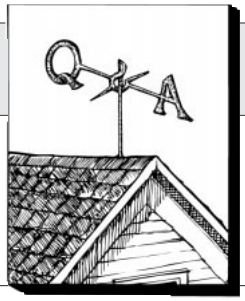


Fanning Clapboards

Q. *How does one go about fanning clapboards to create a sunburst on the gable end? Can this be done with vinyl siding as well as wood?*

A. *Clayton DeKorne responds:* With wood clapboards, first cut a semicircular "sun" from a piece of clear 5/4 stock. For best results, back-prime this piece of trim, and prepaint the top curved edge.

For the rays of the sun, lay out the appropriate taper with a chalk line, and rip each clapboard along the thickened, butt edge. Install this ripped edge along radius lines of the sunburst.

Start by installing the clapboards along the bottom on both sides, and work your way towards the center. Butt the end of each ripped clapboard into the edge of the sun, and seal the joint with caulk.

Where the clapboards meet in the center, install a vertical batten along the top edges of the fanned clapboards, which should now be close to vertical. I find it works best to rip this batten from clear 1-by stock, so both edges run parallel to the clapboards along radius lines of the sunburst.

With vinyl, follow the steps illustrated below. In this case, cut the sun and the last center ray from a piece of flat coil stock, and install them last over the ends of the vinyl panels.

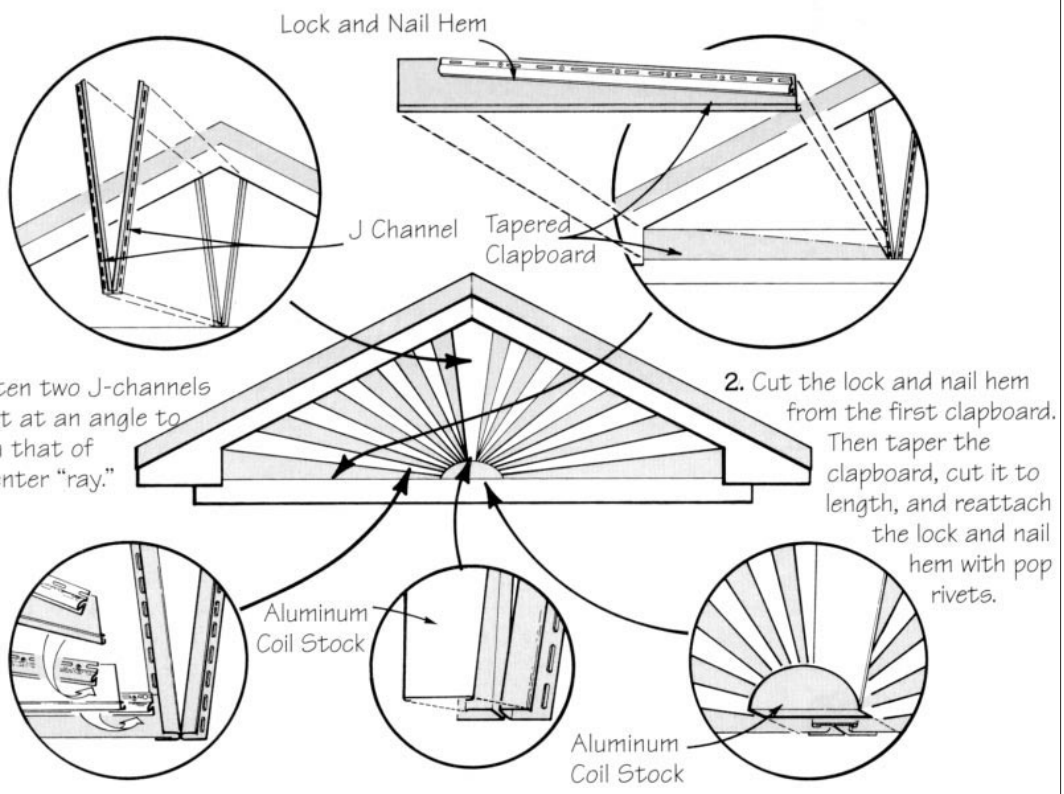
Clayton DeKorne is the senior editor of the Journal of Light Construction.

Encounters With Aluminum Wiring

Q. *I recently did some work in a house where the electrician found aluminum wiring. The electrical inspector told us that pigtailing in standard devices with wire nuts was not acceptable. Instead, we must use aluminum-rated devices and special aluminum-to-copper connectors. I checked with the local supply house, but they said they couldn't get aluminum-rated devices and had never heard of wire nuts rated for aluminum-to-copper connections. Any ideas?*

A. *Rex Cauldwell responds:* Though large-diameter aluminum wiring is common in households, aluminum

Vinyl Sunburst Details



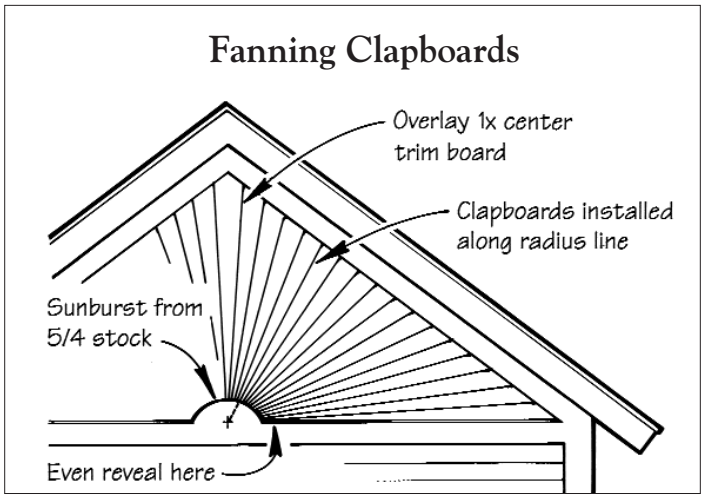
3. Repeat step two for each clapboard. Fasten each tapered panel into J-channel until the gable is complete.

4. Form a sleeve from coil stock and use it to cover the vertical J-channels. If necessary, fasten it with pop rivets.

5. Cut the sun out of coil stock. Bend the bottom inch at a right angle. Rivet the sun in place.

The sunburst is formed by fanning out vinyl panels on either side of vertical strips of J-channel, following the sequence shown.

TIM HEALY



To fan wood clapboards, rip the butt edge of the clapboard to the appropriate taper, then lay this edge along the radius of a half circle. The clapboards should overlap each other at least one inch.

branch circuit wiring is not. At one time, some houses and mobile homes were wired with aluminum. Problems arose with the devices, which were designed for copper. The expansion and contraction of dissimilar materials caused the connections to loosen, and this sometimes created an arc that would start a fire.

To my knowledge, aluminum wiring has since been discontinued, but it's still around in many existing homes. Contractors who encounter it should take certain precautions: Nothing can be connected to aluminum wiring unless the device is labeled CO/ALR. Appropriate switches and receptacles are available from several manufacturers, including Leviton (718/229-4040) and Eagle (718/937-8000).

I do not know of any light fixtures that allow aluminum wiring. (The silver you see on some light fixture wires is tinned copper.) If the light fixture needs to be replaced, a new one can be installed using SWS bi-metal-tongue, split-bolt connectors from Teledyne Penn Union (814/734-1631). Be very careful with the hookup. Do not bend the aluminum or it will break. Once the connection is tightened down, cover it with an antioxidant, then cover both the connector and 1 inch of the wire with electrical tape. This will support the aluminum wire, as well as insulate the splice.

Rex Cauldwell is owner of Little Mountain Electric and Plumbing in Copper Hill, Va.

The Mildew That Wouldn't Die

Q. *We coated a house I designed in 1987 with a high-quality solid-body stain. Within two years, it was badly spotted with mildew. We power-washed the house with bleach, then recoated it using a product called "Mildew Check." Within a year we were called back to wash the house again. To make a long story short, in seven years, we have power-washed the house four times and recoated it three times, each time with a different high-quality solid stain containing a mildewcide. The same thing has occurred on other houses with wood siding I've designed, regardless of whether we used pine, redwood, or cypress. Please help.*

A. *Henri de Marne responds:* All stained or painted wood siding will absorb water. Protective coatings help reduce absorption, but do not prevent it, especially after some weathering time. Plus, moisture is absorbed through shiplap joints, the tongues and grooves of solid-board siding, and the bottom edges of clapboards. Also, as any wood moves with the changes in the climate, thirsty, unpainted surfaces become exposed. Then there is capillary attraction between two meeting surfaces, which can drive moisture well beyond the exposed parts of any uncoated wood.

All these conditions make wood siding vulnerable to moisture. If it stays wet, it won't be long before you have mildew problems. Once mildew sets in deeply, no surface power-washing, even with added chemicals, will reach deep enough to get rid of it entirely.

To avoid mildew growth, it is best to treat all surfaces of the siding with a water-repellent wood preservative. At the very least, back-prime the siding before installation. Consider using preprimed siding to speed the job along.

If you install uncoated wood siding, be sure to prime it within a couple days. Do not leave the siding to weather for weeks and months, as is too often the case. This practice only exposes the wood to contamination from airborne dirt and mildew spores, which must be removed chemically (bleach and TSP). If mildew becomes established in the wood, it will continue to grow through as many layers of paint or stain as you are willing to apply.

Also, keep in mind that mildew spores love linseed oil, so stay away from any coatings that are linseed-oil based.

One final, but very important point: Any wood siding must have a chance to dry out fast once it becomes wet. When the sun shines on a damp wood surface, it is not "sucked out" as one might think. Instead, it is pushed away from the sun, deeper into the wood, only to come back out later. If this moisture is blocked from migrating into the underlying sheathing, the siding will stay wetter for long periods of time, and mildew will grow. For this reason, mildew problems are most severe over foam sheathing, especially foil-faced foam that prevents any absorption of water.

One answer to this problem lies in installing a "rain screen." Apply the siding over furring strips installed over the foam sheathing (vertical strips for horizontal siding and horizontal strips for vertical siding). Be sure to apply furring strips around windows and doors that are sufficiently wide to provide a nailer for the ends of the siding *and* the trim. In retrofit applications, the existing trim should be removed, then reapplied after exterior jamb extensions have been installed. I suggest adding furring strips around the entire perimeter of each wall to seal the spaces between the furring strips from bats and insects. The air space between the sheathing and the siding will provide the proper climate for dissipating heat and moisture. ■

Henri de Marne, a former remodeling contractor and custom builder with almost 40 years experience, is now a home inspector and building consultant based in Waitsfield, Vt.

Got a question about a building or renovation project? Send it to On the House, JLC, RR 2, Box 146, Richmond, VT 05477.