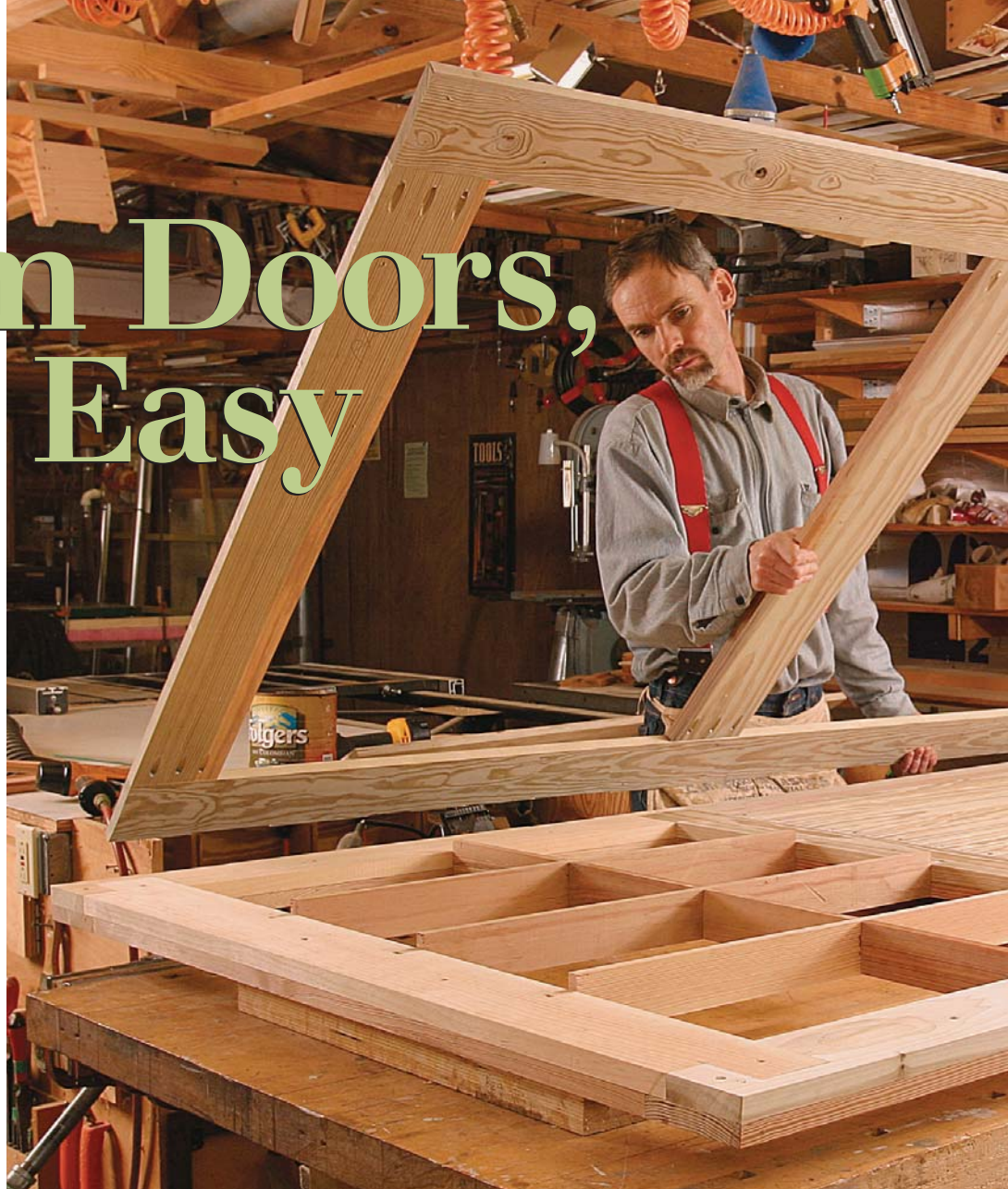


Custom Doors, Done Easy



Sandwich-style construction offers strength and design flexibility without fussy joinery work

BY SCOTT McBRIDE

I love the look of custom-built doors. Building a door from scratch allows you to decide on the proportions, details, materials, and finishes that you want. Do the job right, and the end result will far exceed what you can buy off the shelf.

My door-making technique can be adapted for doors of just about any size, but it's best for thicker doors, like the garage doors shown here. Strength and stability are important when you go beyond standard door sizes, and the layered construction of my doors makes them strong, stable, and heavy. Plan to hang these doors with heavy-duty hinges. I recommend four hinges on a large door instead of three.

Because of the layered construction, I describe my doors as “sandwich doors.” Building a door in layers gives the look of traditional joinery (stiles and rails that meet with mortise-and-tenon joints) with less of the fuss. The key tool for this technique is the pocket-hole jig, which allows you to join two pieces of wood quickly. (See “Pocket-Hole Jigs,” *FHB* #158, pp. 86-89.)

Scott McBride is a contributing editor to *Fine Homebuilding* and the author of *Build Like a Pro: Windows and Doors* (The Taunton Press, 2002). Photos by Chris Green.

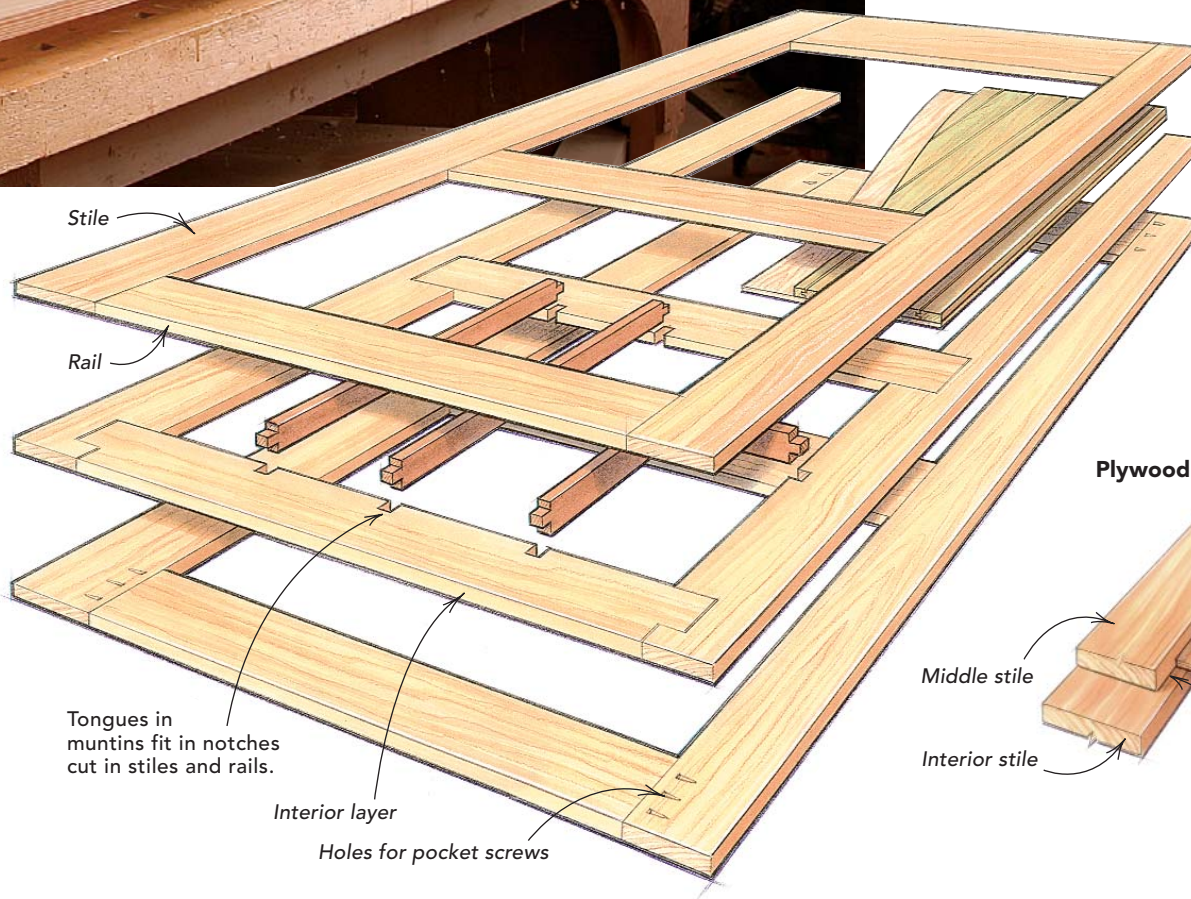


Pocket screws join the pieces. Assemble frame joints by drilling pocket holes and driving galvanized washer-head screws (McFeely's Square Drive Screws; 800-443-7937; www.mcfeelys.com). Locking clamps prevent the joint from creeping out of alignment during assembly.

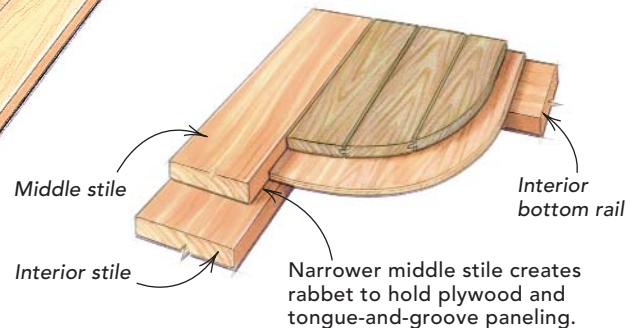
OVERLAPPING LAYERS CREATE STRONG JOINTS



Notched connections in the middle layer turn into mortise-and-tenon joints when outer layers are glued in place. A foam roller speeds glue application.



Plywood and paneling detail





Plywood, paneling, and glass

Cutting the middle frame members narrower than the outer frame members creates a rabbet or step where a ¼-in. lauan-plywood panel can fit. The author fills the lower section of the door with tongue-and-groove “beadboard” paneling. Window muntins and the exterior stile-and-rail assembly are installed next.



A lock mortise in layers. Simply making square cuts in the door’s middle layer creates a mortise for the lockset. The hardware is located in the lower section of the door, where the paneling is installed.



Easy muntins. Tenon shoulders for the muntin assembly are cut on a tablesaw; the mortises can be drilled and cleaned up with a chisel. Horizontal muntins are let into vertical muntins with mortises and stub (shortened) tenons. Added later, simple applied stop moldings will hold the glass panes in place.



Completing the sandwich. With the exterior stile-and-rail assembly installed, the door is nearly done. The beadboard paneling and exterior frame are made from pressure-treated pine to resist mold and insect damage.

beef up the sandwich



A perfect fit. The doors were made $\frac{1}{4}$ in. oversize, then planed to fit the opening. Four hinges support each door.



“I wouldn’t consider building a door any other way”

This endorsement comes from Andy Engel, a former *Fine Homebuilding* editor who now works as a building and remodeling contractor. Like Scott McBride, Engel used sandwich-style construction to duplicate the strength and appearance of a traditional mortise-and-tenon door. This Craftsman-style door graces the entryway of the house that Engel built several years ago in northwestern Connecticut.

