

# Build a Better Sawhorse

by Voicu Marian

*Useful shop fixture offers good layout and joinery exercise*

I made my first pair of these sawhorses a few years back while remodeling my house because it was uncomfortable working stooped down on the floor. With a hollow core door on top, I had a fairly sturdy workbench that could be moved easily from one room to the next. After finishing up in the house, I took them back to the shop, and that's where they've proven their value.

My workbench always seems to be cluttered with tools. Before I made these horses, I often used the tablesaw as an auxiliary bench. That worked well as long as I didn't need to cut anything.

Now I have a second workbench: A pair of these sawhorses provides a strong, stable base; a couple of thick, heavy planks atop them form a perfectly serviceable benchtop; and a plank across the stretchers makes a good shelf for bench planes and other larger tools that normally clutter a bench surface. I clamp horses and planks together for stability and use C-clamps and bar or pipe clamps in lieu of vises, dogs and bench stops. When I'm finished with the bench, it disassembles and stores easily.

What makes these horses different from most, though, is the joinery. I first saw this half-lap, half-dovetail joint (see the drawing) used by an old carpenter when I was growing up in Romania. It's a strong joint, not too finicky to cut—especially in softwood. The joint gives these horses greater strength and rigidity, a much longer life and, as a bonus, a nice look. Also, the practice you gain in laying out and cutting the joinery in construction lumber will transfer to the fine work you do in hardwoods.

## Construction sequence

I dimension all my stock first and then bevel all the edges with a block plane. To ease assembly and ensure consistency, I nail together a quick, simple set-up jig, consisting of three pieces of scrapwood on a plywood base (see the photo).

I determine the angle of the legs by eye rather than by using any mathematical formula. I hold two legs upright and adjust their spread until it looks right. Checking with a protractor for future reference, I read 35°.

I cut the notches at the top of the legs for the saddle first, space the legs with a block the same size as the saddle and then lay out the short end stretchers. I lay out and cut the half-lap first, scribing from the insides and outsides of the legs. I mark out the dovetails on the top side of the stretcher at 8°, cut them and scribe around them with a sharp pencil onto the legs (see the photo). I cut and chisel out the leg to receive the stretcher. When the joint is assembled, leg and stretcher should be flush.

With all four end assemblies complete, I stand up a pair at a time and install the saddle, leaving a 4-in. overhang at each end. This provides a wider support for the boards I use as a benchtop as well as clearance for my feet. For now, one screw holds it together. Next I adjust the sawhorse so it's square to the surface it's standing on. Then I place the long stretcher across the short ones. I center it and mark it for length and for the shoulder of the half-lap.

The rest of the process is the same as for the short stretchers, ex-

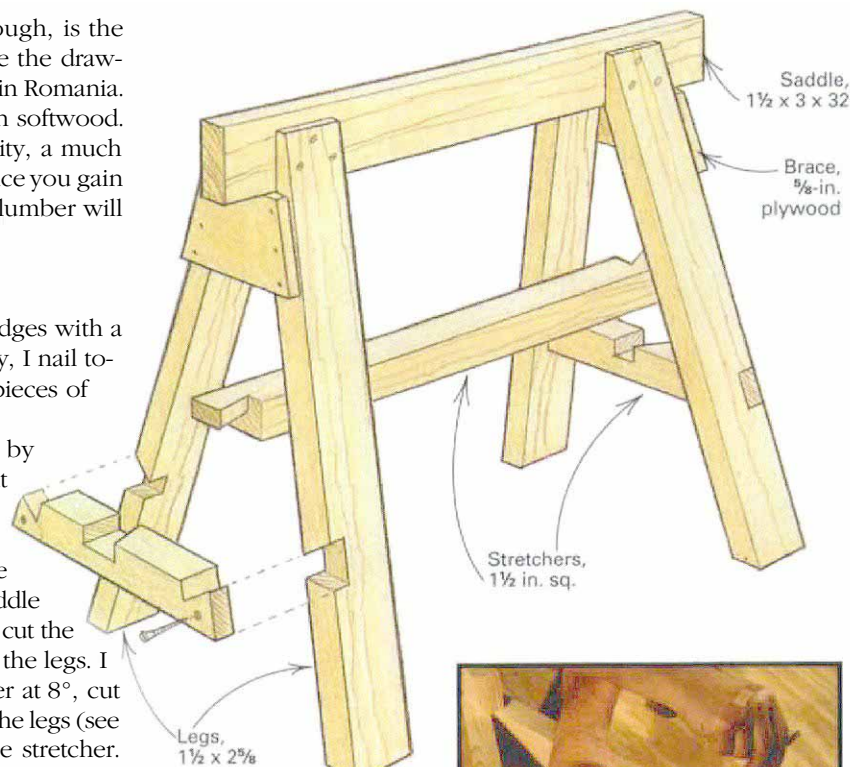
cept I put the dovetails on opposite sides at each end. I do this more for aesthetics than for any structural reason. I glue the long stretcher in place and screw it from below. I then put two more screws on each side of the legs for a total of three screws into the saddle at the top of each leg.

The last thing I do is cut the tips of the feet, so they don't rock. To mark them, I lay the sole of my square flat on its side, scribe around each foot and then saw them off. □

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## The well-built sawhorse

*Optimal dimensions for these horses depend on the function for which they're intended and on individual height and preference. For someone of average height, 32-in. horses make a good base for an auxiliary workbench, and 24 in. horses are about right for an assembly and finishing platform.*



*A simple, nailed-together jig speeds layout and ensures consistency from horse to horse. Here, the author scribes around the end stretcher dovetail to cut out its mortise in the leg.*