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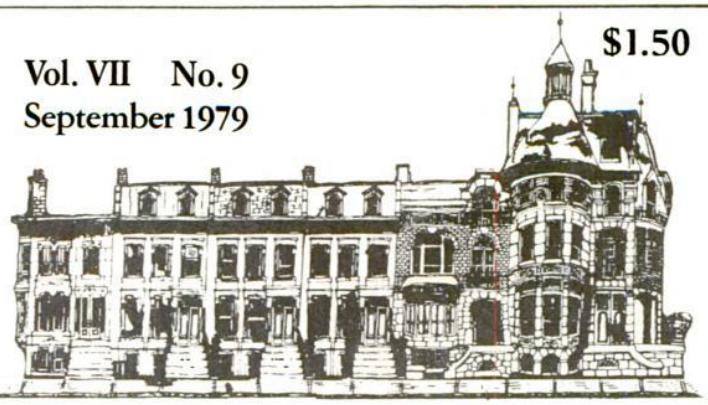
Restoration And Maintenance Techniques For The Antique House



Making A Flue Liner

In This Issue

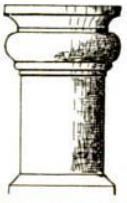
Coming Next Month

BUILT-IN GUTTERS

By Trina Vaux

IN 1975, WHEN WE BOUGHT our 1830's three-storey Philadelphia row house, an obvious advantage was the potential of seven fireplaces. The operative word here is potential. The kitchen fireplace in the basement had the soil pipe running through it, and all the others--two on each floor--had been sealed with masonry and plaster. In addition, several of the chimneys had had holes punched in them at various heights to accommodate stove pipes, now long gone. (When the flue silted up around the pipe a hole had been made higher in the chimney wall. The stove pipe was then raised and plugged into it.) In many cases these holes had ruined the arch of the original hearth opening.

WE DECIDED TO OPEN four of the fireplaces--simply a matter of sledges and crowbars while the dumpster was still available. Three of the fire boxes proved to be of reasonable size. The fourth, on the third floor, could only be described as a faggot burner: 13 in. x 11 in. x 31 in. A fortuitous heirloom--a Franklin stove--got us around the problem of narrow width. We filled the holes in the brickwork, rebuilt the arch on the bedroom fireplace, which was not to be replastered, and laid quarry tiles left over from the bathrooms and kitchens in the hearth floors.



THERE ARE, however, safety considerations closely allied with reality. We knew that the flues were not obstructed and that they drew well--the burning paper test worked, and a good deal of demolition dust went up the chimneys of its own accord.

BUT WE WERE SURE THAT the walls of the flues were less than stable. Much of the mortar had decomposed, and there were chinks in the brickwork both above and below the roof. Clearly they were a fire hazard, and no longer impervious to strong winds. As it happened, our financial situation was in a similar state of disrepair, so hiring a masonry magician was out of the question. Likewise, we were reluctant to pay for a total of over a hundred feet of ready-made liner. We decided to make our own.

The Basic Design

THE BASIC DESIGN was a sheet of iron tube to run from the throat of the fireplace to the top of the chimney. Where the flues were offset, the liner was to run from the point at which the offset stopped and the straight run began. Each tube was to have a sheet iron flange at the bottom. The liners were to be hung from the chimney by means of a 1/4 in. steel rod run through holes drilled in the liner, and set on top of the flue walls.

(Cont'd on page 102)

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material

Fly-By-Night Contractors

To The Editor:

I HAVE SOME HARD-WON ADVICE for any of the OHJ readers who are hiring people to work on their houses: Investigate very carefully before making any commitments. So much renovation is going on here in Washington, for example, that fly-by-night operators are having a field day.

WE CONDUCTED AN INFORMAL SURVEY on our block and uncovered more than $5,000 in losses to unscrupulous workmen in a single year. Here are a few of the horror stories:

1. Pointing job—Homeowner accepted a quote of $1,500 and made down payment of $600. Workman took money and was never seen again.

2. Driveway—The owner was quoted a price of $1,000 for the job and made a down payment of $700. Seven yards of concrete were delivered to the site and poured....but not spread! At this point the contractor disappeared. It cost the owner $400 to have the concrete pile jack hammered apart...and $200 more to have the stuff hauled away. A licensed contractor was called in, and he charged $1,500 to do the driveway job correctly. But counting in the costs for the faulty job, the owner spent $2,800 for a driveway that should have cost only $1,500.

3. Roof—Owner quoted a price of $900 and made a down payment of $400. He never saw the workman again.

4. Painting job—Owner quoted a price of $200 and made a down payment of $50. He never saw the workman again.

IN THE FOUR CASES above, the owners did not ask to see a city license or permit; they took the workmen's word that they had one or that it was being applied for. They did not check with the consumer affairs office, did not ask for references, or go to see work that had been done before.

BASED ON THESE UNHAPPY EXPERIENCES, I would like to offer these suggestions for anyone hiring a workman for his or her house:

- Don't hire someone who wants 1/2 down so he can buy supplies—unless it is a long-established firm. There's a strong possibility you'll never see him again.
- Don't hire someone who doesn't have a city license.
- Don't hire someone you don't know by reputation.
- Don't hire someone whose past work you can't check on.
- Don't hire wino's.

THE OLD-HOUSE JOURNAL®

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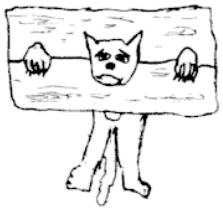
- Don't use a word-of-mouth contract; get it in writing.

BY THE WAY, the driveway in example #2 above, was mine!

C. M. Giordano
Washington, D.C.

Cat Odors: Is There An Answer?



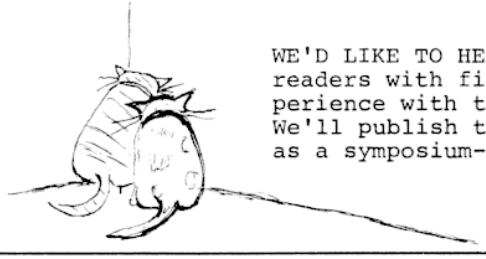
To The Editor:

I RECENTLY PURCHASED an old house that is quite lovely in all respects save one: It had been owned previously by a "cat lady." The house is completely filled with cat odor!

AND IT'S NOT JUST in the floor boards. One of their favorite haunts was the plate rail in the dining room. The plaster and baseboard below the plate rail are soaked with "essence of cat."

HAVE ANY OF the other readers solved a similar problem successfully?

Don Wardell
Ypsilanti, Mich.



WE'D LIKE TO HEAR from any readers with first-hand experience with this problem. We'll publish the answers as a symposium-in-print.—Ed.

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The Mysterious Roof Leak— A Drama In Two Parts

By Frank Bogardus, Manlius, N.Y.

WHEN A ROOF LEAKS, there may be more to the problem than holes in the roofing material. An old house I worked on recently illustrates the complexity of the problems that you'll sometimes face. I had been asked to put a new roof on a house that had a recurring leak in a first-floor family room. The leak showed up, the owner told me, only during the coldest periods of winter when a foot or more of snow is on the roof.

THERE WAS NO QUESTION that the entire house needed a new roof. Its asphalt shingles were brittle and cracked, with much of the mineral surface worn off. It seemed clear that the leak in the first-floor room was due to ice damming. During the winter, when snow on the roof repeatedly thaws and freezes, it creates a build-up of ice along the eaves. Ice dams can grow to two ft. thick or more before a prolonged thaw melts them off.

ICE DAMS FREQUENTLY cause roof leaks that don't show up during other parts of the year. As the ice builds up vertically, it also backs up the roof, creating a shape that looks like a pie-wedge in cross-section. The dam prevents subsequent melting from running off the eave. The water lies under and behind the dam, oozing its way through the roofing material into the house.

LEAKAGE FROM AN ICE DAM may appear on the walls and ceilings inside, as well as underneath the exterior siding. In severe cases, water that penetrates from a second floor eave can go all the way to the cellar.

For Ice Dams - An Ice Edge

FOR RELATIVE DURABILITY and economy, the owner and I agreed that a good choice for the new roof would be 290-lb. asphalt shingles, combined with an ice edge made of galvanized sheet metal. The shingles are guaranteed for 25 years—but would probably have a life expectancy less than that in the weather extremes of central New York.

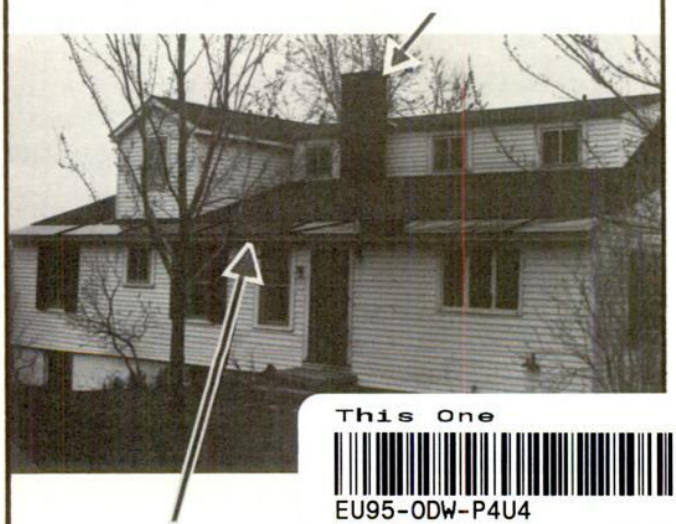
THE METAL ICE EDGE is a proven way to combat ice dam leakage. However, installation has to be done properly to give adequate protection. A half-way job is never sufficient. To merely shove roll aluminum under existing shingles is hardly worth the effort, because most ice dams will extend up the roof beyond the make-shift metal edge.

TO MAKE A PROPER ICE EDGE, galvanized steel was selected for this job because it is nearly as inexpensive as aluminum, but it is considerably more puncture-proof, and does not expand and contract as much. One drawback is that galvanized metal needs to be painted. The zinc coating will resist rusting for several years, but eventually it will weather through.

TO PAINT GALVANIZED STEEL, I first wash it with a solvent (such as paint thinner or mineral spirits) to remove any oil from the mill. Then I etch it with a zinc primer and give it two coats of exterior paint.

GALVANIZED STEEL is available in 4 ft. x 8 ft. sheets that permit a 3-ft. exposure of the metal with a 1-ft. overlap of shingles—which is adequate protection from ice damming in all but the most severe conditions. (On more steeply pitched roofs, less exposure is needed and 3 ft. x 8 ft. sheets can

Further investigation showed that chimney was causing melting that was contributing to the leak problem.



This One
EU95-ODW-P4U4

Leak still showed up (arrow) after a new roof had been put on and a galvanized metal ice edge had been installed at the eaves.

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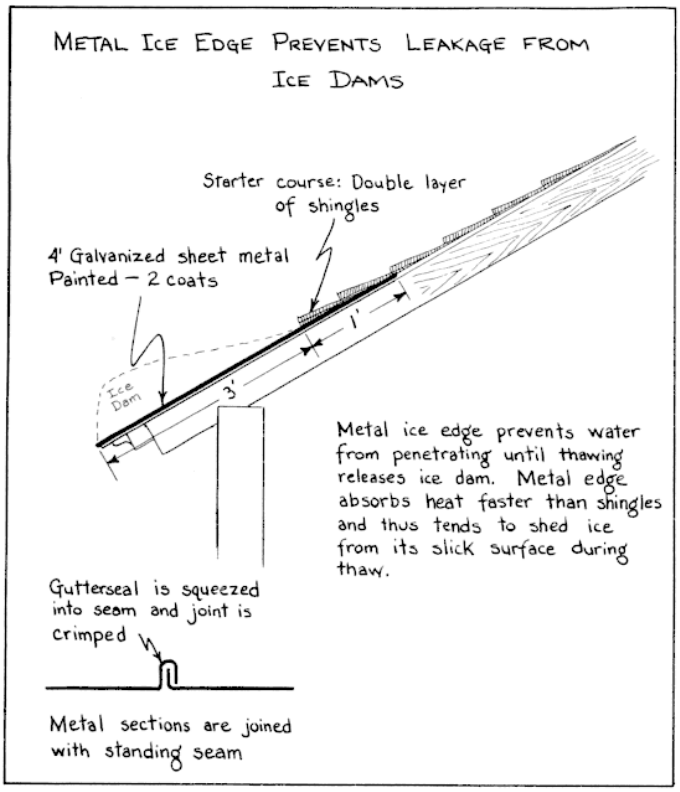


be used.) The metal is firmly bedded in roofing cement and then joined in sections with a crimped standing seam (see diagram). They can be joined in full-length 8-ft. sections, but I prefer to cut the sheets in half to make seams every 4 ft. These shorter sections have two advantages: (1) I find them aesthetically more pleasing; (2) Having more joints gives greater allowance for expansion and contraction.

THE NEW ROOF AND ICE EDGE was completed in the early fall. About the second week in December, a few days after the first heavy snowfall, the owner called me and said that the leak had reappeared, in the SAME PLACE!!! Needless to say, I found this hard to believe. I have made numerous similar installations, and they have all proved satisfactory. I went right over to take a look.

Finding The REAL Problem

FOR THE FIRST TIME, I made a thorough inspection of the underside of the roof. There had seemed no need to do this before, since it had seemed obvious that it was an ice damming problem. The roof involved is on a shed-type structure, extending about 20 ft. off the rear of the house. Above the first floor in the shed section is a small, unheated attic, tapering from about 4 ft. high where the shed meets the main house to nothing where the rafters meet the plate.

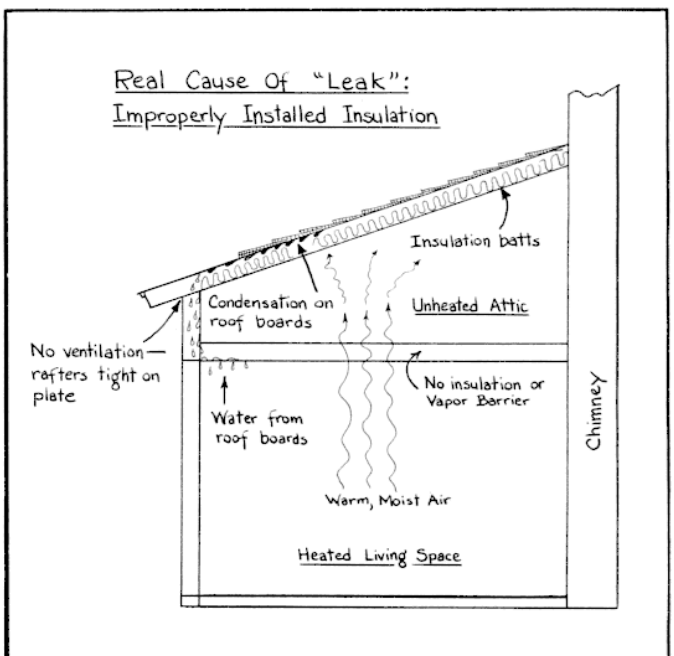
THERE IS TONGUE-AND-GROOVE FLOORING in the attic, which played a critical role in this drama. Several years ago, when the owner decided to insulate the attic he didn't want to remove the floor boards to put insulation between the floor joists. Instead, he stapled foil-backed fiberglass insulation batts between the roof rafters. This, he supposed, would accomplish his purpose of keeping heat from escaping the house too quickly. He also thought that some heat retained in the attic would make it more usable for storage.

Detective Work

AFTER SEVERAL INSPECTIONS and serious head-scratching, I realized that the insulation might be at the root of the problem. The insulation between the rafters did not keep the warm air from reaching the underside of the roof, but only served to hold it there. Taking down some of the fiberglass, I found the roof boards covered with droplets of water. Some of the boards were sodden and on the verge of rot.

ON COLDER DAYS, frost formed in the place of water. The frost would build up until the weather turned warm. Then the melted water would trickle down the slope of the roof until it hit the plate. From there, it would soak through to the ceiling of the room below.

TO TRY TO SOLVE the problem, the owner has installed insulation—with a vapor barrier—between the attic floor joists. This hopefully will drastically reduce the flow of moist air to the attic. I also put three vents in the roof to create air circulation to draw off residual moisture. There was no way to install



Real cause of the "leak": Warm, moist air was rising into the cold attic from the living spaces. Moist air was getting behind the insulation batts and condensing against the cold roof boards; condensed water then leaked down into the ceiling.

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soffit venting because there are no rafter tails; the cornice is built entirely below the plate level.

I HAVE SUGGESTED that the owner remove the insulation between the rafters, to allow air to circulate freely under the roof boards. But he is reluctant to see his past effort and expense go to waste.

THIS TALE HAS TWO MORALS: (1) When setting out to fix a leak in a roof, be SURE you know where the water is coming from; (2) Beware installing insulation between roof rafters. If it is imperative to put insulation in the top of an attic, be sure there is provision for ventilation BEHIND the insulation. See OHJ, Sept. 1976, p. 9, for a general discussion of attic insulation problems.

Patching Metal Gutters

OLD METAL GUTTERS are going to require repair from time to time. And this is one type of repair that should not be delayed—because leaky gutters can cause disastrous damage in an old building. Metal gutters can range from modern aluminum ones or galvanized steel through the more classic materials like copper, terne metal or lead-coated copper.

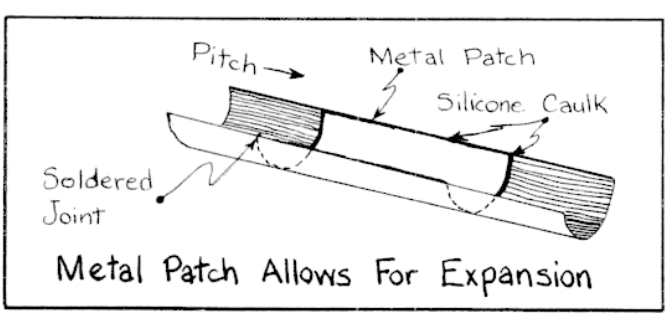
WHEN CONFRONTED BY a deteriorated gutter, the first decision is the "repair or replace" choice. Every building material has a finite life span and must be replaced at some point. If you have a metal gutter that is deteriorated at many points, you're probably better off replacing the entire system. Conversely, if there are just a few bad spots, with judicious mending you may be able to get an extra 10-15 years of service from the existing gutter.

Expansion/Contraction

METAL GUTTERS expand and contract with changes in temperature. Thus any gutter system with soldered joints is under continual stress—and the joints are likely to open. Soldered gutters should be inspected annually, and any broken joints resoldered. This kind of soldering is beyond the capabilities of most do-it-yourselfers.

WHERE HOLES EXIST, you can patch a couple of ways. We don't recommend epoxy-fiberglass patches because these create a rigid bond that expands at a different rate than the metal. Thus they could work loose.

PATCHES CAN BE MADE WITH METAL—but be sure to use the same metal as the gutter is made from. This will avoid corrosion by galvanic action between dissimilar metals. One type of patch that can be made on metals that can be soldered (e.g., copper) is shown in the sketch. Clean metal well with steel wool, then solder patch on the uphill side of the break. Seal the patch on the downhill side with a high-quality silicone caulk. (See sketch.) Having one free-floating end allows patch to expand as needed.



Metal Patch Allows For Expansion

ANOTHER WAY to patch with metal is to cut a metal patch of appropriate size, and then hold it in place only with silicone caulk. This avoids the need for a soldered joint. You clean the gutter well, apply a liberal amount of caulk on the gutter, then bed the patch firmly in the caulk...paying special attention to the seal at both ends of the patch. Although silicone caulk should have a useful life of 10 or more years, this kind of patch requires careful monitoring through annual maintenance check-ups.

IT IS ALSO POSSIBLE to make a less durable patch with flashing cement and a fabric material such as burlap, roofing membrane or building paper. There's always a chance that a black roofing compound or flashing cement will contain acidic materials that will attack the metal. So protect the gutter with a good-quality metal primer (such as Rust-Oleum).

THE STEPS in making this type of patch would be: (1) Clean gutter thoroughly; (2) Paint with a metal primer; (3) Apply coating of flashing cement or roofing compound; (4) Imbed fabric in the cement; (5) Cover patch with another coat of flashing cement.

AVOID COATING THE ENTIRE metal gutter with a coating such as roofing cement. If any water does get under such a coating, it will be held in contact with the metal indefinitely.

Need For Maintenance

FREQUENT INSPECTIONS and cleaning of metal gutters are imperative. In addition to spotting troublesome leaks, inspections allow you to see whether any organic debris is building up in the gutters. Besides impeding water flow and causing ice damming, such debris tends to hold moisture. The moisture will react with any acidic elements in the debris or in the pollutants from the air to create acid that will hasten the destruction of the gutter material.

GALVANIZED METAL should be kept painted. If it is bare or rusted, prime with a metal primer (one made for galvanized steel), followed by a top coat of any exterior enamel--preferably one made by the same company that made the primer.

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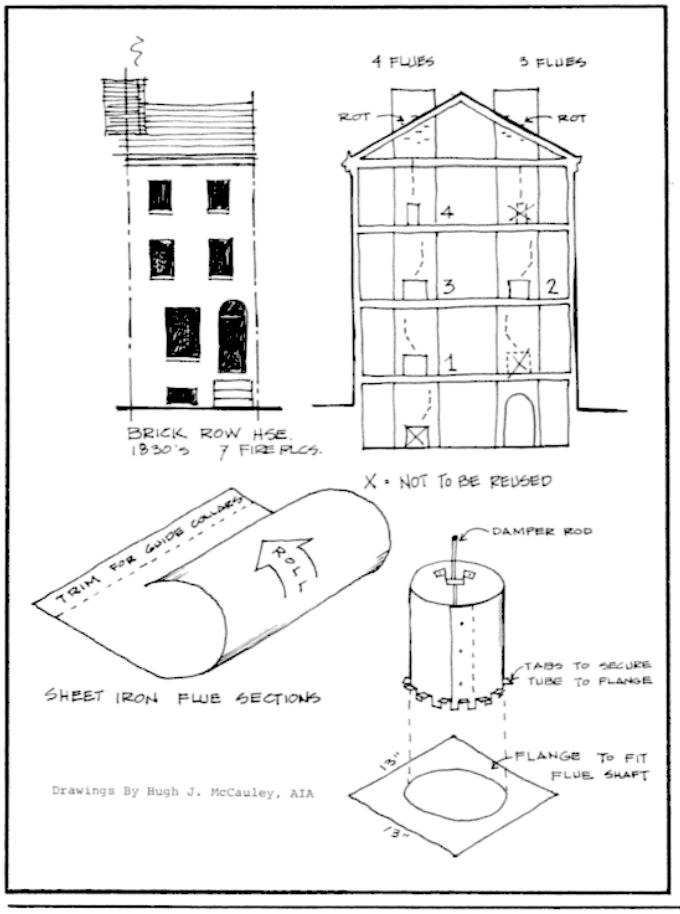
(Flue Liner--Cont'd from pg. 97)

Once the liners were installed, we would pour concrete around them to give stability. In addition, we decided to attach guides to the inside of the liners for rods to operate dampers we intended to install at the chimney tops. (None of the chimneys had existing dampers.)

THE MATERIALS NEEDED FOR THE LINER job were 4 ft. x 7 ft. sheets of 20 gauge galvanized sheet iron, short pop rivets and a pop riveter, shears or tin snips, a drill, concrete, 1/4 in. steel rod, and two people.

FOR OPENINGS 13 in. square we wanted a liner diameter of roughly 12 in. The standard size sheet iron available was 4 ft. x 7 ft., so the first step was to trim 7-1/2 in. off the width of the sheets so they would, when rolled with a 3 in. overlap at the joint, have the proper diameter. We also had to trim the length of several sheets because the flue heights were not convenient 7 ft. multiples. The long narrow leftovers were used to make guides for the damper rods and collars for rolling the sheet iron. Larger pieces were saved to make flanges for the bottom of the liners.

BEFORE THE SHEET IRON WAS ROLLED we cut 4 in. strips off the 7-1/2 in. x 7 ft. leftovers, bent them to make a flange at each end, and riveted them down the center of the large piece of sheet iron. (Although we used pop rivets, short metal screws, stove bolts, or solder may be preferred by others.) We installed four guides on each 7 ft. section, fewer on shorter sections, and, of course, were careful to line them up.



Rolling The Sheet Iron

ACTUALLY ROLLING THE SHEET IRON can be a trial; the sturdy gauge we thought necessary is quite stiff. To ease the process we cut the 7-1/2 in. leftovers into two pieces and riveted them to make collars of the proper circumference. These were then slid around the liner sheet as it was rolled, guiding it to the necessary dimension, and holding it so that riveting would be easier. (This is where two people are necessary--one at each end of the liner to insure that it rolls and does not bend.) With the liner rolled (damper guides are on the inside) and held by the collars, the two edges were riveted at the overlap.

THIS PROCESS WAS REPEATED until we had enough sections of liner to run the height of the flue. In the section which was to be at the top, we drilled two 1/4 in. holes to accommodate the steel rod which would hold the liner in place once it was installed.

THE NEXT STEP WAS to put a flange on the bottom section. The purpose of the flange is twofold: To prevent smoke from getting between the liner and the flue wall, and to serve as a stop for the concrete when it is poured around the liner. In actual practice it will never be totally effective because of the impossibility of installing a flange which fits perfectly, will go down the chimney easily, and is secured to the liner. However, it does the job reasonably well.

Making A Flange

FOR THE FLANGE we cut a piece of sheet iron slightly less than 13 in. square (the size of the flue), and then, using the bottom liner section as a guide, marked and cut a hole in the center corresponding to the size of the liner. We then checked it for size, and to make sure it would slide down inside the flue. (We were lucky--there were no bricks protruding from the flue wall.) The flange and liner were then attached by a tab connection. (Tabs of approximately 1 in. square are cut in the end of the liner, and every other one is bent back at right angles. The flange is then slid on, and all tabs are hammered down against the flange.)

THE FINAL STEP in fabrication was to join the sections to make the necessary length. This was done by sliding one section about 2 in. down inside the next (making sure the damper rod guides line up) and riveting at the overlap. In most cases we made lengths of no more than 14 ft. while still on the ground. Longer lengths were made up of 14 ft. sections once they were on the roof. In fact, some riveting had to be done with one section already in the flue, and the next one set above it, since

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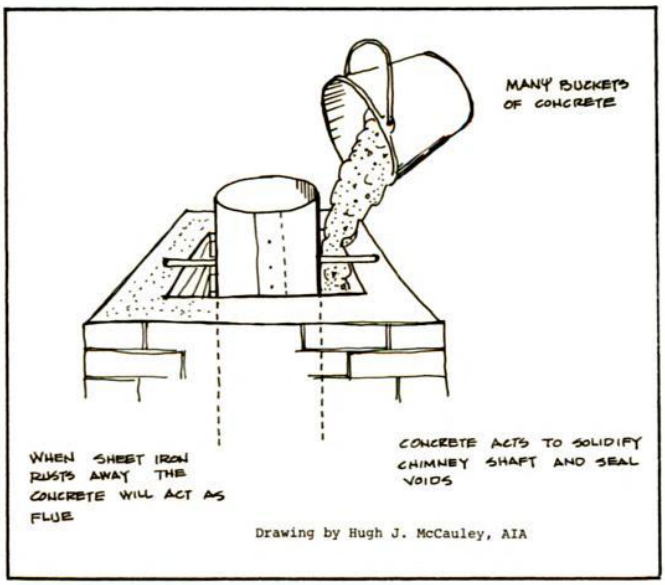

Drawing by Hugh J. McCauley, AIA

one of could hold the top end high enough to make the liner perpendicular. This part of the installation required at least two people (one to keep the lower section from slipping down the flue, and one to rivet) and some choice vocabulary. Once the liner was in the flue, we put a piece of 1/4 in. steel rod through the holes previously drilled in the liner, and rested the ends of the rod on the top of the flue walls.

The Concrete Proposal

HAVING LINED ALL FOUR working flues in this fashion, the temptation to consider the job finished was overwhelming. Like all other old house owners, the dream of being "finished" is constantly with us, floating in the evanescent future. For the present, finding a cheap source of concrete was the next task.

FILLING IN THE SPACE BETWEEN THE LINER and the flue wall, as it turned out, took unimaginable amounts of concrete, time and brawn. We estimate that 80 lbs. of concrete were required per foot to fill the 1 in. space between flue wall and liner.

ALL OF IT HAD TO BE HOISTED up three storeys and poured down the chimney. We ended up buying stone and sand in bulk delivered to the back yard, renting a small electric cement mixer, and enlisting the help of the next door neighbor who shares the chimneys. Thus, cost and effort were divided. Gloves and block and tackle were essential, and hot baths taken in conjunction with the most favored relaxant/pain killer (whether Ben Gay, gin, or both) were required.

IT MAY BE THAT ALL flue walls do not need to be completely filled with concrete, depending on the extent of decay. Some of ours were in pretty bad shape and needed the added stability. We also wanted to insure that the smoke went up the liner and was prevented from finding chinks in other flues. Finally, galvanized sheet iron will eventually decompose; a solid wall of concrete around it provides security when that happens.

THE HAPPY ENDING is that we now have four fireplaces that draw splendidly, and do not leak smoke. They do not leak water and heat, and our next job is to install damper caps--about which, and on completion, we will provide a full report for these pages.


The author's 1830's row house in Philadelphia.

Trina Vaux is a Philadelphia-based preservation consultant who has also had experience in public radio and arts management. She is a co-author of The Cape May Handbook and has participated in historic architectural surveys in New Jersey and Pennsylvania. While lecturing and giving courses and workshops on preservation, she and her husband, Hugh J. McCauley, AIA, are constantly in search of time to finish renovations on their own old house.

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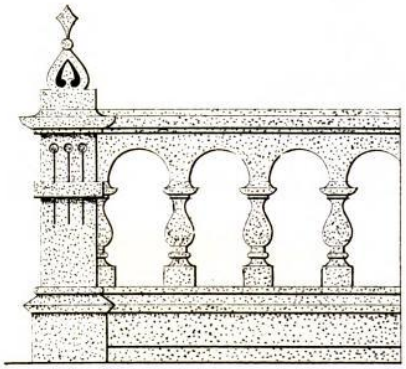
Sand Paint



By Carolyn Flaherty

SAND PAINT is an unusual paint finish that was common in both the 18th and 19th centuries. By dusting sand onto the paint after it was applied and still wet, painted wood was made to resemble stone. Sand was most often blown onto the paint with a hand bellows.

Historic Use

SAND PAINT IS still found today on many historic homes. Mount Vernon is the most widely known. It was George Washington himself who has left the best record of why and how sand paint was used. The following is an excerpt from "Writings of Washington" and is his instructions to his building supervisor in Washington City.

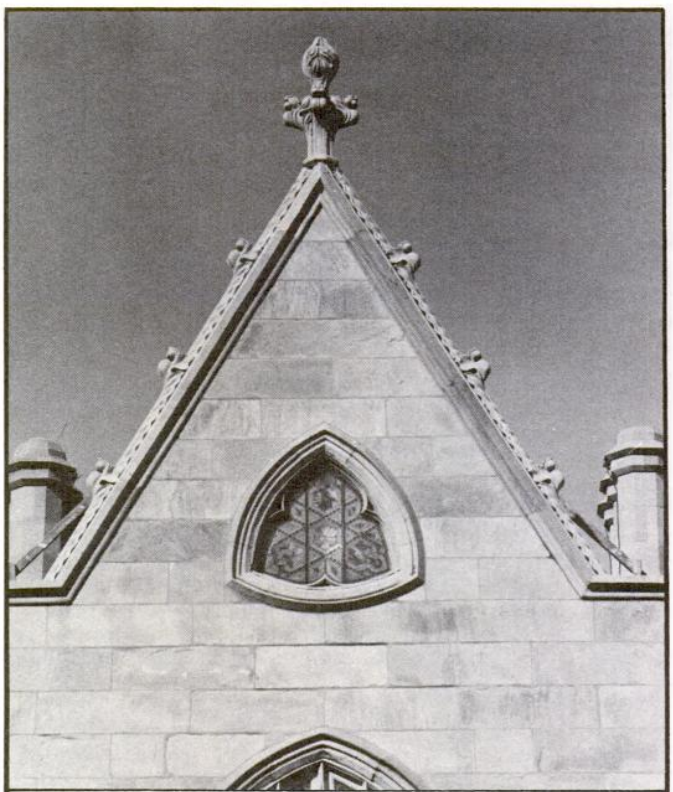
> Sanding is designed to answer two purposes, durability, and presentation of Stone: for the latter purpose, and in my opinion a desirable one: it is the last operation, by dashing, as long as will stick, the Sand upon a coat of thick paint. This is the mode I pursued with the painting at this place, and wish to have pursued at my houses in the City. To this, I must add, that as it is rare to meet with Sand perfectly white, and clean: all my Houses have been Sanded with the softest free stone, pounded and sifted: the fine dust must be separated from the Sand by a gentle breeze, and the sifter must be of the fineness the sand is required and it is my wish to have those in the City done in the same way. If the stone cannot be thus prepared in the City, be so good as to inform me, and it shall be done here and sent up. It must be dashed hard on, and long as any space appears bare.

IN A 1950 restoration of Carpenters' Hall in Philadelphia, the exterior trim was found to have a bottom layer of sanded paint. It was a putty color mixed with a light-colored sand. Carpenters' Hall was built in 1770-1774 of stone and wood and both materials were sand painted. It is believed that stone color finishes were popular in Early America because they imitated British Georgian stone architecture.

Sand Paint In The 19th Century

SAND PAINT continued to be used in the 19th century. Many elderly painters can remember using hand bellows to apply the sand which had been dried by heating. It was thought in the Victorian era that sand painting was valuable as a means of fireproofing.

WHEN ALEXANDER JACKSON DOWNING began designing his romantic and picturesque Victorian houses, he espoused the doctrine of truthfulness of materials--wood or stone should appear to be what they actually are. Where did this leave



East gable of Lyndhurst, the Gothic Revival mansion in Tarrytown, N.Y, has its wooden finial, crockets and mouldings sand painted to resemble stone. (Photo courtesy of The National Trust for Historic Preservation.)

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the practice of sand painting? Well, Downing made an exception because he so disliked the appearance of stone and wood in the same structure. The following is his rationalization taken from his influential book, "The Architecture of Country Houses" published in 1850:

> Perhaps an exception may be allowed in the case of wooden verandas, and such light additions to buildings of solid materials as we often see in this country, in districts where the stone is so hard as to be costly when wrought into small parts, so that wood is often used, but is so painted and sanded as to harmonize with the stone. In this case, we say, the apparent untruthfulness is permissible, for the sake of a principle almost equally important--unity of effect; for nothing is more offensive to the eye than an avowed union of wood and stone in the same building. But of course, this is a sacrifice to expediency; and the more truthful treatment, viz. making all portions of one material, is the only satisfactory one.

SO WITH THIS DISPENSATION and implied approval, many houses in the Italianate, Gothic, and English rural style had their verandas, window frames, door frames and sometimes doors and brackets sand painted to imitate stone.

THERE IS A GREAT DEAL of written evidence that the cast iron railings of brownstones had been sand painted to imitate the brown stone of the building. This all-over stone brown look is probably what caused novelist Edith Wharton to refer the Manhattan rowhouses of her time as rows of "chocolate mousse."

Using Sand Paint Today

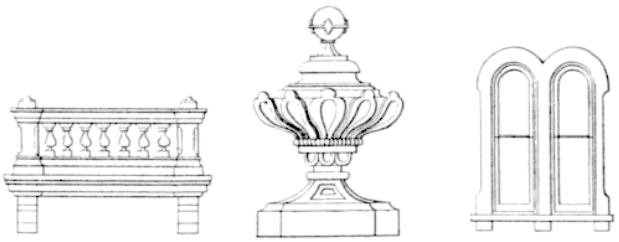
BEFORE YOU CONTEMPLATE using sand paint there is one important fact to consider--it is almost impossible to remove. In fact, one of its biggest advantages is durability. In the brownstone neighborhood where The Journal's office is located I was able to find many examples of sand paint. It was on cast iron railings that had fallen into a sad state of disrepair and obviously hadn't been painted in 100 years. But the sand paint was clinging to the iron--still giving an amazing illusion of stone.

THE NEXT CONSIDERATION is: Where are the appropriate areas of the house to use sand paint? I think A. J. Downing's mid-19th century advice is a good starting point. Any place where wood is used in conjunction with stone is an area to consider.

FOR INSTANCE, on any brick or stone house there are many architectural elements that could be sand painted:

1871 Paint Card

A REPRODUCTION of an 1871 paint manufacturer's color card is available that shows six different sand paints among the 48 samples. At the time, ready-made sand paint was often used. The card is the same one that appeared in the book Exterior Decoration--now out of print. No. 51 purports to be a "Perfect Imitation of Brown Stone." This attractive, 11 x 14 in. card is $2.00 from the American Life Foundation, Watkins Glen, New York 14891. There is a limited supply.



- WINDOW AND DOOR FRAMES--Brick houses often had grey or tan stone-colored sand paint on window frames, and any light-colored stone house benefits from having window or door frames painted in a matching stone color.
- VERANDAS--Any veranda, small porch or portico can be sand painted.
- DECORATIVE TRIM--Crockets, corbels, finials, brackets and any decoration on the stone house could be painted in a matching stone color.
- RAILINGS--Balustrades on small balconies, roofs, or stoop railings are good candidates for sanding.

How To Create A Sanded Finish

THERE ARE TWO BASIC WAYS to apply sand paint. The first is to mix the sand in with the paint. This a method used years ago and ready-made sand paint was sold (as shown in the color card described in the above box). Ready-mixed sand paint is sold today for interior use. Although many professional painters use this method it is not the preferred one. Paint mixed with sand is very difficult to apply and the finish does not give the same illusion of stone as happens when the sand is blown on.

THE PREFERRED METHOD is blowing sand onto wet paint. This can be done with an old-fashioned hand bellows or with a modern "glitter gun." A glitter gun is sold for the purpose of spraying colored chips onto a textured ceiling or exterior surface--for reasons better left unexplored. But they also make terrific tools for spraying sand. (See box on next page.)

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Getting A Glitter Gun

GLITTER GUNS can be purchased from the Goldblatt Tool Company. There is a hand powered model that requires no compressor to operate. It works by cranking a handle which dispenses the sand and sells for $31.65.

THERE IS ALSO a larger deluxe model which sells for $58.50 and needs a compressor to operate (compressors can be rented). It is recommended for heavy duty work when covering whole buildings.

THE HOMEOWNER who is only painting a part of the house--a railing, window frames, etc.--should find the hand model quite adequate.

TO GET a free copy of the Goldblatt catalog, write to: The Goldblatt Tool Company, Dept. OHJ, 511 Osage, Kansas City, Kansas 66110.

ONE CAUTION: If you do not plan to buy or borrow a glitter gun, I cannot promise that any bellows will do the job. Recorded information only tells us that a hand bellows was used but there is no evidence to the actual kind. It is possible that it was a type of tool that is no longer around.

BEFORE USING THE BELLOWS try the technique on a sample board. In fact, no matter what the method, it should be tried out on a sample board. A variety of finishes can be gotten with the glitter gun just by the way the tool is used. By testing it on a sample first, you can find out which is the best for your building.

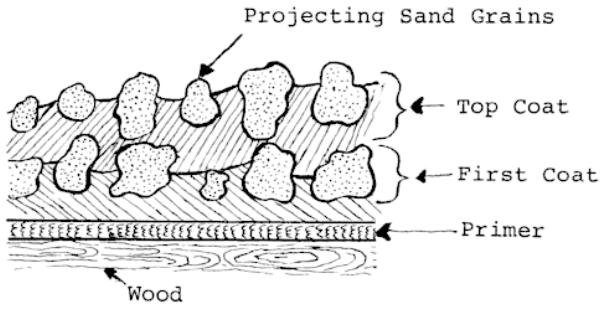
The Sand

TWO FACTORS are important concerning the sand--texture and color. As most sand is either a gray or tan stone color it is not too much of a problem to obtain a sand that is similar to a stone house.

IT IS FAR MORE DIFFICULT to reproduce a sandstone or brownstone effect. They did it at the Morse-Libby mansion in Portland, Maine. For those who want to get serious about it and to use it in fairly large quantities, I recommend reading about it in the report published about the mansion. (Reviewed in the May 1978 OHJ.)

TO MATCH THE BROWNSTONE of the facade they had to use purple garnet sand, orange garnet sand, fine brown sand and other ingredients. A quick way to make a small amount of sand paint in a brownstone color is to use some old, deteriorated brownstone crushed up to the fineness of sand with a mortar and pestle.

The Order Of Finish



RESTORATIONISTS have successfully used play sand (sold for sand boxes) which can be bought at the hardware store. It is sometimes too coarse. It can be poured through a framed screen (a window screen will do) to sift out the too-large particles. Building supply stores generally carry two or three grades of sand. Just by looking at the available varieties, one can probably be selected that is right for the job.

TO MATCH AN EXISTING SAND PAINT, you can dissolve a patch of it in paint remover (preferably water-soluble) and then wash off the paint remover. What is left is the sand that was used originally.

Applying The Finish

PROCEDURE FOR the application of sand paint is basically five steps:

1) SURFACE PREPARATION: The most important step in any paint job. (The June 1976 OHJ elaborates on surface preparation and an article in the December 1974 OHJ deals specifically with preparation of iron.)

2) PRIME with any good, appropriate primer.

3) PAINT with a good quality oil-based house paint. (We have no information on latex paint being used for this purpose--either pro or con--but oil-based paint has been traditionally used.) The paint color should approximate the desired stone color.

4) BLOW ON SAND: This must be done while the paint is still wet. If you hold the blower too close to the surface it will move the paint around. The proper distance away from the paint is something that should be worked out with the sample board.

5) REPEAT THE PAINTING AND BLOWING OPERATION: Although just one coat of sand can be used, two coats are infinitely better. It produces a more stone-like appearance and will be much more durable. NOTE: Let the first coat dry thoroughly before applying the second.

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Refinishing Clinic

By John Zirkle, Harrisonburg, Va.

Painting Galvanized Metal

Q. People have told us that no paint will stick to galvanized metal surfaces. We recently had to replace the gutters and leaders of our Victorian house. The appearance of the galvanized metal is very objectionable to us. Now the man at our local paint store tells us that latex exterior house paint is a good primer for unrusted galvanized metal gutters and downspouts. Is this true?

A. Yes, it is true, although I cannot explain exactly why. Most good latex exterior paints applied to unrusted galvanized which has been cleaned of all oily residue makes a good primer as well finish coat. Be sure the oily coating which is on much new galvanized is removed by mineral spirits before painting the metal. Holdtite from Davis Paint Company of Kansas City is good as a galvanized metal primer as is SWP's A-100 Latex House Paint. A different type of primer, Gal-v-Grip from Derusto is also good for large galvanized metal surfaces, though it is slightly more expensive than the latex house paints. One more caution. The latex paints to which I refer all have a flat finish. The gloss and semi-gloss latexes may not be suitable for primers on galvanized metal.

A Whitewash Formula

Q. We have some outbuildings and fences we just want to whitewash. Can you give us any hints on making or applying whitewash?

A. I can reprint a formula that is over one hundred years old:

> "Lime whitewash is made from lime well slaked. Dissolve two and a half pounds of alum in boiling water and add it to every pailful (2-1/4 gallons to 2-1/2 gallons) of whitewash. Lime whitewash should be used very thin (because of the laws of light reflection which I cannot explain, your wet whitewash will be much more transparent than the dry) and when it is sufficiently bound to the wall by means of the alum, two thin coats will cover the work better. Most whitewashers apply their wash too thick and do not mix a proportionate quantity of alum to bind it, consequently the operation of the brush rubs off the first coat in various parts and leaves an uneven surface..."

Some people I know use salt in preference to alum, but I can't vouch for this.

Preserving An Unpainted Fence

Q. We bought a house built around 1900. The back yard is enlosed by a six ft. high old, unpainted, board fence. The fence blends in perfectly with the plantings in the yard, and we do not wish to paint it. It is in not too bad condition, but we would like to preserve it with some sort of non-glossy clear finish. It seems that all of the finishes that we have checked on cost an arm and a leg. Can you suggest anything else?

A. Linseed oil is one of the most economical clear finishes you could use. You might get a little more protection for the fence by adding a pint to a quart of spar varnish to every gallon of oil. This will cost you just a little more, but should be worth it. Since your surface is old and weathered, use raw linseed oil rather than boiled. Don't worry if you get some shiny spots because of the added varnish. These will disappear in a few weeks.

Correcting a Water Stain

Q. The roof of my turn-of-the century house leaked. Water came through and stained a bedroom ceiling. The plaster of the ceiling is still firm but there is a large yellow stain where the water had come through. I have repainted the ceiling twice with a good latex paint. The stain came back after each coat dried. How can I correct this?

A. The stain is water soluble. It begins to come through each time while the latex paint is still wet. You might correct this by using a solvent-thinned alkyd instead of a latex paint. Better yet, coat the stained area with a good coat of shellac as a primer and sealer. There are also commercial stain sealers available at paint stores. Many of these are simply pigmented shellacs.

John F. Zirkle is a retired housepainter and paperhanger. He began painting for his father when he was ten years old and later went into partnership with him in a paint contracting and retail paint and wallpaper business. Above are some of the questions he has answered in his many years of experience.

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Products For The Old House

Metal Shingles

ONE OF THE MORE UNUSUAL roofing materials used in the late 19th and early 20th centuries was metal roofing shingles. Most often, these shingles were made from galvanized steel and were painted.

FINDING replacement metal shingles is quite difficult. There are only two sources in the U.S. that we've been able to find. And there are only a couple of patterns available.

METAL SHINGLES have several advantages for old houses: (1) Aesthetic appeal; (2) Long life; (3) Light weight; (4) Fire resistance; (5) They are cooler than asphalt shingles in the summer.

SHINGLES ARE AVAILABLE in such metals as: Galvanized steel, aluminum, terne, copper and Microzinc 70. The galvanized and terne shingles have to be painted—which can be an advantage if you are trying to match a roof color to the color scheme of the house.

METAL SHINGLES could be considered where an asphalt shingle roof has to be replaced and you are looking for something with more of a period look. Metal shingles could also be used on a Mansard roof where it is too expensive to replace with slate.

METAL SHINGLES are somewhat more expensive than asphalt: Galvanized is about $70 per square; terne is $130 and copper is $400. In addition, it costs about $35 per square to install metal shingles. One problem with metal shingles is finding a roofer to install them; many of today's asphalt-oriented roofers don't want to bother.

THE TWO SUPPLIERS of metal shingles are:

● CONKLIN Tin Plate & Metal Co., P.O. Box 2662, Atlanta, GA 30301. Tel. (404) 688-4510. Conklin currently makes only Diamond Pattern shingles, but also has old dies on hand (including a gothic pattern) and could produce a special run. Conklin sells mainly in the Southeast, but can ship to all points. Also makes galvanized gutters and accessories. Brochure on Diamond Pattern shingles available free.

● BERRIDGE Manufacturing Co., 1720 Maury, Houston, TX 77026. Tel. (713) 223-4971. They make several styles of metal shingles; their traditional pattern is called "Victorian Shake." It's made in Galvalume—an aluminum-zinc alloy on steel that lasts longer than standard hot-dipped galvanized. It weathers naturally to the color of dark zinc. Company also makes standing seam metal roofing in terne, copper, Galvalume, and prefinished metal. Catalog free.

Helpful Publications

Return To The City

RICHARD ERNIE REED—author of "Return To The City"—traveled 10,000 miles across the U.S. to provide a graphic report on how preservation is faring in America's cities. His findings are upbeat without being panglossian. From Portland, Maine, to Portland, Oregon, Reed shows how energetic and creative people are producing delightful living environments from buildings and neighborhoods that skeptics had given up as lost.

THE BOOK IS not primarily a how-to-do-it manual, although there are helpful chapters on: Organization; Creating A Neighborhood Identity; Design Unity; Gaining Control Of Your Community; and The Problem Of Displacement.

REED's research will prove invaluable to anyone trying to get a neighborhood preservation group organized. When the task seems hopeless, it's always reassuring to have proof that it CAN be done. "Return to the City" is available for $8.95 from: Sales Service Desk, Doubleday & Co., 550 Stewart Ave., Garden City, NY 11530.

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