

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.

Head lights

I do quite a bit of remodeling and termite work, and I've found that my most valuable tool is my headlamp, purchased at a local sporting goods store. It's simply an encased bulb with a reflector fixed to an elastic strap that fits around the head. A separate battery pack attaches to my belt, and a small cord connects the two. It uses four pen-light batteries and is very compact.

Before I thought of using this amazing gadget, I had to devote one of my hands to carrying a flashlight whenever I went under a house to do inspections. If tools had to be carried, I would be limited to half my capacity.

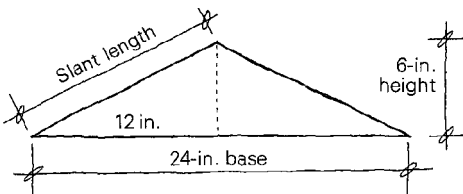
No more training clamp lights or droplights on job areas; no more shadows to fight with. All I have to do now is look at what I want to work on and it's illuminated.

I got my headlamp from the REI Co-op. For their catalog, write Box C-88125, Seattle, Wash. 98140.

—Alan Forbes, Oakland, Calif.

Laying out a cone

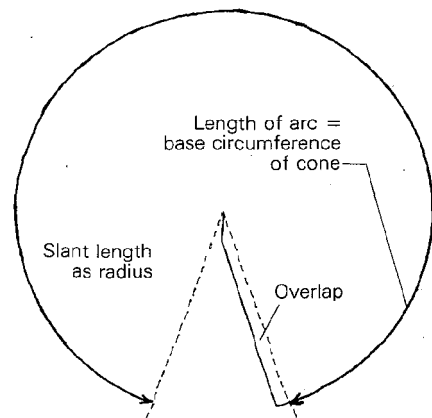
I have been intrigued with this shortcut which you may find of interest. Cones have several uses, such as sheet-metal chimney caps, but the layout of a cone is puzzling to some craftsmen. Here is a fast method that doesn't require higher



Determine slant length and base circumference:

$$\text{Slant length} = \sqrt{12^2 + 6^2} = 13\frac{1}{2} \text{ in.}$$

$$\text{Base circumference} = 24 \times \pi (3.14) = 75\frac{3}{8} \text{ in.}$$



mathematics. The example above shows how to lay out a cone 6 in. high with a 24-in. dia. base.

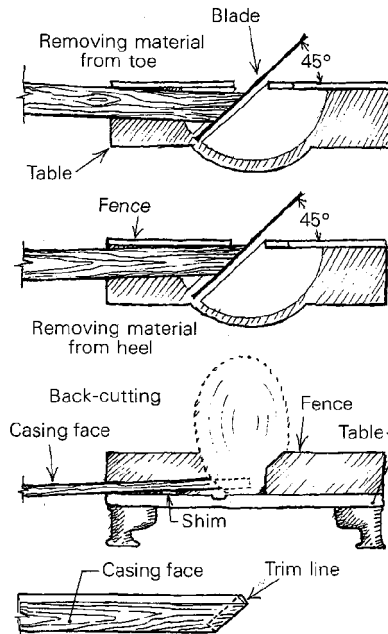
Using the slant length as radius, scribe a circle on the material, and snip. Then measure the base circumference of the cone on the circle, adding at least a $\frac{1}{4}$ -in. overlap for screws, and cut out the wedge.

—William A. Julien, S. Chatham, Mass.

Cutting miters

When casing windows or doors where miters are used, anyone who has done a few knows that they are never square, and often not flush with the wall surface. Rather than using a block plane or rasp to compensate, I've learned it's quicker and more efficient to use the power miter box.

Cut the first piece (top or bottom) to length with true 45° angles (miter boxes I've seen have adjustments to true the cut and should be



checked periodically), and nail it in place with an even reveal of the jamb.

For the sides, start by cutting a true 45° (90° to the back surface), then hold the piece in place with a consistent reveal, tight to the wall and jamb. If the joint is open at one end of the cut, take it back to the saw and compensate by changing the angle of the material (not the saw) until you get the right cut. If it is still open—but evenly so—across the front, back-cutting is required. To do this, simply insert a thin wood shim to get a small trim angle. Once you have that fit, hold in place at the opening, mark the length, and cut it at a true 45°. (If you're casing a door, just cut the bottom end off square.) Repeat for the other side.

To fit a final piece where two ends must come together, use the same method. However, you must leave the piece long, so both ends can be trimmed to fit. Once you have both ends fit (piece still long), mark one end to final length and repeat the fitting cut.

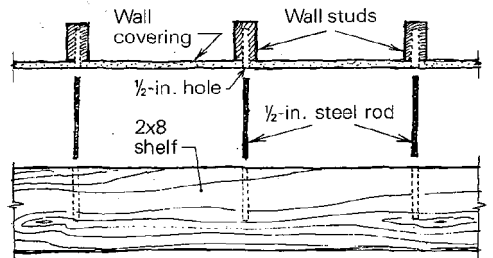
This is a safe and—with a little practice—an easy way to get clean fits every time, quickly. A carbide blade helps, but be sure it can withstand the high rpm of power miter boxes.

—Chuck Sjodin, Coon Rapids, Minn.

Hidden shelf connections

I was working on a game room where I had a 9-ft. section of wall on which I wanted to place shelving. I was doing the room in Early American so I wanted to use 2x8 material to achieve a massive look. I didn't want any visible bracing

that would interrupt clean lines. The solution: I drilled $\frac{1}{2}$ -in. holes into the wall studs to a depth of 3 in. plus the thickness of the wall covering, on the centerline of each shelf and the center of

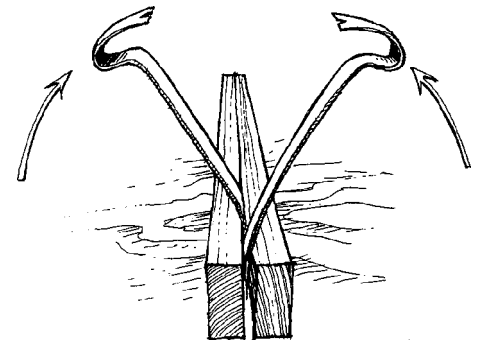


each stud. I then drilled $\frac{5}{8}$ -in. holes 5 in. into the shelves, to correspond with the holes in the wall. I drove 8-in. by $\frac{1}{2}$ -in. dia. steel rods into the wall studs and then slid the shelves onto the protruding steel rods. The holes are larger than the rods so the shelf can be removed for painting. The resulting shelving is strong enough to sit on, yet still has clean unbroken lines.

—Stan Morgan, Mapleton Depot, Pa.

Separating studs

Seeing me struggling with my framing hammer, trying to separate two studs nailed together, prompted the carpenter I was working for to



show me this trick. Use two pry bars, one in each hand. Insert the flattened ends between the studs and simply close together, as shown, working your way down the studs. Saves the back and clears the air.

—Gerald McSweeney, Toronto, Ont.

Cheaper by the dozen

Here are twelve tips that will save you time and cash. We've found them helpful in our years as owner-builders and in our professional experience in the Going Solar Design group.

When siting your house try to place it on the least desirable spot on your lot, so that the more beautiful places are left available.

Set up proper books and keep accurate records. If necessary, pay an accountant as a consultant to help you arrange your books.

Choose a carport over a garage if local codes allow. This can save significant amounts of money, since less structure is required. Ask yourself, "Does my car need to be in the house?"

Pace yourself while doing your building project, so that you don't burn yourself out. Consider a vacation before you begin your final carpentry. Try to keep your project fun. Look for signs of anger, impatience, mistakes and injuries that mean you should take some time off. Always be in control of the project; don't ever let it control

you. Use your energies for creative work, not to combat frustration.

Use the local employment office to obtain manual laborers for digging trenches, moving lumber, clean-up, etc.

Plan out your trips to the lumberyard. Have a job site chalkboard. When anyone runs out of something or realizes something will be needed, write it down. Frequent and unorganized trips to the lumberyard waste a lot of time.

When figuring materials, always add 5% to 10% for waste, errors and unusable stock. Running out is costly.

Get a "temporary building shack" permit to allow you to live on the land while you are building, thereby saving rental costs or mortgage payments on another house.

Investigate edible landscaping. If you're going to plant trees, why not plant fruit trees or vines that provide food?

If you must remove trees from the land, leave at least 4 ft. of stump, so the bulldozer operator can easily knock it over. If cut off at ground level, stumps are very difficult to remove.

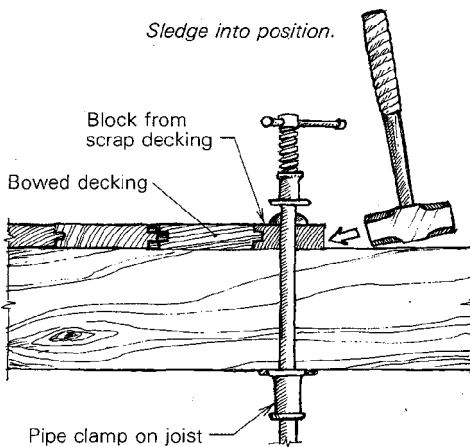
If you look like a building professional and learn the lingo, you will easily get the contractor's discount. If you are questioned, state that you are an owner-builder, the contractor of record on your job, and you should get the reductions in price. Be gently insistent.

Consider used lumber, especially for large timbers, but have it graded by a certified lumber grader. Check the newspaper for demolition opportunities.—*John Stebbins, Laguna Beach, Calif.*

Reluctant decking

Here is a simple solution to the problem of getting tight joints when laying twisted or bowed tongue-and-groove decking.

First, pick some good straight pieces for your first course or two and nail them securely in place. Working with the tongue forward, start



the groove of the next course onto the tongue of the last course. Anywhere the pieces don't slip together easily or a bow in the wood causes a space to occur, clamp a block (a short piece of scrap decking works well, minimizing damage to the tongue) to the joist in front of the troublesome piece with a short pipe clamp. Then hammer in on the block with a sledge hammer.

The tougher the bow, the harder you will have to clamp the block down and the harder you will have to hit it with the sledge, but the clamped block will hold the joint tight until it can be

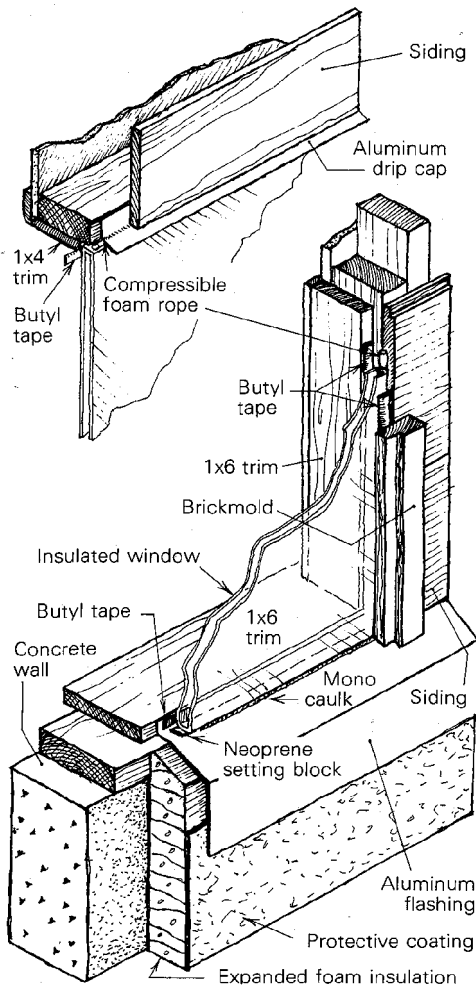
nailed. In this manner you can lay the most twisted pieces easily and tightly.

This trick was shown to me by Joe Caputo, an old-timer I work with building post-and-beam structures. We use it quite often to apply 2x8 V-match pine to 6x8 floor joists 3 ft. on center. We use the V-match as either a sub-floor or the finish floor, and also as the finish ceiling for the room below. This technique works great on the timbers and equally well on stick-framed buildings. For fastest application try a toe-nail first, and if that won't pull in the decking, try the clamp method.—*David Barker, Gardiner, Maine*

Installing fixed windows

As builders of passive solar homes in a severe climate, we combine heavily insulated concrete and stud walls with fixed glass windows on the south side for direct gain.

Large areas of insulated glass can be installed economically if the units are standard sizes and fixed directly to the building's framework. We use tempered glass made for patio doors; they are available at reasonable cost and resist almost any form of abuse. If a unit must be replaced, it can be done easily using this form of installation.



Frame the rough opening with a ½-in. gap at the top and sides to allow for expansion and framing irregularities. Cuprinol or copper naphthalate preservative on the interior trim will reduce the water damage from condensation,

which is inevitable. A few coats of marine varnish will extend the life of the wooden sill.

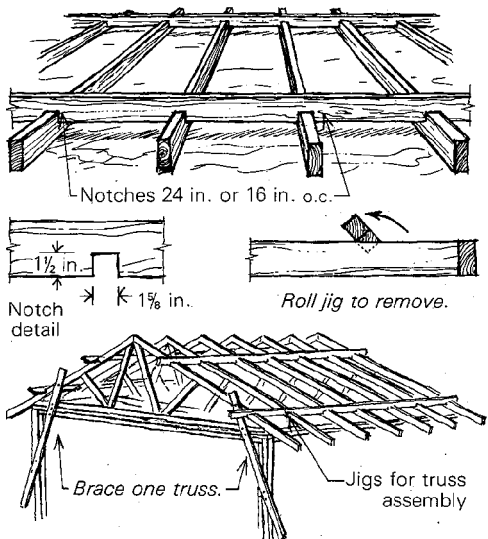
Butyl tape greatly simplifies glazing. We use Butyl 440 tape from Tremco; it is a uniform bead of butyl caulk with a paper backing that prevents it from sticking to itself. It is packaged in coils and can be purchased at many hardware or paint stores. Automobile glass installers also use it. Leaving the protective paper layer on allows you to install the tape against the interior stops, check the window for fit, remove the paper and instantly secure the window. We place neoprene setting blocks under the window as it is installed to absorb expansion and contraction of the glass and frame. The blocks are site cut to the thickness of the window unit from ¼-in. thick neoprene and are normally 1¼ in. long—usually two per panel. Then we use Tremco mono caulk to seal the base of the window. Compressible foam rope ¾ in. wide fills the spaces at the sides and top of the window and allows for expansion.

The aluminum drip cap at the top of the window overlaps the brickmold trim on both sides, minimizing exterior trim and further reducing weathering problems. As soon as the sun comes out, any drift of snow or ice at the bottom of the window slides off the aluminum flashing (preferably a dark color).

—*Tom Ashman, Wiarton, Ont.*

Framing jig

I have a rapid and accurate method for assembling any wall, floor or roof that uses standard dimensions. It consists of a jig, which is simply a 2x4 notched on 16-in. or 24-in. centerlines to receive the framing members. Two such jigs are handy, and for large-scale work, four can help. To use, just slip one member at a time into the jig until everything is in place, then nail. No measuring is required except for cutting pieces to length. It really helps on long runs that need to



be sheetrocked, covered with plywood, etc. For trusses, it means that everything can get assembled via the jigs, the plywood started and then the jigs pulled up. No nails to pull.

I put together a 1,000-sq. ft. workshop with this method—mostly by myself and on evenings and weekends. It really works.

—*M.R. Havens, St. Albans, W.Va.*