

Caulk-Free Corners

A technique for folding skylight flashing

by David Marshall

I usually use lead flashing when it comes to weather-proofing roof openings, but there are times when sheet copper or aluminum makes more sense. There are various ways of bending either copper or aluminum to form a weather-resistant corner. The ones I've seen, though, leave a slight gap at the corners that must be caulked in order to keep out the rain (see *FHB* #11, pp. 64-65 for one such method). I don't like the idea of relying on caulk so I devised a way of folding light-gauge flashing that doesn't leave a gap. I've used the technique to flash skylights, but it can be adapted to flash any rectangular opening in a roof.

Origami in metal—Basically, I bend metal to form four individual corners, and I use them with head and base flashing to completely encircle the skylight curb (drawing below). Here's how to figure the flashing for a typical 2x4 skylight curb. To determine how wide a piece of metal to start with, add together the height of the flashing and its width. The height in this case is 3½ in. I usually figure 6 in. for the base, so I'd start with metal that's 9½ in. wide. You can adjust the width of the flashing to make good use of standard metal widths.

The starting length depends on how far you want the corners to extend along the curb—I usually allow 8 in. Multiply this number by 2 and add twice the base of the flash-

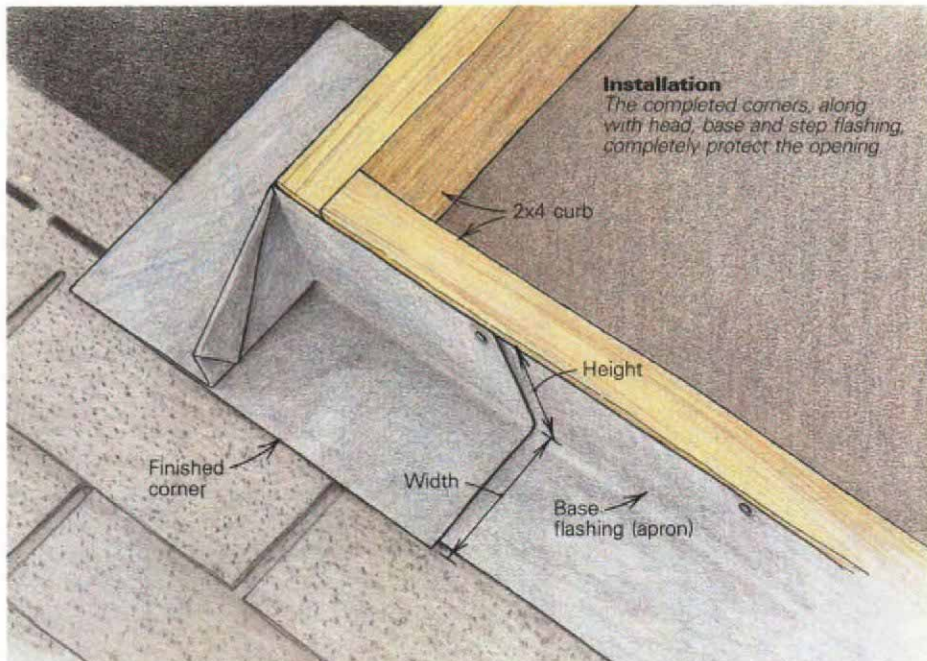
ing (2x8 plus 2x6 equals 28). Each corner in this case will be folded from a 9½-in. by 28-in. rectangle of metal. The rest of the job is simple (drawings at right), but you should try the bends with a piece of paper first.

Installation—An opening in the roof needs two left-handed corners and two right-handed corners. To change the hand, make the diagonal fold in step #2 on the opposite side. With the curb in place, I fit the base flashing (apron) into place and nail it into the curb. After putting the two lower corners into place—with their projecting wings pointed down the roof—I secure them with nails at the top of each corner.

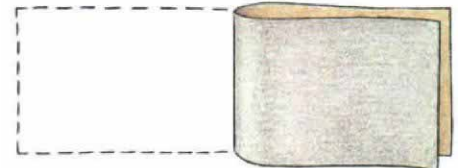
Step flashing should lap over the corners. It fits in the usual way to the top of the opening. At that point, the two upper corner pieces can be placed over the step flashing—projections to the sides—and secured with nails. The top flashing fits over the corner pieces and is folded over. The flashing is now complete.

The projecting wings of the corner pieces may look a little bit odd at first, but they serve to direct water away from the sides of the roof opening. □

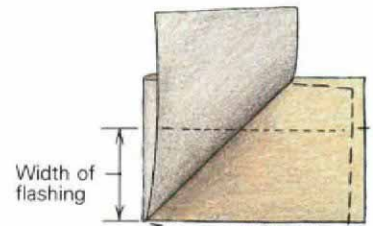
David Marshall is a woodworker and builder who specializes in unusual items and historic house reconstruction.



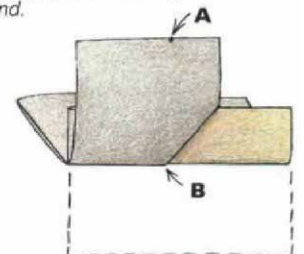
Making a corner piece



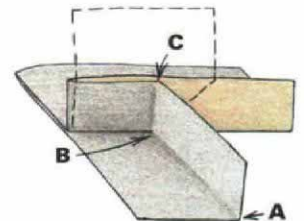
1. Lightly bend the metal in half along its width. Don't flatten the bends at this stage—finger pressure is enough.



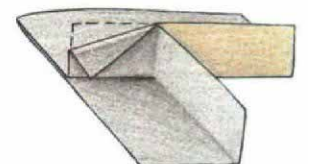
2. Bend one corner up, creating a 45° crease, and mark the width of the flashing. This will be the next bend.



3. Bend the metal under 90° along the line, and mark point B and point A (directly above B).



4. Pull point A toward you so that line A-B is perpendicular to its previous position. Crease two new folds along the lines A-B and C-B. With a block of wood and a hammer, tightly crease all the folds.



5. Fold over a corner to lock all the other folds together.