

Create a kumiko cloverleaf

BY CRAIG VANDALL STEVENS

The decorative kumiko pattern I chose for the lamp in this issue (“Build an Andon Lamp,” pp. 42–49) is called *yotsuba kaku-tsugi*, which means cloverleaf square-joint. I like its simplicity and the way it reads well as an individual unit but also as a cluster of four.

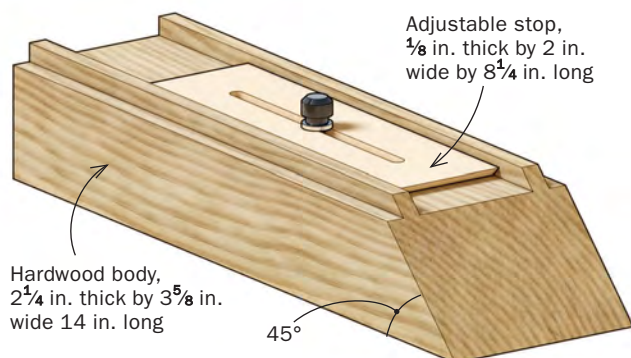
To keep decorative kumiko from appearing too heavy, I mill the strips slightly thinner than those in the kumiko grid. For this lamp, with its grid of 1/8-in.-thick strips, I made the cloverleaf

from strips 3/32 in. thick. It’s important to note that having the openings in your grid perfectly square and equal in size makes the patternwork much simpler. Otherwise, you’ll find yourself custom-fitting scores of tiny parts—not fun.

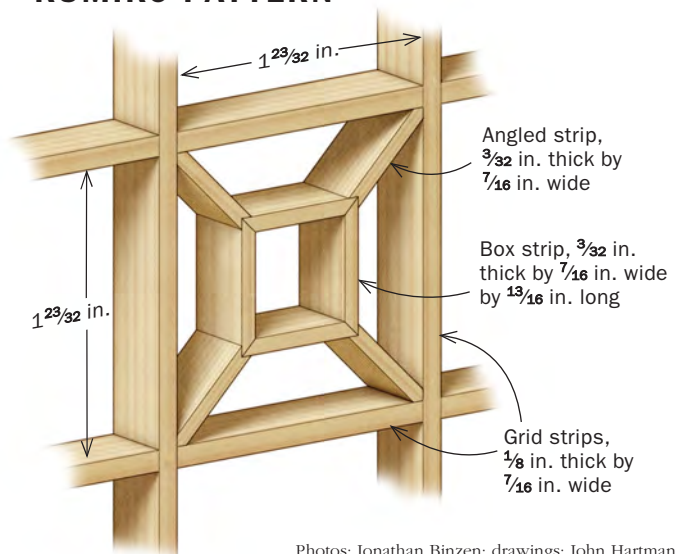
I make the central squares of the cloverleaf first. After cutting strips slightly overlong, I miter one end using a handplane and a miter-joint jig. Then I reset the jig’s stop and cut miters on the other end of the strips. I glue up the squares on my bench, using rubber bands to clamp them.

KUMIKO MITER JIG

When mitering kumiko strips, Stevens cuts them to rough length, then trims them cleanly to finished length using a handplane and a miter jig. The jig can handle four strips at a time.



KUMIKO PATTERN



START WITH THE SQUARES



Make the first miters. With a handplane and a miter jig, Stevens cuts miters on four strips at once.



Saw to rough length. The strips are then stacked in a miter box, with their miters against a stop, and cut to rough length.



Back into the miter jig. After resetting the jig's stop, Stevens presses the mitered end of the strips against it.



Miter number 2. A few strokes of the plane create a second miter, finishing all four pieces.

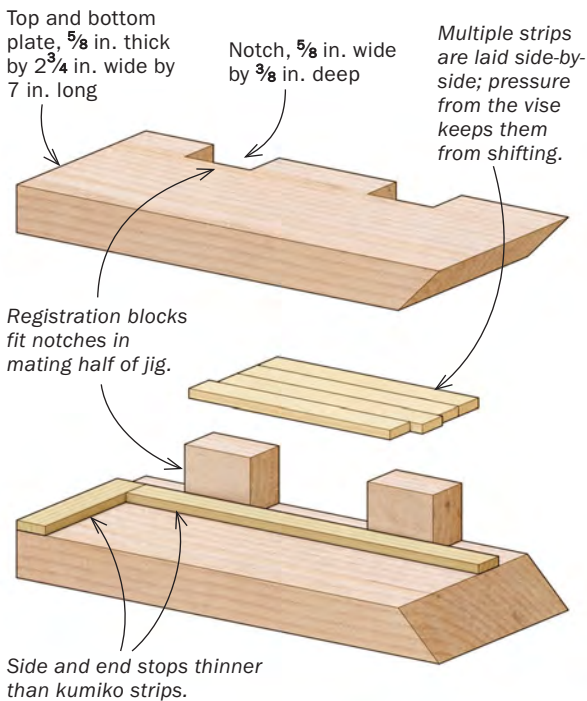


A little dab of glue. Working on a flat surface and applying a smear of white glue, Stevens presses the squares together.



Elasticity. A doubled-up rubber band provides clamping pressure as the square cures.

BIRD'S-MOUTH JOINT JIG



Next, I make the diagonal strips, which have a double miter on one end and an inverted miter, or bird's mouth, on the other. I first cut a batch of 2-in.-long pieces—enough to yield two diagonal strips.

To cut the bird's-mouth miters, I use a shopmade jig and a wide chisel that is easy to hold flat on the jaws of the jig. I use a slicing motion, drawing the chisel from side to side and cutting with the chisel's trailing corner. I make scoring cuts from one side, then move the chisel to the opposite mitered jaw to complete the bird's mouth.

I cut the bird's mouth on both ends of the 2-in. strips, then cut them in two. At the miter paring jig, I place the bird's-mouth joints against the stop and plane a miter on the other end. Without moving the stop, I flip the workpieces and miter the other face. The second miter automatically cuts right to the center of the strip, creating an arrowpoint.

I put a tiny amount of glue on the miters and assemble the cloverleaf on a flat surface. Although I did the glue-up after applying the washi paper here, I typically glue up first and then add the paper. □

Craig Vandall Stevens makes furniture in Philadelphia.

DOING THE DIAGONALS



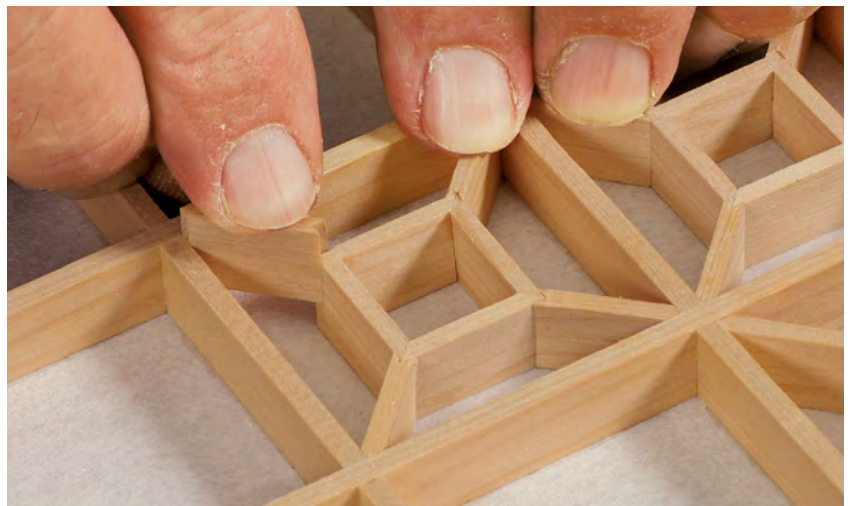
Two-part bird's-mouth miter jig. The jig Stevens made to cut bird's-mouth miters accepts four strips. He makes the strips long enough to yield two finished diagonal pieces. To use the jig he clamps it upright in a vise.



Cutting the bird's-mouth miters. Placing a wide chisel on one of the jig's angled jaws and using a side-to-side slicing action, Stevens scores one side of the workpieces. Then, moving his chisel to the other jaw, he completes the cut.



Make the double miter. Back at the miter paring jig, Stevens puts the bird's-mouth joints against the stop and planes a miter. Then he flips the pieces over and planes again, creating a perfectly centered arrowpoint miter.



Completing the cloverleaf. Having applied a small amount of glue with a toothpick to the miters on both ends, Stevens presses the diagonals into place.