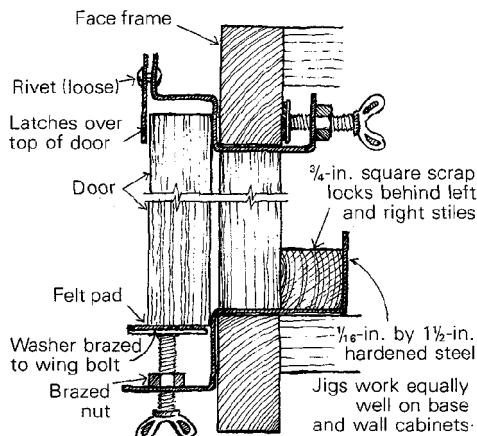


Tips and Techniques is a forum for readers to exchange the methods, tools and jigs they've devised. We'll pay for any we publish. Send details, sketches and negatives with photographs to Tips and Techniques, Fine Homebuilding, Box 355, Newtown, Conn. 06470.

Hanging a door

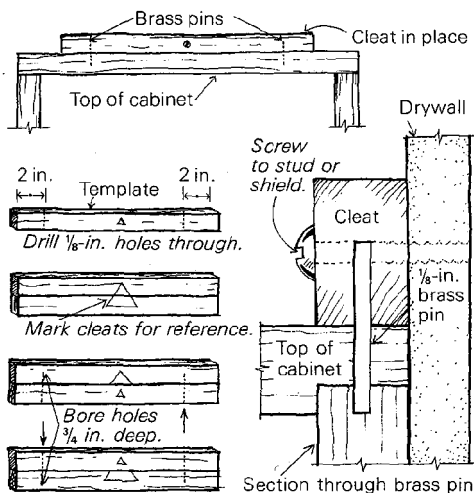
A couple of ideas I use for hanging cabinet doors: two of the bottom jigs level the door; the top jig holds the door up, freeing both hands.



With lipped doors I use one bottom jig in the center of the door. The jigs are $\frac{1}{8}$ -in. by $1\frac{1}{2}$ -in. hardened steel bent to specifications at a machine shop. —Ben James, Jacksonville, Fla.

Cabinet cleats

This easy and attractive way to hang cabinets involves a wooden cleat above and below the cabinet against the wall. These cleats are picked to complement the grain of the cabinet and shaped accordingly. They need not be thick or wide. I make three pieces, usually about $\frac{1}{2}$ in. to $\frac{3}{4}$ in. by $1\frac{1}{4}$ in. and as long as looks good. One piece is the template. Holes $\frac{1}{8}$ in. in diameter are drilled



through the template about 2 in. in from the ends to accommodate $\frac{1}{8}$ -in. brass rods.

Next I mark the top and bottom pieces and the template with a triangle for reference, then bore the two cleats about $\frac{3}{4}$ in. deep. Next the template is clamped to the cabinet top and bottom

and holes bored there. Make sure the template is in the exact position you want your cleats.

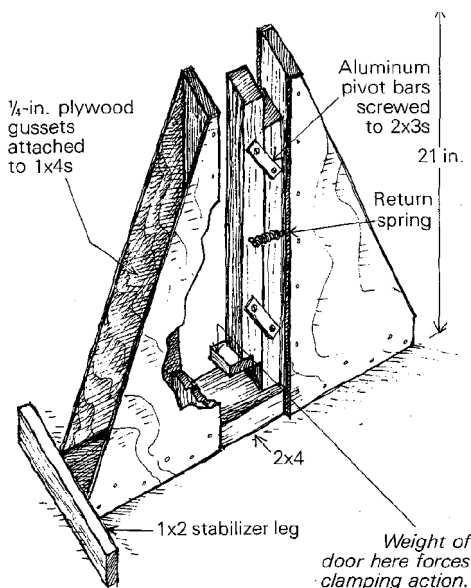
At this point cut your pins and try on the cleats. They should fit like a glove. For most of my small cabinets I use one #10 or #12 round-head brass screw in the center of each cleat. I like this technique for drywall mounting because you can set the cabinet where you like and mark the screw holes. If there is no stud (is there ever?), you can use those little plastic screw shields that work incredibly well and come in all sizes. On large cabinets, more pins and screws will make it easier for you to sleep at night.

These cleats can be clean and straight and functional, or fun and frivolous. They can be shaped and sculpted to look like a natural extension of the cabinet top and bottom or can have other roles such as little shelves. Experiment.

—Alan Miller, Brush, Colo.

Door-holding jig

This is a sketch of a jig I use to hold doors while routing them for hinges or planing them to fit. It



automatically adjusts to doors of different thicknesses and holds them securely. The weight of the door provides the clamping action, and the return spring brings the clamp back into position. —Kerry Ludden, Kearney, Neb.

Anchoring to concrete

Anchoring wrought iron railings to concrete porches and stucco or concrete block walls can be a real problem. Pourable expansion cement offers a simple, reliable solution. It sets to usable hardness in half an hour and has twice the compressive strength of ordinary concrete. Expansion cement comes in powder form and can be mixed either to the consistency of putty for vertical work, or to pouring consistency for work on horizontal surfaces.

If you are working in old concrete, use a masonry drill or roto-hammer bit $\frac{1}{2}$ in. larger than the diameter or diagonal measurement of the post to be installed, and drill a hole at least 2 in. deep. Rock and rotate the drill slightly to enlarge

the bottom of the hole, then clean it out thoroughly, using an air compressor, bicycle pump or vacuum cleaner. Dampen the hole with water, set the post in place, and fill it with expansion cement. —Geoff Alexander, Berkeley, Calif.

Snapping lines

When snapping a series of chalk lines, as on roofs or siding, two people can hook their chalk box lines at the clip by inserting one line through the other, as shown in the drawing. Worker A

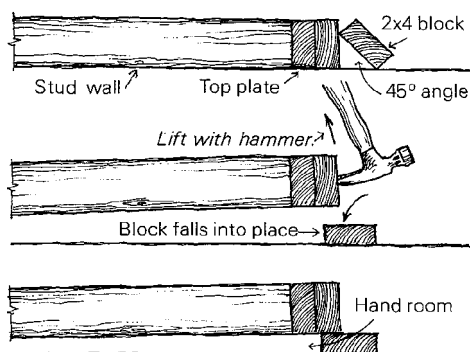


reels in the hooks to his end and they snap lines until worker B's line goes dry. Then worker B cranks his line while exposing A's for more snapping. There is no walking back and forth, and no time wasted rechalking the lines.

—Jackson Clark, Lawrence, Kans.

Hand room

Back when I worked in the tracts, a little trick made our lives easier when it came time to lift stud walls into place. Both people working on a wall would pick up a scrap piece of 2x4 and lean it against the top plate at about a 45° angle. Then



we would bury the claw end of our hammers into the top plate deep enough to provide lifting purchase on the wall. Both workers lifting together would then raise the entire wall enough to allow the 2x4 blocks to fall under the top plate, providing hand room for the final lift from the other side. —Dave Bullen, Berkeley, Calif.

Holding down a temporary roof

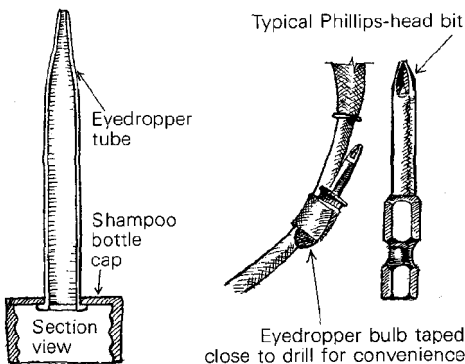
This tip is for the homebuilder who has either run out of time, money or both and needs to get a roof covered before the next rain. I've tried it and it works on roofs with a minimum 4/12 pitch in any weather condition short of a gale.

After whatever sheathing you are using is in place, cover it with 30-lb. felt using any appropriate lap, and then staple string $\frac{1}{2}$ in. above the lap line. Use kite string, mason's line, fishing line, or some other small-diameter string with at least 15 lb. test. The staples should be at least $\frac{1}{2}$ in. long ($\frac{3}{8}$ in. is even better) and place them 10 in. on center for effective holding. Be careful to staple every exposed edge, vertical or horizontal, or a good wind will pick off the felt. The string can be left in place when the finished roof is installed. —Craig Savage, Hope, Idaho

Eyedropper recycled

I have come upon what I believe to be a new use for the common eyedropper.

As a cabinetmaker/carpenter I find myself often using my electric drill to drive screws. The Phillips-head bit I use was always being misplaced or falling to the bottom of my work



pouch. I taped the bulb part of an eyedropper to my drill cord. It holds the bit quite well.

I use the tube portion to convert an old shampoo bottle into a fine glue bottle. I drilled a hole in the screw cap of the bottle and slid the tube into place; the hole was sized by testing the tube in a drill index and drilling the hole $\frac{1}{64}$ in. smaller. This glue bottle can be any size and has a tip that will reach hard-to-get-at places.

—Mark Hallock, Arcata, Calif.

Wooden wheelbarrow

A couple of years ago I watched a neighbor struggle through the mud with a load of firewood in his wheelbarrow. The wheel was too small. Movement was all but impossible because

there simply wasn't enough surface area to keep the front end up. Not long afterward, I designed and built the wheelbarrow shown in the drawing below. Handles for the wheelbarrow were cut from a 6-ft. length of full-dimension 2x6, ripped diagonally so that the portion over the wheels (the area that usually breaks first) was about 4 in. wide. The handle area was rounded a bit with a router. The wheel was fashioned from two 20-in. discs of $1\frac{1}{4}$ -in. plywood. These were covered with softwood slats about $1\frac{1}{2}$ in. thick and 12 in. long.

The axle was formed from a section of $\frac{3}{4}$ -in. steel pipe about 22 in. long. This was inserted through the center of the wheel and fastened in place with epoxy and a couple of scraps of $\frac{3}{4}$ -in. plywood on each side. Bearings for the unit were made from hardwood blocks about 2 in. by 4 in. by 10 in. These were drilled about $\frac{1}{32}$ in. oversize and bolted in place to take the axle. I use a few drops of 90-wt. gear oil on the axle from time to time as a lubricant.

The rest of the construction is fairly straightforward. I used a few scraps of $\frac{1}{2}$ -in. by $\frac{5}{8}$ -in. plywood for the sides and bottom, fastened with glue and 6d galvanized nails. I used 2x2 blocks in the corners for nailers. A couple of coats of Cuprinol gives protection from the weather.

The completed unit cost me less than \$4 and took three hours to build. It is light, tough, holds a lot, and rolls more easily than commercial units. Its large wheel will carry tools and building materials through mud and over soft lawns without sinking in and leaving marks.

Other than low cost and simple construction, I think dependability is this wheelbarrow's biggest virtue. It will never have a flat tire.

—Mark White, Kodiak, Alaska

