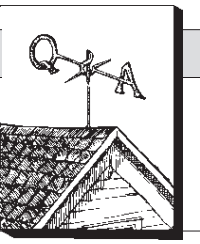

Resurfacing Old Plaster

by Henry Spies

Reviving A Flaky Wall

Q. *How can the surface of old, flaking, and crumbling plaster be preserved? Is a thin coat of joint compound acceptable?*

A. Much depends upon the cause of the problem. If the top (white) coat is delaminating from the brown coat, a latex bonding agent will be needed to make the new surface adhere. A lime finish plaster should be used. If the area to be patched is small, you can use patching plaster, which is almost pure gypsum. Of course, if the flaking and crumbling is caused by water damage, the water source must be removed before any patching will hold. For more complete instructions on plaster repair, I suggest Old House Restoration Pamphlet #1, *Plaster,* available for $1.50 postpaid from the Building Research Council, One East St. Mary's Road, Champaign, IL 61820.

Sealing Metal Roofs

Q. *How should metal roof panels be joined in high-wind areas to prevent water infiltration?*

A. The most effective approach is to seal all joints with butyl sealing tape, which should be available from the supplier of the metal roofing. The tape has a paper backing and is applied between the sheets as they are installed. It is more effective than caulk, and since the butyl does not cure, it tends to creep within joints to absorb the movement of the metal with changes in temperature. Where the problem is severe, two strips of tape may be necessary.

Insulating Crawlspaces

Q. *How can the floor over a 4- to 5-inch crawlspace be insulated?*

A. There is no good way to insulate such a space. If there is no vapor retarder over the soil surface, it should not be insulated. Rather, it should be vented, at least during the summer. If there is a vapor barrier over the soil, the best solution is to insulate the walls of the crawlspace, rather than the floor. When this is an existing structure with no access around the perimeter, it is necessary to insulate the foundation from the outside. The backfill should be dug out to expose at least a foot of the foundation wall below grade, and extruded polystyrene insulation attached to the outside of the foundation, extending from the bottom of the trench to the bottom of the siding. The exposed foam should be protected with a trowelled-on coating, FDN-grade plywood, or some other suitable protective material.

More On Truss Uplift

Q. *Is there any way to stabilize roof trusses to prevent "truss chord uplift?"*

A. Truss chord uplift is caused by the dimensional instability of the lumber used to make the trusses. When the bottom chord is covered in insulation, it tends to expand and contract with seasonal climate changes at a different rate than the top chords. This causes the bottom chord to bow and lift periodically.

Some builders may add a king-post to the truss to eliminate the problem. However, this solution is not supported by our research at the Building Research Council at the University of Illinois. A project sponsored by the Truss Plate Institute, concluded that the most important factor is for the truss fabricator to use bottom chords cut from the mature wood on the outer part of a log. "Juvenile wood," formed while the tree is young and located in the center of the log, expands and contracts with changes in moisture much more in length than the mature wood at the outer portion of the log.

For builders, I recommend using clips such as the Stud Claw (5370 Chestnut Ridge Road, Orchard Park, NY 14127; 716/662-7877), which connect the trusses to interior partitions but allow the trusses to move up and down. Also use drywall clips to hold the edges of the ceiling drywall to the studs rather than nailing it to the truss chords. Together, these allow the truss chord to move without causing finish problems.

Rx for Bleeding Siding

Q. *How can pine resins be sealed to stop bleed-through on exterior siding?*

A. Shellac has always been considered the sealer of choice for pine resins, but it is not considered appropriate for exterior use. However, if the shellac is thinned substantially, about one part shellac to four parts alcohol, it may work. The primary problem with exterior use of shellac is its brittleness, which should be reduced by thinning. ■

Henry Spies is a building consultant formerly with the Building Research Council of the University of Illinois.