

4 chisel tricks

BY PHILIP C. LOWE

It is often faster to make do with the tool in hand than to hunt for the perfect one and check that it is sharp and adjusted correctly. That's why I do so many things with a normal, flat bench chisel. Just a handle and a blade, the chisel is an uncomplicated tool, but wonderfully versatile, capable of both rough and refined work. Chisels are also fast and efficient.

I always have a one or two within reach. Here is why.

Quick chamfers

I chamfer the ends of tenons so they fit into their mortises more easily, and no tool does this faster than a chisel.

However, if you cut a 45° chamfer by pushing the chisel straight across the width of the tenon, you'll leave behind a rough surface and most likely will blow out the far edge. To avoid those problems, lower the handle of the chisel so that the cutting edge is skewed as it makes the cut. Then, as you reach the far edge of the tenon, slide the chisel up to cut with the grain rather than across it. That

Chamfer a tenon

Tenons fit into mortises more easily if their ends are chamfered. The quickest way to do that is with a chisel.



Skew the blade. The lower effective cutting angle produces a smoother surface (top). Lowe typically skews the chisel 45° for most woods, but goes as high as 75° or 80° on difficult woods. As he reaches the end of the tenon (above), he pushes the chisel upward to cut with the grain and avoid tearout.



Pop a chamfer on the end. After placing the chisel edge on the narrow end of the tenon, a quick hit on the handle is all it takes to form the chamfer.

Trim a tenon

Lowe uses a chisel to quickly pare the cheeks and shoulders after sawing them close. The chisel's edge fits neatly into the scribed layout lines. He works across the grain, because if you work with the grain, the chisel dives and rises with it and the cheek goes out of square. Later, when he's ready to do the final fitting, he grabs his shoulder plane.

Start in the scribe line.

The one on the edge controls the depth of cut and the one on the end grain keeps the chisel cutting straight, resulting in a tenon with parallel cheeks perpendicular to the shoulders.



The first cut takes you halfway. Stop there, so you don't blow out the other side.



The second cut finishes the job. Turn the workpiece around and come in from the other edge, meeting the first cut in the middle.



For shoulders, work perpendicular to the tenon. Put the chisel in the scribed shoulder line and start with a narrow cut, about $\frac{1}{8}$ in. wide.



One cut guides the next. Place the flat chisel back on the first cut, at an angle to the face of the workpiece, and then straighten the chisel as you push the blade into the waste.

TIP ANGLED TENONS NEED A DIFFERENT APPROACH

On the high side, cut across the grain to avoid tearout, but on the low side, pare toward the tenon.



prevents tearout as the chisel leaves the cut. The edges of the tenon are a cinch. With the workpiece clamped vertically in a vise, come from beneath, so you're cutting with the grain. Skew the chisel slightly and give it a quick, firm pop with the palm of your hand.

Cut layout lines for precise paring

Nothing is faster at paring tenon cheeks and shoulders down to the layout lines than a chisel. From there, you can do the final fitting with a shoulder plane. Here's how I get it done.

First, I lay out the tenon with cutting tools: a marking knife for the shoulders and a cutting gauge for the cheeks. The crisp cut lines left behind in the wood become the perfect guides for your chisel.

Mortise a hinge

A hinge mortise needs to be a tight fit, but two chisels can handle the entire job quickly. For chopping, use one that is slightly wider than the mortise, and for paring, use one with a width that's less than the mortise's length. Remove most of the waste quickly—and in a controlled manner—with angled cuts, and then pare to the layout lines.

Get started with a perpendicular chop. Stay about $\frac{1}{16}$ in. from each end of the layout lines.



Then work from an angle. Lowe holds the chisel at 45° with the bevel up. Strike the handle with a mallet, but use quick, controlled taps.



Clear the chips with a single swipe. Keep the chisel flat on the workpiece all the way through.



Clean up the bottom. Again, the scribe line is your friend. Put the bevel in the line and push in. Last, chop the ends right at the scribe line, and clean up those corners.

I remove the bulk of the waste with a saw, leaving about $\frac{1}{32}$ in. for paring, so little that it won't force the chisel into the cheek or shoulder.

For the cheeks, I use the layout lines on the edges and end grain. The bevel goes into the line on the edge and is guided by the one on the end grain. I also use two cuts to pare a cheek, working from both edges into the middle to avoid blowing out the edge grain.

I've found it easier and more accurate to pare the shoulders if I work perpendicular to the tenon cheek. I start by paring just a narrow strip on the edge of the shoulder, about $\frac{1}{8}$ in. wide. I then use that strip as a guide for my next cut by resting the corner of the bevel on it, which puts the chisel at an angle to the tenon. As I straighten the chisel, I push it into the cut and down to the tenon. I repeat that process across the width of

the shoulder and end up with a shoulder that's even across its width and pared precisely to the layout line.

Angle the chisel to control chopping cuts

Mortising for a hinge involves two chisel techniques: paring and chopping. I lay out the mortise like I do a tenon, with a marking knife and cutting gauge, so I can use the layout lines to guide my chisel during paring. But first, I have to remove the waste from the mortise, which I do by chopping it with a bench chisel.

The hardest part of chopping is controlling how deeply the chisel cuts with every strike from a mallet. The best way to do that is by angling the chisel 45°. Here's how that works for a hinge mortise.

After laying out the mortise, I make a cut at both ends with the chisel perpendicular to the workpiece. Then, starting at one

Shape curved parts

Refining the shape of a cabriole leg can be a time-consuming affair. Lowe speeds up the job by using a chisel to remove most of the waste.



Start with layout lines. Lowe draws a center-line and two quarter lines on all four faces, so he'll know how much to material to remove.

end, I make a series of “feather” cuts with the chisel angled at 45°. Angling the chisel prevents it from chasing the grain and cutting too deeply. Also, when the blade reaches the previous cut, it stops and won't cut any deeper. After reaching the other end of the mortise, I lay the chisel flat on the workpiece and pull it back across the cuts I've just made. Because the cuts were angled, there is very little material left holding the waste in place, and they come out easily. You're left with a mortise that is almost the exact depth required. To clean it up, just pare using the layout lines to guide the chisel.

Go bevel down on concave curves

As a period furniture maker, I've made a lot of cabriole legs. I've found that a chisel is the quickest way to go from the rough bandsawn shape to one that can be refined with a spokeshave.

As there are both concave and convex curves on a cabriole leg, there are two chisel techniques to use. For concave curves, use the chisel with the bevel down, so you follow its contours and keep the handle out of the way. Also, always work downhill, taking short “shoveling” cuts. That prevents the chisel from cutting too deeply and gives you better control.

Turn the chisel over, with the bevel up, for convex surfaces. By having the flat of the chisel on the work surface, you'll be able to cut facets as you work your way toward the rounded shape. □

Philip Lowe is director of The Furniture Institute of Massachusetts.



Go bevel down on concave surfaces. Like the short sole of a spokeshave, the bevel has no trouble following the curve.



Stay in control with short cuts. They prevent the chisel from cutting too deeply and causing tearout.



It's bevel up for convex curves. This enables you to make faceted cuts more easily.