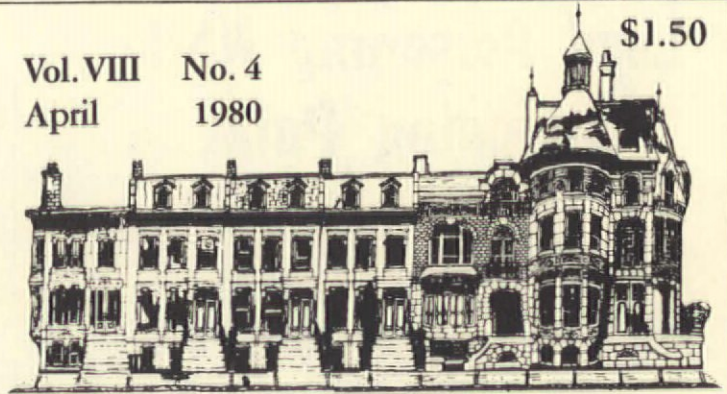


# THE OLD-HOUSE JOURNAL

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Restoration And Maintenance Techniques For The Antique House

## The Case Against Substitute Siding

By Brian D. Conway

**R**EADERS OF THE OLD-HOUSE JOURNAL will be disheartened to learn that not everybody's consciousness has been raised: There is an alarming increase in the use of synthetic siding materials in older residential neighborhoods. All too often, fine old homes are entirely encased in aluminum or vinyl siding that invariably pretends to be something it is not. There are plastic "bricks," asbestos "shingles," and aluminum "clapboards"--imitations that never seem convincing apart from a salesman's pitch. Those sidings are NOT maintenance-free, and synthetic siding will almost certainly destroy the architectural integrity of an old building. It may even contribute to the structure's physical deterioration.

SYNTHETIC SIDINGS will change a building's character by hiding important design details and ornaments. In fact, the installation of such siding often requires that those details be entirely removed. Monotone siding will, for example, cover the varied textures and colors of clapboards, shingles, and decorations that are essential features of a Queen Anne style house, destroying the house's visual character. Similarly, an Italianate house loses a characteristic feature when its brackets are replaced with a vinyl fascia and soffit.



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### Coming Next Month

GAS FIXTURE REPAIR

EVEN THE PROPORTIONS of an early-twentieth-century frame house can be ruined by the application of wide synthetic siding which obscures the original narrow clapboards. The design and function of window casings, drip caps, mouldings, and door trim are often obstructed, and the three-dimensional appearance is destroyed, resulting in a flat appearance.

**S**YNTHETIC SIDINGS will not render a building maintenance-free. Although synthetic siding HIDES physical deterioration, it does not prevent, and may even accelerate, such trouble. Even if the original building fabric is not damaged during installation (damage is quite likely), there are other problems. Rot and insect attack may proceed unnoticed. Many sidings act as exterior vapor barriers, trapping excess water vapor which condenses and damages the wood; if installation is incorrect or if the siding is subsequently damaged, actual runoff water may enter behind the siding and be trapped. Such problems are undetectable because the siding makes a visual inspection impossible. And finally, artificial sidings offer no structural support, so that if continued deterioration leads to failure, the siding will buckle and separate from the building.

(Continued on page 44)









## Home-Made Gingerbread

By John Slobodnik, Riverside, Illinois

**I**NSTALLING MY OWN Victorian-style fence was the final touch in transforming the exterior of a broken-down, nondescript farmhouse into the Victorian cottage I'd always dreamed of owning. I had started at the bottom with the work on "Hearts Haven," as I named the house, replacing most major essentials such as the foundation, roof, plumbing, electrical work, and the heating plant.

FENCES IN VICTORIAN TIMES were significant in the exterior decoration of homes, and, like gingerbread trim, their immense variety of fanciful and practical forms often reflected the character of individual homeowners. Hence, there were conservative fences, pretentious fences, fences that were substantial and imposing, and fences that were light and unconfined. Victorian fences were built from many materials, ranging from sawn and lathe-turned wood to brick, stone, and ornamental cast iron. Wood fence construction sometimes rivalled the craftsmanship of interior trim, with skillful modelling similar to that found on the furniture and fixtures inside.

**T**HE STRUCTURE of my fence is based on the common picket fence which has been popular since Colonial times and is still a familiar, easily-installed choice of today's homeowners. It consists basically of a series of 4x4 posts which support 2x4 rails that form sections onto which the 1x4 pickets are nailed. While ordinary ready-built picket fences can be purchased at most lumber yards, it is almost impossible to find fences for sale today with milled pickets that are any shape but pointed. For this reason I found it necessary to build it myself. Please note that a tremendous variety of fence designs to match any

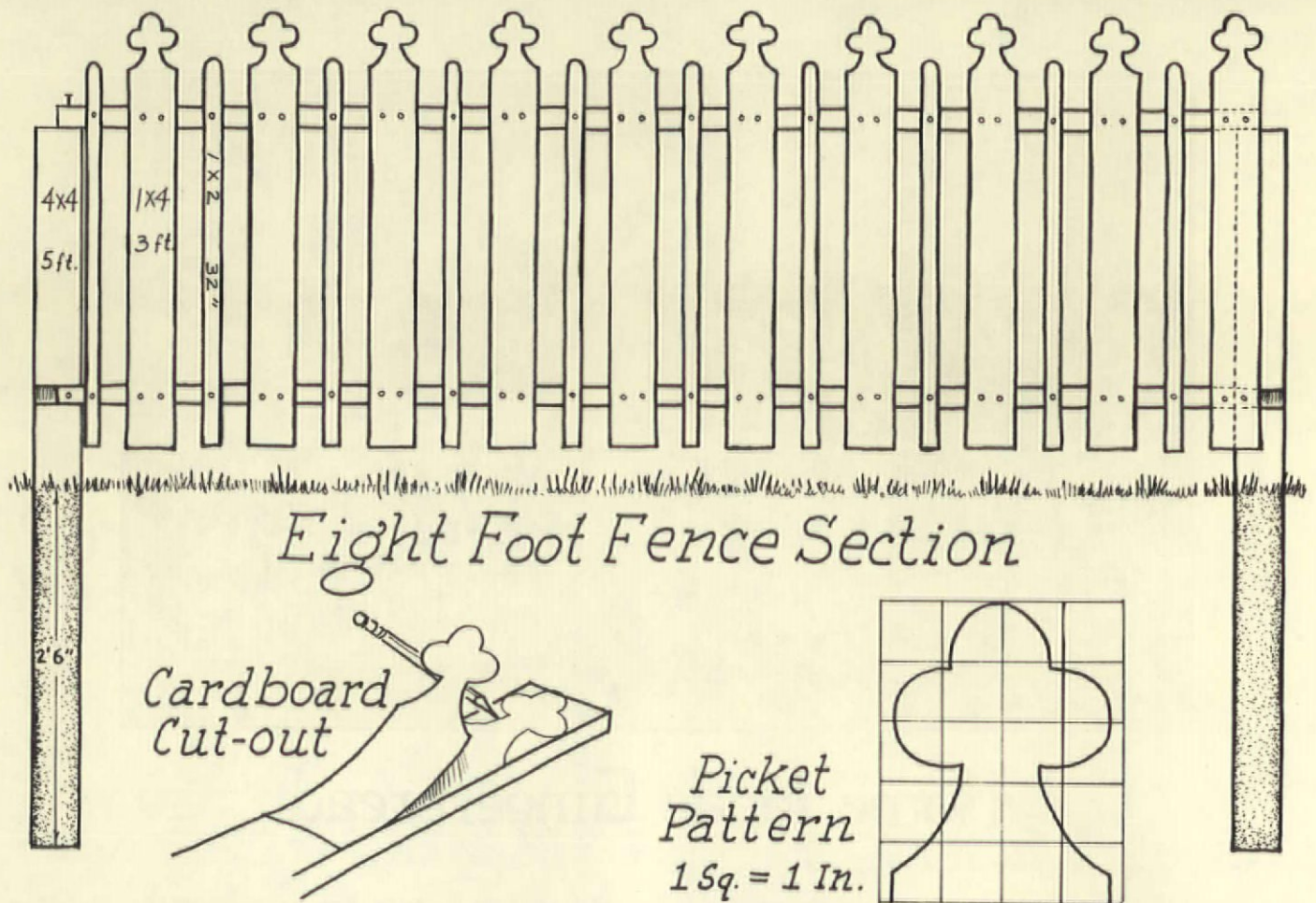
architectural style can be made using the same standard structure.

MY FARMHOUSE RESTS on fourteen acres which include a barn, corn crib, and several out-buildings, so it was not my intention to separate the home from the rest of the farm by fencing it in on all sides as one might do in the city. Instead, my object was to build a picturesque fence that would accent the home without interrupting the flow of space. I decided to let the fence wind its way from the left side of the house, around the curve of the driveway, to a point which presented a pleasant view from the verandah. Under the circumstances, the installation of gates did not seem necessary.



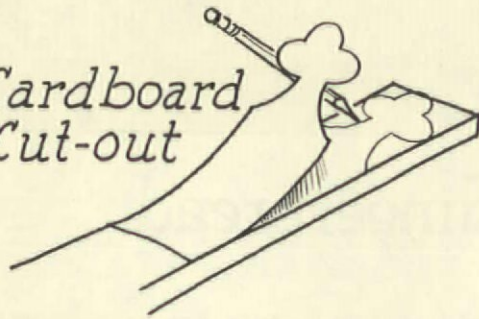
The dilapidated condition of this plain farmhouse made it the ideal candidate for such a creative renovation.



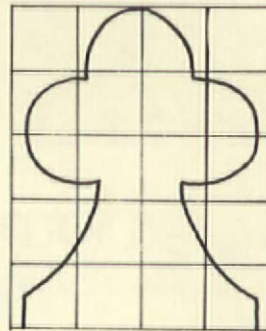


## Eight Foot Fence Section

Cardboard  
Cut-out



Picket  
Pattern  
1 Sq. = 1 In.



MUCH OF THE TRIM I had fabricated was after the Eastlake style, a mode of decoration highly popular on late Victorian buildings; I wanted to pattern the fence to complement the trim. After many rough sketches and trips to the architecture shelf in the library, I settled on a trefoil (or three-lobed) design, a Gothic motif that appears on the house and was frequently used in Eastlake decoration.

### The Materials

**U**SING CEDAR OR REDWOOD lumber throughout would have made the fence the most weather-proof. However, since I was on a budget, I used less expensive common pine for the fence sections, insisting only that the posts, which were to be sunk into the ground, be made of rot-resistant cedar. By alternating inexpensive 1x2 furring strips with the pickets (this arrangement looked best anyway), I used less lumber and so reduced the cost. The 1x4's were to be ornamentally cut, so they had to be clear--free of knots and rough edges. (1x4 furrings are available in grades cheaper than clear. By personally selecting the wood, it is possible to get satisfactory material.)

CONFORMING TO A STANDARD 2x4 length, I settled upon 8-ft. sections and 3-ft. pickets. The pickets, when installed, would hang an additional 3-1/2 inches above the ground. The slimmer 1x2 furrings would be shorter for reasons of appearance, measuring 32 inches. On paper I calculated that one 8-ft. section would, therefore, consist of ten pickets alternating with ten 1x2 furrings. I reduced

my cost by looking for lumber market sales which saved me an additional 25% of the bill.

I PURCHASED most of the lumber in standard 12-ft. lengths, saving money by cutting the pickets to 3-ft. lengths myself. On a piece of light cardboard the width of the pickets, I made a full-size outline of the trefoil design and cut it out. Placing this pattern at the top of each 1x4 picket, I traced around it and then cut it out with a saber saw. After also cutting the 1x2 furrings to length, I rounded the tops of each with a file. All that was left was the assembly.

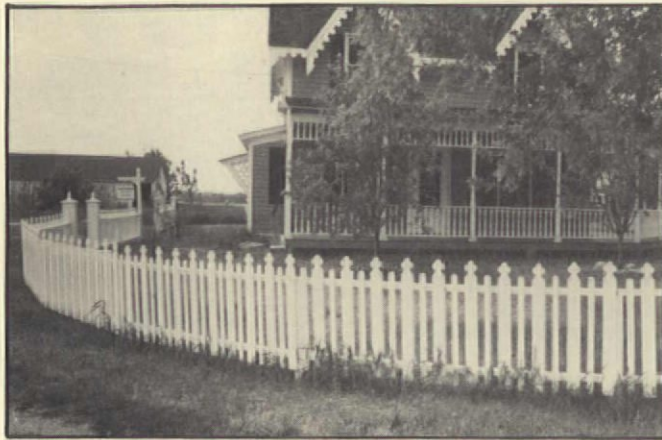
SINCE THE FENCE was to be free-standing, I was faced with the problem of how to end the last section of the fence without its being too abrupt. I designed the pickets in the final section to get consecutively smaller as they reached the end, giving the fence the effect of gradually diminishing into the landscape.

### Assembly & Installation

**A**SSEMBLING THE SECTIONS was not difficult, as I used the grid pattern of my tiled basement floor as a guide. (Alternately you could lay out a chalked grid, using a big carpenter's square.) Setting each pair of 2x4's 25 inches apart on the floor, and using rust-proof aluminum nails, I tacked the first and last pickets into place in order to keep the squared units from shifting as work progressed. Then I nailed all of the large trefoil pickets into place, leaving spaces for the slimmer 1x2's. Figuring that the



pickets in each section would be equally spaced at 6-1/4-inch intervals, I cut a strip of corrugated cardboard 6-1/4 inches wide for use as a spacer. Placing this cardboard against the side of each nailed picket, I could easily set the next picket into place, always parallel and correct. Once the larger pickets were in place, it was easy to nail each of the 1x2 furrings into the spaces left. At the end of the summer, I had a dozen sections ready to be installed.




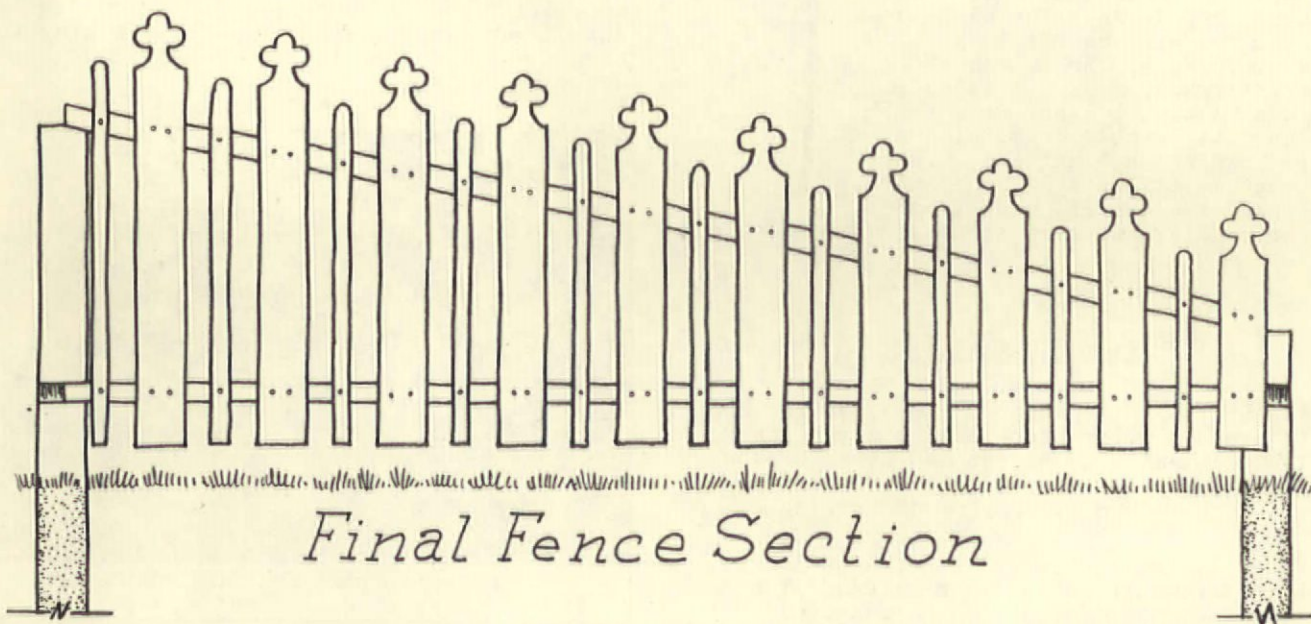
SINCE THE PURELY ORNAMENTAL fence was designed without gates or corners, its installation did not require much measuring. I had merely to start at the side of the house, erecting each section along the edge of the lawn, taking care to follow the curve of the driveway to an approximate point in front. Boring a clean 6-in. hole with a hand-turned auger-type post hole digger, I then inserted a 5-ft. cedar 4x4 post to a depth of 2-1/2 feet.

I CUT A NOTCH into both ends of the lower 2x4 rail in each section, and a corresponding notch at the base of each 4x4 post so that the bottoms of the sections would fit flush into the posts. The upper rail of each section was then nailed flat onto the top of each post. (See the diagram.) In order that the fence would follow the gentle curve of the driveway, it was also necessary to miter the ends of the upper and lower rails a bit. One problem I didn't foresee was that there is a slight slope to the front yard which had to be compensated for by some trimming of the ends of pickets in one section. Aside from this minor problem, the fence went up easily in one day.

DURING THE WEEKS I had been assembling the sections, I'd also made four large ornamental posts to be installed at the front and side entrance walkways. I constructed a pair of box-like front entrance posts of wide 1x10's for design emphasis, and reinforced the posts inside with a frame of redwood 2x4's. From scrap lumber I fashioned tops for both posts and purchased ornamental turned finials from the large selection at a local lumber yard. On the remaining two end posts at the side of the house, I found that the easiest and most substantial arrangement after all was to install solid 6x6's which are suitably massive and require a minimum of fashioning. These, like the front posts, were cut into 6-ft. lengths and anchored 2-1/2 feet into the ground so that they would stand a foot taller than the 4x4's.

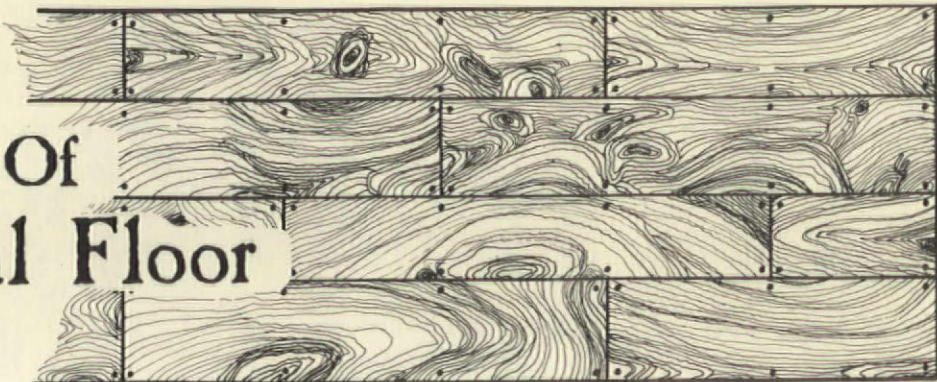
**P**AINTING THE FENCE required time and patience as I applied a base coat of exterior primer and finished with two coats of oil paint, just as I had painted the house. Although the finished paint job looks very attractive, I think in retrospect that a couple of coats of white stain would have been more sensible. Besides not requiring priming, the stain would have weathered gradually without blistering or peeling. It would be a good idea to paint the sections before installing them, if possible, since painting the undersides of rails and pickets is painstaking once the fence is up.

THE UNIQUE "HEARTS HAVEN" SIGN which serves as an end post at the side entrance was ordered and specially inscribed at a local lumber yard for about fifty dollars. 





# The Reproduction Of A Colonial Floor



By Jane Freeman, Brimfield, Mass.

**O**NE OF OUR RESTORATION OBSTACLES was choosing how best to reproduce the colonial floors of our 1750's house. Finding a solution was no easy task. But we've refinished the floors of our nine-room house, including one complete replacement, and we're pleased with the results.

FIRST, WE VISITED some other old houses in which the floors had been reproduced. In one house, the floors were not finished or stained at all, since the owner had chosen to let the boards age naturally. It was a beautiful and appropriate treatment for an Early American floor, but not suitable for our kitchen with its food and water spills.

THE OWNER OF ANOTHER ANTIQUE house had put a high gloss varnish on his floors. This technique gave the floor a new, never-used appearance. Finally we found what we'd been looking for. In this example the boards were new, but they could have easily been mistaken for the original floor. The floorboards were lovely, ranging from ten to eighteen inches in width, and had a dull, antique finish.

A FINISHING TOUCH made this floor uniquely appealing: The nails used to hold the wide boards in place were produced by the Tremont Nail Co. of Wareham, Mass. (Listed in the OHJ Catalog.) They were two and one-half inches long, with a large head and a blunt end. They are what is called a clinched nail; the shank reaches its widest point in the middle, and then tapers towards each end.



## Saw Mill Savings

**A**FTER SEEING THIS HANDSOME FLOOR, we decided to use a similar procedure in our kitchen. The original wide boards had been torn out by previous owners some time before, and replaced with modern narrow-board flooring.

WE FOUND A SAW MILL locally that supplied us with the necessary wide floor boards. Ten to fifteen-inch boards can't be purchased at a

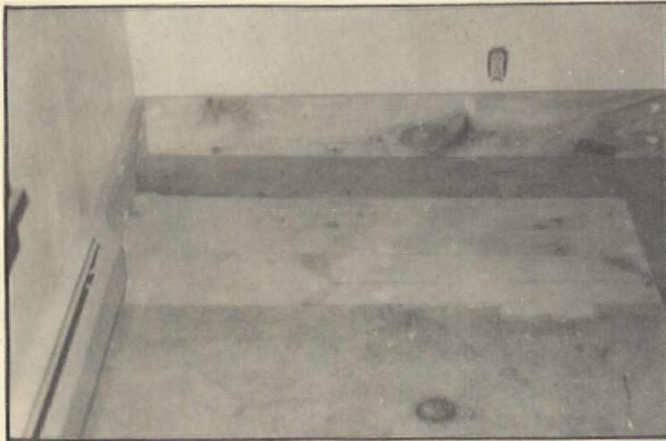
regular lumber yard anymore. The only drawback to buying saw mill lumber is that it is not always as dry as that from a lumber yard. Therefore you must plan ahead, buying the lumber well in advance. The boards must be stacked with spacers in between to promote drying, and left for about a year before use. This might sound inconvenient, but the monetary savings outweigh the time involved.

**T**HE ROUGH-SAWN BOARDS, which were one inch thick, were machine planed to 3/4-in. before installation. We ran the boards over the jointer to provide a tight fit between boards. A hand-plane could also have been used. We tore up the worn narrow boards in order to replace some of the underlying joists. We levelled a surface for the reproduction floor by nailing down a 1/2-in. plywood sub-floor. Since the old-fashioned nails had such blunt ends, all the nail holes were pre-drilled to ensure that the boards wouldn't crack. Also to prevent any splitting, the nails were driven in one and one-half inches from the sides and ends of the boards. The boards were nailed over the floor joists, which run perpendicular to the finish flooring. In our case the joists were every 24 inches on center. We encountered no difficulties during our floor-laying project. Talking to people who had done it before helped us avoid pitfalls.



The all new, sanded and finished kitchen floor.





The Freemans saved as much of the original flooring as possible, but in some rooms patching was needed, using same procedure. Floor shown before finishing.

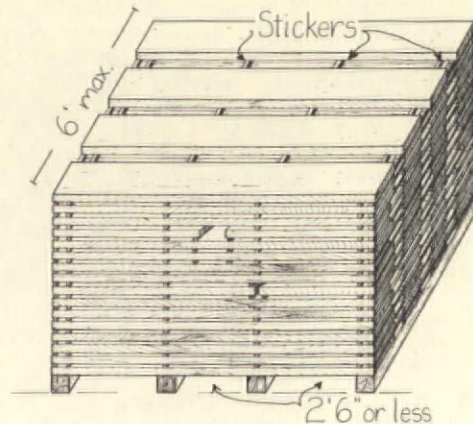
ONCE THE UNFINISHED FLOOR was laid, we had to keep from walking on it, since gritty footprints are hard to remove from an unfinished surface. We covered them with red rosin paper for protection. This building paper is cheap and durable, and it can be purchased at any lumber yard.

BEFORE THE INITIAL COAT OF STAIN was applied, the floor was hand-sanded with increasingly fine grits of sandpaper. Next we swept the floor, and rubbed it down with a tack rag (a clean soft cloth dampened with varnish, mineral spirits, or turpentine) to remove dust and wood fibers. After staining with Minwax Special Walnut Early American Stain, we were ready for the final protective finish.

WE USED A CLEAR URETHANE, applied in thin multiple coats. Urethane won't water-stain, and this kind of application is the most durable. The brand of urethane was Zip Guard, which is easy to work with and gave us good results. We applied four coats of gloss finish urethane to lend protection, then we put on two coats of satin finish (matte) urethane to give a rubbed appearance. It is important to let each coat dry the recommended number of hours (in our case, 24) before the next coat; otherwise urethane may not bond properly.

WE REFRAINED FROM USING STEEL WOOL; if you've ever used it in the past, you've noticed the tiny steel splinters which inevitably remain. These are often invisible--until they're covered by urethane, after which it's too late. So we used very fine sandpaper when preparing the floor between coats. Before EACH coat, the dry floor was hand-sanded and rubbed with the tack rag. It did feel like a lot of work, but once it was all done it seemed to be well worth the time and effort.

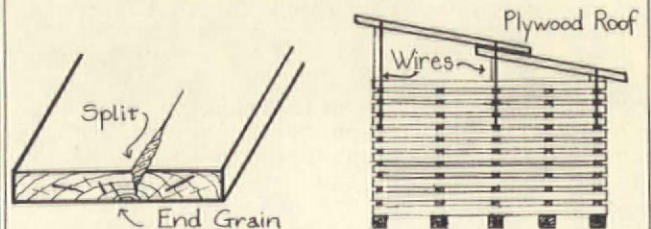
THE NEW FLOORS have such a time-worn look that they are in complete harmony with our colonial house. Now that we've moved in, the floors are being put to the real test. So far the finish is performing well and the floors are easy to care for. Not only do they have the charm of a true colonial floor; they also offer the easy maintenance of modern floors. 🏠



## Sticker Stacking

PRINCIPLES for air-drying wood: (1) Positive air movement throughout stack is necessary for uniform drying. (2) Stacks must be prepared in such a manner as to reduce bowing, cupping, end-splitting, and surface checking.

- CLEAR away rocks and weeds. Check drainage. Don't pile near buildings, walls, or many trees.
- STACK wood by size and type: Hardwood separate from softwood, 2x4s separate from planks.
- PILE should be 6-ft. wide maximum, by length of timbers. Support both ends of short boards. Stickers should be directly vertical over base bearers. Maximum between stickers is 2 ft. 6 in., less for thinner stock.
- ALL timber should be stacked in the same direction--DO NOT cross-pile.
- CONVENIENT thickness for stickers is 3/4 in. Widths can vary but to prevent moisture-staining they should be similar and not too wide.
- BUILD a make-shift roof--or stack in a lean-to, woodshed, or even a garage--but don't drape plastic or tarp over sides or right on top of wood.
- MINIMIZE end-splitting from too-fast drying by brushing or dipping ends in melted paraffin, or coating with oil-based paint or white glue. (Paraffin is flammable; always heat over hot water.)
- HARDWOOD should air-dry one year per inch of thickness--time is less for softwoods.



IDEALLY, different woods require somewhat different conditions. For more information, see THE WOOD HANDBOOK, U.S. Dept. of Agriculture, Forest Products Labs. It's in many public libraries, or order from the Government Printing Office, Washington, D.C. 20402.



(SIDING, continued from p.37)

THE SIDING ITSELF will lose its initial appearance. Aluminum siding is prone to dents and scratches, and its color coating can peel and fade. Solid vinyl siding is vulnerable to punctures and tears; it is sunlight-sensitive, becoming brittle and faded if not properly treated with an ultra-violet inhibitor. Most vinyl siding becomes brittle and susceptible to shattering in cold weather. Should it ever be necessary to replace a section of siding (the typical repair after temperature or impact damage), it will probably be impossible to match color and style since the industry frequently changes its product lines. Successful painting of such siding is also difficult.

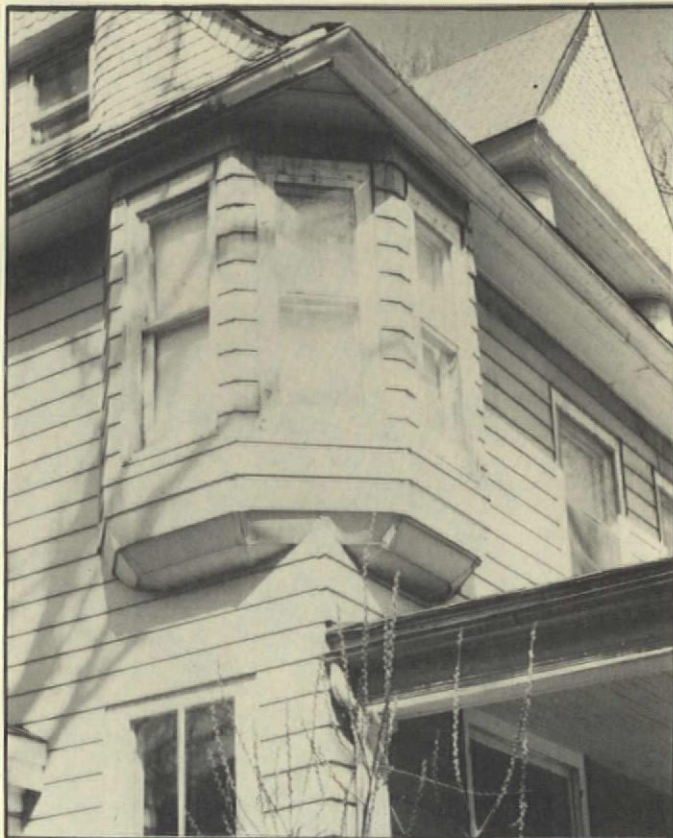
### Any Advantages?

**I**F THERE IS A FIRE, sidings offer little or no protection. Aluminum siding can make it difficult to reach the fire's source, though it will not burn or increase heat. Vinyl siding melts, curls, and sags—even when the fire is only in a nearby structure. Vinyl siding is sometimes advertised as "self-extinguishing," which simply means that it will not burn alone. It will, however, burn in the presence of fire.

ACCORDING TO the Federal Trade Commission, synthetic sidings have little or no insulation value. It was the FTC's contention that even when insulated aluminum siding is correctly installed, there is little or no energy savings. As a result of these charges, the insulation value claim has disappeared from advertising.

FINALLY, synthetic sidings are no less expensive than other alternatives. Most siding comes with a twenty-year guarantee, some expensive types even carry up to 40 years, but these guarantees are pro-rated. (That is, the manufacturer's liability is limited to a decreasing percentage of labor and materials costs as the warranty period progresses. In many cases, this works out to practically exempt the maker from any costs in a very short time: Labor is often totally excluded after three years; cost of materials liability is small, and replacement limited to whatever product is closest to the damaged one, with no guarantee to match color, size, or style. And the warranty is voided in the event of improper installation.)

AND ALTHOUGH THE LOSS of aesthetic value is not quantifiable, it must also be included in economic considerations because the property will retain greater value when original materials are properly maintained. [Ed. note: In the case of a modest house in need of exterior repairs and less than fifty years old, siding may possibly enhance the short-term resale value. However, authenticity of materials and preservation of style increasingly commands a premium—and not just in certified historic districts. Also, real estate appraisers and potential buyers may be concerned that the siding is hiding problems.]



Installation of substitute siding over curved surfaces is awkward at best.



With the replacement siding off, the original proportion of the beaded wood clapboards is apparent. A trim board at sill level was discarded during siding installation.



## One House's Story

**T**HIS HOUSE IN PEORIA came to the attention of the Illinois Dept. of Conservation in 1979. Its siding, which had been in place twenty or twenty-five years, was faded, dented, and peeling. The aluminum siding on the 1899 frame house had been painted white to cover its original coating, which had faded and peeled. Eight-inch-wide aluminum siding had been applied over four-inch clapboards, altering the scale and proportions of the building, and decorative details had been removed during installation.

FACED WITH periodically painting the siding and maintaining a building out of character with the rest of the neighborhood, the owner removed the siding himself, disclosing the badly deteriorated clapboards beneath. The aluminum shell was not airtight, yet there wasn't enough air circulation to allow moisture to evaporate. Dirt had accumulated behind the siding, and the condensed moisture that had been trapped between the clapboards and siding ran down the side of the house, leaving patterns in the dirt. Wherever water had collected at the base of each vertical surface, the wood was rotten and needed replacing.

IN OTHER AREAS, water was actually entering and being trapped behind the siding, a phenomenon attributable to any of several causes...improper installation, failure to first correct a water problem, or damage to the siding. Water had been entering undetected, causing the original siding, sheathing, and structural studs to rot. Interior plaster was also beginning to fail due to excess moisture.

### Damage

**V**ARIOUS INSECTS had been making their homes behind the aluminum siding. Beetles and wasps found it particularly attractive. One area was literally covered with dead wasps, another was actively infested with termites, which were busily destroying the frame structure while protected by the siding. But for the siding, the termite attack easily could have been detected. (Protection from termite attack is a claim made by virtually all siding manufacturers.)

IT WAS ALSO CLEAR that the frame structure had been damaged during installation of the siding. Nails, used to secure furring strips that held the siding level, had cracked the original wood siding. Decorative details had been taken off. The wood window sills had been cut and sections removed to accommodate the siding.



The aluminum siding had covered detailing, and the house has a flat monotonous look. Notice the incongruity of the modern wrought iron on porches.



Here the siding is being removed. On the facade, deteriorated and missing boards were replaced, painting has begun, and the porches are being restored.



One example of the detail and texture that had been covered by the flat siding.



TO RESTORE THE BUILDING, the owner is replacing damaged or deteriorated wood siding and trim, reconstructing missing trim and details, filling nail holes and cracks, and scraping all loose paint. He will then sand, prime, and paint the siding with colors close to the original. This project also involves restoration of the porches, which were altered when the aluminum siding was installed. Their original wood columns were replaced with wrought iron, changing the design and appearance of the house. Those iron fixtures seem too light-weight and delicate to carry the roof, and they may not be structurally sound. The sagging roof provided evidence that the support system was failing.

THE SIDING had not lived up to its promises and had, moreover, sacrificed the architectural integrity of the house. It is clear that a regular painting schedule, and maintenance of the wood clapboards, would have been far preferable to synthetic siding.



THERE'S MORE INFORMATION about substitute siding in Preservation Brief #8 from HCRS: "Aluminum and Vinyl Siding on Historic Buildings." The point of these two reports is the evidence that not only do sidings hide or destroy the characteristics of old houses--but that they can cause physical deterioration as well.

PRESERVATION BRIEFS can be ordered from the Government Printing Office, Washington, D.C. 20402. Please enclose 75¢ for each.

BRIAN D. CONWAY is the Architectural Coordinator for the Historic Sites Division of the Illinois Dept. of Conservation. This article was adapted from one which first appeared in the newsletter "Historic Illinois" (Dec. 1979.) The newsletter, and the Illinois Preservation Series, are published and distributed free of charge by the Illinois Dept. of Conservation, Div. of Historic Sites, 405 E. Washington, Springfield, IL 62706.



The factory finish on this aluminum siding had faded and peeled years before. The owner had been maintaining a regular painting schedule.



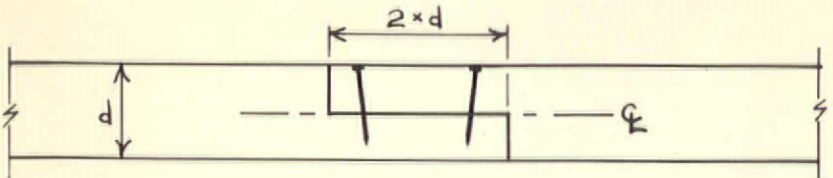
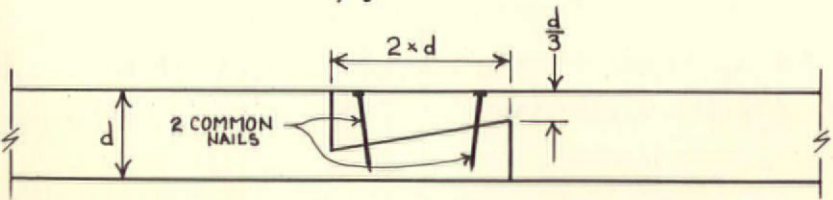
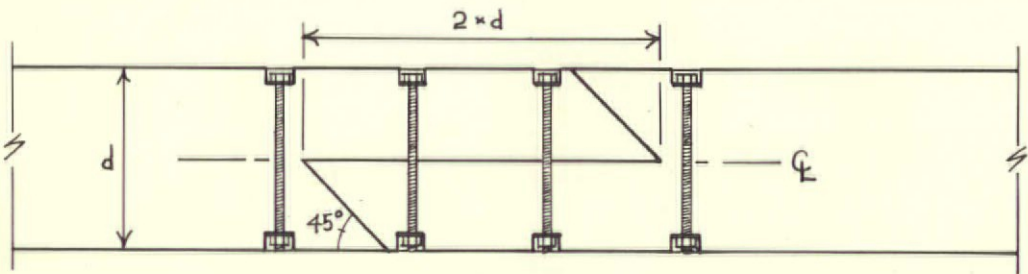
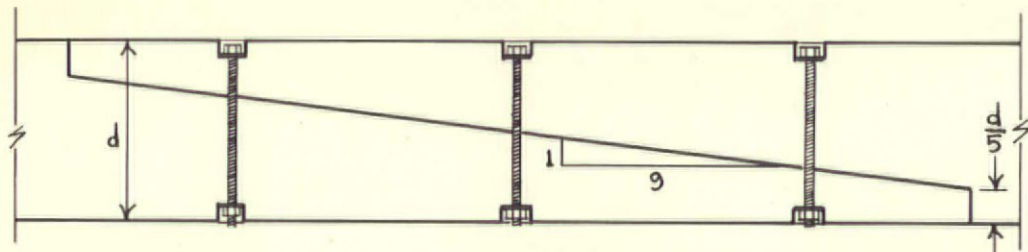
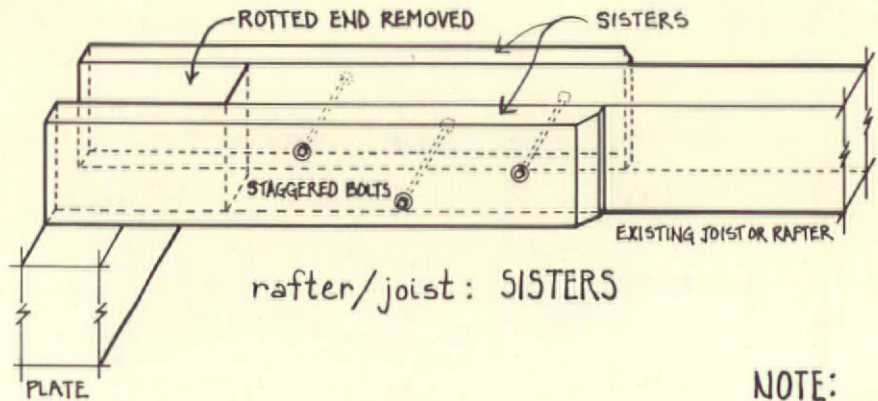
This deterioration was caused by the aluminum siding. Studs were rotting, and interior plaster was damaged.



Most of the wood clapboards didn't look like those at the left. The majority of curious homeowners who remove substitute siding find a condition similar to that above: It needs paint. Also, bullseyes were taken off the decorative band--and had to be replaced.



# WOOD SPLICE JOINTS



## NOTE:

- TREAT ALL SURFACES WITH WOOD PRESERVATIVE AND FLOOD BOLT HOLES WITH PRESERVATIVE, BEFORE ASSEMBLY.
- MATING SURFACES SHOULD BE COATED WITH HIGH STRENGTH WATERPROOF ADHESIVE OR EPOXY HAVING GOOD GAP FILLING QUALITIES. HOWEVER, A PROPER, CLOSE FITTING JOINT IS ESSENTIAL FOR MECHANICAL STRENGTH.
- USE GALVANIZED BOLTS AND FLAT WASHERS.
- OPTIONAL: COUNTER-SINK BOLTS AND PLUG HOLES.

## NOTE:

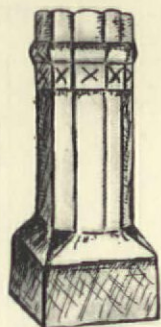
- TREAT ALL SURFACES WITH WOOD PRESERVATIVE BEFORE ASSEMBLY.
- ANY SILL OR PLATE JOINT MUST BE SUPPORTED BY FOUNDATION OR STUD RESPECTIVELY, AT JOINT.

## GENERAL NOTE:

BUILDING CODES MAY VARY. CONSULT LOCAL AUTHORITIES FOR REQUIREMENTS AND RESTRICTIONS.



## Products For The Old House



### Clay Chimney Tops

THE BEST CHIMNEY TOPS are made of clay. Even Sulfuric acid, the most destructive product of combustion gases cannot damage a clay chimney top. They resist corrosion, rust, burning and melting.

A CLAY CHIMNEY TOP is also a beautiful architectural feature. The Superior Clay Corporation makes clay chimney tops in a dozen styles and at least four of them are appropriate for the old house.

CHIMNEY TOPS or "pots" as they are called in England, are not merely decorative. They keep out wind and water that can damage your home, but permit safe, unobstructed venting of dangerous gases such as carbon monoxide. A chimney top also increases the height at the top of the chimney to increase draft.

ALTHOUGH REAL CLAY POTS are not inexpensive, imitation masonry chimneys and exposed metal vents have enough problems inherent in them to not warrant the saving. They allow acids to eat holes in them and water to leak in, and rusted metal can discolor the roof.

SUPERIOR CLAY also manufactures clay flue linings of selected ceramic materials fired to a temperature of approximately 2000°F. Information on the flue linings are included in the free brochure on chimney tops.

FOR THE FREE BROCHURE, write to: Superior Clay Corporation, Dept. OHJ, P. O. Box 352, Uhrichsville, Ohio 44683. Telephone: (614) 922-4122.

## Helpful Publications

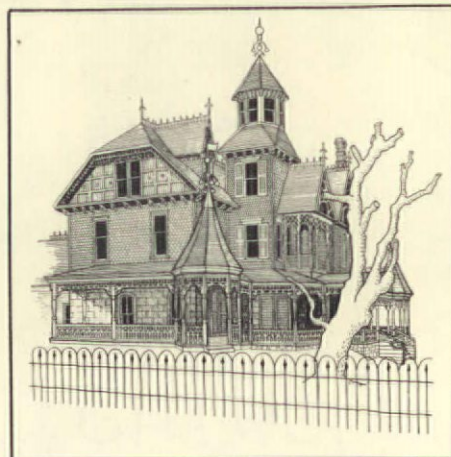
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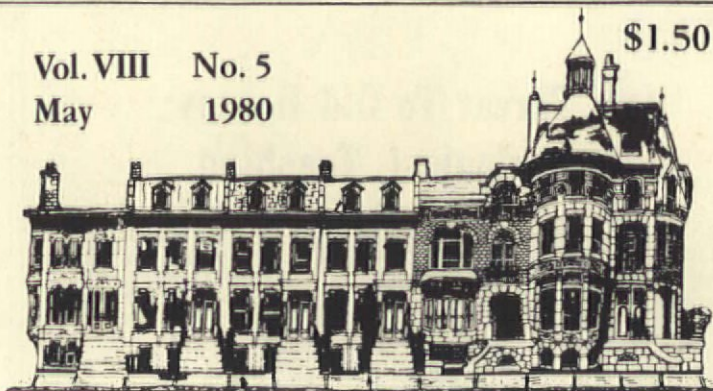
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Restoration And Maintenance Techniques For The Antique House

Slate  
Roofs

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Coming Next Month

FRONT GARDENS IN THE CITY

By The Old-House Journal Technical Staff

**U**P AGAINST THE CLAIMS of asphalt roofing manufacturers and unenlightened contractors, comes this article--a little bit of friendly persuasion for keeping that old slate roof. There are BENEFITS, both practical and aesthetic, to maintaining an existing slate roof. And even as replacement roofing or on new construction, slate is a cost-efficient material over the long term. It will outlast many asphalt roofs, all the while giving beautiful, low-maintenance service. The passing of time only enhances it. Because it is natural stone, an infinite variety of color and texture is found among slate roofs.

SLATE WAS POPULAR for roofing until the late 1920's. The same traditional methods are used for the quarrying and milling of slate today, although most current production goes toward structural uses (such as slabs for damp-proof courses) and for flagging. However, some companies continue to produce roofing slate, and some will fill special orders for restoration projects. (See the box on page 55.)

IN THE UNITED STATES, slate has been quarried to the greatest extent in Pennsylvania, Vermont, and Virginia. The Vermont slate region extends into Washington County, N.Y., and the Pennsylvania region into Maryland. There is also a high-quality slate taken in Piscataquis County, Maine, but this

is no longer generally available for roofing. In the Peach Bottom District (PA-MD border) slate has been quarried since the 1730's, and slate was quarried for local use in Virginia as early as 1787. But before 1850 and the railroads, most slate used in this country was from Wales.

How Long Does It Last ?

**T**HE SLATE INDUSTRY is prudently conservative in its claims. The prevailing opinion about slate's longevity is that Pennsylvania slate lasts at least 50 years, Vermont (and N.Y.) slate lasts at least 100 years, and Buckingham (VA) slate lasts at least 175 years. This takes into account those slates which fail from individual natural flaws, and those veins which produce slate that is the most porous or of the least desirable mineral constituents.

IT IS SAFE TO SAY that slate, being naturally durable stone, is one of the most permanent roofing materials available. The star example of its longevity is the roof of the Saxon Chapel at Stratford-on-Avon in England. After nearly 1200 years of exposure to the weather, the Welsh (high quality) slate is still in good condition.



(Continued on p. 51)



## New Threat To Old Houses: Technological Trashing

**P**RESERVATIONISTS made some impressive gains in the 1970's. In many towns it is becoming almost fashionable to restore old buildings, rather than to pull them down to construct vacant lots.

**BUT NOW**, with much education remaining to be done on the why's of preserving old buildings, a new potential enemy is appearing on our unguarded flank. Conservationists--people concerned with the preservation of natural resources--may become as big a problem in the next 10 years as the bulldozers have been in the past.

**MOST PRESERVATIONISTS** have felt, I think, that conservationists were our natural allies. Both groups share an abhorrence of waste, a concern for the physical environment, and a respect for individual workmanship.

**BUT I FEAR** the tide of public policy is flowing so strongly in the direction of energy conservation that it may make antagonists out of people who should be friends. While federal funds for preservation are being slashed, for example, politicians are competing with each other to devise new tax incentives and grants for energy conservation.

**ALL OF WHICH IS FINE--**up to a point. But past experience with urban renewal has shown what happens when you attempt to solve a problem by quickly throwing buckets of money at it. There is the danger that the rush to retrofit old buildings for energy conservation is going to wreak as much havoc as the bulldozer forces did in the past.

**COUNTLESS THOUSANDS** of old houses have been covered in aluminum and vinyl siding in a misguided search for energy savings. Only now is it being discovered that these substitute sidings can cause terrible damage (See OHJ, Apr. 1980).

**THE GOVERNMENT'S** emphasis on "insulate everything" has led countless thousands of others to blow sidewall insulation into their old houses. It will be a decade or more before the folly of this step shows up fully in rotted sills and clapboards.

**MUCH MORE VISIBLE**, however, will be the consequences of hanging solar collectors all over old buildings. When this is

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done by people who have no interest in old architecture, the result can be disastrous. A special danger is that the owner or architect will feel compelled to make a bold "personal statement" at the expense of the building's appearance. When energy gadgets are displayed in a conspicuous fashion, the result can only be called "technological trashing."

**A**RCHITECTS AND BUILDERS of the 18th and 19th centuries considered the creation of beauty one of their prime functions. That they succeeded admirably is shown today in the public's delight in restored houses and neighborhoods across the U.S. People love the texture, proportion, ornamentation and human scale of old buildings.

**OLD BUILDINGS** were frankly designed to evoke an emotional response from people. The emotional reaction is removed when a building is technologically trashed.

**I**N THE 1980's, there will be more and more people ruining the beauty of old buildings by smothering them with insulating siding, solar collectors and other gadgets. It's crucial that we who love the appearance of old architecture become totally familiar with the techniques of energy efficiency. We have to provide the "soft technology" to make old buildings energy conserving--without destroying their beauty!

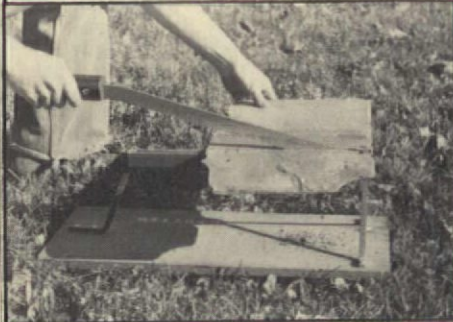
--Clem Labine



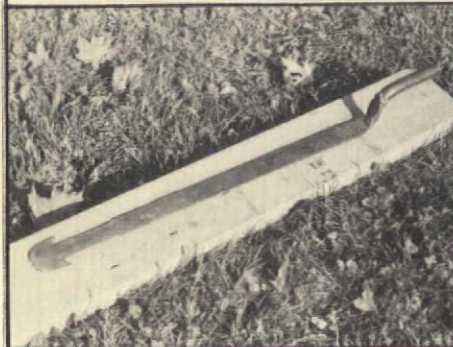
**TECHNOLOGICAL TRASHING:** The facade of this handsome house has been hidden behind an ugly glass wall that is supposed to act as a solar heat collector.



# Slater's Tools



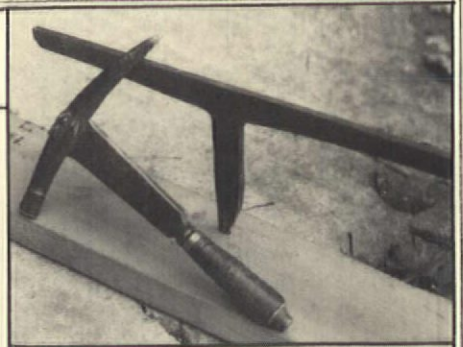
**SLATE CUTTER:** A simple tool similar to an office paper-cutter, convenient for cutting quantities of slate on site.



**SLATER'S HAMMER:** Cast-steel one-piece tool. One end is pointed for punching slate; other end is a hammer head for driving nails. On each side of the shank is a shear edge for cutting slate.



**RIPPER:** Cast-steel tool 24 in. long used for removing damaged slate. Thin blade is slipped under broken slate and hooked around nail shaft. The other end of tool is struck sharply with a hammer; end hook cuts and withdraws the nail. (left)



**STAKE:** T-bar (18 in. long) with the short arm pointed for driving into plank or scaffold. Long arm acts as rest for slate during punching and cutting operations, or as a straight edge.



## Buying & Matching

**L**IKE OTHER SHINGLES, slate in quantity is bought by the square (the number of shingles that cover 100 square feet of plain roof surface with the standard lap). For restoration jobs, of course, smaller quantities can be purchased from either a distributor or a quarry, depending on circumstances. Top dollar will be paid for just a few slates, especially if you have the shop punch, cut, or bevel the slate, or if shipping is involved. A roofer who deals in salvaged slates may be the best source for very small orders.

### APPROXIMATE 1980 Roofing Slate Prices: (per square, may vary)

PA Black.....	\$165/sq.
VT Weathering Green.....	190/sq.
VT Unfading Green.....	230/sq.
VT Variegated Purple.....	265/sq.
Buckingham Grey.....	350/sq.
NY Unfading Red.....	1200/sq.

PERMANENCE DOESN'T COME CHEAP, as you can see. But maintaining an existing slate roof and replacing slates as they break--one or a few at a time--is relatively simple and inexpensive. A slate roof is one of the most valuable assets an old building can have. Its proper maintenance over time will ensure its preservation. (A slate roof adds appreciably to the value of a house.)

WHEN ADDITIONS or alterations are made to a house, or when the existing roof is repaired,

it would be nice to have the new sections of the roof match the old in color and texture. Slate of the same quality and color characteristics should be used. Because of the deep and varied color in a slate, matching is not as difficult as it is with other stone, such as granite and marble. It is important to get in the same color family, however, and this means getting the replacements from the same region or occasionally from the very same quarry. In addition, the difference between Unfading and Weathering colors must be considered. A new Weathering Green slate from Vermont, for example, will not match old Weathering Green slate (by now a subtle brown or grey) for some years.

TO BLEND NEWLY BOUGHT with old slate, the best method is to remove some slates in an old intact section of the roof, and mix these with new slates. Slates on dormers and in shadows will be less obvious than those on the roof's major expanse, so it may be preferable to use the new slates on these small areas.

## Where To Buy Tools

SLATE TOOLS are available through any of the quarries that supply roofing slate, as well as through many roofing suppliers.

HAMMER, RIPPER, AND STAKE are available direct from the manufacturer by mail. Please call for prices:

JOHN STORTZ & SONS  
210 Vine Street  
Philadelphia, PA 19106  
(215) 627-3855



TO MATCH SLATE, look at the underside of an old slate. (The exposed part is not a good example of the color because it has accumulated organic debris and pollution.) To check the color as it was before Weathering--if Weathering Slate--look at the inside of a broken slate.

PENNSYLVANIA SLATE colors are Blue-Grey, Blue-Black, and Black. Buckingham and other Virginia slates are generally Blue-Grey to Dark Grey with micaceous spots on the surface that produce an unusual luster. Vermont slates can be Light Grey, Grey-Black, Unfading and Weathering Green, Unfading Purple (rare) and Variegated Mottled Purple and Green. Unfading Red slates are found only in Washington County, N.Y.; these are the most costly. Also, a lustrous Unfading Black slate of exceptional strength was long quarried in the town of Monson, Maine. It is no longer sold as roofing slate.

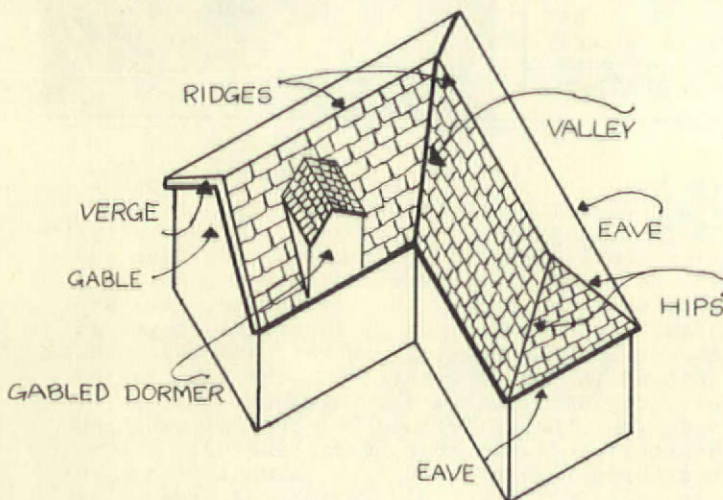
## Failures, Leaks

ONE OF SLATE'S major advantages is that it needs no ongoing maintenance: No painting, no preservative coatings, no waterproofing or fireproofing, and no cleaning. Slate resists seasonal weather changes better than other roofing materials. (Some slates have a greater porosity than others and will eventually begin to spall due to freezing cycles.)

ANY ROOF, however, should be checked and maintained periodically. Gutters and flashings are particularly prone to problems and may need occasional repairs. (See Maintenance of Gutters, Oct. and Nov. 1979.)

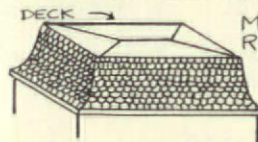
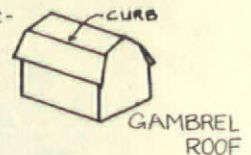
COMPLETE FAILURE of a slate roof is almost always due to poor installation methods--bad flashing details or inferior nails. The nails sometimes give way; the worst condition is when ALL the nails need replacing because false econ-

## Dictionary



RIDGE has the combing slates (those projecting at the top) alternately projecting on either side of the ridge.

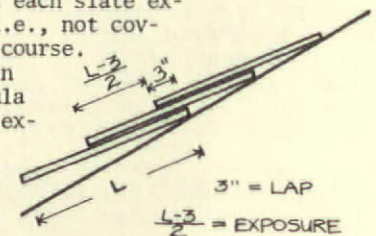
CURB: The line formed by the junction of two different slopes on one side of a roof--especially on Mansard and Gambrel roofs.



DECK: The flat or nearly flat top of a Mansard roof.

ELASTIC CEMENT: A sticky, waterproof compound used to secure hip and ridge slates, and to cover exposed nail holes. It has a high melting point and low freezing point. Also, any modern product meeting these criteria.

EXPOSURE: The length of each slate exposed to the weather, i.e., not covered by the next above course. Exposure is expressed in inches. A simple formula is used to compute the exposure: Deduct 3 in. (standard lap) from length of slate and divide by two. For a 24-in. slate, usual exposure is  $24-3=21$ ,  $21/2=10\text{-}1/2$  inches.



FELT: For a standard roof, refers to 30 lb. (optimum) asphalt-saturated rag felt. It is laid under the slates in horizontal layers with the joints lapped 3 inches towards the eaves and at the ends. It does not have long-term waterproofing value; but rather protects the roof while the slates are being laid, has insulating value, and forms a cushion for the heavy brittle slates.

FLASHING: Metal sheets or patches that are used to prevent water infiltration at intersections of projecting surfaces through the roof, or against which the roof abuts. (For example, valleys, around chimneys and dormers.) BASE FLASHINGS are used over or under the roof covering and turned up on the vertical surface. CAP FLASHINGS are those built onto the vertical surface and bent down over the base flashings. (Latter also called Counter Flashings.)

BABY: In single slate replacement, a piece of copper or other metal used to cover nail holes and provide a channel for water runoff. See photos.

BUTT: The exposed end of a roofing slate.

CLEAR: In regions where slate contains bands of rock compositionally different from the main body of slate, "clear" denotes slates which have been trimmed of all such ribbons.

COMMERCIAL STANDARD SLATE: Most common and available roofing slate. Exact definition varies by region, but generally this slate is 3/16 inch thick with varying widths (8-14 in.) and a length between 18-24 in. Each slate has a bevelled edge and pre-punched nail holes. Quality is fairly consistent.

COMB RIDGE: Ridge finishing treatment in which the combing slates (see Saddle Ridge) on the North or East side are laid extending 1/16-1 inch over the other side. The grain of the combing slates may be either vertical or horizontal. The COXCOMB



omy or ignorance led to the use of the wrong nails to hold each slate. If some slates are letting go because their nails have rusted through, this could mean that eventually all the slates will have to be relaid with the proper copper nails. Today's galvanized nails can not be recommended. Old slates can be reused.

**LEAKS IN SLATE ROOFS** are usually caused by deteriorated flashing, or missing slates. Flashings gradually erode from ice and atmosphere. Flashing repair can often be tackled by the homeowner, especially the flashings around chimneys and stacks and in open valleys. Replacing flashing in closed valleys--where the metal is covered by slates--is more complicated.

**WITHOUT A DOUBT**, it is more economical to keep up the repairs on a sound slate roof by replacing missing slates and deteriorated flashings, than to replace it or cover it with a modern, less permanent material. If the majority of

the slates are delaminating or crumbling, it won't be possible to save the roof. It should be recognized that such a roof is probably many years old already, and that the condition resulted from the original installation of inferior, least expensive slates.

## Replacing A Broken Slate

**I**NDIVIDUAL SLATES may have to be replaced because of breakage or natural deterioration of a flawed slate. A slate is tough and durable but brittle. A falling tree limb, a heartily thrown rock, or a careless footstep can break it. Many problems are caused by improper installation: The nails may have been driven too tight, causing tension in the tightly held slate which results in its cracking. Or the nails may not have been driven quite far enough, causing the slate in the course above to rest unevenly on the protruding nail head.

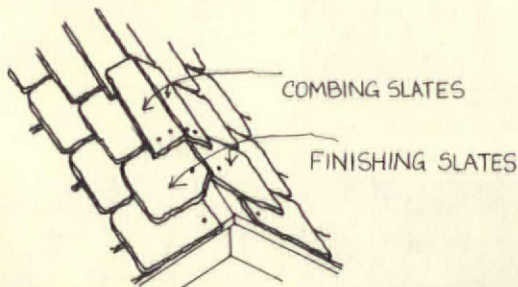
(Text continues on p.55)

**FREAKS:** Slates having an unusual combination or variation of color, bought for special effects on special order. They are thicker than usual--never split under 1/4 inch and up to 2 inches or more.

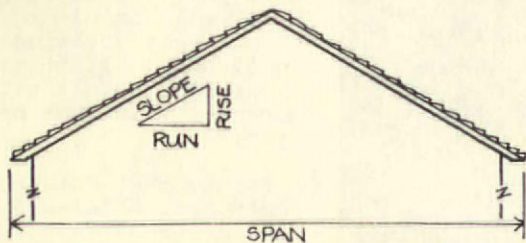
**GRADUATED ROOF:** Variation on the Standard slate roof. Slates are arranged so that the thickest and longest are at the eaves, diminishing in size and thickness to the ridges. Usually this is combined with other generally more labor-intensive treatments such as closed valleys.

**LAP (HEADLAP):** That part of a slate overlaying the slate two courses below. The standard lap is 3 inches. Roofs with less slope (flatter) often take a 4 inch lap; those very steep need only a 2 inch lap. See sketch at EXPOSURE.

**RIBBON STOCK:** Slate which contains bands of rock differing in composition and color from the main body of stone. It is always labelled as such. Usually from Pennsylvania quarries.



**SADDLE RIDGE:** Finish in which the regular roofing slates are extended to the ridge line so that slates on both sides of roof are butted flush. Then another course of slates is laid with its grain horizontal (combing slates) and lapped horizontally to cover the previous combing slate's nail holes. They are butted flush on either side of the ridge.



**SLOPE (PITCH):** The angle of inclination that the roof makes with a horizontal plane. It is usually described in terms of the vertical rise (in inches) to each foot of horizontal run, as in "8 in 1." Or it can be described in terms of the total rise (height) of the roof to its total span, as "1/4 pitch" or "1/4 slope."

**STANDARD ROOF:** One composed of Commercial Standard Slate (approx. 3/16 in. thick) of more-or-less uniform standard width and length, with butts laid to a line, in standard slate colors. (No color patterns, no freaks.) Encompasses those slates with butts (exposed ends) trimmed to have an hexagonal, diamond, or Gothic pattern.

**SQUARE:** Number of slates needed to cover 100 square feet of plain roof surface, when laid with the customary lap of 3 inches. So, you'd need more small slates to make a square, fewer large slates. (For example, there are 686 10-in.x6-in. slates in a square, but only 98 24-in.x14-in. slates to a square.) Also, roofs with less slope (flatter) take a 4-in. lap, so more slates are needed to cover 100 sq. ft.; very steep roofs take a 2-in. lap, so fewer slates would be needed. Commercial Standard Slate weighs 650-750 lbs. per normal square.

**TEXTURAL ROOF:** In between a Standard Roof and a Graduated Roof. Generally, such a roof has more visual interest than the Standard, with the use of rough slates instead of smooth, or with unevenly laid butts, or variations in the thickness, size, and color of slates. (Not usually over 3/8-in. thick.)

**UNFADING:** A color designation given to those slates that do not "weather" or appreciably change color over the years. (As Unfading Red.)

**VALLEY:** The depressed (inside) angle formed by the intersection of two inclined sides of a roof. In an **OPEN VALLEY**, the metal flashing is exposed as the slates do not come together. A **CLOSED VALLEY**, where the slates completely cover the metal, is used on expensive jobs. **ROUND VALLEYS** and **CANOE VALLEYS** are descriptive names for two types of Closed Valleys.

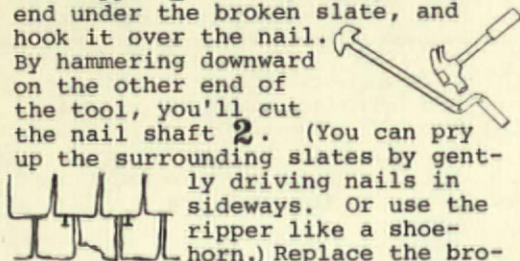
**WEATHERING:** Modifying word describing the color characteristic of a slate. Weathering slates react chemically with the atmosphere to gradually change hue over the years; does not affect longevity or hardness of the slate. See Unfading.





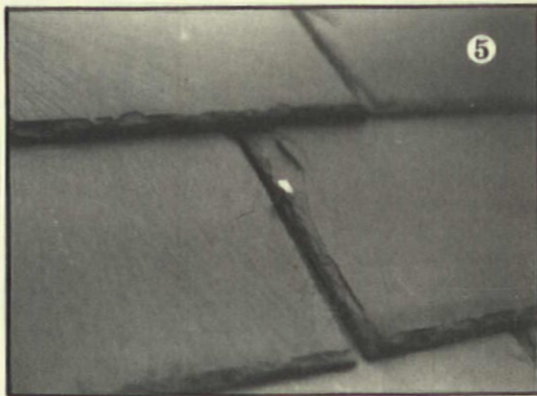
## Making Babies

FIRST REMOVE any broken slate, with the Ripper **1**. Slip the pointed end under the broken slate, and hook it over the nail. By hammering downward on the other end of the tool, you'll cut the nail shaft **2**. (You can pry up the surrounding slates by gently driving nails in sideways. Or use the ripper like a shoe-horn.) Replace the broken slate **3**. Line up the new

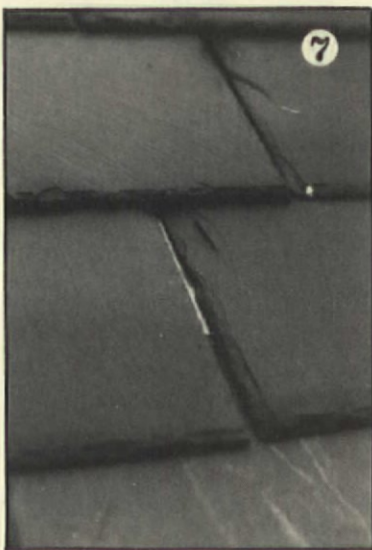
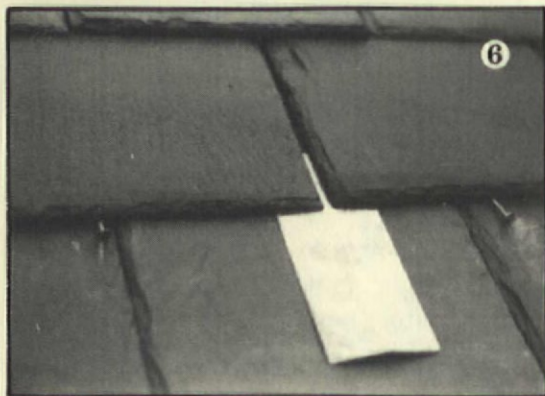


slate in its course and be sure pre-punched nail holes (if any) are covered. Mark and punch a hole in the replacement slate **4**, preferably 1-2 inches from the next above slate, but always above double coverage. (You want a hole ONLY in the new slate, not in the one below it.) Use a nailset or punch, or drill the hole.

A SLATER'S NAIL is a heavy gauge copper wire nail with a large flat head. Its length should be twice the thickness of the slates plus one inch.



3d nails are appropriate for standard-thickness slates up to 18 in. long. Use 4d nails for extra-long slates, and 6d nails on hips and ridges. DO NOT use common wire nails or shingling nails. Drive the nail **5**; note that the large head was cut to fit between slates in this case. Alternately, you could chip out a little of each adjoining slate.

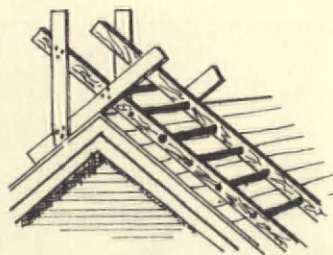


BEND A PIECE OF COPPER slightly convex or concave to make a BABY that will cover the exposed nail hole **6**. Slide it firmly up so that its bottom edge is 2 inches below the nail. If necessary, tap a screwdriver against the baby to push it up, or use the nail trick again as in the photo. The baby will stay in place **7**, adequately covering the nail hole. If it is bent concave, it will channel rainwater better.

SEE the text for another method of holding a replacement slate.

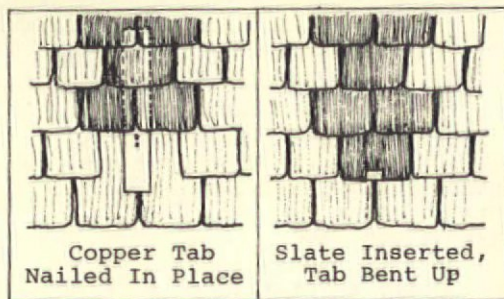


WORKING up on the roof is tricky because slates are brittle and will break if full weight is placed on them. The roof can be padded with an old blanket and a ladder can be laid on the roof to work from.



A ridge hook is a simple device which attaches to the top of the ladder and hooks over the ridge --one can be bought or rented. (Roofers will have scaffold brackets or other equipment. In no case should they leave supporting metal straps in the roof when they're finished; the metal will rust, staining the slates.)

**T**HERE ARE TWO METHODS for holding the new slate in place. The first is the simple copper holding tab shown in the drawing. However, ice may bend this tab in cold climates. A sure way to fasten the new slate in place is shown in the photographs on p. 54.



Copper Tab Nailed In Place

Slate Inserted, Tab Bent Up

IF A WHOLE AREA of slates needs replacing, or needs new nails, first remove all the slates. This will minimize the number of babies, since some slates will be nailed in the normal way, that is, with the nail holes covered by subsequent courses of slate.

THE NAIL shouldn't be driven so tight that the slate is under pressure--the slate should HANG on the nail (unlike wood shingles). Normally, the nail hole would be sealed with elastic cement. (You can use Dow's "Gutter-Seal," Alcoa's "Roof Sealant," or exterior caulk.)

### Notes On Reroofing

**T**OTAL REROOFING with slate is a procedure larger than this article, and probably a task beyond the fond desires of most OHJ readers. But reroofing with slate is sometimes a worthwhile consideration. Brand-new man-made materials are never quite harmonious with the other elements of an old house and its setting. Slate, on the other hand, instantly blends in as a natural material. It may be preferred over wood shingles in densely populated areas where a fireproof roof becomes a necessity.

IT IS GENERALLY RECOMMENDED that the old roofing be removed first. It's a prerequisite if the existing roof is uneven, much-interrupted by hips and dormers, or if the sheathing or rafters have rotted. But if the existing roof is smooth or can be easily shimmed, a slate roof can be laid on top of it. Follow the recommendations of a competent roofer.

COMMERCIAL STANDARD SLATE (3/16 in.) should present no load problem to a structurally

### Quarries

FINDING a slate company (quarry or distributor) doesn't necessarily mean you've found a ROOFING slate supplier. The following quarries produce roofing slate, and can fill special orders for restorations.

VERMONT STRUCTURAL SLATE CO., Fair Haven, VT 05743. Tel.(802) 265-4933.

RISING AND NELSON SLATE CO., West Pawlet, VT 05775. Tel.(802) 645-0150.

EVERGREEN SLATE CO., 34 North St., Granville, NY 12832. Tel.(518) 642-2530.

HILLTOP SLATE CO., Middle Granville, NY 12849. Tel.(518) 642-2270.

STRUCTURAL SLATE CO., Pen Argyl, PA 18072. Tel.(215) 863-4145.

BUCKINGHAM SLATE CO., 4110 Fitzhugh Ave., Richmond, VA 23230. Tel.(804) 355-4351.

### The Book

THE BEST BOOK about slate roofs is SLATE ROOFS, a reprint of a 1926 publication by the now-defunct National Slate Assn. It's full of well-organized information--historical, scientific, and practical, and it's required reading for any roofer unfamiliar with slate or a homeowner who plans an extensive roofing job. The price (ppd.) is \$7.95; order from Vermont Structural Slate Co., Fair Haven, VT 05743. Tel.(802)265-4933.

SPECIAL THANKS to Bill Mahar of Vermont Structural Slate for all his help.

sound roof. (Max. 800 lbs./square, including slate, nails, felt.) An engineer should be consulted before installing a Graduated Roof or if there is any question about the soundness of the roof members beneath the existing roof.

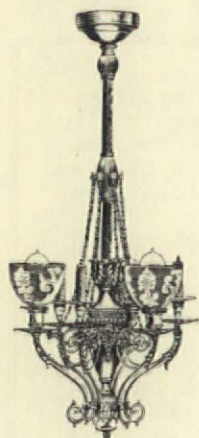
### Enlightened Roofers

**A**N UNRECOGNIZED FACT these days is the high salvage value of slate; it can be reused, being in no way damaged or used up on its first roof. There are tales--not many--of less-than-scrupulous roofers advising replacement of a slate roof that merely needed work on the flashings, just to make off with the resalable slate.

MORE OFTEN, when a roofer says "It can't be fixed," he's really saying "I can't fix it."

INDEED, IT MAY BE DIFFICULT to find a contractor familiar with slate roofs. Your safest bet is with a roofer who advertises in the Yellow Pages as a Slate Roofer. If finding a slate roofer in your part of the country is unlikely, it is possible to hire and educate another responsible roofer to do the job. First, find one who doesn't say "Asphalt is better than slate" or "You can't buy roofing slate anymore." Then have him read the Slate Roofs book. A few things must be mastered... like working on a brittle roof, and driving the nails just right. But many of the procedures are standard for any kind of shingle, slate, wood, or asphalt.





# Living With Gas Lighting

By Don Yule, Brooklyn, N.Y.

**N**EW YORK was the first city to have electric lighting--starting in 1880 with Edison's first generating station on Pearl Street in Manhattan. But for a half-century prior to that, city homes had been illuminated by gas, piped into each room.

MY BROWNSTONE ROW HOUSE was built in 1879, and many of the original gas fixtures are still in place and operating. Most of the rooms have one outlet in the ceiling, allowing a "gasolier" to hang from the center of a rosette, and another outlet on the wall. I found several varieties of fixtures in these locations, depending on the room.

MY HOUSE WAS NOT ELECTRIFIED until the 1920's. By that time, electric service had become more reliable, the overhead lines having been replaced by underground cables. Several of the original gas fixtures were converted to electricity by the simple expedient of threading wires through the gas pipes and replacing the gas jets with pull-chain sockets.

ALL OF THE OVERHEAD FIXTURES were electrified, but most of the wall gaslights in my house were left as they were. (The owner at that time was either trying to save money on the conversion--or else he was still not convinced that electricity was here to stay!)

THE GAS FIXTURES are still quite workable. Although I don't use my gaslights regularly, we do light them on social occasions, when candles might otherwise be used. I find they create the desired atmosphere.

**O**NE OF THE MORE INTERESTING fixtures is the gas mantle unit in the bathroom. It is strategically located over a marble sink which has two bevelled-glass mirrors above it. It was obviously the place where the man of the house shaved; hence the need for the bright light provided by the mantle. The gas light also provides ample heat for this small room.

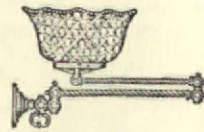
**EDITOR'S NOTE:** Many old houses have the gas lines still intact in the walls. Before attempting to re-activate such a system, however, be sure to have it checked out by your plumber or gas company to be sure it is still safe.



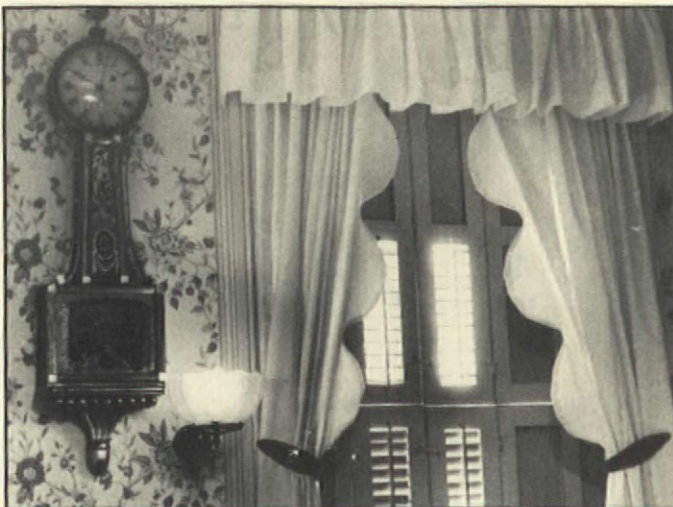
An unusual three-arm sconce with open flame casts a soft light on a self-portrait by the author's wife, Jaye.

IN THE MASTER BEDROOM, there is an ornamented brass wall fixture over my desk. The valve has an auxiliary outlet on the side. I use this valve for an extension hose running to my Welsbach gas student lamp. This is one of my favorites: A heavy brass desk model with a gas mantle and green glass shade.

IN THE LIBRARY, above my wife's desk, is an unusual triple-burner gas wall sconce, with a valve in the shape of a gas flame. The kitchen has a swing-out model that can fold out over the kitchen counter. Presumably, this was handy for reading cookbooks. There's a similar fixture at the bottom of the cellar stairs--providing a meager light for the coal bin.



WE DON'T HAVE big blackouts in New York City very often, but when we do, I'll be ready! 🏠



Original gas wall sconce still lights the Yule's front parlor.



# How To Make Victorian Drapery

By Carolyn Flaherty

**E**VERY ONCE IN A WHILE a publication comes along that adds so much valuable knowledge and practical help in the restoration of old houses that we want to bring it to your attention in a big way.

SUCH A BOOK IS "The Curtain-Maker's Handbook." While it has already proved indispensable in many house museum restorations (The Taylor-Barry House in Kennebunk, Maine and The Molly Brown House in Denver, Colorado) its value lies in its application to any old house of the Victorian period. The author not only gives suggestions for window hangings, but complete instructions for planning, cutting, making and hanging drapery.

ANY OLD-HOUSE PERSON who sews should be able to follow the diagrams and sewing instructions and for those who don't sew--a drawing, instructions and yardage requirements can be taken to a local place that will make drapery but which does not ordinarily deal with period styles.

## A Little History

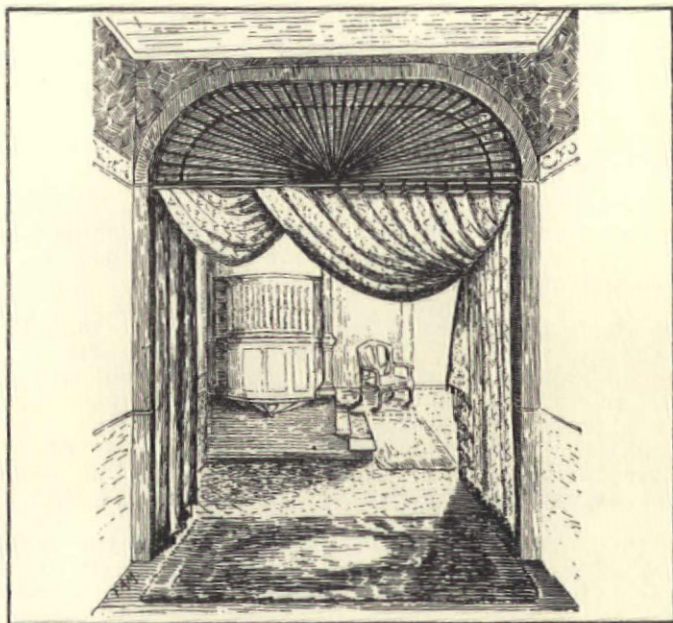
**T**WO YEARS AGO, Martha Gandy Fales (a consultant to historical societies and museums in northern New England) was looking for an appropriate design for window hangings for a room being refurbished in the Victorian period. A volunteer thought she had an old book that might be helpful. It was "Practical Decorative Upholstery" by F. A. Moreland, published in Boston in 1889. It was so helpful that E. P. Dutton has reprinted it as "The Curtain-Maker's Handbook." Ms. Fales has written the excellent introduction for this reprint edition. Mr. Moreland explains the purpose of the book in his preface:

"It is the art seen from the standpoint of a practical draper, and if to an expert such close attention to detail seems tedious and unnecessary, it must be remembered it is written for the uninitiated."

DRAPERY in Moreland's day was by no means confined to windows. He gives instructions for making portieres; covering walls; alcove and archway drapery; laces, glass and sash curtains; curtain and traverse rods; draping brass bedsteads; how to launder curtains; cleaning painted floorcloths and linoleum; and even a method of preserving the feathers in a feather bed.

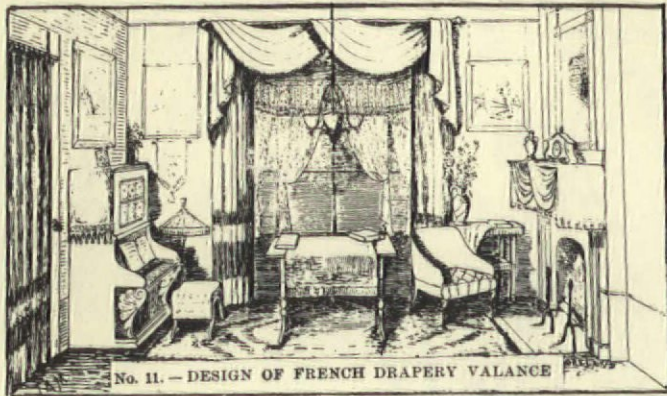
## A Selection Of Drapery

A SMALL SAMPLE of Moreland's instructions and designs from the book follows. I have selected the designs that seem to be of the most general interest.



Hall drapery is looped over a pole and drawn up on one side by means of a cord running through rings placed between the curtains and the lining. The rope is a decorative effect.





No. 11. - DESIGN OF FRENCH DRAPERY VALANCE

## French Drapery Festoon

**I**N MAKING UP A DRAPERY when the design is intended to convey the idea that the whole is in one piece and simply thrown over the pole, the festoons are cut by a different rule, as in hanging they are to droop below the pole at the head; and the pleats, instead of being gathered together in a small compass, are spread along the pole to correspond to the width of the wing or long curtain to which it is attached.

THIS METHOD is especially adapted to the fashion of using poles, which allows a freer handling of goods than in using the cornice, and if well done will quite deceive the eye and appear as though the goods had been put over the pole without cutting.

INDEED THE REQUEST is sometimes made that the drapery be so arranged and not cut at all. This would be impossible to do except for some very simple form of drapery in silks or other reversible goods requiring no lining.

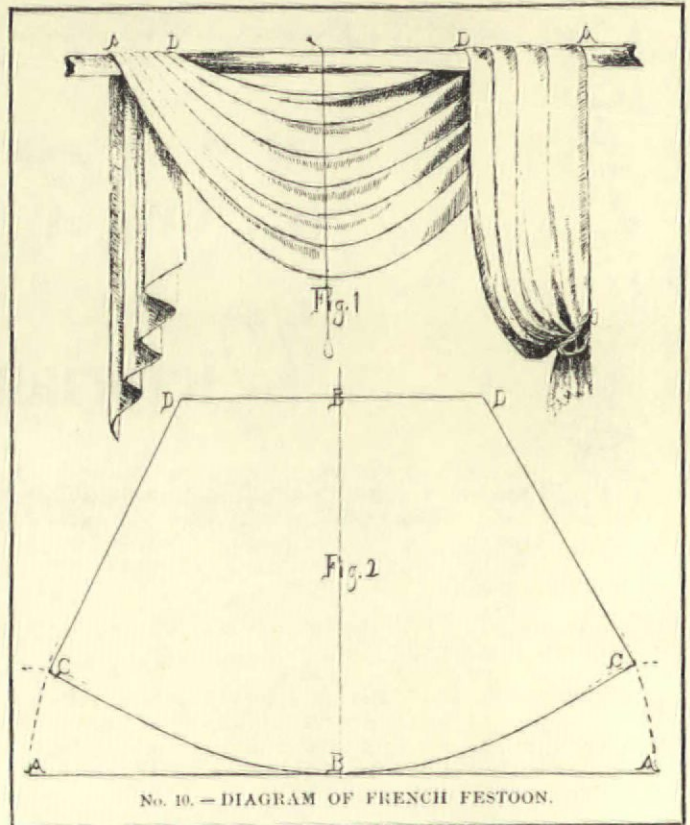
IT WOULD BE VERY IMPRACTICABLE any way, and the desired effect can be produced better by having the drapery properly cut and made up in separate pieces.

THE DESIGN must first be drawn to a scale adapted to the form of the window or whatever the space may be, having each part in good proportion.

ON THE POLE before alluded to, mark off in full size the width of the drapery, dividing it up according to the spaces required for the various parts. Put a tack at each end of space to be occupied by the festoon. (See AA, Fig. 1.) Hook the measuring tape at A, letting it fall down and around to A at the other end, and as low as required by the scale drawing.

THIS GIVES the full measurement around the bottom of the festoon which is to be laid out for base line AA, on the previously prepared paper for patterns the same as for cutting the common festoon. (See Fig. 2.)

WITH THE T-SQUARE ERECT the perpendicular line BB, Fig. 2. This will be through the middle of the base line, as the festoon at the bottom is the same on both sides.



No. 10. - DIAGRAM OF FRENCH FESTOON.

NOW TAKE HALF the base line for radius with centre at B, draw the sweep C, and on it locate the point C, one-sixth the whole base line above the point A. Now mark off on line BB the depth of the pattern, which is to be twice the depth of the festoon when pleated up.

THROUGH THE MARK at the top draw the head line, which is to be as long as the measurement of the head each side of the perpendicular line, which in this case is a little less on the right side. (See head line DD.)

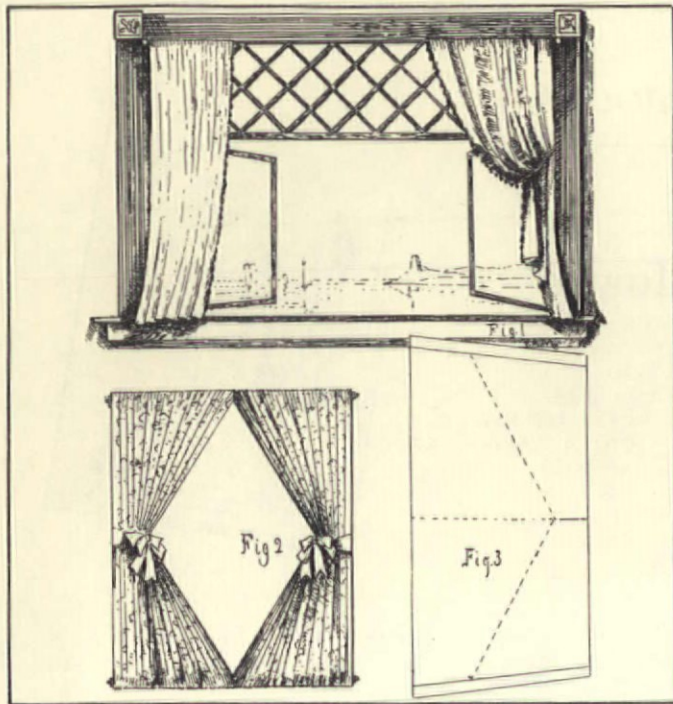
THE HEAD is to be measured the same as the base by dropping the measuring tape as low as the head of the festoon is to sag below the pole, and noting the measurement each side of the plumb line, which is represented by the perpendicular line on the pattern.

RULE FROM points CC to DD, and you have three sides of the festoon. Draw one-half the bottom as shown by diagram. Cut around sides, top, and this half of the base, fold over on perpendicular line, and cut out the other side of bottom by the same curve.

DESIGN No. 11 would do for an over-drapery for portieres going outside the door casing, or the form modified for the occasion would be an easily made valance in silk for a light drapery over laces, or to festoon the front of a mantel, and is an easy lesson for a beginner. From five to seven yards of silk would make a lambrequin for an ordinary-sized window, requiring five to six yards of fringe. In cutting the festoon for the design, the perpendicular line would come in the centre, as the festoon spreads the same both sides.

INSTRUCTIONS are excerpted from: "The Curtain-Maker's Handbook."





### Advice About Curtains

**A**BOVE are Moreland's designs for cottage and diamond drapery. They are simple enough to require no further diagrams. He does, however have a great deal to say on the subject of lace, glass, and sash curtains. Here are some of Moreland's comments:

### Lace Curtains

LACE CURTAINS that are to hang under long curtains or lambrequins should be arranged so they can be easily removed without taking down the other work. The practice of attaching them to the same rings that support the other drapery when poles are used is a bad one, as it brings them all too close together to allow either to drape well. The best method is to turn a hem at the top to receive a rod which is supported by hooks or brackets on the casing.

### Laundering


**INSTRUCTIONS FOR CLEANING LACE CURTAINS:** Soak them over-night in warm water with soap and a couple of spoonfuls of borax or ammonia. After soaking twelve hours, move them around in the tub and that will be sufficient to remove everything but stains. Rinse them thoroughly in clean, warm water. Stretch them a little and fasten them to frames to keep them from shrinking. Frames can be made of light strips of board screwed together at the corners so they can be easily taken apart and packed away for future use; or the curtains can be tacked out on the floor, previously covering the carpet with large sheets of paper. Be sure, when tacking out, that the front edge and bottom are at right angles. Keep the back edge as near parallel to the front as the work will

permit. All the unevenness will then be at the top, and the curtains will dry out nice and square. The top will have to be trimmed off square and rehemmed for the rod. Use very little starch, as, the more flexible they are, the more graceful they will hang.

### Glass Curtains

GLASS CURTAINS are short curtains to go inside the casing, and are usually hung on a small rod with sockets or eyes on the stop beads, unless the window shades should be on the outside of casing. They will then have the rods supported by brackets projecting far enough to keep the curtain clear of the shade. Lace curtains of this kind are often used at the same window with long laces, and it is also a very tasteful way to drape chamber and cottage windows, and show the casing all round. Make them of some light material, silk, muslin, or madras, and trim them with soft fringes.

### Vestibule Curtains

VESTIBULE CURTAINS are usually hung with rod top and bottom, and allow double fullness if possible. Finish them about five inches longer than the glass opening, so the hemming will not be seen on the outside. In hanging, place the upper rod first, slip the lower rod through the hem, and draw down tightly enough to cause the curtain to hang in well-defined pleats, screwing on the brackets to hold. For a door with single large opening, a pretty treatment is to have the curtains in pairs, fringed and weighted with shot. Shirr up the top, put on rings for the rod. A traverse cord and pulleys with dainty tassels to match are a nice addition, but as such curtains would be within easy reach one could dispense with the traverse. 

## To Order The Drapery Book

"THE CURTAIN-MAKER'S HANDBOOK" is a reprint of an 1889 volume written by Frank Moreland. Moreland, having had 20 years experience in the upholstery and drapery business, gave instructions for planning, cutting, making, and hanging drapery. He included seventy illustrations. There is an excellent contemporary introduction by Martha Gandy Fales. This softbound edition has 320 pages.

THE PRICE is \$7.95, plus \$1.00 postage. Send check to: Mr. Cyril I. Nelson  
E.P. Dutton, Dept. OHJ  
2 Park Avenue  
New York, N. Y. 10016



## Products For The Old House

### Source For Wood Gutter Stock

RECENTLY there has been a real problem obtaining wood gutter stock in the East. Most Eastern gutter stock has been made from Douglas fir. The primary source for this wood has dried up and lumber yards in the Northeast report shortages and, even worse, no apparent plans for obtaining wood gutter stock from a new source.

THERE IS, however, a source for wood gutter stock out West. The Coast Trim Company is milling wood gutter stock from heart redwood. They report that they have plenty available and will mill more as needed. They will also ship anywhere as long as the customer pays the shipping charges.

IT IS PROBABLY a good idea to call and check prices, availability, etc., before writing. Talk to: Mr. Bill O'Connor, Coast Trim Company, 4200 Ross Road, Sebastopol, CA 95472. (707) 546-2271.

### For Fine Tools

ANYONE who appreciates a fine, high quality tool should have a copy of The Fine Tool Shop Catalogue.

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THE CATALOGUE is \$5.00, but is free to Old-House Journal subscribers. Write to: The Fine Tool Shop, Dept. OH, 1 Nutmeg Drive, Trumbull, CT 06611.

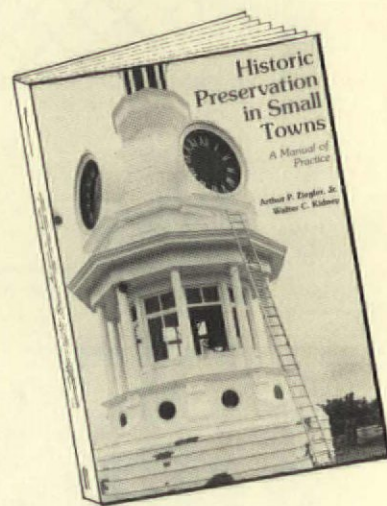
## Helpful Publications

### Help For Small Towns

THE DEFINITIVE BOOK on developing a preservation plan in towns of fewer than 50,000 people has just been published by the American Association for State and Local History. "Historic Preservation in Small Towns, A Manual of Practice" was written by preservationist Arthur P. Ziegler, Jr. and architectural historian Walter C. Kidney.

THE FIRST THREE CHAPTERS offer thoroughly practical information--a presentation of the special problems faced by small-town and rural preservationists, a discussion of organizing techniques, and some objective advice on saving properties. The next section presents six case histories...their failures as well as their successes. This book is not about what "ought to be" in preservation; rather, it is all about what has worked so far.

APPENDICES AND BIBLIOGRAPHIES are very useful. Included is a list of the addresses of all State Historic Preservation Officers, and perhaps the most



comprehensive list ever of what should be on the preservationist's bookshelf.

THIS PAPERBACK is attractively bound, with 60 photographs; it is not, however, a pretty picture book of finished projects like many others. It is, truly, a manual of practice that will become essential reading for concerned citizens and dubious town fathers (and mothers) in small communities.

TO ORDER, send \$8.95 to the American Assn. for State and Local History, 1400 Eighth Ave. South, Dept. OHJ, Nashville, TN 37203. Tel. (615) 242-5583.

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