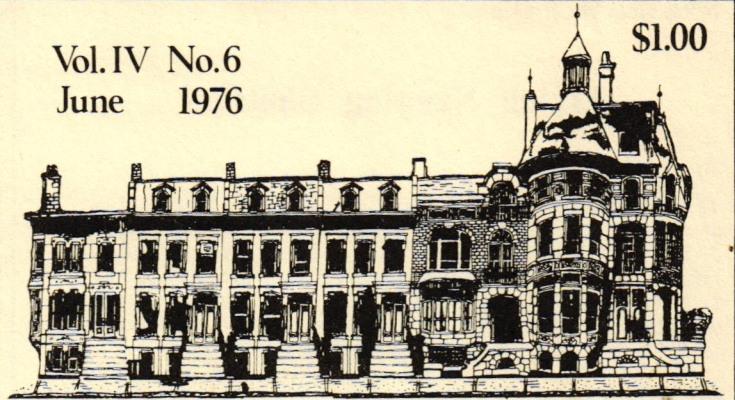


THE OLD-HOUSE JOURNAL

Vol. IV No. 6
June 1976

\$1.00

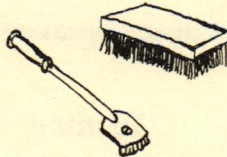


Renovation And Maintenance Ideas For The Antique House

Avoiding Mistakes



In



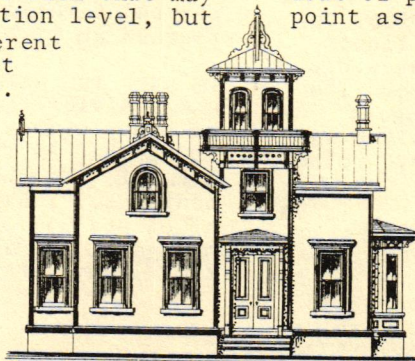
Exterior Painting

By Edward F. Gola, Technical Manager—
Exterior Coatings, PPG Industries

FOR MANY YEARS, the biggest selling house paint was a product based on linseed oil with high levels of zinc oxide—a product with both plus and minus features. It provided good performance with proper application, but it had a built-in affinity for moisture—with a strong tendency to blister.

THOUGH A NEW ERA of chemical-based coatings and resins has emerged to give the homeowner a wider range of paints to choose from, the old-house owner faces a special problem: You also have to think about what has already been applied to the structure. An old house has probably been patched, repaired and repainted five or more times. It not only has acquired a brittle build-up of old paint film that may be reaching (or at) its saturation level, but it is also a build-up of different paint formulations that may not be compatible with each other.

QUESTIONS TO BE ANSWERED first are: (1) Will the surface take still another coat of paint? (2) If yet another coat of paint is to be added, what kind of surface preparation is necessary? (3) What kind of top coat will be flexible enough to counteract the brittle



In This Issue

Reshaping An Old Fireplace.....	7
Painted Vs. Stripped Woodwork.....	2
Installing New Joists And Beams.....	3
Wood Destroying Insects.....	5
Fixing Sagging Shutters.....	2

Coming Next Month

SELECTING APPROPRIATE LIGHTING FIXTURES

character of the surface to be covered? (4) If the old paint is to be removed, what is the best primer and finish coat combination? (5) Is there evidence of a moisture condition that should be corrected before any new paint is applied?

Previous Paint — Salvage Or Remove?

ABOVE 16 mils thickness (0.016 in.), an old paint film can be considered at the dangerous saturation level. What this means is that above this thickness the paint film presents a greater and greater barrier to the escape of moisture—moisture that is often generated within the home itself. Since moisture tends to collect at the interface between the wood surface and the original first coat of paint primer, pressure mounts at this point as the moisture tries to push its way through the paint film. At high film thicknesses, this pressure can cause cracking and peeling down to the wood surface.

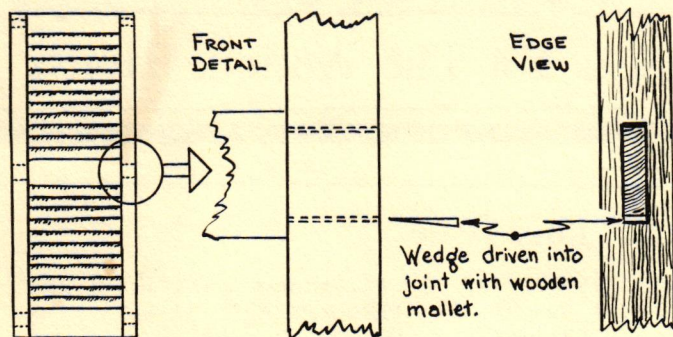
THERE IS NO WAY—short of extensive laboratory testing—to predict with 100% certainty whether or not a new coat of paint will cause peeling. New paint, regardless of quality, will peel if applied over an old film that is not anchored firmly

(Continued on p. 9)

Fixing Sagging Shutters

To The Editor:

IN WORKING WITH OLD BLINDS, I have found that a number of mine had a noticeable sag. Joints in these blinds are all mortise-and-tenon, with wooden pegs holding the assembly together. I have found that you can straighten up these blinds by driving in small wooden wedges at the middle mortise.

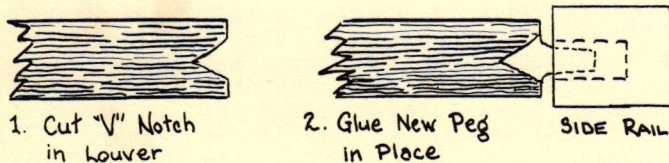


A WOODEN MALLET is used to drive the wedges so as not to break the small wedge. You use the middle mortise rather than the top or bottom mortises because the wood is usually in better condition in the middle of the blind.

Burton L. Brown
Scottsville, N.Y.

To The Editor:

I HAD A SET OF BLINDS with a couple of pegs broken off the ends of the louvers so that those few slats flopped around like a bird with a broken wing. I didn't want to take the blinds completely apart to insert new louvers. So I cut a "V" shaped notch in the slats where the peg was missing, then carved a new peg with a wedge-shaped end that matched the "V."



A GLUE SUCH AS quick-set epoxy is applied to the wedge. The new peg can then be slipped into the hole in the side rail and the wedge fitted into the "V" notch in the louver. The peg can be held in place with the fingers while the glue sets. (Since there isn't a lot of stress on the joint, it doesn't have to be super-strong.) Stain to match.

Robert Costello
New York, N.Y.

Ed. Note: For details on how to remove a single louver for notching and how to fashion new holding pins, see The Journal, Nov. 1973.

THE OLD-HOUSE JOURNAL

Published Monthly For People Who Love Old Houses

Editor	R. A. Clem Labine
Decorative Arts Editor	Carolyn Flaherty
Circulation Director	Paul T. McLoughlin
Circulation Assistants	Joan O'Reilly Peggy Scaglione
Midwest Editor	Anne Flaherty
European Editor	H. Weber Wilson
Staff Photography	Jim Kalett
Contributing Editors	Claire Wood Labine James R. McGrath R. A. Labine, Sr.
Advertising Representative	Curtis Dewees

Published by The Old-House Journal Corporation, 199 Berkeley Pl., Brooklyn, N.Y. 11217. Tel. (212) 636-4514. Subscriptions \$12/yr. in U.S. and Canada; \$20/yr. elsewhere. Printed at Royal Offset Co., 34 W. 15th St., NYC 10011. Contents of The Old-House Journal are fully protected by copyright and must not be reproduced in any manner whatsoever without specific permission in writing from The Editor.

Painted Vs. Stripped Woodwork

To The Editor:

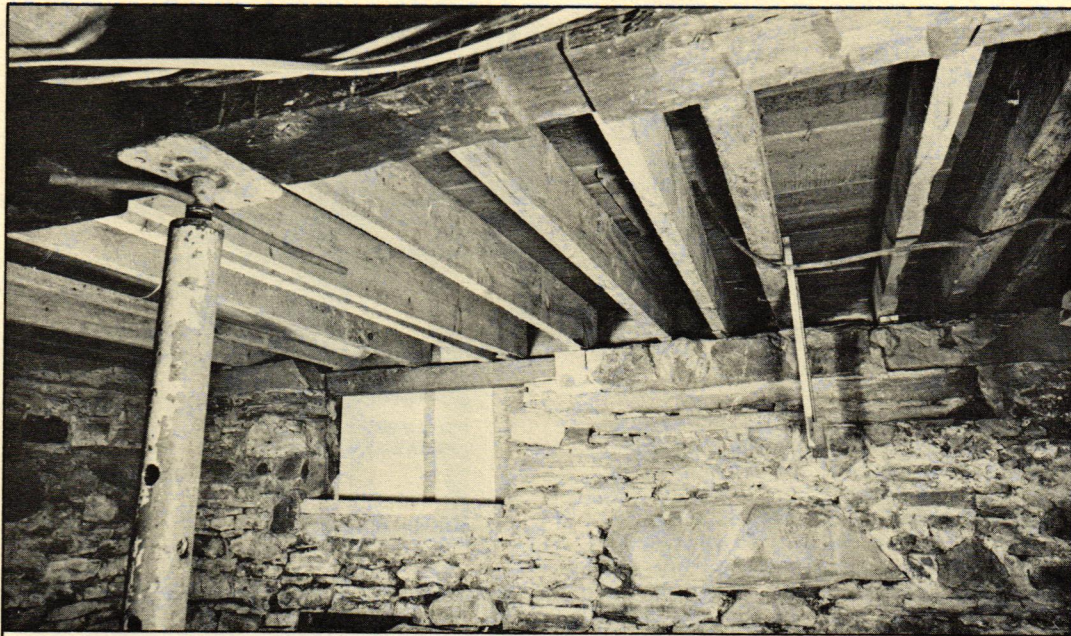
I'D LIKE TO ADD to the discussion of when it is appropriate to strip paint from woodwork (Jan. 1976 issue). I have a Pennsylvania farm house built around 1775. It has not only the usual chair rails and baseboards, but also interior partitions of beaded planking.

WHEN I STARTED work, I assumed that all the wood had been painted originally. But as I opened up some long-sealed-off nooks and crannies, I found ample evidence that nearly all the wood had been neither painted nor sealed—just left bare.

SO IN FINISHING my house, I did as much natural as I could. Some of the original natural wood required only slight cleaning. A few walls that had been painted—presumably with milk paint—resisted all efforts to strip. There, growing weak of heart, I repainted. In other choice areas, I persisted with the stripping. I was not greatly troubled with paint remaining in open grain, as yellow pine is quite smooth. Only around knots, where the wood was ragged, was there any paint residue problem. Those areas I touched up with tube colors and a fine brush.

TO KEEP THE NATURAL WOOD from soiling, I did use a sealer ("Pryme") with good results. I am happy with this finishing scheme with one exception: In the one room where everything is natural, the chair rail and baseboard lack contrast. I have been told that some trim was often stained or painted to resemble walnut or mahogany. Having seen an original example of this in my area, I intend to do likewise.

Don H. Berkebile
Smithsonian Institution
Washington, D.C.



In the older part of the house mostly new joists are shown running from both foundations, meeting at girder in center. Rather sound old joists are fourth, second, and first from right. Note small header beam over window opening and shims at foundation.

Old-House Living...

Installing New Joists And Beams

By Donna Kline

WHY DON'T YOU BURN DOWN the house and live in the barn?" our parents said when they first saw the long neglected old house we were about to purchase. But, despite criticism, the size of the place, the peaceful rural environment, and the bordering woods and fields owned by Cornell University still attracted us. We temporarily blinded ourselves to the extensive work ahead and bought the half Greek Revival, half Italianate farmhouse.

OF THE MANY PROBLEMS, the worst was the extensive damage done to the first floor beams and joists by powder post beetles. An ice pick wasn't necessary to test the condition; one could pull handfuls of powdered wood away from the joists. The main supporting girder under the larger Italianate part of the house, although damaged in spots, was still fairly sound. However, the end under the kitchen wall was twisted and the mortised joists were actually pulling away from the beam. Luckily, the sill beams were sound.

THE FLOORS AND INTERIOR WALLS upstairs sloped badly towards the center of the house. The floor shook noticeably when one walked across it and we got the feeling that it wouldn't be long before all gave way and crumbled into the basement.

THE POWDER POST BEETLES HAD been quietly munching away at the wood for decades according to people who knew the house. They were able to infest the joists because the base-

ment was always damp or flooded. The house is located on rather swampy land and the basement flooded regularly before recent installation of sump pumps. The beetles had apparently been exterminated by the man from whom we bought the house. We have observed no beetle activity in one and one half years.

WE HIRED A CARPENTER to plan the job and replace the joists. We told him four months before moving day to order dry, treated lumber immediately. We explained that it was absolutely necessary to install dry lumber, so that it could not be infested by any remaining beetles. Apparently, he didn't really want the job, because one week before he was to start, he obtained a batch of nice, WET, rough-cut lumber at our expense. We were forced to postpone the work.

WE LOOSELY STACKED the lumber with small stickers between each layer in our airy barn to dry until the following spring. RAK (Roger Kline) decided we could do the job ourselves. We rearranged the piles of joists frequently throughout the winter so that by June 1975 it was dry.

BESIDES THE NEW JOISTS, we need girders, cellar-jack posts, a hydraulic jack, cement and gravel for the footers and pentachlorophenol to treat the wood. We were investigating steel I-beams, when a friend offered several old 8 in. x 8 in. wooden beams salvaged from a partially burned house. Later we purchased two 6 in. x 6 in. x 26 ft. wooden beams from our neighbor. This saved \$250, and the wooden beams rather than steel ones we felt would

be more in keeping with the character of the house. We could not compromise on the support posts, however. We had to use steel cellar posts to avoid conduction of moisture and dry rot fungi from the damp floor up to the beams.

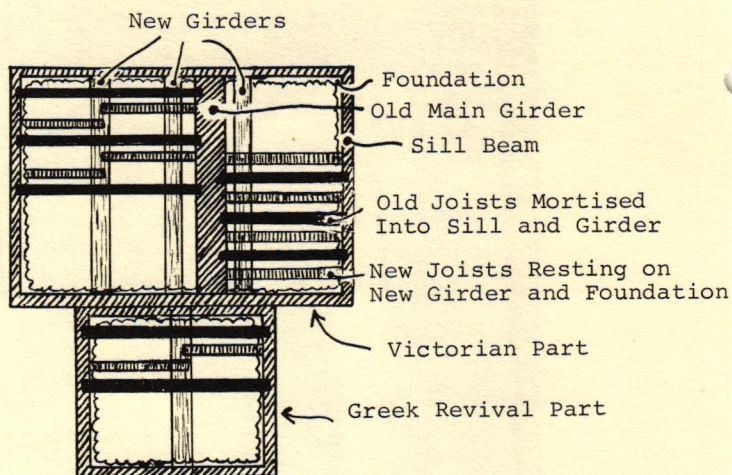
THE PLAN WAS TO INSTALL a new joist between each of the old ones without removing the original joists. This plan had advantages: We didn't have to take up the floor boards which were nailed to the old joists. (The floor boards were sound.) Thus, we could go on living in the house since the whole floor was still supported and intact throughout the job.

NEW GIRDERS were placed on either side of the old main beam under the Victorian part of the house, and in the middle of a long span of joists in the front end of that section. The small Greek Revival portion never had a girder down the center; the joists simply ran from sill to sill. A new beam was placed in the center there. In the latter and in the long span of the Victorian part, joists measuring slightly more than half the length of the span ran from the sides of the span and met on the new beams in the center of the span. The shorter rear section had enough room on the foundation to permit installation of full-length joists. The original joists were 8 in. high. We had the new joists cut 7 in. high so they could be manoeuvred more easily between the old joists.

BY FAR THE MOST TIME CONSUMING part of the job was preparation of the lumber and beams, and of the foundation top and the areas where the new joists were to go. Once all that was done, the actual placement of the joists generally was not difficult.

THE BEAMS WERE PAINTED with the "penta." Each joist was bathed at least 15 min. in a penta dipping trough (made of wood and lined with 2-3 layers of heavy plastic.) I kept the joist submerged by placing a 50 lb. weight on it. "Penta," a dangerous chemical if inhaled, is also absorbed through the skin, therefore I wore long, acid resistant rubber gloves and

Plan View--Placement Of New Joists And Girders

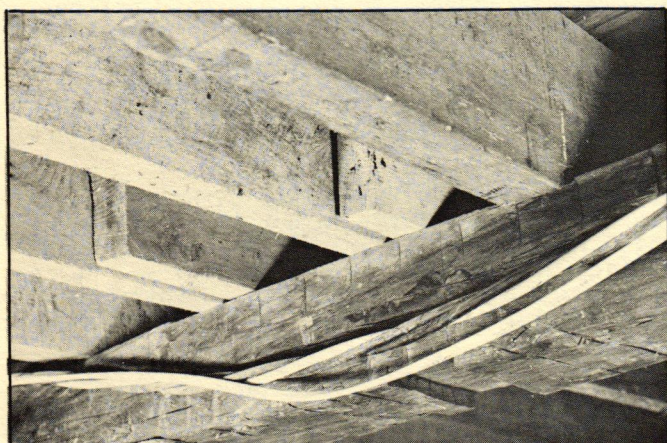


apron. The trough was in our old, well ventilated milk house. After the dipping, the joists were allowed to dry 2-3 days before use.

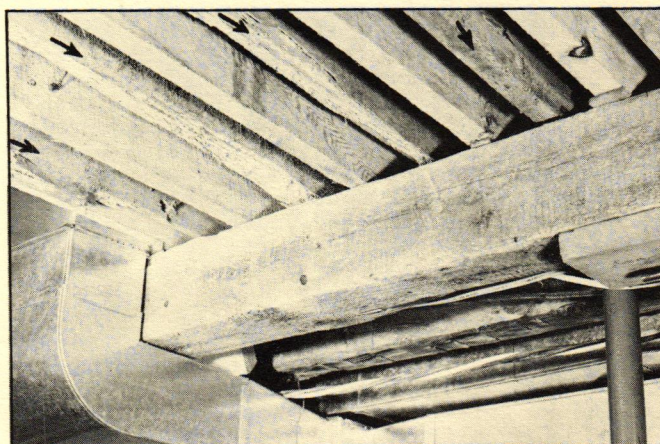
WE WANTED TO SPRAY THE SILL BEAMS with penta before the new joists were put in and found that a plastic squeeze bottle ("wash bottle") with a thin plastic nozzle worked quite well. Using this, I avoided inhalation of the penta mist a regular sprayer would have created and was able to get the solution into the tiniest of places. These was bottles are available from any scientific supply house such as VWR Scientific or Fisher Scientific, both of Rochester, N. Y.

WE HAD TO PREPARE THE FOUNDATION top so that it would be fairly level to receive the ends of the joists. I carefully cleaned the places that needed levelling and RAK replaced mortar and stones to make a flat surface.

THE DIRTIEST, most lengthy task was preparing the areas where the new joists would go. RAK had to take down all the heat ducts and reposition the furnace. Some water pipes had to be moved. Electric wires had to be loosened



In the Greek Revival part, new joists meet at "new" girder. Large joist first from right is a sound old one and shows a few powder post beetle holes. Black spots on some joists are impurities from penta.



In Italianate part, the new joists are placed between the old, damaged joists (shown by arrows.) Placement of new joists was planned with installation of new heat ducts in mind.

Detection And Treatment Of Wood Destroying Insects

Wood Destroying Insects	Conditions Promoting Infestation	Visible Symptoms	Type of Damage	Insect Appearance	Prevention	Treatment
Powder-Post beetles	Green wood or damp environment	Fine sawdust near timbers, small shot-holes in wood	Meandering tunnels packed with fine dust	Adults: winged beetles Larvae: white, no legs	Use dry wood, ventilation, dehumidify, vapor barriers See A & D	Dry the wood; paint or coarsely spray timbers with I or III
Subterranean termites	Wood touching or near soil	Earthen tubes connecting wood to soil; termites swarm and shed wings in spring; collapse of wood	Hidden tunnels following grain, packed with mud	Adults: thick waists, dark brown or cream colored (workers) without wings Larvae: white with legs	Clear wood debris around house, metal shield above foundation, treat soil with IV. See B	Chemical treatment of soil around house with IV
Carpenter ants	Wood wet or touching soil	Coarse sawdust near timbers; may see ants	Tunnels following grain, no sawdust or debris in tunnels	Adults: black with or without wings; thread-like waists Larvae: white, no legs	Use dry wood, ventilation, vapor barriers, dehumidify. See C & D	Dry the wood; dust or spray with I or II

PUBLICATIONS:

- A. Controlling Wood Destroying Beetles in Buildings & Furniture. U.S.D.A. Leaflet #558, Supt. of Documents, U. S. Gov. Printing Office, Wash., D.C. 20402 10¢
- B. Subterranean Termites, New York State Tree Pest Publications F-5, State University College of Forestry at Syracuse University, Syracuse, New York 13210
- C. Carpenter Ants. New York State Tree Pest Publication F-3, State University College of Forestry at Syracuse University, Syracuse, New York 13210
- D. The Old-House Journal. Detecting and Defeating Rot In Old Houses, Oct. 1974, Nov. 1974.

NOTE: Any wood added to lower structural members of the house should be pressure-treated with insecticide-fungicide chemicals, for example, copper or zinc naphthenate or creosote.

TREATMENT SOLUTIONS:

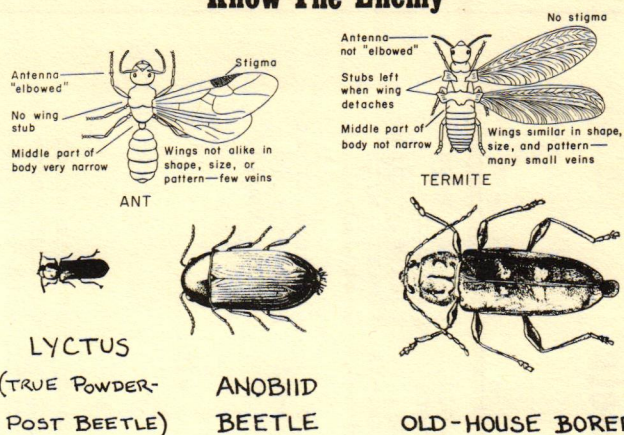
- I. 2% Chlordane in kerosene
- II. 4% Rotenone dust
- III. 5% Pentachlorophenol in kerosene
- IV. 2% Chlordane, 1% dieltrin, or 1% benzene hexachloride
- V. 0.5% Lindane in kerosene

CAUTION: These materials are poisons. Observe all precautions.

(Table data by Roger and Donna Kline)

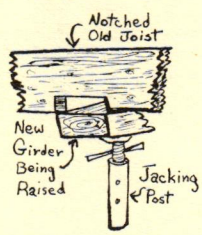
and hung down out of the way. All the old bridging between the joists had to be removed, concrete footings had to be made to hold the steel jack-posts, and headers had to be put in over the wide double windows at the front of the basement. And finally, all the old joists had to be notched with a wood chisel so that the new girders would fit snug against the old joists while supporting the new ones (1 in. shallower.) RAK donned goggles and a dust mask for much of this preparative work.

Know The Enemy



OUR WOODEN GIRDERS were quite heavy, but the two of us were able to raise them into position by placing them on columns of concrete blocks. We could then gradually raise the beams by adding 1 or 2 layers of block first at one end then at the other end.

WHEN THE GIRDERS were a few inches short of their intended height, we started sliding the joists over them into place. We did the Greek Revival section first, for "practice," as it was the easiest part. It had few ducts and wires to remove and no water pipes. Sliding the 35 half-length joists into that section took less than 2 hours. When the joists were in place, they were shimmed at the foundation end to make them snug against the floor. The girder was then jacked up with the jacking posts placed 5 feet apart until the new joists just touched the floor boards above. The girder fit well into the notches in the old joists. The joists were then shimmed at the girder to make them fit equally firm against the floor boards.



THE BACK SECTION RECEIVING the full length joists was the trickiest because it contained all the plumbing. Sliding the joists in over some of the pipes was quite difficult. Also, the original joists in the Victorian part were 12 in. on center leaving little room to manoeuvre the new ones.

BY WORKING WEEKENDS and after work for three months, all the new joists were installed and shimmed. It was time to commence jacking up the first floor and the walls above it. We jacked some sections as much as two inches at first, as those areas had sagged terribly. The hydraulic jack was used to elevate a particular area, then adjacent cellar-jack posts were adjusted upward to support the raised girder.

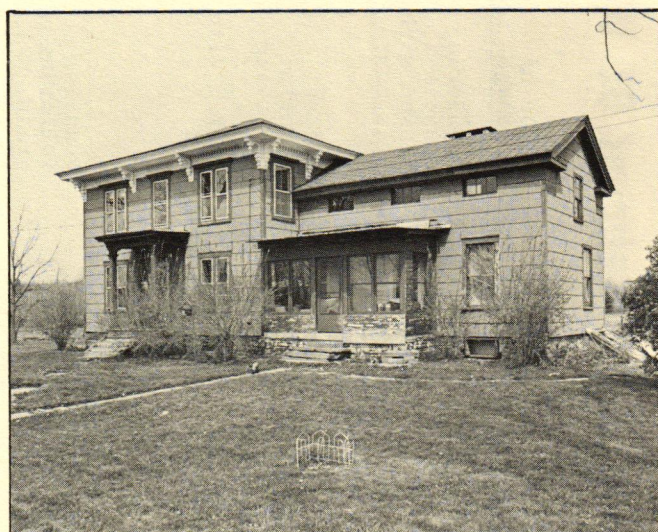
PROGRESS WAS SLOW, but it was a wonderful feeling to have the floor a little more level and so firm underfoot. Now, we intermittently jack up the house fractions of an inch and check the progress upstairs with levels on the floor.

WE OCCASIONALLY jack some areas along a beam too high and have to let them back down a bit. It's surprising how flexible those large wooden beams are. We've had some plaster cracking, but no damage to the wood framing in the house.

THE MONEY WE SAVED by doing the joist job

ourselves paid for professional installation of entirely new and improved ductwork for the heating system. The floor may never be perfectly level, but we now feel quite safe bringing in heavy furniture and having large parties.

(Photos by Jon Crispin)

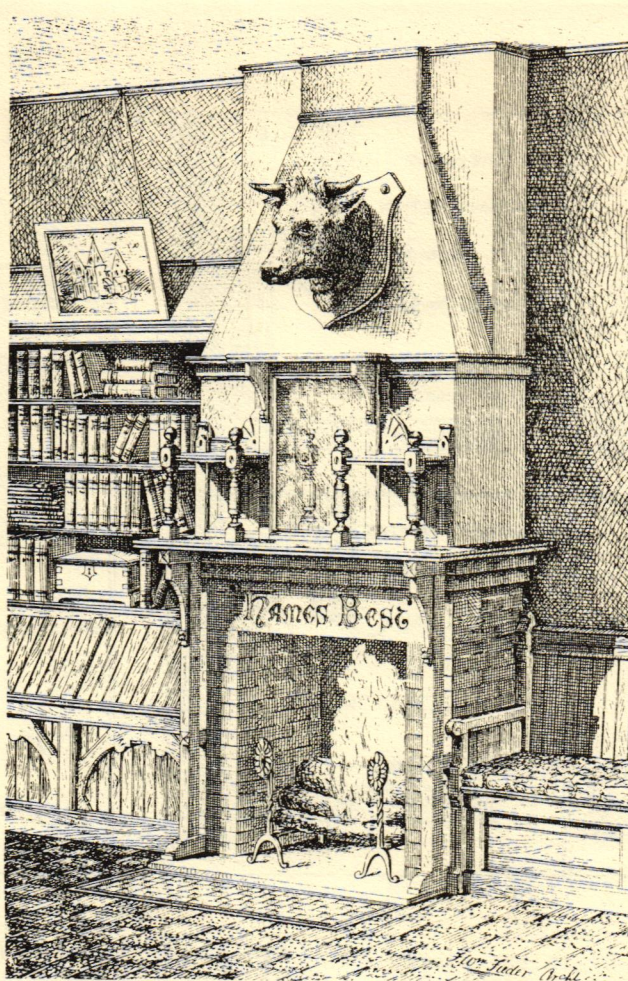


This is the part Greek Revival-part Italianate house in Ithaca, New York, owned by Donna and Roger (the RAK in the story) Kline. Because the house had been badly neglected before they bought it the Klins have a great deal to do. The only exterior job they have done so far is to paint the brackets and cornice on the Italianate part. The Klins plan to: Add drip caps back to the lower windows; remove the asphalt shingles and replace with wooden clapboards; replace the funny, glassed-in porch (made of old storm window) and re-create one matching the Italianate porch (a 1926 photo shows that they were the same); add wide-board trim to the windows on the Greek Revival part.

Reshaping

An Old

Fireplace



Some fireplaces require new brickwork for maximum efficiency. The March 1976 issue of The Old-House Journal described the geometry of properly constructed fireboxes. Following is one reader's experience with altering dimensions and adding dampers.

By John L. Lloyd

I HAVE INSTALLED DAMPERS in three existing fireplaces in two houses in which I've resided and renovated and have been quite successful each time.

WITH ANY EXISTING FIREPLACE there's one unalterable given--the flue size. Measure yours, then consult a table of fireplace dimensions (most any fireplace book--OHJ, page 6, March 1976 issue--or ask your lumber yard or hardware store if you can look at the directions included with the dampers they have for sale.) Working the table backwards, see if your fireplace opening (W x H) approximates one of the acceptable sizes for the size flue that you have. If it doesn't, change the opening so that it does. I poured 6 in. of concrete to raise the floor of one fireplace and lowered the top of another about 3 in. by dropping my wire lath and plaster stop when I refinished the face of the fireplace.

NEXT, REMOVE ANY BRICKS not part of the actual chimney structure to make the fire box as large as possible. This is the time to examine your fireplace and chimney carefully. Re-

point wherever necessary and within reach. Clean out as much soot and dirt as possible.

IF YOUR CHIMNEY HAS a flue liner consider yourself fortunate. It can be repointed by lowering a canvas bag stuffed with rags and newspapers and weighted down with bricks. Stuff the bag so that it will just fit down the chimney. Prepare mortar to pancake batter consistency and ladle a generous amount on top of the bag toward the edges. Lower the bag to the first joint in the flue and swab up and down a few times. Then lower to the next joint, etc.

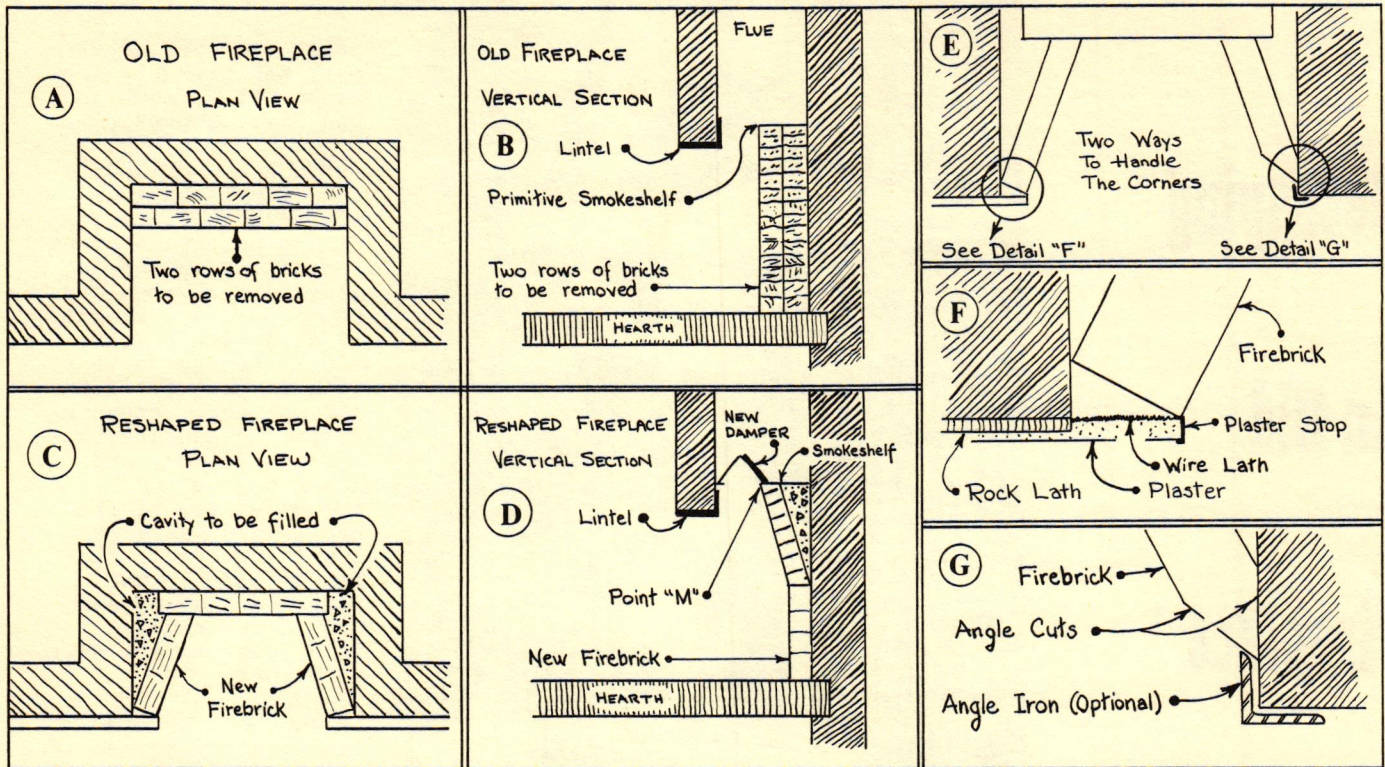
IF YOU HAVE NO flue liner, check to see if any wooden floor, ceiling, or roof members tie into the chimney. If they do, extensive carpentry is required to cut them free structurally and box in around

the chimney. I was fortunate in only having to do this on one side of one fireplace. When the chimney is free of wood members, I would suggest, as added insurance, wire lath and plaster all the way up to the roof line. A brown coat of plaster is all that is necessary in places out of view.

THE NEXT STEP is to purchase the largest cast iron damper that will fit into the fireplace above the lintel. Don't buy a steel damper if you can avoid it--they warp. Make sure your damper has a removable door and handle that can be installed after the damper body has been installed. Next, measure the size of the fire brick available at your local lumber yard and purchase enough to line the three sides of your fireplace. Ask if you can return the unused ones--they're expensive.

NOW COMES THE HARD PART. Refer to drawings A through D and to your table of fireplace dimensions. You're going to line the fireplace with firebrick in a manner to create angled sides and a sloping rear wall. Try to stay as close to the applicable dimensions as possible. The front of the damper body must touch the back of the front wall of the fireplace on or above the lintel. It doesn't have to rest on the lintel--side walls of firebrick will support it. The back of the damper body then, is the top of the sloped rear wall (call it point M).

START LAYING YOUR FIREBRICK, one course at a time in a fairly dry mortar mix around all three sides of the fireplace. Lay the brick straight up to whatever full course brings you



to the approximate height to begin the slope. Get this height from the table and temper it with the reality of having to slope outward from the rear wall to point M. It will usually be 3 or 4 courses. Begin the slope by using a mortar joint on the back wall that's thin in front and thick in the rear. From here on in, lay one course on the back wall clear across. Don't worry about tying-in or interlocking the side walls.

THEN LAY ONE COURSE on the two side walls. The brick that meets the back wall on each side will have to be cut at an angle--more on cutting later. The horizontal mortar joints will no longer be continuous since the side walls, rising straight up, will be higher than the sloping rear walls.

CONTINUE LAYING one course at a time, back wall first, then side walls until you are one course below point M. This should put your side walls above, even with, or no more than 1 in. to 2 in. below the bottom of the lintel. Carefully lift the damper body into approximate position and prop, wedge, or hold it there.

LAY THE LAST COURSE of brick--the course on the back wall may have to be cut to come out level with the side walls. Place a generous amount of mortar on top of the last course and lower the damper into place.

USING A WET MORTAR MIX, reach up through the damper and pack mortar down to seal the line of contact between the front of the damper body and the lintel. Pack mortar around all 4 sides of the damper to seal. Using sand or ashes, pack cavities behind angled side walls and sloping rear wall. (It's easiest to do this after each course is laid.)

THE WAY YOU PLAN to treat the sides of your fireplace opening determines how you treat the frontmost brick on each course of the side wall. If the fireplace opening is to be narrowed (determined by table dimensions and esthetics) you may not have to do anything. However, in all three of my cases the fireplace width remained the same. Thus, I had to make an angle cut on each frontal brick.

BEFORE STARTING THIS JOB, make sure you have access to a masonry saw--preferably water-cooled with a diamond blade. Firebrick is softer than most common brick and cuts fairly easily especially if you use the above mentioned saw. If you don't have to make the angle cut on the frontal bricks, and if you're good with masonry hammer, you may not need a saw at all. However, I've always used one.

IF YOU MEASURE carefully before starting and are able to determine the various angle cuts necessary, you may be able to gather up all the bricks that need cutting and go to a local construction site. A few dollars to the masonry foreman may work miracles. Plan on going back at least once, though, for a few unforeseen cuts. Don't forget that these angle cuts are not simple since the side walls don't meet the back wall at a right angle.

INSTALL THE DAMPER DOOR and handle and that's about it. It's a lot of work--about 1 to 2 days for the firebrick and damper part--but it's worth it on a cold winter's evening.

John L. Lloyd is president of the L. R. Lloyd Co., Inc. in Uniontown, Pa. The L. R. Lloyd Co. carries many roofing materials suitable for the old house.

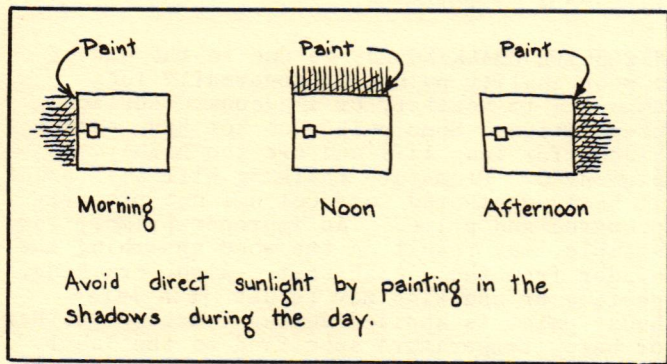
(Exterior Painting—Cont'd. from p. 1)

to the wood, since expansion and contraction of the new paint film will pull off the old loose material. The only guide for the old-house owner is to make a careful appraisal of the condition of the siding, soffits, trim, etc.

WHEN THERE IS general deterioration of exterior surfaces—with continuous patterns of deep, down-to-the-bare-wood cracks—the old finish should be removed. This is a difficult, time-consuming job that can be accomplished best by burning off the old paint or by sanding.*

GREAT CARE should be taken in burning off paint since this process can char the outermost layers of wood cells and contribute to defiberization. When charring occurs, it is difficult to get the proper paint adhesion. Surface charring should be removed by sanding whenever possible. When all charring can't be removed, reasonably good performance can be achieved by using a primer that does not contain zinc oxide or other reactive pigments, since these pigments are hydrophillic (water-loving) and contribute to prime coat blistering. Also, finish coats containing zinc oxide will blister if applied over bare wood without a proper prime coat.

BLISTERS may also appear within a very short time after a coat of paint has been applied in hot weather or in direct sunlight. This causes skin-drying and traps the thinners before they have had a chance to evaporate. This is known as solvent blistering—and is more apt to happen with darker colors that absorb more heat from the sun.



IF PAINT HAS BEEN REMOVED by burning or sanding, prime the wood with two coats of solvent-base primer. Allow sufficient drying time (as indicated by the label) between coats. Thin the first coat four-to-one with a solvent such as mineral spirits (1 qt. of mineral spirits for every gallon of paint). This reduced prime coat helps to lower viscosity and allows the paint to penetrate and glue the loose wood fibers together so they won't break away. Second primer coat should be full strength; this provides assurance that you have "cemented" the wood fibers.

*Special precautions should be observed in removing lead-based paint. See The Journal, May 1976 p. 9.

FOR THE TOP/FINISH COAT, one coat of an oil-type quality house paint should be sufficient with proper priming. If you choose a latex house paint, one coat is recommended for Northern areas, and two coats where mildew is a problem. The second coat creates a more effective barrier to external moisture (rain, dew, etc.) and moisture is a prime agent for mildew growth.

IN SOME CASES, cracking and peeling may be confined to single boards or small sections of siding, or in the so-called "protected" areas, such as the soffits. Careful cleaning, scraping, sanding and priming of these problem areas can avoid the last resort of complete paint removal.

Moisture - Inside Or Outside?

PRIME CAUSE OF PAINT FAILURE on exterior surfaces is moisture migrating to the surface from inside the structure—or moisture getting behind the paint film from the outside. Most of the complaints aimed at "bad paint" are in fact misdirected; they result from failure to take proper precautions against moisture.

MOISTURE CAN ENTER from the outside through faulty flashing, inadequate caulking, leaking gutters, etc. Moisture can also originate from the inside from high-humidity areas such as bathrooms and laundry rooms.

YOU CAN THWART EXTERIOR MOISTURE by sealing all cracks. On the roof, defective shingles should be patched or replaced. Faulty flashing should be repaired with flashing cement. Leaking gutters can be repaired with fiberglass and epoxy resin. Any cracks or holes in siding should be plugged with putty or caulk. And all joints between siding and woodwork trim, and joints between wood and masonry, should be sealed with a good quality latex caulk. Latex caulk costs quite a bit more than the old oil-based caulks, but they will give much longer service.

DEALING WITH MOISTURE from the interior is more complex. Better ventilation is usually the key. In bathrooms, for example, inexpen-

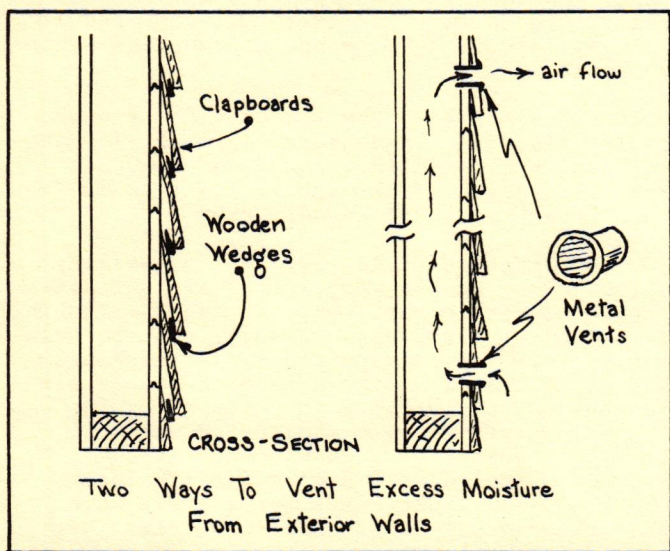
Caulking Checklist

- Between siding and drip caps on windows and doors;
- Between siding and window sills;
- Between siding and frames of doors and windows;
- Between siding and corner boards;
- At joints between masonry and woodwork;
- Between siding and decorative moulding;
- Around columns, capitals and gingerbread;
- Between porches, masonry steps and house foundation.

sive tile that may have been used for walls will have to be replaced—and an exhaust fan installed to give the moisture a way out. Attic spaces may require installation of louvers—or bigger ones if you already have them. There should be at least two attic vents, with 1 sq. ft. of vent area for every 350 sq. ft. of attic space.

WASHERS AND DRYERS generate a tremendous amount of water vapor inside the house. You should be sure that dryers, especially, are properly vented to the outside.

ADDITIONALLY, siding that has been installed close to the ground will usually be saturated with moisture drawn by capillary action. The moisture vapor is drawn upward into other parts of the wood structure and may condense on the back of the siding—only to migrate through and push off paint wherever it goes. Wooden wedges under clapboards—or metal vents in more extreme cases—can provide moisture with a way to escape to the atmosphere without pushing through the paint.



ANY ROTTING BOARDS should be replaced—after treating the new board with wood preservative and priming edges and both sides before installing.

'Protected Areas'—A Special Danger

GREATEST IMPACT of exterior moisture is on the so-called "protected areas"—soffit areas such as under eaves and roof overhang, or areas protected by trees. These areas are protected from direct sunlight and from driving rain...which means normal cleaning and weathering does not occur. Dirt and grime accumulation can become excessive. And any moisture that does collect (such as dew) does not dry quickly and water remains longer on the paint film. This promotes expansion and contraction of the top paint film, which may weaken the bond of one coat to the other.

KEY TO GETTING good paint adhesion in these protected areas is proper surface preparation.

If surface is hard and glossy, it should be sanded. If peeling, it must be thoroughly scraped. If dirty or grimy, it must be cleaned. And if the soffit area has been painted many times, be sure the new top coat has sufficient flexibility to handle the dimensional fluctuations of the previous coats.

Tips On Surface Preparation

SURFACE PREPARATION is vital for good paint performance, since it provides the basis for adhesion—and adhesion is what good paint performance is all about. Anyone restoring the finish on a piece of fine old furniture knows the importance of careful surface preparation. Unfortunately, old house exteriors rarely get the same loving attention—even though a lot more is at stake.

TO CLEAN A SURFACE FOR exterior painting, first remove all loose material such as flaking paint, dust, etc., with wire brush, scraper, sandpaper and/or steel wool. Tight stubborn material may have to be removed with a motorized wire brush. Old paint that is smooth and shiny should be roughened by sanding to provide a good "tooth" for the new paint.

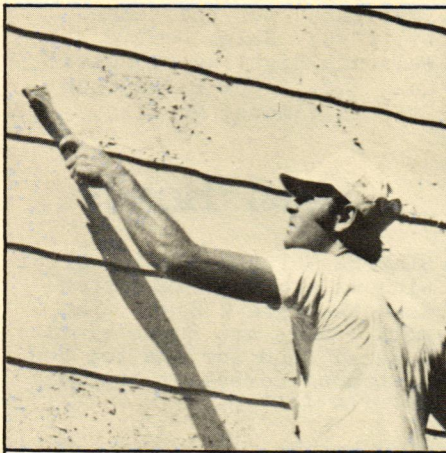
WHEN THE OLD PAINT has been chalking (surface is powdery) it is especially important to wash off the chalky powder. Same is true if there is much surface dust and dirt. Make up a mild detergent solution by mixing ¼ cup household detergent (such as "Tide") in a gallon of water. Scrub the exterior using this solution and a bristle scrub brush. Rinse off thoroughly with a garden hose and allow the house to dry completely before proceeding to paint.

EXCESSIVE CHALKING may be due to the use of a poor quality paint, or abnormally long exposure to weather, or inadequate surface preparation. Some paints do not have enough binder for long life and are too highly pigmented. Premature chalking will also occur if badly weathered surfaces are not properly prepared and primed. An improper primer, for example, may result in the wood absorbing the binder from the finish coat. Also, cracking, peeling or chalking may result if a latex house paint is applied during freezing weather or below temperature specified on the label.

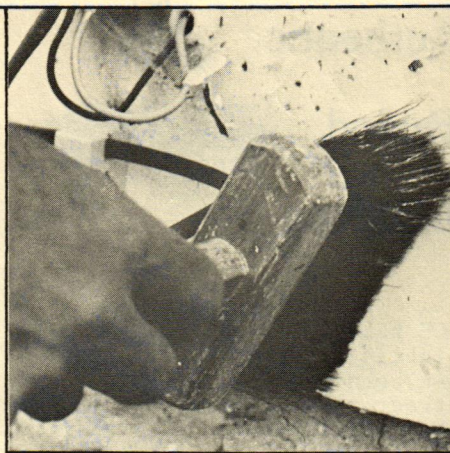
NAILHEADS should be countersunk, patched with filler and pre-primed. Where old paint has flaked out in big pieces, edges of the holes should be sanded to feather edges, and pre-primed if you are down to bare wood.

IF THERE ARE a few small rotted areas that don't warrant complete replacement of the wood, you can use some of the epoxy wood consolidating systems.

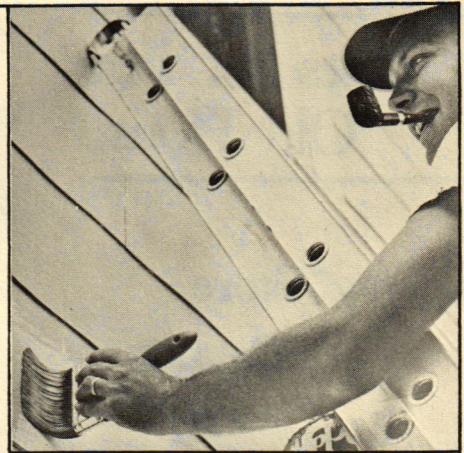
EXTERIOR PAINTS are made in many different formulations—each designed to give best performance under different conditions. For example, mildew is one of the most common causes of paint failure. There are specific treatments—and paints—designed to deal with mildew conditions.



Find and correct any moisture problem. Then remove peeling and chalking paint.



Use bristle brush to remove all dirt and dust. Wash surface if dirt and grime are excessive.



Apply primer and finish coat that are compatible with each other—and with the old paint film.

MILDEW is the visible result of fungus growth on the surface of organic matter. It is fairly common on exterior painted surfaces, especially in warm, humid or shady locations. It appears as tiny spots of brown, black or purple discoloration. The unattractive appearance becomes progressively worse due to growth of the fungus and entrapment of dirt in the mold web.

LIKE ANY LIVING ORGANISM, mildew fungus requires food. It flourishes on the nutrients found in house paint, on the surface under the paint film, or both. Often, mildew on the surface will grow completely through the paint film to the wood below, much like the roots of a tree. Result: Deterioration of the entire paint film.

PAINT MANUFACTURERS have tried to solve the mildew problem by developing paints with the most mildew-resistant materials, supplemented with specific mildew fighters. Unfortunately, a mildew resistant paint film is only as good as the surface preparation prior to painting. If mildew is definitely present, it is necessary to thoroughly clean and sterilize before any painting is started. Since mildew sometimes looks just like dirt, it is wise to test a surface for its presence.

A SIMPLE MILDEW TEST consists of placing a few drops of common household bleach on the suspicious patch. If the bleach causes the spot to lose its blackish or brownish appearance, then there is reason to believe mildew is growing on the surface.

Treatment For Mildew

QUONCE MILDEW has been diagnosed, the following procedure is recommended: (1) Prepare a cleaning and sterilizing solution of 3 qt. warm water into which you add 1 qt. of liquid bleach containing 5% sodium hypochlorite; 2/3 cup trisodium phosphate or borax; 1/2 cup detergent.

(2) Remove mildew by scrubbing with this solution. A medium soft brush will give good

Answers To Your Questions

Your local paint dealer can often be helpful in selecting the proper finish. But if you have any additional questions about proper surface preparation or the best paint to use, the folks at the Pittsburgh Paint R&D Laboratories have offered to help The Journal's readers. Address specific questions to: Anne Cain, Public Relations Dept., PPG Industries, 1 Gateway Center, Pittsburgh PA 15222. She'll direct your inquiry to the right person.

results. When applying solution, avoid getting it on skin or in your eyes.

(3) After scrubbing, thoroughly rinse with fresh water from a garden hose. Allow surface to dry completely.

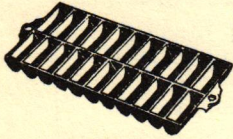
(4) Apply mildew-resistant paint as soon as possible after the house dries. This prevents possible contamination by fresh fungus spores.

WHEN SELECTING a paint from the many types available to today's homeowner, remember that the primer and topcoat should be considered together as a single system. If these two don't react well together, you are merely painting on more problems for yourself in the future. When in doubt, the safest course is to buy a primer and finishing coat made by the same manufacturer. ■ ■

Ed Gola works in the Research & Development laboratories of PPG Industries—makers of Pittsburgh Paints. Trained as a chemist—with a special interest in wood chemistry—Ed now finds his business and hobbies overlapping: His favorite at-home projects are refinishing and adding decorative finishes to old furniture.

Products For The Old House

Country Store Catalog



BREAD STICK PAN

A COMPLETE LINE of Country Store items is available in a 300-page catalog. Mainly for gardeners, farmers, and

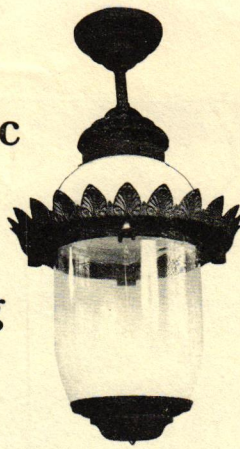
ranchers, it is chock full of down-to-earth and often hard to find tools, equipment and supplies.

COOKING UTENSILS, HARDWARE items and gardening and fireplace equipment are of the old-fashioned, plain and sturdy variety.

ALONG WITH the everyday items there are such exotic items as a cuspidor brush or a surrey with fringe on top. The old house owner will be interested in the stoves, gas logs, and masonry tools not readily available elsewhere.

TO RECEIVE this very interesting catalog, send \$3.00 to: Glen-Bel Enterprises, Rte 5, Crossville, Tenn. 38555.

Authentic Period Lighting



THE WELSBACH Lighting Co. has been making street lights since 1877. They still have a wide variety of elegant colonial, Victorian and turn-of-the-century fixtures. They are made of cast aluminum instead of cast iron, but in the original patterns. The outdoor lamps range from the kind that lit the post road in colonial days to the aristocratic Newport style dating from 1900.

THERE ARE ALSO pendant and wall bracket lanterns for use outside or inside. They are offered in solid copper, brass, or painted aluminum, and can be used with many different light sources--high or low pressure gas, electricity.

FOR INTERIOR LIGHTING, there are reproductions of antique lamps used in railroads--marker light, Silver Nugget Wall Lantern, Pullman, etc. They are available in kerosene or electric versions.

FOR A FREE CATALOG, ask for "Elegant Creations in Lighting" if you are interested in outdoor lighting, or "Superb

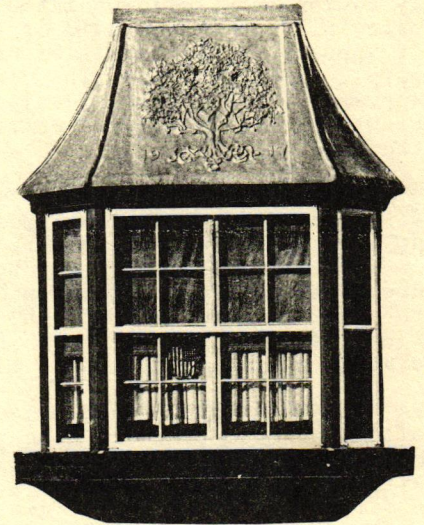
Americana" for the lamps. Write to: Sales Dept., The Welsbach Lighting Products Co., Inc., 3001 E. Madison St., Baltimore, MD 21205.

Oriel Hoods

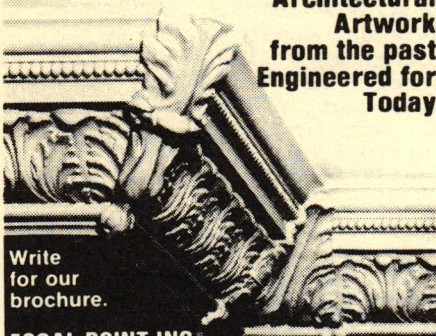
STAMPED METAL hoods for oriel windows are available from Kenneth Lynch & Sons. The metal parts are quite simple: A metal hood for the top and a stamped corbel or "bucket" for the bottom.

MANY PEOPLE use them in combination with Andersen windows and work them into one design.

FOR DETAILS on hoods and buckets for oriel, bay or bow windows, write to: Kenneth Lynch & Sons, 78 Danbury Rd., Wilton, CT 06897. Telephone: (203) 762-8363.



Architectural
Artwork
from the past
Engineered for
Today



Write
for our
brochure.

FOCAL POINT INC.
3760 Lower Roswell Road
Marietta, Georgia 30060 404/971-7172

The Old-House Journal Buyers' Guide

SOURCES of hard-to-find items for the old house: Reproductions; Salvage Parts; Services.

- 1,082 Listings
- 298 Companies
- 205 Product & Service Categories

Single copies: \$5.50
(\$3.50 when ordered with
subscription). Order from:

The Old-House Journal

199 Berkeley Place, Brooklyn, N.Y. 11217

Subscriptions: The Old-House Journal

Enclosed is my \$12 for a one-year subscription to The Old-House Journal.

Subscription is: Gift Personal

Name _____

Address _____

City _____

State _____ Zip _____

Donor's Name _____

Mail to: The Old-House Journal, Dept. 7,
199 Berkeley Place, Brooklyn, N. Y. 11217

OLD-HOUSE JOURNAL CLASSIFIED

Classified advertising is a monthly feature of The Old-House Journal, appearing in a special insert section. Rates are 25¢ per word with a \$5.00 minimum. Post Office box numbers and telephone numbers count as two words; abbreviations and zip codes one word. Check or money order must accompany copy and be received prior to closing date (5th of the month preceding month of issue). Classified Display is also available at \$15.00 per inch. Minimum one inch. Payment should also accompany orders for Classified Display. Send to: Classified Department, The Old-House Journal, 199 Berkeley Place, Brooklyn, N.Y. 11217.

Wanted

JOHN ROGERS GROUPS--any condition. Also old cars, any make or model. For further information call days only: (212) 547-9444 or (914) 237-1279. Frank Nicodemus, 880 McLean Ave, Yonkers, N. Y. 10704.

POSITION--Attention restorationists in N.E. area. Can you use someone with the experience in carpentry and building, the love of restoration and the desire to learn? I desire to make what is now an avocation, my profession. For further information, please write: Mark Shiff, 11 William Street, Medway, Mass. 02053.

Vacations & Resorts

VACATION IDEA for preservationists: Dine and lodge with us in private home as it undergoes restoration. Details: Meyer, P. O. Box 6, Keene, N. H. 03431.



For Sale

STAMPED METAL ORNAMENT--Pressed tin ceilings, metal cornice parts, ornamental gutters and leaders, weather-vanes...thousands of stamped metal designs made from original dies. Work done in galvanized steel, copper, lead, zinc, etc. Also: Brass parts for chandeliers; molds for making cast stone. Custom hammerwork. All designs shown in big 128-pg. catalog. For catalog and price lists send \$3.50 to: Kenneth Lynch & Sons, 78 Danbury Road, Wilton, Conn. 06897.

HAND HEWED TIMBERS, circa 1860, fir, 12 in. x 12 in. x 45 ft., mortised and tenoned 10 in. x 10 in. structures 33 ft. long, 14 ft. high, all necessary braces, joists, etc. Carefully dismantled. Donald Gwyther, P. O. Box 71, Creswell, Oregon 97426. Telephone: (503) 895-2419.

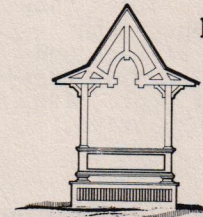
MASONRY RESTORATION--American Building Restoration is expanding nationwide to handle the growing demand for its own masonry restoration cleaners, paint strippers, and waterproofing sealers. Seeking local and regional dealer-applicators and distributors. Mail order price lists and brochures now available to contractors and home owners. Direct inquiries to: James Diedrich, Vice-President, American Building Restoration,

Inc., 9720 So. 60th St., Franklin Industrial Park, Franklin, Wisc. 53132. (414) 761-2440. Demonstration sample kits available.

BEVELLED PLATE GLASS--Marble Table and Sink Tops (some colors available.) Send pattern of exact size for quotations. R. Donald, P. O. Box 491, Feather Falls, CA 95940.

Restoration Services

ARCHITECTURAL HISTORIAN/
Restoration Consultant.
Quality architectural drawings. Historical research and National Register Nominations (Maryland only). Period houses, barns and dependencies, restoration materials and furniture bought, sold and traded. Md., Del., Va., N. C. areas. J. Richard Rivoire, P. O. Box 126, Faulkner, Md. 20632. (301) 934-4541.



**Howard Morgan
Assoc.**

adaptive re-use,
restoration consulting
& feasibility studies.

**201 e. liberty
ann arbor, mi.
313-668-7519**

HOUSE RESTORATION--Full restoration to small patch jobs.. Carpentry & cabinetry. If you are doing your own work, ask about a consultation. Eastern seaboard area. Doug Ross (212) 857-4865.

ACCURATE BUILDING INSPECTORS

WHY A
PROFESSIONAL
INSPECTION
BEFORE BUYING?
CALL OR WRITE
FOR FREE BOOKLET

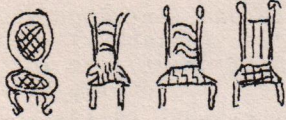


NEW YORK CITY..... 212-891-6335
NASSAU & SUFFOLK ... 516-239-4664
4210 OCEAN AVENUE
BROOKLYN, NEW YORK 11235
A DIV. OF UBELL ENT., INC.



Books & Publications

TIME TO



weave new seats for the old chairs

CHAIR SEAT WEAVING FOR ANTIQUE chairs. Highly recommended textbook that makes learning easy. Includes caning, rush, splint and Shaker tape weaves. In its 6th printing. \$3.00. Marion Sober, Box 294-0, Plymouth, Michigan 48170.

NEW LIGHT ON OLD LAMPS-- full of the kind of practical, detailed information needed to understand the myriad of lamps and lighting fixtures used in the 18th and 19th centuries. A classic reference work with illustrated explanations of the way old lamps worked and the parts they require. To order "New Light On Old Lamps" send \$9.75 (includes postage and handling) to: The Old-House Journal, Reprint Dept., 199 Berkeley Place, Brooklyn, New York 11217.

Reproductions

RARE 17th CENTURY IRONWARE-- Museum quality reproductions from our collection or your drawings and photographs. Hearthware, hardware, and weathervanes. Professional restoration services with references available. Architecturally compatible gates, grilles, signs, and lighting made to order for residential and commercial environments. Send \$2.00 for portfolio. Rowland Metalcraft, Inc., R.D. 3 Allison Park, PA 15101.

ARCHITECTURAL MOULDINGS-- Accurately scaled reproductions of period cornices and medallions. Precisely cast from lightweight, easily handled polymers. Write for free brochure. Focal Point, Inc., 3760 Lower Roswell Rd., Marietta, GA 30060.

**IF HOME IMPROVEMENT
IS YOUR FIELD...**

Inquire about exhibit space
in the

Home Restoration & Remodeling Show



In Los Angeles

September 9-12th, 1976

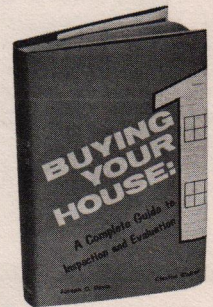
Ambassador Hotel

Contact: Show Manager
Home Restoration & Remodeling Show
2 Kansas Street, San Francisco, CA 94103 626-9876

House Inspection Manual

...from The Old-House Journal,

March 1976



"The book, 'Buying Your House' gives you a complete run-down on inspecting and evaluating a structure. The manual isn't geared specifically to vintage houses. So it doesn't give much guidance on the architectural merits of a structure. But it does give a wealth of detail on the more mundane aspects: Structural, interior finish, heating systems, electrical and plumbing, special problems of country houses. These are factors that most of us neglect once we've fallen in love with a stained glass window. After reading Claxton Walker's book, you may still fall in love with the stained glass window and buy the house that 'needs work,' but you'll have a more realistic idea of what you're getting into."

"Buying Your House" is 252 pages, hardcover. Send \$8.95, plus 50¢ postage to: Emerson Books, Dept. 276C, Buchanan, N. Y. 10511.