

Sidewall Shingling

For that authentic Cape Cod look and low maintenance, you can't beat cedar siding

by Bob Syvanen

Sidewall shingling has always been one of my favorite carpentry jobs. It requires a good measure of skill, repetition and precision, all steeped in cedar aroma. And you can watch the house's character emerge with each new course.

Shingles aren't the cheapest siding material you can use, and they take longer to apply than most other types of siding. But the reward for a good shingling job is in looks and longevity. A good grade of cedar shingles, white or red, will last a long time with no maintenance. The first house I shingled 40 years ago still has many years left in its siding, which has weathered to a beautiful grey.

Tools—Nothing fancy here. A hammer and utility knife are my basic tools for most shingling jobs. For fastening shingles, power staplers are okay, and you'll see a lot of them in use wherever tract houses are going up. The trouble with using these tools is that speed sometimes overshadows quality. There's a real difference between shingling fast and shingling well. Preparation, layout and application are more important than speed if you want a good-looking job that will last for many years.

A shingling hatchet can be used in place of a

hammer and knife. The hatchet's waffle-face head is less likely to glance off a nail onto a finger when the nailhead has a gob of zinc left on it from the galvanizing process. Only, hot-dipped galvanized shingle nails should be used for this kind of work, and the length I use is 3 in.

The blade of the hatchet is for squaring and trimming shingles. I find that a utility knife does this better, though, and it's safer and easier to carry around. For cutting across the grain, a small handsaw is better than a knife. I use a 10-point (10 teeth per inch), 20-in. crosscut saw.

A chalkline, a tape measure and a level are three other essential tools. They're all used for setting course lines. I use blue chalk because red stands out like a sore thumb, especially if you've snapped a course line too low. There's no need for long measurements when you're shingling, so a 12-ft. tape is fine.

I keep nails, a utility knife and a tape at my waist in a two-compartment canvas nail apron. A lightweight holster carries the hammer. The level hangs on a nail in the end of the staging planks, and I keep my saw handy by shoving the blade up underneath a course of shingles. The chalkline just hangs around on the staging.

Short walls can be shingled from staging

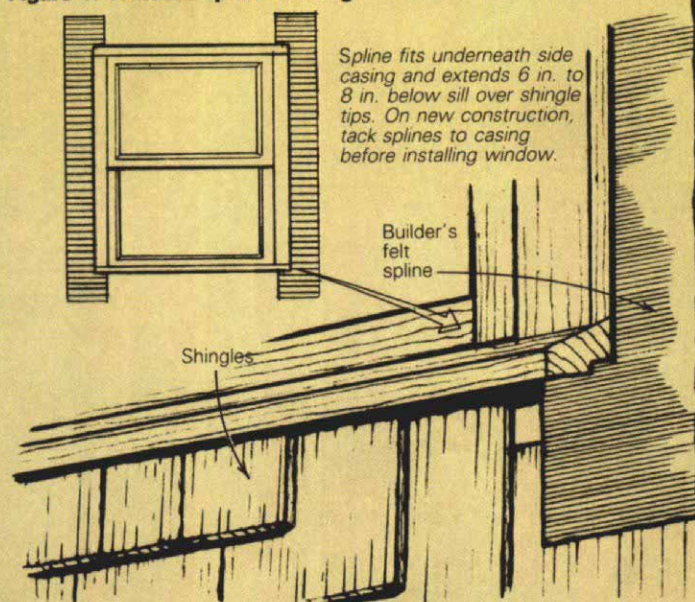
planks set on sawhorses. Taller walls and gable ends require wall brackets, pump jacks, or push brackets. For reshingling work, pump jacks or push brackets are ideal because they don't require punching a hole in the wall for support. For new work, I prefer wall brackets because of their simplicity and security.

Preparation—Sidewalls don't have the leak potential that roofs do, but you still have to take precautions to keep water out from behind trim at corners and openings for windows and doors. This is done before any shingling starts. I slip strips of builder's felt (around here we call them splines) behind window and door side casings (see figure 1, below). The splines are cut from the felt roll with a utility knife. I make them about 8 in. wide and long enough to extend from 3 in. above the header to 6 in. to 8 in. below the window sill.

After this felt is in place, I flash the head casing with copper or aluminum. This flashing should extend over the felt splines at the top corners of the window or door. At the bottom corners, the 8 in. or so of each projecting spline should run under two courses of shingles and over the tips of the third course. This will direct



Figure 1: Window spline flashing



water that runs between siding and casing out onto the face of the siding.

I put builder's felt under all trim—corner boards, frieze boards and rake boards—before installing it. At least 4 in. of felt should show on either side of the corner or corner boards. The felt should be creased and stapled to the sheathing before the board is nailed up.

It's important to tuck shingles up securely beneath window sills, frieze boards and rake boards, as shown in figures 2, 3 and 4 below. If these three problem areas are not properly prepared, the shingles will crack and fall away from the wall, especially if they're short. With the shingles behind the trim, longer shingles are less liable to split, and they will not curl out, pulling the nails with them.

At the windows, I cut a $\frac{5}{8}$ -in. wide by $\frac{1}{2}$ -in. deep rabbet in the bottom of the sill so that all the shingle tips, including the course just below the sill, will fit in the rabbet (figure 2). Most windows come with a rabbet about $\frac{3}{8}$ in. wide, which will accommodate beveled clapboard siding, but not a double layer of shingle tips. On a new house, I cut all these window rabbets before the windows are installed, using a skillsaw with a rip guide. Cutting the rabbet with the window in place requires tedious work with a utility knife and a chisel.

You can rabbet the underside of the frieze board to hold tucked-up shingles, but this leaves a $\frac{1}{8}$ -in. wide lip that always cracks. I prefer to pack out the frieze board with a piece of 1x3, as shown in figure 3. The rake board gets packed out the same way (figure 4), but here you usually need $\frac{7}{8}$ in. of packing width rather than $\frac{3}{4}$ in. One-by-three strapping used to work well for this when it was a strong $\frac{3}{4}$ in. It's now a weak $\frac{3}{4}$ in. thick and requires an additional $\frac{1}{4}$ -in. piece to build it out to $\frac{7}{8}$ in. These days I often use two pieces of $\frac{7}{16}$ -in. plywood (which used to be $\frac{1}{2}$ in.) for packing.

Layout—I try to lay out shingle courses so that they come out even at window sills, header casings and frieze boards. To do this, you vary the exposure slightly so that the butt edge of a given course lines up where you want it to. You can't always hit these trim lines, but it is something to strive for. If it won't work for all conditions, let the least objectionable spot be the odd ball out. For example, if a window head casing is 3 in. from the bottom of the frieze, lay out the courses to line up with the bottom of the sill and work up to the frieze, rather than to the top of the window.

I lay out courses for a 5-in. exposure, but this can be expanded to $5\frac{1}{2}$ in. or reduced to $4\frac{1}{2}$ in. The range I usually work with is from $5\frac{1}{4}$ in. to $4\frac{3}{4}$ in. As shown in figure 5, if I have a window space of 34 in., I divide it into seven courses, each with an exposure of $4\frac{7}{8}$ in. weak. Seven courses multiplied by 5 in. of exposure equals 35 in., which is 1 in., or eight eighths, too much. I have to knock off $\frac{8}{8}$ in. in seven courses and that works out to a strong $\frac{1}{8}$ in. per course, so exposure should be $4\frac{7}{8}$ in. weak.

All the courses don't have to be the same, but I do try to avoid perceptible differences in adjacent courses. I don't like to put a $5\frac{1}{2}$ -in. course above a $4\frac{1}{2}$ -in. course because the difference is too noticeable. I would rather reduce the $5\frac{1}{2}$ -in. courses by adding another course. What I'm saying, of course, is that there's a lot of fudging in shingling layout.

To keep the course layout consistent, I mark up a story pole that reaches from the bottom of the frieze board down to about 6 in. below the top of the foundation. I use the frieze board as the reference line from which all of the other marks are made. The story pole shows window and door heights and all course lines, and can be used anywhere along the frieze to locate shingle courses. If the gable-side windows are the same height as the eave-side windows, the



story pole can be used for layout on the gable wall as well.

I like to trim inside and outside corners with corner boards rather than weave shingle corners, which I'll discuss later. After the corner boards are installed (I let them run a few inches long and cut them to length after the shingling is finished), I use my story pole to mark the course lines on the corner boards and door and window casings. The courses might need adjusting

Figure 2: Window-sill rabbet

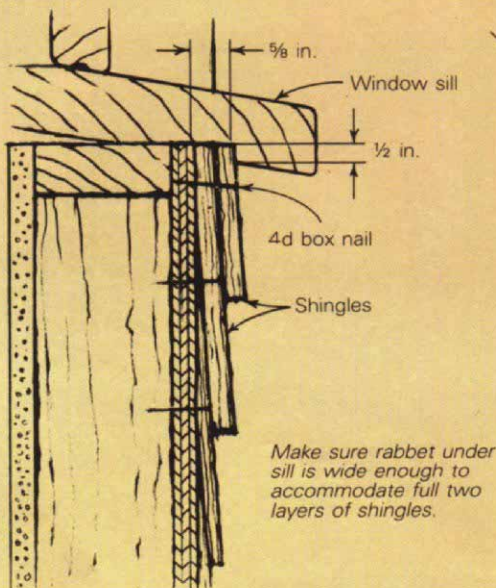


Figure 3: Packed-out frieze board

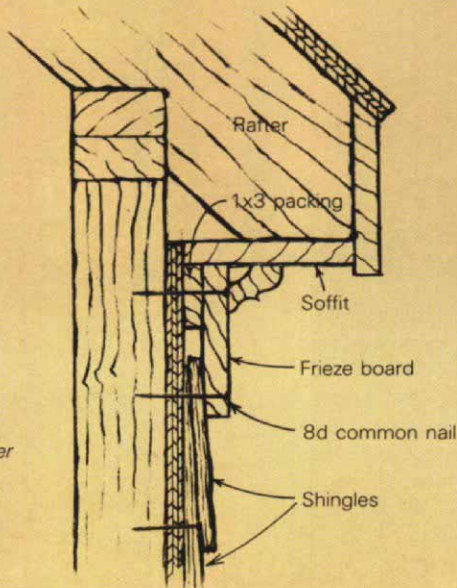
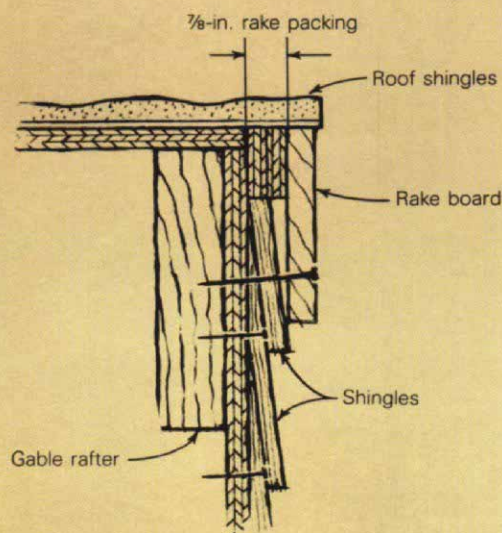
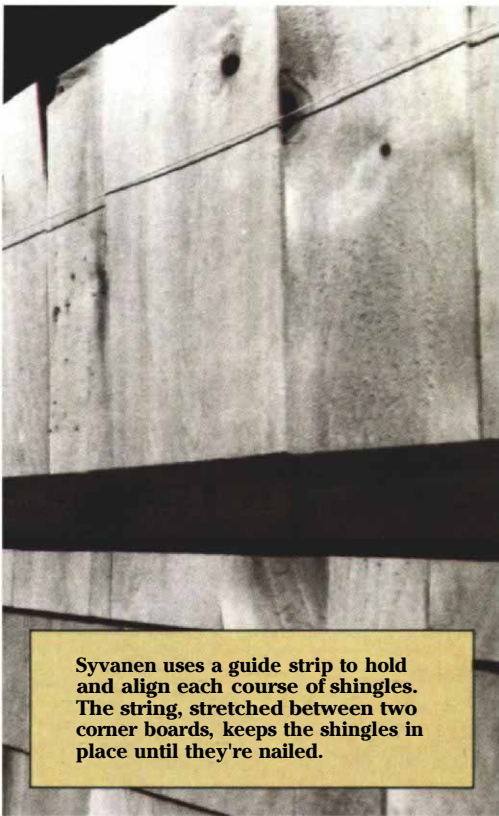


Figure 4: Packed-out rake board





Syvanen uses a guide strip to hold and align each course of shingles. The string, stretched between two corner boards, keeps the shingles in place until they're nailed.

Shingling—I do my shingling to a 1x3 guide strip. The guide strip is temporarily tacked to the wall with 4d box nails, and its top edge supports the course of shingles that you're about to nail up (photo left). The length of the guide strip can vary, based on how wide the area is that you'll be shingling.

I begin my starter course at the base of the wall, with the butt edges of the shingles about 1 in. below the top of the foundation (figure 6). This keeps the joint between foundation and sill well protected from the weather. To align the starter course, you have to snap a line for the course against the masonry, or hang your guide strip down an inch below the sill. To do this, I nail several strips of sheet metal (flashing works well) to the back of the guide strip. I then nail the strips to the sidewall so that the 1x3 is level and aligned to support the first course.

The starter course is two layers thick, with the joints staggered. When shingling against a guide strip, I leave out the shingles where the guide strip's metal hangers are attached, and nail them in later after the guide strip is removed.

Red cedar shingles can be laid up loosely (about $\frac{1}{8}$ in. between shingles). But the white cedar shingles you buy today are far from dry, and they should be laid up tight because they'll shrink. In fact, the last two shingles in a white shingle course can be force-fit by pushing against their common edges. This works if the shingles are just a tad wide for the opening, and it saves the time spent having to cut the last shingle to fit.

Nails in white cedars should be driven home hard. The nails should be about $\frac{1}{2}$ in. from the sides of the shingles and no more than an inch above the butt line of the following shingle course. A good Shingler can gauge proper nailing height by eye, but I often use my hammer head as a rough gauge—it measures about $5\frac{1}{2}$ in. from claw to face of head. Any low nails will

show up when you snap the chalkline for the next course, and they should be removed.

The joints in adjacent courses should be staggered at least 1 in.—any less and the nails are liable to show in the joints between shingles, especially after the shingles shrink with age. One problem with speed nailing using a staple gun is that the staples often end up somewhere near each edge of the shingle. The result is that many staples show through in the joints. This not only looks bad, but it exposes the staples to water, inviting decay in the wood around them.

Once the first course of shingles is on the wall, the rest of the shingling progresses, using the guide strip as long as there's room for it. To position the guide strip, I first snap a chalkline. The location for the chalkline is picked off the marked corner boards and casings, as shown in figure 6.

To speed things up, I stretch a string just above the guide strip and run it the full length of the shingle course. Then I load the guide strip with a mess of shingles, slipping the shingle tips underneath the string so that the shingles will be held against the wall until I nail them up (photo left). The string takes only a minute to set up between a couple of nails, and it really speeds the work, especially in windy weather. Without it, you can barely hold a few shingles in place with your hand or forearm while nailing. On a long course, the string has to be supported at midspan or at several points.

With two workers, it's best to nail from both ends toward the middle. A lefty and a righty make a good team for shingling. Usually, when laying the last few shingles in place, you can find the right combination of shingle widths. Fitting the last shingle can be kind of a game, but if the right width shingle isn't around, I put the last two shingles in place, lapping one over the other. Then I make a deep score along the trim line with a sharp utility knife and snap the shingles

Figure 5: Calculating exposure

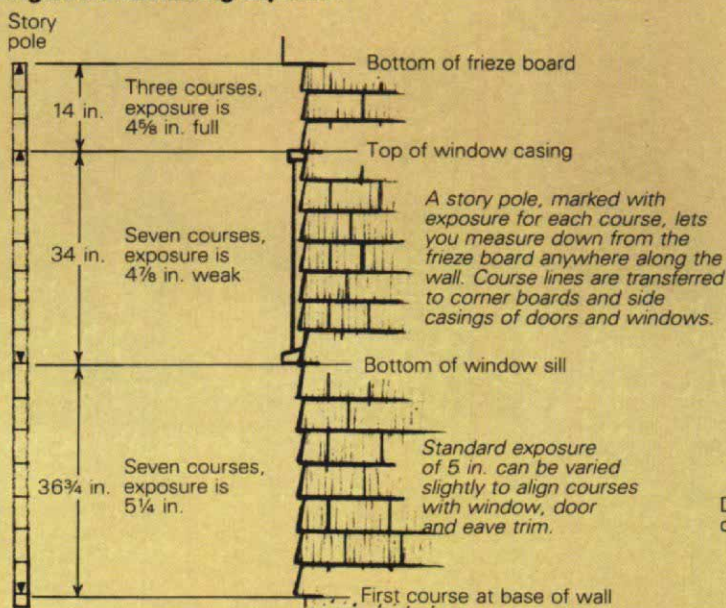
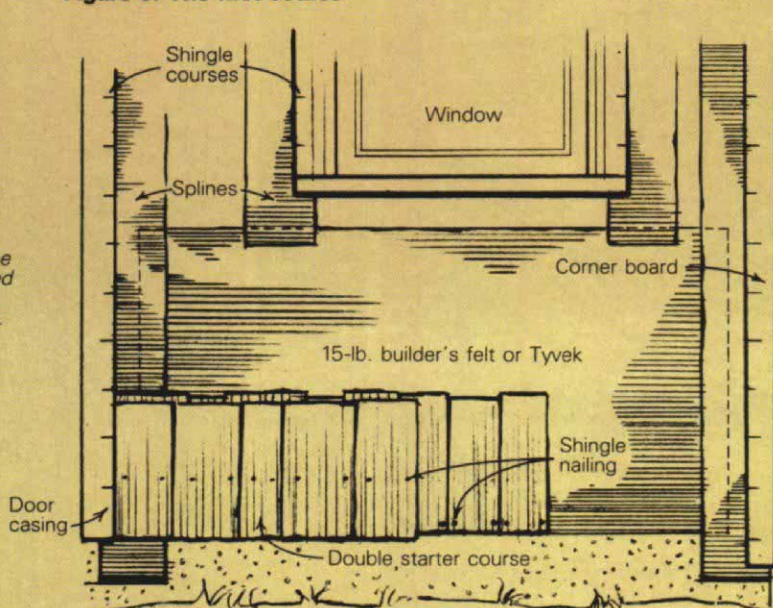


Figure 6: The first course



along the scored line. The result is usually a perfect fit.

Wherever there is trim above a shingle course—usually in the form of a frieze board, rake board or window sill—the nails in the shingles will show. I use 4d or 5d hot-dipped galvanized box nails and set the heads with a nail set. Thicker nails will spread the wood fibers too much and split the shingles. The nailing looks better if it is in a straight line and about ½ in. to ¾ in. down from the trim. The sun sometimes casts a nice shadow line that can be used as a gauge; otherwise, a light pencil line drawn against a straightedge will do.

Just beneath the rake board, only the lower side of each shingle is nailed through its exposed face. In this case I use a 4d galvanized finish nail. All the shingles that tuck up underneath the rake board should be extra wide. The single face nail in each shingle also catches the upper side of the rake shingle under it (figure 7).

Corners—At inside corners, I butt shingles against an unpainted ¾-in. by 1-in. corner stick nailed into the corner over a creased spline of 15-lb. builder's felt (figure 8). The corner stick is just wide enough to keep the butt edges of the courses from contacting each other, so the stick is barely visible.

An alternative to the corner stick is the woven inside corner, which you create by alternating the butted and the covered edge of each shingle course. Shingles have to be trimmed more carefully for woven corners, so you may need a block plane in addition to a utility knife. Though I prefer the look you get with corner sticks, there are cases where the woven corner is the better way to go. Where a bay window meets its sidewall, for example, you've got an obtuse inside corner that should be woven.

You've also got two choices when it comes to shingling outside corners (figures 9 and 10). I

like to butt the shingle edges against corner boards, but you can weave the corners here too. The alternating overlap used for weaving inside corners is the same for woven outside corners, but you should secure each outside overlap with a 4d hot-dipped finishing nail. On outside corners, overlapping shingles can be shaped in place with a block plane after they've been nailed up.

When shingling against corner boards, window casings or other vertical trim, it is wise to use shingles no wider than about 6 in. Narrow shingles won't shrink as much as wide ones will, so the chances of a gap showing between trim and shingle are minimized. For the same reason, wide shingles shouldn't be used in woven corners, especially outside corners.

Cheeks and gables—Dormer sidewalls (I call them dormer cheeks) are the most difficult walls to shingle, but you can make them go quicker by precutting a lot of wide shingles to the angle of the roof pitch. One of the automatic things I do when shingling is to put aside the widest shingles, or *bed sheets*, so that they can be used on dormer cheeks and gables. All shingles wider than 12 in. qualify as bed sheets.

The first thing I do before shingling a dormer cheek is to cut a pattern shingle that fits plumb against the corner board and is parallel with the roof. This shingle should be cut so that it comes to a point at the butt (figure 11). Once the pattern shingle is cut, you can use it to cut the rest of the shingles that will get nailed up at the cheek/roof juncture. To save time cutting, I stack a few shingles together and cut them all at once with my skillsaw.

As with all starter courses, the cheek starter course is doubled with course joints staggered. After the starter course is up, the pre-cut, angled shingle is the first shingle that you install in each subsequent course. You locate it by leveling

Figuring material

Just about any wood can be used for sidewall shingling, but on Cape Cod white cedar is the preferred material because of the beautiful grey color it acquires as it ages. I've redone old houses that had pine shingles 80 or 100 years old, and cedar can last even longer. Red cedar is common in the West, but it ages to a black or muddy brown color that doesn't seem to fit well in a New England coastal setting.

I've used only two grades of shingles—*extras* and *clears*. For roofs, extras are best, but clears are fine for sidewalls. The extra grade means that the shingles are knot-free, while clears will have knots 5 in. from the butt. Extras run about \$20 a bundle; clears go for about \$18 a bundle.

All white cedar shingles come from Canada, and some mills are better than others. There are bargain shingles to be had, but I would use them only on bargain houses or if money is a problem. I've found that Wasco shingles (Clair International Development Corp. Ltd., Waska Cedar Shingle Mill, 2nd IND Ave., Box 118, Clair, New Brunswick, Canada) are consistently good. The things to look for in a bundle of shingles are a full ¾-in. butt thickness and a good mix of widths—bed sheets, 3-in. widths, and plenty of 6s and 9s. Bundles that have a preponderance of narrow (2-in. or 3-in.) shingles, which we call paint paddles, are bad news. You'll have a tough time staggering shingle joints, and work will progress in narrow increments.

If a bundle meets the above criteria, chances are that the mill has used good

Figure 7: Shingling the gable

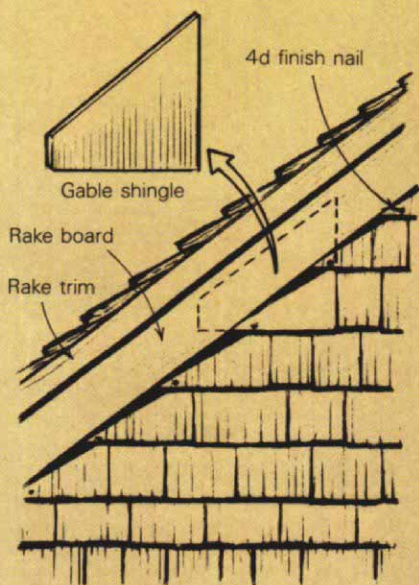


Figure 8: Inside corner

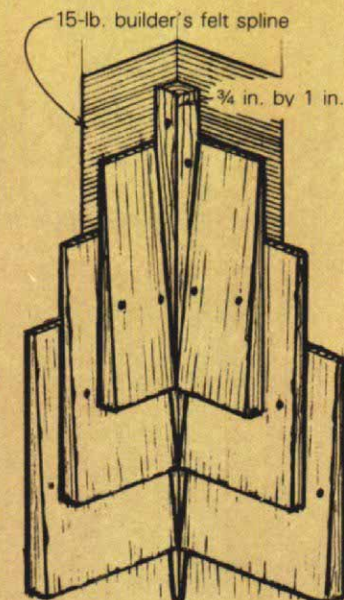


Figure 9: Outside corner with corner boards

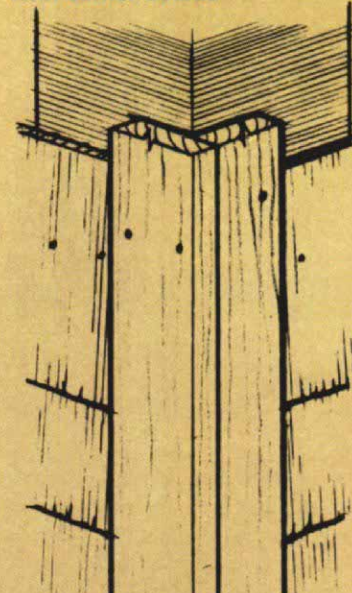
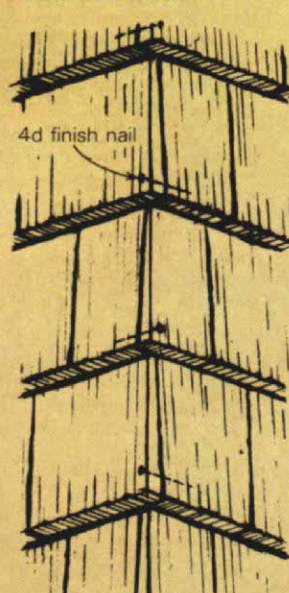


Figure 10: Woven outside corner



wood for its shingles. Still, I prefer to buy a few bundles to see how they lay up and check the quality of the shingles buried in the bundle. A bad bundle can look good from the outside; like prepackaged supermarket food, the best stuff is usually on top. Good shingles lay up tight at the butts with little or no trimming required at the tips. One way to find a reliable brand of shingles is to ask local carpenters. These tips for finding shingles used to be standard practice for good builders, but today it's difficult to work in the old ways. The local yards get what they can, and the selection of material is limited.

To figure how many bundles of shingles to order, you need to know the square footage of your sidewalls and the exposure that you'll be using. Exposure is the amount of the shingle that shows to the weather in each course. The longer the shingle, the greater the exposure can be. White cedars come 16 in. long, and the usual exposure is 5 in. This will give triple coverage at every butt line.

Using a 5-in. exposure, which is standard here on Cape Cod, four bundles of shingles will cover 100 sq. ft. of sidewall, or one square. To figure your siding, multiply the length of the sidewall by its height, subtract the window and door square footage to get the total area to be shingled, and then divide by 100. This will give you the number of squares, which is how shingles are ordered. Add one extra bundle of shingles for each 60 lineal feet for starter courses. For nails, use 3-in. galvanized shingle nails and figure 2 lb. per square. —B. S.

over from the course marks on the corner board. A full shingle then butts against the long edge of the angled cheek shingle, followed by the rest of the full shingles over to the corner board. The first few courses will have to be laid to a level pencil line. As the courses get longer, you can go back to using a guide strip.

Gables are shingled like dormer cheeks, but the angles are reversed. Gable shingles that tuck under the rake board must have their tips angled to match the slope of the roof. Again, using bed sheets where angled shingles are required will speed the work. When cutting angled gable shingles, I always try to leave about 2 in. on the low side of the shingle for strength (figure 7). This 2-in. side gets tucked behind the rake board so that only the horizontal course line shows. Cutting the low side of the shingle to a point is bad practice because the point is bound to crack and break off sooner or later.

Other tricks—Not all shingles are created equal. Most white cedar shingles have a good face and a bad face. It's not overly important which face is out, but if there is a shingle with a defect, I put its good face out. Shingles have a natural curve from tip to butt and I put the hump side out to prevent future ski-tip warping.

I don't use hard, brittle shingles because these are more liable to warp and split. Loose pieces on the face of a shingle will fall off in time, and any shingle with this defect should either be discarded, or installed with the defect side hidden. Some shingles have a few vertical cracks along the grain that are not obvious. They'll show up if you flex the shingle parallel to its grain, and deep cracks will cause the shingle to split when you flex it. This type of shingle tends to shred as it ages.

To trim a quantity of shingles to a specific length quickly (for under windows and frieze boards), I cut them with a skillsaw while they're

still bound together in the bundle. To even up the butts before cutting, I drop the end of the bundle on a flat, hard surface.

Sometimes you have to replace a shingle in an otherwise completely shingled wall, or reattach one that's worked loose and slipped below its course line. To do this, you can use a couple of wood wedges, box nails, and a nail set. Hammering against a block of wood, drive the butt of the loose or replacement shingle up to within ½ in. of aligning with its course, as shown in figure 12. The shingle tip has to be driven into the shingle nails of the course above, and this can take a bit of pounding. Then pry up the butt of the shingle above by driving a narrow wedge up at each edge. This raises the butt of the shingle above, giving enough clearance to drive two 4d box nails into the replacement shingle. You have to drive these nails at a slight angle so that they'll end up under the wedged-out shingle. Set the nails well. The final step is to drive the butt of the loose shingle up to align with the rest of the course. Don't hammer directly against the shingle because you'll damage the butt; put a block of wood between the hammer and the butt as you drive the shingle up.

A shingling table is handy equipment to have when shingling off a ladder, or whenever you don't have a flat place nearby to hold loose shingles. The table I use can be easily made from scrap wood or shingles (figure 13). For the shelf I use a wide shingle that's nailed (shingle nails work fine) to a 12-in. 1x6 support (or another shingle). This forms a T-shaped platform. I nail a 2-in. or 3-in. wide shingle to the back of the platform with its tip pointing up. This vertical shingle can be pushed up under the butts of any shingle course, securing the platform so that you can stack it with loose shingles. □

Bob Syvanen is consulting editor to *Fine Homebuilding* magazine.

Figure 11: Shingling a dormer sidewall
The cheek shingle is always the starter shingle for each course on dormer sidewalls (cheeks).

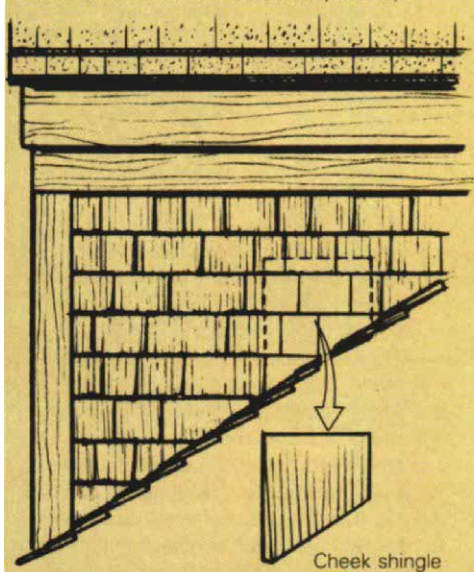
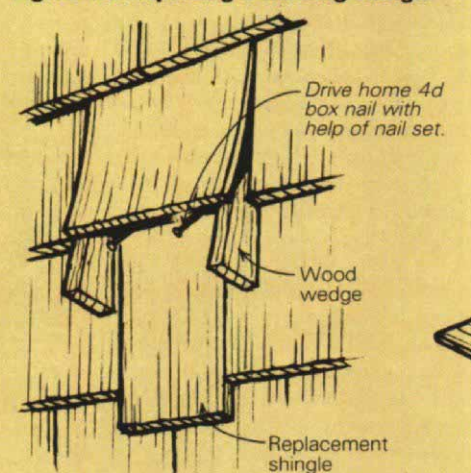


Figure 12: Replacing a missing shingle



Lift up the shingle or shingles in the course above with wood wedges. Push the replacement shingle up as far as it will go, then drive two 4d box nails into the shingle at an angle. Finally, drive the butt of the replacement shingle up flush with the rest of the course.

Figure 13: The shingle table

Use table to hold loose shingles nearby while working.

