

A New Door Fits

Are your doors looking tired? Replace them quickly and

BY GARY M. KATZ

I used to hate hanging doors. It's way too easy to make a mistake, like hinging the door backward or upside down, or planing the bevel in the wrong direction. And I always had a tough time making a 1/8-in.-to-zero cut across the top of a door, especially if the door cost more than all my tools combined, and especially if someone was watching me work.

But years of hanging doors and learning from professional door hangers have tempered my views. In fact, the techniques that I outline here can make door hanging foolproof and fun, even if you're hanging your first door. Using just a few simple tools and following the steps in order, you'll no longer need to be afraid of doors, or of people watching you work on them. □

Gary M. Katz (www.garymkatz.com) is a *Fine Homebuilding* contributing editor and the author of *Installing and Hanging Doors* (The Taunton Press, 2002). Photos by Roe A. Osborn.

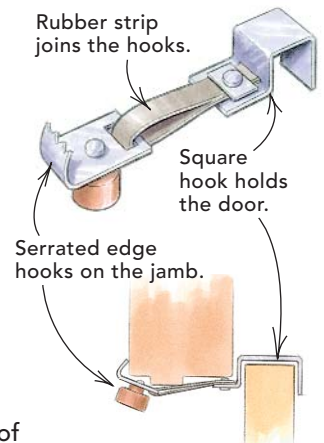


1

SHIMS POSITION THE DOOR IN THE OPENING

Scribing the door to the opening is an important first step. Start by setting the door on a couple of shims, then hooking it against the top of the jamb (photo left). A **homemade door hook** holds the door against the jamb (drawing right).

Adjusting the shims raises or lowers the door to the right position. If the head of the jamb is out of level, raise or lower one side of the door until the top rail is parallel to the jamb head. A **small pry bar** moves the door until it's centered in the opening (photo below), but I leave at least 3/8 in. on the lock stile after planing; otherwise, some dead bolts might not fit. If the head is out of level and the jamb can't be fixed easily, cheat the door a little out of plumb to make the head look better.



an Old Jamb

easily with a technique that works every time.

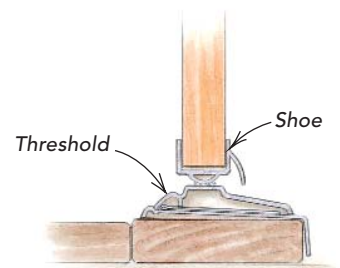


2

MARK THE DOOR EDGES

Use a simple set of dividers to scribe the edges of the door. Because I'm on the stop side (photo left), I spread the dividers to $\frac{3}{16}$ in. (for a $1\frac{1}{4}$ -in. door) to account for the hinge gap as well as bevels on both edges. If I'm fitting an interior door, I scribe the bottom of the door for the floor it swings over. For standard carpet, I spread the scribes to $1\frac{1}{8}$ in. An exterior door is scribed for the threshold and door shoe (photo and drawing, right).

Before taking down the door, make a large X out of tape on the hinge-side top of the door to orient it once you've carried it to the door bench. Also measure for each hinge location. I used to transfer hinge locations from the jamb to the door by eye, but because the trim often keeps the door $\frac{1}{2}$ in. away from the jamb, it's hard to keep the marks perfectly level. Careful measurements eliminate guesswork.



3

TRIM THE TOP AND BOTTOM FIRST

A door bench is helpful when working on a door, but sawhorses also can be used. After placing the door flat with the X facing up, score the cutline across the stiles with a razor knife to prevent tearout. Cut about $\frac{1}{8}$ in. wide of the line, using a sharp blade in your circular saw (photo right). Then plane right to the line. I start with the plane upside down, stopping within a foot of the opposite end so that I don't blow out the back edge of the stiles (inset photo). After planing to the line, turn the plane right side up and finish the other end with no blowout. While the door is lying flat on the bench, seal the top and bottom.

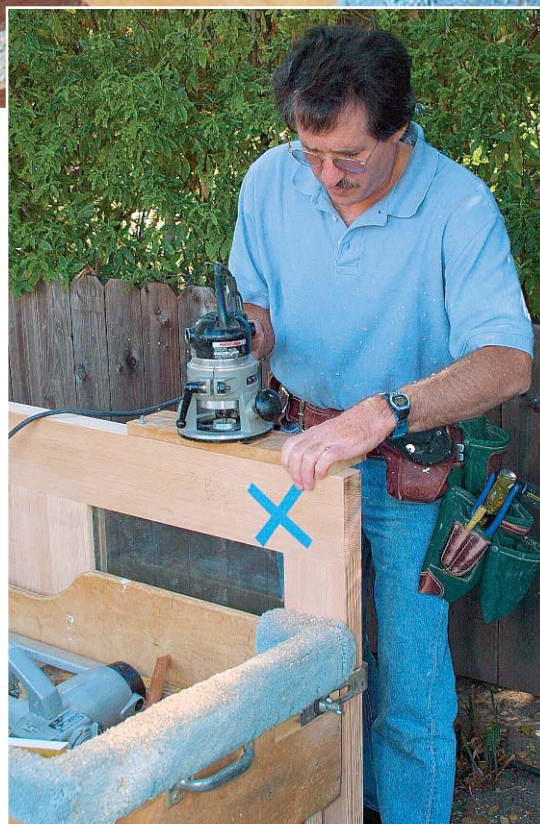
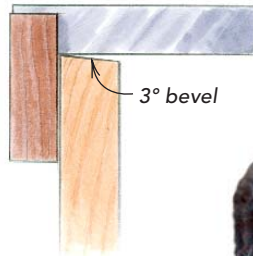


4

BEVEL AND MORTISE THE HINGE EDGE

Set the door on edge with the X facing the bench to plane the hinge stile. **Plane to the scribe line** with the plane set to about a 3° bevel (photo and drawing, right). The bevel prevents hinge binding. I also ease the edges with the plane at a 45° angle.

Lay out the hinges with a tape measure and look for the X to make sure you lay out the mortises from the top (photo bottom left). The hinge barrels should point away from the X. For speed and accuracy, **I use router templates for all hinge and hardware mortises** (photo bottom center). To keep the hinge screws from splitting the stile, **drill pilot holes with a centering bit** before attaching the hinges (photo bottom right).



5

ONE FLIP IS ALL YOU NEED

Because I keep the scribe lines and the X facing the door bench at all times, I flip the door vertically, not horizontally, to work on the opposite edge, the lock stile (photo left). Bevel the lock stile with the plane at the same 3° bevel (photo top right). Then measure for the lock bore, again remembering to look for the X so that you measure from the top instead of the bottom. Because I install lots of doors, I've invested in a lock-boring jig, although a paddle bit and a hole saw also can work well. Drill and mortise for the lockset (photo bottom right), then carry the door back to the opening. About 95% of the time, the door fits the first time I swing it.



6

FINAL TWEAK FOR A PERFECT FIT

To hang the door, tip it until the top screw hole in the top hinge lines up with the screw hole in the jamb, and drive that screw. Align the door by pushing with your foot, and drive the rest of the screws in the hinges (photo right).

When the door is swinging from the jamb, check the fit. Doors often need tweaking because hinges aren't all the same. To move the door toward the strike jamb, place a nail set between the hinge leaves and against the hinge barrel (photo bottom left); then close the door gently. The nail set spreads the hinge slightly.

To move the door toward the hinge jamb, first pop up the hinge pin until it's just engaging the top barrel. Then tighten a crescent wrench around each of the barrels on the hinge leaf attached to the door (photo bottom right). Use the wrench to bend the hinge toward the strike side. This will close the gap on the hinge side.

