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October 2004
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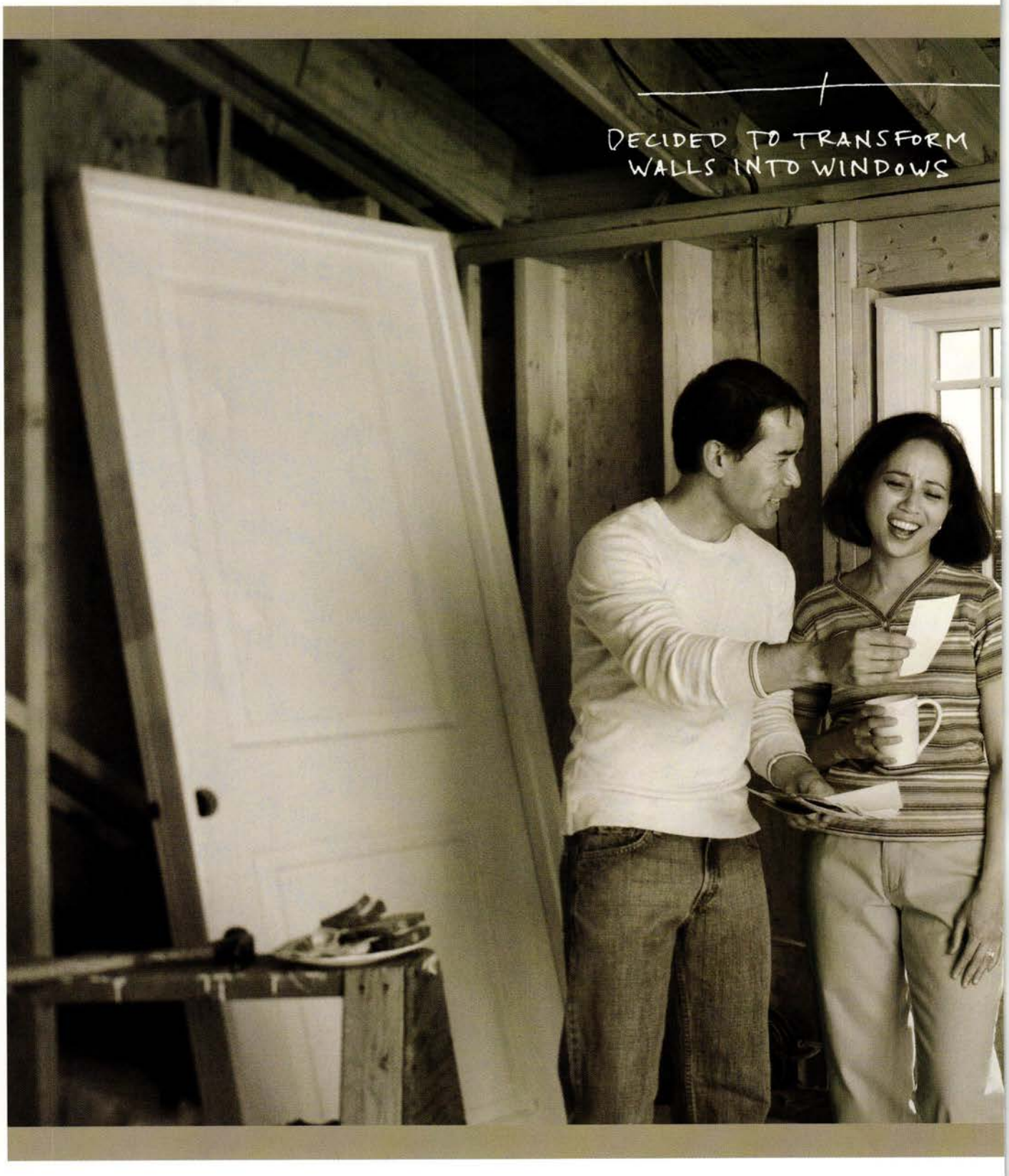

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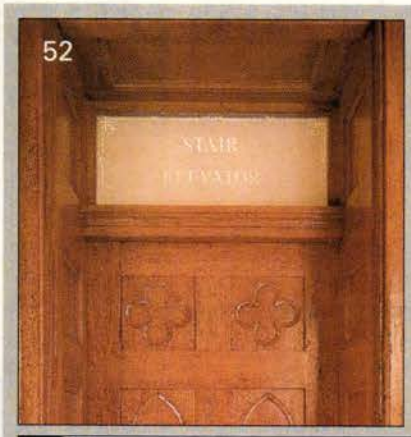

September / October 2004
Volume 32 / Number 5
Established 1973

ON THE COVER:
Photo by Andy Olenick. Acorn Hall, an Italianate villa built in 1853 in Morristown, New Jersey, is today home to the Morris County Historical Society.

Old·House JOURNAL®

Departments


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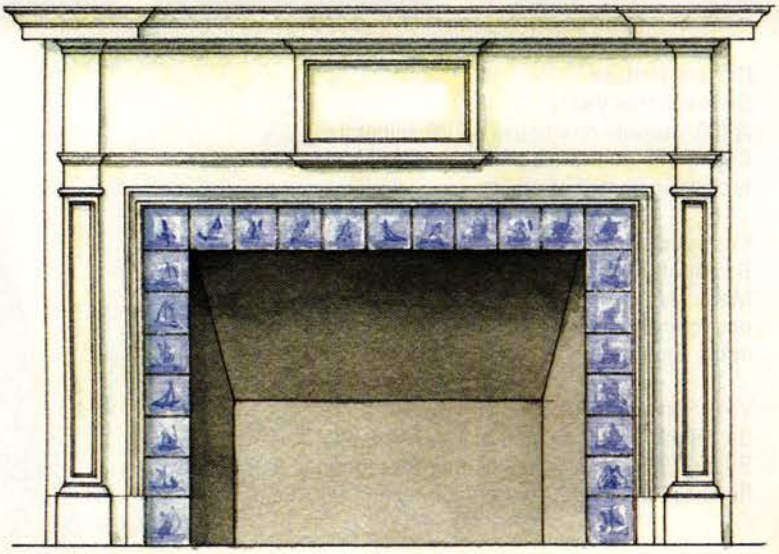

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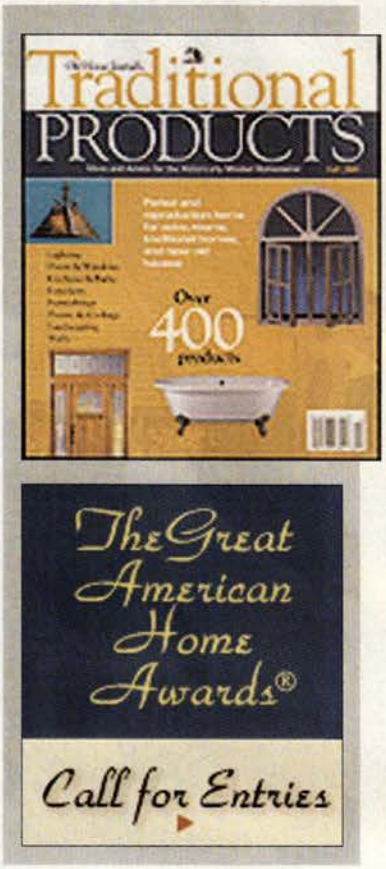

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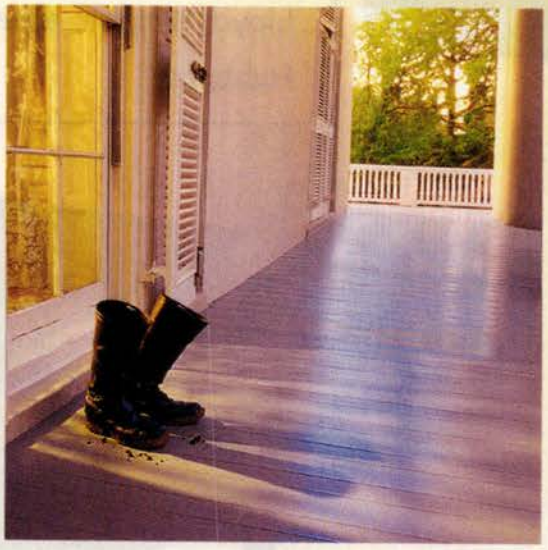

{White House of the Confederacy ~ Richmond, Virginia}

When it came time to restore the White House of the Confederacy in Richmond, Virginia, curators consulted scores of historic documents to ensure that the landmark was restored to its original wartime appearance. When it came time to replace the porch floor, they chose a product that would exactly match the planking originally used in 1818, but would also withstand the visitor traffic it receives each year.

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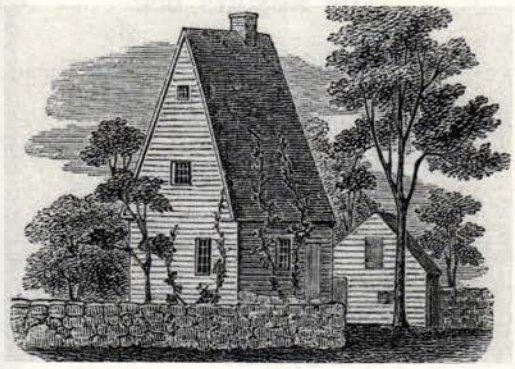
Tall House Tales



Among the many characteristics that distinguish old houses as a group is the way they attract colorful—but not necessarily defensible—lore about the nature of their construction. Referred to in historic preservation as apocryphal stories (after the contested books of the Bible), these may-or may-not-be-true accounts are typically pseudotechnical phrases dashed off to explain some quirky or foreign feature of a building— the woodwork "built by ship carpenters" is an often heard example. Just as typically, though, these stories tend to unravel a bit when subjected to a bit of research or logic: why, for instance, would ship carpenters seek work hundreds of miles from any water? We've all heard at least one suspect apocryphal story. These three are my favorites.

Those bricks (or tiles) were shipped in as ballast. In the context of ships or balloons, ballast is often defined as "heavy materials, such as stone, solely carried to improve the trim and stability of a vessel." While there's little doubt that shipping building materials like brick or tile would require careful stowing onboard due to their weight, there's little reason why they would be considered ballast—that is noncommercial—more than any other cargo. The credo of shippers, be they modern truckers or ancient mariners, is to never run empty. For example, passenger ships traveling up the coast from San Francisco regularly returned with lumber from Northwest ports.

Wood gets harder as it get older. If all you've ever seen is modern, plantation-grown lumber, or lightweight species like hemlock commonly sold today for studs, perhaps it's hard to imagine there was once an abundance of timber literally tough as nails. Due to the way its growth rings are compressed over centuries, old-growth wood is many times denser than farm-raised wood, and it often came from exceptionally durable trees like heart pine that were all but logged out by the 1930s. A case in point, my 1880s Queen Anne (not that old or special as houses go) is balloon-framed in some kind of softwood that is hard to get a nail into without a pilot hole, and there's clear evidence it was always that way.

Window glass sags as it ages. There's no question that glaciers and many other seemingly static parts of our world are actually in motion, but moving at a slower pace than we can detect with the naked eye. That, however, is not why old window glass may have waves, ripples, and other distortions. The short explanation, rather, is that for the bulk of the 19th century, window glass was made by the cylinder method—a process akin to making bottles. Blowing balloon-like cylinders of glass, then flattening them into sheets, produced glass of varying quality, and it is in the lesser grades that we see these fun-house mirror distortions.

Despite their dubious veracity, apocryphal stories like these live on, and are even considered helpful in their way. While they may not always be accurate, they do spark interest in historic buildings and their construction, and that is good for all old houses.

Gordon Bock

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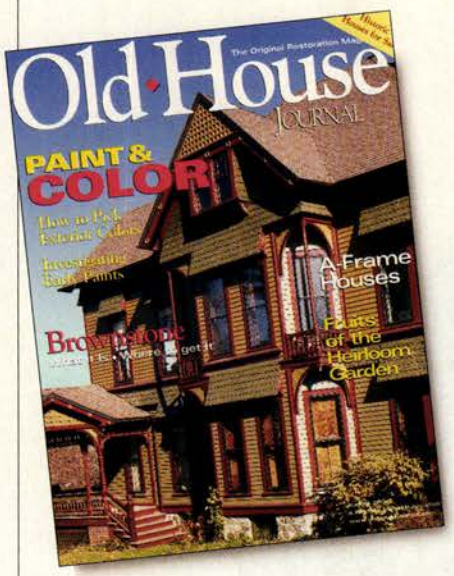
Letters



Color My World

I enjoyed Steve Jordan's article "The Vary Best Colors" (July/August). I have been unsure about painting my own Stick style house that has been a single shade of white for 15 years. This story has given me the courage to break away from this ho-hum approach to house paint.

Ellen Blonder
Des Moines, Iowa

A-Frame Mania

I enjoyed "Mania for A-Frames" (July/August). The "mania" to build A-frame houses was because it was fashionable at the time and, like automobiles, boats, and hemlines they change, and so does taste in architectural styles.

That prices for lots became higher, "and it made little sense to build a $10,000 A-frame on a $80,000 lot," is spurious reasoning. One could rationalize to build a $10,000 house on an expensive lot would be a good idea to defray the cost of a vacation house.

As a student I spent some time in one of the A-frames in Berkeley and I loved going there. It was "in" and exciting to drive up among the old conventional houses around it. Inside was another matter. Tape, signs, and hanging plants were placed at the 6′6″ slanted walls to keep from bashing your head against them. Over the beds foam rubber was glued to the wall/ceiling in case you weren't fully awake if you woke up at night.

Although the article seemed very complete, a very important fact was overlooked. In the early '50s the Building and Safety Department of Los Angeles County would not issue building permits for A-frame houses because of the lobbying of the carpenter unions since they would take less man-hours to build them.

Joel Schiller
Hollywood, California

In his book A-frame, *author Chad Randl puts a finer point on the changing economics and lifestyles behind the passing of the A-frame fad:*

At the end of the 1960s, the vacation home market reached a new level of maturity and diversification. Planned resort communities had become increasingly popular as the decade progressed. One banker speculated that, despite all the rhetoric about outdoor recreation and escape, "city people don't really want to be alone. They get panicky when they see trees." Beginning in 1970, [vacation houses became] increasingly a renters' market. Potential buyers were further discouraged by tax code changes that eliminated the second home as a financial shelter. An energy crisis in 1973 only exacerbated the difficulties facing the second home market. [By 2002] The New York Times observed that "instead of traditional lakeside chalets, newcomers are seeking out big houses in the countryside—typically Colonial styles that can double as primary residences if work schedules can be juggled." In this climate, modest postwar A-frames just don't fit in. —Eds.

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Letters

Traveling Tower

I noted that on the cover of your June 2004 issue of OLD-HOUSE JOURNAL the house was oriented with the tower to the right; however, on page 55 in "Room to Grow" the before and after images of the same house show the tower to the left. This curious situation does not appear to be a simple case of accidentally reversing a transparency since the house number in both "restored" pictures is correctly oriented.

I'm curious to know why and how the images were reversed. I assume that the correct orientation is the one shown on the June 2004 cover.

Thanks in advance for your explanation and thank you for a great publication.
Best wishes,
Leroy Crislip
Via e-mail

You caught us. At time we take small liberties on our covers to orient the house in the most appealing way. The correct orientation of the house appears in the article "Room to Grow."—Eds.

Here Comes the Hosta

I am writing to thank you for publishing Lee Reich's article, "Don't Dig It" (March/April). This timely article came to my rescue in preparing my old country Victorian home and grounds for my son's outdoor wedding, which took place in mid-July. The original plantings on the property consisted of maple trees, numerous evergreen shrubs, and torture-resistant perennials such as daylilies, irises, hostas, liriope, and big blue lobelia, none of which would be blooming at the time of the wedding. Reich's article provided an easy way for me to install six flower gardens filled with colorful annuals where none had existed before.

I began installing above-ground gardens on newspaper according to Reich's directions near the end of May and continued through mid-June while also working full-time. Several of the new gardens consisted of alternating hostas and impatiens located under the trees where the wedding ceremony took place. The others were located in sunny spots along the way from the parking area to the wedding site. By the time of the wedding, all the flowers were blooming profusely! I could never have installed so many gardens in time for the wedding by the conventional approach.

Thank you for the key role OLD-HOUSE JOURNAL and specifically Reich's article played in our wedding preparations!
Carol H. Sandt
Pequea, Pennsylvania

17th-Century Envy

My wife and I thought that the green color in the House of the Seven Gables ("The Color of Money," July/August) was great. We'd like to use that color on a chair, but the article does not indicate which company makes the particular shade of green. Can you help us out?
Paul Belyea
Lynn, Massachusetts

The article is about researching paint and color from the 17th century —that is, handcrafted paint made some 150 years before the invention of manufactured paint-in-a-can. Therefore, there is no commercially recognized "name" for the color, and certainly nothing like it from an off-the-shelf paint company. This is why the museum called on a decorative painting expert to simulate the paint with modern materials, such as conventional glazing liquid and artist's pigments. Making your own paint is not that difficult. For that matter, why not hire a decorative painter to paint your chair? Check OLD-HOUSE JOURNAL'S RESORATION DIRECTORY *(www.oldhousejournal.com) for listings of artisans who do this work.—Eds.*

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Calendar

September 19
PORTSMOUTH, N.H.
Moving History Lecture
Learn about the practice of moving buildings for preservation purposes, with a brief introductory lecture at the Governor John Langdon House followed by a walking tour of buildings that have been moved in Portsmouth. Admission is $10 for Historic New England/SPNEA members and $12 for nonmembers. Call (603) 436-3205.

September 24-26
CHAUTAUQUA, N.Y.
Arts & Crafts Conference
Attend a weekend conference at the Chautauqua Institution showcasing the history, philosophy, and art of the Arts & Crafts Movement at the turn of the last century. Events include notable guest speakers, seminars, an antique appraisal fair, and a special dinner celebrating the "Art & Craft" of dining. For more information visit www.roycroft.org, or contact Kitty Turgeon at info@roycroft.org.

Ends October 31
BOSTON, MASS.
Win a Trip to The New Yankee Workshop!
Enter to win a three-day/two-night trip for two to Boston to watch a taping of *The New Yankee Workshop*. Work with Norm Abram to stain a *New Yankee Workshop*-designed piece of furniture for your home. To enter the sweepstakes or read official rules, visit www.minwax.com.

A Rose is Still a Rose

OHJ's old friend is changing its name but not its focus. The Society for the Preservation of New England Antiquities (SPNEA) is now called Historic New England. SPNEA has updated its 100-year-old name to reflect a renewed commitment to serving the public by preserving and presenting New England's heritage.

Along with keeping SPNEA's traditional offerings, Historic New England will also launch several new initiatives. A new Heritage Tour program is in the works—it tailors historic house tours to a specific interest, such as furnishings, landscape, architecture, preservation, and social history. Plans are also underway to develop new membership levels that reflect an interest in landscapes or focus on the special issues related to owning a historic home.

COURTESY OF HISTORIC NEW ENGLAND

The Harrison Otis Gray House (photographed here in 1916) in Boston is headquarters for Historic New England.

Historic New England President and CEO Carl R. Nold says, "SPNEA has been an innovator since its earliest days. Some of its most respected programs were the result of a willingness to try new ideas. We are proud of what SPNEA contributes to New England life and will ensure that those accomplishments and high standards continue to be part of the work of Historic New England." For more information call (617) 227-3956 or visit www.historicneweng land.org.

Call for Playful Proposals

May 5–7, 2005, the National Park Service, along with a number of co-sponsors, will host a conference devoted to preserving historic recreation and entertainment sites. Titled "Preserve and Play," the conference will present appropriate strategies for protecting a range of resources, from urban recreation centers and school gymnasiums, to public boathouses, amusement parks, and spas.

Preserve and Play will be held at the InterContinental Chicago (USA) Hotel, constructed in 1929 as the Medinah Men's Athletic Club. This recently restored hotel is located on Chicago's "Magnificent Mile," blocks from many of the city's most notable landmarks. Preserve and Play will accept presentation and demonstration proposals through September 24, 2004.

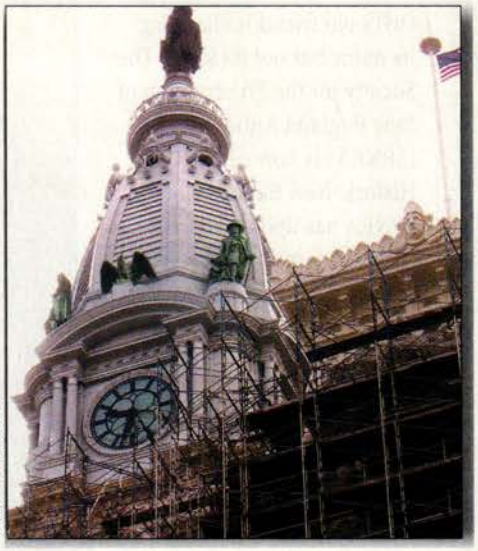
For more information on proposal requirements, conference themes, and contact information visit the conference website at www.preserveandplay.org.

Chairs for Charity

In celebration of its 100th anniversary, Minwax has invited 15 prominent designers and personalities to create original chairs using Minwax stains and finishes. Participants include Norm Abram, Oscar de la Renta, Jamie Drake, Billy Joel, and the New York Yankees. Bidding for the finished chairs will be available online and at the Kips Bay Boys & Girls Club Holiday Wonders party November 18th. Visit www.kipsbay.org for details.

Traditional Building in Philly

Tom Hylton, Pulitzer Prize winning journalist and author of *Save Our Land, Save Our Towns,* will serve as the keynote for the Traditional Building Exhibition and Conference, April 27–30, 2005, at the Pennsylvania Convention Center in Philadelphia. Formerly known as Restoration and Renovation, the exhibition and conference will feature up to 80 workshops in nine educational areas ranging from preservation basics to neighborhood revitalization. "Hard hat" tours of projects in the vicinity of the convention center, including Philadelphia's City Hall and the Union League Building, are planned. Partners already on board to help with the planning include Preservation Pennsylvania, the Pennsylvania Historical and Museum Commission, AIA Historic Resources Committee, Association for Preservation Technology's Delaware Valley Chapter, the Institute for Classical Architecture, the National Trust for Historic Preservation, and the Philadelphia Preservation Alliance.



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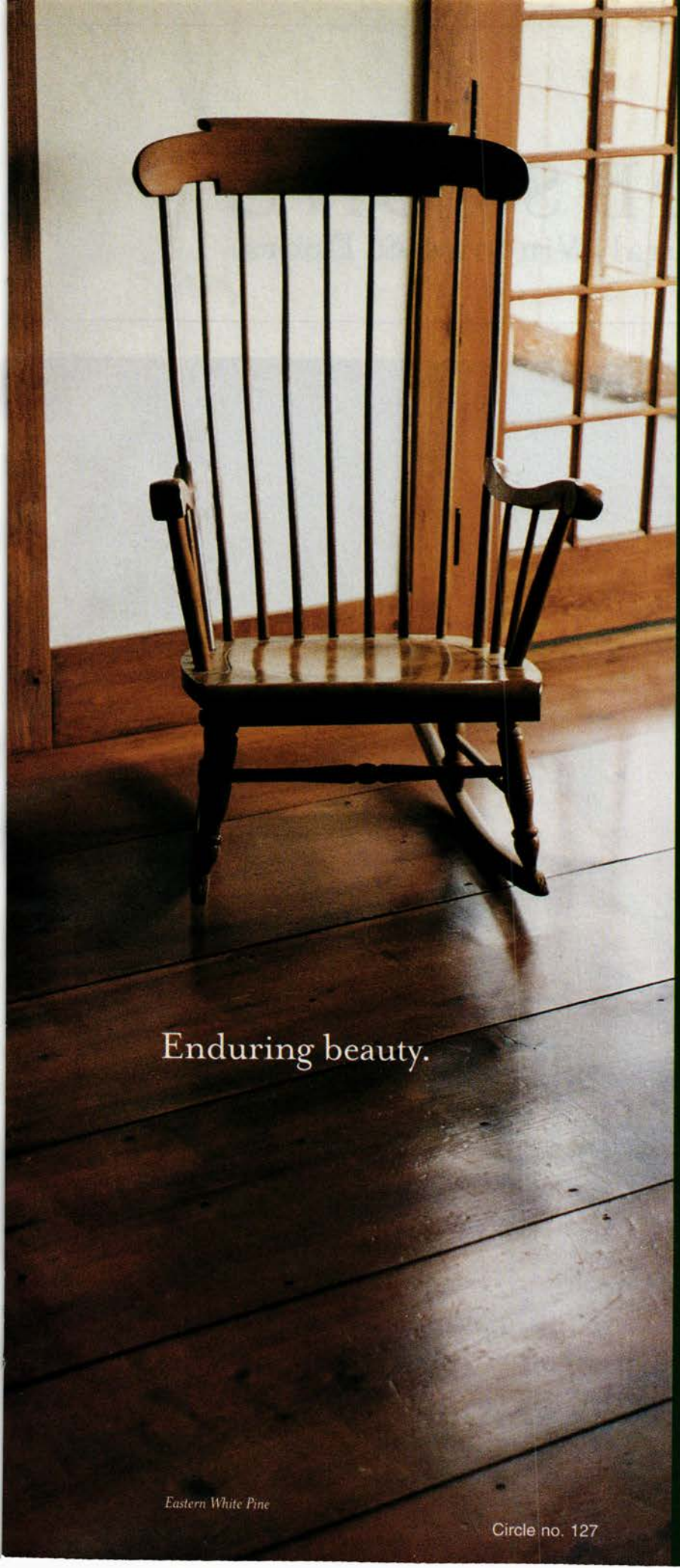
Philadelphia's City Hall under scaffolding.

The workshops are approved for health, safety, and welfare credits through the American Institute of Architects' Continuing Education Program. The American Institute of Certified Planners and the International Interior Designers Association have approved workshops for continuing education credits as well. For more information visit traditionalbuildingshow.com.



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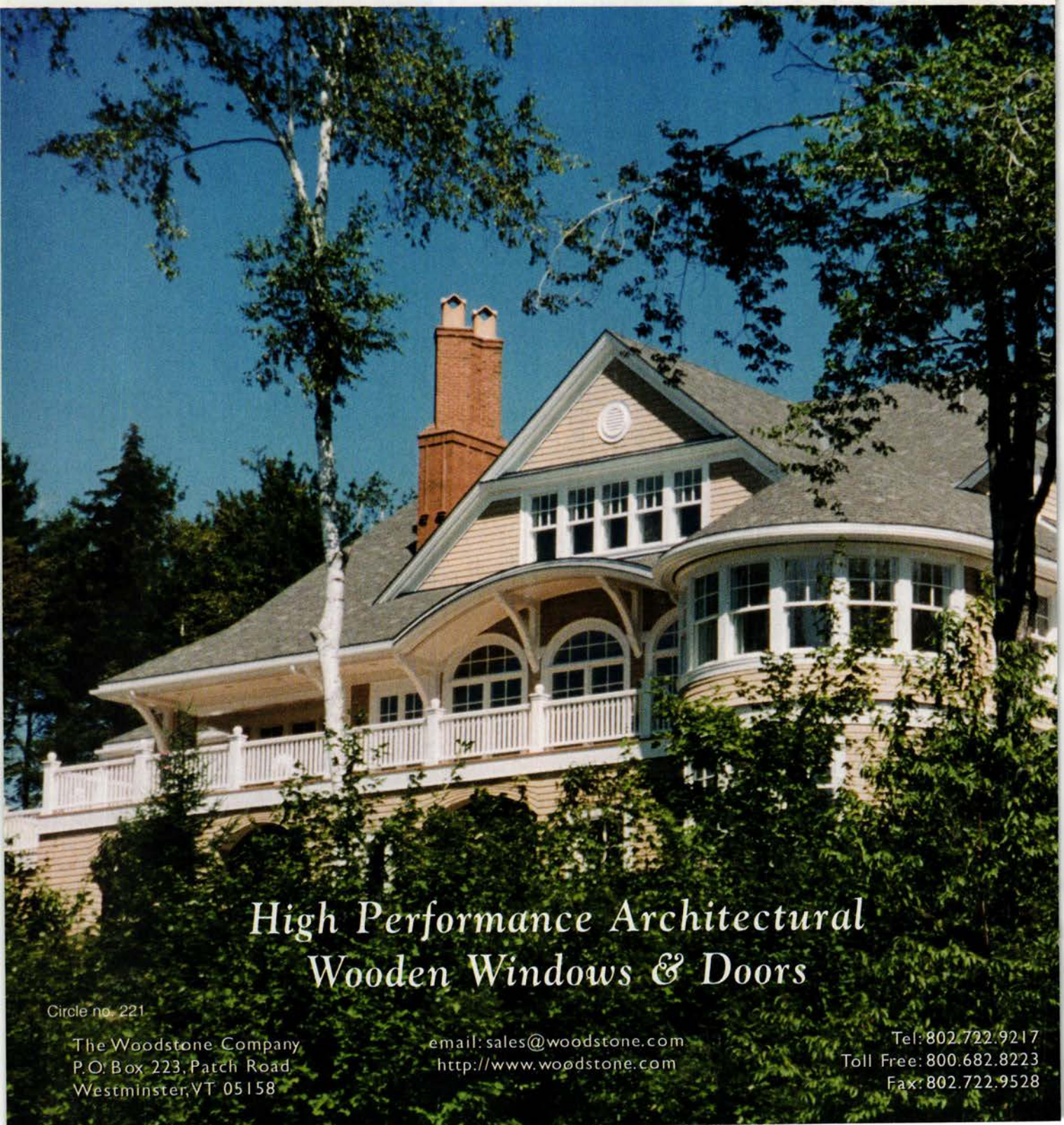

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Eclectic Reconnaissance

I passed this beautiful house while traveling on my vacation. Can you tell me anything about its age or style?
Helen Higgins
Columbia, Georgia

These double casement windows and heavily quoined corners are eclectic European details.

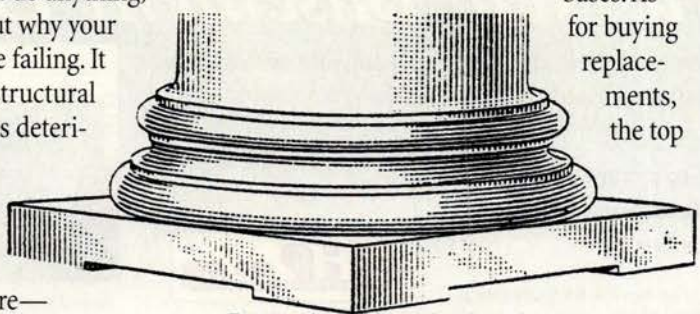
The design of this large house appears to draw on two highly varied stylistic groups, sometimes called French Eclectic and Spanish Eclectic. These houses, fashionable from about 1915 to the mid-1940s, were built across the country in various forms, and with many different kinds of detailing, but they all share the domestic architecture of either France or Spain as their basic inspiration.

This house, like many French models, is symmetrical with a five-bay front and hipped roof. The paired casement windows are a typical feature, as is the boldly quoined door surround matched by equally bold quoins at the building corners. On the Spanish side, the house appears to have a barrel tile roof, which is a typically Spanish or Italian revival detail, and the relief ornament around the window over the door is a common Spanish flourish. Such mix-and-match combinations of details from different (though fundamentally related) European architectural traditions was far from rare in America in the first half of the 20th century, and was just as prevalent in the eclectic styling of many English/Norman houses popular at the same time.

Back to Base-ics

I have four, two-storey columns that are more than 24″ in diameter. The base rings are about 5″ high, and comprised of four pieces that need to be replaced. Any suggestions are welcome!
Lake Williams
Lincoln, Nebraska

Before you do anything, figure out why your bases are failing. It could be due to structural problems, such as deterioration of the foundation, but more likely the cause is excessive moisture—especially if there is little or no ventilation within the column. For example, ideally the bases should be raised on feet and open in the center to allow air to enter from the bottoms, travel up through the centers of the columns, and then exit through the tops of the capitals, taking moisture with it. The vent in the capitals should not be blocked by any overhead framing, and the capitals themselves should be protected from roof run-off by proper flashing. These conditions will have to be correct for you to expect any better performance from your new bases. As for buying replacements, the top manufacturers of columns in your size also sell bases that can be bought separately. Consult the OLD-HOUSE JOURNAL'S RESTORATION DIRECTORY (www.oldhousejournal.com) for suppliers, such as Chadsworth's (www.columns.com).



Bases should be raised on feet to permit ventilation through the column.

Dealing with House Trauma

Recently, a storm (now called "The Thousand Year Storm") dumped at least 13″ of rain in our rural, National Register village. Many homes had several feet of water in them for about two days. Needless to say, clean-up efforts continue—any advice?
Gina Murphy
Vincentown, New Jersey

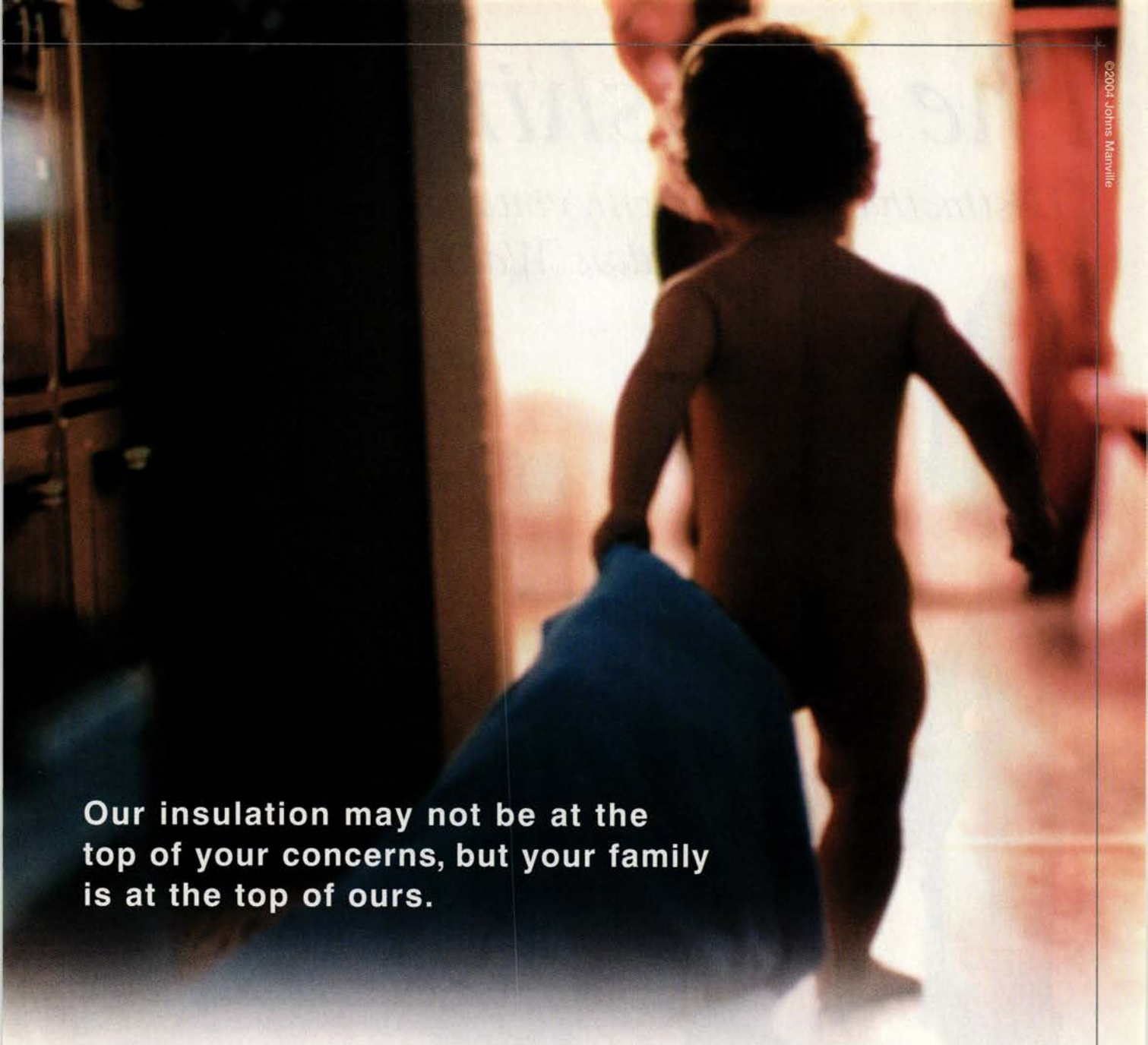
Old-house lovers learned a lot about disaster management of this kind when Hurricane Hugo devastated Charleston, South Carolina, a decade ago. Based on this experience, Washington, D.C., architect Ward Bucher wrote a highly informative OHJ article on the subject of water damage called "Drying In and Drying Out" (March/April 1991). "Drying in" refers to the temporary measures taken to keep water out of a building after a storm has blown out windows or opened up part of a roof. Drying out is the process of removing water once the building is secure again from the weather. Some of the "drying out" advice is worth remembering for situations such as yours.

Don't be in a hurry to dry out the building. Though rain and floods may have swamped the structure quickly, it helps to dry out slowly. In general, natural ventilation and evaporation are better for the building than forced-heating or air-conditioning systems.

Starting at the top, check the house for water damage. If attic insulation or belongings are wet, remove them as soon as possible. The extra weight of water can cause plaster to crack. Open any windows or ventilators to allow air to circulate. Poking a few holes in conspicuously wet areas will allow water to escape into buckets and save much repair work later.

Check the insulation in frame walls and crawlspaces. Remove the baseboard and, if the insulation is damp or soaked, pull it out and leave the baseboard off until the wall is thoroughly dry. Check crawlspace insulation and remove if necessary, then ventilate. Mold and mildew can be cleaned off walls by scrubbing with a weak solution of laundry bleach, TSP, and water.

Be careful with flooded floors. If wood floors are coated with mud, wash them down with fresh water, then apply paper towels to absorb any floodwater contaminants, such as saltwater. Do not use newspaper, which may stain the floor. Since boards will inevitably cup, cover the floor with boards for walking to protect raised edges, and ban shoes like high heels that can leave marks in soft, wet wood. Do not force-dry floors with heating equipment, which will only encourage warping. Be patient and consider buying a moisture meter. It may take several months of drying before the floors are ready for refinishing.



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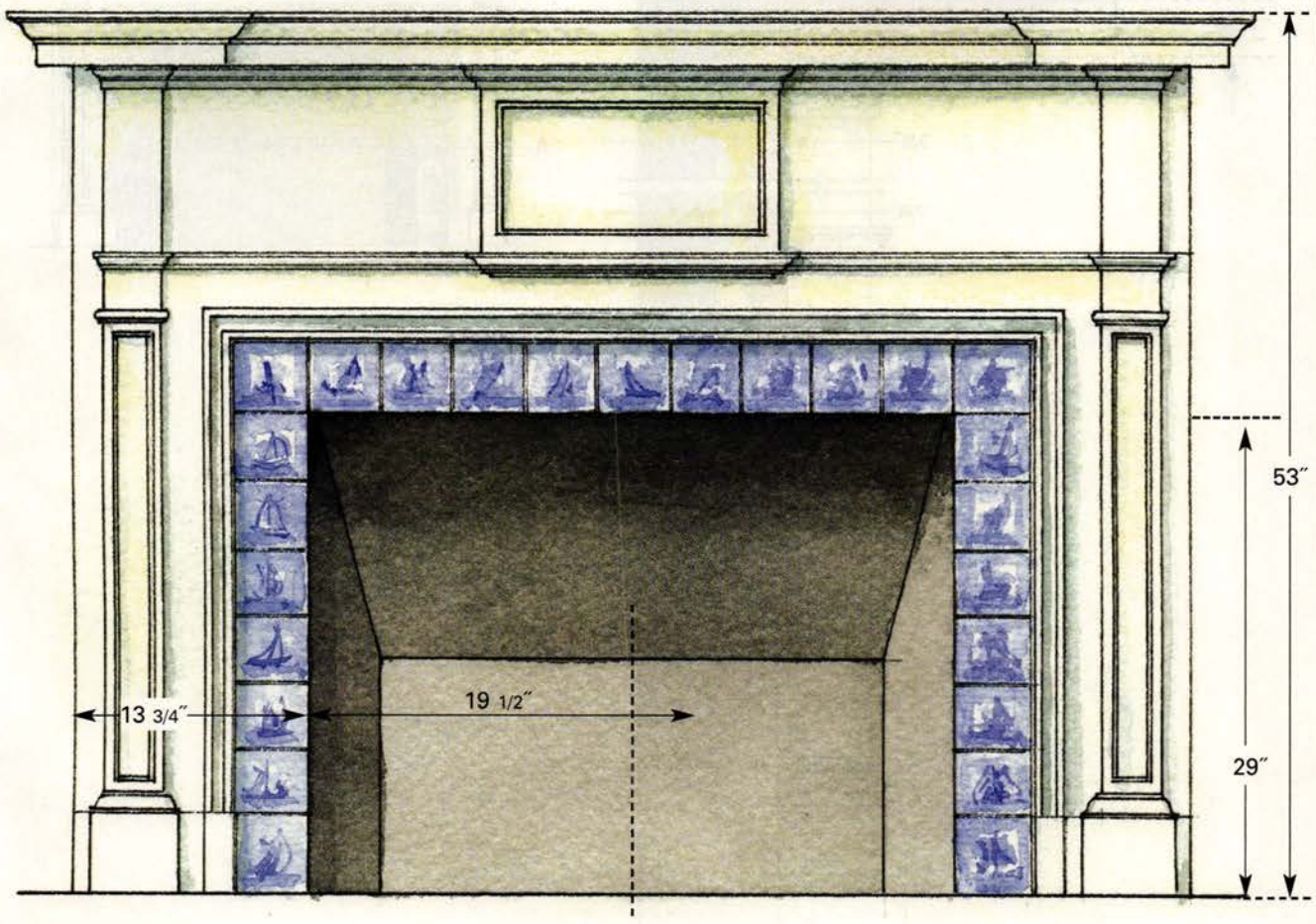
Classical Mantel

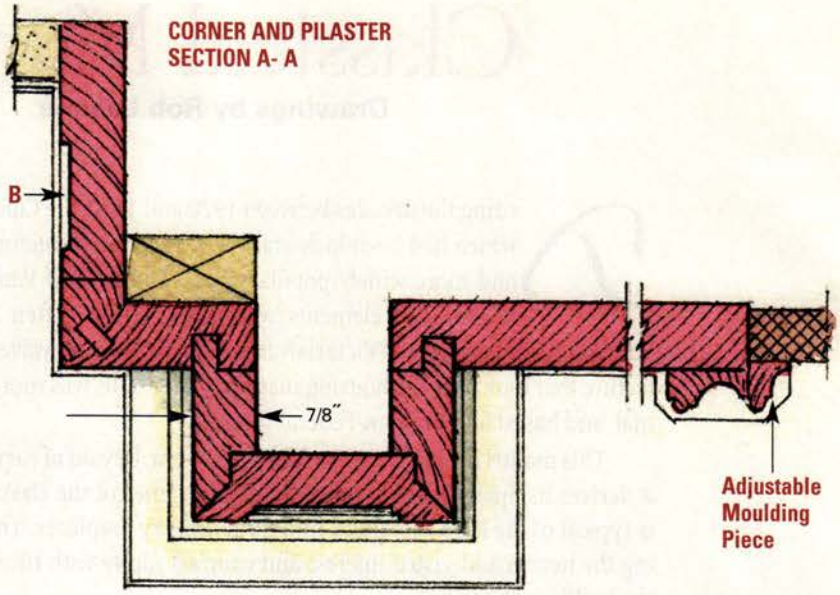
Drawings by Rob Leanna

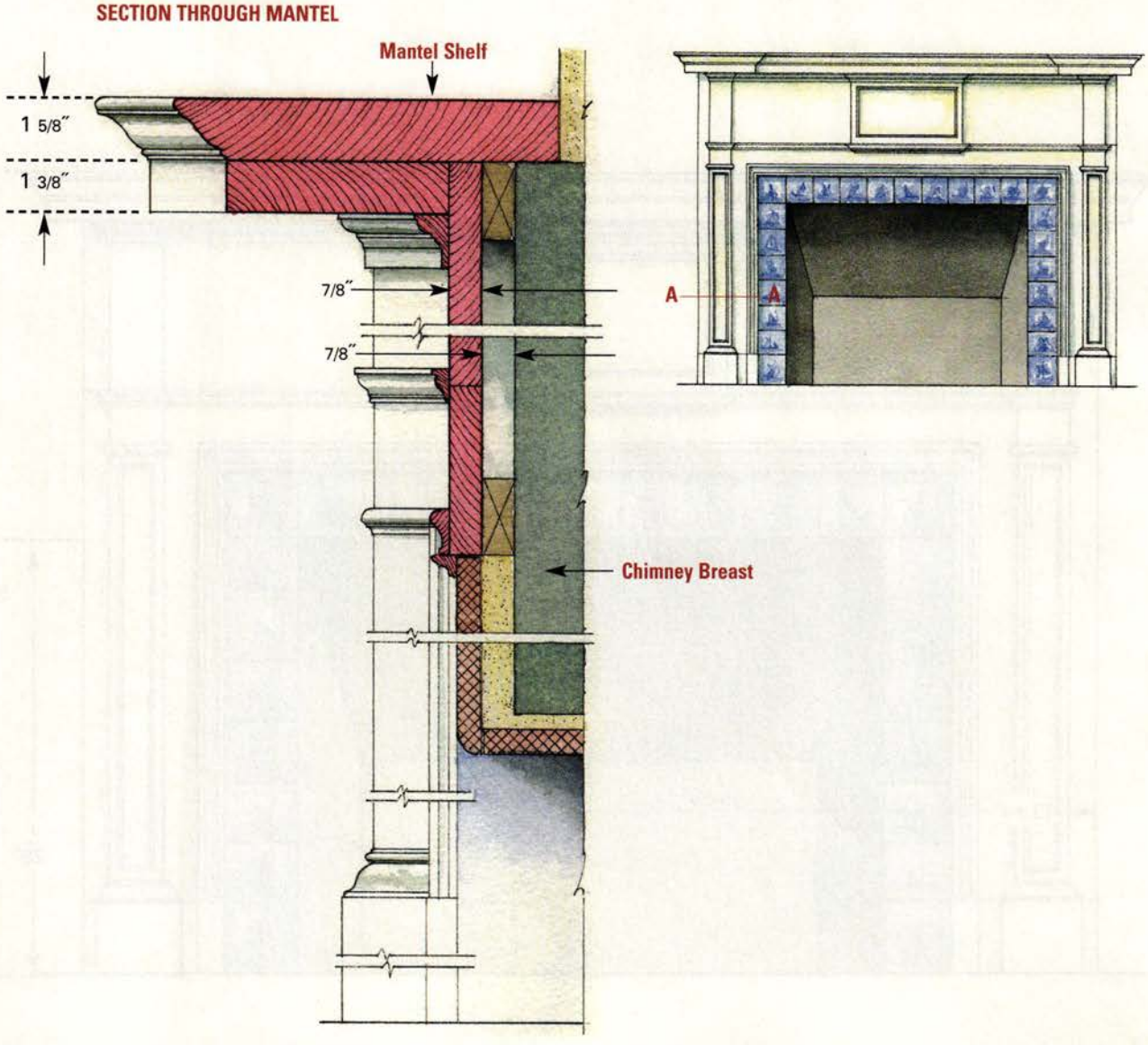
During the decades between 1920 and 1940, the Colonial Revival movement—which had been kick-started by the 1876 Centennial—moved into a second and more widely popular phase. Until World War I, many Colonial Revival houses and elements were interpretive—often equal parts 18th-century building features and late-Victorian fashions. The second wave of Colonial Revival architecture that took over the housing market in the 1920s was more historically accurate, formal, and based on Georgian/Federal models.

This mantel design is true to form for the era. Devoid of carvings or applied ornament, it derives its Spartan beauty from the shadow lines of the classical moulding shapes, and is typical of the kind that grace mid-20th century fireplaces. The paneled pilasters flanking the hearth add visual interest and contrast nicely with tile surround, which can be of the builder's choosing.



While the dimensions shown here are practical, they may need to be adapted to the needs of the project and to meet local fire codes. Actual construction is up to the builder. Note that the moulding bridging the mantel woodwork and tile is adjustable, and that the sides of the mantel may be recessed with panels (see B) like the pilasters. Classical mantels were typically painted to emulate stone, in which case this mantel may be made of paint-grade material. Whatever the finish choice, back-paint all finished wood to reduce the chances of warping and movement.





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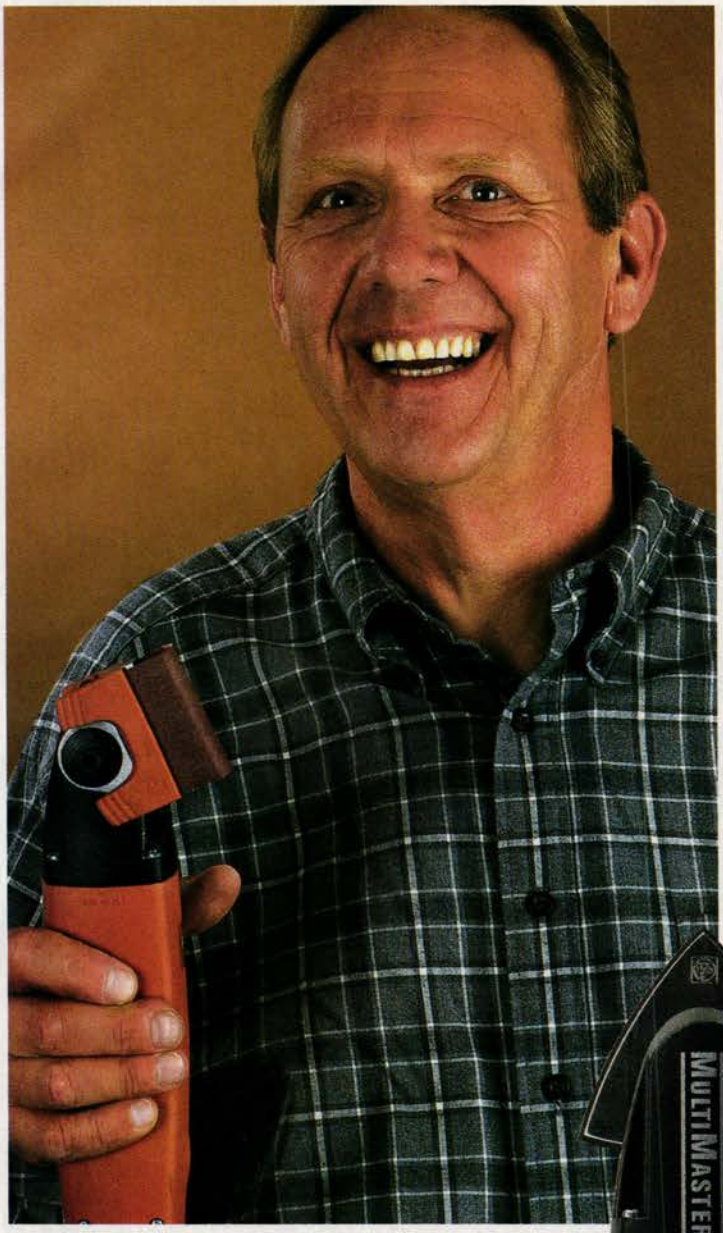

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Making Sense of the Mercurial Epoxy

What makes epoxy chemistry ideal for repairs, and why every two-part product isn't epoxy.

By John Leeke

Who hasn't heard of epoxy? Epoxies have been used since the 1940s to manufacture a wide variety of products and, in the last three decades, have become a primary tool for repairing building materials, especially wood and concrete. While some companies tout their epoxy products as close to miracle cures that can mend broken metal or revive deteriorated wood, there are also architectural conservators who believe that epoxies do more harm than good. To make things worse, there are many products on the market that are used similarly to—and often confused with—epoxies. All this can leave old-house owners scratching their heads. Is there a practical, middle ground where epoxies can be used to save exterior woodwork successfully? And just what is this epoxy stuff? A look at the nature and growing applications of this remarkable chemical repair technology can help answer these questions.

PHOTOS: JOHN LEEKE

Top: Epoxy fillers are two-part products composed of resin and hardener that must be thoroughly mixed before use. Above: The flexibility and tenacious adhesion of wood-epoxy products make them ideal for outdoor repairs.

Epoxy Basics

Epoxy belongs to a broad family of thermosetting compounds —in simple terms, plastics that cure by heat reaction. Widely used epoxies like adhesives and casting materials are commonly made up of two liquids: an epoxy resin and a curing agent called a hardener. When the resin and hardener are mixed together, a chemical reaction takes place and the resin transforms into a solid mass. During the reaction, single molecules (monomers) of the epoxy resin and the curing agent combine to form chains of molecules (polymers). As the mixture cures, the chains grow longer, the solution gels, and then it hardens.

Epoxy materials are very adaptable. The chemists who design and formulate epoxies can give them a wide range of pre-cure and post-cure characteristics. It all depends on which epoxy monomers, curing agents, solvents, and fillers they add. The pre-cure mix can be thin as water to penetrate porous materials, or thick and viscous to stay put on vertical surfaces. The cured epoxy can be nearly as hard and brittle as glass, or almost as soft and flexible as rubber bands. Even the rate of cure can be adjusted to meet very specific needs. An epoxy that takes hours to gel can penetrate deeply into porous wood, while products that set up in minutes can be good for adhesives and floor coatings where the area must be put back into service as soon as possible. Many epoxy systems also contain additives, such as plasticizers to make them more flexible, organic solvents to make them more spreadable, and fillers, such as sand, to add bulk and reduce costs. Mixing in pigments adds color.

Since epoxies bond exceptionally well to a wide range of materials, they make excellent adhesives. Good bonding also means that epoxies are useful for making composite materials. For example, we can reinforce a repair by layering epoxy and fabric so that the resulting composite bonds to its surroundings, or by mixing the resin with powdery fillers or chopped fibers to make a paste that fills voids.

What's the point of all this adaptability? It makes epoxies compatible with the char-

The strength, adhesion, and moisture resistance of epoxies also makes them excellent wood adhesives for new exterior woodwork, such as these post bases.

acteristics of traditional building materials—from stone, glass, and concrete to terra cotta and wood. For example, epoxies designed for wood repairs are specifically formulated to match the strength of wood and be flexible enough to move with its cycles of contraction and expansion. In fact, several manufacturers offer kits of epoxies specially formulated for such repairs that include one or more of the following specialized product types:

Epoxy consolidant: Liquid resin formulated to soak into fibrous materials, such as wood. The amount of penetration depends mainly on the dryness of the wood. Other technical considerations, such as capillarity, interfacial tension, molecular size, temperature, consistency, and gel time also play important roles.

Epoxy primer: Liquid formulated to prepare a surface for good adhesion of another material such as an epoxy paste filler.

Epoxy paste filler: Adhesive paste composed of a two-part liquid epoxy that is similar to consolidant. Manufacturers blend in powdery thickeners to give each paste a consistency that ranges from mayonnaise to stiff mashed potatoes. Other fillers give the cured paste the strength and flexibility characteristics of wood. You can even formulate your own paste by starting with epoxy resin, then adding familiar materials like sawdust and a little corn starch. Commercially prepared materials, however, are much more consistent and reliable.

Don't confuse these products with epoxies formulated for other uses, such as five-minute adhesives, bar top coatings, or paints. Moreover, don't assume that a product with two parts or a resin is epoxy. True epoxy products have become so common and popular that, in some conversations, the word epoxy is used generically to mean any resin applied to repair wood—even when the resin is not epoxy. Repair products like the following are sometimes caught up in this confusion.

Common auto body filler: These products, typically based on polyester resin, are used to fill dents in sheet metal, so they are usually designed to be fairly hard and inflexible when cured—not a great match with the inevitable movement of wood caused by changes in moisture content. Like polyester resins in general, their chemical "curing" reaction is set in motion by mixing in small quantities of catalyst, rather than the hardener used with epoxies.

Polyester wood filler: These products are designed for wood, but based on polyester resin. For example, one company offers a consolidant that is poly-ketone resin in an acetone-methane solvent. The solvent promotes penetration, but only the resin remains in the wood; the rest evaporates. The companion product is a two-part paste made of polyester resin and fillers.

Cementitious wood filler: This wood filler and repair system is based on a special cement, acrylic latex polymer, fillers, and fiberglass cloth. One manufacturer says its product's high adhesion and flexibility prevent loosening due to wood movement. Unlike epoxies, it can be applied to damp wood and, when cured, allows water vapor to pass through thin sections.

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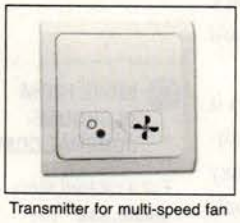
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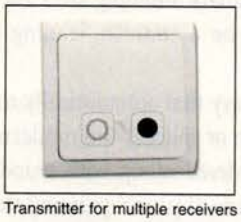
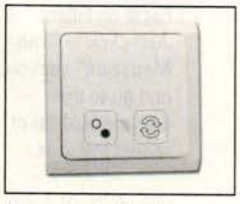

Transmitter for multiple receivers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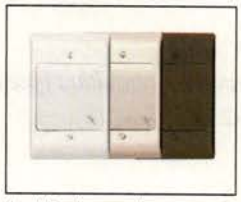
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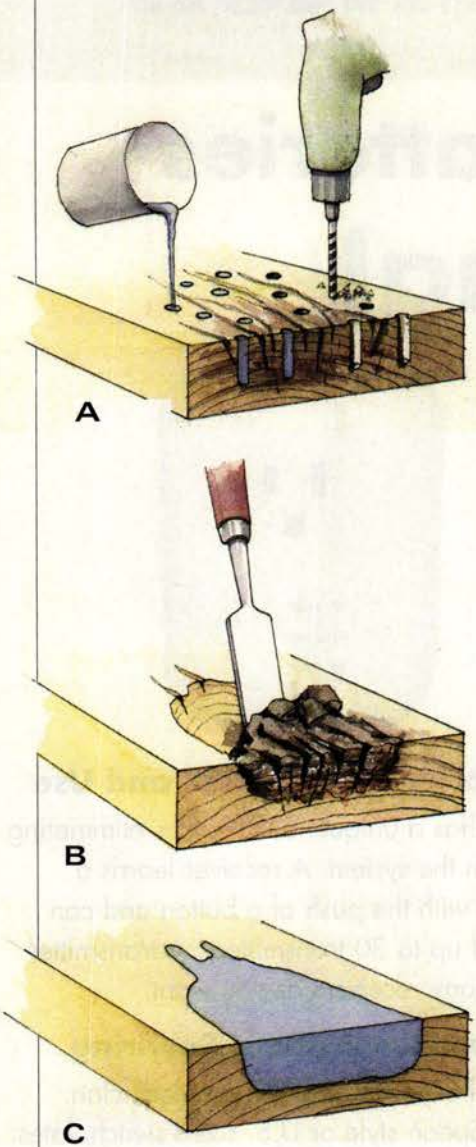

ROB LEANNA

In decay consolidation (A), you saturate deteriorated wood with epoxy consolidant (often aided by holes), then fill voids with epoxy paste. In decay removal, you remove deteriorated wood (B), then prime the void and fill with paste (C).

Wood Repair Methods

There are two common methods for repairing wood with epoxy: decay consolidation and decay removal. When wood decays, it becomes softer, weaker, and more porous than the surrounding sound wood. In the decay consolidation method you saturate the porous, decayed wood with liquid consolidant, which later hardens within the wood. It is important to make sure that absolutely all of the decayed wood is saturated, right down to and into the surrounding sound wood. Unfortunately, this is difficult to do since you cannot see where decayed and sound wood meet. The alternate method is to remove all of the decayed wood. Then you prime the exposed surface of the sound wood with an epoxy primer, and fill the void with epoxy paste filler. It is sometimes easier to get more effective results with this method because the newly exposed surface of sound wood is much more consistent than the interface of the decayed and sound wood. Remember that you must also determine and control the source of the moisture. If a window sill is decayed due to an overhead gutter leak, you must fix the gutter along with the sill, or the sill is likely to decay again.

Another point to bear in mind is that epoxies are, for the most part, not reversible. What makes wood-epoxy materials so effective from a practical point of view is their ability to penetrate deeply and adhere tenaciously, but this ability is also what makes the repair difficult to reverse. Since treatment reversibility is a key tenet of building conservation philosophy, this characteristic is sometimes required for work on historic landmarks or important buildings and artifacts—artisan-carved paneling or furniture, for example.

Most old-house owners, however, do not live in museums, and very often they can strike a balance between the shorter maintenance cycles of totally reversible treatments—the philosophical ideal—and the longer maintenance cycles of less reversible treatments. Longer maintenance cycles are particularly important for woodwork in remote locations, such as roofs, steeples, and high towers, due to the high cost of access. This not only reduces the cost of maintenance, but it has also been demonstrated to preserve more historic fabric on at least one national landmark building over the years. Balancing reversibility and sustainability should always be a concern, leaning toward reversibility with important historic buildings.

Keep in mind that there is nothing magical about epoxy that automatically makes it better. Traditional repair methods (such as wood dutchmen or splices) and modern methods (such as part replacement) should always be considered along with wood-epoxy repairs. Select the method and materials that meet the needs of your repair and the goals of your situation.

John Leeke, *author and longtime OHJ contributor, is a preservation consultant based in New England (26 Higgins St., Portland, ME 04103, 207-773-2306, www.HistoricHomeWorks.com).*

For a list of **SUPPLIERS,** see page 108.

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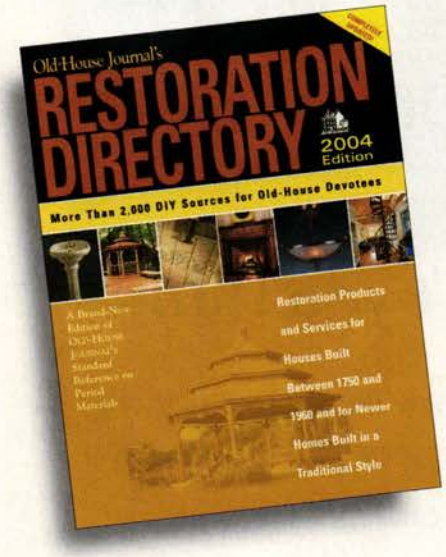

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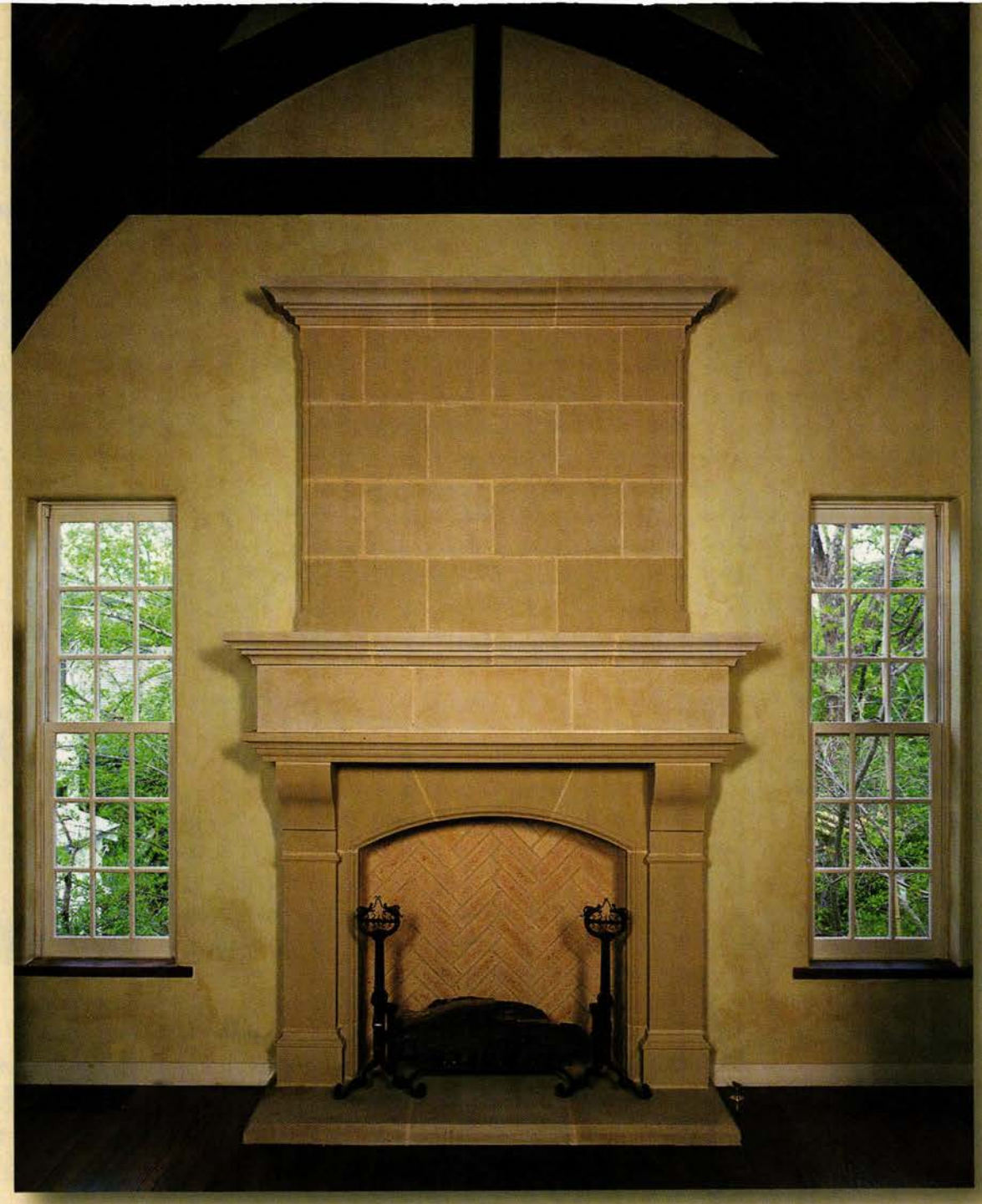

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The Place for Melrose

"The Wimbourne Papers" may sound like the latest spy novel, but in fact it's the latest wallpaper collection from Farrow & Ball. "Melrose," shown here, is a delicate winding pattern with a repeat of 21", while "St. Germain" is a bolder floral design with ribbons, bows, and tassels and a repeat of 26". Inspired by 18th-century silk fabrics, each is available in 24 color combinations. The washable paper is printed using full-size, individually painted blocks that are then stamped onto brush-painted paper. Visit www.farrow-ball.com. Circle 3 on the resource card.

Have A Ball

South Carolina-based Bommer Industries has reintroduced its ball-top hinge, first offered about the time of the company's founding in 1876. Although manufacture ceased in the 1950s, the style remained popular with homeowners, architects, and builders. Made of United States steel, they are offered in bright, satin, or antique in shades of brass, bronze, or nickel, or in polished or satin chrome. Available in 5" or 7" in prices ranging from $55 to $120. Visit www.bommer.com. Circle 4 on the resource card.

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Want to achieve the rainbow look of beveled glass on some special windows in an addition, but avoid the expense of custom work? CertainTeed and 3M have teamed up to create Prim Grid, which can be applied to existing, new, or replacement windows in such patterns as colonial (V-groove bevels in the shape of traditional muntins), valance (bevels at the top of a window), prairie (at the edge of the window), diamond, or jewel (small cut-glass designs). Prism Grid is inside double-pane windows so it requires no special cleaning. Visit www.certainteed.com. Circle 6 on the resource card.

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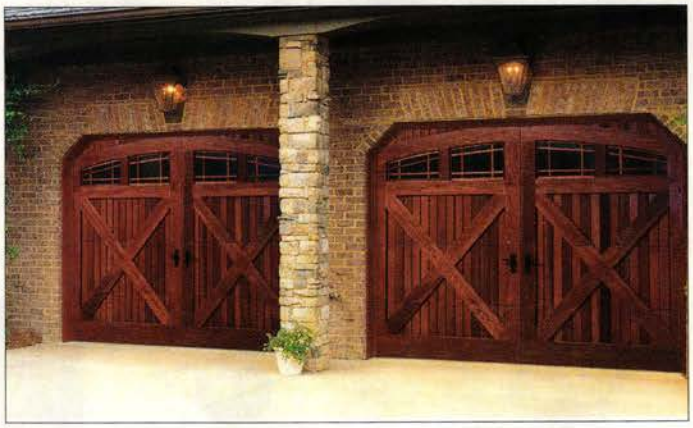

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A Perfect Fit

BY SUE SENATOR

"What *are* you going to do about the kitchen?" horrified neighbors asked with eager curiosity when we first moved in. "Such a great house," said others, who had considered buying it themselves, "but the kitchen...!"

Ah, the kitchen—the fatal flaw of this house, the reason it sold so much lower than other houses on the street. Ours is a "galley kitchen," unfashionable in its very name. Galley—so backstairs, so servile, so unhearthlike. The kitchen is supposed to be the gathering place, the heart of the home, and must therefore be suitably sized for that purpose. So everyone assumed we would not stand for such a dingy old closet of a kitchen but would renovate and expand like average homeowners. We needed a kitchen that would suit the grand proportions of the rest of the house—an 1880s Shingle-style Victorian—and the neighborhood, designated historic by the local preservation board.

When I first saw the house, I felt the same way. But I wanted it so much, I conveniently evaded my own doubts about the kitchen. As we got closer to moving in, though, I became more anxious. First, there was the look. The entire kitchen had been painted the unappetizing color of dried egg yolk. The floor was cracked, brown linoleum, and the sink reminded me of my play sink from childhood. An orange, metal birdcagelike chandelier hung from the center of the ceiling. Then there was the lack of usable appliances, most notably, the filthy 1950s stove. We scrubbed it within an inch of its life, apparently. When we turned it on for the first time, sparks flew from the knob.

"Well, you don't waste a single step in here!" my mother cheerfully pronounced on her first visit. When the cabinet doors are wide open, you bump your head. The fridge is around the corner, on the backstairs, with about 18″ of space to pass through.

In order to move in, we decided simply to make the kitchen clean, bright, and safe. It was to be a "temporary update." We painted the ceiling, walls, and woodwork in the same white, replaced the sink and appliances, and peeled back the linoleum and sanded the floors.

BILL FIRESTONE

We weren't prepared for the utter transformation created by the gleam of the new white enamel and silvery stainless steel fixtures; the elegant stretch of creamy, light walls; the pine floors that buffed up to a warm toffee color. We were stunned to realize that we now had a pleasant kitchen. Still not big enough, not glamorous, definitely not edgy, but usable and friendly.

The space has gamely come back to life, a diamond chip in the rough. I began to see how this little kitchen offshoot makes sense with the rest of the house's curious layout. The other rooms are also discreet spaces unto themselves that don't flow into one another like the floor plans of new constructions. Where you would expect a dining room door to the family room, there is a window. The large living room has a narrow doorway, while the entry to the dark backstairs has a charming arch. I've concluded that Mr. Cabot, the bachelor who designed the house, had a deeper need for solace and solitude than for the active companionship of connected rooms.

For three years now we have lived happily enough with our refreshed but tiny kitchen. What was once cramped now feels cozy, a place that fills easily with the smell of morning coffee. The sun pours in through the two large old windows during sluggish late afternoons, just when I need it, splashing gold on the clean white walls. The panes are wavy like water and play lovely tricks with the light. And although space is tight, it doesn't stop me from baking with my three boys on many a wintry Sunday. By now we have all learned how to fit side by side in that small space, making use of every square inch of countertop. We duck and reach and gather companionably around. Mom was right; no wasted space in here.

Who knows? Someday I may come up with a solution that will increase my counter space or rescue the refrigerator from the indignity of the backstairs. But only if it leaves intact the serene distinction of the rest of the rooms. Because although the kitchen doesn't make that much sense in a 21st-century way, in other ways, it's a near perfect fit, for us, and for the house. After all, Cinderella's foot was absurdly tiny, and that's why it was a perfect fit for that glass slipper. It's just one more eccentricity to put up with in a beloved old friend.

Sue Senator *lives in Brookline, Massachusetts, where she is working on a book,* Just a Family, *due from Shambala Press in 2006.*

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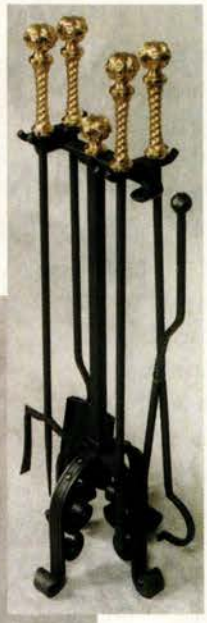

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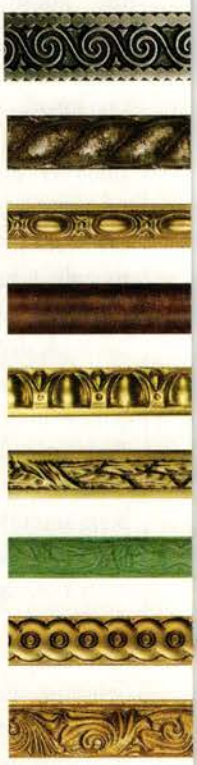

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Foundation Garments

Instead of girdling your house with green meatballs, consider a dooryard lilac—a Victorian secret.

BY TIM HENSLEY

You've talked with the landscape designer at your local nursery, and he's coming this evening to look at your foundation plantings. He'll step off dimensions, take notes on existing plants, and ask questions about traffic flow and the views you'd like to preserve. But he won't ask you about lilacs blooming in the dooryard.

I should know. As a part-time landscape designer I've been drawing circles for a long time, and I can tell you that few designers are above proposing horticultural clichés. One of the worst is the modern foundation planting—that swath of tightly sculpted meatballs made from hardy but hackneyed plants: yew, holly, arborvitae. The color scheme is often a study in one shade of green. But sometimes a designer will get his juices flowing and come up with a selection of bright reds, gaudy yellows, and cerulean blues that would make even Ronald McDonald proud.

DOUG KEISTER

This 1908 Santa Monica, California, bungalow has little gardening space between house and street, but has made the most of it with low-growing plants in purple and white that create a buffer while letting the architecture shine. Easter lily vine (*Beaumontia grandiflora*) accentuates the upturned roof, while basketweave brick paths provide access for garden maintenance.

The stated purpose of the planting is to "hide ugly underpinnings" and to "anchor the house to its site." But while the basic practice has a long history—foundation plants have appeared around everything from medieval castles to Victorian cottages—the way that it's applied today is often unfortunate.

Take those ugly underpinnings, for example. If your old house is like most, the foundation is far from ugly. Underpinnings of block and concrete did not rear their heads until the housing boom just before and after WWII. Only then did landscape designers begin to push for a continuous patch of jungle around the base of every home.

KEN DRUSE

Formal architecture doesn't dictate formal foundation plants. This sweep of interwoven perennials provides a welcome dash of color.

Of course, this kind of planting requires lots of plant material—which is good news for the guy at the nursery. But eventually these cute, green muffins, invariably planted too close together, grow into green monsters that gobble up your home, creating an atmosphere of gloom and darkness inside.

Besides that, the hackneyed selection of plants is anything but period sensitive. Nineteenth-century gardeners planted hearts-a-bustin' (*Euonymous americanus*) and bigleaf hydrangea (*Hydrangea grandiflora*), not 'Blue Rug' juniper and 'Alberta' spruce. Their focus was not so much on "getting the front yard done" as on using a particular plant for a particular purpose: forsythia, to remember the

friend back East who gave them an Irishman's cutting; bubbybush (*Calycanthus floridus*), for its sweet and spicy fragrance; and red currant, for putting away the best jelly they ever tasted.

So how do you avoid buying into this ubiquitous horticultural cliché? Here are some things to consider before signing on the dotted line.

1. Foundation plantings don't have to be continuous. That's a hard notion to get hold of if you're used to hemlocks on every corner, with a stretch of yew or rhododendron in between. But some architectural features (a stone fireplace, wide logs, a unique basement entrance) are best left unskirted. Indeed, sometimes the best foundation planting is a narrow bed of ivy (where it isn't invasive), or even a carpet of fescue turf.

2. Foundation plantings don't have to be evergreen. Sure, you may own a set of high-powered electric shears and enjoy trimming boxwoods. But why not put the boxwoods between you and your neighbor, where they can give privacy, rather than promoting mildew on the side of your house? Adding deciduous plants to your design palette will open a whole world of plant possibilities. Many native plants, in particular, are now becoming common in the nursery trade. I've used, for example, Virginia sweetspire (*Itea virginica*) along a front walkway, white fringe tree (*Chionanthus virginicus*) as a corner accent, even Indian currant coralberry (*Symphoricarpos orbiculatus*) to frame a set of steps. All of these plants would have been used around homes of the 1700s. Keep in mind also that the flowers and foliage of foundation plants should accent the colors and textures of your house rather than overpower them.

DOUG KEISTER

Regionality is obviously an important consideration in plant choices. Here in San Diego, a clinker brick and river rock foundation is punctuated, rather than hidden, by a red-orange clivia (*Clivia miniata*) and a deep pink camellia.

ANDY OLENICK

The front garden of this 1845 house in Pittsford, New York, was formerly the bed of the Erie Canal. The unpainted fence visually ties the planting area to the stair and porch, while the informal shape of the beds softens the lawn area.

3. Foundation beds can vary in width and form. The style of your house is the best guide here. A Greek Revival or a Federalist home calls for a certain amount of symmetry and structure, while an Arts & Crafts bungalow is enhanced by asymmetrical forms. Even your front door can provide planting cues. Formal doors with pilasters and pediments call for treatments that are balanced and neat. A modern door with a light to one side suggests a more informal layout. Yard size is also an important consideration. If your 1902 folk Victorian sits close to the street on a city lot, then a corner planting that meanders far out into the turf, in imitation of its modern counterpart, would be silly at best.

Similarly, a narrow side yard may leave no space for shrubs but will allow for a 2′-wide bed of iris or daylily or ferns. Be sure to consider also roof pitch, which determines how much snow will get dumped on your plants and roof overhang, which determines how much moisture some plants will receive.

4. Foundation plantings can accent or contrast architectural lines. If your house is a three-storey Queen Anne, for instance, you may want to plant a narrow tree near the corner to accent a prominent turret. On the other hand, if the house already seems tall for its site, you can balance its strong vertical lines with massed shrubs

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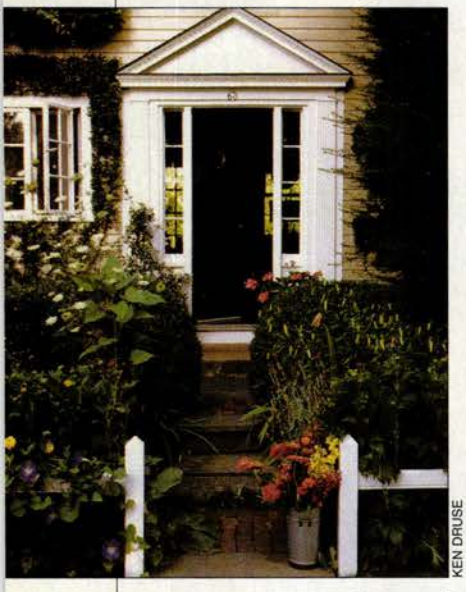
or low, spreading trees that will make it appear more "grounded." Keep in mind also that many homes have a prominent focal point, say, an arched, two-storey window. Since your eye is naturally drawn there, it is tempting to focus your landscape efforts in the same area. But it's often better to balance a focal point on the house with an attractive alternative elsewhere in the landscape.

5. Foundation beds are great places for thinking outside the box. A fig, for example, makes a great specimen plant, especially if it can be sited in a protected nook. Foxgloves and hollyhocks may be just the thing to recall your home's Victorian past. An espaliered nectarine on a south wall is a delightful and time-honored alternative to the modern application of firethorn (*Pyracantha*).

No rules say your fencing has to be around the edge of your property or your plantings smack dab against your foundation. This stepped arrangement accentuates the entry stairs and strikes a balance between formal "hedge" and informal "cottage garden."



KEN DRUSE

Notice that I just used the words "delightful" and "foundation planting" together in the same paragraph. It is a pairing that brings us full circle, to the title of Walt Whitman's elegy on the death of Abraham Lincoln, "When Lilacs Last in the Dooryard Bloom'd." Whitman's phrase reminds us that a dooryard planting can open the way to contemplation, to pleasure, and to a sense of connectedness to time and place. If that sounds like so much poetic nonsense, then you should nod your head approvingly when the landscape designer shows you his sketch, nod and make a note in your calendar. Your planting of yews and rhododendron will be installed in two weeks.

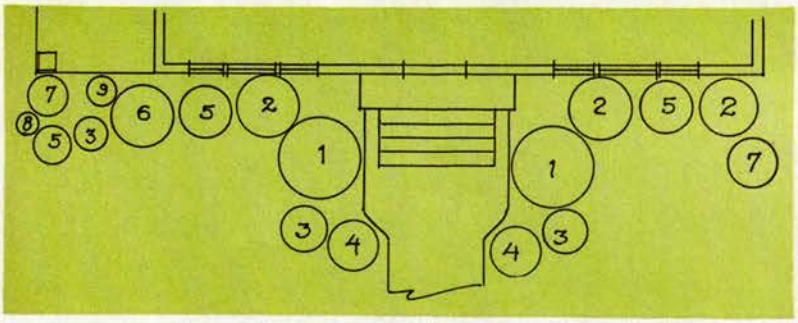
But if the invitation to delight sounds like a voice from a pleasant dream, where plants invoke memory, offer up sweet fragrance, and yield delectable fruit, then you should find a designer who will understand what you mean when you say, "I want lilacs blooming in the dooryard."

Tim Hensley is a landscape designer and installer and grower of heirloom apples in Bristol, Tennessee.

CONIFEROUS EVERGREEN PLANTINGS 31

A pleasing effect with evergreens, produced by occasional clipping. We do not advocate the use of blue Spruces for foundation plantings, however

1. Green or Plume Retinospora *Retinospora plumosa*
2. American Arborvitae *Thuja occidentalis*
3. Sulphurplume Retinospora *Retinospora plumosa flavescens*
4. Mugho Pine *Pinus mughus*
5. Moss Retinospora *Retinospora pisifera var. squarrosa*
6. Koster Blue Spruce *Picea pungens kosteriana*
7. Goldenplume Retinospora *Retinospora plumosa aurea*
8. Savin Juniper *Juniperus sabina*
9. Reid Arborvitae *Thuja occidentalis reidi*



The detailed landscape plans in *Foundation Plantings* by Leonard H. Johnson, published in 1937, gave a boost to the concept of wrapping a house in evergreen shrubs. Rather than color from flowers, such schemes offered a break from green with blue spruce.

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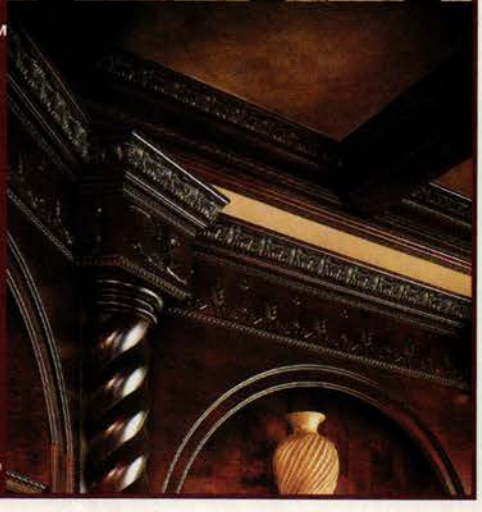

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$$$ Help for Home Restorations

Q: Our 203-year-old house is on the Connecticut historic register...but falling down around us! We desperately want to restore it, but we are facing large expenses. Are there any grants or other money sources to help us?
Jacqui Kelleher, Simsbury, Connecticut

By J. Randall Cotton

That is the $64,000 question. Unfortunately, unless you are satisfied with "it depends," the answer is not simple. While there are sources of financial help for old-house work, they vary widely across the country, and they take some homework to access. Here are some ideas to get you started.

Grants (gifts of money to be used for specific purposes) come from public sources (federal, state, or local governmental entities) or from private sources (sometimes individuals, but more often foundations). Nonetheless, almost all grants are awarded on the condition that there will be a benefit to the general public, and that's why most restoration grants go to publicly-owned buildings or ones that are opened to the public.

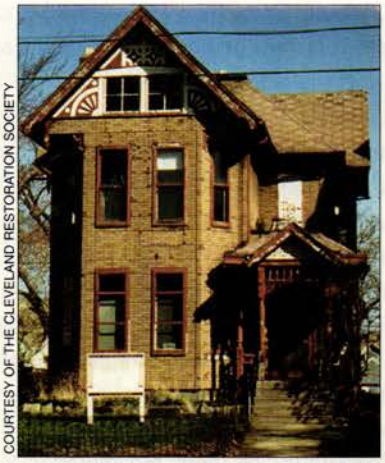
Outright grants for the restoration of a historic house that is both privately owned and privately occupied are very rare. Still, you might want to peruse foundation directories at your local library or online. If available at all, locally based foundations are more likely than statewide or national foundations to have restoration grants for homeowners. Some local municipalities may have façade improvement grants that subsidize the costs of improvements to houses in historic districts. These programs, while commendable, are still uncommon, and often provide modest grants to homeowners only in low-income or "distressed" neighborhoods.

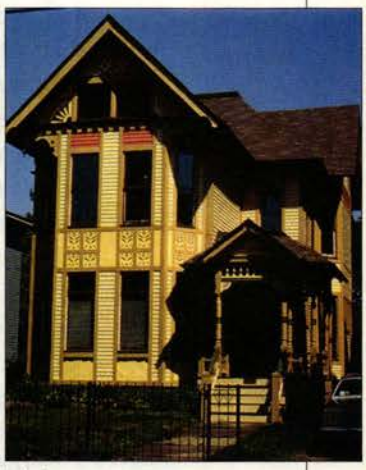
Tax incentives and low-interest loans, two other kinds of financial assistance for homeowner restoration projects, are more common. These programs will typically be administered either by a governmental agency or a nonprofit organization.

To be eligible for these programs, usually your house must be officially designated as historic by either a local historic commission or by inclusion on the National Register of Historic Places. The property can be either individually designated or listed as "contributing" to a historic district in which it is located.

In addition, the restoration work you undertake must adhere to certain standards such as the Secretary of the Interior's Standards for the Treatment of Historic Properties (which can be found at www2.cr.nps.gov/tps/secstan2.htm). A governmental agency or local preservation nonprofit organization will usually review and "certify" the completed work.

Programs like those at the Cleveland Restoration Society in Ohio help old-house restorers secure home equity loans from major lenders and assist in façade improvements.





COURTESY OF THE CLEVELAND RESTORATION SOCIETY

Tax incentives may either abate your property taxes, or reduce your federal, state, or local income taxes. When you complete a certified restoration project, an abatement will reduce or freeze your real-estate taxes for a period of time—ten years, for example—after which your taxes will be assessed as usual. Income-tax incentives either reduce the amount of your taxable income (deductions) or directly reduce the amount of tax you owe (credits).

The best-known and most widely used tax incentive is the Rehabilitation Tax Credit (also known as the Investment Tax Credit, or "ITC"), which can provide a federal income-

J. RANDALL COTTON

Owner-occupied properties in Illinois historic districts, such as the Hyde Park-Kenmore District in Chicago, may be eligible for an eight-year (plus four-year phase-out) property-tax abatement program.

tax credit in an amount up to 20 percent of the eligible costs of rehabilitating a certified historic structure. But here's the catch: this program can only be used for income-producing properties. So unless your home is used as a rental property, your restoration project won't be eligible for these tax credits. If all or some of the historic house is rented out, however, it's definitely worth learning more about this tax incentive at www2.cr.nps.gov/tps/tax/incentives/index.htm.

Currently 45 states have restoration tax incentives. While some of these programs limit the benefits only to income-producing properties, many others apply to owner-occupied historic houses. The most comprehensive and up-to-date summary of these programs is probably a list compiled by the National Trust for Historic Preservation; (http://www.nationaltrust.org/help/financing_a_home.html).

As an example, the state of Georgia provides an eight-year freeze on property taxes if the rehab project increases the market value of the owner-occupied residence by 50 percent or more. This type of abatement is intended to eliminate one disincentive of restoring a historic house: that the restoration improvements would result in burdensome, increased property taxes. In addition, Georgia also offers homeowners a state income-tax credit equal to 10 percent to 15 percent of the costs of eligible restoration projects.

Connecticut offers a 30 percent state income-tax credit for eligible projects on certified historic houses. There are conditions, however, like a minimum project expenditure ($25,000), a maximum tax credit per dwelling ($30,000), and location (the property must be in a "distressed" area defined by the state). These kinds of conditions are typical of tax-credit programs in other states as well. Many states, through so-called "enabling" legislation, also allow local municipalities—counties, townships, cities—to enact restoration tax incentives.

Revolving loan funds are offered by some statewide or local historic-preservation nonprofit organizations (and some governmental agencies), for which owners of historic homes may be eligible. The idea is this: a pool of money is lent to homeowners—usually with more lenient terms than typical market-rate home-improvement bank loans—for improving their historic homes. As the loans are repaid, the payments "revolve" back into the loan fund so that additional rehabilitation projects can be funded.

The advantages of rehabilitation loan funds administered by historic-preservation organizations are several: the interest rates may be lower than market rates, the qualification criteria may be more lenient, and technical assistance is often provided. In addition, since these loans are often concentrated in "targeted" neighborhoods, they act as catalysts for the revitalization of the entire neighborhood.

As an example, the Cleveland Restoration Society, and its partner banks, offer a Neighborhood Historic Preservation Program that provides below-market 1 to 1/2 percent (APR), 12-year loans to homeowners in that city's most central urban neighborhoods. Last year, the loan program allowed homeowners to complete 28 projects worth more than $2-million in rehabilitation construction.

The availability of these rehabilitation-loan programs varies greatly across the country. Places to begin your inquiry are at www.epreservation.net or www.preservationdirectory.com, or at your local community-development agency or preservation nonprofit organization. So there's help out there. The assistance may be spotty, modest, or sticky with "red-tape" procedures, but it's certainly worth checking out before embarking on a restoration project.

***J. Randall Cotton** is associate director of the Preservation Alliance for greater Philadelphia.*

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AboWeld 8005-6 bonds new concrete to old concrete permanently.

AboCoat & Abothane Series: floor, wall, tank and tub coatings. Solvent, water and solventless systems.

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The Art of Door

Effecting the burls, crotches, and ribbons of fancy woods with paint is a technique that highlights many old houses.

COURTESY OF OAK ALLEY PLANTATION VACHERIE, LA

CHARLES T. LYLE

Above left: Grained doors enriched major entrances with imitations of popular, furniture-quality woods, such as the door grained to look like mahogany at Oak Alley Plantation (1839) in Louisiana. Above: Mahogany grained doors balance the mahogany furniture in Boscobel Mansion (1804-8) in Garrison, New York, complementing the rich wall and trim colors.

STEVE JORDAN

William Wall, America's most well-known 19th-century grainer, demonstrates his quarter-saw oak skills at the House Painters and Decorators Convention in Ontario, Canada, 1905.

Graining

By Steve Jordan

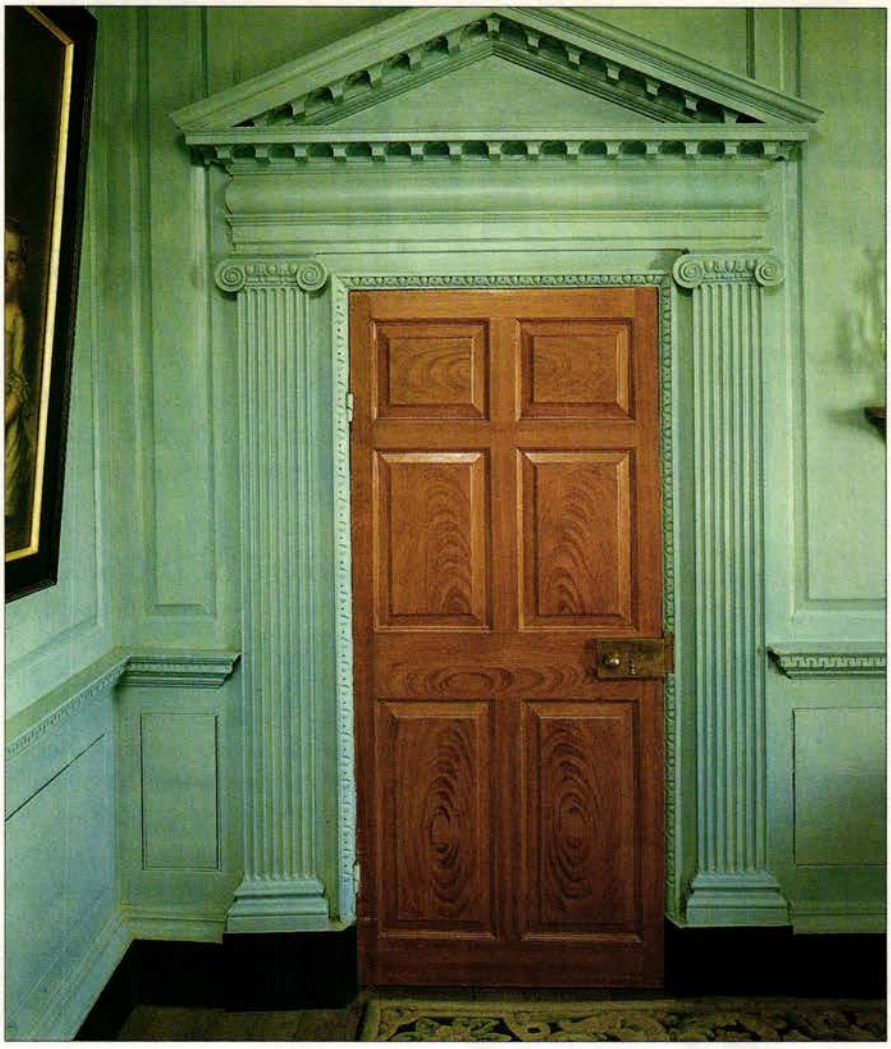
Graining is the painted imitation of an expensive wood over an inferior wood, or any smooth surface that can be painted. One of the classic decorative painting techniques, it's also known as wood graining, grain painting, and *faux bois*—French for "not wood." Most old-house lovers have probably appreciated graining at one time or another, but to the uninitiated, it's a bizarre concept. Why paint wood to look like another wood? Why not buy the real thing? The answer, basically, is an old story. People want what they can't afford, or what can't be purchased at any price. In the case of attractive wood, like a street-bought Rolex or synthetic stucco, a good imitation will do. Exploring some of the rich lore of graining, and its historic use in houses—particularly on doors—can teach us a surprising amount about how these beautiful decorative effects were produced, and what their owners were trying to achieve.

The Waves of Graining

Graining came to America with an age-old pedigree. With the dense forests of England and Europe long gone, imitating wood with paint was a regular practice there by the time the first colonists established themselves in the New World. Documented examples of 17th-century graining in North America are rare, but by the first quarter of the 18th century, both physical and written evidence of graining is common. The earliest painter/grainers were Englishmen, who typically arrived after serving strict apprenticeships—tutelage lasting ten years or longer under masters who were often harsh or cruel. The flows of immigrants that began in the 1850s, however, brought experts from other countries, each contributing to the craft as it developed, refined itself, and spread.

Historically, graining, marbleizing, striping, and sign writing (and sometimes mural painting and portraiture) were performed by painters with skills beyond "plain painting"—what we know as house painting. Grainers made more money than plain painters, and the very best were in high demand. In sparsely populated rural areas, painters were Jacks-of-all-trades, performing whatever work was necessary to make a living. In metropolitan areas, though, painters often specialized and grainer/marblers were common.

Grainers advertised locally and also traveled as itinerants, living with their clients as part of their fee. In 1760, for example, the *Maryland Gazette* advertised



PAUL ROCHELEAU

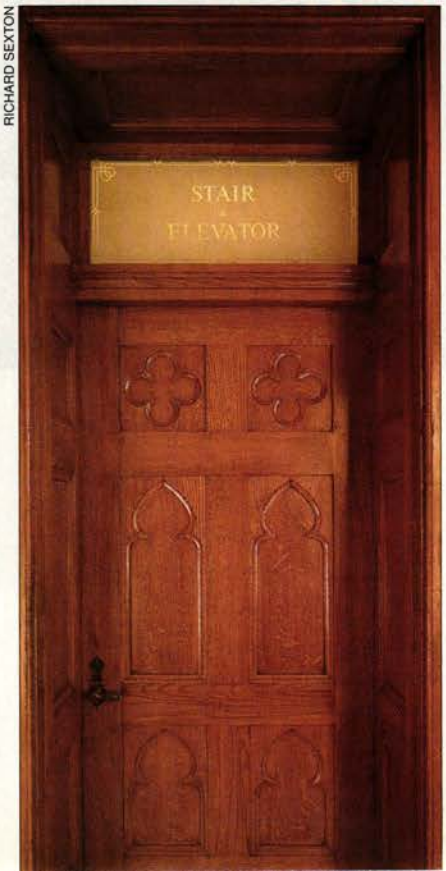
George Washington's Mount Vernon boasted several grained doors. They were painted to resemble mahogany, the most popular furniture wood of the period. This door with ring-grain panels was originally grained about 1760 by Washington's convict servant, John Winters, who ran away during the project.

that John Winters, a convict servant who had last worked for George Washington and could "imitate marble or mahogany exactly" had run away. In the 1830s, one Joseph Davis traveled to New Hampshire and Maine selling his services as a limner (portrait painter), house painter, and a grainer. Bridging the gap between the town painter and the itinerant was William Gray of Portsmouth, New Hampshire, who worked locally, but also traveled distances to out-of-town clients. Records indicate he went as far as Durham, New Hampshire, to paint a room "seder (sic) color" and another "stone color."

Early American graining was usually an approximation of wood, or even a naive simulation. Imitations of bird's eye and tiger maple, mahogany, and oak were common. The unstudied, playful nature of this early work—sometimes called country graining—is a favorite of many old-house owners and especially sought-after on primitive antique furniture. But by its zenith during the last half of the 19th century, graining was often refined to near-perfect re-creations, and the best grainers were referred to as "art" grainers. Mahogany with elaborate crotch figuring on door panels, rosewood, walnut and wal-

CHARLES T. LYLE

Right: So masterfully grained they could be confused for real wood, these crotch-figure door panels at Boscobel stand up to the striking wallpaper, creating a richly decorated environment.



RICHARD SEXTON

Right: Graining was also used to embellish public buildings at great savings to the public purse. This beautiful lancet-panel door in the old Louisiana State House is actually cypress grained to resemble quarter-sawn oak.

nut burl, and quartered oak were commonly imitated on doors, wainscots, and trim. Similar treatments were used on cottage (inexpensive) furniture.

Fine-Figured Doors

Almost every surface in a house could be grained. Doors, trimwork, walls, floors, and ceilings were all up for grabs, but doors usually highlighted the grainer's best work with the most difficult (and also most desired) grains placed in the panels. For example, if oak graining was used throughout a room or only on a door, the fussy dapples of quarter-sawn figuring were saved for the panels, while easier combed graining decorated the stiles and rails. The panels of mahogany-grained doors were usually decorated with flamboyant crotch figuring, while the stiles and rails were decorated with simpler ribbon-cut graining. Walnut-grained doors often sported burl panels with common plain-sawn graining on the rest of the door. Although rarer because it was more difficult to produce, bird's-eye maple was another imitation used to decorate door panels.

Expert graining was not the only method used to set doors apart from the rest of the room. Doors were frequently grained in two contrasting woods or with a contrasting paint or gilt as might be done in creating a piece of fine furniture. Panel mouldings that separated panels from the stiles and rails were frequently "picked out" with paint in a striking way. A mahogany-grained door might have ebonized or gilt panel mouldings. A light maple-grained door might have mahogany-grained panel mouldings to create an interesting contrast. In rarer cases, stripes were used to create the illusion of more intricate mouldings.

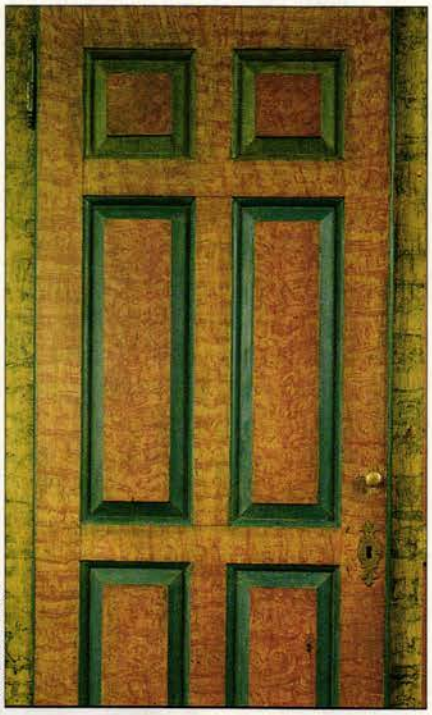
One advantage of graining doors was that each side could be grained in a different type of wood. At the Patrick Barry House in Rochester, New York, the public room doors were grained in beautiful interpretations of mahogany and walnut, while the sides of the doors facing the private kitchen halls where the servants worked were grained in common oak.

Historic Paint Superstars

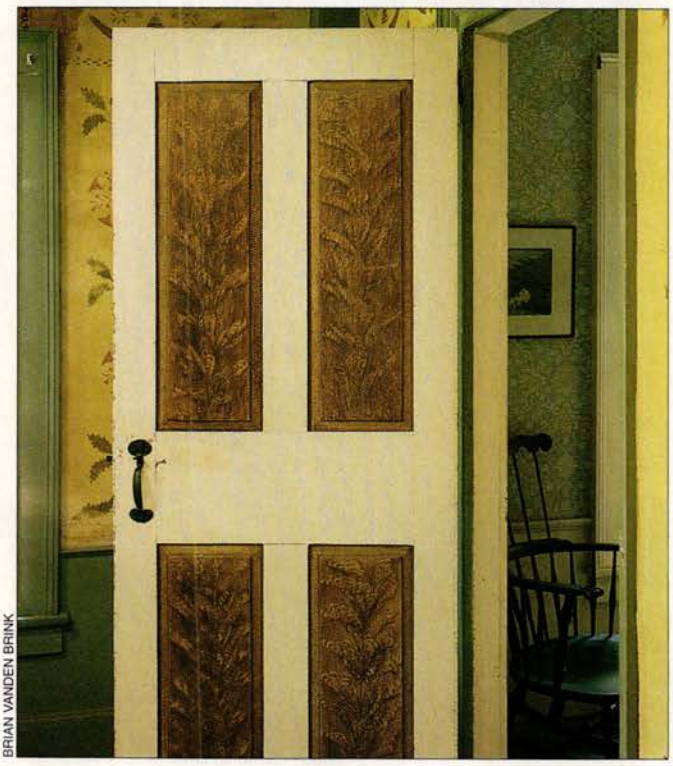
Little is known about America's earliest painter/grainers but 19th-century records and books reveal a lot about the later workmen and their trade. One early 19th-century painter whose life and work has been well recorded is Rufus Porter (1792–1884). Porter was an itinerant painter (and also a publisher and inventor) known for his murals that still exist in various locations across New England. An expert in all the required decorative painting skills, he published *A Select Collection of Valuable and Curious Arts* in 1826. Among his instructions, he included a section "To Paint in Imitation of Mahogany and Maple." His directions left broad margins for interpretation but demonstrate Porter's firsthand knowledge and call for decorative painters to master this technique.

Although a departure from a discussion about North America, no history of graining is complete without a few words about the most famous of all grainers, Englishman Thomas Kershaw (1819–1898). With a lengthy apprenticeship in house painting, signwriting, graining, and marbling, Kershaw won awards at the

Ebonized, stained, or gilt mouldings were often added to emphasize a door's furniture-like quality, and to "picture-frame" the grainer's work, such as this evocation of tiger-maple figuring.



PAUL ROCHELEAU



BRIAN VANDEN BRINK

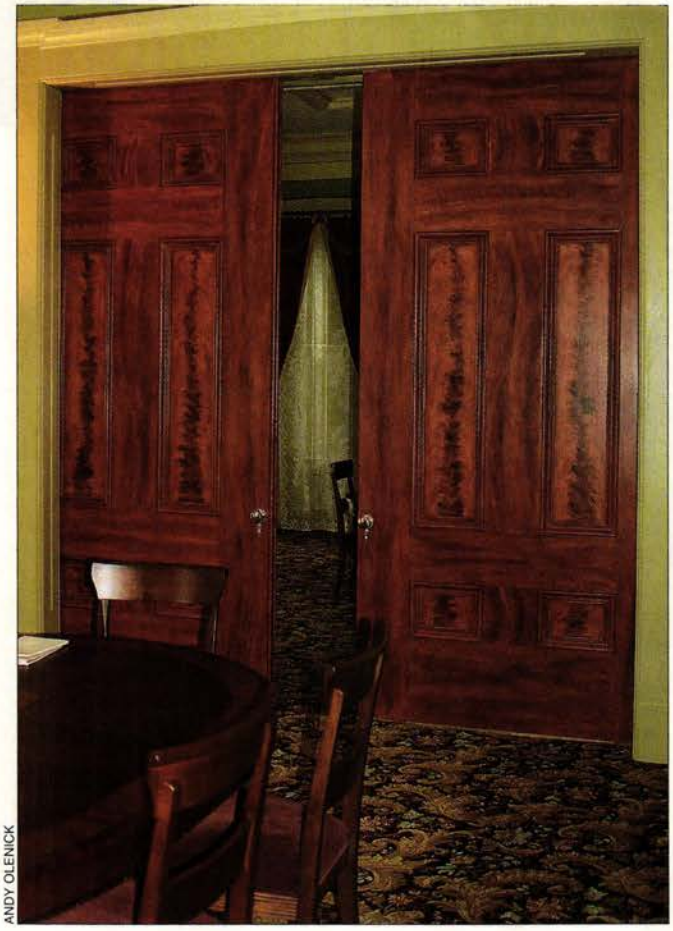
Left: The crotch-figure panels of this door in New England are highlighted by lighter paint on the stiles and rails and a darker color on the mouldings.

International Exhibit of 1851 and in the Paris exhibition of 1855. So skillful and realistic was his work that it was often confused with real wood and marble. His fame brought him to the attention of Prince Albert, who hired Kershaw to decorate the Emperor's Room at Buckingham Palace. His work is still occasionally displayed at the Victoria and Albert Museum.

Between the mid-19th century and the turn of the 20th century, the popularity of graining was nearly ubiquitous. Books, pamphlets, and journals demonstrated techniques and formulas, and patented graining tools were invented to make "every man his own grainer." Despite the way publishing put graining knowledge in the hands of the layman, and patent tools made the task easier, mastering the techniques needed for a skillful, realistic imitation of coveted woods was still the province of the professional grainer, and America had her own stars.

What Kershaw was to England, William E. Wall was to the United States. The son of a grainer, Wall lived in the Boston

ANDY OLENICK



ANDY OLENICK

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Above right: This beautiful walnut-burl-paneled door is in the dining room of the 1855 Ellwanger-Barry House in Rochester, New York. Right: Also in Rochester are the double-parlor doors of the 1840 Hoyt-Potter House, originally grained with elaborate crotch or flame patterns on the panels and a ribbon-cut pattern on stiles and rails. Though lost to wear, they were regrained in 2001 by painter Bill Farley, leaving two of the original panels on the back for interpretation and study.

Above: Thomas Jefferson's Monticello also holds remarkable early examples of graining. This balcony door in north passage still presents its original graining by Richard Barry from 1806-7, including a burl effect in the panel edges.

CLEVER TOOLS FOR CONVINCING EFFECTS

The tools for graining have always been uncomplicated. Even though dozens of patent tools and gimmicks were introduced to speed up and improve the process, the best work took only the simplest tools—mostly brushes.

Brushes

- **Graining brush:** Used to lay in the thin lines of wood grain when dragged over the glaze.
- **Flogger:** Used to pat (or flog) tiny pores into the wood, as might be seen in oak or walnut.
- **Pencils:** Artists' brushes used to lay in fine lines.

Left to right: Floggers, grainer, badger blender, pencil over-grainer, and mottler (bottom, center).

- **Softeners or blenders (badger blenders):** Used to soften harsh lines or delete the appearance of brushed work.
- **Mottlers:** Used to mottle or distress the glaze to create a blotchy appearance.
- **Pencil overgrainers:** Several artists' brushes connected to allow laying in several lines at once.

Other

- **Homemade leather combs:** Used to rub across the glaze to simulate grain.
- **Manufactured steel combs:** used to rub across the glaze.
- **Cheese cloth:** For wiping out highlights
- **Graining heel or roller:** A patented tool for laying in grain quickly.
- **Transfer papers and stencils:** Transfer papers left an imprint on large areas such as a door panel. Stencils were used to stencil in distinct patterns that were then overgrained.

Patent graining tools from about 1905.

Patent steel graining combs from Sheffield, England.

PHOTOS, THIS PAGE: ANDY OLENICK / STEVE JORDAN COLLECTION

metropolitan area where he perfected his skills. He won awards for his work at the Columbian Exposition, the St. Louis World's Fair, the Jamestown Tercentennial, and the Philadelphia Sesquicentennial. In 1890, Wall published *Practical Graining*, which was a compilation of articles he had written for the journal *House Painting and Decorating*. Wall's second book, *Graining Ancient and Modern* (1905), is possibly the most thorough book ever written about the craft.

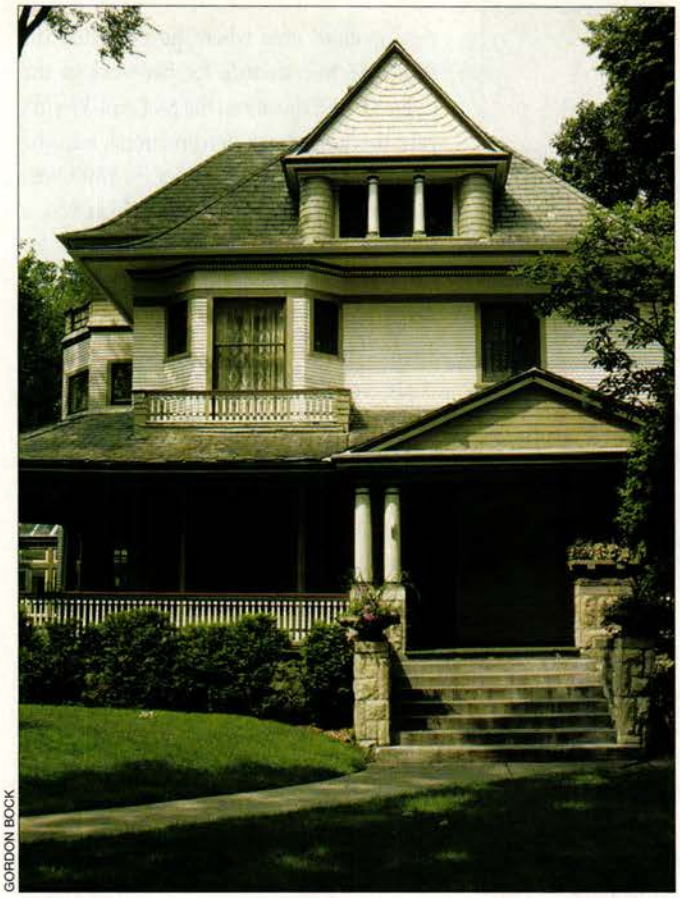
Graining Regained

Throughout the 19th century, graining had its advocates, but it was also reviled by leading architects, designers, and style mavens as a deceptive, cheap imitation. Nevertheless, because popular woods were expensive or unavailable, the use of graining—good quality, badly done, and everything in between—was widespread in moderate and expensive homes, commercial buildings, public buildings, and churches.

Since the 1970s, there has been a revival of traditional painting crafts fueled in no small way by renewed interest in historic houses and buildings. The United States has always had a shortage of highly skilled workers, and the situation is no different for graining, marbleizing, and many decorative painting techniques.

Experienced artisans are usually busy, even during poor economic times, and the very best often have work reserved for months into the future. In response, decorative painting schools, instructional videos, home-center classes, books, and websites have all contributed to the rebirth of the technique on both the popular and professional level. As in centuries past, a basic consumer impulse still holds true: If we can't have the very best, then a good imitation will often do just fine. The surprising appeal of graining, however, comes from the fact that the man-made version can be more interesting or beautiful than the real thing.

Contributing editor ***Steve Jordan*** *based this article in part on his Cornell University master's thesis, "Graining in America: 1828-1923."*



GORDON BOCK

Wood, at one time or another, has been used to make every part of old houses, from foundations and structural framing to roofing and wall cladding. The first settlers that landed in North America brought with them the methods for covering roofs and walls with wood shingles split from short lengths of logs, however, it was the rich supply of tall, straight trees they found here that gave rise to a new and different kind of wood building material: horizontal siding.

The clapboard and its variants are the original horizontal siding, dating back to the earliest, hand-rived types from the 17th century, but they are only the progenitors of a family of materials that took off with the Industrial Revolution. With the widespread use of steam-powered millwork machinery in the 1850s, horizontal siding proliferated into patterns of striking creativity, to satisfy the Victorian taste for texture, or simply efficiency—such as ersatz versions of log façades or even the venerable clapboard. By the 1930s, standard millwork references listed no less than 28 different types of commonly available horizontal siding. Since many are no longer familiar today and are difficult to purchase (especially at one-size-fits-all home centers), we have put together this glossary of the basic types and how they are installed, for use by anyone who has to repair or alter a horizontally sided old house built in the last 150 years.

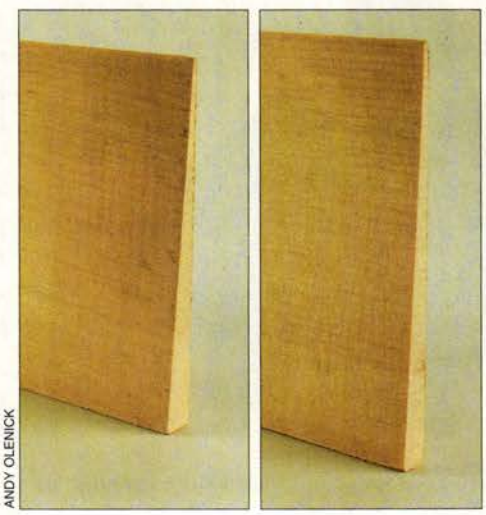
Double O.G. siding on the second storey adds to the varied wall textures and materials of this circa 1900 Queen Anne.

Horizontal

CLAPBOARD & BEVELED SIDING

Clapboard is plain, beveled siding, a near-isosceles triangle when viewed on-end. Traditional New England clapboard is cut radially from the log (producing true vertical grain) and up to 6" wide. Bevel siding and Bungalow siding are 20th-century versions that are generally resawn from boards (producing random grain) to obtain widths of 8" and more.

Manufacturers recommend nailing modern resawn bevel siding through a single board to allow for wood movement (A). Traditional clapboard with true vertical grain is typically nailed through both boards to sheathing (B).



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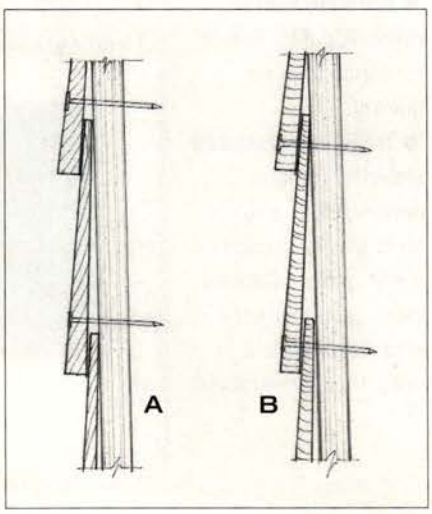
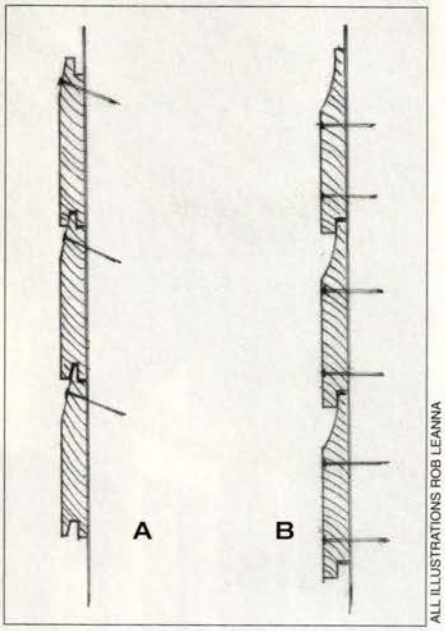


NOVELTY SIDING

GORDON BOCK



ALL ILLUSTRATIONS ROB LEANNA

A term that is also applied to all patterns of drop siding—milled siding that lies flat on the wall surface—novelty is frequently associated with the ubiquitous cove pattern also called German siding in some areas. Popular by the 1880s, and possibly in use as early as 1860, it is typically edge-matched in a shiplap joint, but was also produced in tongue-and-groove. Novelty siding that swaps a bevel for the cove is often called channel rustic.

Tongue-and-groove novelty types may be blind-nailed at the tongue (A). Cove-style novelty siding is typically face-nailed, sometimes directly to studs in light-weather areas or buildings (B).

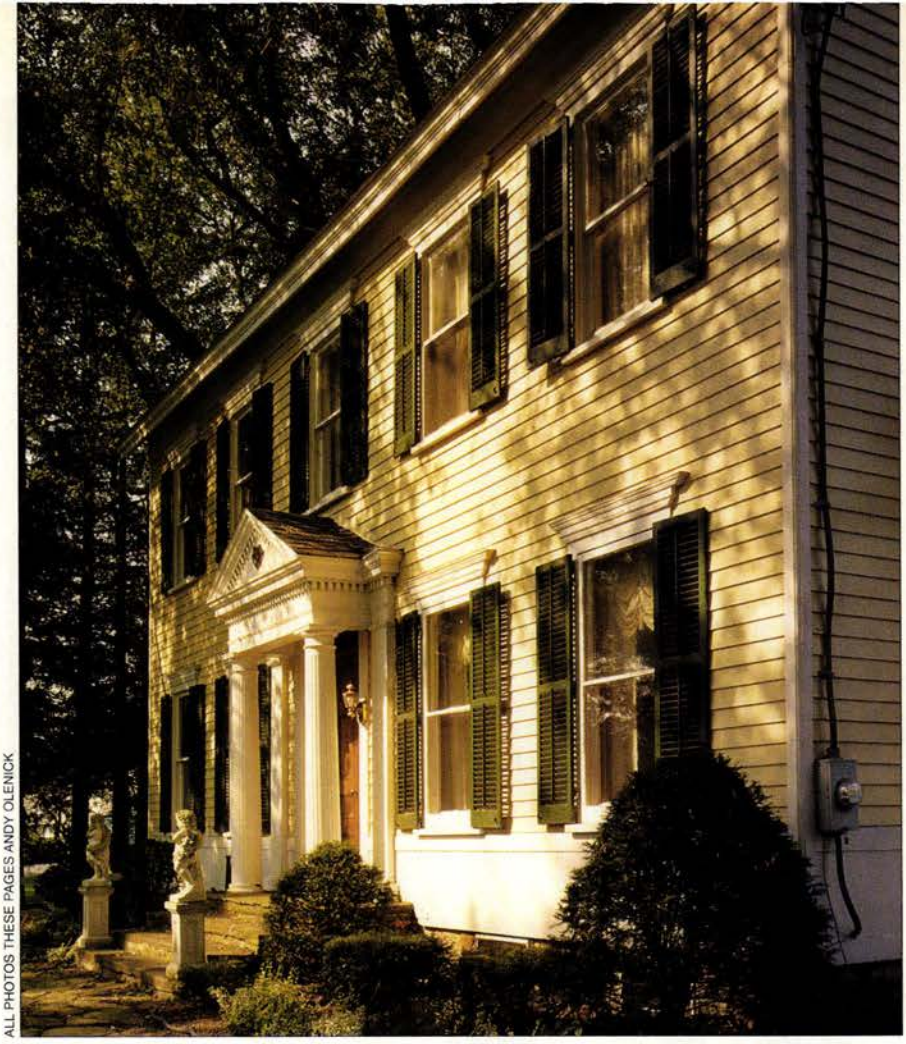
Siding Circus

A survey of basic millwork patterns and their installation.

BY THE OHJ TECHNICAL STAFF

GORDON BOCK

Drop siding that could finish a wall without sheathing was ideal for temperate climates, making it a favorite for the ubiquitous bungalows of the early 20th century.



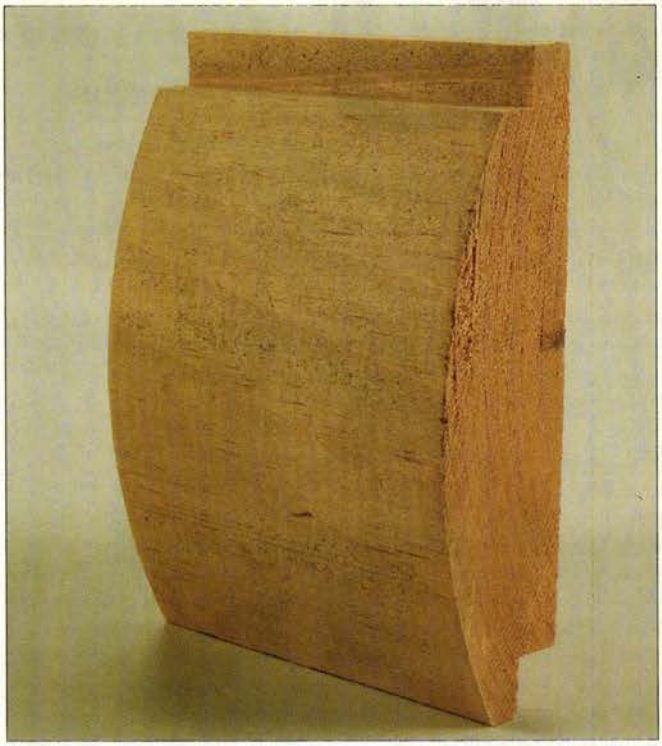
ALL PHOTOS THESE PAGES ANDY OLENICK

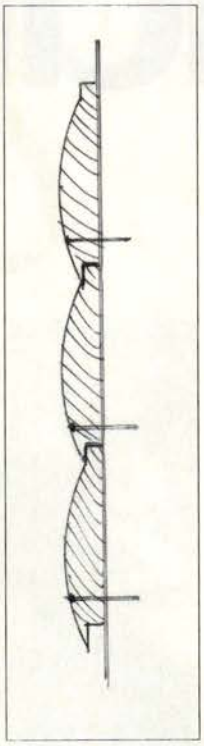
The material from which all horizontal sidings flow is the clapboard—the premium façade finish of early New England that was reborn in larger and more economical versions during the Colonial Revival of the 1920s.

RUSTIC SIDING

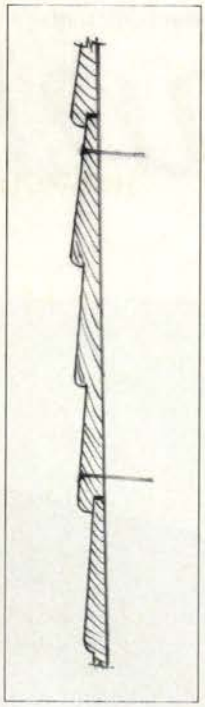
Rustic siding is a broad term often applied to several types of siding milled to present an appearance much more like timber than their actual thickness. The classic example is log cabin siding—a peeled log simulation with shiplapped joints. Log cabin siding was common by the 1930s, in 6," 8," and 10" widths.

Log cabin siding is typically face-nailed above the rabbet edge with a single nail, though wide patterns may require nails on both edges.





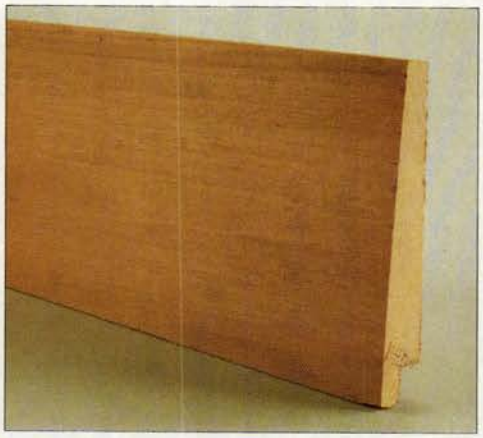
DOUBLE O.G.

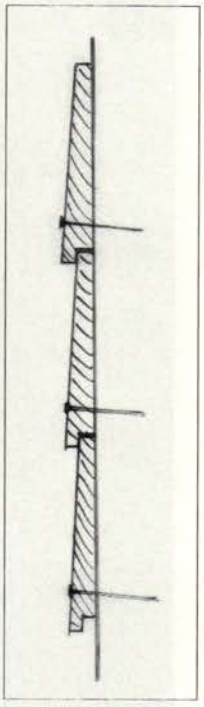


Representative of an extensive sub-set of drop siding types, double o.g. is a single siding board milled to present the shadow lines of two boards. The concept was applied to many other patterns (the double coves of novelty siding, double bevels, etc.) and, in some areas was even extended to triple O. G. siding. These products were usually shiplapped, but also appeared in tongue-and-groove versions. Double O. G. was common by 1910.

Double O.G. is typically face-nailed above the rabbet edge with a single nail, though wide patterns may require nails on both edges.

DOLLY VARDEN





Sometimes considered rustic siding, especially when milled with an unplanned face, Dolly Varden is a bevel siding simulation made with a rabbeted bottom edge, so that the siding installs flat on the wall with a tight joint. It dates to at least the 1930s.

Dolly Varden is typically face-nailed above the rabbet edge with a single nail, though wide patterns may require nails on both edges.

Yankee In

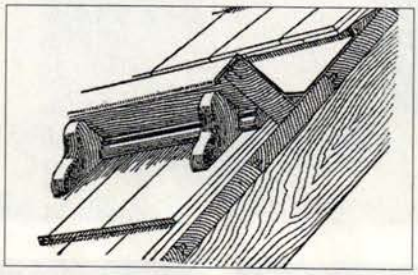
By Robert L. Williams

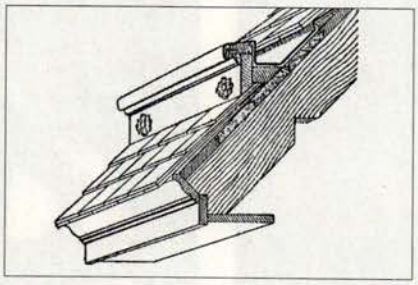
By the 1990s, most of the roof of the Crabtree House was in an advanced state of decay, so the only remaining examples of the original gutters were on the front porch and a small, 3' section on the rear roof of the main house (inset). Today, the rebuilt Yankee gutters are visible along the upper eaves.

GRACE DAVIS

genuity

Rebuilding and improving traditional metal-lined gutters.





One of the trickier challenges in restoring old houses is dealing with site-built, metal-lined gutter systems. Unlike hanging gutters—those ubiquitous, preformed troughs of metal or wood that are attached along eaves—metal-lined gutters are constructed from wood as an integral part of the roof, then lined with sheet steel, copper, or even lead to make them watertight. Many types of metal-lined gutters were in use by 1900, such as the classic box gutter incorporated within a cornice, but since they were often lined with sheet "tin" (terne-coated steel), they fell out of favor due to problems. If the gutter didn't receive routine scraping and painting, the liner would develop pin holes, the sheet metal would rust and start to fail, and leaks would follow.

For this reason, many people who are confronted with an old, metal-lined gutter system opt to either shingle over the gutter and install a modern, hanging aluminum version, or completely remove the gutter and reconfigure the cornice or eave. Either way, the results can have a negative impact on the integrity of the façade. Metal-lined gutters, such as the ones I found on the 1899 Crabtree House in Montgomery, New York, can be important character-defining features. So when it came time to replace the roof on this Queen Anne-style house, instead of concealing the decorative open rafter ends behind some roll-formed hanging gutters, I embarked on the following steps—and devised some new ones—to rebuild the historic features.

ALL PHOTOS ROBERT L. WILLIAMS EXCEPT WHERE NOTED

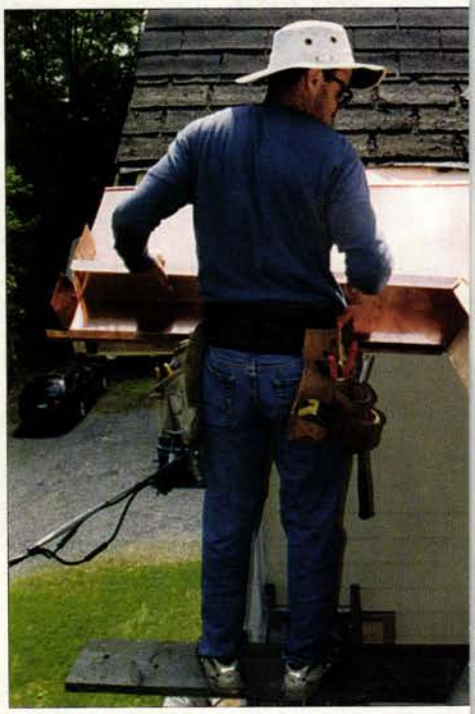
Above left: Two 1908 methods for building standing gutters, the lower one is recommended for slate roofs. Left: While the basic roof carpentry was still in good shape after 100 years, the Yankee gutters had been removed long ago when they faced constant maintenance or failure.

For a list of SUPPLIERS, see page 108.

The original 3′ section of gutter was rebuilt. Note that in many Yankee gutters, the outlets pass through the roof sheathing, so it is important to make the hole in the wood large enough to allow the metal to move some.

Phillip McNeil carries a section of liner up the original main house to install where two Yankee gutters meet in a valley. The 1910s porch addition (right) got new half-round copper gutters, as well as new, custom-fitted copper downspouts.

Miters in the gutter, and the fact that it extends the copper over the standing board and end brackets, in effect anchored the liner, making it necessary to add an expansion joint.



This view of the copper being installed shows how far it actually extends up the roof. Ice and water membrane applied to the uphill edge (before the shingles go on) offers more protection.

Designs and Details

In the fall of 2002 I contracted Phillip McNeil of Heritage Coppersmith in Warwick, New York, to reconstruct lengths of gutter on the upper roof, as well as install a standing-seam copper roof off the back of the building. Though of different pitches, both roofs relied on a V-shaped gutter system that is sometimes called a standing or Yankee gutter. Basically a board 3″ or 4″ wide that is attached to the roof several inches above the edge, a Yankee gutter is supported with brackets every 24″ or so, then lined with metal.

For the most part, the original Yankee gutters had been removed and roofed over, but we knew their design through the physical evidence they left behind and a large collection of historic photographs that came with the house.

When McNeil began demo-ing the old roof, he discovered that the original yellow pine sheathing was in excellent condition. Rather than add weight by installing plywood, which generally provides a more consistent surface for new shingles, we decided to retain the original sheathing boards but replace the nails

holding them with coated, power-driven screws. This would both strengthen the sheathing-to-rafter connection and eliminate the chance for nails to work their way out and puncture the roof, especially the new standing-seam copper.

Once the roof was prepared, building the new gutter was a straightforward process, using a good grade of pine for the standing board, pressure-treated wood for the brackets, and replicating the original pitch and dimensions. For the gutter liner, I chose 20-ounce copper—a bit heavier but more durable than the 16-ounce weight commonly spec'ed for valleys and flashings. I have found that the cost differential is minimal between a gutter lined with copper and one with tin because the primary expense is the labor, not the materials. Actually, terne or even galvanized steel requires more work for the installer due to the initial coat of primer and paint. Naturally, I selected the copper so as to avoid the paint maintenance.

Gutter liners must not be nailed directly to the roof sheathing but, instead, affixed with cleats. These cleats are small copper strips, roughly 1 1/2″ x 2″ that are bent at an angle on the lower edge, then nailed to the roof sheathing. The upper end of each cleat extends to the edge of the gutter liner, where both pieces of metal are folded over together in the opposite direction so that they connect in a lap (eventually concealed under the shingles). This cleat system allows the liner to move as the metal expands and contracts, thereby reducing stress on the joints.

As Phillip created the new liner, we upgraded the design by having the liner completely wrap around the upright gutter board rather than just over its top. The support brackets were also coppered-over to protect these components from the elements. Once the liner was attached with cleats, Phillip stitch-soldered the joints—that is, he soldered the sections of sheet metal together in a back-and-forth pattern over the seams to provide superior strength.

Improving on the Past

Nearly six months after completion of the porch gutter—an early portion of the project that had been done by another contractor—I noticed that the liner had bowed up in the middle during the first warm day. Shortly thereafter, I found several broken seams in the copper liner. Although the contractor had used cleats, apparently they were not enough to allow for the movement of this long (over 40′) run of the gutter. It is vital to recognize that sheet metal moves as it expands and contracts with temperature changes, and that an expansion joint may be necessary to allow for this process (see box above). Though the standard recommendation for most gutters is an expansion joint at least every 50′, other conditions can reduce this dimension. At the Crabtree House, for example, the tight-fitting downspouts, as well as the way the copper work encased the roof corners, meant that the liner was essentially held captive at its ends, and an expansion joint was necessary in the middle.

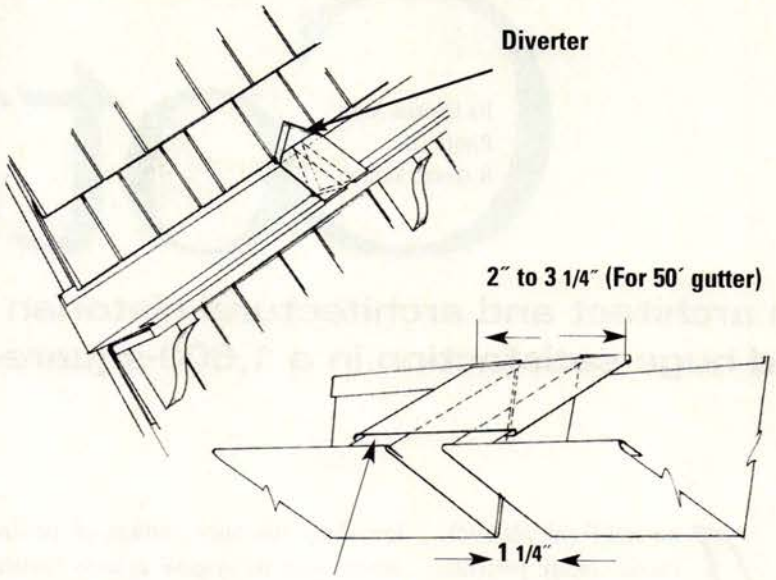
Another improvement we added was a small diverter at the uphill edge of the expansion joint cap. This diverter—essentially an upside down V made of copper—shunts the water runoff to either the left or right channel and prevents it from simply running over the expansion joint and out of the gutter.

No less than any house in the snow belt, if your old house is endowed with metal-lined gutters—particularly one of the on-roof varieties like a Yankee gutter—you need to pay attention to the potential for ice dams. At the Crabtree house, after the copper liner was in place, but before the new roof went on, we installed an ice-and-water membrane along the upper edge of the gutter liner. Inexpensive and widely used, this modified bitumen product has a sticky backing that adheres to the wood sheathing as well as the copper. We ran it up the roof about 30″ and under the shingles to prevent leaks caused by ice dams at the eaves.

Choosing to go with metal-lined gutters and historic roofing materials is no easier than finding the right tradesperson to properly install and maintain them, but it is worth the effort. When the completed copper gutters and roof systems shine on the Crabtree House, they provide just the right finishing touch to a period-appropriate exterior.

Robert L. Williams *is the former town historian of Montgomery, New York.*

Gutter Expansion Joint



ROB LEANNA

An expansion joint is a device that provides room for the metal to expand without deforming or not fulfilling its functions. In this instance, the joint is a specialized break in the liner—similar to two end caps under a top—with a V-shaped diverter.

Cottage

By George Abry
Photos By
Richard Sexton

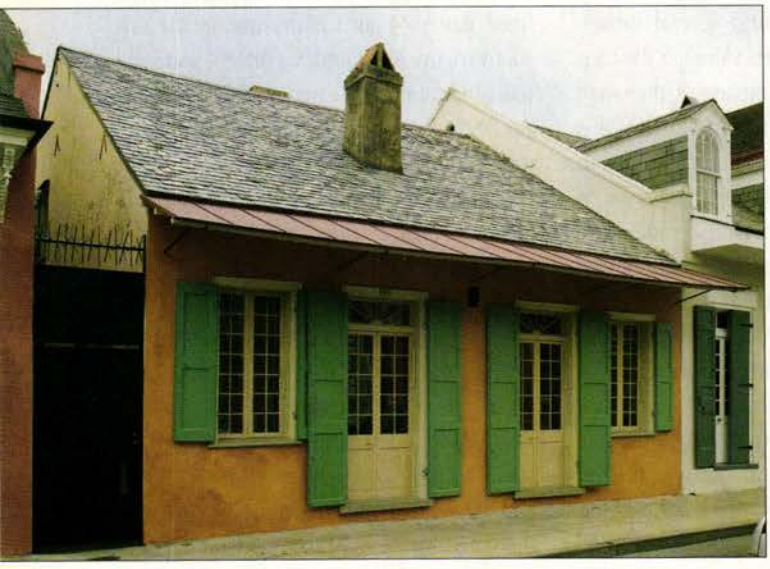
An architect and architectural historian find huge satisfaction in a 1,600-square-foot Creole dwelling.

Ann and Frank Masson's Creole cottage presents quite a spectacle in the French Quarter. If the sun is out, its weathered façade gives off a brilliant orange tint. Its stained walls often shimmer in the moisture and heat that saturate the steamy "Crescent City."

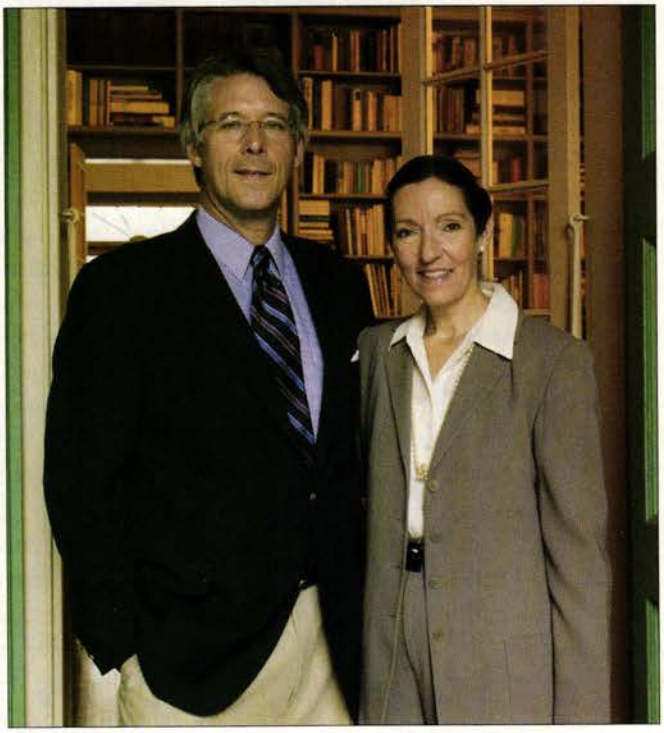
Built in 1805, the Massons' home unabashedly shows its age. It's a simple low-slung masonry cottage of peeling stucco, with its original cypress shutters and wrought-iron hinges, French doors, and loggia. Flush with the sidewalk, it's a textbook example of an early 19th-century Creole cottage—a vernacular house type of French and Caribbean origins that is a hallmark of New Orleans.

The weather-stricken visage is both a reflection of the home's age and the Massons' restoration. Ann is an architectural historian at Tulane University and Frank is an architect who has worked extensively on restorations throughout the French Quarter and elsewhere in New Orleans. Both of them wanted to restore the house according to Creole building traditions, which meant going beyond appearances. All architectural details, materials, and techniques had to be historically correct.

"Our primary interest was to make

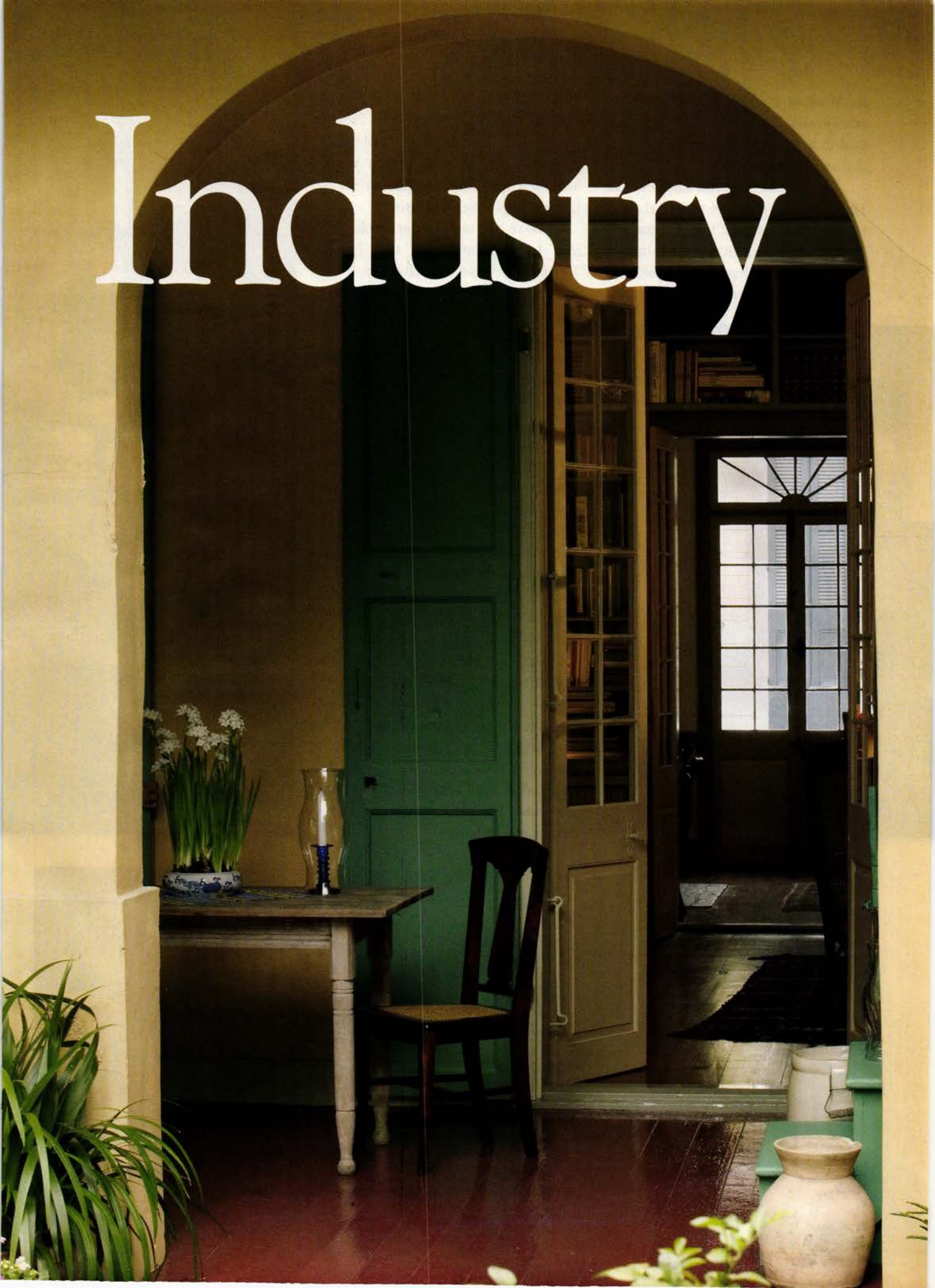


Above: The façade of the Masson cottage changes colors according to the daily humidity of New Orleans. Right: Archival materials, such as this 1931 photo, guided the restoration.



Above: Frank and Ann Masson have professional backgrounds that helped in their research. Right: The four rooms of the cottage flow into each other in a circle, with no hall.

Industry



the house as much like it had been as we possibly could," says Ann. Adds Frank: "My goal in a restoration is to do something that will fool an expert."

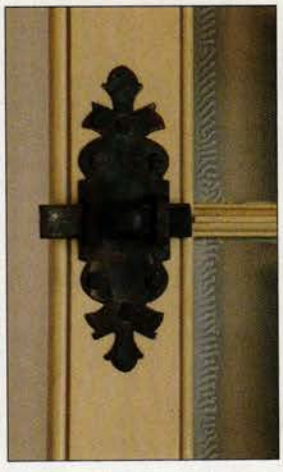
The popular postcard image of the French Quarter is one of multilevel, cast-iron galleries, red brick town houses, and 24-hour entertainment. But at the time of the Louisiana Purchase in 1803, the scale of urban housing in New Orleans was much more modest. Had President Thomas Jefferson visited the French Quarter—the city's French colonial settlement of 1718—its quiet streets would have been lined with smallish, one-storey Creole cottages like the Massons'.

"We've had to cram our whole lives into 1,600 square feet," says Frank. "Fortunately we've never lived in a big house." The floor plan of a Creole cottage—four small rooms arranged en suite, opening into one another without a hallway—is one of its characteristics, a legacy of French and Spanish building traditions that predate the arrival of the Anglican center hall.

Ann is a West Virginia native who had lived in Baltimore and Baton Rouge. Frank came from Illinois before they met as students at Tulane. When they decided it was time to buy a house, they wanted it to reflect their professions. "I don't know that we were looking specifically for a Creole cottage," Frank says. "We were interested in an early building that had never been renovated."

They got their wish. When they bought the cottage in 1980, it had been abandoned for nearly 30 years and was on the verge of collapse. Its ceiling was gone, it had dirt floors, and there were no back doors. Its priceless cypress mantels, French doors, and wrought iron had been plundered. Filled with rubble, the house never had plumbing.

French doors lead to a rear loggia, which offers a serene mealtime setting, as well as shady respite from the sweltering Louisiana sun.



In 1805, wrought iron was standard for hinges, doorknobs, latches, and other hardware. Frank designed these knobs and hinges in the spirit of the period.

Frank designed the bookshelves that dominate the entranceway to the library and sitting room. Furnishings include an 1860 rocking chair, an early 19th-century toile tray, and an 1810 rolled-steel French convent bed with checked linen.

Ann's background was, of course, an advantage, but so was New Orleans' particularly well-documented history, such as the archives at the Williams Research Center at the Historic New Orleans Collection at Tulane. She found out everything she could about the people who once lived in the cottage, including its builder, Jean-Louis Dolliole, a successful New Orleans "free-man-of-color." Ann came across an early estate inventory that boasted of a mahogany card table, a mahogany bedstead with four columns, a cherry-wood armoire, silver spoons and forks, as well as an eight-year old-slave girl, Anna, valued at $400. She turned up an archaeological survey of a nearby French Quarter home that had been built about the same time, and also engaged an archeologist to draw up an architectural report on the cottage.

While Ann was deep in historical research, Frank was analyzing the floor plan. He located its openings and measured door trims. He sifted for any piece of wood that might serve as a design signpost.

"He started documenting everything more like a historical archaeologist than an architect," Ann says. "He drew up every little scrap we could use to figure out how things looked, what went where."

For additional clues, Frank consulted old photographs taken in the 1930s by a local restoration architecture firm, along with images taken during the same time period by the Carnegie Survey of Southern Historic Architecture, on file at the Library of Congress.

In spite of the plundering the cottage endured over the years, he was able to salvage important materials, including a pair of the home's original French doors. "It was pretty easy for me to figure out what was here," he says. "We had door trims, we had doors, we had pieces of chair rail, the ceiling joists were still there, and we had five individual ceiling boards from the attic floor." Several pairs of the cottage's original exterior shutters had also sur-

A rear cabinet (pronounced "cabinay"), one of two small spaces at each end of a recessed rear gallery, is a distinctive feature of Creole cottages. A low-ceilinged attic provides some storage and sleeping space.

ALL HISTORIC PHOTOS SOUTHEASTERN ARCHITECTURAL ARCHIVE SPECIAL COLLECTIONS, TULANE UNIVERSITY LIBRARY

The cottage, shown here in 1931, still lacked indoor plumbing when the Massons bought it in 1980. Abandoned for 30 years, it was a prime candidate for demolition.

vived. Even scraps, such as old hinges and pieces of plaster, proved useful.

Putting it all together, Frank designed the home's mantels, doors, bookshelves, staircase, wrought-iron latches, and shutter hooks.

The palette of Creole colors—earth-based tones combined with stronger hues reminiscent of the Caribbean—was based on information about a structure built roughly at the same time, says Frank. "The colors in the house are not specifically known to be accurate to this house, but my office did a job from the year 1799 to 1800, and we had a professional paint archaeologist come in and a do a very detailed report that determined all of the original colors. There must have been 20 or more different shades used on baseboards, door trims, and door panels, and we coded these to the Munsell Color System, a scientific color analysis that allows for precise matching."

"The first archaeologist we worked with was absolutely certain the house had been a very early period dark red, with grey shutters and white trim," says Ann. "It was possible—that would not have been out of the way for 1805. Then a friend of ours visited and we did some more snooping and chipping around, and we determined that the very first coat was a greenish blue."

Most of the stucco on this house was lost or broken up, so Ann and Frank have had to make changes and work with it, but the colors are all circa 1800 colors. They just tried various color schemes over time.

The result is a triumph of color and detail that whispers of old Creole days—blue-green doors, green-grey risers, ochre-stuccoed walls, reds, creams, yellows.

Among the house's more spectacular elements are its walls, which appear to undulate and change colors. That's because moisture rising from the waterlogged delta ground creeps in, dries up, and stains the walls of the house, depositing salts as water evaporates.

It's a phenomenon rooted in nature, as well as design. The Massons avoided using a moisture barrier on those old, orange New Orleans bricks, simply because one wouldn't have been used in 1805. Instead, they applied soft mixes of plaster and stucco directly to the brick.

"My proudest stamp is that I don't have one here; I let the building tell me what to do," Frank says. "I was brought up with architects who weren't afraid to step out on the ice, but only after a lot of research and soul searching."

Ann says she's glad they were able to save the house from further collapse or demolition. "It's made me realize too that virtually anything can be saved if you're willing to invest the time, the money, and, of course, the energy."

***George Abry** lives in New Orleans and writes frequently on history, culture, and architecture.*

The cottage's original cypress mantels had disappeared, but thorough research on other French Quarter buildings of the same style and era allowed Frank to design new ones.

Historic STUCCO

Left: Project architect Doug Gilpin and Rich Baker of Tidewater Preservation discuss the extent of the failed stucco at Morven Park.

CHARLES STECK

CHARLES STECK

Like icing on a cake, a smooth coat of stucco adds a handsome finishing touch to a building's exterior. A relatively inexpensive cladding, stucco—a cementitious coating—has dressed mundane brick, fieldstone, and wood structures for centuries, giving them the appearance of wealth and stature. More important, stucco in good condition protects the building from the elements, but if it is not properly maintained, it can lead to problems. A visit to a complex project reveals the techniques, as well as some of the challenges, that a Virginia-based restoration firm faced when reviving this historic facade.

COURTESY OF TIDEWATER PRESERVATION

Left: Tidewater Preservation replaced Morven Park's failing stucco. Far left: Today the house museum resembles its 1903 appearance with its new cladding.

Restored

By Paul Kelsey Williams

A 250-year-old house in Leesburg, Virginia, receives a much needed facelift.

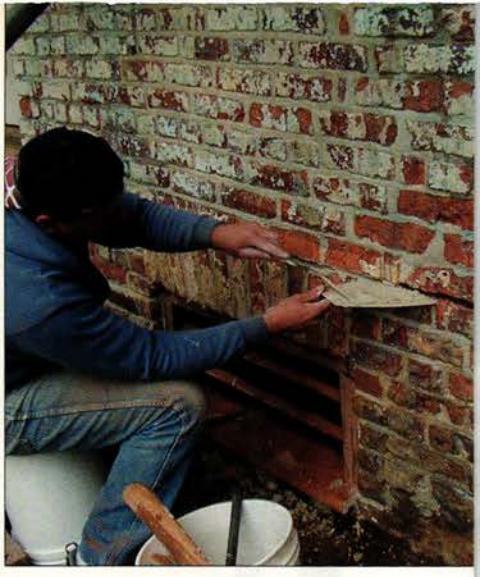
Home to two governors, Morven Park in Leesburg, Virginia, stands as a fascinating example of building accretion. It is composed of remodelings, additions, and expansions from different eras—even the bridging of different houses—all literally joined together over the past 250 years under an even covering of painted and patched stucco. The house evolved from a 1750 fieldstone farmhouse to its current turn-of-the-last-century mansion through seven ambitious building campaigns—one of which was undertaken in 1850 by Maryland Governor Thomas Swann, who added a series of four Italianate towers to an 1825 Greek Revival portico addition. Understandably, such a metamorphosis resulted in an almost constant maintenance of the stucco, which often failed at key joints where different building materials met, allowing water to infiltrate.

The crew removed the stucco using crowbars. Once the stucco was off, the underlying wood around doors and windows showed signs of rot and had to be replaced.

When the staff discovered that the stucco's bond to the subsurface was completely lost in places, they contracted Tidewater Preservation based in nearby Fredericksburg, Virginia, to remove the failing stucco and replicate a new finish similar to the period between 1903 and 1944 when Virginia Governor Westmoreland Davis resided in the house. One of many phases of the overall interior and exterior restoration, the stucco project had to be completed in one summer to avoid freezing mortar if temperatures dipped below 32 F.

Tidewater Preservation Founder and President Frederick Ecker II began the project by reviewing the research of Jana Riggle, a historic preservation graduate student, who had completed an intensive study on the mansion's many quirky additions and expansions. Her work offered the Tidewater Preservation team clues about the different materials they could expect to find under the stucco.

The 1903 lime-based stucco had been patched repeatedly with incompatible materials such as portland cement, which promotes cracking and spalling (flaking)



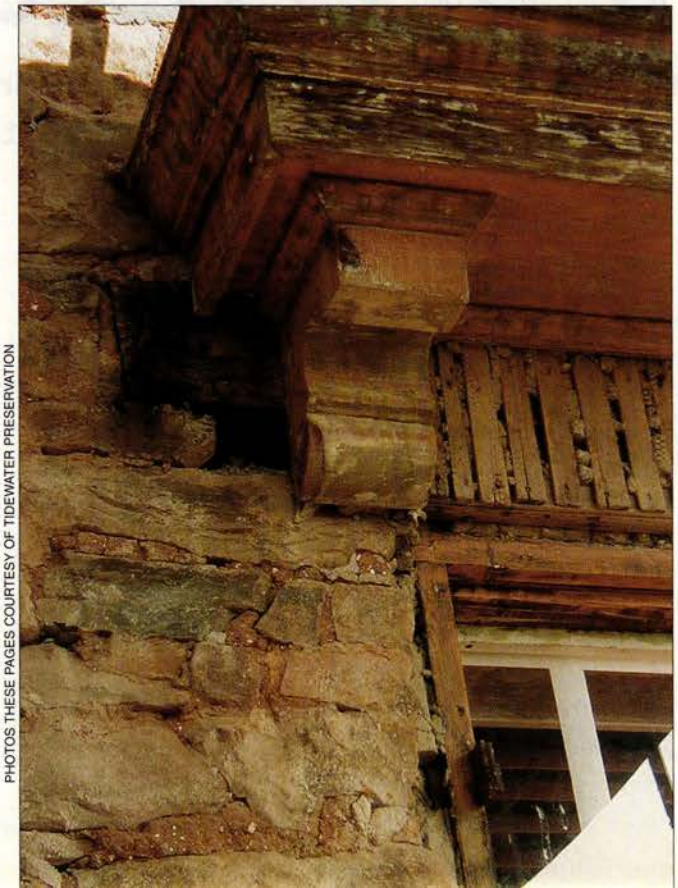
Before the crew could apply the stucco, all the subsurfaces were subject to restoration such as repointing brick.

"because it's a harder material than the original stucco," says Morven Park Executive Director Will O'Keefe. "In my 11 years as director, we had a cyclical patching and painting requirement every three to four years with a rapidly deteriorating surface that created numerous water leaks all throughout the mansion." These quick fixes failed to save the stucco, and the exterior repairs were scheduled first to prevent any further damage to the house's interior spaces.

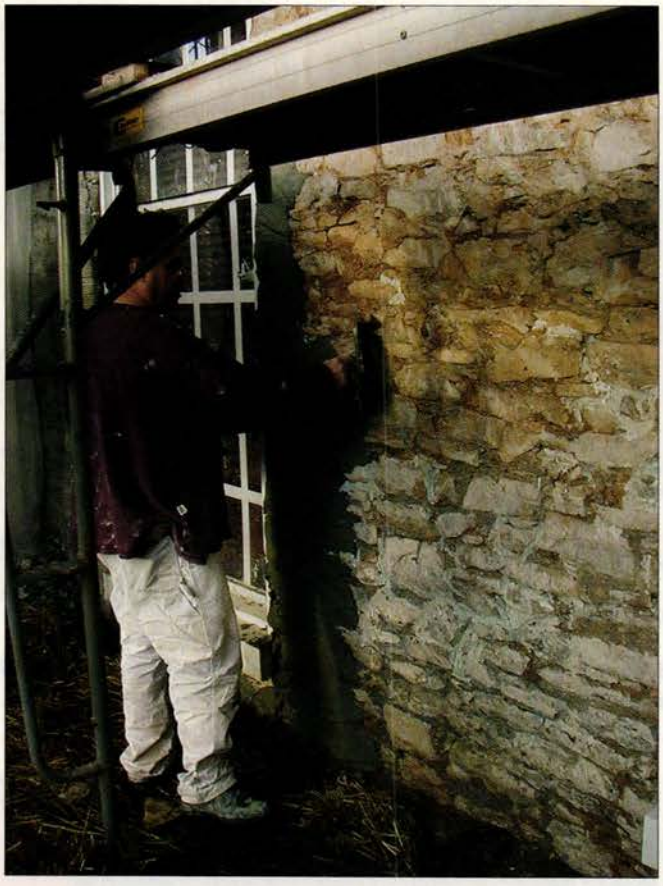
Under the Surface

Tidewater Preservation's first task on site was to determine what materials lay under the stucco. By boring a series of cores through the exterior, the crew found stucco supported by wood siding, wood sheathing, fieldstone, brick, and both chicken wire and galvanized wire mesh used as supporting lath. In some cases, entire sections of wood had rotted away—leaving only the stucco. "Built-in gutters on the mansion had failed repeatedly," says Ecker, "creating the perfect condition for wood rot between the exterior stucco and the interior plaster walls." Lab analysis of the core samples revealed that the 1903 stucco was lime-based and cream colored. They also discovered that more than 20 layers of paint covered the exterior walls.

While Tidewater Preservation installed scaffolding on the exterior, O'Keefe and his staff prepared the interior of the house, which they expected would be



PHOTOS THESE PAGES COURTESY OF TIDEWATER PRESERVATION



Workers applied the scratch coat directly onto large surfaces of brick and stone.

subject to moderate to heavy vibrations during the stucco removal. They stored away furniture, paintings, and small decorative items, and carefully supported crystal chandeliers and heavy plaster ceiling medallions with scaffolding.

Removal and Repair

The Tidewater crew began to remove the stucco in various areas by prying with small crowbars placed between the subsurface and the deepest layer of stucco, being careful to minimize damage to the underlying surface whether composed of wood, brick, or stone. Windows and doors had been removed as part of the overall restoration, and were replaced with plywood or Plexiglas to prevent damage. Before workers lowered large pieces of stucco to the ground, they first shielded portions of the façade and wood detailing with plywood to protect it from falling stucco. Stucco that had been applied over chicken wire proved to be the most difficult sections to remove, according to Ecker, because it necessitated cutting old wire while simultaneously removing portions of hard, heavy stucco, a process that often took two workers to perform in concert. Tidewater Preservation carted off tons of stucco that, fortunately, could be disposed of on the 1,200-acre heavily wooded property. (The discarded stucco will later be used as road bedding on the grounds.)

Once the crew had pried all the old stucco off the building—a methodical exercise that took several months—the underlying materials needed to be repaired. This meant repointing brick and stone, replacing rotten wood, and, in some cases, fabricating new wood supports in anticipation of the newly applied stucco.

Color Match

During the removal phase, Tidewater focused on matching the original color of the stucco by experimenting with local sands from a nearby quarry. By re-creating the original composition of cream-colored, lime-based stucco, the newly applied stucco would emulate the 1903 color of the house, eliminating the need for painting. The key to matching the stucco color, Ecker advises, is to use local sand, as would have been done 100 years ago. Similar to stone, sand color changes when quarried from different levels within the same quarry, so he suggests ordering enough sand all at once to complete the entire job.

The commercial sands on the mod-

Historical Facts

IN THE PAST STUCCO WAS MADE FROM FINE SAND TAKEN FROM RIVER BEDS. TODAY MOST STUCCO IS MADE FROM "MANUFACTURED" SAND THAT PRODUCES A MUCH LARGER GRAIN SIZE. THESE PHYSICAL AND VISUAL QUALITIES ARE VERY DIFFERENT AND THIS AFFECTS HOW THE STUCCO WORKS AS WELL AS THE WAY IT LOOKS.

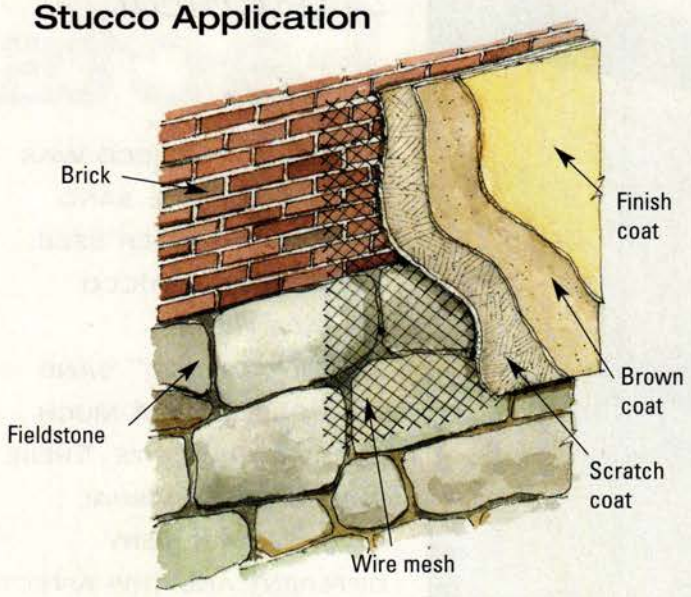
Tidewater's Stucco Recipe

Scratch Coat
Portland cement 1 part
Mason's lime (type S) 1 part
Sand 3 parts

Brown Coat
Portland cement 1 part
Mason's lime (type S) 1 part
Sand 4 parts

Finish Coat
Portland cement 1 part
Mason's lime (type S) 2 parts
Sand 5 1/2 parts

Stucco Application



Wire mesh is needed where different materials meet.

No wire mesh was required when the subsurface was one material.

ROB LEANNA

PHOTOS THESE PAGES COURTESY OF TIDEWATER PRESERVATION EXCEPT WHERE NOTED

Above: Where two different materials met, wire mesh was used as a base for the stucco. Right: One layer of stucco is raked to create a "key" or rough surface to hold the next.

ern market tend to be too "washed" to be a good match, Ecker says, because their individual grains are too large and because they don't have the color produced by natural sand's "fines." (The sand early masons used would have come from river beds, which still yield a much finer grain.) Tidewater sifted the sand mixture to separate these fine, cream-colored granules in order to create a smooth finish on the surface of the mansion. Most of today's stucco is artificially colored with tints that can vary from batch to batch. Stucco is also commonly composed of a premixed acrylic or latex base, neither of which is suitable for historic restoration as they tend to be far too inflexible for the soft building materials, such as lime, used in older construction.

Stucco Application

Tidewater applied galvanized mesh screening to several sections of the repaired subsurface of Morven Park, specifically on portions that included joints of different building materials—where a solid stone wall met a wood surface, for example. This screen covered any exterior wood siding or wood sheathing to

provide a solid base for the stucco. Large areas of brick or stone provided a sufficient base for trowelling the stucco directly onto these surfaces.

Tidewater mixed the lime-based stucco on site and, using steel floats (a flat masonry tool with a handle), troweled it on in three stages: a 3/8″ thick scratch coat that covers and evens out the subsurface; a 1/4″ thick "brown" coat; and finally, a 1/4″ thick top coat that serves as both the building's exterior surface and its final finish (see stucco recipe page 75). The scratch coat is raked or combed to provide a key (rough surface) for the brown coat. Each coat takes about 24 hours to set up before the next layer can be applied. Often an entire wall had to be stuccoed at one time to prevent discoloration of the final surface. Historically, a stucco job did not include expansion joints (which allow movement in the stucco), unlike new construction, which does. To maintain the historical look of the stucco, the team chose not to incorporate any such joints onto the building.

Melissa York, director of educational programs at the estate, made a concerted effort to keep Morven Park open to the public during its two-year restoration. She saw the project as an opportunity to educate visitors about how major maintenance and periodic care are just as critical to Morven Park as they should be for their homes. Tour guides and docents at the mansion received updates from the restoration crew on the progress of the stucco removal and reapplication and convey the inherent surprises and problems encountered along the way. Today Morven Park greets visitors with a creamy smooth, handsome cloak of stucco as inviting as icing on a cake.

Paul Kelsey Williams *is president of Kelsey & Associates, Architectural Historians, (202) 462-3389, washingtonhistory.com. Special thanks to* ***Tidewater Preservation****; see page 108 for contact information.*

When Stucco Fails

☛ Assess the damage. Is it spalling, bulging, or missing?

Unsound areas that have lost their key will echo when tapped gently with a wooden or acrylic hammer.

☛ Test the stucco to determine its composition.

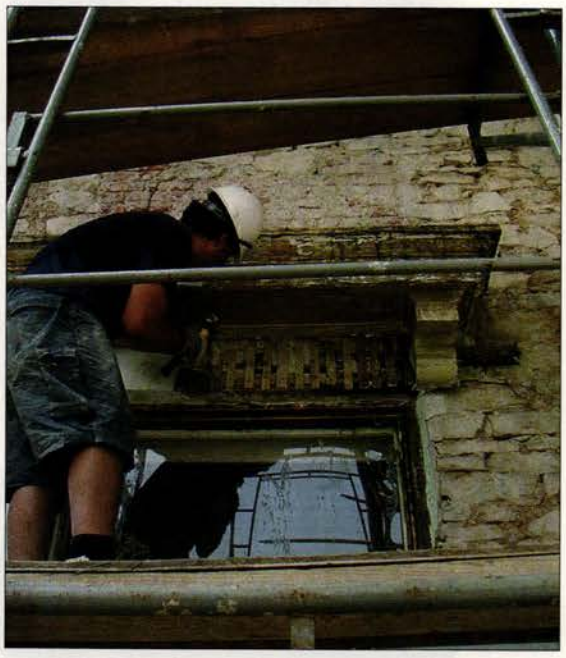
Hydrochloric acid will dissolve lime-based stucco, but not portland cement.

☛ Choose a stucco mix compatible with historic stucco.

Portland cement stucco is much harder than lime-rich stucco.

☛ Keep in mind durability, color, texture, and finish when replacing stucco.

—National Park Service Preservation Brief # 22



CHARLES STECK

Above: Stucco was removed carefully from this window hood. Right: Today this same window is picture-perfect after its final coat of stucco.

Green HOUSE

By Stephanie Vierra

Retrofitting a historic row house with environmentally friendly building materials.

PHOTOS CHARLES STECK EXCEPT WHERE NOTED

Homeowner Stephen Young and consultant Bambi Tran helped make a historic row house in Washington, D. C., more energy efficient.

TERRA GREEN TILES
Recycled materials are a large part of the green movement, so Young will incorporate decorative ceramic tile made from 58 percent recycled glass into the interiors.

When Stephen Young decided to rehab his 140-year-old row house in Washington, D.C.'s, historic district of Capitol Hill, his highest priority—along with maintaining the exterior's historic character—was to find ways to reduce its impact on the environment. Young at first decided to make just a few small improvements to the fully detached, 2,100-square-foot, three-storey building, such as caulking windows and doors, replacing the old roof, and insulating the

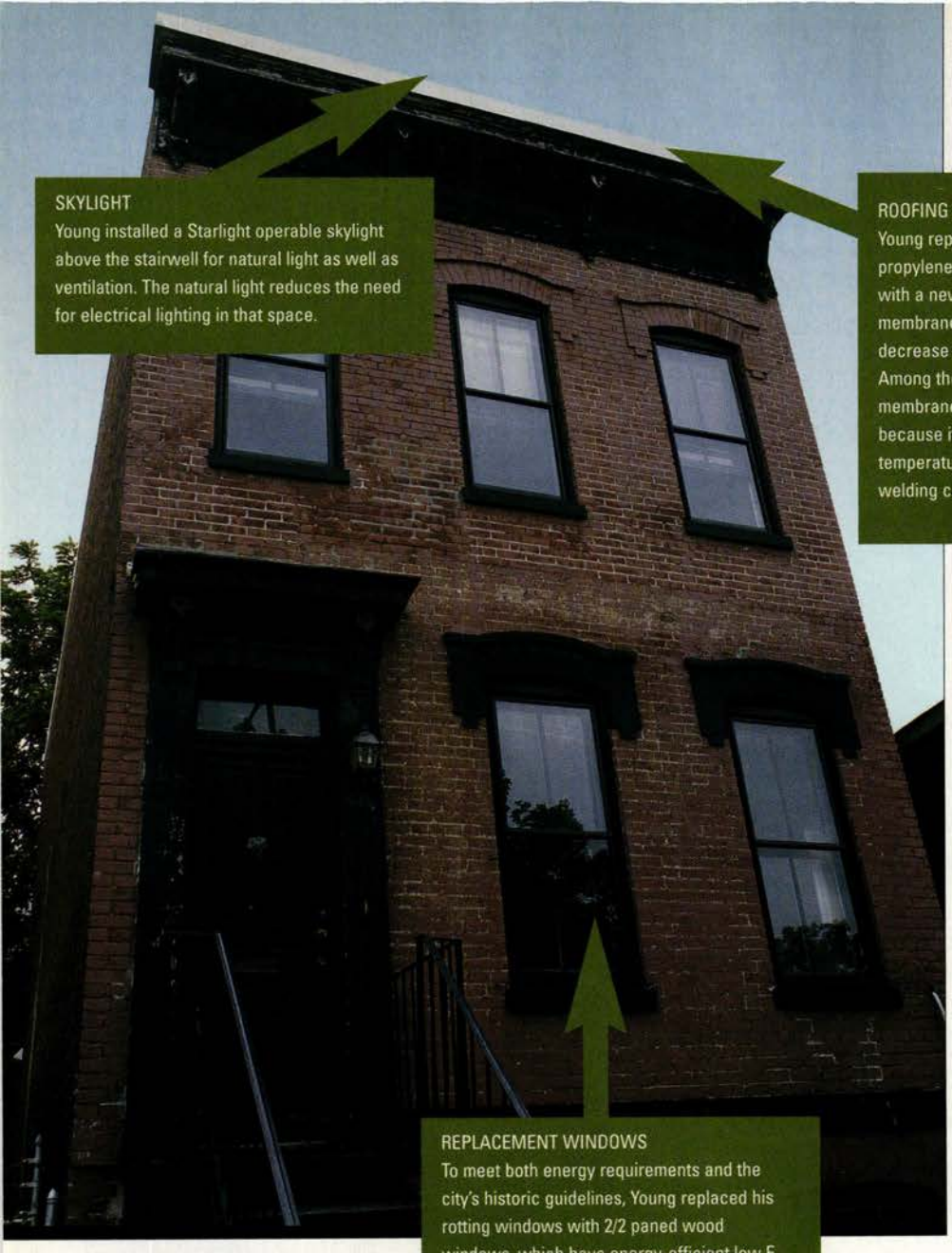
FLUORESCENT LIGHTING
A proven green product, fluorescent lighting has a life span that is ten times longer than and consumes one fifth of the electricity of incandescent light bulbs. Young incorporated compact fluorescent lights throughout the house, an even greater energy saver than traditional fluorescent lighting.

POLYISOCYANURATE INSULATION
Young will insulate his walls with this rigid "green" material that per inch of thickness has a higher R-value (thermal resistance) than batt or blown-in fiberglass, cellulose, and cotton insulation. This insulation is also more impervious to water and has higher bearing strength. All this makes it a cost-effective wall insulation choice.

CAULK
Conserving energy by keeping the cold out and the heat in can be big challenges in old houses. Young made sure to seal cracks and fill holes around walls and plumbing areas with a multipurpose caulking compound.

RADIANT FLOOR HEATING SYSTEM
Young chose a radiant floor heating system for his row house. Radiant heat warms objects near the floor (people and pets) as opposed to forced hot-air systems that warm the air, which tends to rise to the ceiling. Radiant floor heating eliminates issues associated with forced air systems, such as dust, drafts, noise problems, and unsightly duct chases and registers. Manufacturers also claim that radiant floor heating saves 20 to 40 percent on monthly heating bills.

SALVAGED FLOORS FINISHED WITH OSMO HARDWAX OIL
The row house's flooring will be salvaged and finished with OSMO Hardwax Oil, an engineered finish made from plant oils and waxes, and enough highly refined mineral spirits to allow easy application. This finish offers durability—resistance to cracking, blistering, and flaking—as well as renewability and a lustrous finish. Instead of forming a plastic film, as polyurethane does, OSMO Hardwax Oil has open pores that "breathe." This allows any moisture to escape without lifting off the finish.



SKYLIGHT
Young installed a Starlight operable skylight above the stairwell for natural light as well as ventilation. The natural light reduces the need for electrical lighting in that space.

ROOFING
Young replaced the row house's old ethylene propylene diene monomer (EPDM) roofing with a new thermoplastic polyolefin (TPO) membrane to reflect the sun's radiation and decrease the urban heat island effect. Among the other Energy Star-qualified roofing membrane products, Young selected TPO because it has the weathering and cold temperature flexibility of EPDM and heat-welding characteristics of PVC.

REPLACEMENT WINDOWS
To meet both energy requirements and the city's historic guidelines, Young replaced his rotting windows with 2/2 paned wood windows, which have energy-efficient low E, argon-filled glass.

Young's home sits in a Washington, D. C., historic district. Young needed to be sensitive to the city's historic preservation guidelines while making his home more energy efficient—and ultimately more green.

attic—all changes that would save hundreds of dollars on his energy bills.

As he began working on the project, however, he was compelled to do more. Young is among the growing number of older-home owners who are motivated to "go green," but can't readily determine what makes an old house green, or how to find good comparative information on materials and systems to make their decisions easier. Luckily, Young is a member of Green Home—a local nonprofit volunteer organization that promotes affordable, sustainable house design, construction, and landscape practices—which led him to expand the scope of the renovations. We'll learn what materials and technologies Young introduced to his home to make it green.

While Young was volunteering on a project for Green Home, he met Bambi Tran, a project manager with Steven Winter Associates (SWA), a leading architectural firm in green and sustainable building design. Tran and Young both believe in the need to make buildings more energy efficient, and Young knew that the best way to reduce his impact on the environment was to reduce the amount of resources that he consumes in his own home. Their shared philosophy led to a professional consulting relationship that gave Young access to the resources and professional expertise he needed to make his project successful. The connection also opened the door to a U.S. Department of Energy grant for SWA to provide design and technical assistance on rehabilitating and retrofitting the row house with green products. The project

1. Green Home volunteers cut polyisocyanurate wall insulation. 2. Energy-efficient fluorescent lighting was installed throughout the house. 3. Volunteers take up flooring to install radiant flooring. 4. A Starlight skylight floods the hall with natural light. 5. An air admittance valve for plumbing reduces the number of holes cut into the roof, making it easier to keep the roof well insulated. 6. A thermoplastic roof membrane keeps the roof from becoming a heat sink. 7. Safecoat caulking compound seals cracks. 8. Salvaged floors are finished with OSMO Hardwax Oil.


STEPHEN YOUNG
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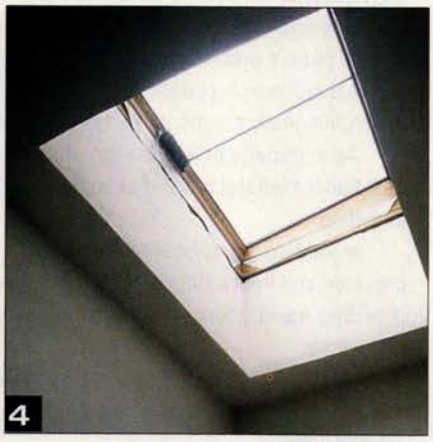
2


STEPHEN YOUNG
3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grew into an opportunity for others to learn by making it a joint effort between Green Home, SWA, and Young.

With a project budget of around $80,000, the retrofit materials are expected to save Young about $230 a month on electric and gas bills. The house will feature radiant floor heating, polyisocyanurate insulation on walls and under the new thermoplastic polyolefin membrane roofing, new bathroom fixture technologies, such as air admittance valves, ceramic tile with 58 percent recycled content, and the use of salvaged materials such as floors, doors, and bath fixtures.

Tran says adding insulation in the walls and attic will keep the heat in and the cold out. The heating system features radiant "PEX" pipes (which have the flexibility of a hose) installed under the flooring. Tran believes it increases comfort. Radiant heat is also a great way to maintain the look of historic interiors because the heat source "hides" under the floorboards.

Even though the house is not ideally oriented north and south for natural daylight to take advantage of passive heating and cooling, Young still made the choice to face the hot, humid summers of Washington without central air-conditioning. Instead he installed ceiling fans and two skylights—a fixed one in the remodeled bathroom and an operable one in the stairwell. The operable skylight permits natural ventilation, reduces the use of electrical lighting, and reduces unnecessary moisture intake in the house with a rain sensor that automatically closes the skylight. A simple, and often overlooked, passive cooling strat-

GO GEOTHERMAL

Longfellow House Case Study

Respecting the character of a historic home is a daily ritual for Jim Shea, director of the Longfellow House Museum in Cambridge, Massachusetts. Built in 1759, the Longfellow House is an elm-encircled, Georgian-style mansion that is the highlight of a colonial-era group of homes off Cambridge Common. Among the residents before Longfellow was George Washington, who stayed here for ten months in the mid-1770s and used the home as his headquarters during the Revolutionary War. It was occupied by Longfellow descendants until 1972. When Shea came on board as director, he immediately became concerned about the vulnerability of the collections and original furnishings within the house, as well as the 750,000 papers archived onsite. He discovered that there were no fire suppression systems despite the use of gas furnaces that could easily contribute to a serious fire.

As a property of the National Park Service, the house qualified for federal funding to support significant renovations including:

- Adding environmentally controlled museum storage to preserve and house fragile historic documents and artifacts, providing researchers with greatly enhanced access to collections.
- Installing new and upgraded building systems to significantly improve safety, fire protection, security, and the environment.

It was essential that the renovations not alter the architectural or historic character of the house. Additionally, the museum is situated in a densely settled area so standard chillers or condenser units, from a visual and acoustic perspective and because of their impact on surrounding properties, were not viable options. Shea worked with a team of historic architects, curators, and HVAC specialists to study alternatives and decided on replacing the gas-fired furnaces with several strategically located new geothermal heat pumps.

Geothermal heat pump (GHP) systems—also known as GeoExchange, ground-source, or water-source heat pumps—are available for both residential and commercial buildings. While residential GHP systems are usually more expensive to install than other heating and cooling systems, their greater efficiency means the investment can be recouped in two to ten years. GHP systems also offer aesthetic advantages, quiet operation, free or reduced-cost hot water, improved comfort, and other benefits.

Shea worked closely with Loomis Construction of Woburn, Massachusetts, to ensure that these new pumps would benefit visitors, staff, and collections, while remaining invisible. Historic ductwork from the late 1800s, often contained within closets, was cleaned and reused. Workers also installed custom sprinkler heads throughout the house so as not to be intrusive. For further information on the Longfellow House, see www.nps.gov/long.

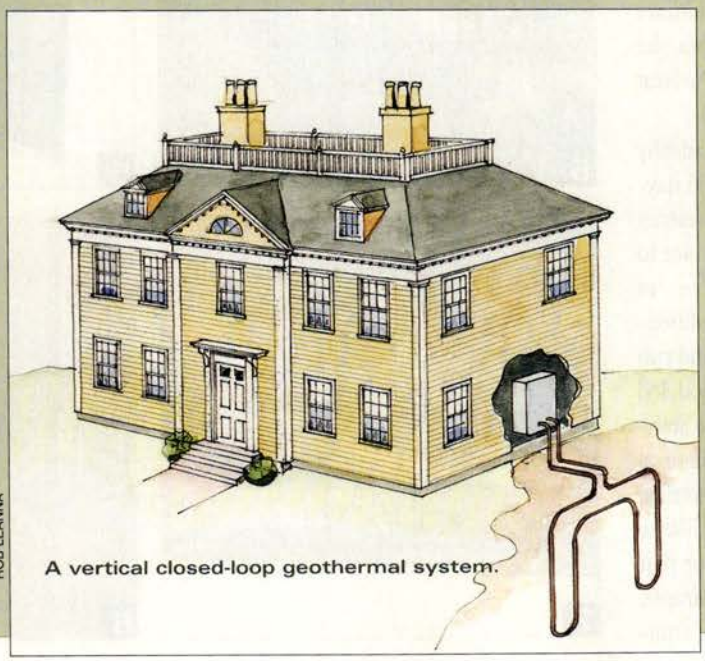
What is a Geothermal Heat Pump?

Geothermal heat pumps use the earth as a heat sink in the summer and a heat source in the winter. Through a system of underground (or underwater) pipes, they transfer heat from the warmer earth or water source to the building in the winter, and take the heat from the building in the summer and discharge it into the cooler ground. Therefore, GHPs don't create heat; they move it from one area to another.

A GHP works much like a refrigerator, with the addition of a few extra valves that allow heat-exchange fluid to follow two different paths: one for heating and one for cooling. The beauty of such a system is that it can be used for both heating and cooling—doing away with the need for separate furnace and air-conditioning systems—and for free hot-water heating during the summer months.

Hank Handler of Oak Grove Restoration Company in Laytonsville, Maryland, says one of the best systems for a residential property is the vertical closed-loop system. This system is appropriate for old houses that sit on small lots. Closed-loop systems circulate a water-based solution through a "loop" of small diameter—underground pipes that are buried 150' to 300' underground. He always incorporates a backup gas furnace or boiler in case the geothermal system is not supplying enough heat. "These systems are great for restoration of old houses," says Handler. "I'm a purist and don't like to see compressors and chillers on the exterior of an old house—with this system everything is under the ground or in the basement."

For more information on geothermal heat pumps, visit the U.S. Department of Energy's Energy Efficiency and Renewable Energy website at www.eere.energy.gov.



ROB LEANNA

A vertical closed-loop geothermal system.

DEFINING GREEN AND A FEW HOMEOWNER TIPS

When improving the green nature of an old house, it's important to think in holistic terms. According to the Sustainable Buildings Industry Council (SBIC), a nonprofit organization based in Washington, D.C., the areas most owners of old homes can easily address in a remodeling project include energy efficiency, efficient water use, indoor environmental quality, materials, and renewable energy. Home remodeling decisions are often made one by one. In a whole-building design approach, every decision is made in the context of others. For example, designing an airtight and well-insulated wall system, but not installing storms on old single-paned windows, is counterproductive. In a positive scenario, choosing to add storms may allow the air-conditioning system to be downsized, saving most of the added cost of storms. The net result is a more comfortable home that uses less energy and is therefore greener, at very little added cost.

SBIC promotes the core principles of low-energy design and the use of renewable (solar) energy whenever possible. It promotes the idea that energy should be regarded in the broadest of terms to include the concept of "embodied energy"—the amount of energy used to produce, deliver, and dispose of a product—and energy used during construction—including all those trips to and from the building supply store. Typically, a quarter of a home's energy is consumed by appliances (most notably the refrigerator, clothes dryer, and dishwasher), lighting loads, and "plug loads," such as TVs, computers, table lamps, and minor appliances.

Materials are more difficult to choose on a project if you are taking the three-pronged approach to sustainable design, which is to consider the economic, social, and environmental impacts of your restoration. More green and environmentally friendly products are available in the marketplace today, but it's important to compare them against each other to understand their benefits and impact on your project's aesthetics, budget, and green goals. Consider products that are recycled, recyclable or renewable, contain natural fibers, are considered low VOC, and are produced locally whenever possible. For more information see the list of resources below.

Consumer Guide to Energy Savings by the American Council for an Energy Efficient Economy provides excellent tips on conserving energy around the home, including tightening up your house, heating and cooling more efficiently, and lighting options.

Environmental Building News Product Catalog, a joint publication of E Build, Inc., and What's Working, provides environmental, cost, and availability information for over 70 building materials. An environmental overview of each major building material category starts each section of the catalog.

Green Building Resource Guide by Taunton Press lists over 600 building materials. Names and addresses of suppliers are provided, along with a brief description of products. The cost of green materials is compared to that of similar conventional products.

The Green Pages: The Contract Interior Designers' Guide to Environmentally Responsible Products and Materials listing of environmentally responsible building materials from 536 manufacturers includes information on flooring, furnishings, fabrics, paints, appliances, lighting, and more.

—Green Building Guidelines, Meeting the Demands for Low-Energy Resource Efficient Homes, 4th Edition

egy that Young is also building upon is the use of operable transoms over doors, found in many old houses. To maximize the effect of the operable ones, he has altered fixed ones to open and close. (Fire codes many differ on this practice from city to city).

Young is most proud of his decision to recycle many of the building materials within the house that would be difficult, if not impossible, to replace today, such as the sturdy 2x4 studs. He's also salvaging the majority of the varied-width pine floorboards and relaying them after coating them with an environmentally friendly hard oil wax finish that he found in Germany.

Unfortunately, Young's windows were in disrepair and had to be replaced. Since the house is located on historic Independence Avenue, Young needed to follow the city's guidelines for the preservation of historic buildings, which requires that the parts of the building facing the street must maintain the home's original character. So to meet both his energy requirements and the historic guidelines, he chose all-wood windows, with integral 2/2 panes, a look compatible with other homes on the historic block. The windows are Low E, argon-filled glass.

The house is quickly becoming a living classroom, and it is also Green Home's first rehab demonstration project. The work teams break for lunch each day to introduce the technologies being incorporated into the rehab, and then they open up a session for questions and discussion.

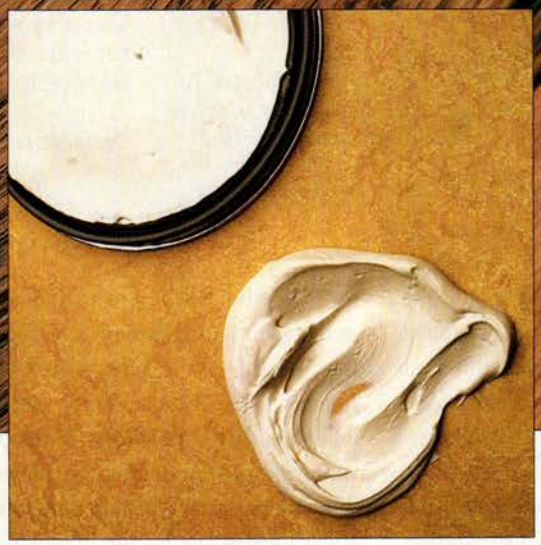
"Stick to your beliefs and goals, and don't throw the old stuff away," Young advises anyone attempting to "green" an old house. "Educate yourself and others involved with the project," and there will be an even greater benefit to the health of the planet.

Stephanie Vierra *of Stephen Winter Associates is a technical editor for the* Whole Building Design Guide, *www.wbdg.com.*

For a list of SUPPLIERS, see page 108.

Evergreen

One of the best ways to "go green" is to recycle materials. Salvaged wood flooring is a perfect example of re-using existing materials. Shown here are a variety of Carlisle's salvaged flooring samples in hickory and pine.



Forbo's Marmoleum is an environmentally-friendly material and so is its adhesive. Forbo makes a mastic that contains no solvents and no VOCs.

A popular flooring choice for Modernist architects in the 1930s, cork comes from the bark of cork oak. Harvesting schedules in Portugal and Spain are set by law to ensure that trees have nine years to heal.

Developed in 1863, linoleum was the choice flooring for kitchens and baths in the early 20th century. Today this material is gaining popularity once again for its durability as well as for its reputation as a green product. All natural, linoleum is made from linseed oil and powdered wood.

IDEAS

By Jacob Arndt
Photos By Charles Steck

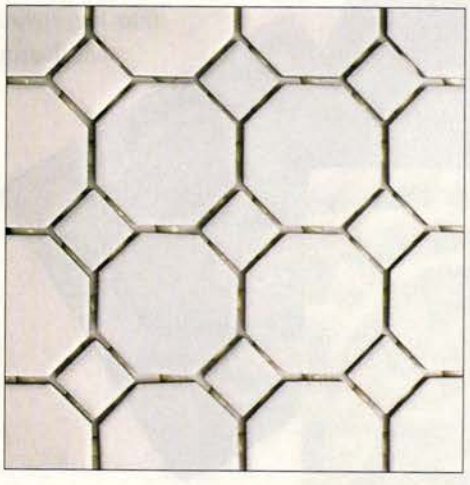
When it comes to Earth-friendly building, old houses and traditional materials are a natural fit—and often already there.

Recently, some friends gained a new sensitivity to environmental safety and concern for energy consumption in the course of dealing with some serious family health issues. Their not-that-old house had been poorly engineered for air flow and moisture control, creating the perfect conditions for the buildup of hazardous compounds. After they tore up subfloors and attic spaces, then installed air exchangers for proper ventilation at great expense, their family illness abruptly stopped. Since the house was partially dismantled anyway, they decided to investigate the potential for other health issues while they were putting it back together. Fortunately, their search for solutions was aided by building materials suppliers who, in response to the growing awareness of environmental issues, are responding with an increasing number of products that are less toxic and more energy efficient.

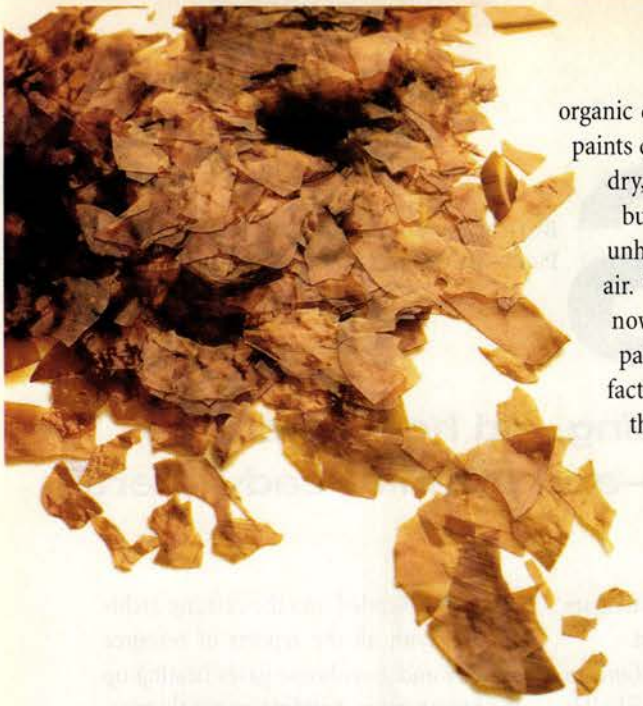
What was once a marginal (and to some eyes suspect) category of the building materials market—green products—has mushroomed into the mainstream over the last 15 years. Many of these alternative products, however, can be used in historic restoration projects without sacrificing period design or character—especially because many of them are already traditional or natural in composition. Since the maintenance and fixed monthly expenses associated with these sustainable materials are often lower than conventional materials, they are ideal for use in historic buildings, where long-term savings are most dramatic, and where many of the products are employed behind walls, under floors, or otherwise blended into the existing architecture. With all the reports of resource scarcity and greenhouse gases heating up the planet, green building materials present a future of not only lower building costs, but also savings. We need not be reminded of the expense of abating a house with flaking lead paint or leaking underground storage tanks to understand why.

Prime Candidates

Paints and coatings, for example, rank high among the green building products to watch. Coating solvents like benzene, toluene, and xylene can cause dizziness, skin rash, and nausea, as well affect environmental air quality because they are VOCs (volatile



Another flooring material inherent to old house bathrooms is ceramic tile. These hex tiles from Dal-Tile comply with the EPA's toxicity characteristic leachate procedure (TCLP). All glazes are water-based and no solvents are used, eliminating the potential for emissions of VOCs.



A natural resin, shellac also proves to be a strong green contender. Produced from the excretions of the lac beetle, shellac is nontoxic and has been used historically for refinishing interior wood details.

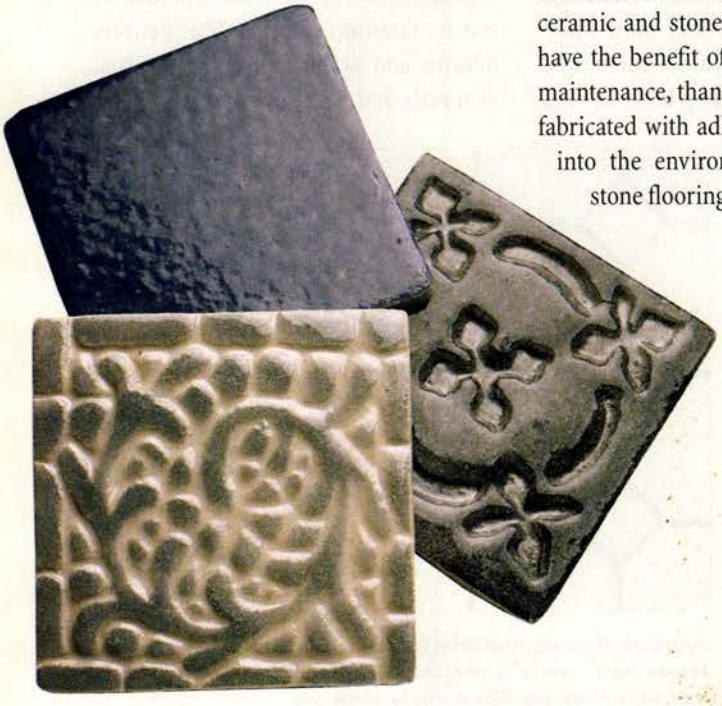
organic compounds). Since solvent-based paints can off-gas for a long time as they dry, when trapped in a tightly sealed building they can contribute to an unhealthy cocktail of chemicals in the air. There are many manufacturers now producing low- or non-VOC paints, and the mainstream manufacturers are well represented among them.

Another alternative to toxic paints is the use of historic pigments in the final plaster coat. Mixing natural pigments in gauged lime plaster skim-coat provides that deep color and mottled effect so sought after in landmark interiors. For example, Ivory Finish Lime combined with gauging plaster produces a surface that is highly durable, nontoxic, and historically appropriate.

Materials that require the least amount of energy to produce tend to have lower environmental emissions, in addition to costing less. Kitchen and bath areas are worth a critical eye in this regard. For surfaces, from floors to countertops, ceramic and stone tiles or other products have the benefit of a longer life, with less maintenance, than man-made composites fabricated with adhesives that can off-gas into the environment. (Ceramics and stone flooring are also an ideal match if you are thinking of installing radiant heating systems because they help transmit energy when the system is on and continue to provide comfort after it's off.) Floors made from recycled wood capitalize on the energy already invested in their growth and manufacture, while avoiding the issues of glues and binders. Energy efficient appliances are a discussion all on their own, but it's worth noting here that tankless water heaters, which provide instant hot water without constantly maintaining the temperature of many gallons, can reduce the energy consumption in kitchens and baths and are widely used in Europe.

Trowel Trades to the Fore

Masonry materials, especially, carry little toxic load. In Europe, for example, plaster over structural terra cotta is used almost exclusively for interior walls and is an inexpensive, long-lasting, nontoxic alternative to painted drywall over wood or steel studs. Structural clay masonry units are easy to install, and the plaster is applied directly to the ribbed surface of the block. This system, with its superior sound-dampening characteristics, significantly reduces annoying noise transmission from the outside and room to room. In historic houses, reclaimed brick and stone serve the same function and can also



Terra Green Products makes decorative tiles using 58 percent recycled glass.

Custom color your old house interiors with these dry paint pigments added to environmentally friendly, water-based paint or plaster.

For a list of SUPPLIERS, see page 108.

be superior in look and performance.

There is even a processed cement insulation product on the market for residential and commercial use that compares favorably with other insulating materials (see suppliers). As an air-entrained, mortarlike material, it is fireproof and free of CFCs and formaldehyde and has a high R-value and excellent soundproofing characteristics.

Within the generally Earth-friendly realm of masonry, some of the more traditional and natural materials are being appreciated for their greener characteristics. Natural hydraulic lime (NHL), for example, is the professionals' choice for restoration work and is increasingly common in new construction as well. It is used just like portland cement as the cementing agent added, in powder form, to sand for mortars, plasters, or stucco mixes. As a natural, nontoxic product, it ranks with stone, clay, and sand.

One indicator of natural lime mortar's green, nontoxic character is its life-cycle assessment in terms of CO^2 emissions per cubic yard as compared with portland cement. On a residential, three-coat stucco application using NHL, you save 8,500 pounds of CO^2 emission compared to portland cement. Similarly, NHL uses only three kilowatts per cubic yard of mortar to manufacture, versus 30 kilowatts for processed cement.

Natural hydraulic lime actually absorbs CO^2 as it cures and matures, and it also "breathes." This breathing characteristic of lime allows moisture to escape, and with it the molds and rot that plague hard cements, resulting in a material with a longevity measured in several generations. In fact, lime plasters and mortars are so natural that their disposal is actually beneficial to the environment. As calcium carbonate, the lime can be used as an amendment in an acidic garden soil.

The green building concept seems the ideal companion to the historic restoration market, combining the use and re-use of traditional materials—already the preferred preservation methodology—with innovative, energy-efficient, and nontoxic newcomers.

While the claims by materials suppliers can be confusing, making it difficult to sort out the marginal products from the ones with real value, one criterion seems to work well. There were few toxic additives in building materials before the 1920s, when most old houses were built, so replacing or altering original materials in-kind seems to be a safe rule of thumb. On the other hand, the energy-saving green mechanical and nontoxic insulations have the benefit of saving money and reducing the general environmental impact, both in the home and in a broader context—outside where air and water quality are everyone's concerns.

Jacob Arndt *teaches historic preservation trades in Normandy, France, when he is not operating Northwestern Masonry & Stone (527 Mulberry St., Lake Mills, WI 53551).*

Water-based wood stains, such as this one from Minwax, have lower VOCs than oil-based stains. To meet the "green" standards, paints and stains must have a VOC rating of 50 grams per liter or less.

The Environmental Home Center's cotton insulation, made from recycled denim scraps, is itch free and easy to install.

This raw umber pure oil color from Janovic Plaza contains no lead or mercury.

You Say Italian,

A Romantic style based on Renaissance models evolved

By James C. Massey and Shirley Maxwell

By the middle of the 19th century, the United States was fed up and spoiling for a fight. Not a fistfight or a gun duel, mind you, though with trouble brewing in Texas and the West to be won, there would be plenty of action to come along those lines. No, Americans were set to take on an architectural battle—the so-called "Battle of Styles."

That's how early Victorians, caught up in the aesthetics of the Romantic era, described the impassioned debate over the single "best" way of building in a still-damp-behind-the-ears republic that was rapidly expanding its boundaries. Americans wanted buildings that were substantial, dignified, and historically evocative, yet fresh and freewheeling. They needed buildings suited to life in a rapidly industrializing nation—in other words, buildings that were slightly exotic but essentially American.

The architectural experiments of the 1840s to '60s sowed the seeds of what would become a full-blown revolution in building styles after the Civil War. In the 1840s, though, Americans only knew they were bored with the flat-faced, rigidly symmetrical buildings of the Federal period. New stylistic influences were beginning to shape their approach to architecture. Chief among these were the assertive Greek Revival and the two most evocative Romantic styles: the picturesque Gothic and the adaptable Italian. Each of these styles had its champions—and many architects of the period were accomplished in all three—but in the end the Italian

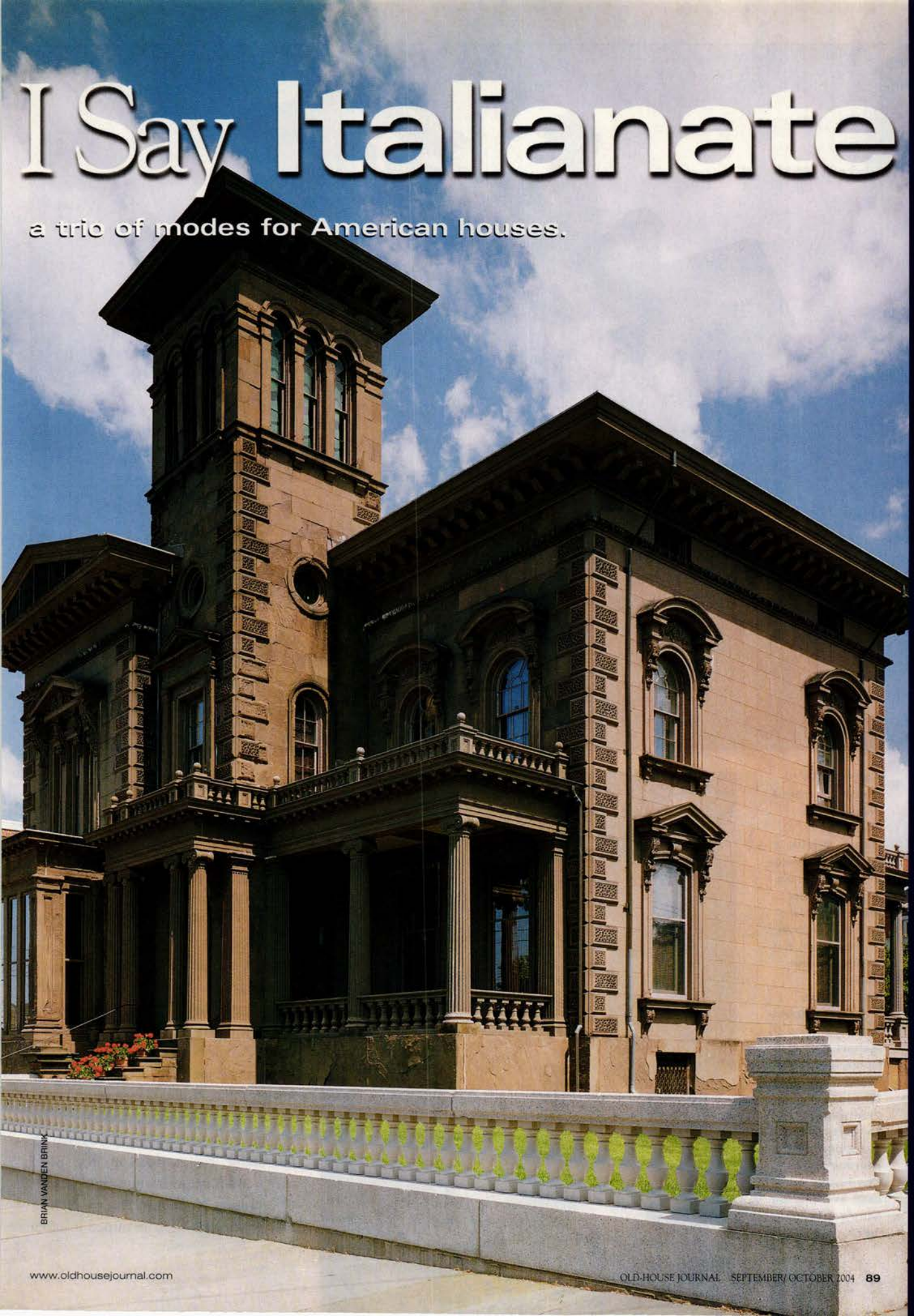
The 1859 Morse-Libby House, now an Italian villa museum in Portland, Maine, was designed by Henry Austin, one of the style's leading architects. A textbook example of the style, it features asymmetrical massing, the ubiquitous tower, and wide eaves.

JAMES C. MASSEY

Marine Villa, in Newport, Rhode Island, is a formal and stylish 1852 Italianate by architect Calvert Vaux and is well-known as Design 30 in his important 1857 book, *Villas and Cottages*.

I Say Italianate

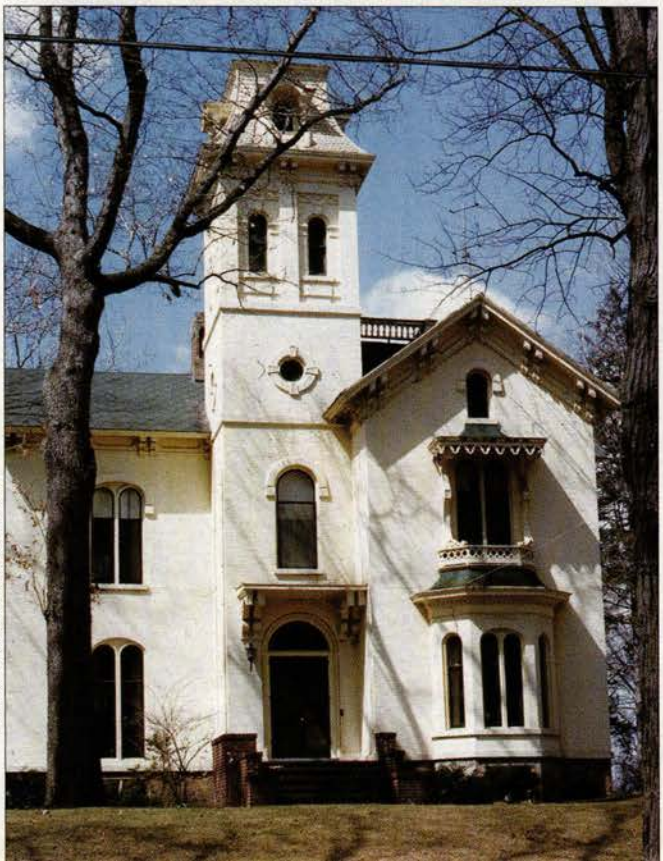
a trio of modes for American houses.



BRIAN VANDEN BRINK

Above: This Southern frame villa in Fernandina Beach, Florida, has key features of the style: an asymmetrical plan, arcaded porch, tall tower, and multiple bay windows and balconies. The George Fairbanks House was designed by Robert S. Schuyler in 1885. Right: The 60-foot tall "campanile" of the Cronin House is topped with a mansard roof. The house was built in Marshall, Minnesota, in 1873.

PHOTOS THIS PAGE JAMES C. MASSEY



held a special appeal for houses, just as the Gothic did for churches.

Paradigms from the Peninsula

It was almost certainly the adaptability of the Italian style (or in its less academically inspired forms, Italianate) that carried the day. Based loosely on the buildings of the Italian Renaissance—that is, the 15th and 16th centuries—it could be used for almost any type of house, be it a large suburban villa, a bracketed farm cottage, or an elegant town house. It could be as formal, informal, symmetrical, picturesquely "irregular," grand, or modest as the situation demanded.

Early on, there was a tendency to see the Italian style as simply a variation on the Gothic. For example, in 1832 when author Washington Irving remodeled his 17th-century farmhouse, Sunnyside, near Tarrytown, New York, he turned it into a

COURTESY OF THE [illegible] COUNTY HISTORICAL SOCIETY

Romantic mélange of Gothic, Italian, and Dutch Colonial features. Gradually, however, the Gothic and Italian styles were differentiated from each other as each was interpreted to fit American building tastes.

The popularity of both the Italian and the Gothic styles was advanced by publications such as Andrew Jackson Downing's *The Architecture of Country Houses* (1850). Downing was a tireless advocate of country living (healthier, happier, and more moral, he insisted), as well as houses specifically designed to enhance family life. His book contained illustrations and plans of houses designed by an up-and-coming New York State architect, Alexander Jackson Davis, whose attachment to the Romantic styles was as intense as Downing's. Although *Country Houses* spoke approvingly of both Gothic and Italianate designs, as well as a hybrid the author called the "bracketed style," it was the Italianate that ultimately captured the hearts of the majority of the building public.

Downing focused on relatively humble rural and suburban residences, but there were actually at least three general categories of Italian houses in the United States: the villa (for country and suburban residences, particularly big ones); the Italian or Renaissance Revival (mostly for urban residences); and the Italianate (usually for smaller houses, often those that were vernacular in design).

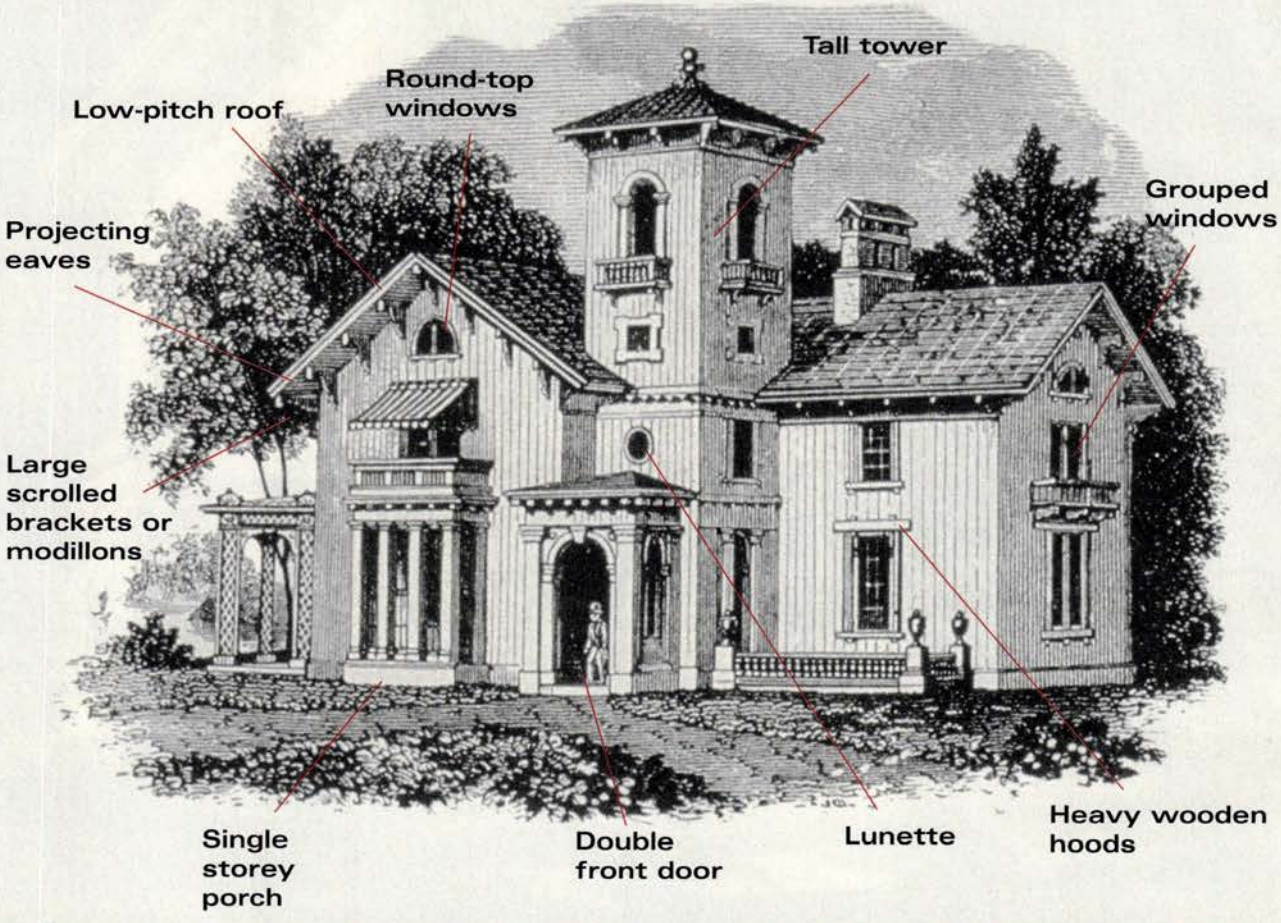
Based loosely on country houses of Tuscany, the Italian villa (sometimes called the Tuscan villa) offered an elegant but relatively relaxed formality. Romantic without being cloying, practical without being dogmatic, the villa was neither as unyieldingly symmetrical as the Greek Revival, nor as pointedly quaint as the Gothic Revival. Built of stone, brick, or frame, the villa had a cube-shaped or rectangular main block, but it was far from boxlike. Rather than being laid out as a series of rooms opening off a single central or side hall, it had an attractive tendency to sprawl a bit—even to pinwheel—in a dignified way. Ells or wings accommodated bedrooms and service functions while nudging the house toward fashionably "irregular" lines.

The design of the Lincoln-Tallman House (1855-1857) in Janesville, Wisconsin, may have come from a planbook by Samuel Sloan. Deep, bracketed eaves, prominent window hoods, and elaborate porches are characteristic of high-style Italianate villas.

The hipped, gabled, or mansard roofs and broad, flat, bracketed eaves of the villa made a strong stylistic statement. Adding to the effect were square cupolas (also called belvederes or observatories) with

Villa Vocabulary

Asymmetrical houses embellished with classical features



their own bracketed eaves and round-arch windows. Projecting from the roof, they brought light and ventilation to interior spaces. Equally elaborate dormers helped to light the attic storeys.

Surely the most striking feature of the villa, however, is the square, tall campanile, or bell tower, usually located beside the main entrance. Although it was most often set into the angle of an ell, the campanile sometimes appeared front-and-center on the main facade.

Italian-style houses featured round-arch-headed windows with arched hoods or labels (hoods or ornamental mouldings that extend partway down the sides of the opening). Houses of this period typically had double-hung windows, often used in pairs or triples, and larger panes of glass, a trend that looked toward the 1/1 window

JAMES C. MASSEY

The classic lines of the 1864 William Angell House in Providence, Rhode Island's, College Hill recall the forms of the Italian Renaissance. The architect was Alpheus Morse.

This plain, symmetrical upstate New York Italianate house in Unadilla illustrates how the style's popularity extended to small towns as well as prosperous cities and from coast to coast. Note the square cupola on top.

JAMES C. MASEY

COURTESY OF THE ROCK COUNTY HISTORICAL SOCIETY

Like many houses of the 1850s, Italian and otherwise, the parlor of the Lincoln-Tallman House features an arched, Italianate fireplace mantel.

that would become standard in the Victorian period. Many Italian houses sported small, round attic windows with wreathlike trim in cast iron, a popular new material that was cheaper than the carved stone that might have been used in earlier years. The front door was always a prominent feature of the Italian façade. Paneled double doors with round-arch panels were frequently set into arched door openings.

Porches large and small were ubiquitous in Italian-style houses. Beyond being merely useful, they added to the picturesque nature of the building, and there could hardly be too many of them. Generally, these were squared-off or rectangular, not the curving wraparounds that would come into their own in the 1890s. Balconies with heavy wooden, stone, or fancy cast-iron balustrades were

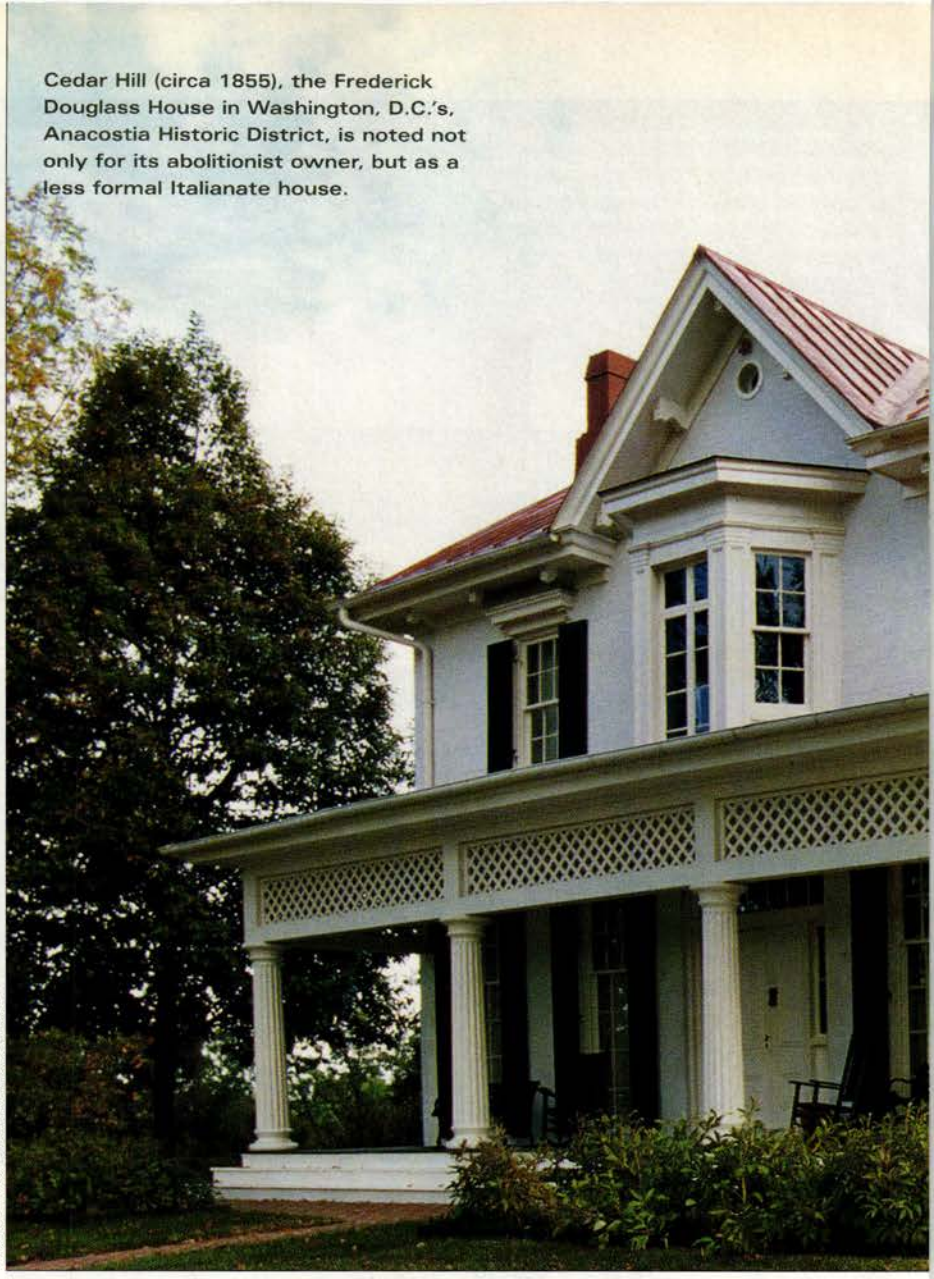
fashionable. Elaborate, heavy, cast-iron handrails and stairs marked front stoops and porches.

Italianate houses, being the vernacular form, were simpler and smaller than villas. They ranged in complexity from simple cubes and rectangles to more elaborate ell-shaped houses with a one- or two-storey wing containing bedrooms and, perhaps, a kitchen. Roofs were gabled on rectangular houses or hipped on cubes, with bracketed eaves and possibly a cupola. The occasional octagonal house, a type popularized by Orson Squire Fowler's 1854 book *A Home for All or The Gravel Wall and Octagon Mode of Building*, were almost universally Italianate in style.

A Sophisticated Style with Exurban Versions

Italian Renaissance-style buildings were formal and sophisticated city dwellings. Decorative details, such as arched and paneled doors, arched windows, and cast-iron stoops, brought distinction to entire blocks of narrow rowhouses. Smooth, brownstone ashlar walls, often with corner quoins, were widely used and much admired. The formal brownstone or brick facades presented a nice contrast to judiciously applied Italianate ornamentation and sustained the popularity of the Italianate row house into the 1870s.

Freestanding city houses in this Renaissance style were built less often, but they included some of the best efforts by the era's most prominent architects. John Notman of Philadelphia was an early practitioner of the Italian style. His villa for Bishop Doane, called Riverside, in Burlington, New Jersey, was finished in 1839. Richard Upjohn's 1845 design for King Villa in Newport, Rhode Island, is considered one of the finest of all the villas, and it helped to establish Newport as the nation's premier summer resort. Henry Austin's Morse House (now Morse-Libby, also known as Victoria Mansion) in Portland, Maine (1859), may be the best known of all the villas. Samuel Sloan is noted for Woodland Terrace, an entire row of Italian villas constructed in 1861 in what was then suburban west Philadelphia. A spectacular example of the Renaissance inspiration is the grand Hay House in Macon, Georgia, by P. Thomas (1860).

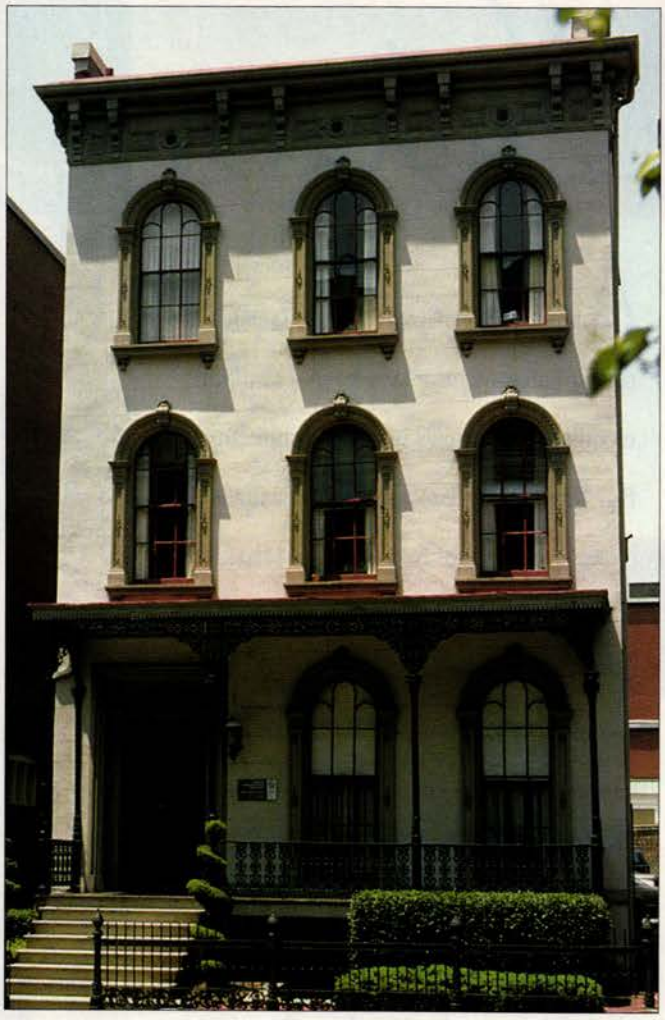


Cedar Hill (circa 1855), the Frederick Douglass House in Washington, D.C.'s, Anacostia Historic District, is noted not only for its abolitionist owner, but as a less formal Italianate house.

PHOTOS THESE PAGES JAMES C. MASSEY

On a popular level, the designs of Alexander Jackson Davis and Calvert Vaux, which became widely known through Downing's and Vaux's books, as well as other volumes, such as Gervase Wheeler's *Rural Homes* (1851), were often adapted to smaller houses. Even the high-style design for Beechwood, one of Newport's early summer mansions, was published in Vaux's *Villas and Cottages* (1857).

Technology was fast changing in these mid-century decades. Municipal water systems were commonplace now, and piped-in water altered the way houses functioned. Indoor plumbing led to indoor bathrooms with flush toilets—although many people still harbored doubts about the sanitary aspects of these devices, not to mention their aesthetics. Warmed bath water could be delivered straight to an upstairs bathtub from a boiler attached to the kitchen range. Kitchen sinks with hot and cold running water (even drains!), along with built-in cast-iron ranges, revolutionized housekeeping. Central heating systems also came into their own during this period, slowly ending dependence on drafty fireplaces. The fireplaces that remained were now more likely to contain coal grates and heating stoves



This fine Richmond, Virginia, example of an Italian-style townhouse, built in 1859, was designed by E. Marshall and occupied by Stephen Putney. The superb cast ironwork is by Phoenix Ironworks of Richmond.

than open wood fires.

The Italian styles were a truly national phenomenon, found in every region of the country and at all income levels. In addition to the high-style examples, vernacular Italianate farmhouses dotted the American countryside. These ubiquitous Italianate cubes and bracketed I-houses were often based on popular planbooks.

Following the Civil War, interest in the Italianate style persisted, but it was tempered by an onslaught of new styles, especially the Second Empire (or Mansard) and Queen Anne. By the 1880s, after a grand 40-year run, the Italian era was over at last—and the search was on for the next "best" way of building in America.

Following the precepts of Orson Squire Fowler, octagonal houses sprouted across the country in the mid-1850s. Most are of Italianate design, like the McElroy House of 1857 in San Francisco.

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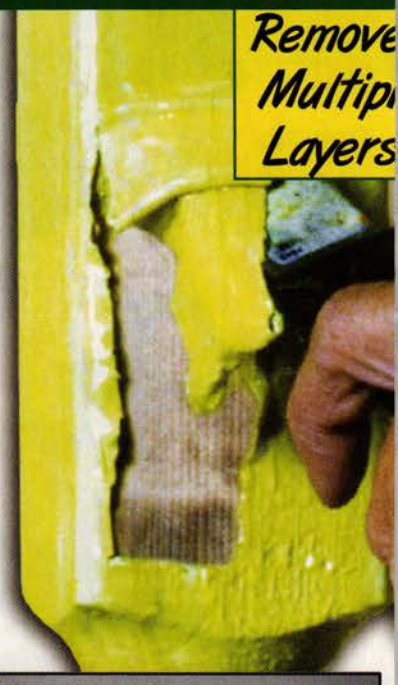

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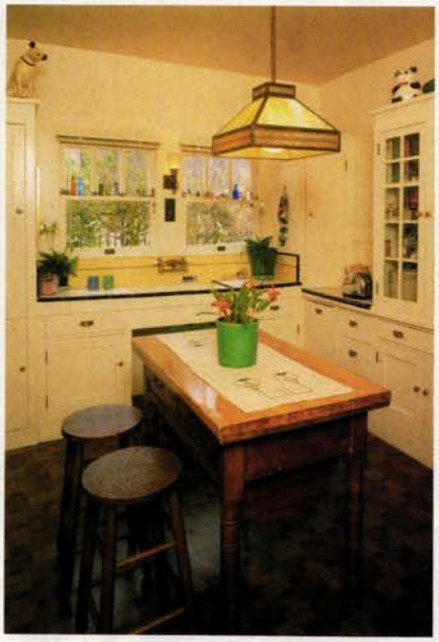

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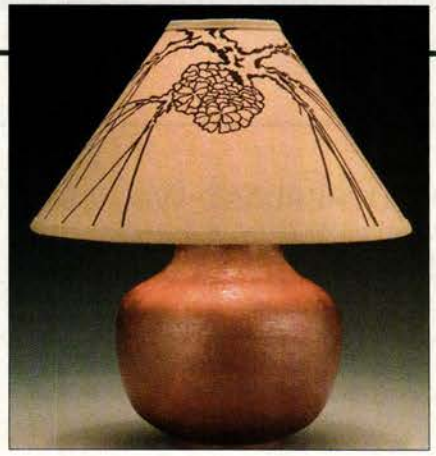

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PRG Preservation Resource Group
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Wood Care Systems
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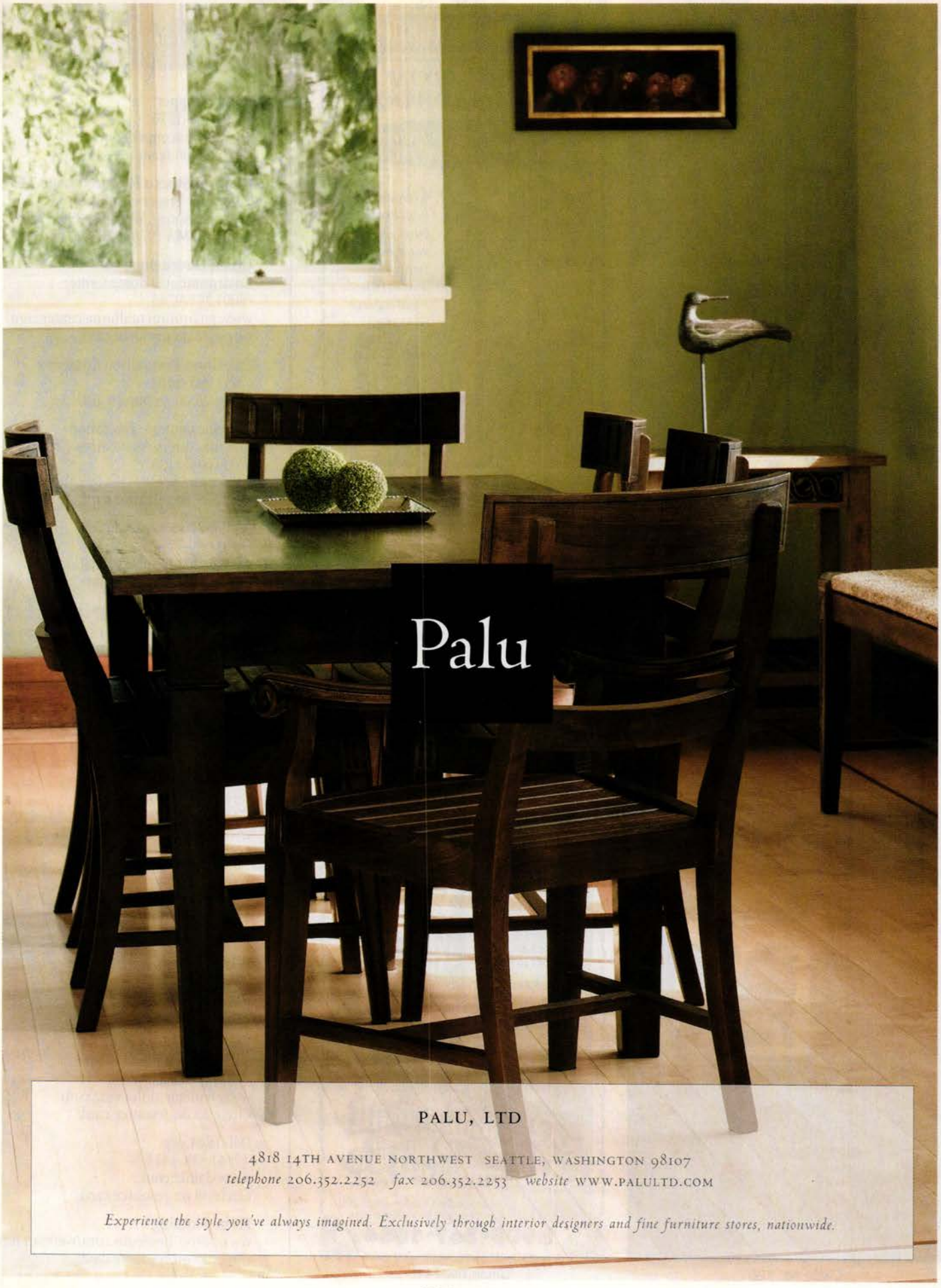

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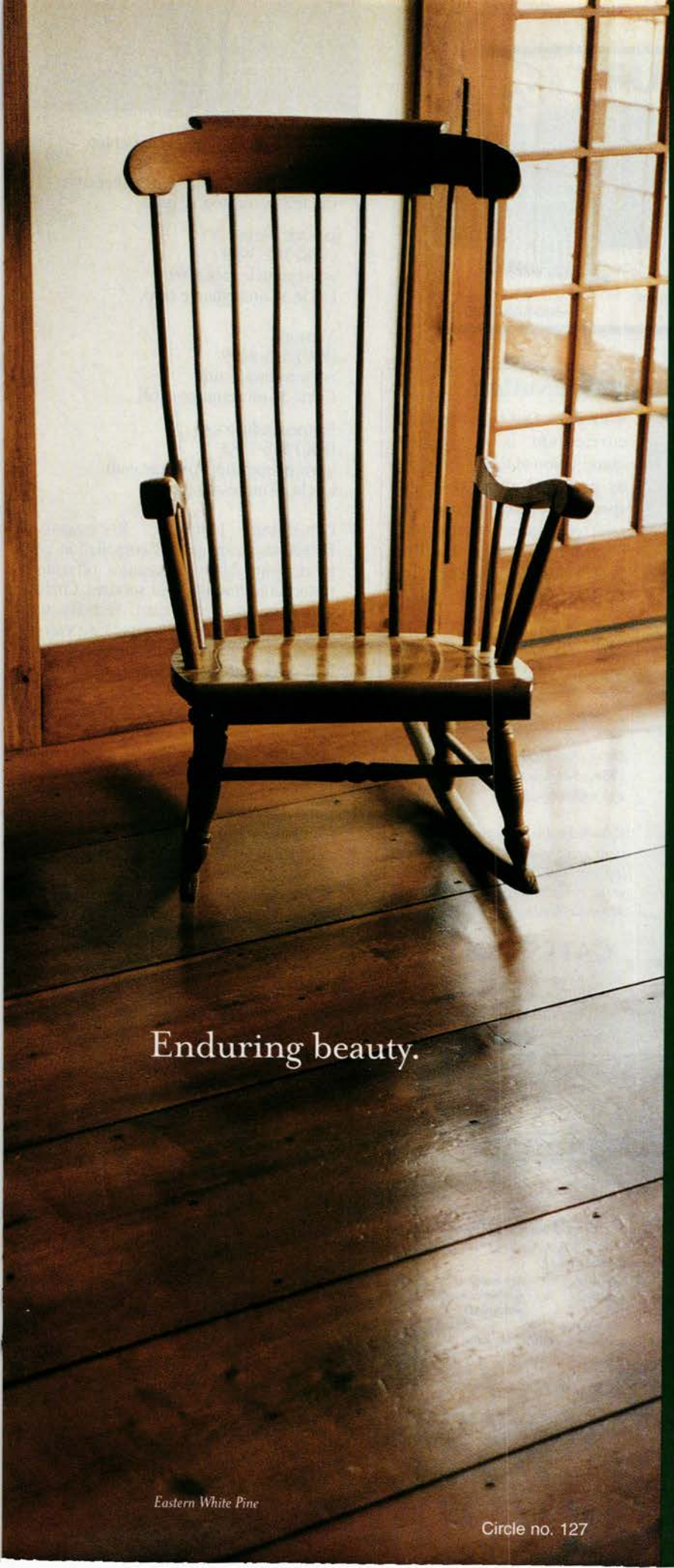

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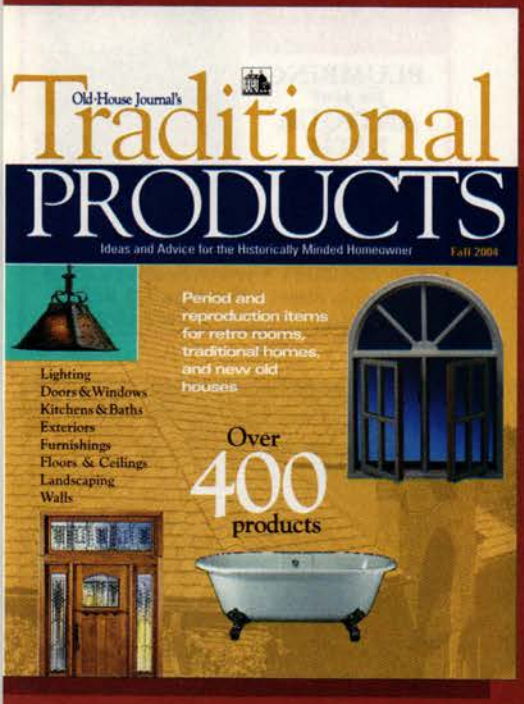

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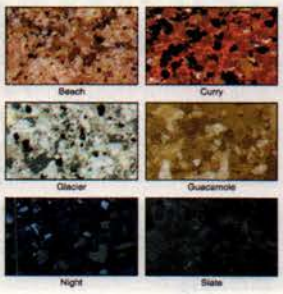

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SPOTLIGHT PROPERTY

WASHINGTON, DC—Cathedral Park Condominium was built in the roaring 1920s by renowned developer Harry Wardman, a transplanted Englishman whose architectural credits include the British Embassy, the Hay-Adams Hotel and numerous luxury apartment houses in the nation's capital. Now available is a 1 Bedroom boasting 831 sq. ft.! It's an entertainer's dream! Located across from the National Zoo! Three blocks to Metro! Walking distance to shops/restaurants! $319,900. **Joseph Himali, Principal Broker, Best Address™ Real Estate, LLC,** (202) 669-4656. Preview photos & floor plan: www.BestAddress.com.

SPOTLIGHT HOUSE

HAGERSTOWN, MD—Rare historic property now available on one of Hagerstown's most prestigious streets. Recently restored to perfection; this home has it all! Buyer need only to move into this 7000+ sq. ft. mansion w/ 6+Bedrooms and 41/2 Bathrooms. Gourmet kitchen, private courtyard, large family room w/ beamed ceilings & 10 fireplaces are only some of the many features. Must see to believe. Call Cynthia for a tour! $899,500 WA4722452. **Cynthia Moler**, (301) 988-5115, **Coldwell Banker Residential Brokerage,** Hagerstown, MD 21740

SPOTLIGHT HOUSE

MARINE CITY, MI—"The Heather House", a beautifully restored Queen Anne Victorian, circa 1885. 6 bedrooms with private bathrooms & porches. Large living areas. Many unique features include: stained glass, original oak woodwork, curved staircase, elevator, remodeled kitchen with double Viking stove & walk in refrigerator. Second floor laundry, All home A.C., great views of St. Clair River & Canada with freighter and pleasure boat traffic. Lovely perennial gardens with sprinkler system from river. 3rd floor suitable for expansion $899.000. Owners: 810-765-3567

FAIRHAVEN VILLAGE, MA—This circa 1891 Victorian was built by Standard-Oil founder Henry H. Rogers on his estate at Fort Phoenix. Still surrounded by stone walls, it has 4 bedrooms, 1.5 baths, living room, formal dining room, parlor w/corner fireplace, recent kitchen, oak floors, in-ground pool, 2-car garage and finished basement. Walk to ocean, bike-path, eateries & shops. $689,000. Olde Dartmouth Realty. 508.996.6562; www.oldedartmouth.com.

PADANARAM VILLAGE, SOUTH DARTMOUTH, MA—*The Captain Snow House,* Circa 1810. This better than new Federal antique has 3000 square feet of living space, 4 bedrooms, 3 full baths, 4 fireplaces, pine plank floors and a half acre corner lot with 2-car carriage house. Huge charming kitchen and master suite. Central air. Walk to marina. $699,000. Olde Dartmouth Realty. 508.996.6562; www.oldedartmouth.com.

WEST FALMOUTH, MA—Family compound in historic district near beaches. Updated sea captain's home (1849) offers expansive ocean views. 8 room main house w/formal parlor, dining room w/fireplace, eat-in kitchen, family room, 3 full baths, 3 bedrooms, unfinished wing for 1st floor master bedroom suite. 2 1/4 acres. Furnished guest cottage. Permits and drawings for 3 bedroom carriage house. $1,900,000. John Weyand, owner/broker, 508-245-1908.

ELLICOTT CITY, MD—"Historical Highlight!" Finest in historic home restoration & improvement! "Quaker Meeting House," this stone cottage will be a showcase home! Exposed stone walls, 2-storey stone fireplace, rustic hardwoods, main level master, gourmet kitchen, new baths, finished 2nd level w/rustic hardwoods, carriage house garage w/studio & gorgeous acre + lot - what a site! $1,085,000. Coldwell Banker Residential Brokerage, Kimberly Kepnes 410-480-3550 or 443-250-4241

ELLICOTT CITY, MD—"Chateau de Angelo" Unique French castle in historic Ellicott City! Circa 1830, European chateau features: gorgeous 1-acre setting, detached 2-car garage, gated entry & perfect updated historic contemporary! Dare to compare the architecture & recent renovations including rich hardwood flooring, 10′ ceilings, 2′ window wells, updated kitchen, baths & home systems. $899,000. Coldwell Banker Residential Brokerage, Kimberly Kepnes 410-480-3550 or 443-250-4241.

ST. JOSEPH, MO—Tudor Revival circa 1925. National Register district. Radiates charm. Fabulous woodwork, unique stained glass "storybook" windows. 3,500+ sq. ft., 3 bedrooms, fireplaces in living room and library. Sunroom has French doors opening onto large front porch. 1 1/2 storey carriage house/ garage w/original panel doors. Built by general manager of Wyeth Hardware. $215,000. Kathy Bahner at Reece & Nichols, Ide Capital Realty. 816-351-4514; www.kathybahner.reeceandnichols.com.

HENDERSON, NC—Robards-Royster House. Historic estate offers 7+/- acres bordering private cove on Kerr Lake. 4,706 sq. ft. residence features 1850s Italianate bracketing, marbleizing, & decorative painting. Completely renovated w/modern kitchen, baths and zoned HVAC. Great room w/stone fireplace overlooks landscaped setting and pool. $579,000. MLS# 744842. Diane Lea, Prudential Carolinas Realty, Historic and Conservation Properties. 919-967-8742; www.dianelea.com

POMPTON PLAINS, NJ—Historic De Bow property comprises a 1790s homestead, tennis court, carriage house w/studio apartment, and 5-stall barn. Handsome 5 bedroom house w/two identical wings and 3 porches has 10′ ceilings on first floor and wide-plank wood floors throughout. There are 2 fireplaces and newly renovated kitchen. Zoning permits 12-14 horses on the 16-acre property. $2,300,000
Sandra "Sandi" Browning, Sales Associate
800-575-0952.
www.ColdwellBankerMoves.com

SPOTLIGHT HOUSE

VICKSBURG, MS—The Baer House. $599,000. Restored Victorian w/Italianate influence. Listed on National Register. Features 6,300 sq. ft., new 3-car garage, 5 bedrooms, 2 bedroom suites, 7 1/2 baths, wood floors, restored porches, solid brick construction, 8 fireplaces w/gas logs, elevator, beautifully fenced and landscaped yard and so much more. Located in Historic Downtown—would serve well as a Bed & Breakfast or personal residence. View this and other historic properties on BrokerSouthGMAC.com. **Pam Beard at BrokerSouth GMAC Real Estate,** 888-447-8791 or 601-397-4505.

SOUTH ORANGE, NJ—Located in Historic Montrose Park District. Circa 1869 shingle-style home will steal your heart. Articulated by side gable roof w/multi-level cross gables and gabled dormer. Situated on beautiful landscaped grounds. Grand foyer stretches from front to back w/elegant formal living and dining rooms. 5,500+ sq.ft. Absolutely gorgeous historic home just 25 min. from NYC. $1,125,000 Burgdorff ERA Realtors 973-378-8300 www.Burgdorff.com

COOPERSTOWN, NY—Victorian on 37 acres w/ "Eric Sloan" barn! Circa 1890, 2,700 sq. ft., 11 rooms, 6 bedrooms, 1 1/2 baths, parlor fireplace, grained woodwork, and crested tower! Outstanding setting w/abundant trees and large lawn. Post and beam bank barn w/stables, drive-in floor above and cupola. Leatherstocking Realty, "The Old House People" Rod Johnson, Broker. Roseboom, NY 13450.
607-547-9595. www.leatherstocking.net

WAVERLY, NY—Italianate Victorian. 1858 brick home, 4,400 sq. ft., 5 bedrooms, 2 full & 2 half baths, 3 fireplaces, basement w/woodworking shop & more. In-ground pool, cabana, 2-car garage. Guest house/rental. Great NY location on 4 1/2 landscaped acres. $310,000.
United Country - 800-999-1020, Ext 108.
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WICKFORD, RI—Historic center chimney colonial circa 1785 with a lovely view of Wickford Harbor. There are 10 rooms, including 3 bedrooms, formal dining, and authentic details such as 5 fireplaces, wide-boards, moldings and more. Located within a short walk to shops, marinas, and schools. Offered at $749,500. Moore Properties 401.295.1708;
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MARION, SC—Victorian beauty. 100+ year old SC home is located in historic district just 48 miles from Myrtle Beach! Boasts 3,351 sq. ft., 4-5 bedrooms, 4 baths, 3 kitchens, possibility of 3 separate entrances, fenced yard & more. Possible B&B. $164,500.
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AUSTIN, TX—Woodburn House, circa 1909, city landmark; National Register of Historic Places. Exquisite restoration with 6 bedrooms, 6.5 baths, including two large master suites. Located in Hyde Park National Register District, a pleasant walkable neighborhood in Central Austin. $995,000 - Lin Team, Old Austin Realtor
512-472-1930 lteam@austin.rr.com.
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SPOTLIGHT HOUSE

PORT WASHINGTON, NY—1903 Front Porch Victorian. Beautiful stained glass windows, beamed ceilings, columns, moldings. Updated in the true Victorian style w/modern comforts of today. Stunning etched glass doors, oak fireplace and dramatic formal dining room w/original coke glass windows and Gothic Cathedral Skylight. Den and sunny eat-in-kitchen. Perfect setting for entertaining. Only 35 minutes by train to Manhattan and walking distance to town, beach and mooring. Don't miss this one of a kind Victorian treasure. $1,195,000. **Donna Weissberg, LAB Coldwell Banker** 516-767-1872 x244

SPOTLIGHT HOUSE

CUMBERLAND COUNTY, VA—"West Hill", circa 1807 home, over 550 acres with one mile frontage on the Appomattox River. Main house has 3 bedrooms, 4 bathrooms, central air, nearly 4,000 sq. ft. living space with 11′5″ ceilings, English basement, 7 nonworking fireplaces, 9-over-6 pane windows. Guest house with 3 bedrooms. Artist's studio. Located near the future equestrian center of Southern VA. $3,300,000. Floor plans & photos for Home #3780 at: www.davenport-realty.com. For color brochure, 888-333-3972. **United Country Davenport Realty**, Keysville, Virginia.

BOWLING GREEN, VA—"Dorsey House" circa 1830/1850. Original Federal and later Greek Revival portions of house have all appropriate mantels & woodwork still intact. Oak & heart of pine floors, plaster walls, 6 fireplaces, carport are all on 1 acre lot with additional .25 acre lot available ($40,000). Boxwoods. Quiet neighborhood. $249,000. Dave Johnston "The Old House Man"® 804-633-7123 or AntiqueProperties.com

BURKEVILLE, VA—5,000 sq. ft. Victorian on 7 acres in the Village. Grand foyer w/double parlors, formal dining room, fireplaces w/grand mantels. Gourmet kitchen. 1st floor bedroom. Hardwood floors. Grand hall, master & 3 bedrooms upstairs. 2 rooms on 3rd floor expandable for B & B. HVAC. Several outbuildings. 1.5 acre lot across the street included. $299,000 Max Sempowski - Antique Properties 434-391-4855 www.oldhouseproperties.com

CHARLOTTE COUNTY, VA—Circa 1934 home on 11 acres with huge oaks. Possible B&B. Over 2000 sq. ft. with 4 bedrooms. Porches and living areas on the first floor with the bedrooms upstairs. Unfinished attic with staircase. Separate large office and storage building. $193,000. Floor plans & photos for Home #3700 at: www.davenport-realty.com. For color brochure, 888-333-3972 (24-hours). United Country Davenport Realty, Keysville, Virginia.

Classifieds

HILLSBOROUGH, NC—Exclusive .98 acre residential building site on King Street in Historic Hillsborough, NC. Deeds and history to 1700s. $600,000. Trish Koontz, Distinctive Properties, 919-906-1790. Trish@trishkoontz.com.

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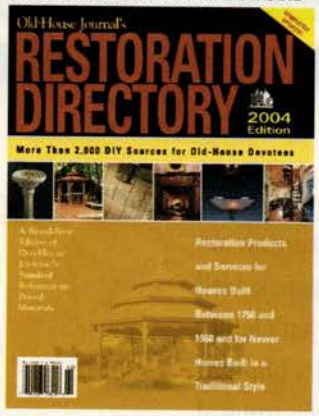

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Whenever It Rains

Pennies from heaven unfortunately have never been a result of restoring an old house, but it looks like this circa 1900 Queen Anne in Portland, Oregon, is well prepared for the elements with various roofs and awnings shading what's left of the original windows. The bumbershoot up front looks a bit like a boudoir lampshade, or perhaps one of the paper parasols that might come in a tropical cocktail. And as we all know, they don't add a thing to the quality of the rum.

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