

March Featured Presentation Turning for Furniture, Session 1



Irv relaxing prior to the start of the meeting.

Well, the club gave me an opportunity to display my presentation skills as well as my turning skills. I used the opportunity to display my presentation skills by holding a very polite group captive 40 minutes past the scheduled ending time in a room that was a bit too warm; on a work evening; forcing them to hear some bad humor; while trying to get a message across that included what some can still hear their mothers nagging them to do: practice, practice practice -- and only getting half-way through the material I had planned to cover. During the last few minutes, I stepped up to a lathe whose axis was unknowingly too high for me, mounted a turning blank in a manner that scarred at least one person who thought I would take out myself and the whole first row (see, my Turning Tips and Tidbits column on page 10 for details) and struggled to turn a cylinder.

Mel Turcanik was kind enough, a couple of days later, to spend about 3 hours with me at my place trying to help me upgrade my presentations skills. Mel was giving me all kinds of good presentation theory and I think he was really getting to me until he got to the place where he suggested that I do what I had been preaching to you -- the need to practice, which is called rehearsal for the performing arts. It is amazing how easy it is to come up with excuses for not practicing. I told Mel that I had no real interest in presenting other than maybe to share information with this club, and no other opportunities even if I was inter-



Irv trying to turn a cylinder near the end of the meeting.

ested. But more importantly, rehearsal probably wouldn't work for me. I usually know what I want to say, but every time I say it, it comes out differently, really differently. When discussing this with Lyle, he called my style the ad lib style. Lyle, in the last days of his IBM career was managing some of IBM's education activities.

Mel thinks that helping members with presentations is part of our club's education mission, I jokingly accused Mel of trying to turn this club into a Toastmasters Club. Anyway, Mel convinced me that whatever I do, I must have an outline with a timeline and stick to the timeline. So, while thinking about how I would redo my outline and add a timeline for the April 14th presentation, a brilliant thought occurred to me. The thought was that my next presentation will be a looser no matter how well rehearsed and timed it will be. I am trying to show the details of turning shapes without any auditory or visual aids. When the lathe is on, all that will be heard, except perhaps by a few in the first row, is a garble along with the turning noise. All that will be seen is chips flying (this is what Lyle says you all come for). But none of the detail of what I am doing will be visible: hand holds, tool angles, and motions, .

Most seminars, and some clubs, use sound systems with microphones that can be attached to the presenters collar and would work under a protective mask,

(Continued on page 2)

(Continued from page 1)

amplifying the words of the presenter, but not the noise of the lathe. Visual equipment, like a couple of cameras, one overhead, and one horizontal, fed a projection system displays all of the detail on screens or large flat panels. Capture the stuff on a computer, add an editor, and you have the makings of a video for sale on a DVD.

Harmon Pierce has been working on improving the clubs presentation equipment for quite a while now and has found a couple of used cameras and a ceiling mount. However, his display equipment is not too portable, so I guess I made the wrong decision when deciding to hold the meeting at Lyle's Studio to try to save you a few bucks on gas.

With all of that said, I will modify my part of the April 14th meeting. It will be an informal meeting in which I will pass on a few tips on layout, replication and precision for furniture, and try to answer any questions on the basic tools and forms that weren't covered at the last meeting. If only a few show up, we can all stand around the lathe and perhaps see some chips fly and hear something. There will be no formal presentation. The meeting will end at 11 am and I will hang around for another half-hour if any members want to discuss anything with me.

There will be no following meeting with me presenting a furniture project. Please see page 1 for the revised schedule.

Summary of the March 29th Presentation

I started the presentation by passing around a couple of picture boards of furniture with turnings, hoping to interest some of you in trying to apply your skills in furniture creation. A story board on a pair of end-tables showed some of the processes. All of the furniture turnings on both picture boards had been turned using the scraping method for the coves and beads, a no-no according to most accomplished spindle turners.

I had, in the first 3 months of this year, gone from being a scrapper to being a cutter by using various books and videos and doing a lot of practice turning. I am a self-learner and thought that I might pass my learning methods on to others. I had gone from being a risk avoidance turner to a confident, creative turner, fully in control of my tools, and no longer afraid to take that second or third refinement pass on anything. Notice that I have not used the word competent above. Competence will come with continuing

practice turning and productive turning.

Because the idea was to show club members **how to teach themselves** how to do spindle turning, I first defined spindle turning: *any kind of turning with the wood grain parallel to the axis of the lathe spindle.*

I then spent a lot of time suggesting texts and videos and talking about some of the authors. It was important to pick one text written by an author that you feel confident in, because you will be spending many, many hours working on the lessons in that text. I choose Richard Raffan as my teacher. A text is more important to me than a video because it is right beside me while I do the lessons. I use a video as augmentation to the text and watch it in an easy chair in my family room to fill in some of the details.

Incidentally, Bill Beckman took the pictures shown at the beginning of this article. I offered him the authorship of the whole article. He wisely declined, but he did send me the following comment to include:

Irv Miller started on his assignment to present the first of three sessions on the subject of furniture turning where most situations require turning spindles. Irv started the discussion with examples and explanations that furniture turning requires the ability to duplicate pieces. Irv discussed various book sources extensively and caused several of those attending to wonder if Irv is really a closet librarian.

Next, we selected spindle turning tools. The idea is to start with a few basic tools, usually the ones you already have. They must be sharp. The audience and I selected 4 basic tools based on what most of us already owned. These are shown on the following page along with 3 other tools.

Wood selection is also important. It must be cheap to eliminate any risk avoidance tendencies, and plentiful, and of one variety to keep the variables to a minimum. An 8 foot 2x4, for about \$2, will produce sixteen 2x2s about a foot long and take you a long way toward gaining confidence in turning coves and beads.

Hence the phrase: *Get a book, get a 2x4, and practice, practice, practice.*

But what do you practice? Answer: Basic shapes. There are only 3: flat, concave, and convex.

We started the chip flying part of the session with centering, mounting a 2x2, and then roughing out a cylinder. That ended the session.

(Continued on page 3)

(Continued from page 2)



Basic set of spindle turning tools: 1 inch spindle gouge, 1/2 inch spindle gouge, 1/2 inch skew, and parting tool. The picture on the right shows the tools rotated 90 degrees to show the grind profile which can vary quite a bit, and is less important than the sharpness of the tool. These are all cutting tools, although the skew can be used on its side as a negative rake scraper if you don't mind sharpening it often.



Other tools: 3/8 inch square beading tool, elliptical nosed scraper that I have used for tight coves, and diamond point scraper that I have used for forming beads. The beading tool works like a square-ended skew or a wide parting tool and is sharpened like the cutting tools above with a coarse wheel if nicked, a fine wheel, and then a hone or a charged hard felt buffing wheel (my method). The two scrapers have a much blunter bevel than the cutting tools. They are sharpened on my 60 grit white wheel and not honed so that the bur remains.

As for the shapes, flats are best made with a shallow gouge with a wide sweep (like the 1" gouge above) or a skew (long point up or long point down). If one end of a flat has a larger diameter than the other, it is called a taper and is best cut "down hill." All spindle turning should be down hill.

The process of cutting shapes is described in such detail and with such excellent pictures and drawings in the referenced texts, that you should really take a look, even if you are not a self-learner. The refer-

enced videos present the details in a much clearer way than they could ever be presented in a club demo, even if we had the best of equipment and the best of presenters, because of the extensive rehearsal and the editing.

Concave surfaces are cut with a gouge or even a skew if the surface curvature is shallow enough. Here is where a skew with a slight radius works well. But as

(Continued on page 4)

(Continued from page 3)

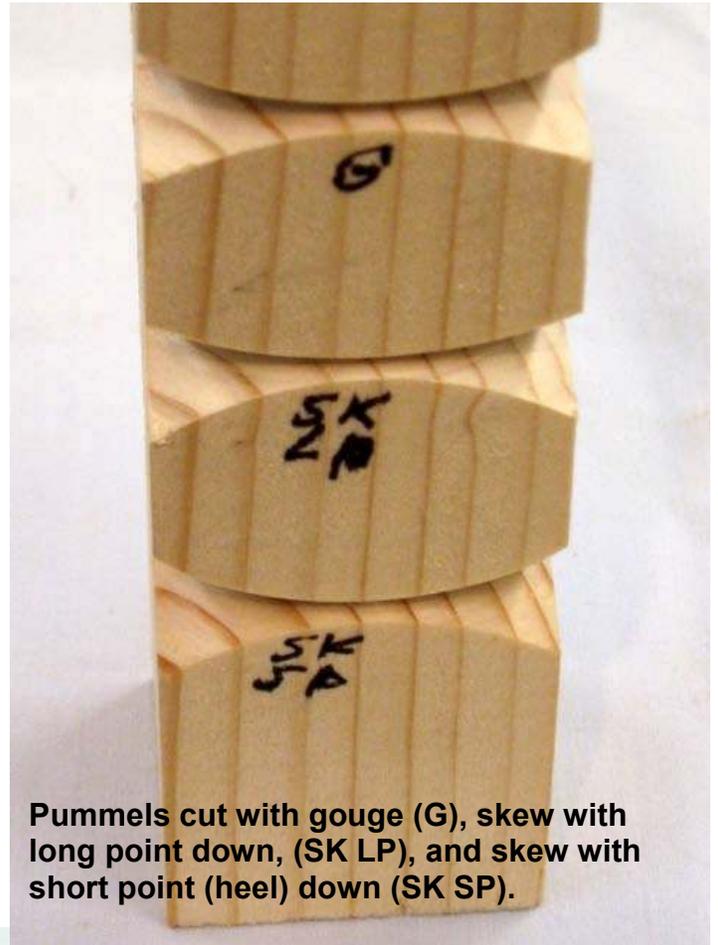
the curvature tightens (coves), only a gouge with a size and sweep tighter than the curvature will work as the cutting tool.

Convex surfaces can be cut with anything, including a skew, gouge, beading tool, and parting tool. The tool for a sharply curved convex surfaces may be determined by what is next to it. For example, to roll a pair of small adjoining beads, a detail gouge (a spindle gouge with an acutely ground bevel) may be required to get between them if you prefer a gouge to a skew.

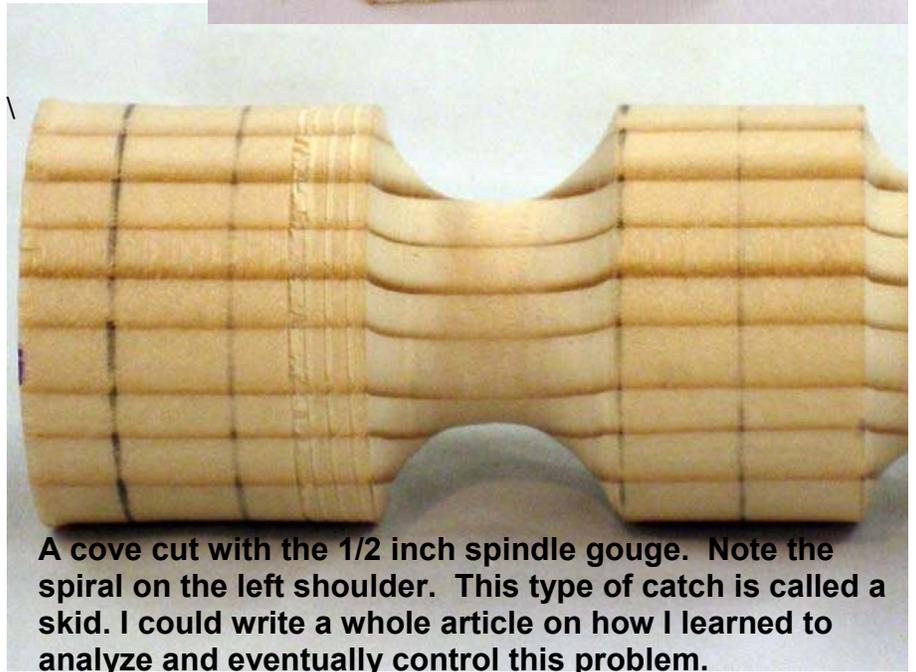
The rest of this article includes some pictures of shapes to practice, but please follow the lessons in the text you have chosen.



The beads to the left can be “rolled” with almost anything. A skew gives the best surface, but not much better than a sharp gouge. The shape just above the skew-rolled bead is a cylinder flanked by grooves made by my skew. This creates room for the bead rolling.



Pummels cut with gouge (G), skew with long point down, (SK LP), and skew with short point (heel) down (SK SP).



A cove cut with the 1/2 inch spindle gouge. Note the spiral on the left shoulder. This type of catch is called a skid. I could write a whole article on how I learned to analyze and eventually control this problem.

Start with a well executed cylinder (good cylinder practice), layout the beads, cut the grooves (good groove practice), then roll the beads.



After a few dozen of these one-footers, over multiple sessions, your body will know just what to do. Do the same with coves.

April 14th Featured Presentation Turning for Furniture, Session 2

Photo by Bill Beckman



Irv actually turning something. Notice that the lathe spindle axis is at elbow height. Protective gear: face mask, hearing protection, and a smock with elastic wrist bands to keep loose sleeves out of the way, is being worn.

I think that this session worked out a little better than Session 1 on March 29th. For one thing, it ended at 11:05 am which was almost on time. I was a little more organized. There were about half as many attendees as there was at Session 1. I guess Session 1 was my weeding-out session for those that weren't really serious about spindle turning basics.

I was able to complete the basic shapes demonstration in about 50 minutes. After a brief recess, we started the replication session with a few words on what we might want to work with to replicate: drawings, pictures, actual spindles. Replicating must be accomplished with sufficient precision that the spindles appear to look alike. The only special tools for replication are a story pole, a pencil, and outside calipers.

One additional aid is a small stand clamped to the ways of the lathe to hold either a drawing of, or the real spindle to be replicated.

To illustrate replication, I used a two-spindle project: the shelf shown on Show and Tell page 5. I had made a story pole from a drawing pasted to a piece of 1/8" hardboard with 3M Supper 77 adhesive. I first mounted a cylindrical blank previously prepared to the largest diameter shape on the spindle. I then held the story pole on the tool rest. With the lathe running, I marked off on the blank, with a pencil, the critical locations of all of the features: bead edges, the start of tenons, large diameters in hills and small diameters in valleys of compound curves, etc. Then, using a

(Continued on page 3)

Photo by Bill Beckman



One by one, the use of each tool was explained, including how to hold it, and the motions that must be used to accomplish a particular shape.

Photo by Bill Beckman



After an explanation the lathe was started and the tool and shape that had just been explained were demonstrated.

Photo by Bill Beckman



Duplication for furniture, the last third of the presentation, was oriented around a pair of spindles that were part of a butter-nut and glass shelf project. The story pole, the parting tool, and calipers were introduced here.

Photo by Bill Beckman



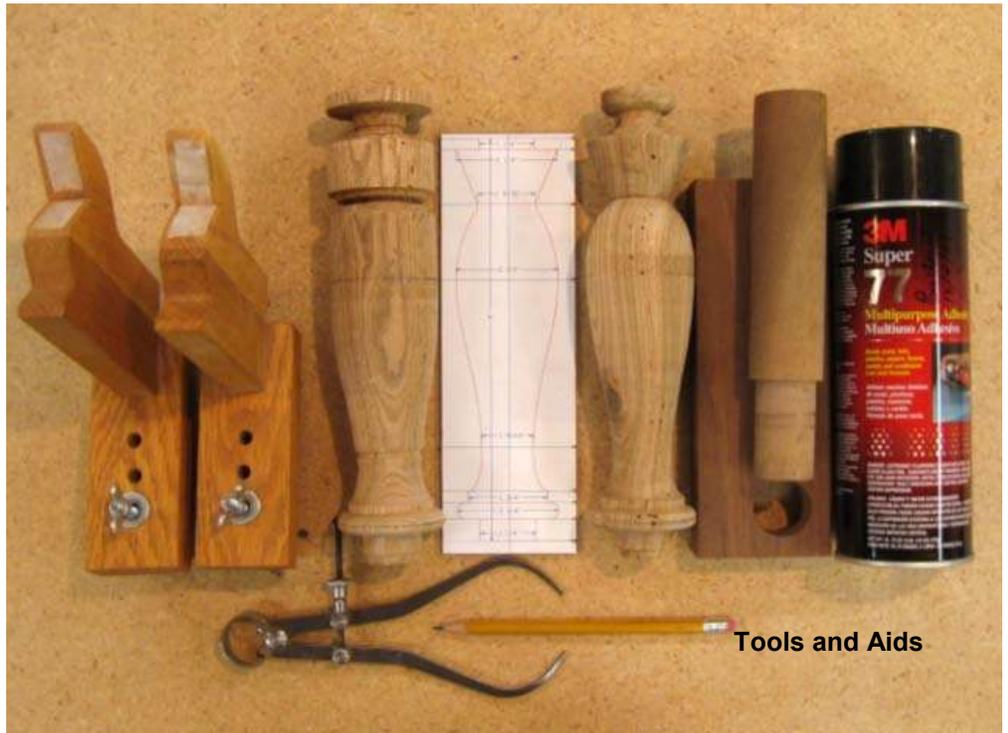
Emphasis was placed on turning precisely fitting tenons.

(Continued from page 1)

parting tool to cut trenches, a calipers to measure trench depth (remaining diameter) and the pencil lines as guides, I removed wood until I reached the desired diameters. This also resulted in a set of boundaries for each shape on the spindle. Then, using the tools and techniques demonstrated previously, and constantly viewing the drawing (or spindle) on the stand, I shaped the beads, coves, etc.

I paid special attention to turning accurately fitting tenons using calipers and a model tenon that had been turned to tightly fit a hole made by the very drill bit that would be drilling the hole for this tenon.

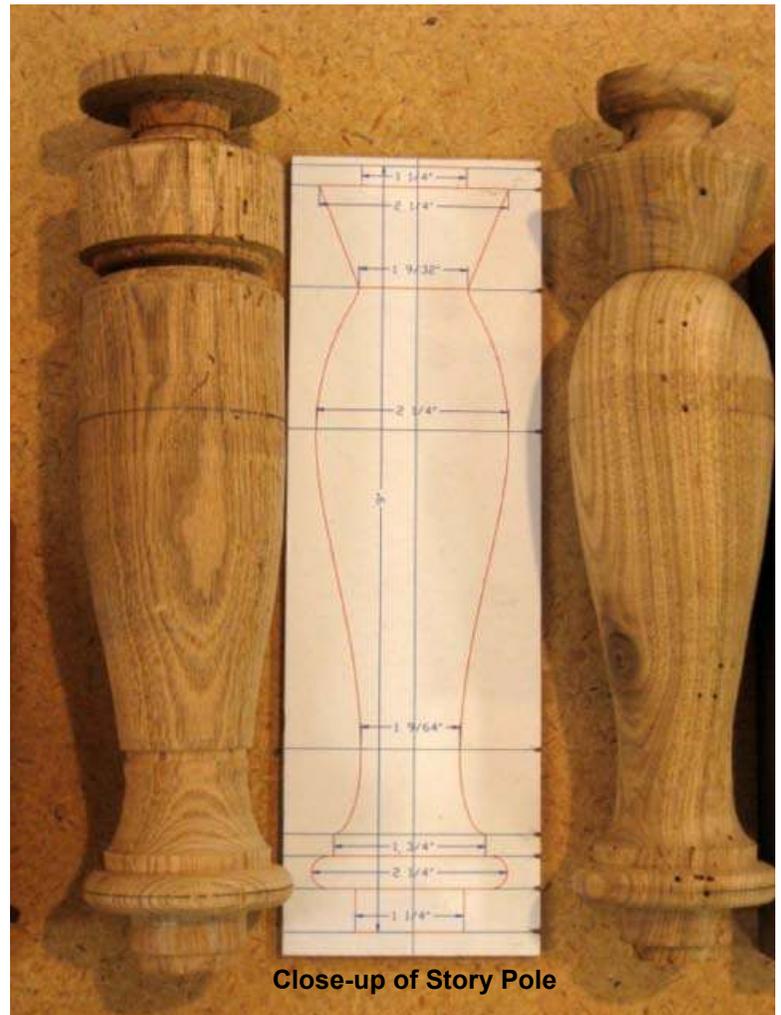
That completed the demonstration. Anyone that wanted to take home a set of plans of the shelf project was welcomed to do so.



Tools and Aids

The photo above shows the tools and aids used in the demo for spindle replication. From left to right:

1. A pair of stands, attachable to lathe ways. These hold the drawing, or hold a previously turned spindle, to be easily measured with calipers. Also, the final shapes can be readily viewed while turning, and hence replicated by eye.
2. The partially turned second spindle. Note that some of the depth trenches, created by the parting tool, and using the calipers to measure depth, are still intact.
3. The drawing that was made into a story pole to mark lines on the cylindrical blanks. It was also used to pick off diameters with the calipers for the first spindle. It can be seen in more detail in the photo to the right. Note the small knife-made v-grooves on the right side to aid in locating the pencil.
4. The first spindle, created solely from the drawing.
5. A two-piece jig for accurate tenon measuring. The hole in the block is cut by the drill that will be used to make the mortises. The cylinder lying on top of the block has a tenon that has been turned to accurately fit the hole in the block. This tenon is then used to set the calipers for all tenons of that particular size.
6. The spray adhesive used to fasten the spindle drawing to its base of 1/8" hardboard.
7. Below, Calipers and pencil



Close-up of Story Pole