Use patterns to guide your work

FROM MILLING TO JOINERY TO SHAPING, THESE FULL-SIZE TEMPLATES ARE A ROADMAP TO SUCCESS

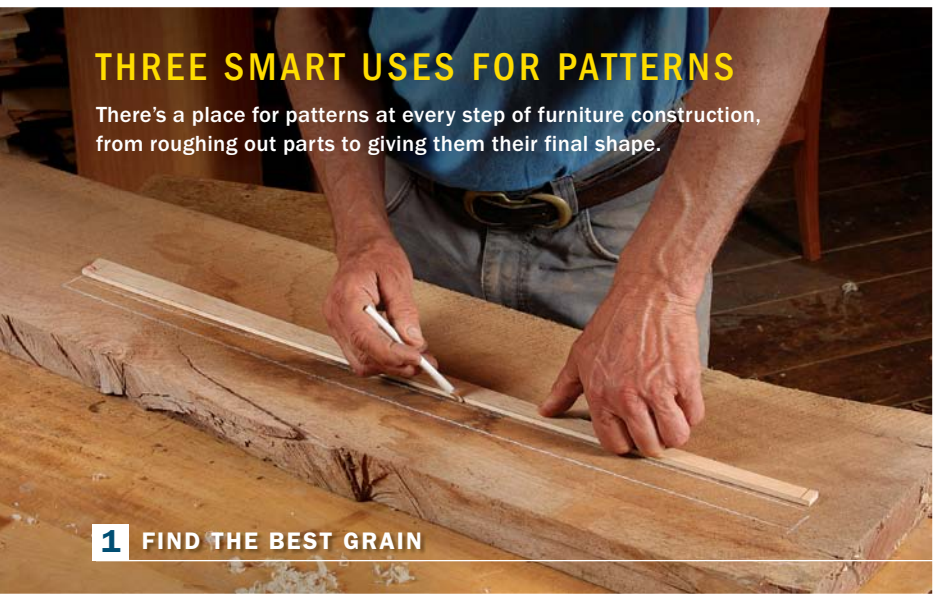
BY GARRETT HACK

Perhaps the most common technique for shaping a curved part is to rough it out with a bandsaw and then rout it flush to a full-size pattern. For many woodworkers, that might be the only time they ever use a pattern, but it shouldn't be. A thin, full-size pattern can be useful at just about every stage of furniture construction. Before milling parts from rough lumber, I use patterns to find the best grain for each part. I also use them like story sticks, marking them with joinery, banding, and inlay locations. They are great aids for difficult joinery like angled tenons. Of course, I use patterns for shaping, too, but not only with a router. They are great guides for a spokeshave as well.

Over the course of my career, patterns have become an essential part of how I make furniture, and I can't imagine working without them. They are easy to make, and there is nothing complicated about using them. Even if you are just

THREE SMART USES FOR PATTERNS

There's a place for patterns at every step of furniture construction, from roughing out parts to giving them their final shape.



Trace the pattern onto rough lumber to see whether the shape and direction of the grain complements the part's shape. You can also use the pattern to lay out several identical parts (like legs) on a single board before cutting them out.

Marked with joinery sizes and locations, a pattern becomes the perfect story stick for parts.

Photos: Matt Kenney; drawings: John Tetreault

starting out, you can incorporate them into your woodworking and reap the benefits.

Start with a drawing

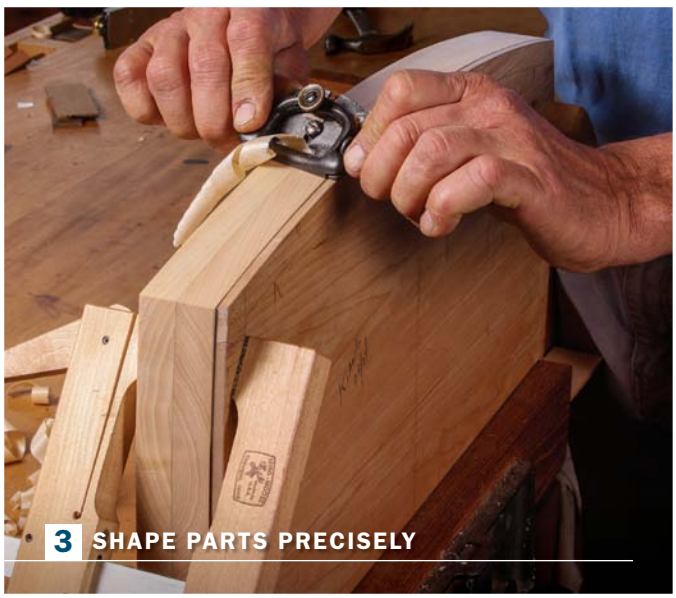
Your design should be complete before you begin making any patterns. It's far easier to erase an errant line on paper than to recut a pattern. I sketch a bunch of ideas, and when I've settled on the one design I like best, I create a full-size drawing of the parts that need patterns. I typically transfer the drawing to the pattern blank by gluing a tracing to it.

A pattern needs to be dead accurate. Any bump or flat in a curve will be transferred to every part made with the pattern. And if you mislocate the transition from a straight section for joinery to a taper, you'll have trouble with the joinery when you're building the piece. That's why I always use solid wood for patterns (I prefer pine, basswood, and cherry). With solid wood, I can use planes and spokeshaves to refine the pattern with precision after cutting it out. It's far easier to finesse a pattern with hand tools than with sandpaper. If you use sheet goods, like plywood and MDF, you're stuck with sanding the edges—an unpleasant and tedious job.

Patterns aren't just for routing

When making furniture, I use patterns right from the beginning. The success of a piece can hinge on how well you select grain for the individual parts, and a pattern makes it easier to orient grain on a part for the best appearance. Put the pattern on your stock, trace around it, and move it away. You can now see exactly how the grain will look. If it's not pleasing, adjust the pattern's orientation on the stock, retrace, and take another look.

Patterns make great story sticks, too, because you can lay out joinery on them and then transfer from the pattern directly to the parts. This eliminates the chance that you might misread a rule or measure from the wrong end. It works great for mortises



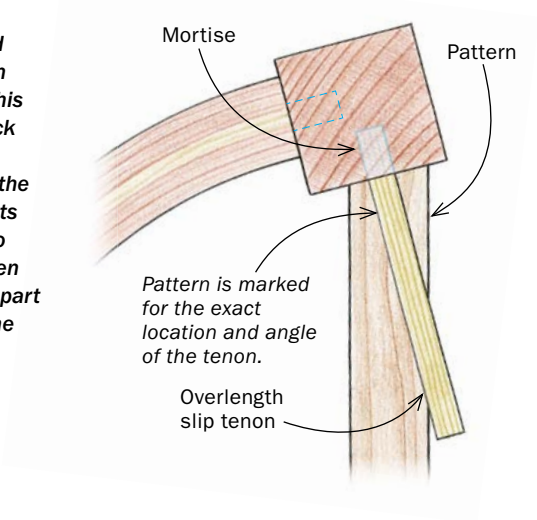
3 SHAPE PARTS PRECISELY

Patterns also work great as templates for shaping. A spokeshave works just as well as a router and flush-trimming bit.

SIMPLIFY COMPLEX JOINERY

Have an apron that needs angled tenons? A crest rail that needs mortises for spindles? Avoid mistakes by laying out the joint directly from the partially assembled piece using a pattern of the part.

No measurement needed. *For angled tenons like those on the back apron of this demilune table, Hack places a pattern of the apron between the back legs and inserts long slip tenons into the mortises. He then traces the exposed part of the tenon onto the pattern to guide his work.*



HOW TO MAKE A PATTERN

The best material for patterns is solid wood, because you can use hand tools to make perfectly smooth edges.

Use a batten and bandsaw for curves. *A narrow piece of straight-grain basswood, about ⅛ in. thick, easily bends into a fair curve (left). To hold the ends in place, Hack clamps the batten to a block with a C-clamp, then clamps the block to his bench. Cut the curve as fair as you can (above), so that it's easier to clean it up afterward. A steady hand and feed rate are key.*

Refine convex curves with a block plane. *Keep the arc fair. You can square the edge to the face later.*

on legs, but don't overlook other types of joinery. I often lay out dovetails for casework on my patterns.

I also rely on patterns for tricky joinery, like mortise-and-tenons for parts that come together at an angle. I use the pattern as a stand-in for the actual part in the dry-assembled piece. This allows me to mark the angle and location of the tenon accurately on the pattern.

Patterns are also great aids for shaping parts. Used with a router and a flush-trimming bit, a pattern is a very fast and accurate way to make several matching curved parts. But if you have just one or two parts that need to be shaped, forego the router and pick up a spokeshave. Clamp the pattern and the part in your bench vise, then shave it down to match. □

Garrett Hack is a contributing editor.

Square up the edge. *A piece of milled lumber on top of the bench creates a shooting board that can handle curved parts. A block plane is better than a bench plane here, because it's easier to maneuver over the curve.*

A spokeshave is the tool for concave curves. *Its short sole is able to follow the inward arc. Keep the edge square as you fair it.*