



The driving force. A well-built mallet delivers a solid blow that powers chisels for chopping dovetails, mortises, and other joinery.

A mallet is a must-have

THIS ONE TAKES AN AFTERNOON TO MAKE, BUT YEARS TO WEAR OUT

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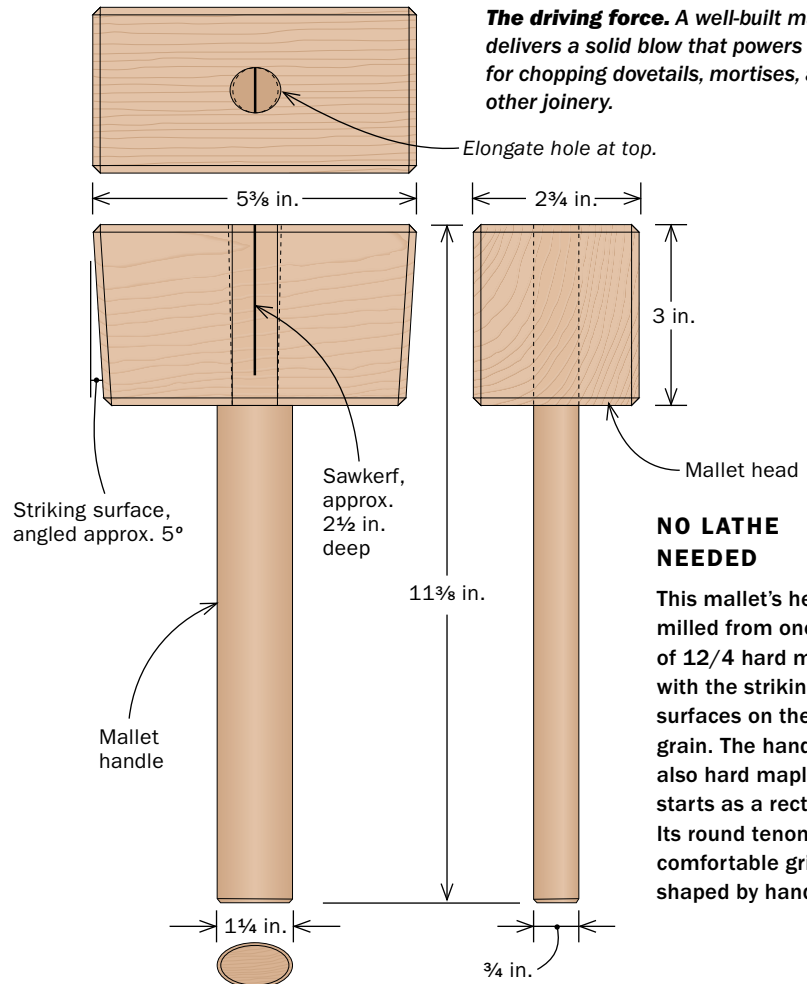
Some folks like to joke that the best tool for any job is a bigger hammer. A woodworker's joinery mallet, with its massive square head, fits that description, but there's more to it than that.

A well-designed mallet is light enough to control comfortably but heavy enough to deliver useful power without requiring a wild, roundhouse swing. A mallet also offers a broader striking surface than a hammer, and one that is tailored to the nature of the work. While a carver's slender mallet allows pinpoint control and a much lighter touch, the joinery mallet's broad, flat striking surface is ideal for other tasks that require more force and less flexibility.

A square-headed mallet excels at driving chisels to chop joinery, especially when cutting across the grain for dovetails or mortises. It's also great for project assembly and other tasks that require a firm rap or two. Another great thing is that a mallet is easy to make.

Make the head from a solid block

Start with a blank of splinter-resistant hardwood such as hard maple. A block about 3 in. sq.

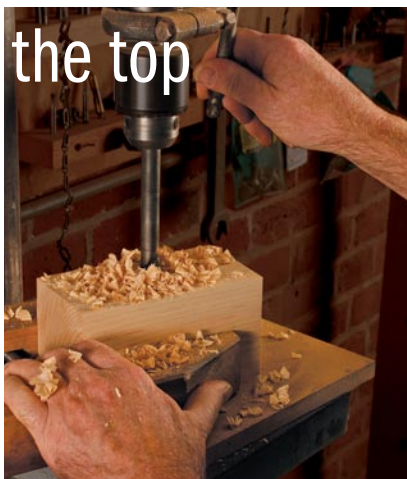


NO LATHE NEEDED

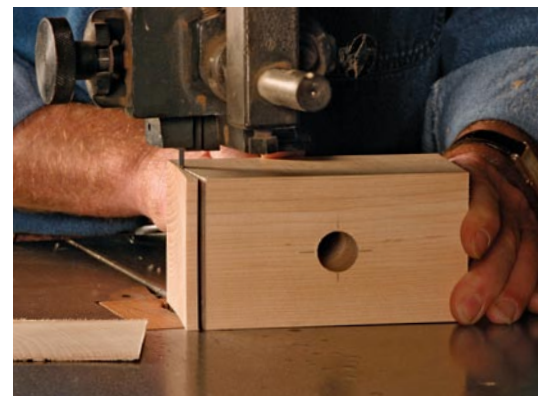
This mallet's head is milled from one piece of 12/4 hard maple, with the striking surfaces on the end grain. The handle, also hard maple, starts as a rectangle. Its round tenon and comfortable grip are shaped by hand.

Start at the top

Drill the mortise. Be sure to back the bit out frequently to clear the waste as the mortise deepens.

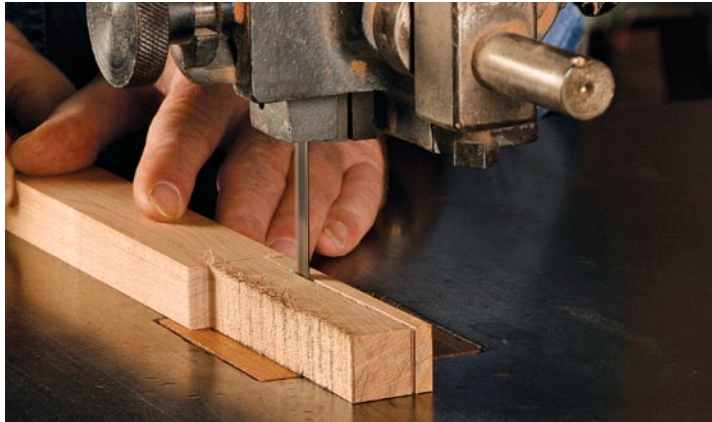


Rasp out a wider opening at the top. A driven wedge will expand the handle to fit this space tightly.



Bandsaw the angled striking faces. Plane or sand the surfaces flat—a rounded surface is more likely to deliver a glancing blow.

Shape the tenon



Start the handle by cutting a long tenon, $\frac{3}{4}$ in. sq. Mark the shoulder so that the tenon will protrude $\frac{1}{2}$ in. beyond the top of the mallet head.



Turn a square tenon into a round one. First mark out a $\frac{3}{4}$ -in.-dia. circle on the end grain, then use a combination square with a 45° head to mark chamfers that just touch the circle. Carry lines from the corners of these chamfers down the sides of the tenon. Next, use a flat rasp to create the chamfers, stopping when you reach the layout lines. A second pass with the rasp removes the secondary corners and makes the tenon nearly round.



by $4\frac{1}{2}$ in. to 5 in. long will make a mallet head that is massive and heavy enough to deliver a blow with great force when needed. You can glue up such a block if you don't have $12\frac{1}{4}$ stock available, but be aware that the glue joint might fail eventually.

A through-mortise in the mallet head provides an attachment point for the handle. To make it, find and mark the center in the top of the blank. Then, using a drill press or a handheld drill with a spade bit, bore a $\frac{3}{4}$ -in.-dia. hole through the blank, top to bottom. Use a rat-tail (round tapering) rasp to elongate the hole on the top of the mallet head by $\frac{1}{16}$ in. to $\frac{1}{8}$ in. toward the end grain in each direction. The wider opening should taper down about halfway through the mortise. If you don't have a rasp or file, a $\frac{1}{2}$ -in. dowel and some coarse sandpaper will do a decent job.

Next, mark the striking surfaces of the mallet for cutting at a slight angle from top to bottom. An angled surface will strike the butt of a tool handle more squarely because the mallet itself typically will be angled slightly upward when the blow lands. Cutting the ends is simplest on the bandsaw. Plane or sand away the sawmarks. It's also a good idea to bevel the edges and corners of the block to prevent splintering.

Start the tenon on the bandsaw

The handle also should be of a sturdy, straight-grained hardwood such as maple, birch, hickory, or oak. Start with a 12-in. length that is $\frac{3}{4}$ in. thick by $1\frac{1}{4}$ in. wide.

Begin by marking the layout for the tenon that will connect the handle to the head. At one end, mark a centerline to bisect the width of the piece. Use this line to lay out a $\frac{3}{4}$ -in. square. Next, mark out a shoulder line $3\frac{1}{2}$ in. from the end of the piece and then cut away the waste on the bandsaw to create the square tenon. The extra $\frac{1}{2}$ in. of tenon length will allow the



Do the final shaping by eye. Use a rasp, smooth file, or scraper for final cleanup, checking the fit frequently. A chisel cleans up the shoulder.

Fit and assemble



Chamfer the corners with a handplane. A simple ellipse layout is transferred to the handle's length with the same tangent method used for the tenon.



Finish shaping. Blend the contours and smooth the surface. Next, saw a kerf about 2 in. deep through the center of the tenon. The kerf should be parallel with the striking faces in the assembled mallet.

tenon to protrude from the mallet head so it can be trimmed flush after glue-up.

Shape the tenon with a rasp

Making a square tenon round is relatively easy if you follow the steps shown in the photos on p. 34. (Of course, if you have a lathe, you can turn the entire handle. Once you have a true cylinder, use a scraper, sandpaper, or a smooth file to finish shaping the tenon, testing and fitting until it goes into the mortise. The handle should fit snugly, but you shouldn't have to strike it to drive the tenon all the way into the mortise.

Next, use a bandsaw or a handsaw to cut a sawkerf about 2½ in. deep down through the center of the tenon and perpendicular to the 1¼-in. dimension. This kerf will hold

the wedge that secures the handle to the mallet head. You want the wedge parallel to the striking surfaces. If it were parallel to the long grain, it could split the mallet head. Before assembling the mallet, shape the handle for a comfortable grip.

Wedge the tenon for a secure fit

To keep a solid connection between mallet and handle, I drive a glued wedge into the kerf in the top of the handle. This expands the handle against the walls of the mortise and tightens the fit. Bandsaw the wedge from the edge of a ¾-in.-thick board. Make the wedge 2 in. to 3 in. long, no thicker than ¼ in. to ⅜ in.

To assemble the mallet, put a little glue on the inside of the mortise and push the handle into place, making sure it's oriented correctly to the striking surfaces. Next, apply some glue to the wedge and hammer it into the sawkerf. When the glue dries, saw off the wedge and the excess length of handle, then chisel or plane the top smooth.

Wipe on a little Watco or linseed oil for an optional finish. Avoid wax—too much will make the grip slippery. □



Drive the wedge until it stops. When the glue dries, use a handsaw and chisel to trim the handle and wedge flush with the top of the mallet.