



*In the last fifty years, Rude Osolnik has produced thousands of turnings, like this rhododendron weed pot, that highlight the natural beauty of wood grains and the elegance of simple lines.*



# Spindle Turning

*Fine points for the beginner*

by Rude Osolnik

I always enjoy teaching spindle turning because any well coordinated person can pick up the rudiments of the craft so quickly. Unlike so many woodworking disciplines, spindle turning doesn't demand a long apprenticeship. Almost from the start, good students begin exploring an endless variety of shapes, wood grains, colors and textures, and injecting their own feelings and personality into their work. This personal involvement is what makes the craft so fascinating for me year after year.

If you want to learn spindle turning, don't even think about duplicating the complex spindles you see in books. That copying has given spindle turning a reputation as a boring, repetitive task. Relax, and concentrate on cutting a nice, free shape. I encourage beginners to start with simple shapes, like the weed pot shown in the picture series, and to work with found wood, which is cheap and often stunning. If you buy expensive wood, you'll be too worried about the money to learn how to handle your tools and master the basic cuts. The secret to spindle turning is locating the highs and lows, which is a matter of measurements, then connecting those points with shoulders (flat areas), coves (hollows) and beads (round or oval swellings). These shapes are cut with a parting tool and a shallow fluted gouge, with the same techniques used to shape the weed pot.

Since so many good turnings are designed to showcase the natural beauty of woods, searching for wood is a good way to start thinking about turning. Good sources for hardwoods include the firewood pile, trees knocked down by storms or old age, and fallen branches. Look for sections with curvy undulations to the bark, or with burls, bubulous growths often having spectacular, distorted grain patterns. Spalting, the dark-line patterns caused by mineral stains and fungus infestation as wood decays, is very pretty. Wood with wormholes, cracks and interesting bark also is good.

Generally, dead limbs are pretty dry, but if the wood feels wet, I stack it out of direct sunlight for a few months to get rid of excess moisture. I might rough-turn a wet piece and put it into a plastic bag for a week before finishing it. I don't use chemicals like polyethelene glycol (PEG) to stabilize wet wood. I tried it once, but the turning never felt dry. One thing that sells turnings is the warmth you feel when you pick up a piece. If a turning feels clammy, it won't sell. That's why wood doesn't sell well on a rainy day when it can absorb environmental moisture.

If your found wood doesn't have an exceptional grain or spalted pattern, it's crucial that its turned form be attractive. This means a turning has to be balanced, well-proportioned, and have pleasing lines. That's an intimidating roadblock for many beginners. Get around it by working from nature. Natural objects frequently have an attractive shape—an onion is a good example. Fruit forms are also good. The designing is all done—you just need to extract some of the lines. Also, get into the habit of cutting pieces to different lengths. The size variations will force you to think of different forms, shapes and proportions.

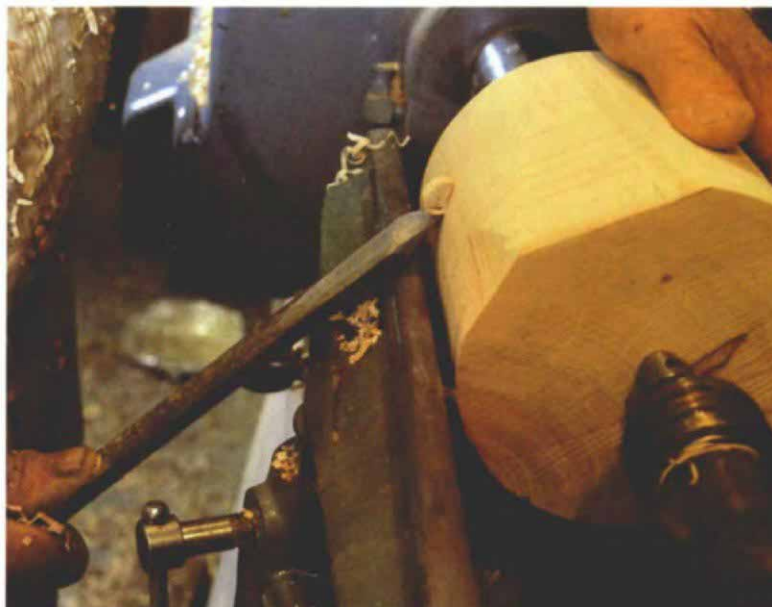
When you see a pleasing shape, scribble that form on a scratch pad and build an inventory of shapes. Look for simple lines that don't detract from the natural flow of the wood grain. Pieces should look as if they're rising out of the surfaces they rest on. Note how slender, delicate sections create a distinctive elegance. I've also found that if a piece looks good, it feels good. If your hands flow smoothly over the piece, it's good.

Another thing that hampers beginners is that they have too many tools. My tool kit is pretty small, only five tools—a square-nose parting tool; three homemade gouge/skew combinations ( $\frac{3}{4}$  in.,  $\frac{1}{2}$  in. and  $\frac{1}{4}$  in.), and a large gouge about 2 in. wide. I

always show how I use my tools, but nobody needs tools like mine. All you need are a parting tool and a couple of gouges. The Superflute gouges, available at local outlets and mail-order supply houses, work well for spindle turning. The point is, almost any tool will work well if you learn how to hold it properly.

I don't spend a lot of time preparing turning stock, especially for simple shapes like the weed pots, but it's wise to bandsaw off any lopsided corners and protuberances that will get in the way when you rough-turn the piece. Perfect balance isn't necessary. I usually locate one of the spurs to the side of the heart of a limb section, which throws the piece out of balance anyway. This produces an interesting star effect on the side of the turning. I often try four or five centers on a piece before getting the effect I want. It's a good way to manipulate the emerging grain patterns. Because of the out-of-balance pieces, don't turn at the higher RPMs, especially when roughing out. Ninety percent of my work, anything up to 5 in. to 6 in. in diameter, is done at 1,800 RPM. For pieces more than 6 in. in diameter, I slow down to 600 RPM.

To shape the weed pot shown, I mount a chunk of oak between centers and rotate the spindle by hand a couple of times to seat the centers. Since my centers are small and sharp, they penetrate easily, but you may want to drill a center hole for heavy centers with thick spurs. If a piece is very irregular, I sometimes begin with the heavier centers, then shift to the smaller ones, once the spindle is balanced. Rotating the spindles is also a good way to check if the turning clears the tool rest, which should be about  $\frac{1}{8}$  in. from the turning. The tool rest should be slightly below the center of the turning, so the cutting edge of your tool will be just above the center, as shown below. Remember, you will be cutting with a small section of the bevel near the point of the tool, or slightly to the right or the left of center, and that part of the chisel should be above center. Concentrate on the relationship between the edge and the work. Take a  $\frac{3}{4}$ -in. gouge and try cutting with the lathe off, turning the stock by hand so you can see how the gouge rides on its bevel and can be lowered or rotated to the right or left until the cutting edge contacts the wood and begins to remove stock. Always try to set the bevel first, then bring the cutting edge down, rather



*Practice cutting with the lathe off, rotating the wood by hand, until you understand how the tool rides on its bevel as it cuts.*



*To shape a weed pot, begin with the gouge on its side, left, and reduce the diameter of the vessel's neck. Don't try to cut the shape all at once, but make several passes. Final cuts, center, are very light, aimed at minimizing the amount of sanding needed*

*to polish the surface. On the bottom, work the point of your gouge or parting tool in to form a concave surface, right, which will help ensure that the pot's base will be true enough to sit on a flat surface without rocking.*

than jamming in the point of the tool, which could catch.

I rough out pieces with a 2-in. gouge, making a shearing cut down the cylinder, but a ¾-in. gouge will work. This is one of the most difficult parts of turning, because the out-of-balance stock produces quite a bit of vibration and the larger tool will absorb some of this. Because of the great amount of material removed during roughing out, I also wear a glove to prevent chips and bark from cutting my hands. A face shield is advisable.

Once the stock is turned to a fairly true cylinder, try to visualize a shape that best shows off the wood's natural beauty. My general strategy is to shape the base of the turning first, to eliminate excess waste and give myself more room to work, then do the top near the tailstock. Most of my weed pots are cut with a ¾-in. or ½-in. gouge, but I will use a narrower gouge for tight curves. The general rule is to cut in from the greatest diameter to the smallest, as shown. Begin your cuts with the gouge fairly

high and the flute of the tool pointing up. Then, as you go to the smaller diameter, bring the cutting edge down and rotate your wrist so it's almost at a right angle to the spinning, above, left. Keep the tool riding on its bevel. Don't rely only on your hands to move the gouge. The smoothest turning motion involves swaying back and forth with your body, rather than a hand movement. Keep your arms close to your body and move your arms and body together. Don't use a white-knuckle grip on the tool. As you get toward the final shape you want, take finer and finer cuts, above, center, to produce the smoothest surface possible.

Bark left on the turning can provide an interesting texture, but if it comes loose, stop the lathe and squirt in Hot Stuff, a syrupy cyanoacrylate glue which dries almost instantly. It's available from Craft Supplies USA, 1644 S. State St., Provo, Utah 84601 (they also sell Osolnik's turning tools and urethane oil), and Conover Woodcraft Specialties, Inc., 18125 Madison Rd., Parkman, Ohio 44080.

Before cutting off or parting the top and bottom, I shape the ends of the turning to facilitate cleanup. On the top, I cut an inverted cone with a stem slightly thinner than the drill bit used to bore out the center of the pot. The drill will neatly pop off the waste as it goes into the main body of the pot. On the bottom, I work the gouge in to create a concave surface, above, right. I cut nearly through, then sever the last bit with the lathe turned off.

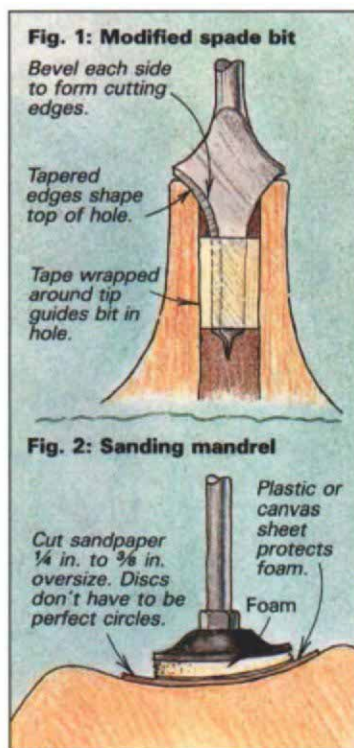
I bored the pilot hole in the weed pot with a brad point drill in a Jacobs chuck mounted in the headstock. You can also use a drill press. The best way to finish the hole is to modify regular spade bits, which are available from any hardware store. Grind the center to make a long, slender brad point and taper the main body of the bit to shape the rim of the original hole, as shown. I wrap the center bit with enough tape to make it fit snugly and run true down the drilled hole.

Forming the concave surface on the pot makes it easy to level the bottom, since the center bump left in parting off is recessed so it can't make the pot rock. To sand this surface, I mount a mandrel with a 1-in.-dia. sanding disc in my drill press, far left, and hold the turning under the spinning disc. With a little practice, you'll find you can manipulate the turning to produce a smooth bottom. To prevent the paper from grabbing, I glue a thin piece of foam to the disc, then glue sandpaper to the pad.

After you've made a few weed pots, try a simple stool with turned posts, as shown in figure 3, p. 40. Make the beads, coves and shoulders with the same cutting techniques you used on the weed pot. Chuck a 2-in. turning square between centers and



*Sand bottom of the pot by rotating it freeband against a foam-backed sanding disc mounted on a mandrel cbucked in a drill press.*



**Fig. 1: Modified spade bit**

Bevel each side to form cutting edges.

Tapered edges shape top of hole.

Tape wrapped around tip guides bit in hole.

**Fig. 2: Sanding mandrel**

Cut sandpaper ¼ in. to ⅜ in. oversize. Discs don't have to be perfect circles.

Plastic or canvas sheet protects foam.

Foam

# Working with an old-time turner

by Dick Burrows

Working with Rude Osolnik is a delight—he's the fastest, and probably cleverest turner I've ever seen, a great storyteller and, even after 50 years as a woodworker, just plain excited about wood. When he was showing me how to turn a weed pot, he abruptly shut off the lathe, moved the light up and said, "Isn't that pretty?" It was, but what's more important, he reminded me why I wanted to be a woodworker in the first place.

Wood is everywhere in Rude's world. There are piles of it near the nine lathes in the two shops next to his house. The house itself could be a craft museum. Bowls and pots ready to go to the Benchmark Gallery, which his son runs in Berea; carvings, ceramics and other objects he traded his work for; even a handmade Windsor chair built by his wife, Daphne. During a tour of the neighboring countryside, he showed me another barn full of his wood. Across the road is another complete shop, now unused, where he and his sons used to mass-produce wooden letters, stools and other gift items for companies in New York and other big-city markets. Nearby are more sheds full of wood, some of it dark with dust and age, but Rude identified the rosewood, walnut and rhododendron without hesitation. Each wood cache also prompted a story about bargains, sly trading and people trying to take the country boy to the cleaners.

Rude never wastes a chance for a story or a humorous ruse. Due to a reservation mixup at the car agency, I drove to Berea in a shiny, metallic-blue Toyota MR2, a hot little sports-car that seemed a little out of place in the quiet college town. Rudy just had to borrow it. "There are some old guys I have coffee with every day. I'm going to drive up and tell them it's my car. Shake 'em up a little." They believed him, for a while at least, and marched out to admire the car, talk about cylinders and gears, while commenting about old goats who won't grow up.

Later, Daphne asked how he was going to explain the car's absence when I left. "I'm going to tell them you made me take it back. They'll believe that." Afterward, he admitted he probably gave everything away when he answered a question about the cost of the car with "I'd give my pickup for the car and \$200."

I had hoped to meet Rude ever since I began teaching myself turning in North Carolina about 15 years ago. His work was pictured in magazines or shown in the Southern Highlands Guild shops, and I knew he was making a living at it, just as I wanted to do. I copied some of his plywood-lamination bowls and rolling pins, and his distinctive candleholders, but I



*To make a distinctively Osolnik-style candlestick, form two cones, cutting in from each end toward the narrow stem. The top cone is one-third the length of the stock, which should be straight-grained to prevent the stem from breaking.*

never got the candlesticks right.

The difference, Rude told me, is that he shaves the stems thinner than his imitators and cuts a slight curve on the top and bottom cones. He's made at least 150,000 of these candlesticks, which helped pay his children's college tuitions. The design is simple—the top cone is one-third the length of the stock, the bottom two-thirds, but each one is a little different and has a little different shape. Rude consistently turns one every five minutes. He often began turning at 4 AM, four hours before he had to leave to teach his first class, and he knew the time was up when he'd finished 48 candlesticks. (Incidentally, be careful if he says, "we'll get an early start in the morning." He means it.) To save time on spindles like the candlesticks, Rude doesn't even stop the lathe to remove and chuck on new pieces. The secret is in having a delicate touch and using a fine spur center. He made a believer of me, and I'm going to try it again, as soon as my fingers stop stinging.

Little details like the stem of the candlestick—the elegance of a slender form, a subtle curve or line cut to reveal the natural beauty of the wood—abound in Rude's work. His output as a turner over the years is astounding, yet each piece has a certain individuality that comes from Rude's enthusiasm for the wood and his joy in revealing its beauty. He's a craftsman's production turner. Not only is he enthusiastic about the work he produces, he delights in the process and coming up with clever ways to produce. There was no pretentious posturing, no art babble—just two guys

who like wood enjoying the work. That's a feeling I often find stifled in a world of art objects and woodworkers who pride themselves on working within tolerances that would challenge a machinist.

Rude has no secrets. He'll show you every technique he knows, if you're interested, all the while stressing there's no one right way to do any turning. Experiment and have fun as you develop your own style and technique. Don't do too much measuring. Use reference points on your tools, such as the distance from the bandsaw table edge to the blade, or the length of your thumb or the width of your hand instead of rulers. If the diameter of your lathe's tailstock is  $\frac{1}{2}$  in., use that as a guide for estimating spindle diameters. When making duplicates, use completed objects to guide your eye, rather than taking measurements. Simple, common-sense tricks. Try them and see how relaxing spindle turning becomes, and how much more of you goes into the turning.

Be warned though. Rude makes everything seem easier than it is. He's been at it a long time. He grinds high-speed steel bars to make his own turning tools, for example. Each tool looks like a roundnose scraper with a 30° bevel on the bottom and a flute cut into the top to help clear shavings. In Rude's hands they cut, not scrape, and they do everything effortlessly. When I tried it, though, I found the long bevel a little awkward and caught the tool a couple of times. I discovered it pulled and tore much the way a badly placed skew did. The tool's so versatile that it's worth a little practice.

One thing I like about Rude's tools is their beefy  $1\frac{1}{2}$ -in.-dia. handles. Rude explained that a small handle encourages you to clench the tool tightly and this hampers smooth cutting. If you hold the tool as if you were shaking hands with a person, with your thumb on the top of the tool, and relax your grip, you'll do better work with less effort. Little pointers like that kept cropping up all day long. One of his former students, a woodworker in Berea, told me Rude had always been like that. He continually came up with efficient, if somewhat unorthodox, methods to get the job done.

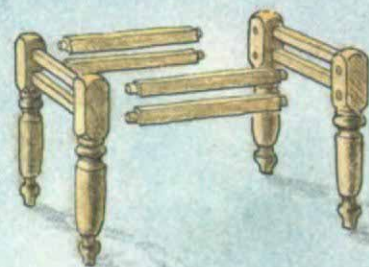
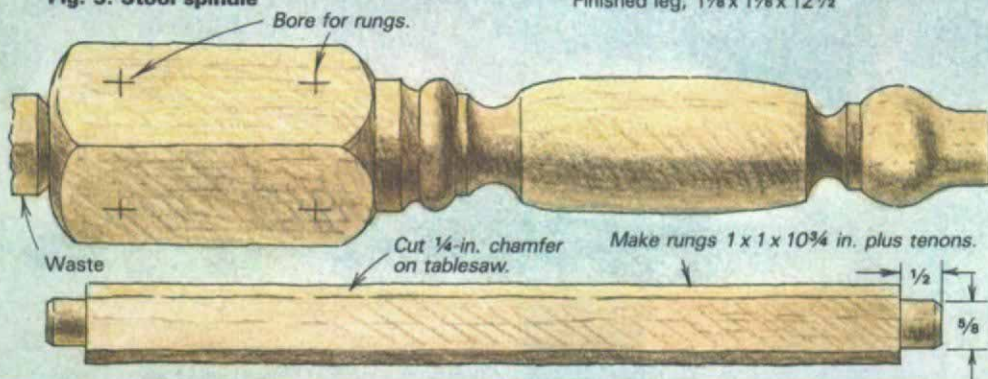
One day a pickup drove up to Rude's shop and a man and his wife got out. Folks downtown had given them directions and said Rude wouldn't mind seeing him. The man had an idea for a new sharpening system. As Rude was talking to the man, his wife softly said "My husband thinks it's an honor to walk on the same concrete as that man." That about sums it up. □

*Dick Burrows is an associate editor of Fine Woodworking.*

**Fig. 3: Stool spindle**

Finished leg, 1 7/8 x 1 7/8 x 12 1/2

To assemble stool, bore one set of holes and glue up two end frames. When dry, bore second set of holes and finish assembly. Weave seat of suitable material.



When shaping a spindle leg for a stool, use a parting tool to set the depths of the coves, left. After setting the depths, roll the gouge down each side of the flat band to create a bead, center.



To cut the cove, right, roll the gouge down from each high point to hollow the section between the shoulders. Always cut downhill, toward the middle of the bellow.



For a napkin ring, fit a block on a mandrel, left. Cut beads by rolling a gouge over the shoulders formed with a parting tool, right.



rough-turn a cylinder, as before. Use your parting tool to set the depths, then round the shoulders with a  $\frac{1}{2}$ -in. gouge. To avoid tearing the corners below the top square, I score the area with the point of my gouge, then cut from right to left and left to right with the gouge to clear out about  $\frac{1}{2}$  in. of wood. Then, I lower the depth with a parting tool. In addition to the depth below the top square, you must establish the flat below the narrow top bead and the bottom of the top cove. Again, use the narrow gouge to round over the square shoulders left by the parting tool to form the bead or hollow out the cove. The bottom section is done the same way. Set the flats, then shape between the flats. Use the point of a gouge or a parting tool to crisply cut the small flat areas and cut sharp lines bordering the beads and coves. Size the coves and beads with calipers, if you like. For rungs, I turn  $\frac{3}{8}$ -in. tenons on the stretchers and chamfer the pieces on a tablesaw. (For more on assembling stools and seat weaving, see *FWW* #36, #62).

To expand your technique, experiment with mandrels. Basically, they're plugs that support stock that would be awkward to mount between centers. To make a napkin ring with a  $1\frac{1}{2}$ -in. hole, for example, turn a 6- to 7-in.-long plug that's  $1\frac{1}{2}$  in. in diameter. The plug is just a holding device, so don't worry about producing a perfectly flat surface. Now, drill a  $1\frac{1}{2}$ -in. hole through a 2-in.-thick block of walnut and friction-fit the block on the plug, as shown at bottom left, facing page. To turn the ring, use a parting tool to lower the center of the ring, then a small gouge to round the end sections.

Another mandrel makes it easy to turn salt and pepper shakers. Since I make a lot of these, I've modified a drill to cut the three-step hole in one pass, figure 4, but you could use three different drills. The larger hole is  $\frac{3}{4}$  in., and is later plugged with a small cork. After I bore out the walnut blank, I turn a three-step plug to fit inside. Then, the blank slides over the mandrel, the tailstock is brought up and the outside of the shaker turned to shape, sanded and finished. Drill the top for salt and pepper holes.

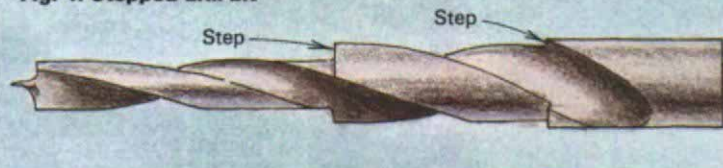
Bracelets are always a nice gift, and an excuse to try pressure turning. Turn the two fixtures shown at bottom right, which resemble two 3-in.-dia. bottles set opening-to-opening. Glue sandpaper to the ends of the fixtures, mount a 5-in.-dia.,  $\frac{1}{2}$ -in.-thick disc between them as shown and turn the bracelet shape. Free it with the tool shown in figure 5. You can re-turn the small disc to make a napkin ring.

It's annoying how many people ruin good turnings by sanding. They forget that clear, sharp lines make the spindle look nice. I cut 100-grit garnet paper into strips about  $2\frac{1}{2}$  in. wide, and fold them lengthwise. I wrap the strips around my fingers or use parts of the strip, whatever I have to do to make the paper follow the lines of the piece and not dub off the sharp shoulders. Don't ever flatten out a wide sheet with your hand and sand. That's how beginners sand bowls to create razor-sharp rims. After sanding with 100 grit, I progress to 150, 220, then 320. As you sand, check to get rid of the smear wood, torn chalky-looking fibers. Sand until these fibers have a glazed look.

For a good, quick finish, apply a coat of Deft clear sanding sealer and let stand until tacky. Then saturate a pad of 0000 steel wool with urethane oil, and use the pad to apply the urethane while the turning is spinning slowly on the lathe. Buff the turning on the lathe with a cloth. □

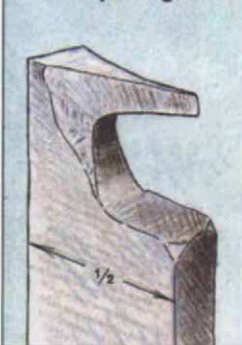
*Rude Osolnik has been turning wood for more than 50 years. He retired as head of the woodworking program at Berea College in Kentucky in 1978, but still conducts turning seminars at his home and in workshops across the country.*

**Fig. 4: Stepped drill bit**



Turn plug to match three-stepped hole bored with modified twist drill, top. Hole could also be bored with three separate drills. Then, fit salt shaker blank on plug and mount it on lathe.

**Fig. 5: Hooked parting tool**



A walnut disc pressure-fit between two bottle-shaped plugs can be shaped to form bracelet. Free bracelet by working in hook-shaped tool, shown above, left, from both sides of disc.