

Tips and Techniques is a forum for readers to exchange the methods, tools and jigs they've devised. We'll pay for any we publish. Send details and sketches to Tips, Fine Homebuilding, Box 355, Newtown, Conn. 06470.

Circuit savvy

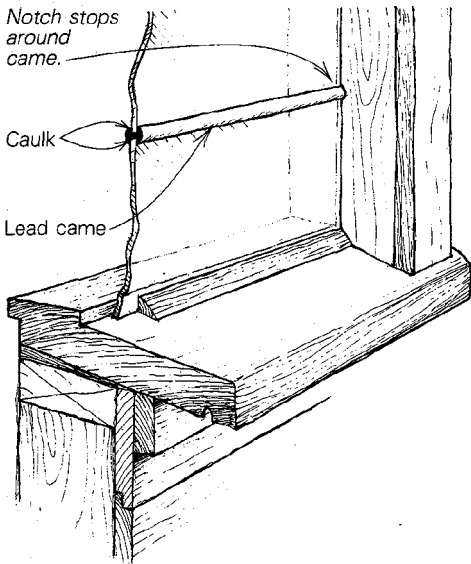
While remodeling my house, I have found it frustrating trying to locate the breaker that deactivates the circuit I am working on. The circuit box is no longer labeled correctly, and won't be until I finish. So once I match a breaker with its circuit, I label the circuit-breaker number on the inside of the outlet cover plate with a grease pencil. Now when I have to work on an outlet, I just unscrew the plate and check it for a number—then I go downstairs and flip the right breaker.

—L. D. Frederick, Aspen, Colo.

Site-built leaded windows

A few years ago, I worked on a low-budget addition that incorporated a lot of recycled materials. One way we were able to save money was by building fixed-lite windows into the bays between studs.

We had been given used windows for the price of hauling them away, but the panes weren't nearly large enough to fill our rough openings. I designed the new windows to take three lites of the recycled glass, separated from each other by short horizontal strips of stained-glass leading (comes). It gives these



windows the look of leaded glass, which is consistent with the style of the original house.

For weatherproofing, we laid a bead of caulk in the grooves of the comes before the glass was slipped into place. Both interior and exterior stops are notched around the comes.

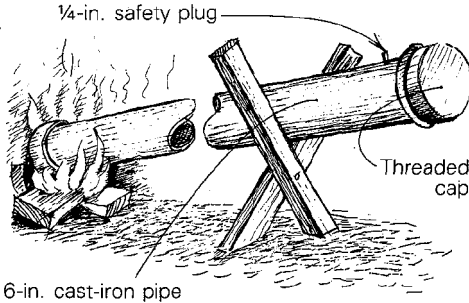
—Robin Mark Freeman, Berkeley, Calif.

Steam-bending on site

While we were restoring a large Victorian building in San Francisco, we had to bend a lot of redwood trim around 4-ft. and 12-ft. diameter framed partitions and enclosures. Steam-bending seemed like the easiest way to do this, but because the trim pieces were so

long, we had to devise an equally long steamer to accommodate them.

I went to a scrap-metal yard and bought a 14-ft. length of 6-in. threaded cast-iron pipe for \$25 (8-in. pipe was also available). I also bought two end caps. I put a thin layer of plumber's putty on the threads at one end of the pipe, and tightly screwed on one of the caps. Near the opposite end, I drilled a 1/4-in. safety-valve hole, and tapped in a cedar plug. Then we put the capped end into the build-



ing's fireplace, built a fire around it with wood offcuts, and poured in about a gallon of water.

About 20 minutes later, the pipe was steaming, and I picked out four pieces of the redwood trim with the most vertical grain, shoved them inside and screwed the second cap on hand-tight. After another 20 minutes we uncapped the steamer, removed the wood (wearing gloves) and cut it quickly. The redwood easily bent to the required curves.

As we grew accustomed to the procedure, we pre-cut the trim pieces because working time is short—about 3 1/2 minutes. Experience also taught us that vertical-grain pieces were much easier to bend than flat-grain ones. With flat grain, the growth rings tend to separate during bending.

The advantage of this steamer is that 20-ft. lengths of trim can be steamed, by joining two pieces of pipe with a union. Also, most job sites have scrap wood and a safe place to build a fire. The disadvantage is that cast iron stains redwood black. This isn't a problem if you're going to paint the trim.

—Michael Spexarth, El Cerrito, Calif.

Cutting through roots

Digging trenches for pipes or foundations can be a miserable job if you're working around trees. I recently had to install a large drainage system that passed through the roots of two massive pines, and I finally discovered a tool that really works on the roots—a Sawzall with a 12-in. pruning blade. Throw down the axes, hatchets, picks and handsaws, and slice through the roots with this versatile tool. In damp soil, protect yourself against shocks with a GFCI-equipped extension cord.

—David Bainbridge, Berkeley, Calif.

Replacement handles

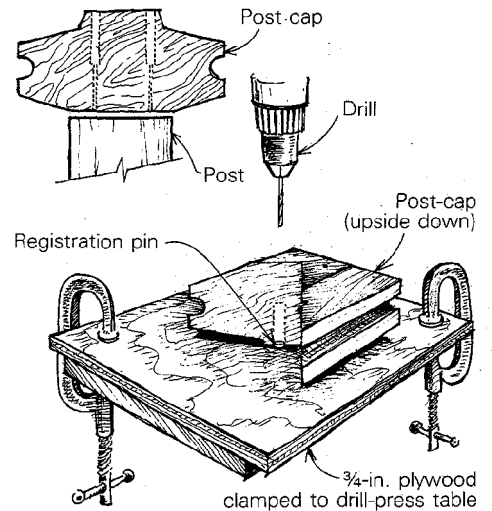
I have broken innumerable handles on hammers, mauls, axes and sledges, and somehow the replacement handle never fits quite as well as the original. It usually comes loose after a period of use, no matter how hard I drive in the end wedges. My solution to this problem is to use five-minute epoxy to glue

the handle to the head. I clean out the hole in the hammer head, fit the new handle to it using a rasp, and then liberally coat both the handle and the hole with the two-part epoxy glue. Then I drive the handle into the hole, set the wooden and steel wedges, and allow the glue 24 hours to cure. The epoxy fills any gaps between the handle and the steel. I've never had a replacement handle come loose using this technique.

—Craig Stead, Putney, Vt.

Drilling from two sides

While installing a set of oak posts and guardrails, I ran into a problem: The ornamental post-caps were over 4 in. thick and required four screws to attach them to the posts. Each screw had to be countersunk into a 1/2-in. by 2-in. hole, and because my 1 1/4-in. twist-drill bit was too short to reach through the thick caps, I had to drill from opposite sides. The



holes had to be aligned, but the complex shape of the blocks made it hard to transfer the layout from one side to the other.

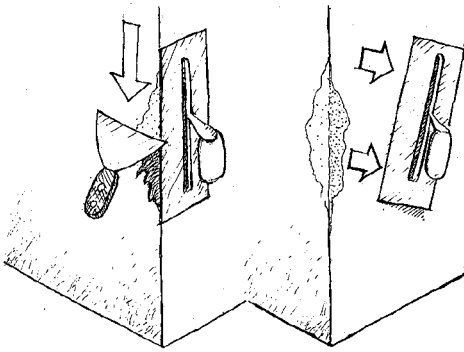
To solve this problem, I began by drilling the four holes in the top of the post cap. Next, I clamped a piece of 3/4-in. plywood to the drill-press table, making sure that the table was perpendicular to the axis of the drill. Then I used my 1/2-in. bit to drill a hole in the plywood. I plugged this hole with a 1/2-in. dowel, leaving about 1/8 in. protruding—this became my registration pin.

Without moving the drill or the plywood table, I reinserted the 1 1/4-in. bit in the chuck, turned the post-cap over, and one by one, registered the 1/2-in. holes over the pin. The pin located the exact centerline for each hole, and let me drill the remaining holes quickly and accurately.

—Mark Hallock, Arcata, Calif.

Corner patch

A frequent problem in remodeling and repair work is the damaged outside corner where some plaster has chipped off, but not enough to warrant installing a corner bead. To fix these dings, I take a flat plasterer's trowel (ideally longer than the chipped area) and lay it on one side of the corner, flush to the edge where it acts as a form. Then I fill the exposed side of the hole with patching compound, and



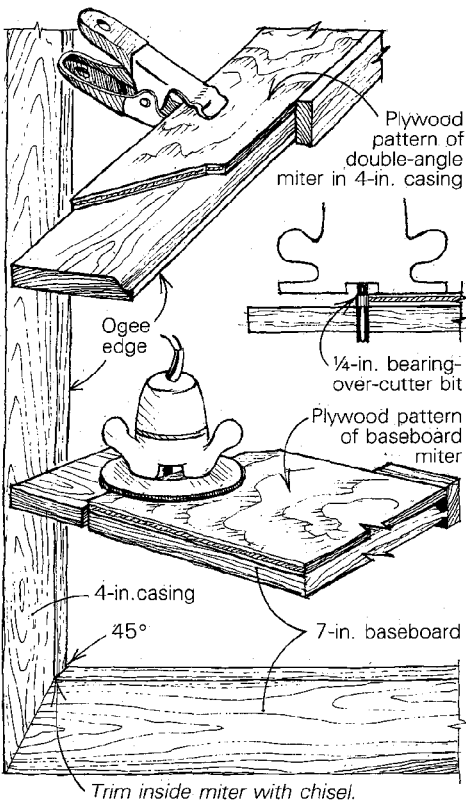
slide the trowel away from the corner without lifting it off the wall, as shown above. For larger fill-ins, plaster works better because it doesn't sag as much as patching compound. When using plaster, be sure to apply water or a bonding agent to the old surface.

—Sam Yoder, Cambridge, Mass.

Cutting double-angle miters

Recently the general contractor I work for was low bidder on the finish phase of a large Victorian-style office building. The job called for crown moldings, 20 raised-panel doors surrounded by 4-in. casings and hundreds of feet of 7-in. high baseboard. Both the baseboard and the casing had a $\frac{5}{8}$ -in. Roman ogee milled on one edge. At each doorway, the base and casing were to be mitered. The miter where the ogees met at the top of the joint was 45° , but this angle changed on the flat face of the trim pieces, as shown below. The question was how to cut a lot of these double-angle miters with speed and accuracy.

I solved the problem by drawing the joints

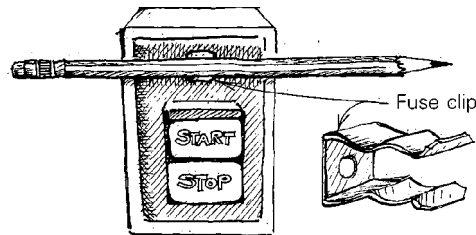


full size (both right-hand and left-hand sides) on $\frac{3}{8}$ -in. plywood, and then cutting each one apart along the lines of intersection. I added stops along the ogee-edge side of each pattern, making it easy to align them with the stock. Clamping the stock and patterns together as shown in the drawing, I cut each joint with a small router using a $\frac{1}{4}$ -in. bearing-over-cutter bit (see *FHB* #10, p. 38). Armed with these guide jigs, the rest of the crew joined me in production-cutting the miters.

—Bob Grace, San Jose, Calif.

Pencil holder

I've always had trouble finding my pencil when I'm using my table saw, drill press and other standing power tools. A few years ago I hit upon a solution. I screw a fuse clip (the



kind that holds fuses in cars and stereos) to the tool's switch box, as shown. The clips are just the right size to hold a standard pencil or a carpenter's pencil. They are inexpensive, and they don't wear out. You can usually use the switch-box cover screw to mount the clip, so you don't even have to drill holes in your equipment.

—Mike Denman, San Jose, Calif.

The kerosene alternative

Kerosene, sold as heater fuel for \$1 to \$2 per gallon, makes a good substitute for paint thinner, which costs considerably more. Used as a solvent for brushes, kerosene leaves a slight residue on the bristles which helps to keep them supple during storage. This residue can be removed with mineral spirits if necessary. Kerosene will significantly extend the drying time of oil paints, so keep this in mind if you are using it as a thinning agent.

—Albert Treadwell, Ridgefield, Conn.

Adjusting doors

Sometimes a new door will hang cockeyed in an old frame, despite the fact that the door and frame are properly sized, square and plumb. This can happen if the depth of the hinge mortises is slightly off, if there's a twist in the jamb, or if there's any variation in the butts themselves.

To remedy this situation, most carpentry books advise shimming the hinges to throw the hinge pins closer to or farther from the jamb. This trial-and-error method takes quite a lot of time. Instead, simply close the door and remove the hinge pins from either the top and middle hinges, or bottom and middle hinges, and temporarily shim the bottom of the door so that the gap is even along both edges of the door. Now take a 6-in. adjustable wrench or smooth-jawed pliers and carefully bend the hinge knuckles until they once again align, and replace the pins. I know that this approach sounds brutal, but it does work. If

necessary, you can pull a door as close as $\frac{1}{2}$ in. of the jamb without making it hinge-bound. In fact, making minor adjustments with this method will automatically relieve the stiff action of bound hinges without ever having to loosen a screw or cut a cardboard shim.

—Dave Walter, Oakwood, Ill.

Magnet helper

A magnet can be a very handy tool around the shop or job site. When I'm working with brads or tacks, I use a magnet to keep them all concentrated in one place. The little nails will stick out like tiny thorns, making them easy to grab between two fingers.

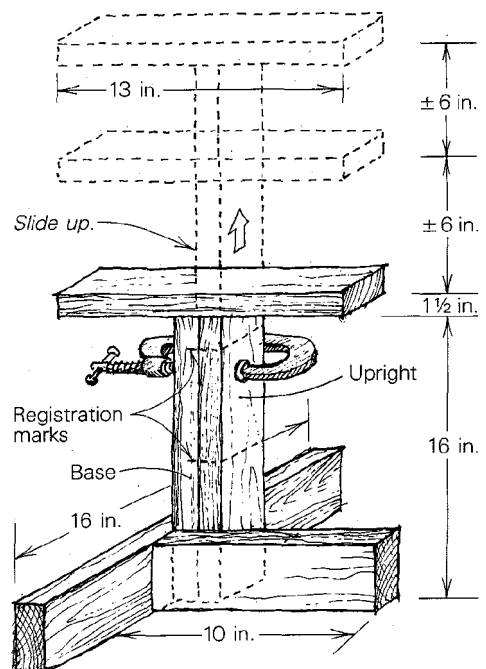
Whenever I have to disassemble a tool and I'm liable to misplace a part in the surrounding sawdust, I get out a magnet to manage all of the parts. It saves a lot of time not having to look for lost screws.

—Ron Davis, Novato, Calif.

Cabinet jack

Since I often work alone, I use these simple cabinet jacks, made from 2x4 scraps, to support kitchen wall cabinets while I adjust their final position. Set on a 36-in. countertop, the jacks will accommodate the three most common sizes of upper cabinets—18 in., 24 in. and 30 in. high.

I use them in pairs, and pre-set each one to the correct rough height registered with marks on the jack base. I use a C-clamp to hold the upright to the base, but a slot in the upright that rides on a carriage bolt through



the base would be better. A wing nut could then clamp the upright and base together at any height.

I lift the cabinets onto the jacks, then level and position them using floor-tile scraps as shims. After the cabinets are installed, the jacks are easily removed by releasing the clamp on the upright.

—Jim Barren, Southwick, Mass.