Any experienced woodturner will tell you that the ultimate success or failure of a piece is determined by its form. And while turned objects provide a means to creatively use wood color and patterns, no amount of flashy grain will save a piece that is poorly shaped. Although I adjust my turning blank on the lathe to take advantage of emerging grain patterns, it is the classical form and deceptively simple curves of the vessels shown here that fascinate me.

The first small-neck vessels I made were hollowed through the bottom, and while I was very pleased with the results, rechucking the piece from each end was difficult and time-consuming. In addition, this technique required shaping the inside of the neck, before the outside shape was finished. This was a difficult procedure that yielded inconsistent results because the tool extended as much as 14 in. beyond the tool rest. Later, while carving one of my vessels, I realized that a decorated area would conceal a glueline. This meant I could part off a piece for the neck and hollow out the inside of the vessel. Then after gluing the neck back in place, I could hide the joint with a decorative carving. Best of all, I can do all of these operations with the bottom of the blank screwed to a faceplate.

The procedures for making one of these pieces are pretty simple, but you must be careful, particularly in the later stages. After the inside is hollowed and the neck is being fitted and shaped, a
slip or a catch can destroy many hours of work instantly. Some of the pieces I turn are fairly large, 12 in. to 15 in. tall and 10 in. to 12 in. in diameter; however, I suggest you try a more modest size until you are familiar with the technique.

**Turning the outside**—I turn these pieces from straight-grained green wood. Unlike most bowl work, the grain is oriented parallel to the lathe axis, making it easy to manipulate the blank so that the grain and color best suit the evolving shape. Because there is less radial shrinkage than tangential shrinkage in wood, the vessels will become slightly oval; but they are still more stable than most bowls, which are turned on a faceplate with the grain perpendicular to the lathe axis. I cut blanks from a log section, avoiding the pith. Each blank should be two to two and one-half times as long as its diameter. This leaves plenty of stock for the neck and for mounting a faceplate to the bottom.

You should avoid blanks with highly figured or twisted grain, crotch grain or grain that does not run parallel with the lathe’s axis because the turning will distort badly or become lopsided. Wood with curly or fiddleback grain is fine, and gets what I think is a pleasing texture as it dries. Also, many burl woods work well and can be oriented for maximum yield and best figure. I like to find wood that has a lot of color contrast, as you can see in the vessels shown here.

I mount the blank between centers, turn it to rough shape and flatten the bottom for fastening the faceplate. During the roughing stage, I shift the blank at either the headstock or the tailstock or at both ends at once to take advantage of emerging figure and color, to align the grain with the lathe axis or to avoid defects. Once the blank is roughed out, remove it from the lathe and screw the faceplate to the bottom with 1½-in.- to 2-in.-long drywall or sheet-metal screws. The sharp threads of these screws provide a much better grip in the endgrain than the shallow threads of regular wood screws.

Remount the blank on the lathe and use a revolving center in the tailstock for additional support as you finish turning the smooth and flowing curves of the vessel. I prefer to do this with a ⅜-in.-deep fluted bowl gouge with the edges ground back, cutting from the large to the small diameter. I rough out the vessels with a pulling cut and then make the final light cuts with the gouge’s bevel rubbing against the piece. To make small refinements in the shape and for final smoothing, I employ a technique I learned from Del Stubbs, a California woodworker who turns everything from salad bowls to musical instruments. This method involves using a scraper tilted at an angle to make a sheer cut, which produces a smooth surface requiring little sanding. Clean cuts eliminate the heavy sanding needed to remove tool marks or torn grain that can quickly ruin a good curve or soften details.

Leave a raised shoulder area for carving and a cylindrical section for shaping the neck, as shown in the left photo above. This cylinder will be parted off and later reattached after the vessel is hollowed out. The neck cylinder needs to be long enough to allow flexibility in shaping the neck, as well as for a tenon at each end—one for gluing the neck back to the vessel and one for mounting the neck in a spigot chuck so you can turn the inside to match the interior curve of the vessel. Use a small tool when parting off the neck cylinder because the less wood removed in the joint area the better the grain match when you rejoin the cylinder to the vessel. Also, leave extra wood in the foot area for support when hollowing the vessel. This wood will be turned away after the rest of the piece has been completed. Now turn a 1½-in.-dia. by ¼-in.-long tenon on the end of the neck cylinder to remount it in a spigot chuck, and cut the cylinder off with a narrow parting tool. If you don’t have a spigot chuck, you can just part off the neck and glue it to a scrap block for faceplate mounting. Put the neck cylinder in a plastic bag to prevent checking while you work on the inside of the vessel.

**Hollowing out**—I hollow out the vessel by first drilling a hole from the top to just shy of the finished inside depth. The hole serves as a depth guide for roughing out waste, eliminates the need to cut directly into endgrain and removes the slow-turning center, which is difficult to cut. Begin by cleaning up the parted off surface on top of the vessel with a gouge and make a small dimple in the center for starting a drill. To determine the depth, I visualize the foot area that is not yet turned and measure from the top of the vessel, allowing ½ in. to ¾ in. for the rough bottom thickness. I drill the hole with a long ⅜-in.-dia. electrician’s drill held in a pair of Vise-Grips and pushed in by hand, using the tool rest for support. A lamp or shell auger would also work. Push the drill in, pulling back often to clear the chips, until you reach the full inside depth.

Rough out the inside of the vessel, making cuts from the center to the outside, but allowing for your wall thickness. To reach into the shoulder area, you will need either a tool with a bit that can be swung or fixed to the left, or a hook-shaped tool. I prefer Dennis Stewart’s hook tool (Dennis Stewart Enterprises, 1383 N.E. 25th, Hillsboro, Oreg. 97124), as shown in the above photo at right, although some people find it awkward. For bigger pieces, I have made larger hooks and longer straight tools that fit in the Stewart handle. It is very easy to catch your tool in the endgrain, however, and you must work slowly and take light cuts. You should keep...
the pieces fairly small until you have some experience at working with the tool extended some distance over the tool rest.

With the interior roughly outlined, begin turning the vessel to final thickness by working the tool from the top down, thinning out an inch or two at a time and cutting from the center out; then move the tool lightly up and down the wall to smooth it out. By thinning out in stages, thicker wood supports the cut. Always leave a distinct shoulder where the last cut ends so you can easily feel where you left off and where wood needs to be removed. Stop the lathe often to blow or vacuum out the chips and check the wall thickness. Standard double-ended calipers work well for gauging the thickness of many pieces, but you may need to make your own devices for checking difficult-to-reach places or larger pieces. Once you've been making these vessels as long as I have, you probably won't need to measure as much, but will rely instead on feel, sound and instinct.

As a general guideline, take the walls to a final thickness somewhere between ⅛ in. and ½ in. for small pieces and between ⅛ in. and ⅜ in. for larger pieces. I vary the actual wall thickness depending on the size of the piece and the density and type of wood. It's hard to define proper wall thickness because it's an intuitive process that is learned through experience. You'll know when the wall thickness is right by the weight of the piece. But this is only revealed after the piece is off the lathe. Since the base area is small, you may want to leave the walls slightly thicker in the lower part to provide a balanced feeling, but avoid making the piece top- or bottom-heavy.

**Fitting the neck**—I turn the inside of the neck before gluing it back on the vessel, because this interior profile is somewhat visible through the small neck opening. I also like the neck's inside shape to be consistent with its outside shape. I mount the neck cylinder in a spigot chuck by the tenon that was turned on the end. If you don't have a spigot chuck, mount the neck on a glue block, three-jaw chuck or screw center. Lightly true the outside of the cylinder, and turn a straight or slightly tapered tenon about ¼ in. long and slightly larger in diameter than the opening in the vessel. Drill a ¼-in.- to ⅜-in.-dia. hole lengthwise through the center of the neck and turn the inside to match what will be the profile of the outside lower portion of the neck.

Because the hollowed out vessel is somewhat flexible and possibly warped, you will need to be extra cautious from this point on. Carefully enlarge the opening in the vessel top to fit the neck tenon by taking very light cuts with a diamond-point scraper or skew on its side. A good fit is essential to having a nearly invisible glue line. The neck should fit snugly, but it can split the vessel if it is too tight and forced in place. Align the grain and mark both pieces with a pencil, as shown in the left photo, so they can be
repositioned quickly when gluing up. Next, apply a liberal coat of gap-filling cyanoacrylate glue (Hot Stuff) to both surfaces. (Hot Stuff is available from many hobby stores and most mail-order woodworking suppliers.) Align the marks and lightly tap the neck into the bottle, allowing a few minutes for the glue to harden. Bring the revolving-cup center chucked in the tailstock up to the neck for support, and then rough-turn the shape of the neck, cutting away the excess wood to expose a tight glue line. If you are going to carve the shoulder, take a light cut across the raised shoulder, leaving it about 1/8 in. proud of the vessel surface, and stop the cut at the glue line. This creates a step at the glue line and serves as a stop for the carved flutes. If you choose not to carve, then finish-turn the neck, blending it in with the shape of the vessel. For these uncured bowls, I like to turn three small decorative grooves, one right on the glue line and one to either side, as you can see in the second vessel from the left in the photo on p. 64. You can vary the amount of grooves, but I think an odd number looks best.

**Carving the Flutes**—The shoulder flutes are carved with a small veiner using the tool rest as a guide. Set the tool rest parallel to and almost touching the area to be carved, and adjust the height so the center of the veiner is on the centerline of the vessel. Test the height adjustment by lightly dragging the veiner backward, making a light impression on the shoulder and checking that it is on center. You can also spiral the flutes by raising or lowering the tool rest. Start carving the flutes by pushing the veiner across the tool rest toward the neck, stopping at the glue line and taking care not to cut into the neck. Rotate the vessel backward slightly and cut another flute next to the previous one, as shown in the photo at right on the facing page. Continue until the entire shoulder is fluted, adjusting the width of the last two or three flutes so you don’t end up with a half flute or an extra wide flute at the end. Since you are cutting across endgrain, a sharp tool will yield clean cuts with no tearout and there is no changing grain direction to give you trouble. You may choose to carve a random pattern, but I think the symmetrical flutes best suit the style of these vessels. I also use this method when carving large-neck vessels.

**Finishing up**—Finish turning the outside of the neck using a small gouge, taking care not to cut into the flutes. Move the tailstock back and shape the top recess or bevel inside of the neck, supporting it with the first two fingers of your left hand and guiding the gouge with your left thumb and right hand (see the left photo above). Take light cuts toward the inside, even though you’ll be going against the grain, because this reduces chatter and yields a smooth surface with a sharp tool. You may need a small round-nose scraper to smooth and shape right inside the hole.

To finish shaping the area around the foot, measure the depth of the piece with a dowel or your long drill and transfer this measurement to the base of the vessel. Define the outside bottom with a parting tool and leave enough wood so that when the bottom is recessed slightly, the thickness will be consistent with that of the walls.

**Applying a Finish**—The key to a good finish is surface preparation, starting with clean gouge cuts and ending with proper sanding. Grain that has been badly torn and sanded out will never look right. Sand the neck, as well as the rest of the piece, by hand or with a foam-padded power sander, being careful not to damage the carving. I usually start with 150-grit sandpaper, followed by 220-grit, and then finish up by hand-sanding with 320-grit or 400-grit paper.

I like a minimal amount of finish—just enough to protect the piece from dirt and to bring out the color. On light-colored woods, I wipe on lacquer sanding sealer, thinned enough to totally penetrate the wood. After the lacquer has dried (about 15 to 20 minutes), I polish the piece with fine Scotch-Brite pads or steel wool before parting off the vessel. During this operation, leave a 1-in. stub at the bottom so you can remount the vessel to turn the bottom. Don’t try to cut the vessel free with the parting tool; saw through the last 1/4 in. of the stub or you risk having the piece bounce loose and breaking. After the vessel is removed, I apply a coat of tung oil.

To shape the bottom, I remount the vessel between centers after reshaping and padding the waste block as a drive center. First I turn a small cone on the waste block that will fit inside the neck of the vessel and then I pad this cone with thin foam or Naugahyde. The vessel is held against the drive cone with light pressure from the revolving center in the tailstock, centered on the stub left on the bottom of the vessel, as shown in the above photo at right. Be careful not to overtighten the tailstock, as too much pressure will break the vessel. With a small gouge or round-nose scraper, recess the bottom and turn the stub down as small as you can without actually parting off the vessel. Remove the piece from the lathe and pare off the remaining stub with a sharp chisel. Allow several days for the wood to stabilize, and then smooth the bottom rim with a flat sanding block to ensure that it sits flat, and sand the recess by hand or with a 1-in. disc. Apply another coat or two of oil if you like and sign the bottom.

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