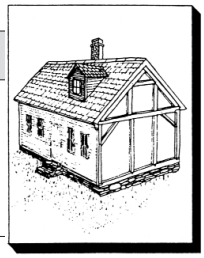
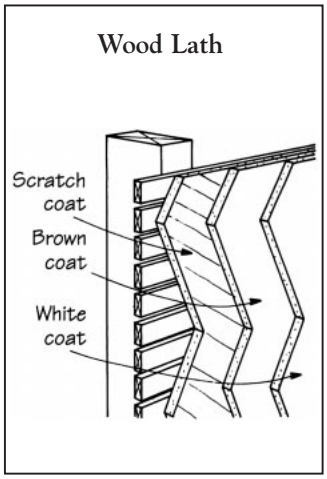


Replacing Old Plaster

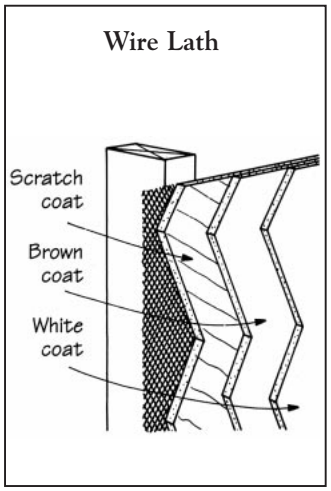
by John Leeke

When plastered walls and ceilings need repairs that cover more than a fourth of the total plastered area, complete replacement may be more practical. When working on older buildings you will find different types of plaster systems were used. Each type requires different preparation for replastering.



Early Wood Lath

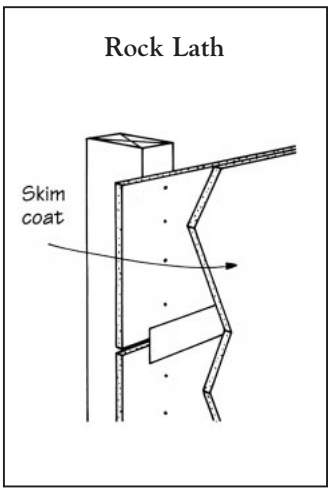
First remove the plaster down to the wood lath. A flat-edged shovel or heavy ice scraper can make this work go quicker than hammers and crow bars. Check the condition of the lath by looking for rusted out nails and decayed or broken lath. If the lath is in good condition you can just leave it in place. Brush off the lath and seal it with oil-base primer or bonding agent. This keeps the dry lath from sucking water out of the plaster. Apply expanded sheet metal lath. This lath has a characteristic diamond pattern and assures a good bond between the old lath and new plaster.



Wire Lath

Removing a wire lath system is a bear; avoid doing it if you can. If the scratch and brown coats are still sound you may be able to leave them in place and apply new plaster over them. This will only work if the trim woodwork is thick enough to accommodate the additional thickness of the new plaster. Scrape off any loose areas of the finish coat, seal the surface, and apply wire lath with drywall screws to the studs.

If the scratch coat is damaged, complete removal of plaster and wire lath will be necessary. One method is to break off most of the plaster and, starting at the top of the wall, rip off sheets of wire lath, rolling it as you work down the wall. Another method is to cut the lath and plaster into panels with an abrasive wheel. Then relath the bare studs.

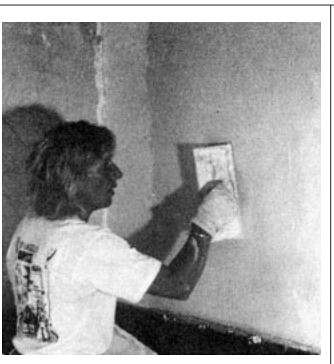


Rock Lath

If the skim coat on rock lath is delaminating or extensively damaged, the paper surface on the rock lath usually can't be recoated. Complete removal of the rock lath is necessary.

Case History

Lynne D'Angelo of D'Angelo Contracting Co., in East Norwich, N.Y., specializes in faux finishes and plastering. In June 1990, Lynne and her crew of six replastered 280 square yards for the United Methodist Church Renovation Project in East Norwich. Following is Lynne's own description of their plaster work.



Lynne D'Angelo trowels on the cream or finish coat.

"We started the job by removing all of the existing plaster down to the sawn wood lath. Even though we were putting in metal lath we kept the wood lath as a backing. Without a wood lath backing, metal lath moves somewhat when troweling on the scratch coat. Where we had to remove the lath on the exterior walls to install insulation, we used ribbed wire lath, which resists movement better than expanded sheet metal lath. The ribs also give a little more meat to nail through.

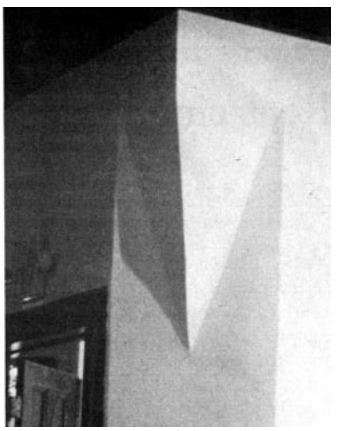
"The specs called for three-coat plaster: a scratch coat, a brown coat of Structo-lite, and a cream coat (white coat) of gauging plaster. The total thickness was to be 3/4 inch. The purpose of the scratch coat is to bond with the lath and form a base for the brown coat. Part of the scratch coat penetrates the lath, forming a key on the back side that holds the coat in place. We added two shovels of sand to every bag of Structo-lite to make it go further and lower our costs. As each section started to set we raked a swirl onto the surface to give a key for the brown coat.

"The brown coat fills out the thickness and levels the surface. We accomplished this critical work with a straightedge and darby — a long, straight trowel. As the plaster was setting we laid the straightedge along the wall at different angles to measure how flat the walls were. Before the plaster set up hard we floated the walls with a rubber-backed float, which gives a grainy finish that forms a key for the final coat.

"The thin cream coat, mixed from lime and gauging plaster, gives a hard, smooth finish to the wall. Since gauging plaster alone sets extremely quickly, it's imperative to use lime, which extends the working time. We prefer auto-clave ready-mix lime, which can be used immediately, rather than slake lime, which must soak overnight. To make a batch of cream coat we formed a large ring of mixed lime on the board (it has the consistency of mayonnaise) and filled it with clean cold water. We added a pinch of powdered plaster retarder to the water to give us some additional working time. Then I added about 40% gauging plaster and mixed it with a trowel and hawk.

"We troweled on the cream coat, working it into the brown coat surface. Fortunately most of the walls were sectioned off with windows and doors so we were able to work an area to completion easily. We framed out each area first and then worked toward the center. The surface was extremely smooth as the plaster set, and polishing makes it even more so. Polishing is the most significant factor in turning a good plaster job into a great plaster job, and it's very easy. Simply splash water onto an area of the setting plaster and smooth the plaster with a clean trowel. This brings a glassy smoothness to the plaster surface, and creates a creamlike plaster residue on the trowel that can be used to fill any porous areas." ■

John Leeke, of Sanford, Maine, restores and maintains historic buildings. He also consults with contractors, architects, and owners working on older buildings. If you have questions on restoration topics, you can contact him c/o JLC, RR#2, Box 146, Richmond, VT 05477.



Preserving the existing wood lath makes replastering details like this angled corner much easier. At right, the completed corner.