

## Adventures in Turning Wood

### *Look! I Made Four Table Legs in Only Three Weeks*

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Just when I thought I was becoming a reasonably competent woodworker, my daughter Melanie asked me to make her a table to match an antique one we had given her. That table has turned legs. Well, I had been meaning to get into wood turning anyway. My old Craftsman lathe was just sitting there waiting for me, and a set of turning tools had come with it. I had actually turned a few simple objects from time to time.

The woodworking forums, especially the tool-oriented ones, are full of jokes about slippery slopes, i.e., the idea that once you become interested in hand planes or old woodworking tools, you begin to lose control, and slide further and further into folly. I know the experience all too well.

To me, however, the slide is more like a conversation, because it is interactive and it inspires both thought and emotion (both pleasant and unpleasant). It can begin with a glance at a tool, a piece of furniture, or a picture of a craftsman at work. The tool, furniture, or picture (in this case, a lathe) looks back at me. Then I wonder about it, ask a question, pick up the tool, and so forth. As they say, the teacher appears when the student is ready. This is the story of one such “conversation,” and how I made four table legs.

I bought Raffan’s book on turning and started in on a practice blank. It did not go very well, so I bought a heavy  $\frac{3}{4}$ " roughing gouge, since Raffan recommends one. It made my old Craftsman turning chisels look like carving tools. It worked well. Soon I could turn a square cross section into a cylinder. Great. But the surface was rough and showed ridges from the gouge. I was

supposed to smooth them with a skew chisel. Not so good.

A “catch”, when the chisel digs into the spinning wood instead of cutting it, is a minor disaster. If the chisel is not resting firmly on the tool rest, as it should always be, a catch will slam the chisel against the tool rest. It can make a divot on a turning that cannot be hidden without turning off the damaged wood. Sometimes this changes the designed diameter of that part of the spindle. Very many catches, and the work goes to the burn box. I had many catches when I started using a skew chisel.

So, I returned to Raffan. Illustrations in his book show long shavings coming off his chisel. My shavings were small, chips really, such as those produced by my jointer. Watching a few videos seemed to confirm that real turners get long shavings. I thought that maybe my chisels were not sharp enough.

Raffan says he sharpens with an 80-grit white alumina (ALO2) wheel and then turns directly to the lathe. I bought a 100 grit white wheel, and a diamond dresser. This was much better than my old 80 grit grey wheel, which has been on my grinder for 20+ years and never seen a dresser. I disliked the idea of sharpening anything except a lawnmower blade on a grinding wheel, however.

I bought a hard felt wheel and stuck it on my bench grinder, thinking that I could hone with it. There were three problems with that. First, the felt wheel has to travel away from the edge, the opposite of grinding. The most convenient solution (but most awkward) was to hone on the bottom of the wheel (below the axis) with the handle of the chisel pointing up. Second, if you don’t maintain the

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correct angle, or if you press too hard, the felt wheel will blunt the edge rather than hone it. Third, a felt wheel does not stay perfectly round very long and is heavy enough to vibrate a lot on a high-speed grinder.

I posted a question on a wood turning forum. I explained my doubts about tool sharpness and asked what people used to spin a felt wheel. The consensus was (a) yes, I should get long shavings; (b) the problem is probably not tool sharpness; (c) most turners don't hone, with a felt wheel or anything else; (d) the problem is tool presentation, i.e., I was not holding the tool correctly. I was accused of scraping instead of cutting. Well, I know the difference, but my technique did seem to fall somewhere in between scraping and cutting.

One of the guys on the wood-turning forum had said to forget everything I had learned about sharpening planes and flat chisels. There was a bit of wisdom in that. At least, there is a lot more to learn about forming and sharpening gouges, which have a fingernail shape. Gouges have to be rotated in two axes while the exact bevel is maintained against the stone, which, remember, can burn the steel if you hesitate. Skew chisels are a bit easier, but they have a bevel on both sides and, of course, that 60° skew.

I decided to rehabilitate my ancient Dunlap wet grinder. This grinder is a great tool to learn on, despite being terribly messy, because it is slow enough that I can see what I am doing, and it won't burn the tool if I hesitate.<sup>a</sup> And, despite advice from my betters, I bought an arbor for the felt wheels and set it up to rotate backwards, with the front of the wheel rising. I should have

listened to the advice. Stropping really doesn't help much with turning tools, but the felt wheel is still useful to have around for knives, carving tools and carefully touching up flat chisels and blades.

I then turned a few cubic feet of wood into shavings. My gouge work improved a lot. The skew was much more difficult to master. I had catch after catch. I gave up forever, totally disgusted, more than once. Then, finally, I began to get the feel of the skew chisel.

Before long, I had turned about 20 coves and beads and one practice table leg turned out of pine scrap. No matter that it broke in two because I insisted on trying to turn it even though it had a big knot in the middle of it. And finally, I made a spindle where the shavings just curled off, and the piece was smooth straight from the skew chisel. Oh, joy.

The shavings! Dust collection in spindle turning is quite difficult, since the shavings fly to the front and the back, mainly toward you. I soon realized that the 11" wide lathe table that I had received with the lathe needed a wider top, just to stop chips from falling down behind it on all the stuff that is stored underneath. The table is also circa 1941. Four steel legs and cross supports for a customer-supplied top and shelf. The top and the shelf were lovely pieces of 2 x 12 yellow pine. So, the shelf became part of the top. I made a modified torsion box for the shelf and rewired the switch. The drive system (an old washing machine motor) vibrated a bit. So I replaced the drive belt with a link-belt, which helped a lot. Now the table was more solid and the lathe worked better.

The tool rest that came with my lathe is about 7" long. The legs that I hoped to turn were about 20" long. Of course, I could move the tool rest along the bed, but three times for each step in turning now appeared

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<sup>a</sup> I discovered a few years later that the big wet wheel is supposed to rotate "up", away from the edge, just like the felt wheel. It is harder to control the tool but using it is a lot less messy.

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unreasonable. I researched my Craftsman lathe. It probably was made for Sears by Atlas Tools. Neither Sears nor Clausing (the successor company to Atlas Tools) had any suggestions. But I found a 12" tool rest. Good enough. I made a full-size pattern for the legs, based on the original. Then I bought some 1½" square poplar sticks and practiced turning to the pattern. I turned three practice table legs that looked as if they would possibly finish OK. Finally, I turned four almost matching table legs. (See the drop leaf table in Chapter 54 of *Notes and Reflections*.)

All in all, considering the table modifications, grinder rehabilitation, and practice pieces, these four legs required about 80-120 hours. Somebody once called this phenomenon "woodworker's attention deficit disorder," where the task you started leads to others until you are so interrupted it is hard to get back to the original plan.

I do think woodworker's ADD exists, but this was not an example. This experience, to me, is fairly normal. A new task shows that my shop is not set up properly, so I correct it before proceeding with the project. (Along the way, I also had to learn how to reverse an induction motor.) Maybe that is ADD after all.

It's not surprising that my shop would not have been set up well for wood turning. Wood turning really has very little in common with (flat) woodworking. At the moment, turning seems as much like flat work as diving is like swimming. You may do them in the same clothes and the same place but otherwise they are different pursuits altogether. Likewise, sharpening plane blades is precise, like drafting. Sharpening gouges is balletic, like calligraphy.

The conversation between me and my lathe would continue, because I still had a lot to learn.

## *Chair Posts*

Some time after I had made the table legs, I became interested in making ladder-back chairs. As with turning, chair making is specialized. Yet another set of techniques and jigs was needed. I wanted to turn a finial on the rear chair posts. Unfortunately, the posts were longer than the bed of my lathe could accommodate. I needed a bed extension to support the tailstock assembly. I had supposed that this must be machined out of steel or cast iron, be perfectly in line with the bed, etc. Since the lathe was at least 60 years old, I had little hope of buying a bed extension.

But I knew that crude lathes had once worked perfectly well, before the advent of electric power. I made a wooden bed extension, basically a block of wood with two oak strips to serve as ways. I also needed a tool rest, which I made from wood and screwed to the table. Also, thanks to an article by Ernie Conover, I made a simple bird's mouth steady rest. I was pleasantly surprised to discover that all of this served my needs very well. (see *Notes & Reflections*, Chapter 47, Shaker Style Ladder-Back Chairs)

## *Vessels and Lamps*

My most recent adventures involved face (faceplate) turning – bowls and cups and the like. Face turning has the advantage that its projects are, in a way, straightforward and fairly short. Where a joinery project, say a desk, may take months, a bowl can be done in a few hours one you have the setup and the skill.

On the other hand, if woodworking is swimming and center turning is diving, face turning is a double gainer off the cliff at Acapulco. When I watched a video of Raffan turning a spindle, I could imagine learning how to do that, and I did learn, more or less.

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But when I watch a master turn something like a wooden ladle or scoop, I really feel the same way I do when I am watching gymnastic platform diving. My highest aspirations in face turning are well short of that skill level.

Of course, face work requires new tools. At the least, it requires a small face plate with a “screw chuck.” I had a 4" faceplate that fit my headstock. I mounted a 1" thick disk of hard wood to it, put it on the headstock, and marked the center with my tail center. Then I drilled a hole through it, into which I drove a 1<sup>3</sup>/<sub>4</sub>" #10 screw. I found that this home-made screw chuck and one or two smaller screws through the faceplate and the wooden disk would hold the work securely.

The problem with this arrangement is that it leaves screw holes in the bottom of the turning. These can be filled, of course, or the bottom can be planed off until the screw holes go away. But, I soon decided that I needed a four-jaw chuck to hold the bowl by its bottom while I hollowed it out. Contrary to my normal practice, I chose to buy a set, because I did know exactly what I would need.

Raffan says that we can, if necessary, use the same shallow chisels for face work that we use for center work. Well, maybe he can do that, but of course he doesn't. Probably a skilled turner like Raffan could turn a bowl in 10 minutes with a broken Coke bottle, but the rest of us need more specialized gouges and scrapers. Even at that, hollowing out a bowl sent me back to beginners' class again, with the same frustrations about choice of tool, presentation of tool and, of course, catches. Also, small flaws in a bowl are much more apparent than, say, flaws in a table leg. So technique is even more important.

This was, and continues to be, very much a work in progress. I have moved from turning chair legs to chair rails to solid bowl blanks to flat segments and staved segments, as I describe further in my book. I have made

a few lamps. I bought a new, larger lathe and reluctantly gave up my trusty old Craftsman. And, just as I thought I was becoming a competent turner, I discovered “bowl from a board,” for me the hardest kind of vessel blank to turn well. Humility has returned.

Then a friend gave me a big block of wild cherry burl that had been drying in the back of his pickup truck for God knows how long, and asked me if I could make it into a bowl. This thing still had its bark on. It was gnarled, and I knew that I'd have to leave most of the bark on to make it into anything appealing. It just barely fit on my new lathe, but it was extremely unbalanced. My friend had tried to hollow it out with a chainsaw or something, so it had no reference surface to start turning. Its grain ran in all directions, but I could not spin it fast enough to cut it well because it was so irregular. To make a long story short, I mounted a trim router on the toolrest of my lathe and turned the block against it –by hand! – to true the surface so I could get started..

## *Conclusion*

My adventures in wood turning are typical, if somewhat magnified, examples of my experience in woodworking. When I took up this craft seriously, I expected it to challenge me on many levels. It has fulfilled that expectation beyond my imagining. Each facet of the craft, be it joinery, inlay work, or turning, has presented a wide variety of interesting and rewarding challenges, and lead me down unexpected paths.

I spend almost every available hour in my shop, and sometimes I feel impatient when other concerns keep me away, even though they may actually be more important than my current woodworking project.. One may reasonably ask why I choose to get hot, sweaty, tired, and frustrated when I could as

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well do something cooler and easier, away from sharp objects.

Surely, the heart of my love of this craft is the cycle of being challenged, sometimes to where I almost give up, and then meeting the challenge and moving on to make something useful and attractive. Craftsmanship allows me to maintain a feeling of personal competence, even as I feel my powers slowly receding with the little physical and mental losses that inexorably accompany advancing years. In some ways, my early years were more fun, because the problems were so complicated: learning about wood,

steel, abrasives, electric motors, the ways that my old tools were meant to work, and on and on. The pleasure I get from this will probably continue as long as the challenges continue and as long as I can continue to rise to meet them.

### References

Raffan, Richard. Turning Wood With Richard Raffan. Newtown, CT. The Taunton Press, 2001