## Make the headboard and footboard

Loose tenon joinery is a solid choice for a bed that's likely to see as much play as sleep. The machined joint offers large face-grain surfaces for glue, and great mechanical strength. To make the joints, you'll need a simple jig and a plunge router outfitted with a ½"-diameter upcut-spiral bit and a 1" O.D. bushing.

Build the jig as shown, then rout the bed rails and legs. The jig's sliding stop enables routing a pair of mortises with a <sup>1</sup>/<sub>2</sub>" section between them. Next, make the loose tenons to fit, and assemble the end frames as shown on the facing page.

Sliding Stop  $\frac{3}{4} \times 1 \times \frac{21}{4}$ **CLAMPING BOARD** F.H. screw 13/8× 41/2 × 17" #6 × 1¾" (Install to platform so that slot centers on workpiece.) 41/2 **CENTER STRIP**  $\frac{3}{4} \times 1 \times 4''$ PLATFORM HALF <sup>3</sup>/<sub>4</sub> × 3 × 11" Notch for clamp access 11/2" × 6'



**Mortising the legs.** Align the joint's centerline with the inner end of the sliding stop, and clamp the jig to the workpiece. For clean mortises, plunge-cut both ends to full depth, and then remove the waste between with a series of successively deeper cuts. After completing the first mortise, reposition the sliding stop, and rout its mate.



**Mortising the rails.** Align the mortise and jig centerlines, clamp the jig to the rail, and rout as before. To avoid part misalignment, orient the clamping board against the same faces (inner or outer) of each leg and rail.



**For stopped grooves, the edge guide has the edge.** To create a centered groove to fit the undersized panels, use a ¼" straight bit and rout from both faces. Take care that you don't groove the section between the twin tenons.



**Tackle through grooves at the router table.** Use the test piece routed in the previous step to set the bit and fence. Rout the first pass, then flip the stock so that the opposite face contacts the fence, and make a second pass for a perfectly centered groove.