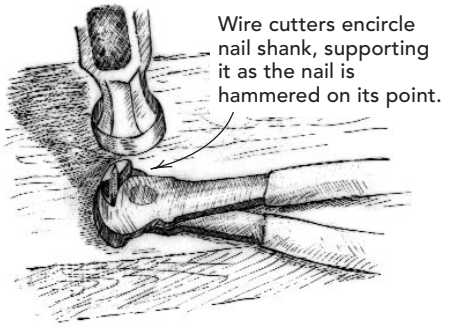
Tips & Techniques

edited and illustrated by Charles Miller

Tips & Techniques is a forum for readers to exchange information about methods, tools and jigs they've devised. We'll pay for any we publish. Send details to Tips, Fine Homebuilding, *P. O. Box 5506, Newtown, CT 06470-5506.*

Supporting a nail during extraction

I like to reuse lumber that I remove during renovations and repairs. One problem I always encounter, though, is the difficult removal of nails from those old boards. Pounding them through from the back side often causes the nail to bend over and



become weak. To prevent that from happening, I use my wire cutters around the shank of the nail to support it. Now I can carefully pound the nail back out until its head is accessible for pulling.

—Dave Johnson, Duluth, MN

Adjustable stair jig

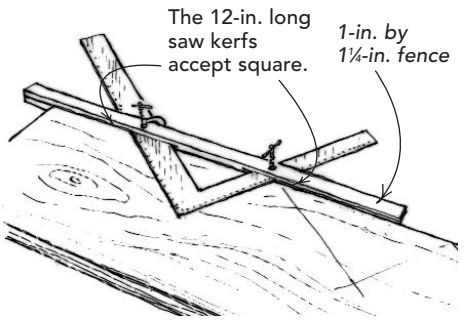
Some carpenters swear by stair gauges for use with a framing square during stair-stringer layout. But I've encountered problems with stair gauges. First, the cheaper six-sided gauges are difficult to set accurately because the edge of the gauge that contacts the edge of the lumber sits off the edge of the framing square. And while my good Starrett stair gauges align exactly with the edge of the square, they have not solved the problems posed by the lumber. The edges of lumber have defects: nicks, knotholes and wane (sloped edges caused by the rounded edge of the tree). When the gauge falls on one of these imperfections, it throws off the layout.

Another problem occurs when the lumber used for the stringer is just long enough for the layout. In these cases, for the first and/or last step, one of the gauges has nothing to bear against because it's off the end of the board.

Because of these problems, I've stopped using stair gauges to lay out stair stringers. Instead, I use a stair jig with an adjustable fence, as shown in the drawing below. The jig consists of a framing square, a fence and two tiny C-clamps. The fence is 32 in. long, a full 1 in. thick and 1¼ in. wide.

To make the fence, I ripped a 12-in. long kerf from each end of the fence, with the material standing on edge as I fed it into my tablesaw. I made this kerf in the center of the 1-in. thickness of the board. Stopping the rip at 12 in. left an area of uncut wood about 8 in. long in the center of the fence.

To set up the jig, I slide the fence over the legs of the rafter square, set it to the desired layout and clamp it in place. In use, the fence rides along the board and easily bridges imperfections in the lumber. It also holds the square in the correct position right up to the end of the board. Once the



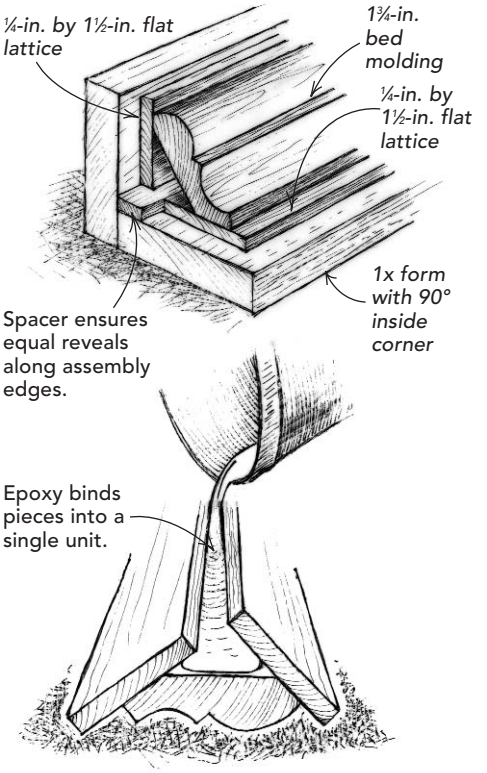
fence is fabricated, it takes no longer to set up this jig than it does to affix stair gauges. This jig also can be used to lay out rafters.

—John Carroll, Raleigh, NC

Quick and accurate built-up crown moldings

Recently, I was asked to install a small crown-molding assembly consisting of standard 1¾-in. bed molding with ¼-in. by 1½-in. flat-lattice top and bottom. Normally, I would install these parts individually, but my client had decided on this installation after he had moved all his expensive furniture into the house. I didn't want to make three trips around each room and compound the chances of damaging anything. But if I could assemble the moldings beforehand, I could trim the room in one trip.

So I built a right-angle form out of 1x pine and ripped a piece of the lattice to act as a spacer, as shown in the drawing (top right).



The thickness and width of the spacer control the size of the reveals along the edges of the bed molding.

I placed the two pieces of lattice into the form, put the bed molding on top of them and nailed them together with the brad gun. It was a touchy operation, and another hand would've been helpful. The gun-tip placement and angle were critical to avoid nailing the assembly to the form, but after a while, I got into a groove. The final results were good enough for paint-grade work, and the time that I saved made building the form worthwhile.

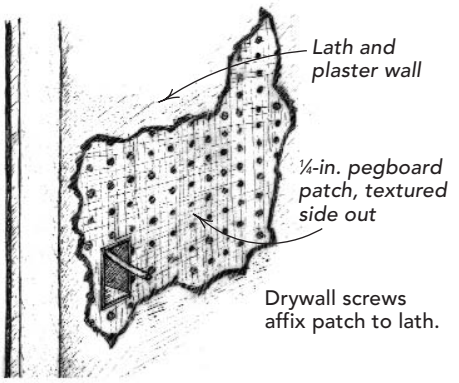
The installation had several returns and very short sections. The prospect of handling all those tiny brad-nailed pieces was not that appealing. My partner, Marshall Schwartz, suggested gluing them together before cutting, so I took several scrap pieces home and marked clear sections between nails. Then I poured epoxy (West Systems 105/205) thickened with West's 410 Microlight filler into the gap between the lattice pieces (drawing above). The results were very good, with the three pieces for all intents and purposes becoming one. After being cut, the small pieces could be safely carved, rasped and sanded for a good fit.

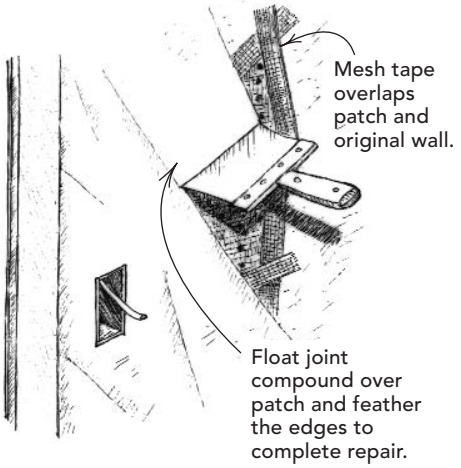
—John Michael Davis, New Orleans, LA

Repairing plaster walls

Any new wiring or plumbing done on an older home usually requires getting behind lath-and-plaster walls. If an entire wall section needs to be removed (such as for new kitchen wiring and plumbing), it is easier to remove all the lath and plaster and hang drywall in its place. But if only a small section of the wall needs to be repaired (such as for rewiring an existing fixture or cutting in a new outlet), I use the following approach, which leaves the lath in place.

To minimize damage to the walls, I score the wall with a chisel around the work area. Then I remove the plaster inside the scored area by gently tapping with a trim hammer. Once I've got the loose plaster out of the work area, I make a patch out of ¼-in. pegboard and orient it with the textured side out. The pegboard's holes serve several purposes: They allow me to eyeball the patch size so that I can sketch its outline while holding the material in place; they give me countersink locations for drywall screws; and they serve as keyways for the topcoats of mud that will finish the patch.





I cut the patch with a jigsaw, then screw it to the lath, shimming as necessary to leave the patch just shy of flush with the surrounding plaster. This section of wall is now bound together more solidly than before. To finish, I tape around the perimeter of the patch, bridging the pegboard and the original wall. Now I can apply several coats of joint compound to feather the patch into the wall.

By the way, you'll get better adhesion if you score the original wall with rough sandpaper prior to floating the mud. And if you have large gaps in the wall between your patch and the existing plaster for any reason, use a quick-setting "hot mud" to fill these large spaces first. Hot mud comes as a powder that you can mix with water on site. Setting times vary from 20 to 60 minutes, which really speeds things up.

—Conan Bliss, Boulder, CO

Toilet-seat washers

I find that most toilet seats loosen where they bolt to the toilet, especially if the bolts are nylon instead of brass. That's because you can make the nylon nuts only so tight without stripping them, and they loosen with use in no time. My solution to this problem is a pair of lock washers made from an old inner tube. Like fender washers, my lock washers are big: 1⅛ in. dia. with a 5/16-in. hole.

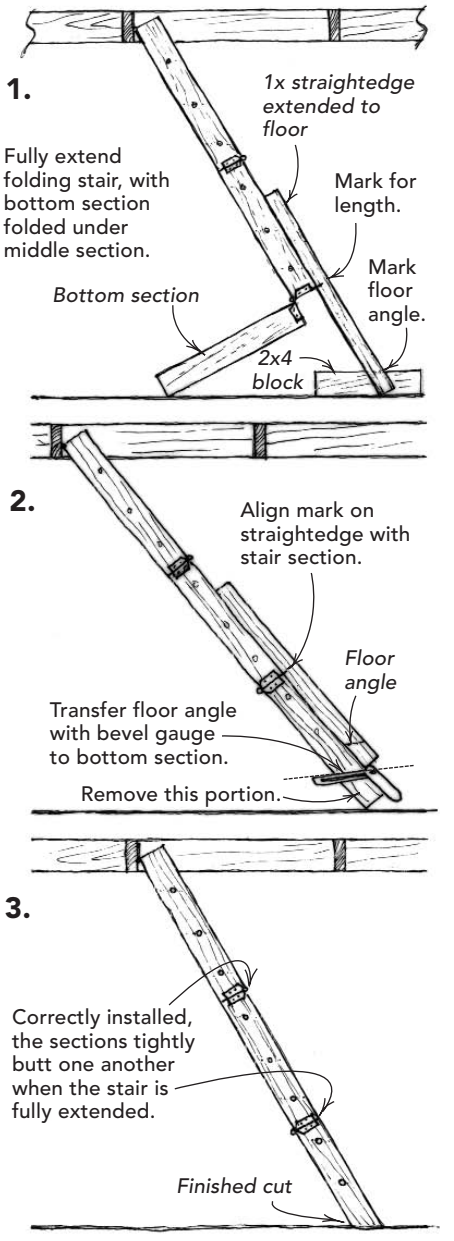
I put one of these washers under each toilet-seat nut and hand-tighten. I haven't had to adjust them since.

—Joseph Kaye, Phenix, VA

Fitting pulldown attic stairs

I install pulldown attic stairs in half the homes I build. The easy part is framing the rough opening in the ceiling and hanging the stairs. Figuring out the angle of cut and the length of the lower stair section is the hard part, and the installation guides aren't much help.

As shown in the drawing (right), I came up with a simple trick that's accurate and quick—and a tape measure isn't even necessary. After the stairs are fastened within the opening, I fold them out, except for the last section (1). I hold a 1x straightedge on top of one of the stair stringers, slide it down until it touches the floor and mark



the straightedge to indicate the bottom corner of the middle section of the stair. Then I place a 2x4 block on the floor against the straightedge and draw a line that gives me the angle to cut the stair. Next, I extend the bottom stair section and align the mark on the straightedge with the middle section's corner (2). I mark the end of the stair and use an adjustable bevel square to transfer the angle and draw cutlines.

The angled cut should fit tightly to the floor, and the sections should butt tightly together when the stair is folded down (3).

—Mike Guertin, East Greenwich, RI