particularly with the length of rod that isn't encased in the block of wood of the same diameter

(see **Fig. 10**). It is even a good idea to take up the extra hole dimension of the second drilling diameter by wrapping enough tape around the mandrel to support the wood. Trust me—it does make a difference.

Here is the absolute key to this process: Once you have the blank on the mandrel and bottomed out, it is time to bring up the tail center. The trick to getting the blank to rotate on the drilled axis is to let it find its own center (see **Fig. 11**). Turn the lathe rpm's down very low and turn on the lathe. Let the blank rotate slowly and then bring the tail center forward to whatever location is the center of rotation. Regardless of what the outside of the blank is doing, you must use the center that it is showing you, based on the drilled hole and mandrel driver. With the lathe running slowly, bring the tailstock up close, lock it, and then advance the tail center (see **Fig. 11**). Once engaged, you have the best chance at turning the blank with the least chance for the inside meeting the outside, since you'll be rotating around the drilled axis. Remember, you don't need to reef down the tail center too tightly. The teeth or screwdriver end on the mandrel will work nicely with sharp tools, appropriate speed, and light cuts. Besides, too much tailstock pressure is a recipe for other

problems, such as chatter and mandrel bending or flex.

It is a good idea to mark the depth of the hole. Obviously, any mark will ultimately disappear as you are turning, but the shape can comprehend where the drilling ends so that you don't accidentally make the pen too short and have a hole showing (see **Fig. 12**). The rest is pretty straightforward woodturning, except that now you have a low-cost, easy method to practice all your turning skills (speeds, feeds, tool control, tool sharpening, sanding, and finishing) inexpensively, but in a way that still yields an end product that can be sold or given away (see **Figs. 13** and **14**).

You can learn to master different sizes, shapes, and finishes without breaking the bank. The blanks that I use are 1" x 1" x 9" pieces of cherry, which are cut from furniture scraps. If I make a blunder and have to throw one away, I haven't even put the inkfill in it yet, so I am only out the cost of the cherry and a bit of practice time. I would score that a win. Practice, mistakes from which to learn, and fun at the lathe—they are all with just a total cost of almost-free wood.

Since you'll probably be banging these pens out rather quickly with just a bit of practice, you won't be

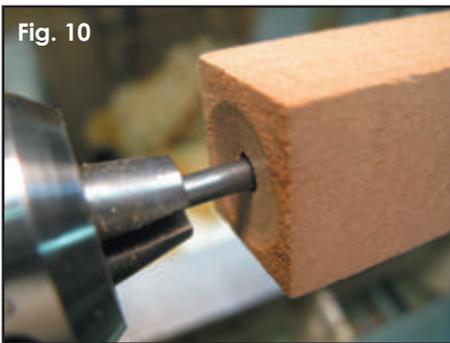


Fig. 10

Keeping the mandrel as short as possible is a good idea, but do have a bit of workspace at the head end.

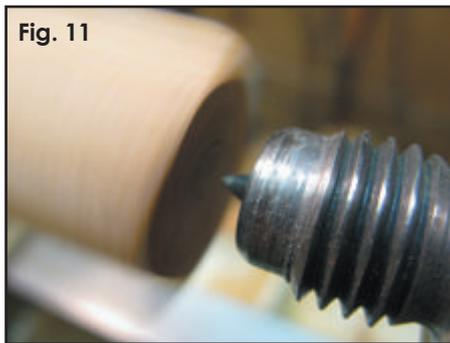


Fig. 11

The key to the entire process is to let the wood find its own center—based on the mandrel and not the mechanical center of the way the wood was cut.



Fig. 12

Having a good idea where the drill depth is will let you create your shape appropriately.



Fig. 13

The turning aspects are standard spindle turning processes, using whatever tools suit you.



Fig. 14

Turn, sand, and finish, leaving sufficient strength at the tailstock end until everything is completed.



Fig. 15

Because these are usually quick projects, a commercial or homebrew friction finish works nicely.

shooting twelve coats of lacquer and rubbing it out after a two-month curing time. You are welcome to use lacquer if you wish, but friction finishes work very nicely (see Fig. 15).

The last issue is to separate the pen at the end where the tail center is still pushing. Loosen the tail center pressure a bit and practice parting off the pen with a skew chisel. This should leave a cut surface that barely needs sanding. Besides, it is end grain and really should be cut as opposed to sanded. After separation, take the tail center away and lightly sand the end, if you wish, while supporting the pen to keep it rotating on the proper centerline.



Fig. 16

Even though these are "quick-and-dirty" stick pens, you can still strive for a good fit at the interface.

Though these are "quick-and-dirty" pens, don't lose sight of the fact that the quality of your turning still can be detected; therefore, there is no reason that you can't pay attention to fit and finish (see Fig. 16).

Also, inexpensive doesn't mean boring. Have some fun. A trip through the arts and crafts store can yield many



Fig. 17

Don't be afraid to have some fun with underlays, inserts, glue-ons, and glue-ins.

ideas for after-turning adornments (see Fig. 17). Depending on your audience or customer base, you can create a special, truly one-of-a-kind pen that can be maintained for a lifetime just by pulling out the old empty inkfill and replacing it with a new inkfill of the same make.



Kurt Hertzog

A professional woodturner, demonstrator, and teacher, Kurt Hertzog enjoys the continuum of woodturning, from making his own turning tools to photographing his finished turnings.

Kurt is a regular feature columnist for *Woodturning Design* magazine, one of the five Council Members of the Pen Makers Guild, and a member of the Board of Directors of the American Association of Woodturners.

Kurt's work has been featured in the American Association of Woodturners "Rounding the Corners" Exhibit, and he has been published in *Woodturning Design*, *American Woodturner*, *Pen World*, and *Stylus* magazines. You can see his work on www.kurthertzog.com.

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