



The Old-House Journal

Vol. IX No. 8

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NEXT MONTH....Energy & The Old House

Restoration and Maintenance Techniques For The Antique House

In Praise Of Porches

By John Crosby Freeman and Clem Labine

OLD PORCHES NEVER DIE--they just rot away." That's a common witticism often heard in the company of contractors, builders and old-house people. Sometimes porches rot from the top; sometimes from the bottom; and sometimes both simultaneously. Yet this is not the fault of any porch per se, but rather can be the fault of the original builder and/or the attitudes of a succession of owners towards the porch.

THE PURPOSE of this article is to sketch out some of the historical background on how porches came into prominence... and the major role they played in American social history.

Perhaps this essay will encourage those of you who have surviving wooden porches to take good care of them. And perhaps even a few of you who have lost porches will be inspired to re-create them.

ALAN KEISER, Director of The National Trust's Restoration Workshop, has referred to a wooden porch as "the ultimate luxury." By that, he means that the continued maintenance required to keep a wooden porch in good shape requires a lot of time--or a lot of money. The reluctance of many home-

(continued on p. 182)



Letters



IN OUR JUNE 1981 ISSUE we printed a letter from Edie Catrett of Nephi, Utah. Her house, pictured below, had been covered with a fake-brick type of stucco that she now wants to remove. The OHJ Network came through for Ms. Catrett: What follows is a subscriber's detailed response.

--The Editors

To the Editors:

THE FAKE BRICK STUCCO that Edie Catrett describes is a cousin of Baltimore's infamous Formstone, which I have had removed from several brick rowhouses. In some cases the stucco installers located most of their nails in the mortar joints in order to speed up installation (the mortar was softer than the brick). In other cases the bricks were spalled and had to be cut out and replaced. The amount of nail damage to the brick may be minimal enough to simply fill the nail holes with mortar. At a distance of several feet, it's not too unattractive.



THE BRICK UNDERNEATH may have been painted at some point before the stucco was applied. If so, then no cement will stick to the underlying brick. But if the brick was painted, then the paint will have to be chemically removed. If the mesh was applied over raw brick, then the amount of cement sticking to that brick will depend upon the size of the mesh used, as well as its thickness. Thin, standard chicken wire will leave the most residue. It may be necessary to acid wash the real brick to remove the residue, even if the real brick was never painted. (Repointing of the mortar may also be needed.) A test patch may be in order.

THE USUAL WAY OF REMOVING FORMSTONE is to start from the top, breaking through with hammer and chisel (if there aren't already places where it's working away from the brick). Once a start

is made, the Formstone is just peeled off by forcing a crowbar between the Formstone mesh and the brick. The Formstone adheres to the mesh, and most of the nails come out as the Formstone is removed. You need a scaffold to do the job because the Formstone will break off as its weight increases while being removed. Therefore, you have to be above and away from the falling debris.

THIS IS CLEARLY A MASSIVE UNDERTAKING. The owners should also be aware that the real brick may have been modified over time, and this could have been one reason for applying stucco: to cover over brick patchwork. Another potential problem is damage to the underlying brick to prepare the surface for stucco installation--e.g., chipping off the edges of a window sill to make it flush with the side of the house where that window is being stuccoed over.

IF BY THIS TIME the owners feel deterred from proceeding, then they should realize that, besides the obvious aesthetic considerations, there are other reasons for removal. Some installers use non-galvanized mesh when applying the stucco. Sooner or later this mesh starts to rust, and the weight of the stucco cracks and then pulls patches away from the walls. Again, an inconspicuous test patch will provide a basis for making a decision.

THIS STUFF IS DEFINITELY WORSE than aluminum siding, but it pales in comparison to an "improvement" that I have encountered on other brick structures: hot tar sprayed over the brick, which is then impregnated while still hot with tiny, multi-colored, pastel stone chips. Ms. Catrett, things could be worse!

--William Gasser
Baltimore, MD



The Old-House Journal®

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Bailing out of Wet Basements

By Jonathan T. Schechtman

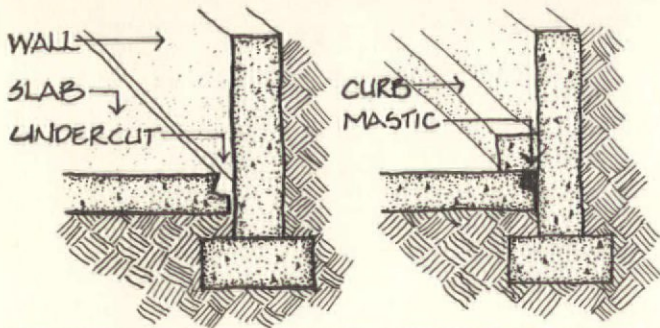
THERE'S NO MIRACLE ANSWER to the problem of a chronically wet basement...so we found out in the June 1981 issue. Presented here are more ways of dealing with water, from inside and out.

WATER THAT DOES ENTER the foundation must be collected, channeled, and conducted out of the building in order to minimize damage. Some old houses were constructed with a basement slab which sloped to a floor drain: Regardless of its source, water entering the cellar flowed by gravity to the drain, and was conducted to a dry well buried under the floor, or to a storm sewer or disposal site beyond the foundation. If water today fails to drain from the floor, the dry well may be full of water, caved in, or silted; the pipe may be frozen somewhere along its length; it might be occluded by roots, debris, a dead rodent, etc. Unclogging it with an electric auger is the remedy.

THERE ARE SEVERAL commercially-installed basement water control systems that deal with water coming through the walls. These systems are available only through waterproofing contractors. Steel or PVC troughs are fastened with an adhesive to the basement floor, next to the wall. Water entering through the foundation is collected in these channels, and conducted to the lowest end of the basement, where it may be collected in a sump pit.



WATER CAN ALSO make its way into a basement through the joint between a concrete floor and the foundation wall. This inflow may result from poor contact between these surfaces caused by faulty construction or shifting soil, or from an overburdened exterior drainage system.



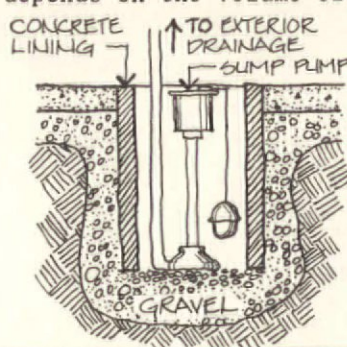
A NARROW GROOVE should be chiseled at the joint of the floor and the wall, 1/2 to 3/4 of an inch wide, extending down through the slab. This is an awkward, knuckle-bruising operation, and to make it even more difficult, the slot should undercut the floor slightly in a modified dovetail to keep the repair in place.

AFTER THE JOINT has been brushed and vacuumed, it can be filled. You can fill the groove with hydraulic cement, which will cure in the presence of water: Pack the cement into the joint, making sure all voids are filled, and build it up in thin layers until it's flush with the surface. Or, you can fill with a bituminous joint filler or similar tar-based, trowel-on waterproofing mastic. These are applied as described above. Then a concrete curb measuring about 4 x 4 inches is poured in place over the joint. (Be certain all surfaces are free of loose particles, and add a bonding agent to the concrete mix to improve adhesion.)

Water Through The Floor

HYDRAULIC PRESSURE from water flowing under foundation walls can heave and crack floor slabs, forcing water into the basement. Providing an escape path for the water reduces both the uplift pressure and the potential for seepage through the floor. The gravel upon which some concrete floors are poured can be utilized as a filter material. Gravel forms a highly permeable path for the groundwater acting against the bottom of the slab.

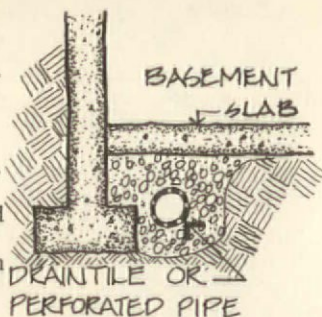
YOU CAN penetrate the slab at its lowest point and install a sump pit. This concrete-lined chamber extends below the floor into the ground and will collect the drainage water. Its size depends on the volume of water apt to flow into the sump. An automatic submersible pump can be placed in the pit to pump the accumulated water out of the foundation cavity for disposal in a storm sewer, etc. A sump pump requires little maintenance, but you must be careful to keep it free from debris which could clog it.



Perimeter Drains Inside

A MORE ELABORATE APPROACH is the installation of a perimeter drain system around the interior of the foundation walls. This is effective for slabs which were not poured on a permeable substrate, or for buildings where exterior foundation drains are non-existent or overburdened. Trenches running along the inside of the walls must be dug, so perimeter drains are easiest to install in earth floors.

THE SYSTEM can consist of drains at the base of two, three, or four walls. Measuring 8 in. wide, and extending 8 in. into the soil below the floor, the trench must slope 1 in. every 20 ft. to the lowest end. Perforated plastic pipe or clay drain tile is placed in the trench and covered sides and top with clean washed gravel, then capped with concrete if part of a floor slab. The pipes can meet in a sump pit so the water can be pumped out, or the pipes can run under the foundation wall for gravity drainage outside. Note that while the perforated pipes can drain about 8 to 10 ft. of area on either side of them, they should be within 3 ft. of the base of the foundation walls, if possible.



Up to this point, incoming foundation water has been treated with answers that remind us of the Dutch boy with his finger in the dike....

FINALLY, a stop-gap method which only controls moisture is the placement of a vapor barrier on damp earth or concrete floors. Just unroll 4-mil plastic sheets on the floor to minimize evaporation of moisture into the cellar air.

Controlling The Rain

UP TO THIS POINT, incoming foundation water has been treated with answers that remind us of the Dutch boy with his finger in the dike, or the sailor bailing out a leaking lifeboat. Now, inspect the outside of the house, armed with an inventory sheet of the water incursion sites inside. The facts you collect will determine the best methods for controlling, diverting, or stopping water before it can enter the masonry walls.

SINCE ALL WATER begins its cycle as precipitation, the first priority is to examine the condition of the roof drainage: gutters, downspouts, and leaders to the eventual disposal area. Gutters are meant to gather rainwater or snowmelt as it leaves the roof; downspouts conduct it along the side of the building away from wall surfaces; additional leaders or splashblocks divert it away from the foundation.

WITHOUT FUNCTIONING GUTTERS, roof runoff may flow down along the side of the building, soaking the walls; or plummet to the ground, splashing back and saturating the lower walls and foundation. If the earth around the building becomes saturated, hydrostatic pressure forces entry through the masonry walls. These conditions can cause paint failure, wood decay, mortar disintegration, rising damp, masonry staining, subflorescence, and spalling.

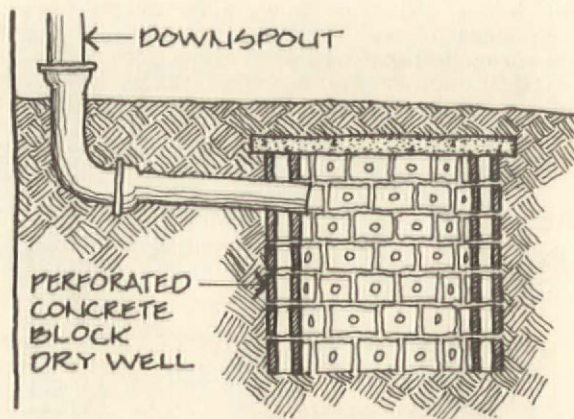
THE IMPORTANCE of installing--and especially maintaining--an adequate roof drainage system cannot be over-emphasized. It is the first line of defense against wet basements. If no gutters are in place, consider installing them. Mount the gutters so that they drop 1 inch every 16 feet to allow a good flow to the downspouts. Install a leaf strainer at the ends to prevent clogging by leaves and other debris.

IF THERE ARE gutters already in place, inspect their fastenings and slope. Go out and look at them during a rainstorm to confirm that the runoff is actually entering the trough, not undershooting and flowing down the wall. If the latter is the case, the edge of the roof can be extended with flashing or tar-backed aluminum tape to properly conduct the water.

MAINTAIN THE SYSTEM! Twice a year, clean the gutters of organic material, gravel from asphalt roofing, etc., and make sure the downspouts are unobstructed and strongly fastened to each other and the building. Especially, be certain that the leaders direct the collected water away from the building, preferably to a storm sewer or dry well, in such a manner that the flow will not return to the vicinity of the foundation.

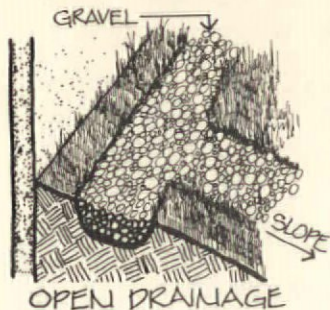
Diverting Surface Runoff

SURFACE RUNOFF is a major source of water that finds its way into a foundation. The ease with which precipitation leaves the vicinity of your building is dependent upon soil permeability, depth of the groundwater table, and the topography of your lot. Many interior water problems can be fixed by exterior grade changes and surface drainage. After a rain storm, look around the building for puddles of standing water, and determine whether they correlate with wet spots on your inventory sheet. (In some soils, it may take up to 12 hours for the water to percolate into the house.)



ANY CONCAVITIES in the terrain close to the house should be filled with soil and lightly tamped, while the height of the soil abutting the foundation may have to be increased so that it is sloped away from the walls to deflect surface runoff. In severe cases, the topography of the entire building lot may have to be altered so that it is level and grades away from the house.

IF AN AREA is prone to persistent moisture, an open drainage system can be installed near the house to conduct water from the chronically damp areas. These ditches can measure 18 to 24 in. wide by 12 to 15 in. deep, sloping 1 in. in 16 ft. They are filled to just below the level of the grass with clean gravel, and allowed to remain open. These drains should conduct the water away from the building to a dry well, collection pond, or storm sewer.



The walls are the last remaining defense against water entering the house's subterranean cavity. Waterproofing the walls from the outside, therefore, will keep your basement dry.

Dirt & Vegetation

SINCE THE INVESTIGATION has moved to the soil around the foundation, let's discuss the role that landscape gardening can have in the water problems we're trying to solve. Historical research into landscape architecture reveals that, traditionally, vegetation was kept well away from the building. Plantings at the foundation will stop sunlight from striking the masonry and adjacent soil, keeping them damp.

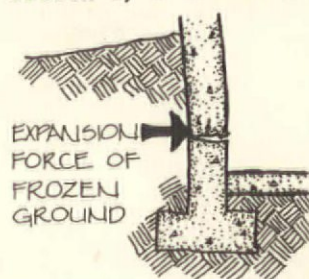
VEGETATION CAN ALSO BLOCK the cellar vents and windows, obstructing the circulation of air. Root systems and mulch near the foundation improve the soil's retention of water--another negative factor. In addition, roots from trees and larger shrubs can invade damp masonry walls in their search for water, often cracking or shifting the foundation. Finally, when conscientious gardeners fertilize their plants liberally, the dissolved nutrients are absorbed by the masonry and crystallize, causing efflorescence, subflorescence, and spalling.

OVER THE LONG HISTORY of an older house, increases in the historic grade, or original soil level, may accumulate against the masonry walls, threatening the integrity of the foundation. Accretions of refuse or compost from continuous habitation, silt from flooding, fill from excavation, or topsoil from landscaping improvements may have increased the ground level by several feet.

WHAT'S BENTONITE ?

SOME WATERPROOFING CONTRACTORS offer a method of sealing foundation cracks from the exterior using "bentonite." This is a porous clay, formed from a weathered volcanic ash, that expands when wet. Holes spaced one foot apart are "drilled" in the soil against the foundation wall, and filled with dry sodium bentonite. The theory is that as water flows into the cracks in the walls, it will carry bentonite with it, which will plug the holes in the walls. According to the National Home Builders' Association and others, this method cannot be endorsed; it is considered ineffectual in most cases, and therefore a waste of money.

THESE VOLUMES OF EARTH may be compacted by settling over time, saturated by precipitation, or frozen by a winter's cold, actions which create



internal expansive pressures. Such forces are transmitted as lateral thrusts to the foundation, which was constructed to accept only downward, compressive loads. The result can be cracked or inwardly bowed walls that admit water through the breaches.

TO REMEDY the condition, you could merely remove the accumulated soil until the historic grade is reached. Careful detective work is needed to determine where the original ground level actually was. Old photographs, the location of steps, thresholds, foundation vents, fence posts, and discoloration on building walls can aid in the investigation. Removal of the cause, however, will not remedy a problem that already exists, so the fill around the foundation may have to be dug up if the walls need to be repaired.

Soil Stability

THE SOIL under a building has some bearing on internal water problems. For instance, highly organic soil acts like a sponge, holding vast quantities of water and keeping masonry walls wet. As the water drains or evaporates from the soil, or the organic matter decomposes, the soil shrinks and the building settles.

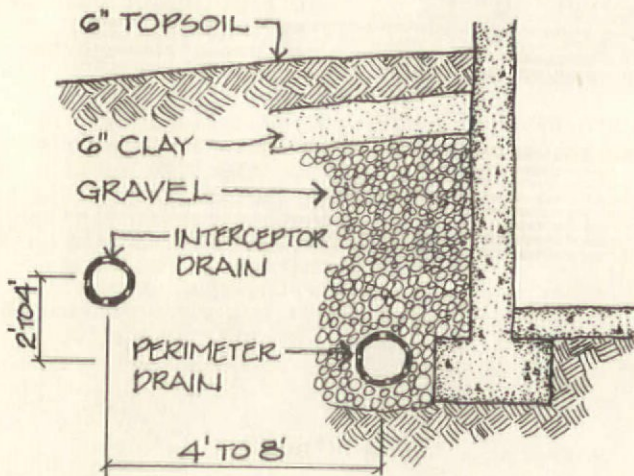
ON THE OTHER HAND, earth with a high clay content has a low permeability and is unstable, expanding when wet, shrinking when dry, sometimes with a differential of 50% of its volume between extremes. This can alternately create great pressure against walls and shift stone footings, then create air pockets in the earth which will fill with water during the next wet spell.

THE TOP FIVE INCHES OF EARTH on a one-third acre lot weigh over 250 tons. To alter the composition of a clay soil, for instance, would require adding tons of sand at great expense. A simpler way of dealing with this is to install subterranean drainage.

Footing Drains Outside

GROUND WATER in soil around foundations can build up sufficient hydrostatic pressure to force seepage entry through masonry or concrete walls. When a foundation is not too far below the water table, this water can be controlled and carried off by the use of footing drains placed around the outside perimeter of the building. A trench alongside the walls is excavated to the depth of the footing. It need only be as wide as a shovel or backhoe bucket.

THEN, PERFORATED PVC PIPE or open-jointed clay drain tiles are placed in the bottom. The excavation is backfilled to within a foot of the surface with clean washed gravel. (This serves as a filter, so any organic material left in the crushed stone will clog the pipes.) A 6-inch layer of clay soil follows, capped with 6 inches of top soil graded away from the walls. The low permeability of clay soil discourages surface runoff (i.e., rain) from seeking drainage intended for groundwater only. The pipes should slope about 1 inch in 20 feet and conduct the water by gravity to a suitable collection site located downslope from the building, such as a holding pond, dry well, or storm sewer.



IN INSTANCES where the water table is very high or the present foundation drain is overburdened, the system can be augmented by an interceptor drain. It is constructed about four to eight feet beyond or outside of the other drain in the manner just described. Its depth, however, is at an elevation two to four feet above the footing, in order to lower the water table in stages.

Excavation

THE WALLS are the last remaining defense against water entering the house's subterranean cavity. Waterproofing the walls from the outside, therefore, will keep your basement dry. There are several methods for exterior waterproofing; the end result of each will be restored, dampproofed, waterproofed walls. All these methods require excavation of the building--not a do-it-yourself job--so waterproofing should be reserved until after pointing, drainage, grading, and so on have

SIFTING THE SANDS OF TIME

AN OLD HOUSE is a valuable piece of our material culture...a part of our national historic heritage. The land around the building is part of the history. I advise people to sift the soil for historic artifacts during any excavation or earth moving. This is mandatory to keep to the guidelines set for houses listed in the National Register. But even if your building is not listed, curiosity might induce you to try an archaeological dig in your own backyard.

FIRST, construct a wooden frame three feet by four feet, on four-foot legs, covering the top with quarter-inch wire mesh. Toss shovel loads of soil on it, and you may be amazed to find artifacts from previous times, such as horseshoes, bottles, pottery, nails, etc. It's quite a thrill to find such real evidence of past inhabitants. If you are interested but don't care to do it yourself, the State Historic Preservation Office or local university may be able to give you names of archaeology clubs or conscientious graduate students in need of a research project.

all been considered. While the building is being excavated anyway, perimeter footing drains should be installed at the same time.

FIRST, ALL THE DIRT abutting the foundation must be removed. Inspect the outside of the walls for cracks or weaknesses which might correlate with the location of water entering the basement. If a wall is severely warped or has settled so drastically that it can no longer support a load, it must be rebuilt. Seek a contractor's advice in this case. The probability, however, is that you'll find only cracks, voids, and failed mortar; they can be repaired by patching and tuckpointing. (See the specifications in "Wet Basements," p. 143, June 1981 OHJ.)

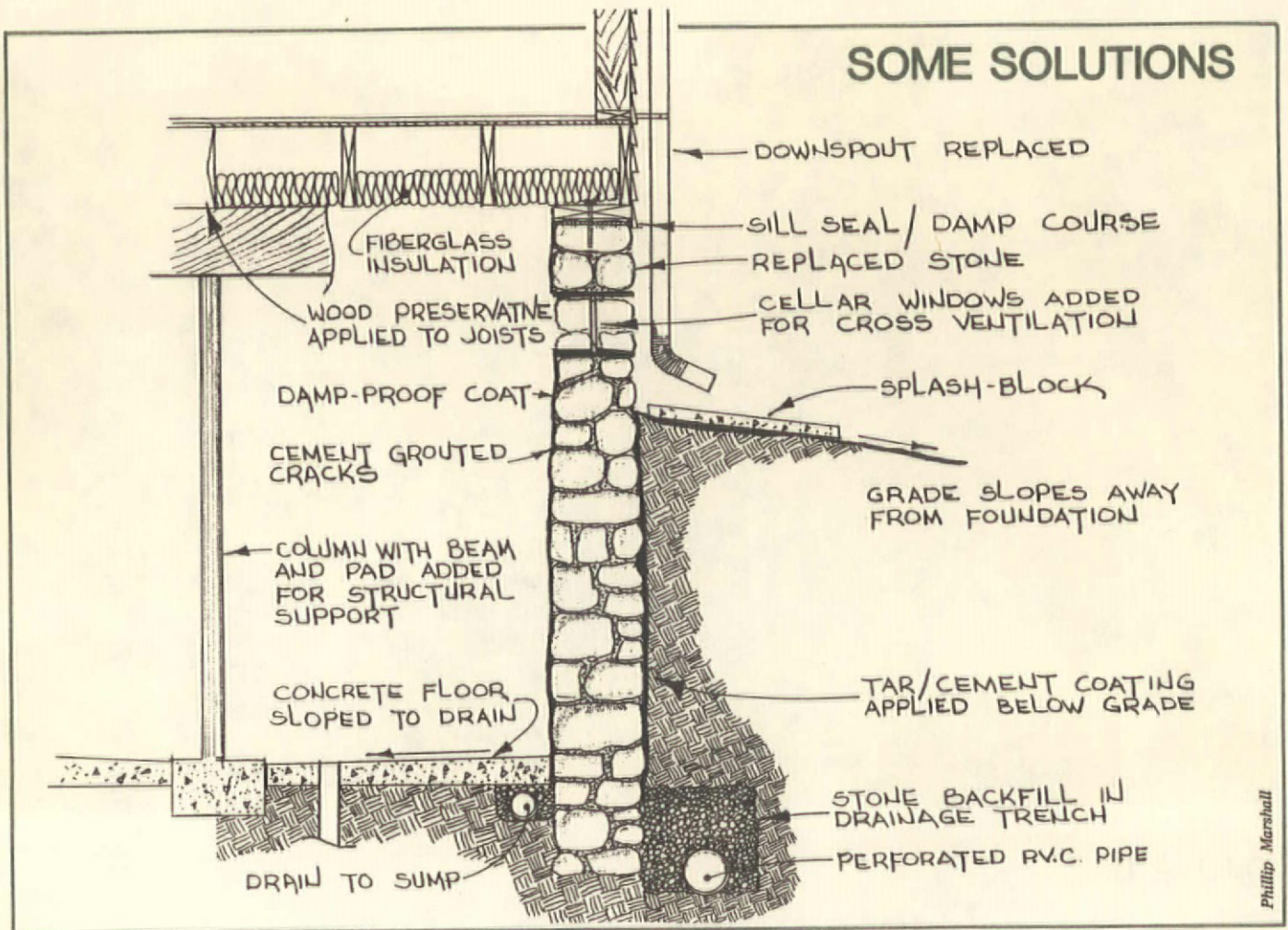
Parging

IN CONDITIONS OF SEVERE WETNESS, parging the exterior of the foundation walls after re-pointing will help ensure a dry crawlspace or basement. To parge, coat the masonry wall with two 3/8-inch layers of mortar, using the following formulations:

| Proportions By Volume | | | |
|--------------------------------------|---|--|---|
| LIME | 1 | | . |
| CEMENT | 1 | | 1 |
| SAND | 3 | | 3 |
| Gives a more flexible, plastic coat. | | Gives a strong, hard coat. Add a bonding agent for greater adhesion. | |

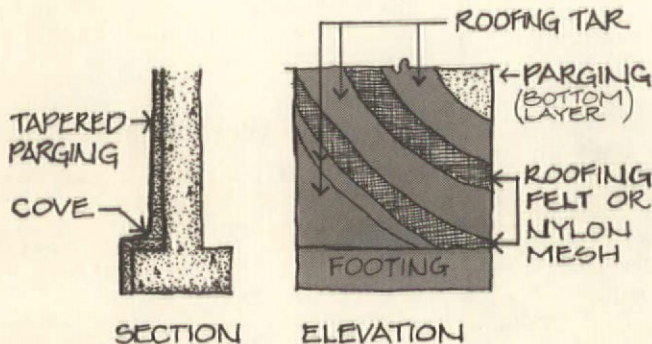
BRUSH THE WALL free of all loose particles of dirt, and dampen it. Trowel the first coat on the masonry face, filling any inequities and voids. Before it hardens, scratch the surface with a stiff brush; the second coat will bond

SOME SOLUTIONS



Phillip Marshall

better to this rough texture. After 24 hours, dampen the first application and trowel on the second coat. After hardening, keep the parging damp for at least 48 hours to allow proper curing. Be sure to extend both coats of mortar downwards over the footing, forming a cove at its joint with the wall. The parging must extend several inches above grade so that water cannot seep in behind it and loosen its grip on the wall.



APPLY BOTH COATS so that they are thicker at the bottom than at the top. A slight difference of 1/4 to 1/2 inch will create a mild taper which will allow the earth to move upwards (as it tends to do when frozen) without thrusting against the wall.

The Final Answer

THE FINAL ANSWER to moisture problems is a bituminous membrane, impenetrable by water. It can be applied to any smooth masonry wall, or to the final parge coat after curing and drying. If there will be no shifting, settling, or cracking, then a brush-on (good) or trowel-on (better) foundation waterproofing mastic can be used.

THE SUPERIOR APPROACH--and one which further stabilizes and protects the parging--is to coat the foundation and footing (over the parging, if any) with a layer of hot roofing tar, then cover it with a roofing felt or nylon mesh. Coat the fabric with more tar, another layer of felt or mesh, and two final coats of tar. Then backfill as described in the section about exterior footing drains. Water won't get through this barrier.

THE AUTHOR

JONATHAN SCHECHTMAN is an architectural conservator, preservation planner, and grant writer for historic structures. He attended High Wycombe College of Technology and Art in Buckinghamshire, England, and has a graduate degree in Historic Preservation from the University of Vermont. He is currently Preservation Program Developer with the Hartford Architectural Conservancy, 130 Washington St., Hartford, CT 06106.



Old-House Living...

Restoring Swab House

By Beth Yenchko Facinelli

IN SEPTEMBER 1901 an insurance company in Elizabethville, Pennsylvania, placed \$1500 insurance on "the mansion in course of construction for Jonas Swab," the Civil War veteran who owned a prospering wagon-manufacturing company. By March 1903 paper hangers from Harrisburg were putting their finishing touches on the 3-storey brick mansion. (Their signatures appear frequently on the walls.) For more than 50 years, the Swab family lived in the house. They sold the property in 1967; by 1976 it was once again for sale, and by then much of its glory had faded.

IN JUNE 1976 my husband Jim and I decided that we needed a break from city life in Harrisburg. Our restoration contracting business was in its infancy, and Jim told the realtor that we were looking for a large and grand old home to restore at a cost we could afford. To our surprise he said that there was

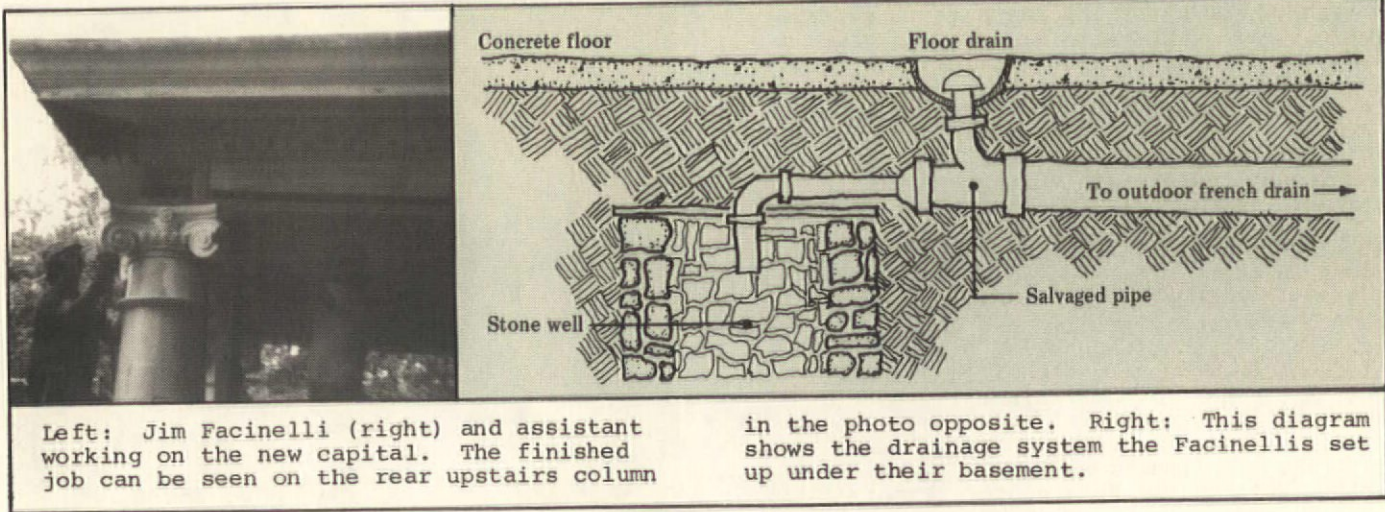
such a place only 30 miles north of Harrisburg. That afternoon he drove us to Swab House in Elizabethville. When we arrived, we peered through the dirty windows and saw the water-stained woodwork and falling plaster. But the fine appointments and leaded glass suggested the true beauty of the house, and so we decided that very day to make Swab House our home.



The music room at Swab House.

The Work Begins

EXTENSIVE EXTERIOR AND MECHANICAL WORK was required before we could begin to work on the fine points inside the house. New tin valleys had to be installed in the slate roof, and new verandah roofs and hidden tin gutters were brought in to replace their leaky predecessors. The rotten soffits and porch joists were also replaced, as was a disintegrated capital that measured 30 inches in diameter. Happily, its mate--composed of



Left: Jim Facinelli (right) and assistant working on the new capital. The finished job can be seen on the rear upstairs column

in the photo opposite. Right: This diagram shows the drainage system the Facinellis set up under their basement.

pink plaster--was still intact. We were able to locate a close match in size and style from the Somerset Door & Column Co. (P.O. Box 328-J, Somerset, PA 15501): a wood fiber composition surrounding a weight-bearing collar, which we had to flash and paint. Six wood columns on various porches were also replaced with new wood ones from Somerset.

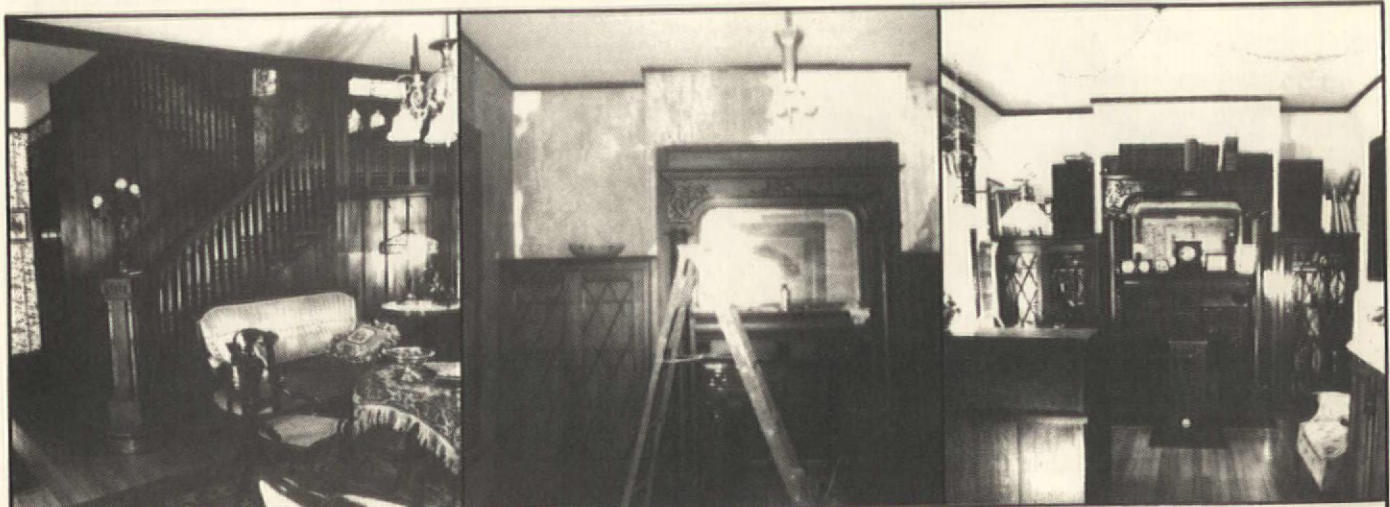
The Underground Well

A GREAT DEAL OF WORK HAD TO BE DONE inside the house, including tearing out and replacing the galvanized and lead plumbing. Our basement was always quite wet, and so we sought to remedy the situation with floor drains. As we set about this, we discovered a 25-ft. deep well or cistern under the floor. With each rainstorm, the water level had risen, seeped through the cracks in the floor, and flooded the basement. As a result, the main support columns in the house rotted and fell over, causing the house to sink 4 inches in the center. We solved the water problem with french drains and then worked on jacking up the house. We managed to stabilize the sagging floors, although we did not get the house back to level. Doing so would have cracked the main beams and joists as well as the walls.

IT WAS FORTUNATE THAT, of the 8 bedrooms, 4 were located on the third floor and had been converted to an in-house apartment in the 1930s. Having once lived in a torn-up house, we were not anxious to do it again. We completely redid the third floor apartment in a hurry--sanding the floors, painting, and wall-papering--and moved in. With the dirt below us, we were able to live in relative comfort and take our time restoring the lower floors.

MUCH OF THE REMAINING WORK was of the tedious sort: cleaning the oak and cypress trim with denatured alcohol and then re-shellacking, stripping paint, patching and plastering walls, painting and wallpapering, and sanding floors. We began working 4½ years ago, and we still have 1½ of the 17 rooms to work on, part of a bathroom and one bedroom.

MANY FINE DETAILS adorn Swab House, yet it was not built strictly in one style. The exterior is Colonial Revival, as is the music room with its white trim and fluted columns. (Yes, Jonas Swab did attend the Columbian Exposition of 1893!) Aside from the music room, all the woodwork in the house was meant to be left unpainted. The entry hall or drawing room has



Left: The drawing room with its oak staircase. Center: The library when it was being

restored. Right: The library as it looks today.

a magnificent brick and terra cotta fireplace reminiscent of Egyptian styling, as well as a wide oak staircase. The library is typically Victorian, adorned by a carved oak mantel and bevelled glass mirror with flanking bookshelves. Dark oak and Tudor influence dominate the dining room, where a fake Tudor fireplace and beamed ceiling are juxtaposed with a triptych of Victorian art glass.

WE ALTERED THE ORIGINAL APPEARANCE of only two rooms on the first floor, the kitchen and the pantry. We tore up the old linoleum, sanded the floors, and installed new custom oak cabinets and wainscoting, along with a butcher-block countertop. We embellished the original coal-stove pad with ceramic tile, and got an antique, gleaming nickel and blue enamel cookstove to heat the kitchen. An embossed steel ceiling, a ceiling fan, and a Tiffany-style shade complete the turn-of-the-century look.

ENERGY COSTS IN A 17-ROOM HOUSE are, of course, staggering. Every year several projects are completed in our effort to make Swab House energy-efficient. Our one-pipe steam system (with beautiful cast iron radiators) was carefully overhauled to get the utmost efficiency



from an old converted oil furnace. The ever-cracking ceilings were beyond hope, so we installed rigid insulation over the old plaster and drywalled over them. Wooden storm windows and combination storm/screen doors were made and installed, and doors were weatherstripped as well. The windows were fitted with cloth window shades--besides looking appropriate to the house, they keep the heat from escaping through the glass on cold winter nights. We still have more work to do, but with these measures--plus careful heat regulation, sweaters, and a few coal stoves--we've managed to cut oil consumption by 1200 gallons.



The Facinellis' kitchen. Above right: The same kitchen before they began working on Swab House.

Getting The Job Done

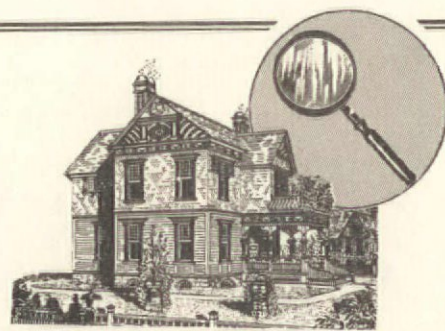
THE WORK WHICH WE DID ON SWAB HOUSE would have cost more than \$100,000 had we contracted out everything. Jim and I, along with our family and friends, managed to do 70% of the work; our crew and subcontractors did the rest. I want to stress that, with the proper tools and guidance, almost anyone can learn to do the seemingly difficult jobs that an old house demands. In our work, Jim and I try to teach our customers skills that they can manage themselves--an approach that we think is very much in keeping with THE OLD-HOUSE JOURNAL's purpose of offering educated guidance to homeowners with limited financial resources but talented hands.



The Tudor-influenced dining room.

The Crack Detective

By Wm. Ward Bucher, Architect



WHEN I HEAR someone say "they don't build 'em like they used to," I always respond "thank goodness!" Poor design (and workmanship) in original construction is a frequent cause of cracks in old houses. I would guess that ignorance and greed played about an equal part in structural failures. They both led the builder to make things which were too small and weak to support the loads placed on them.

IN THE OLD COUNTRY, things were tested by building them and waiting to see if they fell down. After a few thousand years, each region had a good collection of successful ideas which always worked together to make a good house. Unfortunately for our new country, few of these collections were transported intact. Bits of knowledge from all over Europe were often mixed together in a single building. In addition, stylistic fashion changed so rapidly that whole cities were built of completely untested structural types.

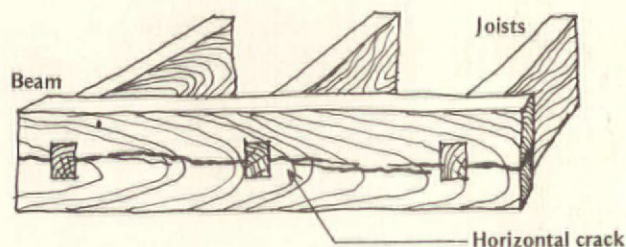
UNTIL RECENTLY, there was no way to calculate the amount of weight a beam or joist could hold. Typically, the owners of the house were more concerned about the bounce of the floor than whether it would collapse. In most cases this was a safe way to judge a floor: If it didn't bounce too much when jumped on, it probably wouldn't fall down. Usually floor beams in old houses are bigger than they need to be, rather than too small. As mentioned in Part I, the cause of ceiling cracks may be deflection...but it's unlikely that it's a broken floor joist.

HOWEVER, CRACKS OFTEN do result from failure of the connections between beams. Since metal was relatively expensive, these connections were made with wood. The mortise and tenon joint was common...a square peg at the end of one beam, inserted into a square hole in the supporting beam. The tremendous amount of weight concentrated at the end of the beam can split it just below the bottom of the peg. (See the drawing on the next page.)

THIS TYPE OF FAILURE is often found at the edge of stair openings where the weight of several joists is gathered onto one beam. Look for very localized crack patterns as evidence of a connection failure. This type of failure can be dangerous, if the connection suddenly collapses--so don't just wait for the outcome. If you can't actually see the beam end, cut a hole in the ceiling below, and stick your head in for a look.

A SERIES OF SQUARE HOLES in a supporting beam can cause another structural problem. Although it's true that the center of the beam is the best place to connect the joists, sometimes so much wood is removed that the beam cracks horizontally along its center line. (This could be called central-axis beam cracking.) This separation means that there are really two little beams instead of one large one, and more importantly, only the bottom half is doing any work to hold up the house.

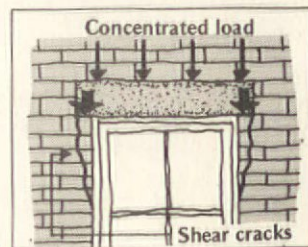
Central-Axis Beam Cracking



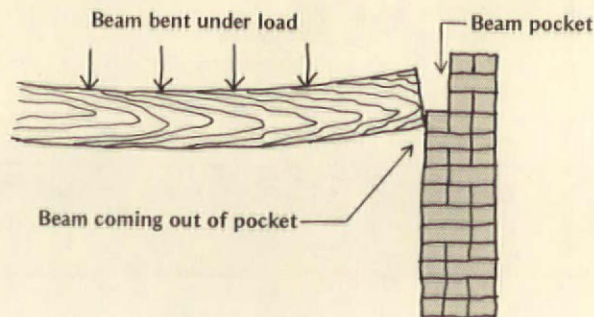
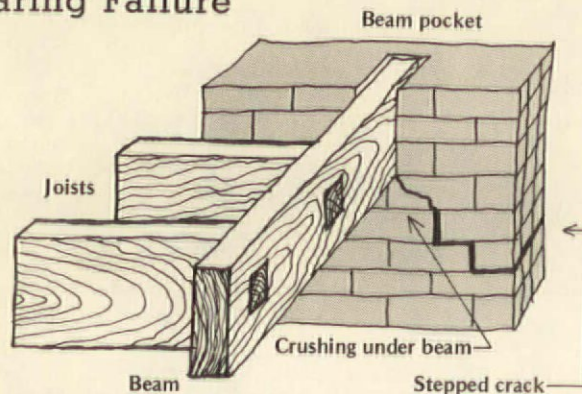
IN LATER HOUSES, nails were sometimes substituted for wooden connections. A mystical early faith in the power of the nail often overrode common sense to produce dangerously weak joints. A few toenailed spikes in the end of a joist are not enough to keep it from dropping in the long run. Nails are fine for holding lumber in position where the forces are pushing the wood together, such as in a stud wall. However, when the loads are trying to pull the pieces of lumber apart, nails are not a very reliable connector.

Supporting Evidence

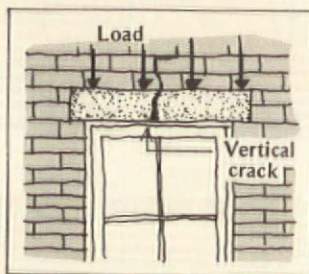
TOO MUCH WEIGHT on the end of a beam for the area supporting it can cause the area below to crush or fracture. A common fracture of this type can be seen below a stone window lintel with a small amount of bearing on the wall below. A shear crack will run down from the very end of the lintel in to the edge of the window. Similarly, a beam carrying several joists may crush the brick below its bearing pocket in the wall. In this situation, the beam itself can be crushed along with the brickwork.



Bearing Failure



BEAMS CAN ALSO FAIL when they are too small to carry the loads on them without bending too much. As mentioned earlier, it is not likely that floor joists will actually break unless there is decay present. However, beams that carry many joists and bearing walls can crack quite dramatically. The crack will nearly always be exactly in the middle of the beam, where the bending stress is greatest. Stone lintels also act as beams and crack in the center. In either case, if the ends stay in place, the bending crack will be wide at the bottom and closed at the top. Since bending failure can have fatal results, excessive floor and beam deflection should be investigated by a professional.



BENDING CAN ALSO CAUSE floor failure from what is really a connection problem. As a joist or beam bends, the number of inches supported on the wall becomes smaller and smaller. Eventually the ends can slip off the wall or out of their pockets and come tumbling down. Start worrying if less than two inches of the joists are resting on the wall.

Bending Failure

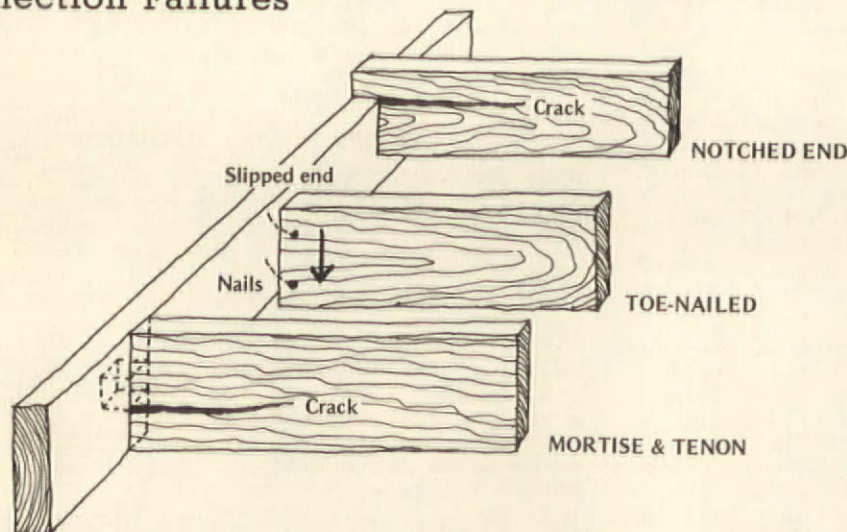
UNDERSIZED COLUMNS can also cause structural problems. If there is too much weight for the size of the column, it will bend to one side or be crushed at one end. The bowing of wood columns is usually easy to see. Brick columns will bow by cracking along the horizontal joints. Look for tapered cracks, all of which are wider on one face of the column. Any significant bowing of a column should be investigated by a professional.

SHORT COLUMNS tend to fail by crushing of the material, rather than bending. In wood columns, look for crushed fibers; in cast iron and stone columns, look for shear cracks near the ends of the column.



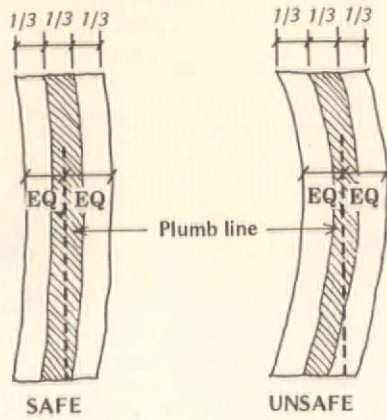
WALLS CAN ALSO BEND. Because of the way houses are constructed, they will almost always bow outward from the center of the building. This bowing will cause horizontal cracks on the interior where the plaster has been slightly crushed by the compression on the inside of the bend. There will also be horizontal cracks on the exterior where the bowing has opened the joints between clapboards or brick courses. And there will be interior cracks where the outside wall has pulled away from abutting floors and walls.

Connection Failures



Connections between structural wood members can fail, causing cracks to appear. A very localized cracking pattern is often evidence of a connection failure. Mortise and tenon joints can allow splitting of the beam just below the tenon. Toe-nailed spikes cannot resist the shear (vertical force) at the connection. And a deeply notched beam that develops a shear crack along the grain of the wood may have been undersized for the load, or notched too deeply.

Bowed Wall



BOWED WOOD WALLS are probably caused by lack of a connection at each floor. This usually occurs only with balloon framing--where the studs in the outside walls are more than one storey in length.

MASONRY WALL BOWING can be caused by both ground settlement and a wall that is too thin. If the wall is not attached to the floor framing, such as in the case of the front wall of a townhouse, an easy check can be made of the likelihood of the wall collapsing. After measuring the thickness of the wall and the amount of bowing, draw a section of the wall to scale. Then draw a line from the center at mid-point of the bow, straight down to the bottom of the wall. This line should always fall within the middle third of the wall. (See diagram above.)

THE SAME RULE applies to walls which have tilted. When part or all of the building tilts together, such as a leaning chimney, the center is in the middle of the entire structure. This means that with the same amount of tilt, an unattached leaning wall is more likely to fall down than a leaning chimney or tower. The Tower of Pisa is a classic example of a leaning structure which follows the one-third rule.

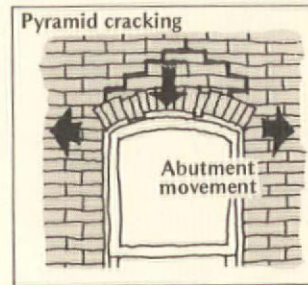
IN THE CASE of a leaning or bowing wall which is twelve inches thick, the amount of lean or bow must be less than two inches no matter how tall the wall is. Remember that when the lean reaches this point, the structure is already very dangerous. When the floor joists are resting on the bowing or leaning wall, the amount of displacement which is safe is much less. Also, eroded mortar reduces the effective thickness of the wall, thereby reducing the permissible amount of movement.

Arch Criminals



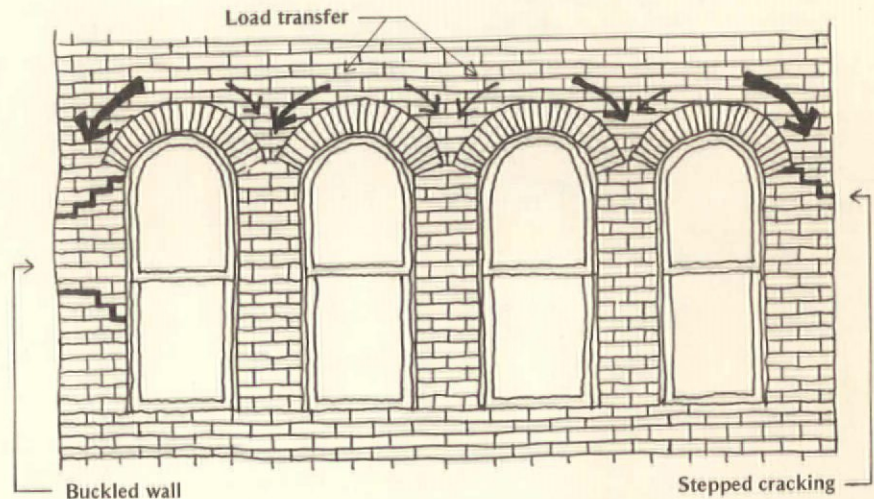
MASONRY WALLS are most likely to fail around the top of the window and door openings. This may be because of beam failure as mentioned earlier, or it may be a case of arch failure. Arches as first used by the Romans rarely failed because they were semi-circular. As square windows and doors became fashionable, though, there were more and more arch problems. The flatter an arch is, the more likely that it will crack over time. Generally, arches which have less than one inch of rise per foot of width will crack unless some additional restraint is added.

THE SIDEWAYS FORCE of an arch pushes the ends of the arch apart. Any small movement of the ends or abutments of the arch causes the center to drop, resulting in the pyramidal cracking pattern forming above. The way in which the abutment and the arch move will help you identify the correct crack suspect.



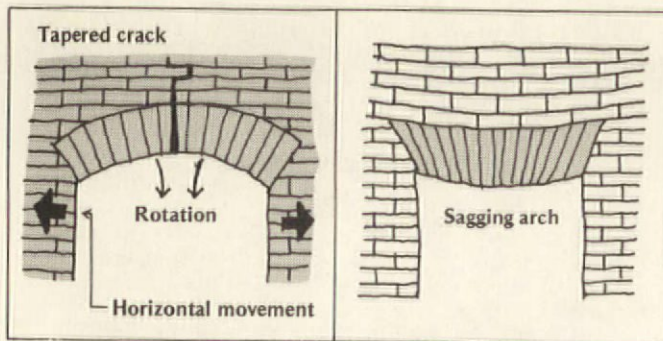
IF THE ABUTMENTS move horizontally, the sides of the arch will tilt toward the center, causing a vertical crack which is wider at the bottom. This may also result in a different movement pattern, in which the sides keep their

Abutment Movement



The geometry of this wall -- slender "piers" between large window openings -- sets it up for cracking. The arch abutments move horizontally because there isn't enough mass pushing back against them. The piers of masonry are supporting all the load above them, and the stresses are concentrated on the end arches in the row. Horizontal cracks appear at the ends of the wall. This sideways thrust can also bow the side wall.

original shape and the center bricks at the top of the arch fall downward. Typically, they will jam in the opening after moving a quarter of an inch or so. If the abutments continue to spread, however, the bricks may fall completely out.

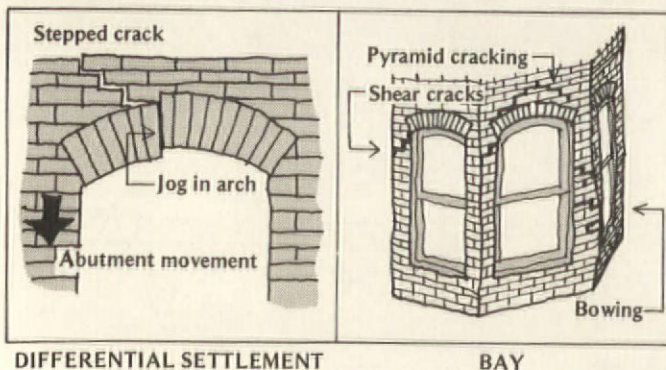


JACK ARCHES are particularly susceptible to this kind of failure. A jack arch is built so that the bottom is flat and the arch is formed by specially shaped bricks which slant towards each side. Almost every jack arch ever built sags in the middle. This sag is the result of horizontal movement of the abutments and insufficient (that is, non-existent) arch height.

Why ?

ABUTMENT MOVEMENT is caused by walls which don't have enough mass to push back against the ends of the arch. This may be the result of walls which are too thin or, more commonly, walls which are not wide enough on either side of the arch. When there is a row of arches in a wall, they all push against each other and the stress ends up on the last arch in the row. The center arches may stay in place while the wall at the side of the end arch cracks horizontally at the base of the arch. The push from the arch may also tilt or bow the side wall around the corner from the end of the building. (All this is shown in the drawing on the previous page.)

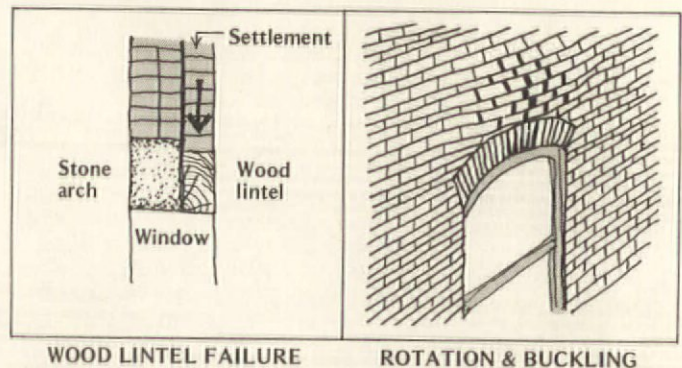
IF ONE SIDE of the arch falls relative to the other, the movement can again be seen at the top of the arch. The underside of the arch will have a jog where one half has dropped lower than the other half. This jog may be a clean break, or have several steps at different mortar joints. The suspect in this case is one



of the settlement types described previously. (Refer back to the drawing on page 155 of the July issue.)

ARCH FAILURES are endemic in Victorian bays. The Victorian taste for large windows and narrow corners left most arches with nothing to push against. The cracking pattern commonly found will include pyramidal cracking above the arch, horizontal shear cracks at the base of the arch, and possibly tilting or bowing of the sides of the bay.

IN SOME CASES the cracking pattern may be seen on the inside of the building, and not the outside. Suspect the practice of using a wood lintel to support the interior course of bricks and an arch to support the exterior course. When the wood compresses or rots, the plaster on the inside wall will crack while the outside arch remains in place. Similarly, the arch and the brickwork above it may collapse without the inside wall falling down.



BUCKLING FAILURE is another arch problem where abutment movement can be suspected. As the arch moves slightly, the bonds between the bricks or stones are broken at the joints. The weight of the wall above may push sections of the middle of the arch downward and to the front. This may cause the bricks or stone to rotate from their original position--which further weakens the arch.

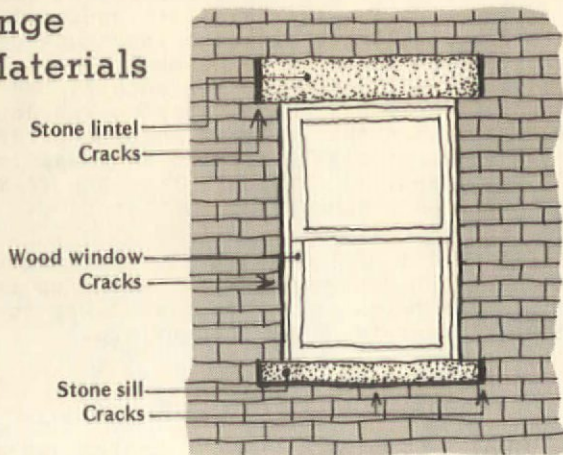
LOOK FOR CLUES in failed arches, beams, floors, walls, and connections during your crack investigation. These structural suspects are all potentially dangerous, so repairs should be considered where cracking indicates possible current or future failure.

Material Witnesses

ET ANOTHER CRACK SUSPECT is a change in materials or geometry. Stresses are concentrated where the house changes direction, or changes from one building material to another. It's a change in geometry that causes the cracks found at the corner of a window or door opening. A shear crack leading up and away from the corner will form. Cracks will also form along a line where a wall changes direction, or where there are projections (such as a bay) from a flat wall.

STRESS CONCENTRATIONS are increased when weight is transferred from one material to another.

Change of Materials



Most houses are built of many different materials, and cracks tend to appear where there is a change in the structural system. A plaster ceiling supported on wood joists will crack where it meets plaster on a brick wall. Cracks tend to form around a stone window sill surrounded by brickwork. The cracks between a wood lintel and the brick wall it is supporting will show up in the plaster in the house.

A COMBINATION OF CHANGES in both materials and geometry is found in many 19th- and early 20th-century bathroom floors. The tile floor is set in a mortar bed which is both over and between the joists. At every joist there is a change from mostly mortar to mostly wood--for example, from four inches of mortar to an inch of mortar sitting on a ten-inch joist. Often there is also a crack running along every joist.

CRACKS CAN BE CAUSED by denser patches within the material itself. A stone baked into a brick may create a crack on the brick's surface. Repointing with a hard Portland cement mortar may also cause cracking of the brickwork.

Red Herrings

BE AWARE that there are two red herrings that can put the crack detective off the trail. All of the suspects mentioned so far cause cracking directly or indirectly because of the weight of the building. The red herrings--moisture and temperature--are quite different, and are cyclical in nature.

WOOD EXPANDS AND CONTRACTS as it gains and loses moisture. In its expanded state, it is generally tight against other parts of the house. As it dries out, cracks form between the pieces. A clapboard house may have cracks over the entire exterior in the dry season. Cracks may also form on the interior as joists, beams, and wall studs shrink. In severe cases the plaster itself may crack, but more often the cracks appear in corners and at the edges of the ceiling. These cracks will open and close depending on the weather. (Other materials are also affected by moisture gain and loss, but their change in volume is usually not enough to cause cracking.)

TEMPERATURE ALSO changes the size of materials. Warmer temperatures and direct sunlight can expand materials a small percentage of their original size. This expansion becomes significant when a large expanse of the material expands at the same time. The cracks form where something interrupts the expansion of the wall. This may be another wall at the corner of the house, a thicker part of the wall, or an opening.


THERMAL EXPANSION CRACKS are not just limited to the outside wall of the house. Cracks will form on the inside where a part of the structure abutting the outside wall is a different temperature. For example, interior partition walls will nearly always crack in the corner where they join the exterior wall. This type of cracking can also be caused by the heat in a chimney breast. The high temperatures from the fireplace or furnace will often cause vertical cracks in the plaster above the mantel.

MOISTURE AND THERMAL EXPANSION CRACKS are red herrings because they are non-structural and tend to be cyclical. They may open and close daily or seasonally depending on the weather. Repairs may be desired for appearances or to keep out the rain, but are often unnecessary.

OCCASIONALLY a thermal expansion crack will continue to grow larger and larger. The accessory here is debris, which falls into the crack when it is open. When the material tries to shrink back to its original place it is stopped by the junk in the crack. Depending on the rate of expansion, it may be necessary to provide for free expansion and contraction.

NOW it should be obvious that not all cracks are cause for alarm--or even corrective action. Parts I, II, and III of The Crack Detective have described tracking down evidence of cracks and finding suspects:

- Document the size and nature of cracks
- Look for a cracking pattern
- Locate the vicinity of the suspects
- Identify, indict, and convict the suspect
- Decide if corrective action is needed

SOMETIMES it will become clear that no real crime has been committed; other times, the suspect is potentially dangerous. In Part IV, we'll present specific methods for rehabilitation of the victim: your building. 

The Detective

WARD BUCHER is the principal in the firm Wm. Ward Bucher & Associates, Architects. His office specializes in architectural and interior design for restorations and renovations of houses and commercial buildings. In addition, the firm is expert in structural inspections and economic feasibility studies. Bucher's address is 1638 R Street NW, Washington, DC 20009. Phone 202-387-0061.

owners to keep up with the maintenance is why so many porches have been torn off...or have fallen off.

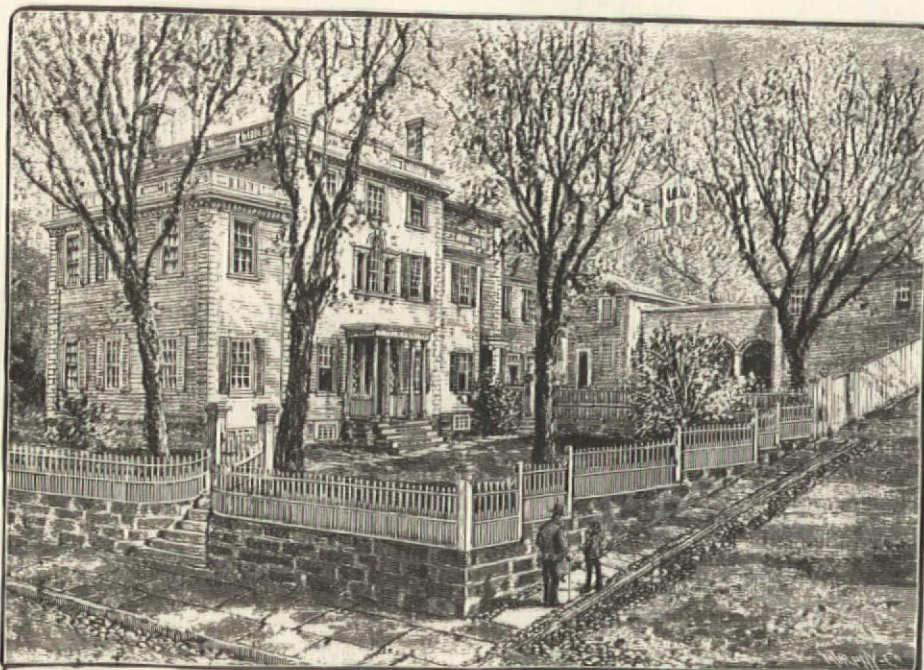
OF COURSE, any old house requires a lot of maintenance. So why should the roof, floor, support structure and ornamentation of a porch be any different? The difference is in the way porches are used: People don't live on porches all the time. If you are awakened in the middle of the night by a drop of water hitting you between the eyes you do something about it quickly because your home has been invaded. But a porch is outdoors anyway, so it's all too easy to put off dealing with that drip or a bit of rot in the floorboards.

IT SHOULDN'T BE THAT WAY. Because of their practical, decorative and social qualities, porches are every bit as deserving of preservation as the houses to which they are attached.

Originally: A Dramatic Focus

THE PORCH has its origins in the classical portico (see glossary on p. 183.) The primary function of the classical portico was to make an emphatic architectural statement. The portico defines the entrance with an elaborate framing element; it provides the visitor approaching the building with a clear visual signal as to where the portal lies.

UNLIKE A VERANDAH, the portico is not meant to be used as a living space. Rather, with its columns, pediment, and often a grand stair, the portico is designed to impress and inform the visitor.



Before the verandah revolution of the mid-19th century, the typical American house did not have a large porch. At the most, it had a small portico at the main entrance. The portico was for architectural emphasis—not for warm-weather living.

THE IDEA OF VERANDAHS as living spaces was introduced into the U.S. in a roundabout fashion. In England, during the late 18th and early 19th centuries, the "naturalistic" landscape designers developed the idea of harmonizing architecture with the landscape. Men such as Lancelot "Capability" Brown, Humphry Repton and John Loudon stressed that a house and its gardens should be carefully integrated into nature. This was a radical departure from the formalistic landscaping popular up to that time.

BECAUSE OF THE COOL English climate, however, these English designers never developed the idea of the porch or verandah as a way to further integrate house into nature.

Enter Downing

IT REMAINED FOR AN AMERICAN, Andrew Jackson Downing, to seize upon the verandah as a logical device for transplanting the English concepts of naturalistic landscaping into American building. Downing's background was as a nursery man and landscape designer. But his desire to construct buildings in harmony with the surrounding landscape soon caused him to embrace architecture as part of his total practice.

PORCHES AND VERANDAHS became a central element in Downing's designs. Along with the practical function of keeping the entrance dry, a broad porch was a "necessary and delightful appendage" in a country with hot summers. "Hence a broad shady verandah suggests ideas of comfort, and is highly expressive of purpose."

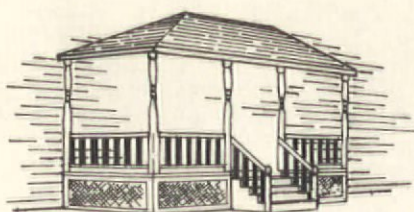
ALTHOUGH PORCHES had been used on some houses in the southern U.S. prior to Downing, it was the impact of Downing's published works that caused "verandah mania" to spread across the country in the mid-19th century. Countless old farmhouses were "modernized" with porches or verandahs, plus that other Downing favorite: the bay window. (The bay window permitted a wider perspective on the landscape and thus allowed more room for viewing artfully constructed "prospects.") And no new home, of course, was complete without its porch, verandah or piazza.

Lure Of The Porch

DOWNING'S WORDS would not have had the impact they did if they hadn't satisfied some innate cravings of the American homeowner. The verandah seems to have satisfied needs on three levels: emotional, functional and social.

ON THE EMOTIONAL LEVEL, the verandah provided a satis-

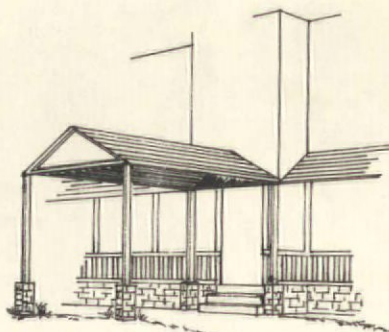
The Many Ways To Say "Porch"



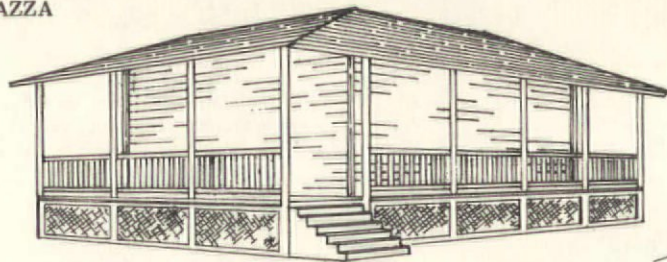
PORCH or PIAZZA



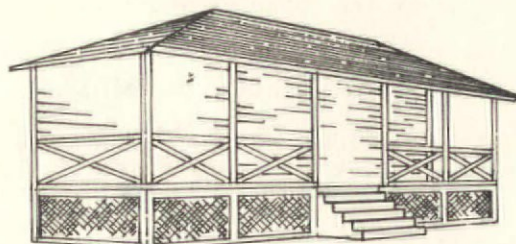
PORTICO



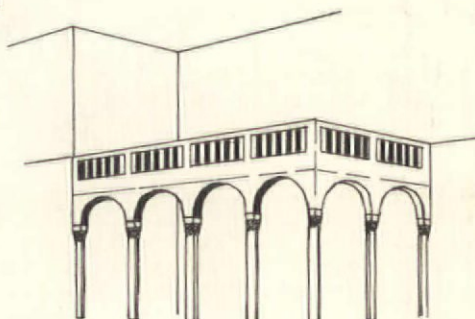
PORTE COCHERE



VERANDAH



PORCH / PIAZZA / VERANDAH



LOGGIA

GALLERY—A roofed promenade, especially one projecting from the exterior wall of a building.

LOGGIA—A covered gallery or passage, arcaded or colonnaded, open to the air on at least one side. Often, the roof of the loggia is formed by the upper storeys of the building. Term can also apply to an arcaded or colonnaded porch. The word is usually associated with Italianate architecture.

PIAZZA—Originally, an Italian term for an open public space surrounded by buildings, or the open courtyard in the center of a house or villa. It can also describe a long covered gallery with roof supported by columns. During the 19th century, with the fascination with all things Italian, the term began to be used interchangeably with "porch" or "verandah."

PORCH—The general term used to describe a roofed space outside the main walls of a building. Strictly speaking, the term should be limited to a covered entrance for a building, having a separate roof projecting from the wall. Longer roofed galleries attached to a house and intended as outdoor living spaces are more accurately termed "verandahs" or "piazzas." The porch can be called a "portico" if it has columns and a pediment that cause it to resemble the front of a Greek or Roman temple.

PORTE COCHERE—A carriage porch, designed to permit passengers to alight from a carriage and enter a building without being exposed to the elements.

PORTICO—The roofed space—usually open on three sides—forming the entrance and centerpiece of the facade of a temple, house or church. It has columns and a pediment. A portico can be further defined by the number of columns; e.g., a "tetrastyle portico" has four columns. The term should be restricted to classical architecture and buildings based on classical models.

STOOP—A small porch, platform or staircase leading to the main entrance of a house or building. Term derives from the Dutch "stoep" (for step). Used mainly in northeastern U.S.

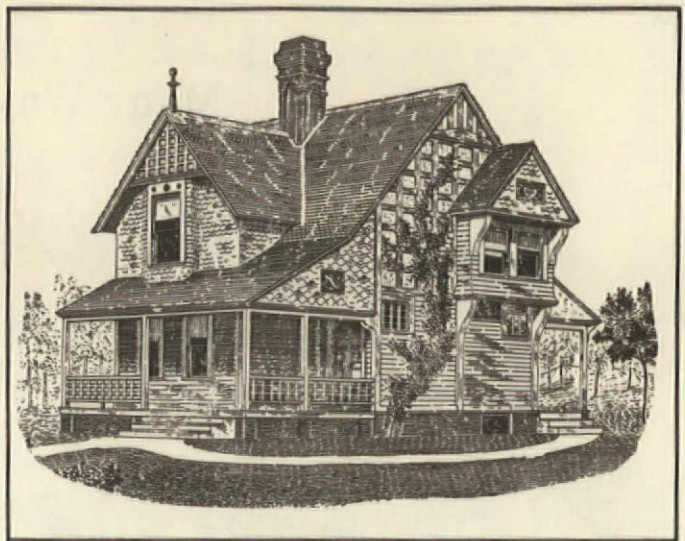
UMBRA or UMBRAGE—From the Latin word meaning literally "that which offers shade." Victorians occasionally used this term instead of "porch" or "verandah" to show their familiarity with classical Italy.

VERANDAH—From the Hindi word "varanda," which denotes a roofed, open gallery or balcony extending along the outside of a building, and which is designed for outdoor living in hot weather. The word was transplanted to England, where it was applied most often to an open gallery with a roof carried on light metal supports that ran across the front of a building. With its emphasis on warm-weather leisure, the term "verandah" should be applied to any gallery extending across two or more sides of a building. A gallery extending across one full side can be called a "verandah" or "porch." Any gallery that is less than a full side of a house or building is best called a "porch."

Drawings by Stephanie Croce



The romantic designs of Andrew Jackson Downing introduced the idea of the broad verandah as a central element in American life. From: *Architecture of Country Houses*—1853.



By the 1880's the architectural styles were markedly different from those of Downing's day. But the verandah remained as a dominant architectural feature on most house designs.

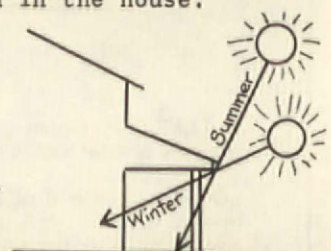
ying transition zone or "halfway house" between raw nature and the artificial environment of the manmade dwelling. In this role, the porch symbolized the American's easy relationship with the wilderness that had been so recently conquered.

EVEN MORE IMPORTANT, the verandah provided an opportunity for architectural embellishment--which was vital to the romantic revival styles that were popular in the mid- and late-19th century. Columns, brackets, scrollwork and

spindlework were all used in fanciful ways on porches to re-state and enhance the basic design theme of the building's exterior.

Passive Solar Benefits

ON THE FUNCTIONAL LEVEL, porches are a passive solar device. A properly designed and oriented porch keeps rays of the summer sun away from ground floor windows--dramatically reducing heat gain in the house. In winter, however, the low-angled rays of the sun are permitted to enter ground floor windows, thus providing heat gain through the greenhouse effect. These passive solar benefits are great enough so that porches are now being specified on some new houses. In an era when more energy is spent on summer cooling than winter heating in many parts of the country, a porch's ability to cut air conditioning costs is a big asset.



FOR THOSE WHO PREFER to do without air conditioning altogether--as people did a century ago--a verandah becomes almost a necessity. It provides a warm-weather living space that enables you to get the benefit of the lightest summer breeze. A verandah that wraps around two or three sides of the house increases the chance that you'll be able to find the spot that's getting the most breeze.

IN ADDITION, verandahs link major entrances with subordinate ones, allowing direct communication with a kitchen, library or conservatory without having to make a route through the interior of the house. These verandah shortcuts reduce the amount of dirt brought into the house, and allow several functions to take place inside the house without their interrupting one another.

DOWNING ON THE PORCH

Instead of leaving the entrance door bare...[a porch] serves both as a note of preparation, and an effectual shelter and protection to the entrance, pointing it out to the stranger as the place of approach.

Porches are susceptible of every variety of form and decoration, from the embattled and buttressed portal of the Gothic castle, to the latticed arbor-porch of the cottage, around which the festoons of luxuriant climbing plants cluster, giving an effect not less beautiful than the richly carved capitals of the classic portico.

In this country, no architectural feature is more plainly expressive of purpose in our dwelling house than the verandah, or piazza. The unclouded splendor and fierce heat of our summer sun, render this very general appendage a source of real comfort and enjoyment. The long verandah round many of our country residences stand in stead of the paved terraces of the English mansions as the place for promenade; while during the warmer portions of the season, half of the days or evenings are passed there in the enjoyment of the cool breezes, secure under low roofs supported by the open colonnade, from the solar rays, or the dews of night. The obvious utility of the verandah in this climate, especially in the middle and southern states, will, therefore, excuse its adoption into any style of architecture.

From: Landscape Architecture, by Andrew Jackson Downing. New York, 1844.



This house, built in the late 19th century, carries the idea of verandah about as far as it will go. On the first-floor level, the verandah wraps around three sides of the house. On the second floor,

some of the bedrooms have their own smaller porches. In hot weather, these upper porches could function as sleeping porches. Photo: Atlanta Historical Society.

SOME 19th CENTURY PORCHES were designed from the outset to be screened in summer--with the screening replaced with glazed window sash in the winter. This essentially turned the porch into a greenhouse, providing solar heat gain and reducing the amount of chilling wind that blew against the side of the house.

The Social Role

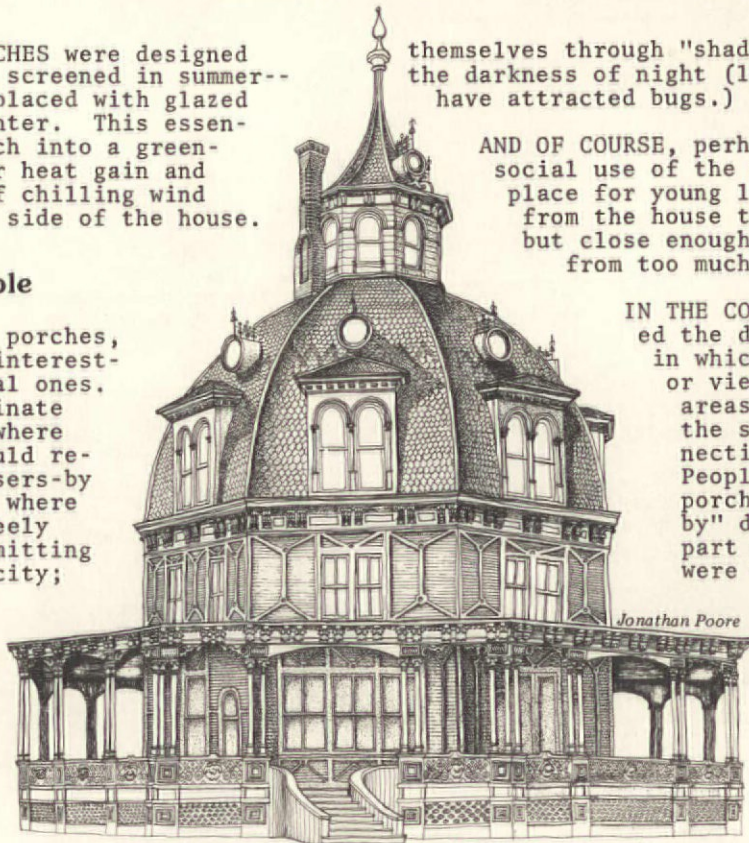
OF ALL THE USES of porches, perhaps the most interesting were the social ones. Porches were indeterminate social zones--places where the family members could recognize or ignore passers-by as they chose; places where the children could freely entertain without committing the family to reciprocity; places where casual acquaintances could be entertained without committing the full resources and full recognition of the house.

PORCHES GAVE OUR ancestors the opportunity to get close to family and friends during long summer evenings. After supper, the family would take up customary positions on the porch and talk among

themselves through "shadow time" and well into the darkness of night (lamps or candles would have attracted bugs.)

AND OF COURSE, perhaps the most famous social use of the porch was as a trysting place for young lovers: far enough away from the house to provide some intimacy, but close enough to it to be a refuge from too much intimacy.

IN THE COUNTRY, the porch allowed the dweller a sheltered area in which to enjoy "prospects" or views. In more urbanized areas, the porch fronting on the street provided a connection to the neighborhood. People sitting on the front porch "watching the world go by" declared that they were part of the community and were willing to enter into social intercourse with passing friends and neighbors.



Orson Squire Fowler, the proponent of healthful living through octagon-shaped houses, added to the verandah's popularity with these words: "These verandahs are delightful places on which to spend twilight and moonlight summer evenings, in either promenading or conversation. And the advantages of having them all around the house are considerable, allowing you to choose sun or shade, breeze or shelter from it, as comfort dictates." From: *A Home For All*, New York, 1853.

Furnishings

THE INTENSIVE social uses of the verandah naturally brought forth a whole new genre of furnishings. Wicker porch furniture was popular for so long that it went through considerable evolution.



This Queen Anne townhouse displays some of the accoutrements of a well-dressed porch: Striped awning, wicker furniture, potted plants, and a trellis with climbing ivy.

EARLY VICTORIAN WICKER often had complex curlicues and twists of reeding decorating high backs and legs. In the late 'teens and early 1920's, the wicker became simplified, with reeds woven in and out in a straightforward lattice pattern, which in some areas was known as the "Bar Harbor style."

ROCKING CHAIRS ABOUNDED. Some were wicker on a hardwood frame. Others were Mission style, with square lines, dark oak panels, and large cushions.

THEN THERE WAS the folding canvas furniture that was the source of endless sight gags in the movies. It seemed that no one could ever get it to fold together properly.

THE ULTIMATE piece of porch furniture was the porch swing or glider: a wood or metal frame with cushions that could hold two or three people. Its gentle back-and-forth motion was usually accompanied by the squeaking of an un-oiled joint. The porch swing was an essential accessory to young romance in an era before drive-in movies.

ANOTHER ESSENTIAL FIXTURE of the well-equipped porch was the canvas awning, which could also be used instead of, or in combination with, curtains or blinds made of canvas, wood or reeding. The awnings and curtains were accompanied by an array of ropes and pulleys that required the skill of a sailor to master. Awnings were usually put up in the spring and taken

WHAT THE WELL-DRESSED VERANDAH WORE

I saw only one piazza in this town in which anything had been done to distinguish it from its neighbors. The house itself was ugly enough, but the piazza made it the most interesting dwelling place along the line. Green and white awnings were hung from the roof. On the railings there were boxes of red and white geraniums fastened, with vines falling over the rails. As these vines did not render the piazza eye-proof, Turkey red was nailed inside the railing. This red was hung again as curtains falling straight under the awnings, to be drawn back and forth at the option of the owner.

There were other Turkey red curtains hung at the farther end of the piazza to shut it off. Straw tables, chairs, hammocks, bird cages, and more flowers on stands and in big pots on the steps, completed the arrangements. Rugs covered the floor. Tea was served here in the afternoon, but all the world of passers-by was not admitted to the spectacle. When curtains are not desired on a porch and vines do not give sufficient privacy, hanging screens are used, made of Japanese straw. Venetian blinds are effective and serviceable.

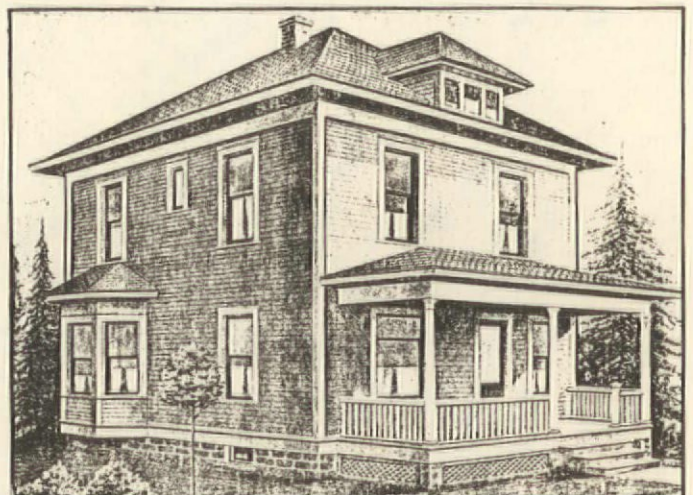
From: *Homes And Their Decoration*, by Lillie Hamilton French. New York, 1903.

down in the fall...an onerous task that generated a lot of work for neighborhood handymen.

Other Furnishings

AS IF THERE WASN'T enough verandah house-keeping already, the well-outfitted verandah often had a straw, hemp or sisal rug on the floor. And sitting on the porch might also be some cast iron animals (such as a sitting dog) plus a variety of plant stands. Many of the house plants would be brought out onto the porch for a summer airing. Ferns, palms and aspidistras abounded. And there might be planting boxes attached to the railing for annuals, plus hanging pots suspended from chains overhead. For even greener effect, there was often a trellis on which twined ivy, wisteria, morning glory or climbing roses.

ANOTHER ESSENTIAL FIXTURE was the metal holder for the flag staff. On Memorial Day, Fourth of July, Armistice Day, and other patriotic occasions, every front porch on the block would blossom forth with billowing stars and stripes.



The American Foursquare—a style popular in the early 20th century—deliberately dropped much of the Victorian-era ornamentation. But the porch was retained.



This porch displays many of the appointments required for the well-turned-out porch at the turn of the century: Striped canvas awnings, matching striped canvas coverings on the furniture,


wicker chairs, rockers and settee, plant stand, fern, and straw matting on the floor. In addition to what's shown, often there would be curtains and more plants. Photo: Bettman Archive.

Red, white and blue bunting was often strung along the railing for greater effect.

ALTHOUGH COLUMNS, balusters and trimwork would be painted to match the rest of the house, there seems to have been two fairly universal customs about porch colors: The floor was almost always painted with battleship gray porch & deck enamel, while the boards of the ceiling were painted a light blue to enhance the illusion of sitting under the open sky.

IN GENERAL, the etiquette of the household extended out onto the verandah. But some special rules often evolved to suit the geometry of the porch. Ruth Freeman, the author's mother, recalls an incident that took place in her girlhood home of Cortland, New York. Local porch etiquette decreed that men were allowed to put their feet up on the porch railing--but the women were not. Across the street, a World War I veteran had returned with a French bride. When sitting on the porch, she would put her feet up on the railing with the

men--an act which scandalized the entire neighborhood!

MAINTAINING--or replacing--a porch is not without its cost. But the verandah/porch was one of the major civil amenities of the 19th century, possessing great functional and human value. In upcoming issues of The Old-House Journal, we'll look at a couple of case histories of people who decided that rebuilding their porches was well worth the time and money involved. 

JOHN CROSBY FREEMAN, as well as being an old-house owner in Watkins Glen, N.Y., and a back-porch lover, is Executive Director of The American Life Foundation. The Foundation publishes reprint editions of many classic 19th century architectural books (many of which are carried in The Old-House Bookshop). John says that "bringing books back to life" is one of his greatest pleasures.

CLEM LABINE is a friend of John Freeman's and writes for The Old-House Journal from time to time.

Ask OHJ

Sandblasting Victim

SEVERAL YEARS AGO a large brick building--circa 1900--in our community was sandblasted in a restoration project. The current owner realizes that this was a mistake and wants to know if anything can be done to prevent further erosion of the bricks.

--Penny Rappa San Luis Obispo, CA

IT CERTAINLY WAS A MISTAKE TO SANDBLAST; and, as is the case with most serious mistakes, the situation is very difficult to rectify. The first thing to consider is precisely how big the erosion problem is. The owner should hold off on doing anything until the bricks show signs of further erosion. (If the weather is basically mild there, the problem may not get worse.)

IF PROTECTIVE MEASURES ARE INDEED CALLED FOR, then a latex paint is the best sealant for masonry. The owner, however, may not want paint, since the house was sandblasted to remove paint from the bricks. But alternatives to paint are problematic. Wax- or silicone-based sealants are unpredictable and can cause more problems than they solve. Almost everybody applies it poorly (usually too thickly). Worse, the sealant can trap moisture in the walls and cause spalling of the bricks. So if the owner decides to use a transparent sealant, he or she would be well advised to be very careful about whom they hire to do the job.

Taking Up The Carpet

HOW CAN YOU REMOVE CARPETING from hardwood floors without ruining them? The carpet is indoor/outdoor and was recently glued down all over.

--Joe Dodson Bellville, TX

YOU HAVE TO GET A SOLVENT underneath the carpeting in order to remove it. (Methylene chloride, the active ingredient in paint remover, will work effectively.) Start by tearing up a piece of carpet with a utility knife. Begin in some out-of-the-way corner because you'll invariably do some amount of damage to the floor when you begin. Once you add the solvent, however, things should go a little easier. Then you can just proceed through the room, pouring

solvent and scraping up carpeting with a wide-bladed putty knife or a wallpaper scraper. It will be messy, but you'll get the job done.

ANOTHER ALTERNATIVE with a short-nap carpet is to place dry ice on it. This will quickly cause the glue to become brittle; then you can scrape up the carpet without using a solvent. Neither of these methods are ideal solutions, however; if any of our readers know of an easier, cleaner way, we'd like to hear about it.

A Fantastic Solution

OUR TOWN HAS JUST GOTTEN a long-term lease on an old railroad station which we intend to convert to a library. There is much work to be done, but our biggest problem is how to remove a zillion layers of varnish from the wainscoting that covers the walls and ceilings of the interior. We are somewhat reluctant to use chemical removers because of the fumes. Is it possible to use a sanding process instead?

--Stephanie Stevens White House Station, NJ

WE HAVE NEVER SEEN AN ABRASIVE finish-removal process that didn't cause significant damage to the wood surface, so we couldn't recommend that. A chemical remover is still the best thing to use; if you wear a toxicity mask when you use it, then you'll be well protected from the fumes.

BUT YOU MIGHT WANT TO CONSIDER cleaning rather than completely removing the finish. Fantastik, the kitchen cleaner, dissolves varnish to an extent, and would be good for removing the top darkest layer. A solution of 1/3 boiled linseed oil, 1/3 turpentine, and 1/3 white vinegar, scrubbed in with fine steel wool, would have good results as well. Commercial finish revivers would work well too: They clean, soften, and reamalgamate the existing finish.

Lye On The Paint

SOMEONE MUST KNOW how I can safely remove multi-layers of old, cracked, peeling, crumbling paint from a flat tin porch roof. All my efforts at removing it have thus far proved fruitless. I have used various paint removers, heat gun, rotary stripper, torch and paint scraping, all to no avail. The only thing left is sandblasting, and I am afraid that that will tear up the metal. Any suggestions?

--Martin J. Kelly Dayton, OH

GOOD RESULTS CAN BE OBTAINED by making your own paint remover using lye (caustic soda) and water. The lye comes in crystalline form and dissolves readily in water. A rough ratio is about 1 lb. of lye to 1 gal. of water. (Thickening the mix with corn starch will prevent too much running.) Small quantities of lye may be purchased at the supermarket; if you're satisfied with the results, then you can

get larger amounts from a chemical supply house. As with any stripper, the longer you leave it on, the better it works. Always remember that lye is a dangerous chemical and extreme care must be taken to avoid contact with skin and eyes.

Plug Your Flue

THE FIREPLACE IN OUR 1899 HOUSE does not have a damper. Consequently, if we do not keep it blocked, all our heat goes right up the chimney. Is there some way we can add a damper or somehow make the opening a little smaller so we don't create a draft? The opening is 6 in. by 18 in.

--Lucille Couzynse Owosso, MI

PLUGGING THE FLUE whenever the fireplace is not in use would be the best thing to do. (If you never use the fireplace, then you should plug the flue permanently.) One subscriber made a plug out of plywood, cut almost to the flue size, with pipe insulation as a flexible gasket. You could also hire a fireplace specialist or a sheetmetal worker to make a custom-sized operable flue damper for you.

THE LYEMANCE FLUE DAMPER is another alternative. It seals the chimney opening from the outside, at the top. (Since it's outside, it also keeps water out of the chimney.) Contact Lyemance International, 141 N. Sherrin Avenue, Dept. OHJ, Louisville, KY 40206. (502) 896-2441.

Salt Problems

BADLY DETERIORATING BRICK AND MORTAR on the inside of my garage is my problem. The garage is about 80 years old, brick construction, unheated, with a flat roof. Large sections of the interior wall are covered with white growth of some kind, behind which both brick and mortar are soft and crumbling.

--Gene Reeves Chicago, IL

THAT "WHITE GROWTH" sounds like it's probably a water-soluble salt crystallizing on the interior walls and causing the masonry to crumble or 'spall.' Salts are carried in the moisture inside the wall in a dissolved state. When the water evaporates at the surface, crystals are formed just under the surface, brick, causing the outer layer to loosen and fall. The source of the salts may be in the ground around the wall (from fertilizers or the storage of salt). The salts may even be present in the masonry itself.

UNFORTUNATELY, THERE'S NO SURFACE TREATMENT you can use that will stop the problem without addressing its source. You can, however, try to decrease the amount of moisture entering the wall. See if the building has a bad run-off

problem, one that causes the walls to pick up water from the ground after a heavy rain. It might prove effective to waterproof the wall on the outside, where the water is entering; any coating you put on the interior will probably suffer the same fate.

Weathered Wood

CAN YOU GIVE ME ANY INFORMATION on the use of stains for shingles? I would also appreciate your advice on suitable treatments that will preserve the wood while maintaining the weathered character of clapboard or shingle buildings.

--John Meffert Charleston, SC

VARIOUS PENETRATING OIL STAINS designed specifically for exterior use are commercially available. While they do not protect as long or well as a painted surface, they are easier to maintain with an additional coat once every couple of years.

THE CABOT COMPANY, in particular, offers a number of different products, several of which include a greyish pigment that enhances the weathered effect of clapboard or shingles, and can even, in some situations, make new wood look old. A stain such as this, used in conjunction with an oil-based wood preservative, and maintained regularly, makes a totally satisfactory exterior treatment for your house.

Slicing A Slab

IHAVE A SLAB OF MARBLE which I want to cut in half. Its dimensions are 3/4 inches thick by 20 inches wide by 6 feet long. Can I do this myself or will it require a professional?

--Joel Shaper Baltimore, MD

MARBLE IS A RELATIVELY SOFT STONE, so you can do the job yourself. While a hacksaw blade will easily saw through marble, you'll have a problem getting through the 20-inch width using a conventional hacksaw. So use a hacksaw blade with a special handle or a cut-off saw with a carbide masonry blade.

Do You Have Questions for OHJ?

Send your questions with pictures or drawings, if possible. (We prefer black & white photographs.) We cannot promise to answer all questions personally, although we will try to answer all questions from current subscriber/members. Questions of general interest will be answered in print. Write: Questions Editor, Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217.

Restorer's Notebook

This process also works well to get those black marks in the grain of a piece of new white oak. (If it should leave the black marks in the grain but the rest grey--not yellow like the existing wood--then follow the stripping with a yellow oak stain.)

Dan Miller
Elgin, IL

Putty & Panes

W E'VE FOUND AN EXCELLENT METHOD for removing old putty from window panes. First we remove the window from the casement. Then we use a utility knife, cutting parallel with and directly adjacent to the frame. (This method has worked much better for us than using a glazier's knife along the surface of the glass.) There's always some putty that stays stuck to the glass, so we place strips of paper towel over the cut joint and pour small amounts of lacquer thinner onto the towel. Once the putty has been thoroughly soaked with the solvent, it then comes off very easily.

Marion & Patti Redstone
Indianapolis, IN

Cook It Clean

H ERE'S THE BEST METHOD I've found for removing years of paint and grime from door-knobs, window locks, hinges, and so on: Simply fill an enameled pan with a solution of water and baking soda, approximately 4 tablespoons per quart of water. Completely submerge the piece to be cleaned, and place it over a low flame. Allow to simmer for fifteen or twenty minutes, and the paint will generally come right off with a stiff brush. If it does not, just put the hardware back in the solution and continue to cook; some pieces may take an hour or more, but the paint will come off. An abrasive cleaning pad such as Scotch Brite Scouring Pad, available in most supermarkets, may help to remove the last traces of paint, but be careful: It will scratch brass.

Barbara Willis
Buffalo, NY

Matching Patinas

E VER HAD A DIFFICULT TIME trying to match the patina of your woodwork or furniture to a replacement piece of wood? If so, and you are stripping varnish from the wood anyway, here's a tip I've found that works great. Do the repair work before stripping. Then, as you strip, take the steel wool that's gooped with stripper and old finish, and smear it all over the new piece--in other words, put the replacement through all the steps that the old wood is undergoing.

IF YOU'RE STRIPPING PAINT from the wood, then don't do the repair work first: It's best not to get paint residue directly on bare wood. So wait until you're down to mostly varnish before following the procedure described above.

Filling Holes

I T SOMETIMES HAPPENS THAT you miss the stud while nailing the plasterboard, or you misjudge a cutout for an electrical box. The resulting puncture can act like a bottomless pit when you attempt repairs. Even large holes can be patched, however, by stuffing crumpled up newspaper into the hole until you can stuff in no more. Use scissors to trim edges that protrude beyond the face of the wall--now you have a surface on which you can apply patching plaster. Rock wool and fiberglass make good stuffers too, but start the process with newspaper--it's cheap and plentiful. On major gouges, try using chicken wire and/or crumpled felt paper.



Jan Saenger
Alburtis, PA

Drilling Paint

O NE OF OUR FIREPLACES has an intricately carved canopy over the mantel with, among other things, two alligators facing each other with their mouths open. When I stripped the mantel, I wound up using everything I could think of, but I couldn't get rid of the tiny specks of paint left in all the crevices. The work was even too small for the relatively small bits of my Dremel hobbyist's drill.

ONE DAY I ASKED A FRIEND who is a dental student to get me dental drills: Combined with the smallest chuck Dremel has available, they did the trick. I literally cleaned the alligators' teeth! It was still a slow process, but the results came far more quickly and were far better than any I had ever obtained before.

ONE CAUTION: While the dental drills are inexpensive (less than \$2), they wear out and so cannot be saved. I have probably used half a dozen, but the investment was worth it.

E.J. Holland, Jr.
Kansas City, MO

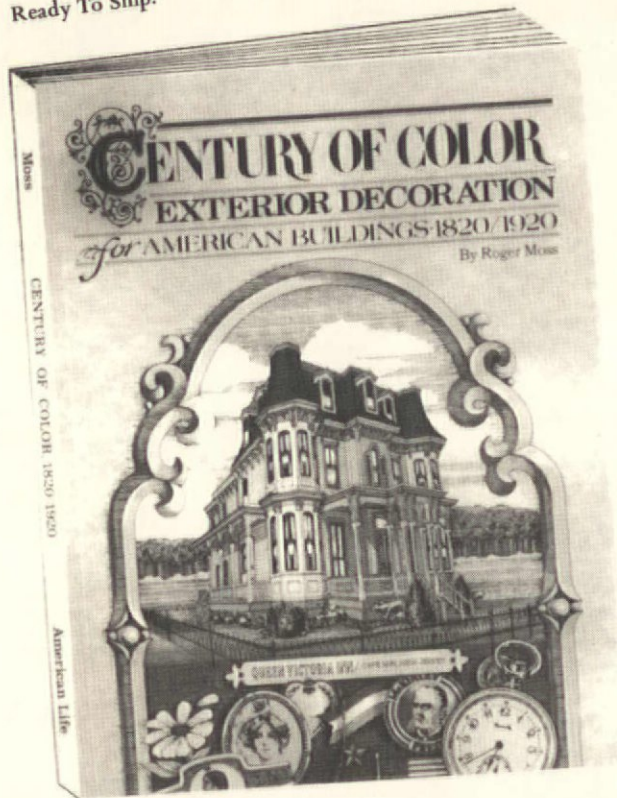
Got Any Tips?

Do you have any hints or short cuts that might help other old-house owners? We'll pay \$15 for any short how-to items that are used in this "Restorer's Notebook" column. Send your hints to: Notebook Editor, The Old-House Journal, 69A Seventh Avenue, Brooklyn, N.Y. 11217.

What Color Should You Paint Your House?

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Deadline will be on the 5th, 2 months before the issue. For example, ads for the December issue are due by October 5th.

Write: Emporium Editor, Old-House Journal, 69A Seventh Ave., Brooklyn, NY 11217.

WANTED

TWO LARGE, MATCHING, HANGING EXTERIOR light fixtures for 1860 Greek Revival house to be used on upstairs and downstairs porch. Call (901) 772-4698 or write Warren Carmichael, 727 West Main, Brownsville, TN 38012.

OLD CAST IRON GARDEN FENCE for Victorian home. Need approx. 150 ft. Would prefer to purchase from a Western U.S. location. G. Macdonald, Box 340, Bellevue, ID 83313. (208) 788-4708.

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BOOKS & PUBLICATIONS

1897 HOW-TO INFORMATION: Reprinted to help restoration and preservation of old houses: "Ornamental Glass" (stained, painted, leaded); "Oil Gilding," "Decorative Stenciling," and "Hot-Water Heating Systems." \$3 each postpaid from Stu Mahlin, 2500 Observatory, Cincinnati, OH 45208.

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THE CONYERS HOUSE, 1770, Sperryville, VA offers bed, country breakfast, and tea. (703) 987-8025.

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OLD FURNISHINGS FOR OLD HOUSES. Will swap or trade for other old things I need. Send your wants and what you have plus \$1 and SASE for details. O. Chism, Hornbeck, LA 71439.

PEAK FANCY WORK from a Nebraska farmhouse. The wood is in reasonably good to poor shape, but worth saving. Willing to give it to whomever will pick it up. If someone wants it cartoned and shipped, will trade that effort for some unglazed colored glass (old only), bevels, jewels or such. Will consider other trades as well. Don Robertson, 539 S. Baltimore, Hastings, NE 68901.

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8 WINDOW GUARDS. Sturdy, ornamental wrought iron each 16 in. by 67 in. Ideal attractive protection for garden apartment, etc. Call (212) 787-7714.

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6 PAIR NEW 9 OVER 6 SASH, 1-1/8 in., primed and glazed, fit opening 4 5/8 in. by 75-3/8 in. \$300. Wrought iron fence, hairpin with arrow, 73 ft. by 30 in. high fence, 2 gates, 5 posts. Needs some reworking; excellent atop wall or as low border. \$300. Pick up near Harrisburg, PA. Call (717) 362-3477.

INTERIOR WOODWORK: Set of 16 highly ornate Renaissance Revival door/window surrounds in oak and mahogany. Ideal for restaurant, commercial, or residential installation. Photo and detailed description available. Call (607) 272-6511 or write S. Hirschberg, 211 Pleasant Street, Ithaca, NY 14850.

OLD EMERSON 110V CEILING FAN, \$150 or trade up for toilet with oak flush box or bathtub with oak trim strip around rim. Ken DeCamp, 1226 Brown Ave., Joliet, IL 60432.

HERITAGE WOOD PRODUCTS: wormy chestnut, wormy oak, V-groove panelling, stock material, barn siding, barn beams. RD 2, Boswell, PA 15531. (814) 629-9265.

CROWN MOULDING, 8 1/4 ft. high, out of old drug store. Also 16 ft. walnut shelving, marble base, sliding glass doors complete. See at SportsWorld, 463 Aultman, Ely, NV 89301. (702) 289-8886. FOB—Ely, Nevada.

CABINETS: Ash, c. 1890, removed from old college laboratory. Each unit approx. 30 in. wide, 36 in. tall, 20 in. deep. 2 flat panelled cupboard doors under one large drawer. Wainscott sides and back. Perfect for kitchen or bath restoration. \$35 per unit. Call or write Craig Dickstein, Box 250, Kingston, RI 02881. (401) 364-6157.

3 VICTORIAN SLATE FIREPLACES complete with cast iron inserts from NYC brownstone built in late 1800s. Also yellow pine interior woodwork and doors as well as porcelain, glass, and brass doorknobs. (212) 581-1226. J. Lee, 362 W. 46 St., New York, NY 10036.

OLD STOVE PARTS for old wood cookstoves. Old locks for old houses. Send requests and SASE plus \$.25 to O. Chism, Hornbeck, LA 71439.

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VICTORIAN ERA OLD-HOUSE PARTS: mantels, transom regulators, doors, chimney pots, etc. Send SASE for listing. Paul & Scott Schoenharl, 2393 Kemper Ln., Cincinnati, OH 45206. (513) 961-8388.

ORIGINAL GROWTH REDWOOD SHINGLES. Large inventory. H. Brown, 364 Redwood Avenue, Willits, CA 95490.



ORIGINAL PRINCIPAL ENTRY to Lulu White's Mahogany Hall of New Orleans' Storyville. Side panels 19 1/2 in. by 7 1/4 in.; central panel 24 1/2 in. by 7 1/4 in. in 35-7/8 in. by 9 5/8 in. frame. These bevelled, jeweled, cut glass doors, recently rediscovered, have aesthetic beauty and unique historic associations. Qualified bidders contact P.O. Box 51354, New Orleans, LA 70151.

1906 N.C.R. CASH REGISTER. Polished solid brass, dept. store model with 3 drawers and crank. Works are in excellent shape, but unit does need competent service to unjam gear set. Asking \$1200 plus freight. Photo on request. Write John C. McClure, Jr., 773 Lucerne Circle, Ormond Beach, FL 32074. (904) 672-7454, evenings.

MEETINGS & EVENTS

THE SEVENTH ANNUAL SOULARD HOUSE TOUR (September 26, 27) will celebrate early Souard house with a tour of 16 homes, 3 businesses, and 2 historic churches. Outdoor arts & crafts festival will be held in Pontiac Park. Other activities include an antique show and sale, quilt demonstrations, the famous barbecue made by the Souard Lions, live entertainment, and period costumes. Tickets are \$3.50 before Sept. 10; \$4.50 thereafter. Hours are Noon to 6 PM each day. Souard Restoration Group, 1216 Russel St., St. Louis, MO 63104. (314) 771-5563.

THE EIGHTH ANNUAL TOUR OF HOMES by the Oregon Historic District Society on October 4. A dozen homes will be open to the public from Noon to 6 PM. There will also be day-long live entertainment, a restoration workshop, and quilt exhibit and sale. For further information, call (513) 223-0538.

TOWN & COUNTRY HISTORIC HOME TOUR sponsored by the Lenawee County Historical Society. Will visit 8 historic buildings in Adrian, MI, on September 19, 20, from 1 to 6 PM. \$4 on day of tour; \$3 in advance. Contact Lenawee County Historical Society, P.O. 511, Adrian, MI 49221.

"HISTORIC HOUSE PRESERVATION: HOW TO," an outstanding seminar program offered by the Smithsonian Institution, November 1-6. Includes lectures by preservation experts such as James C. Massey, Director, Historic House Association of America, and R.A. Clem Labine, Editor, *The Old-House Journal*. Also tours of successfully restored country estates as well as lovely urban homes and townhouses in handsome Georgetown and Old Town Alexandria. \$428 price includes hotel and breakfasts. For further information, contact Selected Studies, A & I 1190A, Smithsonian Institution, Washington, DC 20560. (202) 357-2475.



ITALY, TEXAS: 1893 Gingerbread, 2 parlors, 5 bedrooms, 3 baths, front and rear stairs, 3-storey cupola. Covered with asbestos siding, some modernization without destruction. Woodwork and floors intact, needs restoration. 1/2 acre. \$65,900. H. Braden, Stones Realty, Rt. 1, Waxahachie, TX. (214) 937-1099.

NEVADA GHOST TOWN east of Reno. Abandoned RR center, still breathing. On new highway. Old store, bar, RR active. Rebuild old structure or move yours here. Hazen Preservation Society membership invited. Details, pictures on request. Mr. Budd, Box 89, Sparks, Nevada 89431.

PHILADELPHIA, PA area—in Camden, NJ. Large Victorian (c. 1896) semi-shell condition. 6 bedrooms, 2 baths, large living room, dining room and kitchen plus shed and full basement. 1/2 block from new medical school in developing area 5 min. from Philadelphia. Best offer over \$10,000. Call (215) SH8-0186 or (609) 365-2517.

TUSCARAWAS COUNTY, OHIO, NEAR CANTON. 125-acre horse farm. Extraordinary country house built in 1967, incorporating major period interior architectural detail by the French designer Purjol from 2 fine 19th-century mansions. Living room/dining room, 4 bedrooms, 2 1/2 baths, powder room, kitchen, rathskellar, 4 fireplaces. \$1,100,000. Brochure No. OJ-2674. The Fasig-Tipton Real Estate Group, P.O. Box 4175, Lexington, KY 40544. (606) 278-9581.

NON-PROFIT OLD-HOUSE REFERRAL SERVICE. Eastern part of National Register Historic District in Washington, North Carolina. Available houses both listed with realtors and those not formally "on the market." Generally 1780-1920 periods. Close to Pamlico River. East Main Street Neighborhood Association, Inc., P.O. Box 1901, Washington, North Carolina 27889.

GEORGIA HOUSE, built in early 1900s. 5 bedrooms, den, living room or parlor, dining room, kitchen, study, laundry room, and 2 bathrooms. Large front porch, also beautiful stairway and front entrance. Smokehouse, barn used for garage and workshop. Located 70 miles south of Atlanta, 15 miles from Interstate 75 in a small town. 7 acres of land. \$75,000. Call (912) 885-2575.

SOUTHERN OHIO (near historic Lebanon). Country properties protected by covenants for historic preservation. Victorian farmhouse, 1880, 10 rooms, 1 1/2 baths with 4 acres and pond. 2 smaller homes restored in authentic detail. Acreage to 10 acres with restored old barn. Good financing available. Mrs. Clayton W. Wright, 8489 Rossburg Rd., Morrow, OH 45152. (513) 877-2212.

RESTORATION SERVICES

EXPERT HELP FOR OLD-HOUSE OWNERS (and all owners-to-be): historical research, full preservation and architectural services, design for restoration and alteration, technical assistance. Professional help can improve results and save costly mistakes. Allen Charles Hill, AIA, Historic Preservation and Architecture, 25 Englewood Road, Winchester, MA 01890. (617) 729-0748.

ARCHEOLOGICAL RESEARCH ASSOCIATES has professionals trained to develop accurate interpretations of historic properties. If you can't find the answer in the library, we may be able to find it in the ground. ARA is a non-profit research organization. For more information, write: ARA, Inc., Box 52827, Tulsa, OK 74152.

PEN AND INK DRAWING OF YOUR HOME done from any clean photograph. Drawings are 11 in. by 14 in. Highly detailed and unusual gift for yourself, friend, or relative. \$35 (PA residents add 6% sales tax). Roberta Lee, Box 208A, RR 1, Washington Crossing, PA 18977. (215) 493-3466.

PRESERVATION & RESTORATION CONTRACTOR for 18th- and 19th-century domestic architecture is seeking interesting projects in the coming year. Knowledgeable, skilled craftsmen from structural repair to finish details. Timber Frame Company, RFD 2, Orange, MA 01364. (617) 249-4643.

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Most Wanted Articles

The editors are soliciting manuscripts on the topics listed below.

MARBLE MANTELS

Care and repair, including paint-stripping and cleaning of marble.

OPAQUE EXTERIOR HOUSE STAINS

Their application, advantages, and disadvantages. Must include an actual case.

THE SHINGLE STYLE

Architectural history/evolution of the style; geographical area; its vernacular forms; glossary—pictures—photographs.

JACKING A HOUSE

Sill repair, etc. Must include photos of procedure of an actual case.

TERRA COTTA

A restoration case history, including technical information and costs.

PLUMBING

Series of articles, from basic primer to treating existing conditions—specifically geared to old-house owners.

PRIMING AND PAINTING OF METALS

Protecting metals from moisture; which primers are appropriate for which metals, and why.

REPAIR OF POCKET DOORS

Hung doors and/or rolling doors.

ROOFING MATERIALS

Articles needed on asbestos, ceramic tile, wood shingle, and standing seam metal. Follow format of May 1980 "Slate Roofs."

We'd prefer to review a query letter before receiving a completed manuscript. Your letter should include (1) a detailed outline of the article, (2) proposal for illustrating the article (photos/drawings supplied or needed), (3) the sources you intend to use (books, personal knowledge, interviews, mfr. literature, etc.).

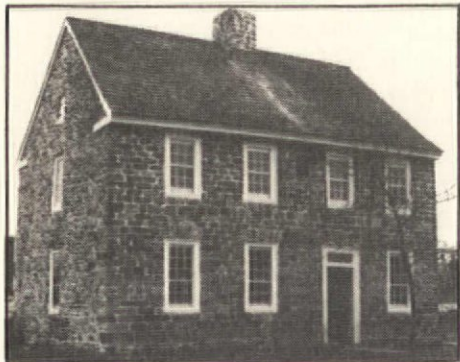
Give previous experience, professional qualifications, special skills. For more on topics, fees, and requirements, or to submit a query letter, contact Patricia Poore at The Old-House Journal, 69A Seventh Avenue, Brooklyn, NY 11217. (212) 636-4514.

REAL ESTATE

"RED TOP" IN COLORADO SPRINGS, COLORADO, is an historic mansion lovingly restored and set on 1.08 acres. Van Briggie tile fireplaces and golden oak accent the beauty of this estate. \$210,000. Contact Lucille Hessong, Real Estate Professionals/Better Homes & Gardens, P.O. Box 769, Woodland Park, CO 80863 or call (303) 687-3021.

CIRCA 1750 ROCKEFELLER family ancestral home. 5 acres. Large lawns, barn, seasonal stream. Wide board floors, exposed beams, 4 fireplaces, 9 bedrooms, 3 baths. Needs restoration. Candidate for National Register. Owner financing. \$95,000. Herman Mesick, Broker, Box 295, Germantown, NY 12526. (518) 537-6202.

QUEEN ANNE VICTORIAN—Located in historic Marshall, TX. 2-storey, 4 bedrooms, 3 baths, 6 fireplaces, parquet floor in parlor, turret, leaded & stained glass. Built 1900. Only 2 owners and meticulously maintained throughout its history. Also has 2 stairways and beautiful fretwork inside. \$150,000. Neely Plumb, Hamilton Realty, 1006 E. Bowie, Marshall, TX 75670. (214) 938-4795 or (214) 935-7852.



FOR SALE OR RENT IN YORK, PA: 1761 restored 2 1/2 storey limestone structure, National Register. Germanic/Georgian features, operating fireplaces, 4 rooms, vaulted stone basement, southern pine floors, walnut trim. Modern plumbing, heat pump/AC, parking. Creekside inner city location. Historic York, Inc., P.O. Box 2312, York, PA 17405. (717) 843-0320.

GET IN ON THE OHJ'S REVENUE-SHARING PROGRAM

Your Group Can Be Eligible For A \$1,000 Grant

THE OLD-HOUSE JOURNAL is giving away money... \$5,000 to be exact. We'll be awarding five unrestricted \$1,000 grants in December to five separate preservation groups in the U.S. And your group could be eligible.

THE OLD-HOUSE JOURNAL isn't being totally altruistic. Rather, we're trying to help those groups that are helping us. Here's our reasoning: The soaring cost of paper and postage is making it ever more expensive to sell subscriptions through the mail. At the same time, with government budgets being slashed everywhere, funds for preservation are dwindling.

SO IT ALL SEEMS QUITE LOGICAL: Rather than pour money into direct mail, why shouldn't we give that money instead to organizations that help us sell subscriptions?

WE'VE DEVELOPED a two-part plan to generate funds for preservation groups:

- (1) THE REVENUE-SHARING PROGRAM: All preservation groups are eligible to sell OHJ subscriptions (new or renewals)—at a discount—to their members. Then, you get to keep 50% of all funds you collect. For every 10 subscriptions (the minimum) you send in, you get to keep \$60.

- (2) THE GRANT PROGRAM: The OHJ will award an unrestricted \$1,000 grant to each of five groups participating in the Revenue-Sharing Plan. Winners of the five grants will be determined by a drawing to be held in December. Winning organizations will be drawn by Henry McCartney, Coordinator of the Neighborhood Conservation Program for the National Trust. Names of the five winners will be published in the February issue of The Old-House Journal.

JUST ABOUT ANY GROUP fostering restoration or preservation is eligible to participate in this Revenue-Sharing and Grant Program: Block association, neighborhood group, historical society, or city or state preservation society.

FOR THE NECESSARY FORMS to make your group eligible for a \$1,000 grant and revenue-sharing, call or write:

Sally Goodman
Grant Program Coordinator
The Old-House Journal
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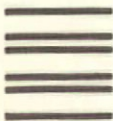
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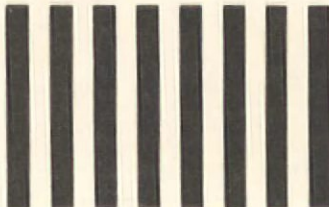
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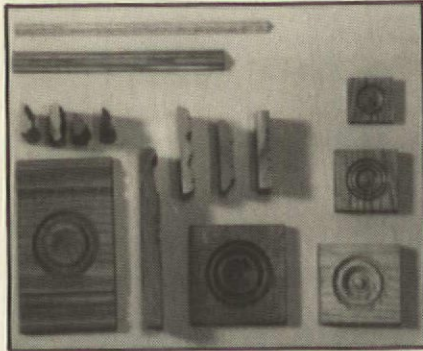
William Seale, historian & award-winning author, is Adjunct Professor of Architecture at Columbia University, and former editor of *19th Century* magazine. Seale consults on restoration projects throughout the country, & is presently writing a scholarly history of the White House.



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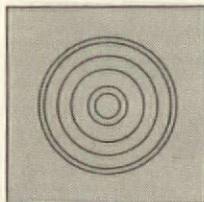
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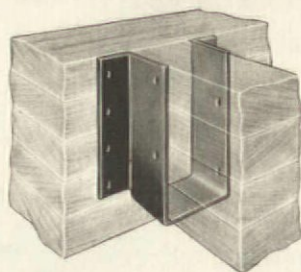
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