The 5" and 6" Bosch random orbit sanders take the guesswork out of getting a precision surface finish. Their unique dual-bearing pad mount system eliminates wobble and vibration. And the Bosch-pioneered pad dampening system controls speed to provide uniform finishing.

For additional accuracy, there's variable speed and electronic feedback circuitry which can be adjusted to any material for constant OPM—even under load.

Plus features like soft-grip tops, ergonomically designed handles and through-the-pad dust extraction bring comfort to the job.

For consistently superior surface finishing, the Bosch random orbit sanders are precisely what you need.

Ironically, its random action is amazingly consistent.

The 5" and 6" Bosch random orbit sanders take the guesswork out of getting a precision surface finish. Their unique dual-bearing pad mount system eliminates wobble and vibration. And the Bosch-pioneered pad dampening system controls speed to provide uniform finishing.

For additional accuracy, there's variable speed and electronic feedback circuitry which can be adjusted to any material for constant OPM—even under load.

Plus features like soft-grip tops, ergonomically designed handles and through-the-pad dust extraction bring comfort to the job.

For consistently superior surface finishing, the Bosch random orbit sanders are precisely what you need.

Ironically, its random action is amazingly consistent.
TAKE ANY 3 BOOKS FOR ONLY $1.99 EACH

WHEN YOU JOIN THE ARCHITECTS & DESIGNERS BOOK SERVICE

Values to $100.00

You simply agree to buy three more books—at significant savings—within the next 12 months.

Publishers' prices shown

32671 $19.95 American House Styles
36975 $29.95 The Bungalow
39839 $29.95 A Complex Fate
53408 $19.95 Home Office Design
58490 $25.00 Lighting Style
56297 $45.95 Kevin McCloud
53293-2 $50.00 Historical Building Construction
48677-2 $45.00 Frank Lloyd Wright: Design for America
34227-2 $40.00 Architecture of the Shakers
65224 $16.95 Old House Dictionary
66115 $55.00 The Old House Journal: Guide to Restoration
66310 $36.95 Ornamental Ironwork
69995 $55.00 Preserving Historic New England
69978 $19.95 Preserving Porches
74301-2 $37.95 Romance of the Mission
84918-2 $15.00 20th Century Building Materials
84984 $50.00 Invented Cities
87564 $27.90 Pacific Island
87563 $27.90 London Minimum
78488 $29.99 Small Space Living Design

MEMBERSHIP BENEFITS: In addition to getting 3 books for only $1.99 each when you join, you keep saving substantially with discounts of up to 50% off the publishers' prices on books you choose to purchase. Also, with your first purchase, you'll earn Bonus Credits you can use to save even more. When you qualify as a Preferred Member, you'll earn double Bonus Credits and enjoy other special benefits. Moreover, our books are always identical to the publishers' editions. You'll never receive an "economy edition" with inferior paper and bindings from us. At 3-4 week intervals (15 times per year), you will receive the latest in home improvement and design ideas, as well as offers of Special Selections which will be made available to a group of select members. If you want the Main Selection, do nothing, and it will be sent to you automatically. If you prefer another selection, or no book at all, simply indicate your choice on the card and return it by the date specified. You will have at least 10 days to decide. If, because of late mail delivery of the News, you should receive a book you do not want, we guarantee return postage.

YOUR
NEIGHBORHOOD STORE
FOR
CLASSIC HARDWARE

Now you can choose from the world's finest collection of arts & crafts hardware without leaving your home. Our craftsman line of hardware offers authentic bungalow reproductions, hand crafted with exceptional quality and detail. The all new 404 page 1996 Crown City Collection catalog features the Arts & Crafts collection along with an unsurpassed selection of restoration and decorative hardware for virtually every style of home.

To obtain your catalog, please send $6.50* to:

Crown City Hardware Co.
1047 N. Allen Ave., Dept EO57J
Pasadena, CA 91104-3298

*Refundable with first purchase. Please allow 6-8 weeks for delivery. For rush delivery, 1-2 weeks, include an additional $3.00.
Table Lamps
Floor Lamps
Wall Mounts
Ceiling Mounts
Chandeliers
Sconces

Timeless Beauty • Uncompromising Quality

For Information on our catalog or a showroom near you, please call 800-400-2776

4509 Littlejohn Street, Baldwin Park, California 91706 • 818-960-9411 • Fax 818-960-9521
All products are manufactured in the USA.
EVERYBODY KNOWS OUR BLADES ARE AMONG THE BEST AVAILABLE.

SO, WE JUST MADE MORE AVAILABLE.

American Tool Companies introduces the addition of 12 new, thin kerf MARATHON® blades. With our family of 22 blades we now cover all common applications — portable saws, miter saws, table saws, and radial arm saws. This newly expanded line offers the same C-3 carbide tips, hardened steel body and unique shoulder design* you know and trust, with more size and tooth options than most other brands. You know MARATHON industrial quality blades. Now, we invite you to try out our newly-expanded lineup. We're sure you'll decide MARATHON blades are the only ones you'll need.

Look for them wherever quality tools are sold.
# Table of Contents

**Vol. XXV, No. 3**

**May/June 1997**

**Established 1973**

## Reading the Old House

**22**

### Hipped and Pyramidal Roofs
Defining old houses based on the shapes of their roofs.

By Shirley Maxwell & James C. Massey

## Editor's Page

**46**

### How-To

#### Between the Cracks
Step-by-step log house maintenance.

By Tom Moates and Douglass Reed

## Mailbox

**10**

### Ask OHJ

## Restorer's Notebook

**52**

### How-To

#### Making the Most of a Good Impression
The best ways to fix your embossed metal ceilings.

By Mary Ellen Polson

## Old-House Living

**56**

### Know-How

#### A Date with the Plater
A homeowners guide to making original metalwork look new again.

By Gordon Bock

**60**

### How-To

#### Shipping Out with a Restorer
One husband's indoctrination into the busy old-house world.

By Joseph Marra

## History & Techniques

**28**

### Old-House Living

#### Old Roses: A Sampler
Historic rose varieties to plant around your period home.

By Jo Ann Gardner

## History & Techniques

**32**

### The Art of Ironwork
The richly wrought story of Victorian iron fences and railings, plus advice on upkeep and repairs.

By Henry J. Magaziner, FAIA

**40**

### The Underachieving Cantilever
A view inside the restoration of a landmark Prairie School house.

By Richard L. Kronick

## Classifieds

**73**

### Emporium
Catalogs, Products & Services, For Sale/Swap, Real Estate, and Events

**80**

### Restoration Services

**84**

### Products Network

**94**

### Advertisers' Index

## Remuddling

**100**

### Vernacular Houses

**ON THE COVER:** A cast iron fence defines the yard around this shotgun, located in New Orleans, a city abundant with decorative ironwork, Victorian ornament, and deep porches.

**Cover photo by Frank Gordon**
Please Fence Me In

This issue includes some great information on working with wood, from rethinking log buildings to repairing a Prairie School masterpiece with engineered lumber. Nonetheless, I'm most attracted to the articles that make up the special theme on metals, perhaps because they each have a point of reference for me.

Exterior ironwork from the past comprises a world of surprising beauty and variety, especially when compared with the strictly functional, all-steel versions of our own era. Iron was a plastic medium in the hands of 19th century craftsmen, and they used it to adorn and protect houses of all economic strata—and literally at all levels. Fences or railings, when raised to the second storey, became balustrades for the balconies and verandas so closely associated with southern cities such as Savannah and Mobile. Cresting, as we learn, is just fencing at the top of the house, marking where the owner's property meets the sky rather than the street.

I know of no better example than OHJ's old neighborhood: Park Slope in Brooklyn, New York, one of the largest uninterrupted Victorian communities in the world. There, street after street of row houses are limned by stocky cast iron fences. Some are slowly self-destructing after a century of neglect, but many stand beautifully preserved or lovingly restored. Exterior ironwork represents a tremendous investment in materials and time—the metal fence and gate market was over $150 million in 1995 alone—and it is well worth the effort to retain.

Indoors, every old house makes use of metal in both mechanical and decorative ways. One of the most impressive is the embossed-metal ceiling, a classic gaslight-era material that finishes off countless interiors across the continent. Surprisingly, there's next-to-nothing written on the restoration of "tin" ceilings. The little practical information that does find its way into print—primarily on new installation for neo-traditional uses, such as restaurants—is almost as thin as the material itself. It's also not that useful if you want to save an old, existing ceiling. To solve the mysteries of dealing with paint and rust overhead, we drew on the advice of some local tin ceiling stewards and our own collective experience restoring the coffered beauty in OHJ's office.

Refinishing old-house hardware is subject we've wanted to brush up on since answering an Ask OHJ letter almost two years ago. A reader in Nebraska was perplexed about the piebald "zebra" finish on his bungalow light fixture. So were we until we talked to some experts. Turns out the surface was antique copper, a metallic effect that was highly popular early in this century.

Researching the article even sent me on a bit of a nickel-plating binge. My latest love is the 1897 General Electric fan you see blowing away on page 56, a $3 find at a flea market that worked fine after a little electrical surgery. The surface, however, was another story. Gangrenous corrosion had eaten the blades, cage, and fittings down to their brass base. It looked like The Fan from the Black Lagoon. So, I found a company that plated and polished the parts to a factory-fresh shine. Here's hoping these articles are as useful a reference for you.
There's just something about an old "tin" roof...

...charm, beauty, longevity

The old "tin" roof—and some of them are still in service after more than a hundred years—never seems to lose its charm and beauty.

No wonder the tin roof—it's actually called Terne—is increasingly being chosen by builders and architects for both new and remodeling residential projects.

Terne also allows you to choose the color you want and special paints available from Follansbee will allow you to choose from many attractive finishes.

Terne will fit well with your roofing plans whether you're building a new house or just remodeling. For more information, call us toll-free, 1-800-624-6906.
HORSEING AROUND

REGARDING YOUR LIST OF COLORFUL trade jargon ["Writing on the Walls," March/April 1997], "horse" has an interesting origin. As you explained, horse is the wood backing for a metal template used to run plaster mouldings. It's my understanding that the word comes from early plaster shops, where templates for large cornices were attached to stocks and slippers and pulled by mules.

A phrase that mystifies me is "punch list." It refers to the work to be corrected or completed on a project, but does anyone know the phrase's origin?

— DAVID FLAHARTY
Green Lane, Penn.

ROAD WORK

IN HIS EXCELLENT ARTICLE "A PERIOD Approach to Walks and Drives" [March/April 1997], author Michael Weishan makes a slight mistake. John McAdam (1756–1836) developed a road construction process that involved carefully graded stones: large stones on the bottom, small stones on top. The bed was coated with rock dust, but not with bituminous binder. The "macadam" road was ideal for horse-drawn vehicles, which compacted them into hard surfaces. Only after McAdam's time were tar and asphalt added.

— MARVIN H. ALLISON JR.
Acushnet, Mass.

Old-House Living

Thank you for "Salvage Labors" [March/April 1997]. Articles like this are the best part about subscribing. After seeing what Richard and Sharon Schmidt did to save that old carriage house, I know I'm [continued on page 12]

Un-Masked Man

I HAVE NEVER LIKED USING MASKING TAPE TO PAINT LINES and have used straightedges for years, but never knew it was a 19th-century method ["Victorian Lining and Stripping," March/April 1997]. Your advice to use a dowel to guide the paint brush without touching the paint has improved my speed and accuracy.

— JOSH PARKER
Ft. Collins, Colo.

You're right. McAdam's original road surfacing process included no bitumen. In 1815 London, McAdam began using compacted and interlocked layers of stone and stone dust to create hard-surface roads. Later in the 19th century, road builders coated the surface with coal tar or asphalt to weatherproof the rock. This new process was called tarmacadam (tarmac). In modern road engineering, macadam has taken on another meaning. It refers to a road surface made with a crushed rock base that's coated with asphalt, cement, or hot tar mixed with aggregate. — The Editors

Two-Acre Tudor

MEADOW BROOK HALL, ["The Other Proper Style," March/April 1997], is in Rochester, Michigan. Its location was incorrectly identified.

— ALICE SPANDE
Clarkston, Mich.

Meadow Brook Hall was built as a private residence in 1929 at a cost of $4 million. The 100-room, 88,000-square-foot mansion is now a part of Oakland University.

The original painting in the dining room of the White Farm Bed & Breakfast in Brockport, New York, includes Victorian lining discovered under many layers of old paint. Restoration by Christine Muratore Deats.
Wood Restoration
System

The New Standards To Restore & Replace Wood

Specified by the U.S. Government, national restoration centers, museums, architects, contractors and other professionals, Abatron’s restoration materials handle virtually any wood repair problem. Results are guaranteed by years of incredible performance and our service.

LiquidWood®
Deep penetrating wood consolidant. High-strength and strong adhesion, clear, transparent, low viscosity. Regenerates and waterproofs wood by hardening after penetrating. Can be brushed or poured on. Ideal for rotted windowsills and frames, columns, doors, furniture, sculptures structural and decorative components of any size in/outdoors.

WoodEpox®
The most versatile, STRUCTURAL & decorative wood substitute & no-shrink adhesive putty used in any thickness to replace, repair, extend or fill wood and other materials in structures, frames, furniture, boats, components, sculptures, in/outdoors. Can be sawed, nailed, planed, stained, painted. Often stronger than the original, unaffected by water, weather and termites. A NEW STANDARD IN WOOD RESTORATION.

Abatron’s Wood Restoration Kit contains LiquidWood A (resin) and B (hardener), WoodEpox A and B, and Abosolv solvent. Available in 5 pint, 5 quart, and 5 gallon sizes.

1-800-445-1754 http://www.abatron.com

ABATRON, INC.
5501 95th Ave., Dept. OH, Kenosha, WI 53144 USA

Since 1959, manufacturers of: Structural adhesives and sealants Protective and waterproof coatings - Seamless floors - Grouts for pitted and spalled surfaces Terrazzo systems - Expansion joints - Anchoring grouts for posts, precasts and structures Underwater patching compounds - Resins for fiberglass and composites Caulks - Crack injection resins
not alone. My salvage labors include rebuilding the 19th-century outbuilding—which includes a blacksmithy—behind our house.

— Sarah Masters
Roseburg, Oregon

ADDITION AND SUBTRACTION
WHEN IT COMES TO ADDING ON TO a historic property, many preservationists, like Mr. Norris ["Bucking the Standard," Jan./Feb. 1997], feel it's best if additions "blend seamlessly with the original." To see the problem with this thinking, you have to look beyond pure aesthetics and recognize the importance of historic structures as tangible records of the values, technologies, and lifestyles of their time. The Secretary of the Interior's Standards for Rehabilitation correctly suggest that the addition will best respect the original house by carefully embracing its features, while maintaining a distinct character that accurately portrays a physical record of its own time.

— Andrew Carpentier, R.A.
Chair, Oakland Landmarks Preservation Advisory Board
Oakland, Calif.

MEDALLION MAKEOVER
SINCE I WROTE ABOUT REPAIRING my ceiling medallion ["Ceiled with a Kiss," March/April 1997], I have completed the restoration of the rest of my house. I was even lucky enough to locate an 1850s four-arm gasolier, which now hangs from the medallion.

For anyone who may be in the Galena, Illinois, area June 14 to 15, my home will be on a local house tour sponsored by the Galena/Daviess County Historical Society and Museum (815-777-9129).

— Kyle Husfloen
Galena, Ill.
ACCIDENTAL PLANS
WE FOUND A DUSTY BOX AMIDST trash left in the attic eaves by previous owners. Inside were signed architect's plans ["Dream Come True," March/April 1997], bills for materials, and some family correspondence. The drawings indicate that a dormer is not original, or at least originally planned. They also show a built-in dining room cabinet where the door to the kitchen now stands. This fall we'll be moving the door to its original location and rebuilding the cabinet. The dormer stays.
— Kitty Jamison Columbus, Ohio

SASH SENSATION
I READ WITH GREAT INTEREST Gordon Bock's article, "New Century Sash" [Jan./Feb. 1997]. As you can see from the photo, we have decorative upper sash in our house, built in 1925 in a gold-mining town eight hours north of Toronto. The house needs repair and enlargement, and we are anxious to preserve its character. Articles like yours help to teach us about its features.
— Carolyn F. Franke Timmons, Ont.

WINERTIME IN ONTARIO LOOKS BETTER THROUGH PICTURESQUE DIVIDED LIGHTS.

Wintertime in Ontario looks better through picturesque divided lights. Through slide lectures and site visits, students will learn to recognize house styles and to understand prudent restoration methods. Shirley Maxwell, Massey's wife, business partner, and fellow OHJ contributing editor, will be a guest lecturer. Running from June 2 through 12, the class will meet Mon.-Thurs. from 9 a.m. to noon. For further information, contact Meghan Culbertson, Continuing Education, Drew University, 120 Madison Ave., Madison, NJ 07940, (201) 408-3185.

MASSEY AND MAXWELL TO TEACH COURSE
OLD-HOUSE JOURNAL CONTRIBUTING EDITOR James C. Massey will teach a two-week course on the restoration and preservation of historic houses at Drew University this summer. Through slide lectures and site visits, students will learn to recognize house styles and to understand prudent restoration methods. Shirley Maxwell, Massey's wife, business partner, and fellow OHJ contributing editor, will be a guest lecturer. Running from June 2 through 12, the class will meet Mon.-Thurs. from 9 a.m. to noon. For further information, contact Meghan Culbertson, Continuing Education, Drew University, 120 Madison Ave., Madison, NJ 07940, (201) 408-3185.

SOMETIMES IT'S EASY.

PREMIUM QUALITY

Cabot® Stains
FOR LONG LASTING PROTECTION

For project support and 4 oz. product samples, call 1-800-US-STAIN ext. 416.
WATTLE YOU HAVE
When we removed three layers of siding from our 150-year-old farmhouse, we found a brick filler between the studs in the first storey. It appears to have been installed from the interior. What can you tell me about this type of construction?

— Sandra Simmers
Purcellville, Va.

YOU HAVE A WALL FULL OF BRICK nogging, a masonry filler used as a firebreak and insulating material in houses built before 1860. Nogging typically was a mixture of rough-hewn wood slats or brick, bound in place with mud, straw, twigs, or grass. A close relative of wattle-and-daub construction, it was used to fill the wall spaces between vertical framing posts in timber frame and stone houses.

In the Middle Atlantic states, nogging was a common feature of the exterior walls of wood-frame houses built before the Revolutionary War, and in the interior walls of stone houses into the early 19th century. Nogging may have been a carryover from half-timbering, the English construction practice of covering the exterior of a building before filling in the frame. Although early American colonists began closing in house frames almost as soon as they went up, infilling apparently persisted long after the original purpose had been forgotten.

SLATE SPLASH
Our slate roof is nearing the end of its 60-year life. When we replace it, I’d like to use some of the old slate to tile a kitchen backsplash. Will this idea work?

— L. Bellero
Red Bank, N.J.

THERE’S PLENTY OF HISTORICAL precedent for slate around sinks—although recycling old roofing slate for the purpose is a novel idea. Slabs [continued on page 16]

LAMP WITH A MISSION
We were excited to see a table lamp identical to the one we own in the background of a photo of Patricia Poore, published last year. We’ve been trying to identify the lamp for years. Can you offer any help?

— Jeff Dziura
Western Springs, Ill.

ELECTRIC TABLE LAMPS FIRST appeared after 1900, displacing earlier electrified versions of oil and gas lamps. Freed from the need for bulbous oil fonts and chimneys, many took an angular, Gothic form in keeping with the Arts & Crafts aesthetic just hitting its peak.

Sears, Roebuck & Co. sold a metal Mission lamp similar to yours (and that of OHJ Editor-in-Chief Patricia Poore) between 1905 and 1910. The shade and base are made of green cathedral art glass, essential for softening the harsh glare of early (unfrosted) electric light. When the lamp is lit, the glass turns warm yellow. Undoubtedly this is a mass-market lamp, probably made by a small manufacturer—but exactly who that was, we can’t say. We’d enjoy hearing from anyone who can shed more light on this lamp.
SCHWERD'S
Quality Wood Columns
since 1860

A.F. Schwerd Manufacturing Co. has been producing wood columns and pilasters for over 135 years. The wood is thoroughly seasoned pine for exterior use; additional lumber species available for interior. Production begins with a minimum 2" shaft wall thickness using solid piece lumber (no finger joints) resulting in a quality, durable column. Columns are available in diameters from 4" to 50" and in the length required for your specific installation up to 35'. To assist in your restoration projects, we can manufacture columns to match your existing design. Capitals, shafts, bases and plinths can be purchased separately.

No. 140 Scamozzi
No. 150 Roman Corinthian
No. 142 Greek Ionic

Our ornamental capitals are made of a hard, durable composition suitable to withstand the elements. Additional styles are available.

#130 ATTIC BASE

Our complete aluminum bases are manufactured of thick metal and are recommended for exterior columns for a seamless base that will last a lifetime. The aluminum plinths are ventilated for air circulation through the column shaft. Complete aluminum bases are available in three architecturally-correct styles for even diameter columns from 8" to 30".

Call or write for our free catalog
A.F. SCHWERD MANUFACTURING COMPANY
3215 McClure Avenue, Dept. OHJ • Pittsburgh, PA 15212
Telephone: (412) 766-6322 • Fax: (412) 766-2262
of soapstone and slate were common backsplashes for dry sinks before the advent of indoor plumbing. In the first two decades of the 20th century, you could order a slate laundry sink from a catalog, says Jeffrey S. Levine, an architectural conservator with John Milner Associates.

Most residential roof slate is standard grade, which has a uniform appearance and a width of about \( \frac{3}{8} \)". You or your tile setter should easily be able to cut the slate to size with a wet diamond-blade saw. The slate tiles can be set in place using the same mortaring techniques you would use for any heavy tile.

Use only sound slate that shows few signs of flaking or delamination. Since the stones will be weathered and dirty, clean them with soap and water. Once the backsplash is in place, protect the slate in its new habitat with a coat of boiled linseed oil.

In humid North Carolina, wood columns are especially vulnerable to moisture damage.

Before you can repair the splits, you need to determine what kind of column you have, says restoration consultant and OHJ Contributing Editor John Lecke. If the gaps are irregular and tend to spiral, the column may be hollow-bored from the center of a tree trunk, or a solid blank cut from the heart of a tree. If the splits are straight and parallel, the column is stave-built—pieced together out of long shafts joined by any one of a half-dozen techniques.

Given the age and design of your columns, it’s most probable that they’re stave-built. You can repair splits with the column in place if the loose, open joint is less than \( \frac{1}{4} \)" wide and can be moved back together by hand.

To make the repair, move the wood back into alignment and apply an epoxy adhesive formulated for wood. Use band clamps to hold the joint together. If the joint doesn’t close with hand pressure, don’t try to force it closed with the band clamps. If you do, you risk forcing open another joint or splitting the shaft.

---

CAST A WARM GLOW WITH AUTHENTIC REPRODUCTION LIGHTING, HANDCRAFTED IN THE SAME MANNER AND OF THE SAME MATERIALS AS THE ORIGINALS. CHOOSE FROM OVER 250 CHANDELIERS, SCONCES, PORCH-LIGHTS AND LAMPS IN ARTS & CRAFTS, VICTORIAN AND NEOCLASSIC STYLES.

Request our FREE 68-PAGE CATALOGUE.

STAVE-INC OFF PROBLEMS

The columns on my ca. 1911 Neoclassical Revival house are relatively soft and some of the wood is split. How do I relaminate them?

— Kevin Hennings

Monroe, N.C.
The ONE SOURCE for all of your RENOVATION and BUILDING needs.

- solid brass drawer and door hardware
- floor and wall coverings
- sinks, tubs, basins
- lav sets, kitchen and tub faucets
- solid brass lighting
- over 2,000 building and renovating essentials

free catalog 1-800-659-0203
Ask for Dept. 2467, or write RENOVATOR'S
P.O. 2515, Dept. 2467, Conway, NH 03818

Solid Brass Door and Drawer and Cabinet Hardware. The best and widest selection anywhere, treated with our exclusive KSF no tarnish finish.

Solid Brass Formal and Traditional Lighting. Authentic period designs for every room in your home.

Ceiling Medallions, Corner Medallions and Pediments. Add the period look of plaster without the mess or cost.

Authentic Oriental Style Rugs and Runners. Enjoy the look, feel and quality of fine Orientals at a fraction of the cost!

Classically styled Cast Iron Tubs. Create a relaxing retreat and pamper yourself in authentic period style.

Pedestal Sinks and Basins. Crafted of grade "A" vitreous china. We've got the look you want!
LOOKING FOR "INVISIBLE" STORM WINDOWS? HERE THEY ARE!

Historic
Property Owners
Renovation Contractors
Commercial Buildings

You will see the energy savings
Not the Storm Windows
Match Any Color
Match Any Shape
Inside or Outside Mounted
Inside or Outside Removable
Screen and Glass
Fixed- Magnetic- Sliding- Lift Out
Unlimited Possibilities

ALLIED WINDOW, INC.
2724 W. McMicken Avenue
Cincinnati, Ohio 45214
(800) 445-5411 (TOLL- FREE)
(513) 559- 1883 (FAX)

"Where custom work is standard"
Decorating Eden: A Comprehensive Sourcebook of Classic Garden Details
by Elizabeth Wilkens and Marjorie Henderson
With its focus on the architecture and ornamentation of the landscape, this is the garden book for everyone—even those with a black thumb who leave it to others to choose the plants. It's a pictorial idea book of garden accessories: arbors, bird houses, bridges, fountains, fumigene, gazebos, lighting, pavings, pools, terraces, trellises, walls, and more. The final section showcases actual plans with photographs and includes rose, rock, grass, seaside, country, and city gardens. This is the best book for beginning landscape designers, for the experienced, it's an idea book and a checklist. The Old-House Journal Guide to Restoration
What if O.H.J. were not a periodical but a one-volume reference? This is it: the how-to and technical highlights of O.H.J., organized by project, in a big hardcover. Not a pretty picture book, this hands-on Guide is for those actually involved (whether do-it-yourself or specifying for others). It opens with evaluating and buying an old house: inspection, restoration planning, tools. Part II covers exterior work: sills and foundation, roof, paint, porches and ironwork, and masonry. Part III goes inside: plumbing and electrical, energy efficiency, basements and structural repairs, windows and doors, plaster and drywall, floors, woodwork, and kitchens and baths. (Wow!) A lot is old-house-specific, such as wiring a ceiling medallion and fixing sliding pocket doors. Technically accurate but conversational language. Even a beginner will understand every word with the help of 700 close-up photos and drawings. No better manual for serious restorers.

The Old-House Bookshop
(800) 931-2931 MON-FRI 9AM-5PM EST OR FAX ORDER TO 508-283-4629 (MC/VISA ONLY)

NAME (PLEASE PRINT)

STREET ADDRESS (NO P.O. BOXES)

CITY ST ZIP

METHOD OF PAYMENT (CHECK ONE):
☐ CHECK (PAYABLE TO DOYETALE PUBLISHERS)
☐ MC ☐ VISA ☐ MONEY ORDER

CARD EXPIRATION DATE  /

AUTHORIZED SIGNATURE

PHONE ( ) (IF WE HAVE A QUESTION—WE DON'T EVER SELL PHONE NUMBERS)
OPEN AND SHUTTER
I replaced broken tenons on our adjustable shutter louvers with wood chopsticks. Select chopsticks that are round at one end and square at the other, and stick with bamboo. Remove the damaged louver and cut a mortise for the square end of the chopstick. Next cut the chopstick to length, and put glue on the mating pieces without getting any onto the new tenon.

Then jackknife the parts together in place, and clamp to dry. (Tight rubber bands make good clamps.) Apply wood putty as necessary, and sand before painting.

— Allen S. Joslyn
Montclair, N.J.

CHASE SCENE
If you have interior walls opened up for any reason, take the opportunity to provide a chase for future wiring. We cut through the wall plates and flooring with a hole saw and joined lengths of PVC to run from the basement to the attic. Then we cut access holes in the pipe at outlet level on each storey. We’ll hide these locations with electric panel covers. The conduit will enable us to run lines between storeys for telephones, cable television, electricity, a security alarm, and whatever else we want. It’ll require only limited snaking of wires through the walls.

— James de Ford
Wilmington, Del.

STRAIGHT SHOOTER
I favor my pistol-grip cordless drill over the new T-handled models because it allows me to hold the drill more effectively. Instead of grasping the handle, put your hand up higher, behind the motor. This gives you more control and cuts down on sore forearms because your hand is in-line with the bit. Use your ring finger and pinkie to operate the trigger. The technique takes some getting used to, but after 10 years as a union carpenter, I can tell you the reduced wrist fatigue is worth the effort.

— Michael Steele
Elgin, Ill.

PARTING WORDS
Over the years, I have re-strung most of the sash weights for our 35 windows. I broke many a parting bead until I stumbled across the perfect tool for removing them intact. First, I use a putty knife or utility knife to break the seal of the paint, caulk, or varnish. Then I grab the bead with one or two locking seamers — basically duck-billed locking pliers sold for metalwork. Locking seamers have wide jaws with no teeth, so they’re ideal for grabbing and locking onto the bead. Once you have a good grip, gently wiggle it free. Start at the bottom and work slowly, especially where the meeting rail covers the bead.

— Dan Miller
Elgin, Ill.

COMFORTABLE COFFEE BREAKS
I’d like to share some simple advice that helps when you’re doing a major restoration while living in an old house. Get a ratty chair (preferably a recliner) from a thrift shop or a friend’s basement, cover it with a washable throw blanket or sheet, and set it up right in the middle of the grit and dust. It’ll give you a chance to take breaks without having to decontaminate yourself.

— Laura Walker
Washington, Penn.

BIT PARTS
Try using oven cleaner to remove wood pitch from toolshop bits and knives. Simply spray it on, and wipe it away in two minutes.

— Greg Joyce
Red Bluff, Calif.

SHARE YOUR SOLUTIONS. We’ll pay up to $100 for hints we publish. Send shortcuts and problem-solving ideas for other old-house owners to: Notebook Editor, Old-House Journal, 2 Main Street, Gloucester, MA 01930.
PERIOD-INSPIRED CABINETRY
At the Kennebec Company, cabinetry and kitchen design have been our specialty for over twenty years. Our period-inspired cabinetry is meticulously crafted using traditional techniques, blending historical sensitivity with contemporary utility.

Send $10 for portfolio.
THE KENNEBEC COMPANY, ONE FRONT STREET, BATH, MAINE 04530 • TELEPHONE (207) 443-2131

A Collection of Complete Building Plans

COUNTRY DESIGNS

Barns, sheds, garages, studio cottages, garage apartments, vacation houses also other accessory buildings and a folio of period fences.

SEND $6.00 FOR CATALOG TO: COUNTRY DESIGNS, BOX 774J, ESSEX, CT 06426

MAY/JUNE 1997 21
Hipped and Pyramidal Roofs

AS WE READ THROUGH A RECENT STACK OF SUBSCRIBER mail, we found ourselves intrigued by a group of unrelated letters that had come with snapshots. Coincidentally, all were from the Midwest. Yet these houses could have been built almost anywhere in the country. What had instead captured our attention was a common trait among the houses. Built over a span of 70 years and in styles from Italianate to Craftsman, the buildings were strikingly linked by their prominent hipped roofs.

That got us thinking.
First, we pondered the definition of a hipped roof. Essentially, we’re talking about four roof planes sloping outward—forming the “hips,” or outside corners. When a building is longer than it is deep, a ridge (or deck) is unavoidable at the apex. At top, there may be a balustraded deck or a cupola. On square or nearly square buildings, the four roof slopes may actually meet at the top to form a pyramid. Think of the trigonometric variations on the roofs of octagonal and hexagonal buildings, or asymmetrical houses with wings and ells! We imagined a slew of variants: steep hip, low hip, deck-on-hip, hip-on-hip, pyramidal, near-pyramidal with vestigial ridge, hip with dormer, double-hipped, jerkinhead (a kind of nascent hip).

Second, we wondered when and why the hipped roof became such an enduring feature in American domestic building. The “why” of their popularity seemed at first apparent: Hipped roofs must offer economy and maximize shelter. But the economy argument doesn’t always hold up. True, in building small houses, fewer long timbers would be needed to frame a hipped roof than a gabled roof. And hipped roofs do eliminate the upper portions of walls that would be contained in gable ends. Four very long and heavy pieces of framing, however, must still extend from the roof peak to the wall plate.

Hipped roofs do offer shelter from glaring heat and heavy rains—making this rationale for the form especially applicable to the earliest use of the hipped roof in what is now the United States: the one- or one-and-a-half-storey houses introduced by the French (with West Indian modifications) into the Mississippi Valley and along the Gulf Coast in the late-18th century. Early, steeply pitched “pavilion” (hipped) roofs gave way over time to gentler slopes. Throughout the 18th and 19th centuries and into the 20th, the hipped roof was endemic to Creole, raised, or Gulf cottages. Hipped roofs are occasionally found even on shotgun houses. (We may get an argument on that in New Orleans, where shotguns are gable-fronted. But remember: shotguns were built in Louisville, too, and elsewhere in the South.)

These early, French-derived houses were informal. But what about the early, formal use of the hipped roof? Think of 18th-century Georgian and early 19th-century Federal houses. Here again, pitch started out steep in the Georgian era but gradually became lower in the Federal period, as the houses became noticeably wider than they were deep. Deck-on-hip roofs, sometimes with classical balustrades around the decks, are characteristic of this time.

By the middle of the 19th century, houses in the Greek Revival style often had very low hipped roofs with deep friezes at the cornice line. A bit later, many Italianate houses were crowned with low, hipped roofs set above bracketed eaves. After the Civil War and into the early-20th century, houses with Queen Anne or Colonial Revival elements often had a core section with a hipped (or pyramidal) roof. Gable-roofed ells at the front, back, or sides often obscured the shape of the central roof, pro-
A formal hipped roof in the English tradition culminates in a deck in the 1759 example above. The French-derived hipped roof, shown in the Pensacola, Florida, house at right, is an informal type. The Blair house in Williamsburg (below) has a gable roof with clipped ends, or jerkinheads, that form hips.
Top Picture: Rococo Chandelier by Starr, Fellows, New York C: 1857
Center: Deer's Head sconce by Gibson Gas Fixture Works, Phila., PA C: 1890
Bottom: A small sample of our hardware

Two beautiful four color catalogs available:
"Heritage Lighting": 16 color pages...$2.00
Over 120 beautiful reproduction lights & "Brass Hardware": 28 color pages...$2.00
Over 900 items of brass hardware
Order both catalogs for only $3.00

AMERICAN HOME SUPPLY
P.O. Box 697
Campbell, CA 95009
Phone: 408-246-1962

The Prairie-influenced Foursquare (top) with an unusual pyramidal roof is located in River Forest, Illinois. The two New Jersey examples (above) are typical with their hipped dormers in pyramidal roofs.

In the 20th century, many house styles, both modern and revival, made use of the hipped roof. Think of the ubiquitous American Foursquare in all its style guises; it is a form defined by its cube shape and hipped or pyramidal roof. The hipped roof lent itself to the formality of the Colonial Revival, the picturesqueness of the Craftsman style, the horizontality of Prairie School architecture, the villa pretensions of the Mediterranean styles — and even to the contemporary lines of Post-War suburban houses.

Hip, hip, hooray: this type is clearly a roof for the ages.

Questions about house style, or about the original appearance, derivation, or details of your house? Send a letter with a clear, color photo or two: Reading the Old House, OHJ, 2 Main St., Gloucester, MA 01930.
America's leading producer of roof crestings offers a complete line of lightweight, easy to install, economical to ship, unbreakable steel roof crestings and matching finials.

Size may be modified, including length, height and thickness.

Choose from our stock designs or we can reproduce any design previously made.

If you wish to design your own, simply furnish us with a drawing and we'll work with you to produce your design — economically.

Ask about our free brochure to help you choose a cresting for your home.

For more information, or to order your crestings, call us toll-free at:

1-800-442-IRON/4766
or Fax 1-717-296-IRON/4766

Patents Pending

CAPITAL CRESTINGS™ ARE MANUFACTURED BY:
ARCHITECTURAL IRON COMPANY, INC. 104 IRONWOOD COURT, MILFORD, PA 18337
Restore Cracked Plaster Walls & Ceilings
Easy One Day Applications
• Vapor Barrier • Cost Effective • 1 Day Application • Remove No Trim

HOW TO USE THE NU-WAL* SYSTEM:

1. Cut fiberglass mat 2" longer than height.
2. Apply saturant to area to be covered.
3. Apply fiberglass mat to wet surface.
4. Trim excess mat where wall meets ceiling.
5. Trim mat at baseboard and window.
6. Trim mat at outlets, switches, etc.
7. Apply second coat of saturant to wet mat.
8. Apply 1st coat of saturant to adjacent area.
9. Apply mat to 2nd area, overlapping by 1".
10. Cut down center of overlap (both layers).
11. Remove mat strips on both sides of cut.
12. Apply 2nd coat of saturant (include seam).

Make Walls & Ceilings Like New!

SPECIFICATION CHEMICALS, INC.
824 Keeler Street • Boone, IA 50036
800-247-3932
email: sales@spec-chem.com
online: http://www.spec-chem.com

FREE INSTRUCTION VIDEO AVAILABLE

CRAFTSMAN HARDWARE CO.

Chris Efker
Hand-hammered copper, brass and bronze hardware with authentic detail and style.
Most complete line of Arts and Crafts period cabinet and architectural hardware available including a full line of electrical plates in four styles.

For Product Information And Photos Send $5.00 To:
Craftsman Hardware
P.O. Box 161
Marceline, MO 64658
Tel: 816-376-2481
Fax: 816-376-4076

Great Prices & Selection...
Quality Products!
(Same base and pole style on both lamps)
Finally! Authentic wood shutters that are beautiful, long-lasting and easy to live with.

The natural qualities of our hand-selected clear cedar keep your Vixen Hill Shutters “healthy” by repelling insects and preventing rot. In addition, our cedar’s porous long-grain fiber provides exceptional strength and a superior surface for easy staining or painting.

Over time, Vixen Hill Cedar Shutters are the most cost-effective solution to your shutter needs—combining authentic shutter design with a better-performing, more-durable material.
Cascading over a fence or banked against a verandah, old roses re-create the aura of a landscape rooted in the past.
Old Roses: A Sampler

BY JO ANN GARDNER

Old roses include climbers like Father Hugo’s Rose (left) and ‘Dr. W. Van Fleet’ (bottom, right), and the intensely fragrant Apothecary’s Rose (top).

OLD ROSES CREATE THE PERFECT SETTING FOR the old house. These often-ancient flowers are the same plants that could have been blooming in any garden prior to the 1910s. Far from being just living heirlooms, old roses are also “hot” in today’s horticultural world. Richly fragrant, they bear the deep rose scent we often seek, but fail to find, in modern roses. Unlike showy hybrids of recent vintage, they are relatively carefree, hardy, and willing to grow in a range of soil and climate conditions.

In the sampling that follows, you’ll find old roses to suit every garden. Most bloom only once each year but, by selectively choosing types, a home gardener can keep the roses coming from spring to fall. With their attractive foliage and colorful hips (fruits), the landscaping value of old roses extends well beyond their season of bloom. All make fine informal hedges.

Old Garden Roses

CULTIVATED IN EUROPE and Asia Minor since classical times, old garden roses dominated European and American gardens before 1867, when the first hybrid tea roses were introduced. Fragrant and many-petaled, these tough shrub roses typically bloom in early summer.

ALBA (THE WHITE ROSE OF YORK) — The intensely fragrant pink or white flowers of the Alba and its descendants bloom early to midseason on dense, arching bushes that reach 5’ to 8’ in height.

CENTIFOLIA (CABBAGE ROSE) — Familiar from old Dutch paintings, the round, tightly packed flowers of the Cabbage Rose may have as many as 100 overlapping petals. Centifolia grows to 3’ to 5’ on canes with wrinkled foliage. It usually blooms at midseason.

DAMASK — These flowers, ranging from pale pink to red, have been distilled for their fragrance since ancient times. The Damask’s arching, thorny canes reach 5’, blooming profusely at midsummer.

GALLICA (FRENCH ROSE) — Also known as the Red Rose of Lancaster, the Gallica is the oldest of old roses and blooms at midseason. One variant, the Apothecary’s Rose (Rosa gallica officinalis), was brought to America by the Pilgrims for medicinal use. Its rich fragrance, intensified by drying, floats from deep-pink flowers with golden stamens on a low, spreading bush. ‘Rosa Mundi’ is a spectacular striped variant.

While old garden roses are available from commercial sources, don’t overlook some of the best hunting grounds: overgrown gardens and cemeteries. Always ask before digging up an old rose—or better yet, just a piece of it. Choose cuttings early or late in the season.

Wild Roses

WILD ROSES ARE THE FOREBEARS OF THE THOUSANDS OF roses in cultivation today. Often single flowered (with just five to 12 petals), some of the most appealing are these shrubs and climbers.

THE SWEET BRIAR (EGLANTINE ROSE, R. eglanteria) — Associated with cottage gardens, the Sweet Briar bears deep pink flowers at midsummer, followed by scarlet to orange hips. Cherished for its apple-scented foliage, the Sweet Briar can reach 10’ to 14’.

RUGOSA — Introduced from Japan in the 1840s, Rugosas are resistant to salt spray and stand up to winds. They often grow to 6’ in coastal areas, blooming from...

PHOTOGRAPHS BY ANN REILLY; PHOTO/NATS (LEFT) MARGE CARFIELD (TOP RIGHT) KEN DRUSE (BOTTOM RIGHT)
midsummer to fall. Tough and beautiful at the same time, Rugosas are identified by their dark green foliage, purplish or white flowers, bright hips, and rose-clove perfume.

'BLANC DOUBLE DE CORBET'—This densely petaled rose (1892) is one of the finest hardy white roses. It blooms from midseason to frost and reaches 4'-6'.

Among the hundreds of wild roses and their variants, several stand out because of their yellow flowers—unusual in the world of old roses. The bright, fragrant, densely petaled Persian Yellow (R. foetida persiana, 1837) grows to 5' and blooms at midseason. The spring-blooming Father Hugo's Rose (R. hugonis, 1899) reaches 8' and produces yellow blossoms, shown to great effect when the plant is grown as a climbing rose.

Early Modern Climbers
MODERN CLIMBING ROSES ARE technically hybrids, but since they have been grown in American gardens for most of this century, they are considered "old" by garden specialists. They include the following varieties, which can be

Growing Old Roses
Old roses will survive neglect, but they thrive on care. All types need a site with good air circulation, well-drained soil, and at least six hours of direct sunlight each day. Plant old roses 3'-5' apart, or with 18" to 24" spacing for a hedge. Climbers should be planted 12" to 15" away from the surface on which they will climb, and 7' apart. Because buds form on old stems, prune after blooming.

No cabbage ever smelled as sweet as Centifolia, the Cabbage Rose.

trained to grow up a trellis, arbor, or building wall.

'DR. W. VAN FLEET'—Bred by an unassuming Department of Agriculture employee in 1910, this climber quickly became a rose classic. Growing on canes to 20', its fragrant, densely petaled flowers are pink, fading to white. A descendant, 'New Dawn' (1930), bears clusters of pink, tea-scented flowers all summer.

'PAUL'S SCARLET CLIMBER'—Spectacular when pegged to a fence, this climber dating to 1916 can reach 15' and blooms at midseason, pouring forth large, full, scarlet flowers in clusters.

Suppliers

<table>
<thead>
<tr>
<th>SUPPLIERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTIQUE ROSE EMPORIUM</td>
</tr>
<tr>
<td>Rt. 5, Box 143</td>
</tr>
<tr>
<td>Brenham, TX 77833</td>
</tr>
<tr>
<td>(800) 441-0002</td>
</tr>
<tr>
<td>ROYALL RIVER ROSES</td>
</tr>
<tr>
<td>70 New Gloucester Rd.</td>
</tr>
<tr>
<td>N. Yarmouth, ME 04097</td>
</tr>
<tr>
<td>(207) 829-5830</td>
</tr>
<tr>
<td>THE ROSERAIE AT BAYFIELDS</td>
</tr>
<tr>
<td>P.O. Box R (OH)</td>
</tr>
<tr>
<td>Waldoboro, ME 04572</td>
</tr>
<tr>
<td>(207) 832-6330</td>
</tr>
<tr>
<td>HEIRLOOM OLD GARDEN ROSES</td>
</tr>
<tr>
<td>24062 NE Riverside Dr.</td>
</tr>
<tr>
<td>St. Paul, OR 97137</td>
</tr>
<tr>
<td>(503) 558-1576</td>
</tr>
</tbody>
</table>

Timeless & Enduring

FACTORY DIRECT VICTORIAN FURNITURE
Shop with us at Heirloom Reproductions for the finest, most authentic, Victorian furnishings. Choose from a vast selection of Victorian pieces, all hand-carved in solid mahogany! Our 150-page catalog offers everything needed to make your home a Victorian treasure—sofas, chairs, marble-top tables, bedrooms, dining rooms, hall trees, curios, lamps, wardrobes, clocks and entertainment centers plus hundreds of fabrics and custom finishes!

For more information, call toll-free: 1-800-288-1513
MasterCard / VISA Accepted
Alabama Residents add 4% sales tax.
OR SEND $3 FOR CATALOG TO:
HEIRLOOM REPRODUCTIONS, 1834 West 5th Street, Dept. OHJ, Montgomery, AL 36106

PHENOSEAL® provides restorers with Professionally Tested, Naturally Trusted products that cover a wide range of uses and are safe for both user and environment.

All-purpose PHENOSEAL® Vinyl Adhesive Caulk seals and bonds all common building materials. Use it to caulk a bath, glue a chair, or seal a leaky gutter. See why we call it The One Caulk for Most Any Job.

Clean PHENOSEAL® Liquid Waterproofing penetrates porous building surfaces to invisibly seal against deterioration due to weather and water. Helps keep wood, masonry, and concrete surfaces looking clean and new.

All PHENOSEAL® products are paintable, mildew resistant, and water based for easy cleanup. Sold at leading paint, hardware, and building supply outlets with our money-back satisfaction guarantee.

CUSTOM LETTERED HISTORIC PLAQUES
- Cast bronze or aluminum
- All sizes from medallion to road signs
- Graphics and logos
- Discounts to Historical Societies
- Time Capsules
- Custom wording from $78
- National Register plaques from $35

Rush service available • Satisfaction Guaranteed

Visit our Internet site at http://buttons.webrover.com/erielc/

ERIE LANDMARK COMPANY
FREE BROCHURE
4449 Brookfield Corporate Drive
Call: 800-674-7848
Fax: 703-818-2157
Chantilly, VA 20151-1681

PHENOSEAL®

GLoucester Co., Inc.
P.O. Box 428 • Franklin, MA 02038
508/528-2200
With wrought iron railings at ground level and cast iron balustrades on the upper storeys, residences like this urban row house became showcases of the ironworker’s art in the late 19th century.
HISTORY

The Art of Ironwork

Historic Use of Railings, Fences, and Gates—with Techniques for Care

by Henry J. Magaziner, F.A.I.A.

In rural early America, the primary purpose of a fence was to keep livestock—cows, sheep, and pigs—from the house. As the country urbanized, the fence’s function switched to containing pets (predominantly dogs) and defining property lines. In a growing nation that was rapidly industrializing, the material inevitably switched, too. The traditional wooden picket fence soon lost out to ferrous metals—wrought iron, cast iron, and clever combinations of both.

While ironwork of the Colonial and Federal eras is noteworthy because of its hand-crafted beauty and relative rarity, the golden age of American architectural ironwork was actually later, running roughly from 1840 to 1930. If your old house dates from this “century of iron,” and you’re blessed with an original iron fence (or the evidence of a previous fence), here’s what you should know to understand what you have and how to keep it for another century.

TODAY’S FENCES ARE LITTLE MORE THAN utilitarian barriers, but in Victorian times they were considered important features in a site’s overall design. According to the prominent Philadelphia architect Samuel Sloan (1815–1884):

“None of the appendages to a country seat better repays an expenditure of taste and money than the fencing. Whatever the size of the grounds attached, the enclosure is an important feature in the landscape. . . . [The enclosure] may be of stone, brick, iron or wood. The two latter admitting a greater variety of pattern, are more suitable than a wall of either stone or brick.

Nevertheless, of course, Sloan’s subject was houses of the well-to-do. In the latter half of the 19th century, nothing finished even a modest town or city home better than a pair of elegant iron railings leading to the front door. The evolution of such railings, and kindred fences and gates, owed as much to technology as to changes in style.

Wrought Iron

In urban homes of the Colonial and Federal periods the exquisite iron railings on stone front steps expressed the wealth and good taste of the owners. These railings were all of hand-wrought iron.

Metallurgically, wrought iron is nearly pure iron—that is, it contains less than 1% carbon. It is soft, compared to steel or cast iron, but tough and malleable with a distinct “grain” or layered structure (the result of residual slag). True wrought iron is rarely produced today. The modern substitute is mild steel, an alloy containing up to 2% carbon, which is strong and work-

Above: After 1850, many capable architects also designed fences. This cast iron rail by Frank Furness shows his highly personal style. Below: This 20th-century wrought iron gate swings in Charleston, South Carolina.

PHOTOGRAPHS BY STEVE DUNWELL: IMAGERANK (OPPOSITE), JAMES C. MASSEY (TOP), RICHARD BOWDITCH (ABOVE)

MAY/JUNE 1997 33
Maintaining Iron

In restoring ironwork of any kind, the important first step is to assess the conditions—that is, make a foot-by-foot survey of where deterioration is located, and what kinds and levels of repair or maintenance are indicated. Where the project is large or necessitates contractors, such as welders or blasting firms, it may be cost-effective to hire a preservation architect or conservator to prepare contract documents. Even before this, check with the local building department, the environmental protection agency, and the historical or landmark commission to make sure that the proposed work violates no regulations.

Do some homework on the contractors or craftspeople, too. Examine their previous work to see if their skills, methods, and equipment are appropriate for your project. Major repairs that involve blasting, cutting, fitting, tapping, and finishing of iron are best performed by experienced metalworkers.

Where there's iron, expect to find rust—sometimes lots of rust. Rusting, technically oxidation of the iron, can be due to the presence of water, salt air, sea water, acids, acid rain, and air pollutants. Where the iron has crevices that trap and hold liquids, the rust may be especially bad. Since rusted surfaces are porous, they act as reservoirs, causing further rusting.

Before there can be any welding, or other restoration, all rust and paint have to be removed from the ironwork. The first step is to chip away any loose paint or rust. Then, dry grit blasting is recommended—unless the member is excessively thin or blasting is prohibited by local regulations. Blasting pressure should be no higher than 80 pounds per square inch, with particles 70–100 mesh in size (see "Gentle Blasting," July/Aug. 1995).

If blasting is prohibited or impractical, the iron must be wire brushed by hand. Whatever the method, it is important to have the iron cleaned down to bright metal before repairs are made. No type of wet blasting is appropriate; it rusts the iron immediately!

Rustproofing

All exterior ironwork should be painted immediately after repairs have been made or replacements added, otherwise it will rust. Whatever paint system is used, the surfaces must be properly prepared. Poorly prepared surfaces will not retain even the best paint. Make sure that the ironwork is clean, free of rust, scale, oil, or grease. Then, never paint on a wet or damp surface. Along the same lines, never paint during fog, mist, or rain, or when the relative humidity is above 80%, or if the temperature is expected to fall below 50 degrees F. within 24 hours. Preferably, don't paint ironwork in direct sunlight either (it dries too quickly for optimum bonding).

A quality metal primer is a critical part of paint protection. Traditionally, red lead—tough, elastic, and impervious to water—was the primer for iron. In our time, however, red lead and zinc chromate (another effective primer) are prohibited, except for some commercial and industrial uses, because they contain heavy metals. Alkyd or acrylic primers have

Unlike oxidation on non-ferrous metals, which provides a protective coating, rust will continue to eat away at iron until the metal is consumed. Most insidious are scale patches and pockets, such as this deterioration on the famous "cornstalk fence," that trap water.
largely replaced the traditional primers. They dry faster but are not as effective for as long. Alkyd rust-inhibitive primers contain pigments such as iron oxide, zinc oxide, and zinc phosphate.

These primers are suitable for replacement parts and for cleaned, previously painted surfaces. Two or more coats of primer should be used, followed by finish coats of alkyd enamel. Zinc-rich primers containing zinc dust can be used for longer protection, but the surfaces must be in a “bare white” condition. This is usually achieved by sand blasting. Water-based latex house paints will cause immediate rust and should never be used as primers on bare iron.

Cover primer coats with even, not too thick, finish coats that can range from glossy to matte. The best available paint system for cast iron is a two-part epoxy primer, followed by a polyurethane finish coat. However, this paint system is expensive and difficult for homeowners to apply. Another choice is an industrial maintenance coating (for example, Sherwin-Williams DTM Acrylic Primer/Finish).

Hand brushing is still the most effective method for painting iron fences and railings. The action of bristles works the paint onto flat surfaces and corners for a good bond with the metal—especially important for primer coats. Paint rollers and airless sprayers can be used to apply topcoat paint on broad areas if they are followed up with a brush.

If part of the unit is to be set in concrete, then that part of the unit should be treated with a bituminous coating, allowed to cure. For setting in masonry, the buried ends are best rust-proofed, since the molten lead will burn off any paint.

While most ironwork is painted black, that color tends to mask the details and shadows that help define depth. Consider also historic greens (especially for naturalistic fences), stone colors, and picking out occasional realistic ornament, such as fruits or flower petals. Painting ironwork sensitively can enhance it artistically.

able, but not quite as weather-resistant. Wrought iron is easily worked, making it an ideal metal for early blacksmiths who could bend, forge, or draw it into an array of sinewy but expressive shapes.

Before 1840 and the development of large-scale iron production, wrought iron rails, fences, and gates remained the work of local artisans and each example was unique. Ornamental ironwork was not created in a vacuum, though. After the Federal period, when the country entered into the age of architectural symbolism, the railings and fences, like the buildings, often carried Greco-Roman patterns. True wrought iron continued to be produced through the 19th and early 20th centuries, and was brought to new heights of craftsmanship by designers and artists such as Samuel Yellin of Philadelphia.

This dramatic Philadelphia fence (top) shows the rich design possibilities of cast iron: a naturalistic pattern of free-flowing grape vines in a rinceau motif is in artful contrast to the very geometric Greek key base below. Cast iron was easy to ship, too. The Banning House “cornstalk fence” (above), one of three known examples of this pattern, was moved from New Orleans to Wilmington, California, in 1910.

Photograph by Henry Magaziner (top), Banning House Museum (bottom)
is much harder and more brittle than wrought iron, so it is poorly suited to shaping with hammers or rollers. However, cast iron pours readily into molds and stands up relatively well to weather—ideal for ornamental work.

Because it could be molded, cast iron made possible the mass production of objects—first stoves, then machine parts and fencing—at a central factory, spawning a pivotal industry of the Industrial Revolution. Starting in the 1840s, Philadelphia’s Robert Wood foundry (and its successor, Wood & Perot) became the national leader in the field of ornamental iron. As Philadelphia was a major port, their castings were easily shipped to distant points. Thanks to a local sales office, Wood, Miltenberger & Co., much of New Orleans’ celebrated ironwork came from Wood & Perot. Their 1859 advertisement touted “200 varieties of Gallery Railings” and “50 (patterns) for verandahs.”

Many fence and railing castings were basically imitations of ornate stone balusters. Others were tracery. Regardless of the design theme, cast iron fences and railings tended to be somewhat massive, using repetitive design elements. Cast iron was not as thin and muscular as wrought iron, but it was much cheaper. Cast iron fencing and some railings came in regular lengths. They were just bolted or screwed together.

Besides lasting longer than wood, cast iron offered endless design permutations. Patterns were frequently mixed, and the same cast iron elements were often combined in different ways. While some castings were “signed” by the foundries, many were not. Furthermore, it means little if the pieces were pictured in the catalog of a firm. Competing foundries were quick to pirate each others designs and copied them freely.

Cast fences and railings lent themselves readily to reflecting the architectural styles of the buildings they surrounded. For example, it was now possible for the designer of a Gothic Revival house to enclose its front lawn with a cast iron rendition of Gothic tracery. The railing on the house’s front entrance steps could also feature Gothic themes.

Picturesque fence designs were developed for needs and whimsies. For example, Philadelphia’s Wood and Perot foundry even produced a cast iron cornstalk fence, commissioned by a New Orleans

In this typical composite wire fence with cast-ons (above), the owner perhaps picked the “Gothic Rose” gate design to harmonize with his Carpenter Gothic porch. The hairpin fence (right) became very popular in the late 19th century. Here the gate posts and rosette appear to be the only castings.
Cast and Wrought Repairs

As with painting, repairs to cast iron should be preaced with your detailed condition assessment of the piece, preferably after paint and rust have been removed. Select repair contractors based on samples of their work.

Once an iron casting is clean, examination may reveal imperfections—some even dating back to its original manufacture. Discoveries may include air holes, cracks, and cinders, or cold shunts—faults in the metal caused by interrupted pouring or “freezing” of the surface during casting. Some old castings may be excessively brittle.

Others may have impact damage, structural failure, broken joints, damaged connections, missing elements, or loss of anchorage in masonry. Cast iron regularly suffers from ill-advised repairs, too. Concrete poured in the central voids of railings and newel posts only attracts water, which promotes rust and, when it expands as ice, blows the castings apart.

Small, non-structural cracks and
holes can be filled with epoxy steel. Major breaks, however, are not as easy to mend. While cast iron is difficult to weld, it can be mended successfully if the welder is skilled and the welding rod is pure nickel. Of course, fencing is typically not used for load-bearing purposes, but it is important to note here that welding should never be used to repair structural cast iron members. Defective structural members must be replaced. So should any cast iron structural members found to be less than \( \frac{3}{8} \)" thick.

If parts of a casting are missing, it is possible to order new replacement iron castings from foundries who specialize in this work. Ideally, a new pattern should be produced for the mold, one that is slightly oversize. This is because once the pattern is removed from the sand mold and molten iron is poured into the void, the metal shrinks approximately \( \frac{3}{8} \) per foot as it cools. Where an exact match in size is not critical, it is possible for the foundry to use an existing piece of ironwork as the pattern. Remember, though, that the eventual casting will be slightly smaller than the original.

Replacement castings can also be made with aluminum, which was not available during the cast iron period. Aluminum will not rust, but it must be isolated from the rest of the ironwork or galvanic corrosion is likely to occur (see page 39). For reassembling old cast iron elements or adding new ones, use only stainless steel pins or bolts.

Wrought Iron Repairs

To assemble the components of a wrought iron object, the iron craftsman draws on various mechanical options. If he rivets, his rivet heads are not countersunk but remain exposed, becoming part of the design. If he collars, he combines the parts with strips of iron, bent while hot around the abutting members. When the iron collar strips cool, they shrink and clutch the members in a very tight grip. If the craftsman produces a true hand-hammered weld, he beats together two pieces of metal that have been softened by gradual heating. Such a weld swells slightly at the point of juncture and looks very different from today’s welds produced with oxy-acetylene torches or electric arcs. Where metal is missing, the craftsman will typically fashion new parts from mild steel.

While able to withstand tremendous compression, cast iron is brittle and vulnerable to cracking caused by impact or internal expansion. Since this post is still structurally intact, it may need only caulking to prevent water intrusion and further damage.
physician to keep his wife “from feeling homesick for her native Iowa.” The same fence was later used at the historic Short-Favrot House in the city’s Garden District. As commuter railroads gave rise to early suburbs, better-fixed families seized the opportunity to escape industrial cities and move “back to nature”—hence the fashion for naturalistic fencing.

Wire and Hairpin Fences
BY THE MID-19TH CENTURY, DRAWN WIRE fences and gates became available. In this process, the precursor to modern chain-link fence manufacture, molten wrought iron was drawn from dies to produce wires $\frac{3}{8}$ to $\frac{1}{2}$ in diameter. Lengths of wire were then cold-bent around jigs to form diamond and loop patterns, or crimped for decorative effects. The leading manufacturer in this field was John Wickersham’s New York Railing Company. Beginning in the 1850s, Wickersham combined both wrought iron and cast iron technologies in “composite” fences and railings. The wires were fixed in place by casting solid rosettes, called “cast-ons,” at the points of intersection without the aid of rivets. Wickersham and his competitors also cast the surmounting pickets directly upon the railings (see “Early Wire Fences,” March/April 1992).

Late in the 19th century tastes moved away from elaborate castings and drawn wire fences. Hairpin wrought iron fences became very popular. Thinner and simpler in line than cast iron, they would often be combined with cast gate posts and features. Unfortunately, many fine decorative fences were lost to scrap metal drives during the two world wars.

Appropriate Iron
TODAY’S OLD-HOUSE OWNERS, PERHAPS HEEDING the advice of tastemakers like Samuel Sloan, often wonder which style or kind of fence or railing is appropriate for their property. North America is rich with a variety of architectural styles. While there are numerous exceptions, houses connected with these styles or eras generally had wooden fences; colonial, Federal, gingerbread Victorian, Stick, Shingle, and Colonial Revival.

On the other hand, iron fences and railings often appear with houses showing the influence of these styles: Gothic Revival, Italianate, Second Empire, Richardsonian Romanesque, Arts & Crafts, Beaux Arts Classicism, Georgian Revival, Jacobean Revival, and Spanish Provincial. Town houses almost always had iron step railings at their front doors. Some Southern ante-bellum houses had wooden fences on their grounds and iron railings on their porches and balconies.

Whatever their nature, railings, fences, and gates that date from the glory days of iron are worth the effort to retain. Besides being costly—if not nearly impossible—to reproduce, they are examples of our building heritage as much as the houses they enhance.

HENRY J. MAGAZINER is a historical architect based in Philadelphia, Pennsylvania. His book The Golden Age of Ironwork is to be published by Skipjack Press.

In keeping with the Greek Revival bank building (right), William Strickland (1788–1854), designed this cast iron fence using the Greek anthemion or honeysuckle motif replete with small spears. As roof cresting (bottom), cast iron fencing was popular on both Gothic Revival and Second Empire-style buildings because it softened the line between building and sky.

In keeping with the Greek Revival bank building (right), William Strickland (1788–1854), designed this cast iron fence using the Greek anthemion or honeysuckle motif replete with small spears. As roof cresting (bottom), cast iron fencing was popular on both Gothic Revival and Second Empire-style buildings because it softened the line between building and sky.
Footings and Fittings

Unlike their wooden cousins, freestanding iron fence posts must be installed in concrete. Earth alone cannot support them. The concrete footing must also be deep enough to extend below the frost line (at least 3' in the snow belt) in order to keep the fence from heaving in the winter.

Iron railings set in exterior masonry (marble, granite, or brownstone, for example) should be set in oversized holes. Traditionally, molten lead is then poured around the sunken stanchions of the railing, embedding them. The craftsman handling molten lead must be sure that the bedding holes are absolutely dry. Otherwise the lead will spatter and may injure the pourer. When the lead solidifies, it is sufficiently soft to accommodate the expansion and contraction of the iron due to temperature change.

Cast iron newel posts, most commonly seen on urban front step railings, were often designed to be anchored with a single threaded rod. The rod runs up through the middle of the newel from a mount in the masonry landing, and the newel can often be restabilized by tightening a nut or finial at the top. First, wire brush the threads, then soak them liberally with penetrating oil (WD-40 or similar product). Afterwards, tighten the hardware cautiously to avoid stripping the threads. Heat from a torch will often loosen up a frozen nut.

Mating Metals

Never bed two pieces of exterior ironwork—be they wrought or cast iron—directly upon each other. Once they are so joined, there is no way to paint and protect the two touching iron surfaces. Eventually water will find its way between them, rusting the bottom of the top member and the top of the bottom member—both unprotected.

Rusting iron expands, so the joint will open. In the winter, more water will enter and, if it freezes, expand further. Also, the rust will wick in more water, accelerating the rusting.

Outdoors, where water is ever-present, two dissimilar metals must be insulated from each other or galvanic corrosion will take place. This happens when the dissimilar metals are in intimate contact while an electrolyte—typically water containing salt or hydrogen ions—is present. The corrosion varies, depending on the relative sizes of the metals and their position on the electrochemical series. The more active metal will be attacked and corroded. Thus aluminum will be attacked when it is in contact with a less active (noble) metal, such as cast iron. Mild steel, which is close to iron on the galvanic scale, is an appropriate material for patching cast iron.

To prevent electrolytic action in cases where aluminum parts are introduced into an iron fence or railing, insulate the different metals from each other with good spar varnish. Apply several coats to the mating surfaces, then be sure that the varnish does not become damaged while assembling the parts. Cast fiberglass sidesteps the issues of corrosion altogether, and may be practical for reproducing small, decorative elements.
THE UNDERACHIEVING CANTILEVER

The restoration of this Prairie School landmark’s roof offers an education in progressive early-1900s construction and late-1900s restoration.

BY RICHARD L. KRONICK
A central cross gable with a Gothic window is the hallmark of the Ontario Cottage, a house with distinct British roots.

ONTARIO COTTAGES

After the Napoleonic Wars, British officers began settling Ontario's towns, bringing with them a housing tradition that reflected their English roots. The result was the Ontario Cottage, which first appeared in the 1820s and 1830s. The building is probably a regional variant of the Regency cottage—the low-slung, informal house style with one or more porches that the British brought back from the tropics.

In its purest form, the Ontario Cottage is an oblong box, 1½ storeys high, three bays across, with a centered door. This basic plan was often enhanced with a cross gable, typically sheltering a Gothic Revival window, and a full-width verandah. Constructed of local wood, brick, or stone, the Ontario Cottage provided compact, easily built housing.

This stone variant from 1824 boasts five bays and a front door in the Adam style, called "Loyalist" in Canada, for a cold, relatively poor province.

The cottage's signature peak began appearing in the 1830s and 1840s. Practical yet political, the gable allowed Ontarians to light and ventilate their bedrooms, as well as express their strong connection with the mother country, where the Gothic Revival style was popular. And the gable's carved bargeboard afforded housebuilders a precious chance to decorate with ceps and trefoils.

The Ontario Cottage never caught on in the United States, which was moving away from English architectural influence. While the young nation was infatuated with Greek Revival pillars and pediments, Upper Canada embraced the Regency and Gothic Revival styles that met in the Ontario Cottage. The style, which continues to be built today, has been a favorite ever since.

—KATHERINE ASHENBURG
Toronto, Ontario

The Antique Hardware & Home Store

Everything You Need To Fix-up Your Home!

Medicine Cabinets • Umbrella Stands • Tables • Rocking Horses • Coffee Grinders • Door Hinges
Tiffany Lamps • Stoves • Toys • Bathroom
Gingerbread Trim • Refrigerators
Stops • Weather vanes • Chair Seats
Chair Seats • Door Accents • Tables • Gold
Outdoor Decor • Runners • Porcelain Bowls
Shower Conversions • Switch Plates
Canning Products • Stoves • Plumbing Fittings • Door Hardware • Curtain Tiebacks
Soap Holders • Hand Held Showers • Bathroom Shelves • Stoves • Sinks
Medicine Cabinets • Umbrella Stands • Rocking Horses • Tin
Stoves • Toys
Cabinets
Runners
Specialty Shutter Hardware • Heat Registers & Grills • Switch Plates
Plumbing Fittings • Curtain Tiebacks • Canning Products • Shutter Hardware • Hand Held Showers
Bar Rails • Specialty Shades • Bathroom Shelves • High Tank Toilets • Tables
Soap Holders
Door Hinges • Tin Ceilings • Toilets • Weather vanes
Gold
Leathering • Shower Conversions • Window Hardware
Canning Products • Shutter Hardware • Tables • Area
Tiffany Lamps • Stoves • Gingerbread Trim • Bathroom
Sinks • Refrigerators • Tin Ceilings • Toilets • Runners
Rails • Chair Seats • Door Accents • Tables
Outdoor Decor • Switch Plates
Umbrella Stands • Bathroom
Tiffany Lamps • Stoves • Wallpaper
Fixtures • Stoves
Mechanical Banks • Door Stops • Brass Bar
Gold Leafling • Door Hinges • Toys
Medicine Cabinets • Weather vanes
Fixtures • Coffee Grinders • Area Rugs
Dishware • Stoves • Heat Registers & Grates • Toys

I Guarantee The Lowest Prices Anywhere.
Send In This Coupon, Or Give Me A Call
At 1-800-422-9982, Ext. 3005
And I'll Send You A Copy
Of Our Latest Catalog.

FREE!

Yes, Send Me Your Catalog!

Name __________________________
Address ________________________
City ____________________________
State ____________________________
Zip _____________________________

Send to: The Antique Hardware Store
1C Mathews Court, Hilton Head Island, SC 29926

Or Call 1-800-422-9982, ext. 3005
SOMEONE ASSOCIATED WITH THIS 19TH CENTURY STONE HOUSE IN EASTERN PENNSYLVANIA CLEARLY HAS A yen for additions. It is possible to successfully add on to an old house, if you respect the existing structure. Many of the changes made here, however, seem to belong to another building.

Let's start with materials. The original house probably looked a lot like the example below—a long, rectangular form, built with irregular rubblestone coursing. The new additions shift the focus to smooth, white vinyl siding, probably over wood-frame construction.

Additions usually work best when they read as secondary. In this instance, the side addition looms larger than the original house. And there's no getting around the new third storey, which rests on top of the house. In fiddling with the roof, the builder also altered the roofline—a guarantee of major change, since roofs generally comprise 30% of a building's surface. Put all the alterations together, and there's not much left of the original structure. It's been ignored, one might say. And in this case, ignorance isn't bliss.

Thanks to Steve Rosenberger of Easton, Penn., for spotting these examples along the New Jersey-Pennsylvania border.

Blindsided

The stone house in Finesville, New Jersey, at right, has probably seen a few alterations of its own. The builder used complementary materials and massing.

WIN FAME AND $50. If you spot a classic example of remuddling, send us clear color slides. We'll award you $50 if your photos are selected. The message is more dramatic if you send along a picture of a similar unremuddled building. (Original photography only, please; no clippings.) Remuddling Editor, Old-House Journal, 2 Main Street, Gloucester, MA 01930.

The stone house in Finesville, New Jersey, at right, has probably seen a few alterations of its own. The builder used complementary materials and massing.
Maple Grove Restorations

Interior Raised Panel Shutters
Raised Panel Walls
Wainscoting
P.O. Box 9194 Bolton, CT 06043-9194
(860) 742-5432
Color Brochure: $2.00

EXTERIOR SHUTTERS
Shipped Anywhere
Moveable Louvers, fixed louvers or raised panel.
Custom curved tops.
Unfinished or painted in your brand & color.
Interior Plantations in 2½" and 3½" louvers.
Hinges and Holdbacks.

The Woodfactory
Authentic Victorian Millworks
111 Railroad St., Dept. OH
Navasota, TX 77868
409-825-7233
Moldings • Screen Doors • Porch Parts
Custom Woodwork • Ornamental Trim
Send $2.00 for a Catalog

slate & tile roofing

NEW & VINTAGE
Looking for that special finishing touch for new construction or a restoration project? We carry a wide variety of patterns & colors in new & vintage slate, clay tile, & others....Call us whether you need 5 States for a roof repair or 50 squares of slate for a roof renovation.

CHIMNEY TOPS
Genuine Victorian Antiques
(European and American)
The Finishing Touch for Your Chimney,
Plain to Fancy
Also, Ornate European Cast Iron Fall Pipe Tops
BENTLEY ENTERPRISES
1935 BUSH RUN ROAD
AVELLA, PA 15312
PHONE/FAX 412-545-3901

SQUARE DRIVE SCREWS
Simply the Best!
Square Drive Beats Driver Slippage
Hardened Steel for Extra Strength
Deep Thread for Super Grip
Also Stainless And Brass.
Send $3 for Samples and Catalog

SUGGESTIONS FOR HOUSEHOLD REPAIR
Use WEST SYSTEM® epoxy to solve dozens of common problems around the house and yard. A 14-page illustrated manual shows you how. Order your FREE copy today.
WRITE GOUVEON, DEPT. OHJ
PO BOX 908, BAY CITY MI 48707
OR CALL 517-684-7286

CHIMNEY TOPS
Genuine Victorian Antiques
(European and American)
The Finishing Touch for Your Chimney,
Plain to Fancy
Also, Ornate European Cast Iron Fall Pipe Tops
BENTLEY ENTERPRISES
1935 BUSH RUN ROAD
AVELLA, PA 15312
PHONE/FAX 412-545-3901

SUGGESTIONS FOR HOUSEHOLD REPAIR
Use WEST SYSTEM® epoxy to solve dozens of common problems around the house and yard. A 14-page illustrated manual shows you how. Order your FREE copy today.
WRITE GOUVEON, DEPT. OHJ
PO BOX 908, BAY CITY MI 48707
OR CALL 517-684-7286

EARLY AMERICAN LIGHTING
Authentic handmade reproductions, faithful in every detail to the originals. Many in famous museum collections.

Boyer’s Ornamental Iron, Inc.
Three generations of craftsmen since 1902
EASY BOLT TOGETHER SYSTEM
5 STANDARD STYLES
CUSTOM DESIGN AND FABRICATION ON REQUEST.
Available in spray painted enamel or powder coat finish

Boyer’s Ornamental Iron, Inc.
4407 State St, Bettendorf, Iowa 52722
(319) 355-3709
GLASS INTERIOR
Storm Windows
- Maintain the charm & beauty of existing windows
- No replacements. NO asphalt triple-track storms
- Eliminate drafts completely
- Reduce heating & cooling 36% up to 50%
- Low "E" & UV Protection available
- Complimentary DIY instruction
- Factory direct custom sizes
- Easy - No tools - Snap In & Out

The Alternative
WINNOW COMPANY
1-800-743-6287 • (888) 951-9991 • fax: (888) 951-6708
19 Herman Drive, Rimensbury, CT 06076

CUSTOM SHUTTERS
Interior and Exterior Wholesale to the Public
2 1/2" Moveable louver, raised panel and fixed louver shutters. Custom finished or unfinished. Complete selection of hardwood.
$2.00 brochure
Shutter Depot
rt. 2 Box 157
GREENVILLE, GA 30222
706 • 672 • 1214

BALDWIN
Lexington Design mortise lock handleset with knob and oval plate trim inside - polished brass with new BALDWIN Lifetime Finish $295.00 plus shipping cost. Mass. residents add 7% tax. VISA, and MasterCard accepted.
Call toll-free 800-821-2768
Ask for the Hardware Department
Addison
126 E. Amite St., PO Box 102,
Jackson, MS 39205

HANDCRAFTED
MAHOGANY
SCREEN-STORM DOORS
Styles include Victorian & Country
SEND $3. FOR CATALOG TO:
Touchstone Woodworks
DEPT. OHJ PO BOX 112
RAVENNA, OH 44266
(330) 297-1313

ORIGINAL FINISH
RESTORATION SOAP
Developed by a restoration firm for cleaning historic finishes. Mixes with mineral spirits or water for use on furniture, floors and woodwork.
Super-Concentrate: two convenient sizes 6oz and 16oz
Visa & MasterCard • 1-800-444-8900
INTARSIA ARTS

Fine American Lighting
Real American Value
From Lighting by Hammerworks
Lanterns, Sconces, Chandeliers, and Hand-Forged Hardware
Send $5 for two full color catalogs and discover how you can enjoy the beauty and quality of our Colonial lighting in your home to:
Lighting by Hammerworks
6 Ficenmont St., Dept. OHJ, Worcester, MA 01605, 508-754-3144
133 Main St. Dept. OHJ, Meredith, NH 03260-2714 http://www.hammerworks.com

J.L. Powell & Co., Inc.
Manufacturers of Quality Antique Pine Flooring
Introducing our new product...
Antique Heart Pine Floor Registers
Our floor registers are made from the same beautiful and warm Longleaf Heart Pine as our tongue-and-groove flooring, and are a great complement to your finished floor.
Call us today at 1-800-227-2007 for pricing & availability (904) 643-9899 FAX: (904) 643-2184
500 SOUTH MADISON ST., WHITEVILLE, NC 28472
PARENT COMPANY ESTABLISHED 1957

AUTHENTIC ANTIQUE HARDWARE
- One of a Kind
- No Reproduction
- Door Hardware
- Furniture Hardware
- Door Knockers
- Curtain Tie-backs
- Twist Bells
Eugenia's
5370-72 Peachtree Road, Chamblee, GA 30341
800-337-1677 / fax: (770) 458-5966 CATALOG $1

WOODEN FLOOR GRATES
Specializing in larger sizes
6"x8" to 20"x32"
3 floor models and baseboard model unfinished or prefinished
Send $2.00 for catalog and receive a $5. coupon to:
GRAITE VENTS
(616) 459-4306

IRON FENCING & GATES
Manufacturer of Iron Fencing and Gates
Pattern in Victorian and Many Decorative Styles
Send $2.00 For Catalog:
CUSTOM IRONWORK, INC.
P.O. Box 180
Union, KY 41091
(606) 384-4122
FAX (606) 384-4848

CLEARANCE SPECIAL
All First Quality Hardware
Knobs • Pulls • Hinges
Black, Copper, Pewter, Old English
Also a complete line of...
Belwith, Amerock and Christensen Brass Hardware
Call or Fax your order to...
Tel: 508-995-5123
Fax: 508-995-5333

96 OLD-HOUSE JOURNAL
Smith-Cornell impressions

Architectural Antiques

We specialize in:
• Sand cast plaques in Bronze & Aluminum
• GraphicsPlus-Smooth Surface Plaques and Markers
• Combination of cast with a GraphicsPlus insert
• Old Standard National Register Plaques

S-C
1545 Holland Rd. • Suite K
Maumee, Ohio 43537
419.891.4335 • 800.325.0248

Premier source for salvage items nationwide.
• Doors, windows, stained glass
• Brass lighting fixtures
• Victorian plumbing fixtures & accessories
• Fireplace mantles and accessories
Visit our picturesque Maine oceanfront location, where Yankee value is still important. Select from thousands of quality architectural items.

Architectural Antiques

Antique Wide Plank Flooring
Heart Pine • Eastern White Pine • Red Pine
Chestnut • Oak

New Plank Flooring
Ash, Maple, Oak, Cherry, Eastern White Pine

Antique & Reproduction
Beams & Timber Frames
Hand-Hewn, Rough Sawn & Planed Surfaces
Mortise & Tenon, Dovetail Joinery

ARCHITECTURAL TIMBER & MILLWORK
35 Mt. Warner Rd, PO Box 719, Hadley MA 01035
(413) 586-3045 FAX (413) 586-3046

NOT ALL CHIMNEY LINERS ARE CREATED EQUAL.

Home restoration experts know the difficulties involved in making old chimneys into safe and structurally sound chimneys, while maintaining their historic integrity. That’s why more and more people are calling on GOLDEN FLUE. We’re the cost-effective masonry liner experts with America’s most fire-retardant chimney lining mixture. Poured and hardened right in the chimney, GOLDEN FLUE even increases the strength of the original structure.

Before you settle for a stainless steel liner, tile liner, or GOLDEN FLUE “look-a-like” call the experts who started it all for a free brochure and the name of an authorized GOLDEN FLUE dealer in your area.

Call For A FREE Brochure Today. 800-446-5354

GENUINE MILK PAINT
Authentic Colonial and Shaker Finish
In powder form Add water and mix
environmentally safe non-toxic odor-free easy to use long wearing will not fade
16 colors include: Sam Red, Salem Red, Pumpkin, Marigold Yellow, Mustard, Buttermilk, Bayberry Green, Tavern Green, Lexington Green, Sea Green, Federal Blue, Scarlet Blue, Blue, Pitch Black, Oyster White, Snow White
See your local dealer
If none locally, write or phone for free literature.
Triat pint, only $8.50, plus $4.00 shipping & handling.
The Old Fashioned Milk Paint Company
Dep’t J, Box 272, Groton, MA 01450-0222
Telephone (508) 448-6336 FAX (508) 448-2754

Sunflower Showerhead Company
8” Diameter
Brass $150
Chrome $125
Installs into standard plumbing
For More Information: P.O. Box 4218-J Seattle, WA 98104
(206) 722-1232 (FAX) 722-1321

FREE COLOR CATALOG
1-800-876-6123
ASK FOR DEPT. 2507
Hundreds of styles, fabrics and colors to choose from... something for every style of home. More lengths and widths than you’ll find almost anywhere. Plus matching bedding, lamps and accessories. Marvelous decorating solutions... wonderfully affordable!
Satisfaction guaranteed or your money back.
Country Curtains
AT THE RED LION INN
DEPT. 2507, STOCKBRIDGE, MA 01262

MAY/JUNE 1997 95
EMPORIUM

PRODUCT NETWORK NO. | PAGE NO.
---|---
70 | AIABBINGTON, Affiliates
71 | American, Inc.
59 | American Group
58 | American Manufacturing Company
25 | Alkaid, Inc.
26 | Alchemy Metal Company
37 | All-Walnut Plates
35 | Alpine Woodworks
36 | Almond Vacations
34 | Alternative Window Company
24 | American House Supply
36 | American Industrial Tool Industries
25 | American Wood Products
48 | Antique Hardware & Home
51 | Architectural Antiques
50 | Architectural Iron Company
52 | Alaskan Timbers & Millwork
40 | Anslow & Vanishing Lighting
35 | Antique Receptacles
34 | Antique Paper
29 | Bessemer Blast
27 | Bellefonte Imports
26 | Biltmore Ornamental Iron Inc
19 | Bradbury & Bradbury
20 | Brandau Woodwork
59 | Cabot Stains
58 | Carlisle Restoration Lumber, Inc.
56 | Certified Chimney Contractors, Inc.
28 | Chadwick, Inc.
29 | Charles Street Supply
40 | Chelsea Decorative Metal
39 | CindyWeb & Company
22 | Classic Accessories
21 | Commercial Cutter Systems
48 | Country Curtains
46 | County Designs
47 | Country Road, Ltd.
68 | Crawford Hardware Co.
67 | Crawford Lumber
66 | Crowd City Hardware
65 | Crowd Point Cabinet
64 | Crowd Point Cabinet
63 | Cumberland Woodcraft
62 | Cumberland Network
58 | Custom Wood Turnings
59 | Decorative Supply
58 | Del Reo Rowan Turnings
57 | Door Designers Inc.
56 | Doorus Lower Products
55 | Donald Duram Company
54 | Elk Corporation
53 | Emer Landmark
52 | Englesson's Plastics
51 | Explorer Manufacturing
50 | Expo Products
49 | Exotic Woods
48 | Exotic Woods
47 | Exotic Woods
46 | Exotic Woods
45 | Exotic Woods
44 | Exotic Woods
43 | Exotic Woods
42 | Exotic Woods
41 | Exotic Woods
40 | Exotic Woods
39 | Exotic Woods
38 | Exotic Woods
37 | Exotic Woods
36 | Exotic Woods
35 | Exotic Woods
34 | Exotic Woods
33 | Exotic Woods
32 | Exotic Woods
31 | Exotic Woods
30 | Exotic Woods
29 | Exotic Woods
28 | Exotic Woods
27 | Exotic Woods
26 | Exotic Woods
25 | Exotic Woods
24 | Exotic Woods
23 | Exotic Woods
22 | Exotic Woods
21 | Exotic Woods
20 | Exotic Woods
19 | Exotic Woods
18 | Exotic Woods
17 | Exotic Woods
16 | Exotic Woods
15 | Exotic Woods
14 | Exotic Woods
13 | Exotic Woods
12 | Exotic Woods
11 | Exotic Woods
10 | Exotic Woods
9 | Exotic Woods
8 | Exotic Woods
7 | Exotic Woods
6 | Exotic Woods
5 | Exotic Woods
4 | Exotic Woods
3 | Exotic Woods
2 | Exotic Woods
1 | Exotic Woods

PRODUCT NETWORK NO. | PAGE NO.
---|---
51 | Interior Arts
52 | Iron Shop, The
53 | J.R. Products
54 | J.L. Powell & Company
55 | James Peters & Sons
56 | Jewelry Company
57 | Kalsie House Improvement
58 | Kennedy Company
59 | King's Chandelier Company
60 | Liberty Cedar
61 | Lighting by Hammerworks
62 | Mar The Antique Place
63 | Maple Grove Restorations
64 | McFeely's
65 | Michigan Hoosier Co.
66 | Midwest Architectural Wood Products
67 | Miller Manufacturing
68 | Monarch Radiator Enclosures
69 | Newbridge Communications
70 | Nixolite of America
71 | Northern Acres Design
72 | Old Fashioned Millwork Co.
73 | Oregon Wooden Screen Door
74 | Paiva Finishes & Copper
75 | Period Lighting Fixtures
76 | Perik Industries, Inc
77 | Phelps Company
78 | Pioneer Millworks
79 | Preservation Products
80 | Prime Distributing
81 | Princeton Press
82 | PurTech Systems, Inc.
83 | Pullman Manufacturing Corp
84 | Reggie Register Co.
85 | Renaissance Lany & Flusher
86 | Renovator's Supply
87 | Restorations Co.
88 | Roy Electric Company
89 | Royal Conservatories
90 | S.B. Trout
91 | S.H. Christiansen, Inc.
92 | Schroeder Manufacturing
93 | Shutter Depot
94 | Shuttercraft
95 | Smith-Williams Press
96 | Stelleh's Therm-Glo, Inc.
97 | Stover Acrylic Designs
98 | Stouffer's Fasteners
99 | Sundowner Screen Company
100 | Sybron Brand
101 | Timberlane Woodcrafters
102 | Touchstone Woodwork, Inc
103 | Uncle John's Gingerbread House
104 | Van Dyke's
105 | Vintage Wood Works
106 | View Hill
107 | Volvo Supply Corporation
108 | W.F. Norman Corporation
109 | Ward Cabinet Co.
110 | Williams & Hussey
111 | Wood Factory
112 | Wood Kote Products
113 | Woodhouse
114 | Woodhouse
115 | Zehringer Corporation

Advertising Sales Office
2 Main Street, Gloucester, MA 01930
(800) 1570-1133
Becky Bernie, National Sales Manager

HOOSIER CABINETS
Hand Crafted Hoosier Replicas
- Hoosier Cabinets
- Pantries
- Porcelain Top Tables
- Hardware
- Authentic Porcelain Tops
- Tin Flour & Sugar Bins
- Tin Bread Drawers
- Carved Spice Racks
- Cooking Charts
- Ant Traps & More!

Hardware Catalog $5.00
Hoosier Catalog w/finish samples $9.60
$ w/ descriptive Hoosier video $19.60

The Michigan Hoosier Co.
253 W. Peters Rd. Dept. obj
West Branch, MI 48661
(517) 345-7098

VAN DYKE'S RESTORERS
Supplies for woodworkers and antique restorers!
- Caming & veneers
- Glass & bubble glass
- Roll top accessories
- Hoosier accessories
- Carvings & moldings
- Furniture components
- Over 1,000 Brass, Glass & Wooden Hardware Items
- Much, Much More

Call or Write
For Your Free Catalog
1-800-843-3320
Dept. 60167 + PO Box 278
Woonsocket, SD 57385

Old-House Journal Web Site Directory
ABATRON, INC.: http://www.abatron.com
ALBANY WOODWORKS:
http://www.Io.com/~webreach/AlbanyWoodw.htm
ANTIQUE HARDWARE & HOME:
http://www.antiquehardware.com
CABOT STAINS:
http://www.cabotstain.com
CHADSWORTH 1.800.COLUMNS:
http://www.columns.com
CHELSEA DECORATIVE METAL CO.:
http://www.theretinianman.com
CROWN POINT CABINETRY:
http://www.crown-point.com
DELEON RESTORATION:
http://www.medtax.com/drw
DONALD DURHAM:
http://www.waterputty.com
ELK PREMIUM ROOFING:
http://www.elkcorp.com
ERIE LANDMARK CO.:
http://erie landmark.com/quotes
FAUX EFFECTS:
http://www.fauxfx.com
GLOUCESTER CO.:
http://www.phenoseal.com
GRANVILLE MANUFACTURING:
http://www.woodsliding.com
HOMESAVVER CHIMNEY:
http://www.homesavver.com
THE IRON SHOP:
http://www.ironshop.com
J.R. BURROWS:
http://www.burrows.com
KING'S CHANDELIER CO.:
http://www.King'schandelier.com
LIGHTING BY HAMMERWORKS:
http://www.hammerworks.com
NIXALITE OF AMERICA:
http://www.nixalite.com
PORTER CABLE TOOLS:
http://www.porter-cable.com
PROTECH SYSTEMS:
http://www.hearth.com/pts
SB TOOL:
http://www.bbschooldools.com
http://www.skttools.com
SPECIFICATION CHEMICALS INC.:
http://www.spec-chem.com
TIMBERLANE WOODCRAFTERS INC.:
http://www.timberlane-wood.com
VINTAGE WOOD WORKS:
http://www.vintagewoodworks.com
WOOD KOTE:
http://www.woodkote.com
WILLIAM ZINSSER & CO.:
http://www.zinsser.com
True Lead Crystal Knob Sets

Spectacular! Exact Duplicates, Mirror Silvering Inside. Fits All Doors. Brass - Chrome - Antique Brass

Clear or Amber
Passage (Brass) 74.00
Privacy (Brass) 78.00
Dummy (Brass) 70.00
Knobs Only (Brass) 50.00
Add 11.00 for Chrome or Antique Brass.

Free 2nd Day Air on all orders! In stock for immediate delivery.

Cinder Whit & Company
Porches • Stairways • Wood Turnings

** Authentic Replicas **
Prompt Quality Service • Work From Drawings or Samples •
Porch Posts • Balusters • Newels • Spindles • Finials •
Lengths To 12 Feet • Free Brochure •

Ph. 701-642-9064 • Fax 701-642-4204
Toll Free 1-800-527-9064
733 Eleventh Avenue South
 Wahpeton, ND 58075

100% Cotton Shower Curtain!

Were they using plastic curtains when your house was built? Don’t think so. Be authentic and environmentally correct with our tightly woven 100% cotton duck shower curtain. It keeps water in the tub (no liner necessary) and it’s machine washable! Rustproof brass grommets.

Size: 6’ x 6’. White or Natural. Use with Mildew Stain-Away.
List: $35.75, SALE PRICE: $32.00 + 4. s&H. (until 6/30/97)

Send check to:
nope (non-polluting enterprises)
21 Winters Lane, Baltimore, MD 21228.
Free price sheet. Wholesale inquiries welcome.

ELEGANT, SOLID BRASS

Stair Rods
Holds Stairway Carpet in Place
Large 3/8" x 30" Polished Brass Rods

Ball, Urn or Pineapple Finials

Set of 13 $158.90 pppd.
Includes Rods, Finials & Fasteners

Singles $13.00/ea. MC, VISA, CK.

Easy, Fast Installation
Custom Lengths (814) 887-6032

HERITAGE BRASS CO.
5 Long St., Smethport, PA 16749

WOOD ROOFING
WESTERN RED CEDAR
5/8 X 18 TAPERSAWN SHAKES
ALSO: HIP & RIDGE CAP/FANCY BUTTS
CEDAR DECKING & ACCESSORIES
CLEAR BOARDS & TIMBERS

1-800-88CEDAR
401-789-6626
535 LIBERTY LANE
WEST KINGSTON, RI 02892

Free Brochure
Free shipping & lighting by Stickley and more.

Repairs & Craftsmen Hardware
Bruce Szopo
3860 Ellamae
Oakland, MI 48363
(810) 662-7652

MAY/JUNE 1997 93
"I'll have Your Order Ready In One Week" When you need a cast bronze national register plaque you want fast delivery. Net a six week run-a-round. At Healy Brothers Foundry, last delivery is our standard delivery on every order.

Call today... 800-626-3229 ask for me, Deanna, your personal Historic Preservation Specialist. I'll answer all your questions on design and installation.

FREE catalog, price quotes, historical society discounts, custom logos, and FAST-FAX artwork approval.

EXACT REPLICA OF THE BEAUTIFUL OLD TIN CEILINGS ARE NOW AVAILABLE IN DURABLE, LIGHTWEIGHT, HIGH IMPACT POLYMER PLASTIC. THEY ARE EASY TO INSTALL, PAINTABLE AND WASHABLE. AVAILABLE IN FIRE-RATED MATERIALS AND COLORS. SEVERAL PATTERNS FROM WHICH TO CHOOSE. PLEASE WRITE OR CALL:

 Exact replicas of the beautiful old tin ceilings are now available in durable, lightweight, high impact polymer plastic. They are easy to install, paintable and washable. Available in fire-rated materials and colors. Several patterns from which to choose. Please write or call:

ANTIQUE HEART PINE FLOORING
T&G Planks up to 11" wide
EXPOSED BEAMS
Dry • Aged • Superb
Heart Pine Stairparts

ANTIQUE HEART CYPRESS
Custom Milling • Doors
Paneling • Shutters

AMERICAN HARDWOOD FLOORING
Beautiful
Unfinished or Prefinished
Naildown or Gluedown

For a Free Brochure, call:
(504) 567-1155
http://www.io.com/~webreach/AlbanWoodworks.html

Alban Woodworks
P.O. BOX 729, ALBANY, LA 70711

COMMERCIAL GUTTER SYSTEMS
MILES AHEAD OF THE REST

TODAY'S TECHNOLOGY PRESERVING THE LOOK OF THE PAST

I f you appreciate the "Olde World" style of gutters and downspouts and desire to restore and preserve your home in harmony with the original intent of its design, Commercial Gutter Systems introduces authentic 6" seamless half-round gutter in both heavy copper and heavy aluminum.

- up to 27 lengths shipped safely
- complete line of half-round accessories
- casted brass & aluminum fascia brackets
- casted brass & alum. decorative components
- buy direct from the exclusive manufacturer
- information available upon request

5621 East 4 D.E., Avenue
Kalamazoo, MI 49004
Phone: 616-382-2700
Fax: 616-343-3141

ALABAMA Woodworks
P.O. BOX 729, ALBANY, LA 70711
Chimney Technique
28. PLASTER WASHERS — These inexpensive washers can restore loose ceilings and walls. Starter packet of 3 dozen washers with instructions, $4.75. Charles Street Supply.
32. CHIMNEY CLEANING, RESTORATION & REPAIRS — Year-round, full-service chimney cleaning, repair and restoration. We specialize in Ahrens, Supalit and stainless steel relining processes. Free literature. Certified Chimney Contractors, Inc.
33. DESIGN PORTFOLIO — Full-page drawings with descriptions of custom crafted traditional kitchens, and a color brochure featuring on-location photographs of Kennebec kitchens, $6.25. The Kennebec Company.
60. BUILDING PLANS — Colonial and Victorian-style garages, barns, sheds, garage apartments, studio cottages, and more. Illustrated catalog, $6.25. Country Designs.
61. METAL ITEM RESTORATION — Restoration and protection of registers, hinges, brass beds, cold air returns, lamps, window and door hardware, chandeliers, plumbing fixtures, and more. Literature, $5.25. Ehrman Plating.
75. PRESERVATION & RESTORATION — Acrymax Tin Roof restoration systems is high performance acrylic technology assuring years of waterproof protection. Free catalog. Preservation Products.
76. HOUSE PLANS — Offering a collection of cozy cottages in designs influenced by early European architecture, $12.25 per collection. Princeton Plans Press.
86. END BIRD POLLUTION — Bird control "X-perts" for over 30 years. Full line of bird and pest repelling products: sonic and ultrasonic units, visual scare devices, physical exclusions, non-toxic chemicals and NEW SPIKES. Free literature. Bird-X.
89. MILDEW CONTROL - E XTERIOR — Remove mildew stains quickly and easily without harming or discoloring painted surfaces, grass or shrubbery. Use for routine clean-up or for pre-painted mildew control. Free literature. Zehnag Corporation.
905. CONSERVATORIES — Designed in England, manufactured in the USA. Built on-site from cedar or aluminum/vinyl. Insulated glass and polycarbonate make these weatherproof designs easy to heat and cool. Free literature. Royal Conservatories.
906. IDEA BOOK — Unique 44-page color idea book features an exciting collection of column projects from Classic to Contemporary for interiors and exteriors. Includes Product Portfolio. All this for $10.00, plus $3.25 p/h. Chadsworth, Inc.

LITERATURE REQUEST FORM

Circle the numbers of the items you want, and enclose $3 for processing. We'll forward your request to the appropriate companies. They will mail the literature directly to you . . . which should arrive 30 to 60 days from receipt of your request. Price of literature, if any, follows the number. Your check, including the $3 processing fee, should be made out to Old-House Journal.

1. Free 42. Free 397. $6.75 622. Free 805. $2.50
2. $5.25 44. $4.75 401. $3.25 631. $25.25 806. Free
3. Free 47. $1.25 438. Free 645. $5.25 841. Free
4. Free 49. $3.25 439. Free 652. Free 853. $5.25
5. Free 53. $3.25 488. Free 659. $1.25 854. $4.50
6. $3.25 55. Free 492. $10.25 661. Free 863. Free
7. $2.25 73. Free 517. Free 675. Free 865. Free
8. $2.75 91. $5.25 518. $5.75 679. Free 874. Free
10. Free 110. $6.25 541. Free 687. $3.25 879. Free
11. $1.25 122. $6.25 545. Free 694. Free 891. $2.25
12. $2.25 128. $3.25 560. $2.25 702. Free 900. Free
14. $1.25 221. $2.25 568. Free 726. Free 906. $13.25
15. $2.25 242. $5.25 569. Free 728. $3.25 908. $15.25
16. $1.25 245. $3.25 580. Free 730. $3.25 929. Free
17. $10.25 294. $10.25 593. Free 733. Free 934. Free
21. Free 334. $4.00 603. $6.25 758. $12.25
23. $4.75 333. Free 615. Free 792. Free
24. Free 387. Free 621. $3.25 799. $5.25

Name ____________________________  
Company ____________________________  
Address ____________________________  
City ______ St ____ Zip ____________  
Phone ____________________________  

Total $__________  
Enclosed $__________  

Mail to: Old-House Journal, Products Network, 2 Main Street, Gloucester, MA 01930
This card must be mailed before October 31, 1997.
Many Years Ago we announced the renewed availability of our old-fashioned, solid wood architectural details!

Soon our quality details were turning up on the best dressed porches. Now, 10 thousand porches later, we've written the book! With 208 pages of authoritative insight, numerous construction details, and over ninety comparative drawings, Porches is really a must for anyone planning a porch.

Gable Decorations were an instant success when we began offering designs to fit any standard roof pitch. Easy ordering is fully explained in our Catalogue.

Over the Kitchen Sink...

Plain Doorways? Not since you’ve discovered our vast array of brackets! And don't forget our elegant & functional screen/storm doors for lasting first impressions!

Plumbing and Hardware

10. METAL ITEMS — Restorer of antique metal items such as door and window hardware, plumbing hardware, lighting fixture and fine silverware. Metal polishing and plating of silver, brass, bronze, copper and more. Free literature. Al Bar-Wilmette Platers.

11. WATER HARDWARE— Sash pulleys, sash chain, sash cord. Fine quality cast brass sash locks and lifts in traditional designs. All items in stock for immediate shipping. Free catalog with photos, information and template drawings. Phelps Company.

49. RENOVATION HARDWARE — Hard-to-find supplies including brass cabinet hardware, lighting, weather vanes, pedestal sinks, old-fashioned bathtub showers, and fixtures. Mail-order catalog. $3.25. Antique Hardware Store.

110. BATHROOM FIXTURES — A wide variety of antique and reproduction plumbing, tubs, porcelain faucets and handles, pedestal sinks, high-tank toilets, and shower enclosures. 96-page color catalog. $6.25. Mac The Antique Plumber.

202. RESTORATION HARDWARE — Over 1000 different brass items for homes and furniture. Plumbing, lighting, wall and ceiling coverings, tin ceilings, and more. Free literature. Hardware Plus.

390. REPRODUCTION BRASS SHOWER-HEAD — A unique 12-inch showerhead which generates thousands of waterdrops to cover the entire body in a gentle rain. Free brochure. J.B. Products.

397. HARD-TO-FIND HARDWARE — From the 17th century through the 1970s; using brass, iron, pewter, and crystal. Catalog includes 34 pages of informative text and 372 pages of high-quality restoration hardware, $6.75. Crown City Hardware.

535. FIXTURES & ACCESSORIES — Bathroom fixtures and accessories such as door, window, and cabinet hardware. Lighting fixtures. Free catalog. Renovator’s Supply.


Restoration Supplies & Services


17. GLOWCORE SERIES “A” BOILER — 97% efficient, CPVC vent, scaled combustion and the smallest foot print in the industry, define modern boiler technology. The series “A” will lower heating costs and provide domestic hot water for the grand old home. Free literature. Glowcore.

FOR RESTORING GREAT OLD CHIMNEYS ON GREAT OLD HOMES

New life for gas, oil, and woodburning chimneys. Our UL Listed, flexible, stainless steel liners are unsurpassed in strength and protection. Call or write for a FREE brochure and the name of an installer in your area. (800) 437-6685.

HomeSaver Chimney Liners • P.O. Box 664, Fairfield, IA 52556 • www.homesaver.com

AUTHENTIC PERIOD WOODEN BLINDS
MOVEABLE LOUVER SHUTTERS
OLD-FASHIONED WOODEN PORCH SHADES
CUSTOM MANUFACTURED
Call or write for free brochure and cost schedule

DEVENCO
120F Waller Miller Rd.
Ste. 240, Dept. OHJ-06.97
Williamsburg, VA 23185
1-800-888-4597

HANDCRAFTED
To The Drip On The Tapered Candles

Early American Lighting since 1938; chandeliers, copper lanterns, and wall sconces.

Knowledgeable collectors, Restorations and Museums have been buying our fine fixtures for over 30 years. A list is available on request. $2.00 for catalog.

GATES MOORE
River Road, Dept OHJ
Silvermine Norwalk, Conn.
06850 • Tel. (203) 847-3231

COPPER • BRASS
BRONZE & PEWTER
METAL COATINGS
(WATER BASE FOR ALL SURFACES)

PATINA

ANTIQUE FINISHES
VERDIGRIS, GREEN, BLUE BLACK, BROWN, BURGUNDY

FREE BROCHURE
1-800-882-7004

Fireplace & Chimney RESTORATION
• Lining (all types) • Chimney Cleaning • Chimney Repairs
Certified Chimney Contractors
Serving Tri-State Area Since 1960
3122 Route 10 West • Denville, NJ 07834
201-361-1783

We wrote the book!
Our 150 years of combined experience wrote Porches - 208 pages of insight for building or decorating a porch! Many construction details + 90 comparative drawings show porch trim options. $12.95

Also -104 page Catalogue of Architectural Details for interior & exterior $2 by return mail

VINTAGE WOODWORKS
Hwy 34 • Box R, #3184, Quitman, TX 75474
903-356-2158 • www.vintagewoodworks.com

sash pulleys, sash chain and traditional brass window hardware

PHELPS COMPANY
ARCHITECTURAL SPECIALTIES
8 0 2 - 2 5 7 - 4 3 1 4
EMPERIUM Products Network (cont.)

polyurethanes and more. Free literature. Wood Kote Products, Inc.

Furnishings

223. ANTIQUE FANS — Restoring and selling of antique fans and parts. Offering a large changing inventory. Detailed brochure, $2.25. The Fan Man.

355. RADIATOR ENCLOSURES — The durability of steel with baked enamel finish in decorator colors. More efficient than paint, and keeps drapes, walls, and ceilings clean. Free catalog. ARSCO Manufacturing.


722. AMERICAN COUNTRY-STYLE FURNITURE — Shaker, traditional, and oak tables and cabinets. Accessories include pillows, doorknobs, rings, and specialty items. Free catalog. Yelll House.

869. 19TH CENTURY BARNWOOD — We sell barnwood very reasonably and we're the only haxers of 19th century furniture to use 19th century barnwood. Free full color brochure. Country Road Assoc., Ltd.

Lighting Fixtures


334. CHANDELIERS & SCONCES — Original designs of all-crystal, using genuine Stass. Solid brass and vermilin crystal reproductions of Victorian gas styles (wired). Catalog, $4.00. King's Chandelier Company.

560. EARLY AMERICAN LIGHTING — Hand-made reproduction fixtures include wall sconces, chandeliers, copper lanterns, & hall fixtures. Catalog, $2.25. Gates Moore Lighting.


Metalwork

70. HISTORIC MARKERS — Proclaim your home's age with a cast bronze or aluminum marker. Manufacturers of plaques for National Register, American Buildings Survey, and custom work. Free catalog. Smith-Cornell Impressions.


545. SPIRAL STAIRS — Magnificent for Victorian settings. The beauty of cast iron, but not the weight. All components, except handrail, are solid castings of high-strength aluminum alloy. Free color brochure. The Iron Shop.

569. GRILLES & REGISTERS — Manufacturers of a complete line of elegant cast-brass and traditional cast-iron decorative grilles and registers. Color catalog, $1.25. Reggio Register Company.

774. NATIONAL REGISTER PLAQUES — Solid bronze cast plaques proclaiming your house as being placed on the National Register. Custom bronze plaques. Buy foundry direct for

HANDBOMELY CRAFTED WOODEN SCREEN DOORS

Whether your home is on the Historical Register, or still on the drawing board, Oregon Wooden Screen Door Company has a variety of screen doors and energy-efficient storm doors suited to you.

Designed for interior as well as exterior use, each door component is constructed using the finest materials and joined with wooden pegs and glue (no nails).

For complete information and styles available, send $3 (refundable with Purchase) for our catalogue. Oregon Wooden Screen Door Company Dept. O.H., 2767 Harris, Eugene, OR 97405
Architectural Sheet Metal Ornaments

Now available from the W. F. Norman Corporation, makers of Hi-Art® Steel Ceilings - a complete, 94-year-old line of architectural sheet metal ornamentation including:

- moldings  • balusters  • finials  • marquee  • crewnings  • lion heads
- brackets  • arms  • scrolls  • enfrchments  • garland  • conductor heads
- corbels  • capitals  • leaves  • glass pendant  • panel  • and fittings
- rosettes  • figtions  • friezes  • ornments

Over 1300 catalog items available in zinc or copper. Custom reproduction inquiries invited.

W. F. NORMAN CORP.

Complete catalog $5.50 • P.O. Box 313, Nevada, MO 64772 • 800-641-4038 • fax 417-667-1708

“I sell barnwood very reasonably.

Call me for a price quote.”

Joe Rizzo, Proprietor - Country Road Associates, LTD.

- Flooring in rare chestnut, wide-board pine, oak, & heart pine
- All wood in natural state, with trimmed ends
  (can be thickness planed and tongue & grooved)
- Random widths from 3" to 20"
- Weathered barnsiding in different natural colors: classic red, gray, silver gray, and brown.
- Large Quantities available  • Deliveries throughout the USA

AUTHENTIC 19th C. HAND HEWN BEAMS UP TO 13" WIDE, RANDOM LENGTHS

COUNTRY ROAD ASSOCIATES, LTD.

P.O. Box 885, Millbrook, NY 12545
914-677-6041  Fax: 914-677-6532

PLEASE VISIT OUR NEW SHOP ON FRANKLIN AVENUE.
OPEN THURS - SUN 10-4 OR BY APPOINTMENT

Enrich Your Home With Quality Grilles & Registers

Cast Iron  • Cast Brass  • Cast Aluminum  • Wood

Over 200 Sizes & Styles in Stock • 44 Page Color Catalog $1

Call (508) 772-3493

The Reggio Register Co.

Dept. D705, P.O. Box 511
Ayer, MA 01432

Classic Hardwood Reproductions of BORDERS and Full Room PATTERNED FLOORING Circa 1880-1920

Geometric & Laser-cut MEDALLIONS

Call or write for free literature and local distributor

HISTORIC FLOORS OF OSHKOSH, INC.

P.O. Box 572
Oshkosh, WI 54902
(414) 582-9977
FAX (414) 582-9971

Block Pest Birds from Landing Strips!

SPIKES®

- TRANSPARENT  • TOUGH
- ECONOMICAL  • EASY TO INSTALL
- DENSE  • FLEXIBLE
- ENVIRONMENTALLY SAFE

Call 800-662-5021 or write today for literature featuring the most effective range of bird-repellent products available. Eliminates pest birds and the mess they bring to your property.

THE BIRD CONTROL "X-PERTS"

300 N. ELIZABETH ST. DEPT. OHU
CHICAGO IL 60607
312-8AN-BIRD 312-226-2480 FAX

MAY/JUNE 1997 87
WIDE PLANK FLOORING

Eastern White Pine • Southern Heart Pine
Red & White Oak • Cherry • Maple

HCR 32 Box 556C, Stoddard, NH 03464
(800) 595-9663 • (603) 446-3937
fax (603) 446-3540
Nation-Wide Service for over 30 years

FREE CATALOG

SHAKER

1-800-659-0206
Ask for Dept. YH267, or write.

PO. 2525, Dept. YH 267, Conway, NH 03818

EMPIRUM Products Network (cont.)

made for nail-up or suspended grid systems. Fire-rated materials and colors available. Free literature. Snelling's ThermVac, Inc.

Doors & Windows


16. WOOD SASH — Any size and shape: divided lite, round top, curved, double-hung, fixed, casement, or storm sash. Insulated glass, shutters, screen doors, and trim. Illustrated brochure, $2.75. Midwest Architectural Wood Products.

53. WOODEN SCREEN DOORS — Blending function, fine craftsmanship, and styling. Dozens of innovative styles ranging from the classic design to highly ornamental. Catalog, $3.25. Oregon Wooden Screen Door.


753. HIDEAWAY SCREEN — Hide-Away roll-up insect screens are ideal for French and sliding glass doors, pass-through windows. Can be used both interior and exterior, can be installed to operate horizontally or vertically. Free literature. Pett Industries, Inc.

864. INVISIBLE STORM WINDOWS — Match any window shape or color; removable storm windows for the inside or outside mounted, screen or glass panels, fixed, magnetic, sliding or lift-out styles. Color brochure, $2.50. Allied Windows.


88a. SHUTTERS — Offering a full line of western red cedar shutters with over 18 styles including raised panel, louver, and recessed panel designs. Authentic hardware and in-house painting services available. Catalog, $2.25. Timberlane Woodcrafters, Inc.

Finish & Tools

31. ROTTED WOOD RESTORATION — 2-part epoxy system restores rotted wood so you can save historically significant and hard-to-duplicate pieces. Free brochure. Abatron, Inc.

33. PHENOSEAL — A premium line of safe and easy-to-use adhesives, sealants and waterproofing. Products that are rugged, flexible, mildew and water resistant, non-toxic, and offer great adhesion to a wide variety of surfaces. Suits the home remodeling/restoration industries and "do-it-yourselfers". Free literature. Gloucester Co., Inc.

479. MOLDER/PLANER — Reproduce railings, sashes, crown, tails, window and door stops, and curved molding with shutter, free finishes. Free information kit. Williams & Hussey.


595. ROCKHARD PUTTY — Ideal for repairing walls, woodwork, and plaster. It can be sanded, chiseled, polished, colored, and molded. Free literature. Donald Durham Co.

66a. PAINT SHAPER — This patented ecologically-safe power tool strips paint from shingles and clapboards. The dust collector allows encapsulation of debris for retrieval. Free literature. American International Tool Industries.


66b. WEST SYSTEM EPOXY — Additives and application tools ideal for high-strength gluing. Epoxy and materials are a versatile solution to dry rot repair. Free catalog. Gougeon Brothers, Inc.

706. WATER BASE METALLIC COATINGS — Copper, brass, bronze, mauve and silver finishes include green, blue, burgundy and black. They can be applied to metal paints and solid metals. Free literature. Patina Finishes & Copper Coatings.

728. REPRODUCTION COLORS — Authentic reproductions of 18 and 19th century architecture. For most exterior and interior surfaces, as well as furniture and decorative painting. Literature, $3.25. Primrose Distributing.


914. STAINING/FINISHING — Manufacturers of preparation, staining and finishing products for wood and composite surfaces. Products include wood bleach; paste grain filler; Jet'l Stain; stainable lacquer; solvent based paints.
REPLACE ROTTED SASH

MIDWEST
ARCHITECTURAL WOOD PRODUCTS LTD
ELDRIDGE, IOWA

300 Trails Road
Eldridge, IA 52748
319/285-8000
FAX 319/285-8003

Decorative Metal Ceilings
Original turn-of-the-century patterns

Using eighty year old dies, the W. F. Norman Corporation is once again producing metal plates for the design of ceilings and wall coverings. Their growing popularity stems not only from nostalgia but from their beauty, permanence, fireproofing and economy.

The fullness of the Hi-Art™ line — including center plates, corner plates, border plates, cornice and filler plates — permits classic designs to be produced that are architecturally proportioned for an exact fit.

Write for reproduction copy of 72 page illustrated catalog. Price $3.

W.F.Norman Corporation
P.O. Box 323 • Nevada, Missouri 64772 • 1-800-641-4038
Fax: 417-667-2708

MOLDER/PLANER
FOR STRAIGHT, CIRCULAR, ELLIPTICAL* MOLDINGS
(Casings, Crowns, Picture Frames, Raised Panels)

Our W • 7S Model offers Versatility and Durability

FEATURES:
• Duplication of historic profiles up to 3/4 in. deep
• Solid cast-iron base & head
• Molder-to-planer in less than 2 minutes
• Portable - on site or in the shop
• 7,000 rpm/two-knife system produces 78 cuts per in.
• 100 standard knives
• Custom knives
• Five-year warranty
• Fully American-made!

* Elliptical jig required
EJ Elliptical jig allows radii as small as 7 in.

Williams & Hussey Machine Co. Inc.
Dept. 567EB
P.O. Box 1149 • Wilton, NH 03086
Tel: 800-258-1380 (USA) or 603-654-6828
Fax: 603-654-5446

A LOVE OF THE HEART...
America's premier flooring manufactured from antique heart pine timbers

J.L. Powell & Co. Inc.
(910) 642-8989 • (800) 227-2007
600 South Madison Street
Whiteville, N.C. 28472

MAY/JUNE 1997 85
Building Components


3. CAPITOL CRESTING — America's leading producer of roof crestings offers a complete line of lightweight, easy to install, economical to ship, unbreakable steel roof cresting and matching finials. Sizes may be modified, including length, height and thickness. Literature, $1.25. Architectural Iron Company.

4. RESTORATION GLASS — Imperfect glass is perfect for restoration work. Each sheet is made using the original cylinder method. Free brochure. Bendheim Glass.

5. TRADITIONAL WIDE PLANK FLOORING — Up to 25" wide. Authentic Floors. Your source for beautiful plank flooring nationwide for over 70 years and through two family generations. Literature, $5.25. Carlisle Restoration Lumber, Inc.


7. WOOD COLUMNS — From Authentic Replication to Stock in a variety of sizes and designs. Interior and exterior. Product portfolio includes column brochure, technical information and price list. Catalog, $5.25. Chadsworth, Inc.


13. MANUAL DUMBWAITERS — The Silent Servant incorporates many unique features to deliver smooth, quiet operation with a minimum of effort. For residential and commercial applications. Free brochure. Miller Manufacturing, Inc.


16. WALL RESTORATION — Repair cracked plaster walls and ceilings. Installs easier than wallpaper; no need to remove woodwork. Stops air infiltration and creates a vapor barrier. Free video. Specification Chemicals.


18. FIBERGLASS COLUMNS — Our classic Plynstone columns are load bearing and do not require ventilation, are ready to paint, impervious to insects and fire/impact resistant. Free flyer. Chadsworth, Inc.

19. HANDCRAFTED BY VERNON C. PERSIMMON — Finials, weather vanes, scrolled ridge, ridge cresting, leading boxes, cupolas, and roof vents. Custom orders are also welcome. Catalog, $5.25. Vulcan Supply Corp.

20. GUTTER PRODUCTS — Offering copper and aluminum half-round gutters with accessories; copper and aluminum bay window strip miters; copper-colored aluminum coils and more. Free literature. Commercial Gutter Systems.


22. ANTIQUE STORES — SALES & RESTORATIONS — Specializing in the restoration and sale of antique heating stoves and kitchen ranges. All stoves are original antiques. Stay Warm! Free literature. Good Time Stove Co.


24. HANDCRAFTED HOOSIER REPLICAS — Single cabinet or complete Hoosier ensemble. Circa 1925 charm with all the features (see ad). Free standing, practical storage space. Catalog, $4.90. Michigan Hoosier Co.


27. EARLY AMERICAN CABINETRY — Fine quality Early American style cabinetry is available nationwide. Features include old cupboard doors, genuine Old Fashioned Milk Paint finish, and birdseye maple and tenon joinery. Free color literature. Crown Point Cabinetry.

Decorative Materials


30. CAST STONE FIREPLACE SURROUNDS — Beautiful, elegant and maintenance-free, our fireplace surrounds bring the old world into your home. Many styles and sizes available. Nationwide shipping. Free catalog. Fireside Magic.


38. DRAPERY HARDWARE — Decorative metal drapery hardware available, as well as a full line of cash-iron spiral and straight staircases. 16-page stair catalog along with illustrated curtain information. $3.25. Steptoe & Wife.

39. DECORATIVE CEILING TILES — Polymer ceiling tiles resemble tin ceilings. Tiles are...
READY TO DECORATE?
Let the old-house experts inspire you.

OLD-HOUSE INTERIORS is the quarterly magazine on
decorating and furnishing ideas from the publishers of
Old-House Journal. You'll find inspiration in the lavish
color photos and intelligently written articles—plus
practical advice and source lists for wainscot and light-
ing, period furniture, and carpets. Old-House Interiors
blends the historical approach with design flair. What you'll
see is not decorating fads, but a classic approach to interior
design. TO ORDER! For con-
venience, use the postpaid
order card opposite. Or call
1-800-462-0211
and charge to MC or VISA.
Subscriptions for Old-House
Interiors are $18 for four
issues. GIFTS: Have your
thoughtfulness remembered throughout the year. Fill
out the card opposite or call the number above (we'll even
send you a handsome card to announce your gift).
Now there is a 21st century solution to 18th century roofing problems!

AcryMAX® Acrylic Roof Coating System
Restores, beautifies, repairs and weatherproofs tin roofs. (Also works great on wood, asphalt and other surfaces.) Easily applied, environmentally safe. Available in many colors. Durable and long lasting.

CALL OR WRITE TODAY FOR FREE BROCHURE!

RESTORATION® is the largest comprehensive commercial trade exhibition and conference dedicated to the restoration, renovation and re-creation of historic exteriors and interiors.

RESTORATION/Atlanta
Cobb Galleria Centre
Atlanta, Georgia
April 18-20, 1997

RESTORATION/Chicago
Merchandise Mart
Chicago, Illinois
October 16-18, 1997

For more information, contact:
EGI Exhibitions, Inc.
129 Park Street
North Reading, MA 01864 USA
508.664.6455, fax 508.664.5822

©RESTORATION is a registered trademark of EGI Exhibitions, Inc.

Historical & Architectural Mouldings & Accessories
- Custom, special order and stock mouldings and accessories
- Custom woodworking: Fireplace mantels, AV cabinetry, doors & stair parts
- Finish lumber, plywood, hardwoods: Custom material preparation
  - 120-page catalog $6.00

ARVID'S WOODS
2500 Hewitt Avenue, Everett, WA 98201
1-800-627-8437
FAX: 1-206-258-4334

Brass, Nickel & Chrome Plating
Let us replate, polish, and lacquer your existing hardware back to its original beauty. Why remuddle with reproduction when we have the replacement hardware, registers, etc. to make your house original?
We also carry stair parts, doors, mantels, and windows.
Send $10 for postage and a hinge or doorplate and we will send you a sample of our work.

Strassen Plating
3619 Walton Avenue, Cleveland, OH 44113
PHONE & FAX (216) 961-1525 9 A.M. TO 9 P.M.
WIDE FLOORING AND PANELING

OAK AND PINE: 8" to 26" wide

For easy installation of beautiful floors, Craftsman Lumber Company offers wide boards that are:

- Dried properly in our own kilns.
- Edges jointed straight and true.
- All boards meet, or exceed, NELMA specifications.
- 100% of order is usable when received. No defect allowance necessary.
- Knowledgable advice and information on proper installation.
- Warranty on all products.

Wide boards from Craftsman Lumber Company have been satisfying architects, builders and homeowners nationwide since 1974. All our boards are created exactly to your specifications. Send $2.00 for literature and grading photos, or phone Charles Thibeau at (508) 448-5621

The Craftsman Lumber Company
Box 222J, 436 Main Street
Groton, Massachusetts 01450

THE ORIGINAL TIN CEILINGS AND WALLS

- 26 Patterns available 2' x 8' & 2' x 4'
- Brass, copper and chrome plated
- Steel and pre-painted white
- Lay-in panels in 2' x 4' & 2' x 2'
- Stainless Steel for kitchen backsplashes
- 13-cornice styles + Pre-cut miters
- Center medallions
- Send $1 for brochure
- Call for technical assistance

Hardware Restoration

Brass, Bronze, Nickel, Pewter

We are specialists in the restoration of antique metal hardware including doorknobs, backplates, hinges, window pulls and locks, lighting fixtures, and other decorative pieces.

Alban Wilmette Platers
Over 60 years experience in restoring antique metal.

127 Green Bay Road
Wilmette, Illinois 60091
847.251.0187
FAX 847-251-0281

Send $5.00 for full color, 56-page product and design idea catalog.

12-Inch Diameter

The most luxurious and soothing shower imaginable will be yours with this decorative 12-inch diameter Country French-style showerhead. A unique, self-contained reservoir neutralizes outlet water pressure and lets water fall rain-gentle through more than 450 openings in a pattern large enough to cover your entire body. The sensation can only be described as "incredible". Available in either polished brass or chrome reservoir with stainless faces. Installs to standard 1/2" piping quickly and easily with J.B. Adapter.

JB Products, Inc., 500 N. Oakwood Rd.,
Lake Zurich, IL 60047 (847) 438-4141

JB Products is a division of Arrow Pneumatics, Inc.
DISTINCTIVE DESIGN—See the result before it's painted. Have an experienced, professional designer create a color scheme for your home's exterior. Detailed instructions for your painter. Enhance architectural details, avoid costly mistakes, escape indecision. Satisfaction guaranteed. Available nationwide by mail. 18 Cherry Street, Katonah, NY 10536. (800) 698-0693.


Preservation Specialist


Roofing


"TIN ROOFING"—Incomparable in charm, beauty and longevity. Let us restore your roof with Follansbee Steel Terne ("tin"). Flat locked, soldered or standing seam. Vanguard Roofing Co. P.O. Box 887, South Bethlehem, NY 12579. (800) 426-5400.

Woodstripping

HONE WOODSTRIPPING AND REFINISHING, INC.—All architectural wood finishes expertly stripped and refinished, since 1983. New Jersey based; will travel. Free estimates, fully insured. Contact: Jack Hone, 5 Spring Lane, Warren, NJ 07059. (908) 647-7120.


Painting & Color Schemes

THE COLOR PEOPLE—Our experience shows after 15 years and hundreds of buildings in 46 states. Others have copied our mail order service, but the beauty of our homes can't be duplicated. The Color People, 1522 Blake Street, #300, Denver, CO 80202. (800) 547-7174, fax (303) 534-4600.

Structural

STRUCTURAL RESTORATION—Specialists in structural member replacement to Colonial timberframe homes, barns, grist mills and log cabins. We provide 30 years experience in jacking, squaring, sill replacement, and interior and exterior restorations. Consulting services available nationwide. George Yonnone Restorations, RD 2 West Center Rd., West Stockbridge, MA 01266. Phone/fax (413) 232-7060.

STRUCTURAL REPAIRS—Structural repairs of barns, houses, garages, including leveling, straightening, backing, welding. For Historical Society references contact: Kenneth E. Earle, 84 Oak Hill Rd., Paxcoo, RI 02889. (888) ROM 6:23-8 or (888) 766-6238.

Tin Ceilings & Walls

TIN CEILINGS AND WALLS—Large supply of new and used tin ceiling and wall panels. Will also do antique metalwork. 35 years experience. Brian Greer, Rt 2, Petersburg, Ontario, Canada, NOB 2H0, (908) 745-9705, fax (908) 570-1447, web site: http://www.tinceilings.com
Bird Control That Works!

Nixalite Stainless Steel Porcupine Wire
- It Works!
- Long Lasting
- Humane
- Inconspicuous
- Repels All Birds
- Easy To Install

Proven effective since 1950!
Ph: 800/624-1189
Fax: 800/624-1196
Web - http://www.nixalite.com

Push Button Light Switches

For Catalog Send $1.50 to:
Classic Accents
P.O. Box 1181 • Dept. OH
Southgate, MI 48195
(313) 282-5525

FOR THE COMFORT & BEAUTY OF YOUR BUILDING

THE ROLL-UP HIDE-AWAY SCREEN

- ideal for French and sliding glass doors, pass through windows or any opening
- can be used both interior and exterior, operating horizontally or vertically
- rolls up to its own attractive housing, allowing easy passage through any opening
- rediscover the exterior views from within, without the obscurity of fixed screens
- when insect protection is desired, simply pull the screen closed
- when insect protection is not necessary, spring action rolls the screen away
- stays closed using durable, full-length magnets (door models)
- limits damage from ultraviolet rays in home or office

THREE TYPES OF INSTALLATIONS

ROLL-UP
SINGLE DOOR
DOUBLE DOOR

Petit Industries Inc
P.O. Box 1156 • Saco, ME 04072-1156
Tel: (207) 283-1900 • Fax: (207) 283-1905
**Something For Everyone.**

At WOODHOUSE, we authentically reclaim and recycle antique timbers of Heart Pine, Yellow Pine, Oak, Chestnut, and many other woods to create the most beautiful flooring you'll find anywhere, and all at affordable prices. Call today and let us bring the wood home with our Antique Country Plank Flooring.

**FREE Brochure**

Sample Kit $15

**The Home of Quality and Value**

Dept. OH • P.O. Box 7386 • Rocky Mount, NC 27804

919/977-7336

---

**Events**

**MORRISTOWN, NJ** — Victorian house tour, Sunday, May 18 from noon-5 p.m. Tickets will include an “English tea party.” Tour starts at the Kellogg Club’s Colles Mansion, 25 Colles Ave. Proceeds benefit the ongoing restoration of the historic Colles Mansion. (201) 984-5315.

**ROCKLAND COUNTY, NY** — Rockland County Executives’ Historic Preservation Merit Awards, Country Supper and Dance, May 18, 4 p.m. at the historic Jacob Blauvelt House, Historical Society of Rockland County, NY. 1997 winners will be honored. $45. (914) 634-9629.

**JOLET, IL** — This Olde Housewalk, Sunday, June 22, Joliet, IL, from 1-5 p.m. Explore one of Joliet’s oldest National Register neighborhoods, featuring six vintage homes, horse and buggy rides, musical entertainment, antique cars, refreshments, porch lunches (by reservation only). Advance tickets $8, $10 at door. For reservations and information, contact Alice Kraus, (815) 722-3068.

**KENOSHA, WI** — “Restoration Faire” at the Kemper Center, May 17. Sponsored by ABATRON Inc., the Preservation Week event features topics relevant to residential building restoration. Architects, designers, and contractors will speak on stone, masonry, and terra cotta restoration, wood restoration, late-19th and early-20th-century wall color schemes, and residential gardens. Registration is $8 and includes a box lunch. Seating is limited. To register, contact ABATRON at (800) 445-7754.

**MECHANICSBURG, PA** — Designers Showhouse ’97 at Ashcombe, Harrisburg Symphony Society. May 18-June 8. Experience the elegance of a Victorian mansion transformed by more than 60 designers and landscapers. House tour tickets are $10 in advance, $12 at door. Call (717) 238-8588.

**ST. LOUIS, MO** — The 12th Annual St. Louis Antiques Show, benefiting the Repertory Theatre of St. Louis, Washington University Athletic Complex, Forsyth and Big Bend boulevards. Fine antiques offered by 30 outstanding dealers from across the nation. Gala Preview Party; Thursday, May 8, with guestlecturers Lady Henrietta Spencer Churchill, internationally renowned interior designer and author; and Richard E. Slavin III, Archivist/Historian, the Schumacher Archives, Friday, May 9. Show admission $10. Call (314) 968-3023.

**FISHERSVILLE, VA** — 20th Shenandoah Antiques Expo. Over 400 dealers. Friday, 10 a.m.-5 p.m., Saturday 8 a.m.-5 p.m., Sunday 9 a.m.-2 p.m. Augusta Expoland, I-64, Exit 91. Near Waynesboro. Fee. Call (540) 960-7452.

**DUBUQUE, IA** — 10th Annual Dubuque-fest House Tour sponsored by the Old House Enthusiasts Club. Narrated tour of five of Dubuque’s splendid stock of older homes. View excellent displays of restoration, creative decorating, and art. May 17-18, 10 a.m.-5 p.m. Admission $8, $10 for adults; children under 12 free. Includes shuttle bus service to each home. Call (319) 556-8668.


---

**Old-House Journal**

Attn: Emporium Editor

2 Main Street, Gloucester, MA 01930
Bring Back The 1890s In The 1990s

TIN CEILINGS
ORIGINAL DESIGNS
VICTORIAN-ART DECO
Send $1.00 for Catalog to:
CHELSEA DECORATIVE METAL CO.
9603 Moonlight, Dept. 0
Houston, Texas 77096
PH 713-721-9200 FAX 713-776-8661
WEB SITE: THETINMAN.com
2' x 4' Sheets for Easy Handling
Shipped Anywhere

VENTINOX Liners
Save Chimneys!
...and provide safe, reliable venting for gas, oil and wood.
- Restores deteriorated chimneys
- Preserves aesthetic appearance
- Protects against harmful flue gases
- Improves chimney performance
Complete lining systems for all types of heating appliances & fireplaces.

Call today for FREE information!
518-463-7284

ProTech Systems, Inc.
26 Gansevoort St., Albany, NY 12202
Leaders In Chimney Technology

ASK WOOD-KOTE

POLYURETHANE MADE EASY

Q: My hobby is restoring old radios from the 1930's and 40's. I often use your Jei'd Stain on the cabinets to match the original finish colors. Do you recommend that I use lacquer as the "top coat" after the wood is stained?
H. Steiner, Phoenix, AZ

A: Lacquer certainly should be considered. However, Wood Kote has recently introduced a new wipe-on polyurethane, Jei'd Poly Kote™. This product has been very well received by professional woodworkers and hobbyists alike for smaller projects. Jei'd Poly Kote™ combines the protection of polyurethane with the wipe-on convenience of Wood Kote Jei'd Stain™. This wipe-on finish can simply be applied with a soft cloth without any runs, drips or bubbles. It can be re-coated in one to two hours without any sanding between coats. Up to six coats can be applied in a single day. People who live in condominiums or apartments will especially appreciate Jei'd Poly Kote's low odor and easy clean-up. Please keep in mind that this convenient wipe-on finish is a two build product, so it should not be used on furniture that is exposed to a lot of wear and tear like table tops. It will, however, provide a beautiful satin finish for your smaller projects.

Have a staining or finishing question? Ask Wood-Kote!
Please write to Dept. Q.
P.O. Box 17192
Portland, OR 97217
or Fax to (503) 285-8374
http://www.woodkote.com

“The Professional Woodworker’s Choice Since 1945”

ASK FOR WOOD-KOTE PRODUCTS
AT PAINT STORES, HARDWARE STORES AND HOME CENTERS.

“We were astounded when the mildew and mold disappeared before our eyes.” — Carol N., Baton Rouge

Concentrated Jomax® removes ugly stains and kills mildew. One quart makes five gallons — you save up to 80% of the cost of other cleaners. Jomax destroys mildew on contact. Won't discolor paint or harm washable surfaces like other products. No annoying fumes or damage to plants.

Just mix Jomax with water and bleach, spray and rinse away mildew stains without scrubbing.

THOUSANDS OF SATISFIED USERS. “Thank you for a great product.” “Fantastic ... far superior to plain bleach” “Made a tough job a lot easier.” “Lasts longer than anything else.”

For a free brochure and a Jomax dealer near you, call 1-800-808-6704.

ZEHRUNG

May/June 1997
The Elegance of Old World Stone Carving!
Call or write for your color catalog today.

EMPIORIUM
Real Estate (continued)

system. $129,500. (914) 255-1523

RURAL RETREAT, VA — Old farmhouse with 5 bdms, 2 baths, formal dining rm., parlor, large porch, outbuildings, original woodwork, updated kitchen/baths, newly painted, views, garden, new gas furnace, two extra lots, scenic little town. Close to I-81, $130,000. (206) 473-4044


For Rent

OREGON COAST — Fabulous oceanview rental, 2 bdrm, 2 bath, fully equipped, pool, spa, golf. Summer rates: $125/night, 2-night minimum or $750/week, $2,000/month. Brochure available. Call Dave or Patti Schnur, (503) 239-7457.

Wanted

WEST — 150 ft. of ornamental wrought iron fence, ca. 1900 w/gate and end posts. (719) 473-8814 or fax to (719) 471-2599.

PAIR OF BUSTS — Queen Victoria and Prince Albert, three-quarter to life size. Send photo and price to: J. Burgess, 220E 11th St., Davenport, IA 52803.

For Sale

DEEN RAG RUG LOOM — "Four Harness Automatic Flying Shuttle," complete with manual, 6 shuttles, shuttle-filling machine, 24-capacity spool rack. Also

Ahrens
Relines/Restores Masonry Chimusneys
With The ONLY Listed Two-Liner Cast-In-Place Masonry Process

- First insulates and strengthens
- Second seals and protects
- Both are immune to acids and moisture
- No guess work. Mechanically applied.
- No exterior alterations.
- No metal to corrode.
- Improves heating efficiency — All for a fraction of the cost of rebuilding!

Dealership network nationwide. Call or write for more information:
2000 Industrial Ave.
Sioux Falls, SD 57104
1-800-843-4417
The Ward
Quartersawn
Clapboard

Authentically Produced
Early American Clapboards

Over 100 years of continuous operation by the Ward family. Quartersawing produces a vertical grain which eliminates warping and accepts paint and stain easily for extended life and beauty. Spruce and pine. Widths from 4-1/2" to 6-1/2". Pre-staining available.

Ward Clapboard Mill
P.O. Box 1030
Waitsfield, VT 05673
Moretown, Vermont Patten, Maine
(802) 496-3581 (207) 528-2933
Fax 802-496-3294

Handcrafted
Copper Roof Ornaments
+ Ridge CRESTING + Weather vanes
+ Copper Cornice + Finials
+ Cupolas + Leader Boxes
+ Roof Vents & Plumbing Vent Covers

A unique selection of copper ornaments ready to install or customized to your needs. Catalog $3, refundable with your first order.

Vulcan Supply Corp.
P.O. Box 100 Westford, Vermont 05494

GlowCore Radiators
The NEW
GB SERIES "A"
GAS BOILER

92% EFFICIENT

FEATURES
- SEALED COMBUSTION
- COMPACT CABINET
- SHOCK PROOF
- CPVC VENT
- LOW NOx

NEW! HIGH EFFICIENCY HEATING FOR VINTAGE HOMES
Sometimes the only cost effective way to save fuel in the older home, is to burn less of it. Clearly, the ultra high efficiency boiler is the answer!

We are proud to be charter members of the EPA Energy Star Program

MAY/JUNE 1997 75
complete with a dam/pump house. Both were constructed in the 1930s of steel and concrete with slate roofs. Main house has slate tile and parquet floors. Additional 1830s immaculate restored and maintained farm home with barns included on this 135-acre picturesque, diverse estate with woods and tillable land. In a world of your own and yet close to main routes and entertainment. Use as a residence or retreat. Subdivision possible. $2,500,000. Open to offers!! Call Kim More, RE/MAX Quality Realty, (419) 663-3536, ext. 315.

ALLENTOWN, PA — Restored Victorian brick single on National Register. Fourteen rms, 2 baths, pocket doors, colored glass, marble, walnut cabinets, oak stairs and woodwork, 3 ornamental fireplcs., central a/c, 2 car garage, corner 5/4 acre, fence, wraparound porch. Call (610) 435-6920.

ENDEAVOR, PA — 1920s home, Allegheny Nat’l Forest, 3,100 sq. ft., 5 bdrms, 2 1/2 baths, modern kitchen, attic, basement, porch, deck, outbuilds on 3+ acres, on creek. B&B professional use. Possible separate rental cottage. $129,000. Call (814) 463-3714.

ERIE, PA — 1923 Alden & Harlow brick duo Colonial, 1.4 landscaped/wooded acres, 3,600+ sq. ft. Slate roof, arched lean-to porch, bi-level terrace, 4 fireplcs., 4 bdrms, 3 1/2 baths, hardwood floors, mahogany trim, French doors, gourmet kitchen, luxury master bath. $425,000. Call (814) 866-5898.

Pennsylvania farm house. Three wood-burning fireplcs., hardwood floors, new heat, electrical, and plumbing. Carriage house with 3-stall garage, 28 acres, very private. Ten minutes to interstate, 20 minutes to downtown Pittsburgh. $795,000. Call (412) 364-1612.


SNOWY MOUNTAIN — Rare opportunity. 1896 four-story brick building with 30,000 sq. ft. 400+ room mansion with historic significance. Complete restoration possible. $1,500,000. Call (303) 320-1234.

SANTA FE, NM — 1870s Victorian with 5 bedrooms, 4 baths, 4 fireplcs., 3,000 sq. ft., all original. $295,000. Call (505) 982-1234.

SAN ANTONIO, TX — 1880s Victorian with 5 bedrooms, 4 baths, 4 fireplcs., 3,000 sq. ft., all original. $295,000. Call (505) 982-1234.
**Real Estate**

**EUREKA SPRINGS, AR** — Landmark 1881 Victorian on National Register in the Ozarks. Operating B&B. Three stories, 4 guest areas with private baths and Jacuzzis, 2 with fireplaces. Owner’s quarters, garage. Great mountain views. Large, newly remodeled. $343,500. Call (617) 729-7623 for floor plans and information.

**RECTOR, AR** — 1905 Queen Anne/Colonial Revival in quaint small town 40 miles from university city of 50,000. Three bedrooms, 2 baths, 11’ beamed ceilings, hardwood floors, pocket doors, foyer columns, clawfoot tub. Sizable outbuilding. Low taxes. $45,000. Call (501) 253-6022.

**KENDALLVILLE, IN** — 1928 Georgian Colonial Mansion, B&B with 6 bedrooms, 6 1/2 baths, open circular stairway, 20 rooms, 8,600 sq. ft., 4 fireplaces, plus detached apartment. Most furnishings included. $279,000. Call Barb Rinard, Four Seasons Realty, (800) 800-7234.


**LEXINGTON, MA** — Capt. Reed House, 1740. Fully restored with fine, ca. 1820 Federal overlay. Convenient to Rt. 128, Lexington center, schools, etc. Au pair, office

or in-law suite on first floor. Asking $434,500. Call (617) 729-7623 for floor plans and information.

**WOBURN, MA** — 1830 Georgian Colonial mansion, strong history, 12 miles north of Boston, special zoning allows residential, office, apartment or all three uses, 2 1/2 acre. 7,000 sq. ft. building space, fireplaces. original details, $450,000. Owner, (617) 933-7188.

**NEBRASKA CITY, NE** — Was “Mrs. Bickel’s Boarding House,” 3,000 sq. ft. Built 1868, enlarged 1917 by the family. Complete renovation 1996. Brick 2 story, wraparound front porch, large back porch, 4 bedrooms, 1 1/2 baths, DR, entry, parlor, new “old” kitchen, family rm, older but good HVAC, new roof, wiring and plumbing, wallpaper. 20x30 carriage house, living quarters above, corner 1 1/2 lots, next door to historic district. Good B&B or family home. $140,000. (402) 873-5925 or (402) 873-9231.

**OXFORD, NY** — 1853 Greek Revival with curved stairway, 4 bedrooms, large LR and DR, parlor, den, 2 full baths. Mostly restored; all systems new with 3-zone heat. Fireplace, lovely porches, original woodwork and flooring, built-ins, large rooms. Carriage house, barn, 3+ acre in scenic upstate village. Great landscaping potential. $72,500. Ex, (607) 843-9067.

**WOBURN, MA** — 1830 Georgian Colonial mansion, strong history, 12 miles north of Boston, special zoning allows residential, office, apartment or all three uses, 2 1/2 acre. 7,000 sq. ft. building space, fireplaces. original details, $450,000. Owner, (617) 933-7188.

**WEST NEWFIELD, ME** — Eleven rms, 2 baths, working fireplaces, many original features, modern systems on 68 surveyed acres on country paved road. Gardens, pond, views. 4x4 1/2 barn with woodshed ell. Good condition. Two hours to Boston. $220,000. John Koenig, (207) 793-2059.

**LEXINGTON, MA** — Capt. Reed House, 1740. Fully restored with fine, ca. 1820 Federal overlay. Convenient to Rt. 128, Lexington center, schools, etc. Au pair, office

or in-law suite on first floor. Asking $434,500. Call (617) 729-7623 for floor plans and information.

**WOBURN, MA** — 1830 Georgian Colonial mansion, strong history, 12 miles north of Boston, special zoning allows residential, office, apartment or all three uses, 2 1/2 acre. 7,000 sq. ft. building space, fireplaces. original details, $450,000. Owner, (617) 933-7188.

**NEBRASKA CITY, NE** — Was “Mrs. Bickel’s Boarding House,” 3,000 sq. ft. Built 1868, enlarged 1917 by the family. Complete renovation 1996. Brick 2 story, wraparound front porch, large back porch, 4 bedrooms, 1 1/2 baths, DR, entry, parlor, new “old” kitchen, family rm, older but good HVAC, new roof, wiring and plumbing, wallpaper. 20x30 carriage house, living quarters above, corner 1 1/2 lots, next door to historic district. Good B&B or family home. $140,000. (402) 873-5925 or (402) 873-9231.

**GHENT, NY** — Swiss general-built 12-room, 1874 Italianate with 12’ ceilings, 2 fireplaces, floor-to-ceiling windows, leaded glass. Plus 3,000 sq. ft. carriage house with guest quarters on 23 acres. Two hours to Manhattan. Contact Wil Guzman, (212) 410-4042.

**Oxford, NY** — 1853 Greek Revival with curved stairway, 4 bedrooms, large LR and DR, parlor, den, 2 full baths. Mostly restored; all systems new with 3-zone heat. Fireplace, lovely porches, original woodwork and flooring, built-ins, large rooms. Carriage house, barn, 3+ acre in scenic upstate village. Great landscaping potential. $72,500. Ex, (607) 843-9067.

**LANCASTER, OH** — Restored Eastlake Victorian in historic downtown. Four bedrooms, 1 1/2 baths with 2 impressive staircases, state-of-the-art kitchen, 7 fireplaces, raised paneling, library, garden house, water garden, original interior shutters and hardware, heart pine. Completely updated services, 2 furnaces and central air. Year-round third-story art studio. Churches and school within walking distance. Easy commute and access to Columbus. $339,000. Call (614) 654-1158.

**MILAN, OH** — In the heart of Ohio’s vacation land is the most unique home in the area. Designed by Pittsburgh architect William Young. Featuring a 9,800 sq. ft. Bucks County-style fieldstone mansion
We Can Solve Your Paint Removal Problems!

PAINT SHAYER™
The Most Effective, Efficient and Ecologically Safe Paint Stripping System Available Today for
Cracking and Peeling Paint on Shingles and Clapboards

- Strips one square foot of paint in 15 seconds,
- Retrieves stripped debris into vacuum systems.
- Can also be used for lead paint removal.
- Eliminates the need for chemicals, sandblasting or heat removal.

SANDER VAC®
Dust-free sanding for all surfaces indoor and out.

AMERICAN INTERNATIONAL TOOL INDUSTRIES, INC.
1140 Reservoir Ave., Suite L01
Cranston, Rhode Island 02920
(401) 942-7855
1-800-932-5872

Quartersawn Clapboard Siding and Building Materials including Wide Pine and Hardwood Flooring

Quartersawing produces a vertical grain clapboard.
- Twists and warps less
- Wears more evenly
- Bonds paint and stain better

Also featuring,
Olympic Machinecoat™ Exterior Pre-Finish for all types of siding.
Allows finishing prior to installation with 15 year warranty:
- Crack, peel and Flake Resistant
- Washable without damaging finish
- Non- Yellowing

Granville Manufacturing Company, Inc. • Established 1857
Granville, Vermont 05747
Call or write for free brochure
TEL: 802-757-4747 FAX: 802-767-3107
E-Mail: woodsiding@madriver.com WEB SITE: www.woodsiding.com
DESIGNER DOORS™
CUSTOM DESIGNED VINTAGE GARAGE DOORS
Patented Construction Methods to replicate vintage door looks with automatic overhead operation
Top Quality Woods
CONTACT:
DESIGNER DOORS, INC.
283 TROY STREET
RIVER FALLS, WI 54022
1-(800)-241-0525

Locations in
MINNEAPOLIS • CHICAGO • BOSTON • ATLANTA
Available Nationwide
Doors that will open your eyes!

VICTORIAN & CONTEMPORARY WHIRLPOOL BATHTUBS
100% Cast-Acrylic 5-year Warranty
20 Styles 60 Colors
Solids, Marbles & Granites
Heavy Duty 1-hp Motors
Package Discounts

Other Victorian-style Bathroom Products
Acrylic Drop-in Sinks Handshower & Lav Faucets Acrylic Shower Bases

For 35-page catalogue of products, sizes, prices & color chart send $15 to:
NORTHSTAR ACRYLIC DESIGNS
P.O. Box 370360 Denver, Co. 80237 (888) 888-8887 (303) 537-0688 Fax (303) 537-2288

Designed by the ages. Crafted by hand.

Fischer & Jirouch has been hand-crafting plaster ornaments by the same methods for nearly 100 years. We use only traditional plaster in replicas of our 1,500 designs from a variety of periods. Architects, tradespeople, and do-it-yourselfers rely on our pieces to enhance their exterior and interior projects. We also offer custom reproduction.

Hand-crafted Fischer & Jirouch ornaments are as easy to work with as wood and authentic throughout. Send for our 144-page catalog ($10 US, $15 Canadian).

No credit cards.
We ship UPS only (no P.O. boxes).
Canadian orders in U.S. dollars.

THE FISCHER & JIROUCH CO.
4821 Superior Ave. • Cleveland, Ohio 44103
Tel. (216) 361-3840 FAX (216) 361-0650
These compact bungalows could easily have come from an early-20th-century, mail-order house plan. Pedimented gables and porches add architectural interest to this vernacular housing form, typical of neighborhoods from the Carolinas to California. The practical floor scheme combines three bedrooms, two full baths, kitchen, great room, and dining room. Choose elevation "A" for the gabled-roof version, or elevation "B" for the hipped-roof plan.

Plan RT-07-PV

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
<th>Set of 5</th>
<th>Set of 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>$170</td>
<td>$230</td>
<td>$270</td>
</tr>
<tr>
<td>Bedrooms</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bathrooms</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Square Footage</td>
<td>1,144'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ceiling Height</td>
<td>8½'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Dimensions</td>
<td>Width 26'</td>
<td>Depth 50'</td>
<td></td>
</tr>
</tbody>
</table>
Restoration Glass will change your view of history.

Why are architects specifying authentic Restoration Glass? Because it's imperfect. Each sheet is made by craftsmen, using the original cylinder method. Yet this glass easily meets today's building codes. And it's available in two levels of distortion.

Once you've seen the difference Restoration Glass makes, no true restoration will look authentic without it.

For details call toll-free 800-221-7379.
In New Jersey: 201-471-1733.
Fax: 201-471-5175.
S.A. Bendheim Co., Inc.
61 Willett Street
Passaic, NJ 07055.

Plaster Washers

Now you can save and restore your plaster ceilings and walls for just pennies.

Charles St. Supply Co.
54 Charles Street
Boston Ma. 02114

Call: (617) 367-9046
or toll free (800) 352-4560
Fax: (617) 367-0682

Volume Discounts
Next day delivery available.
All major credit cards accepted
10 doz. for $60 — 21 doz. for $102
Complete starter kits $15.00 & up.

Iron Art

Acorn introduces a "smoke 'n" new line of hand forged ornamental door, cabinet and bath hardware - Iron Art door knockers, door knobs and handles.

To get your hands on these unique and beautiful hardware accessories call 1-800-835-0121 today for the Acorn Iron Art catalog of products.

Plaster Washers

Now you can save and restore your plaster ceilings and walls for just pennies.

Charles St. Supply Co.
54 Charles Street
Boston Ma. 02114

Call: (617) 367-9046
or toll free (800) 352-4560
Fax: (617) 367-0682

Volume Discounts
Next day delivery available.
All major credit cards accepted
10 doz. for $60 — 21 doz. for $102
Complete starter kits $15.00 & up.

Iron Art

Acorn introduces a "smoke 'n" new line of hand forged ornamental door, cabinet and bath hardware - Iron Art door knockers, door knobs and handles.

To get your hands on these unique and beautiful hardware accessories call 1-800-835-0121 today for the Acorn Iron Art catalog of products.
THIS FEDERAL-STYLE ROW HOUSE DRAWS ITS inspiration from the elegant side-houses of Charleston's South of Broad neighborhood. The distinctive side entry layout is the result of rotating the house so that the gable end faces the street. The floor plan, which totals a compact 1,772 square feet, includes a well-proportioned great room, formal dining room, breakfast area, and three bedrooms. There is ample room for expansion on the third floor.

Plan HR-19-FA
Cost .................................. $200
Set of 5 .............................. $260
Set of 8 ................................ $300
Bedrooms .............................. 3
Bathrooms ............................ 2½
Square Footage ................. 1,772'
First Floor ......................... 893'
Second Floor ...................... 879'
Ceiling Height
First Floor ......................... 10'
Second Floor ...................... 9'
Overall Dimensions
Width ................................. 34'
Depth .................................. 74'
Discover our True Colors

Genuine Old-Fashioned Milk Paint, made from natural materials like milk protein, lime, and earth pigments.

Select from a wide base of sixteen colors, or let us custom blend one for you.

Hand painted full custom cabinetry for kitchens, baths, and other rooms.

Available nationwide.

LOG HOUSES. . . and other 18th & 19th century building materials salvaged from old houses, grist mills and barns; plus. . .

Resawn Long Leaf Yellow Pine & Oak Random Width Flooring up to 13"

Sylvan Brandt

653 Main Street, Lititz, PA 17543
(717) 626-4520
Fax: (717)626-5867

Quality and Value, Since 1931

METAL

All kits available in any floor-to-floor height and BOCA/UBC code models. Made in the U.S.A.

Call for the FREE 32 page color catalog:
1-800-523-7427 Ext. HJS7
or visit our Web Site at http://www.thironshop.com

Showroom/Warehouse Locations:
Broomall, PA (610) 544-7100 | Houston, TX (713) 789-0668
Ontario, CA (909) 605-1000 | Chicago, IL (847) 952-5910
Sarasota, FL (941) 923-1679 | Stamford, CT (203) 325-8466

The Leading Manufacturer of Spiral Stair Kits™

Please send me the FREE 32 page color catalog:
Name ____________________________________________
Address __________________________________________
City ___________________________________ State __ Zip __
Mail to: The Iron Shop, Dept. HJS7, Box 547; 400 Reed Rd., Broomall, PA 19008.

Struggling with your windows? Replace old pulleys, weights, and ropes for smooth, trouble-free operation.

No need to remove the sash. Send for more information through the Reader's Service section of this issue.

Sylvan Brandt

653 Main Street, Lititz, PA 17543
(717) 626-4520
Fax: (717)626-5867

SPRING COUNTERBALANCES

Struggling with your windows? Replace old pulleys, weights, and ropes for smooth, trouble-free operation.

No need to remove the sash. Send for more information through the Reader's Service section of this issue.

Pullman Mfg. Corp.

PHONE: 716-334-1350 FAX: 716-359-4460

The Iron Shop®

MAY/JUNE 1997 67
Mail-order plans have a long history in shaping the residential architecture of the country. Of the thousands of house plans available today, few exhibit good design and a grasp of historical proportion and detail. So, in response to requests from OHJ readers, the editors have “done the homework”: we’ve hand-picked plans. In each issue, we offer the most attractive, authentic, and buildable of the historical designs, from all periods of American architectural history. Let us know what plans you’re looking for.

You can order actual blueprints for all the houses featured. These plans are designed to conform to national building-code standards. However, the requirements of your site and local building codes mean you’ll probably need the assistance of a professional designer (your builder may qualify) or an architect.

For the houses shown in this issue, blueprints may include:
- Detailed floor plans showing dimensions for framing. Some may also have detailed layouts and show the location of electrical and plumbing components.
- Interior elevations are included in some plans, showing interior views of kitchen, bath, fireplace, built-ins, and cabinet designs.
- Building cross sections: cornice, fireplace, and cabinet sections when needed to help your builder understand major interior details.
- Framing diagrams that show layouts of framing pieces and their locations for roof, first, and second floors.
- Energy-saving specs, where noteworthy, are included, such as vapor barriers, insulated sheathing, caulking and foam-sealant areas, bath insulation, and attic exhaust ventilators.
- May include foundation plan for basement or crawl space. (Crawl space plans can easily be adapted for full basements by your builder.)
- Why order multiple sets? If you’re serious about building, you’ll need a set each for the general contractor, mortgage lender, electrician, plumber, heating/ventilating contractor, building permit department, other township use or interior designer, and one for yourself. Ordering the 8-set plan saves money and additional shipping charges.

Other notes: (1) Plans are copyrighted, and they are printed for you when you order. Therefore, they are not refundable.
- If you would like information on ordering more than eight sets of the same plan, please call our Customer Service Department at (508) 281-8803.
- Mirror-reverse plans are useful when the house would fit the site better “flopped.” For this you need one set of mirror-reverse plans for the contractor; but because the reverse plans have backwards lettering and dimensions, all other sets should be ordered right-reading.
- Heating and air-conditioning layouts are not included. You need a local mechanical contractor to size and locate the proper unit for your specific conditions of climate and site.

MAIL TO: OHJ House Plan Service, 2 Main Street, Gloucester, MA 01930
Or call (508) 281-8803 to charge your order.
Please send the following:

PLAN NAME ____________________________

#1 □ ONE COMPLETE SET OF WORKING DRAWINGS $__________
#2 □ FIVE-SET PACKAGE $__________
#3 □ EIGHT-SET PACKAGE $__________
#4 □ PLEASE INCLUDE 1 ADDITIONAL SET OF MIRROR-REVERSE @ $25 $__________
ADD POSTAGE & HANDLING $__________
TOTAL $__________

SEND TO ____________________________________________
STREET______________________________________________________
CITY_____________________ STATE________ ZIP________

□ CHECK ENCLOSED CHARGE TO: □ VISA □ MC
CARD #_________________ EXP. DATE __________
SIGNATURE OF CARDHOLDER __________________________
DAYTIME PHONE #: _______________________ PRICES GOOD THROUGH JUNE 1998

Please allow 3 weeks for delivery.
of extra-thick, unblemished cedar and fitted with a laminated wood turning of plantation-grown mahogany, the stand securely holds a 12" mirrored globe. The globe holder retails for about $310, while the globes sell for about $50. Other latticework designs include plant stands and a series of 8', 10', and 12' obelisks. There's also a Prairie School-inspired stand designed to mimic the look of limestone. To locate a supplier, contact Lake Creek Garden Features, 200 N. Illinois St., Lake City, IA 51449, (712) 464-8924.

FINIAL FLOURISH
MISSISSIPPI'S NATCHEZ Trace is famous for the colonnaded antebellum homes that line this old stagecoach route. Now you can capture the cachet of the Old South with drapery hardware from the Historic Natchez Collection. Decorative finials come in swirled and serpentine patterns; tiebacks include an acanthus-leaf design. All pieces are reproduced in dimensions that closely match the originals. Made of resin, the hardware is available in gold or silver metal leaf and a gilt varnish. Available only through interior designers, wholesale prices begin at $90 for tiebacks, and $135 for finials. For a catalog, contact the Elizabeth Bater Home Collection, P.O. Box 793, Devon, PA 19333, (610) 687-3960.

PHOTOGRAPHED AT MISSOURI BOTANICAL GARDENS,
ST. LOUIS, MISSOURI

MAY/JUNE 1997 65
PARQUET, ANYONE?
Here's a line of parquet flooring and inlays that reproduces originals from American homes built between 1880 and 1920. Composed of maple, cherry, walnut, mahogany, and other fine hardwoods, the precision-cut, inlaid designs are 3/8" thick. Borders come pre-assembled in more than 20 patterns, including geometric and floral styles. More than a dozen styles of parquet flooring are available in a choice of woods, including quartersawn walnut and oak. Prices begin at $12 to $30 per square foot, plus installation. To locate a supplier, contact Historic Floors of Oshkosh, 911 E. Main St., Winneconne, WI 54986, (414) 582-9977.

STAINLESS BRASS
Brass adds period luster to any bathroom—but not when the polished finish begins to spot and tarnish. Made with the same technology used to harden silicon chips and the surfaces of fighter jets, LifeShine bathroom hardware is guaranteed not to tarnish, corrode, discolor, or flake off. The finish resists scratches and won’t come off, even if the faucet is dented. LifeShine is available in Moen’s Monticello bath collection, which includes cross and porcelain-lever handles. The 4" lavatory set shown above retails for about $280, comparable to the same fixture in polished brass. To locate a dealer, contact Moen, Inc., 25300 Al Moen Dr., N. Olmsted, Ohio, 44070, (800) 553-6636.

MY RIGHT, YOUR LEFT
These new tape measures from Lee Valley Tools read right to left—a more natural orientation for southpaws. Right-handers may also find them convenient for scribing carpentry measurements, since you can hold the tape in your left hand and mark with your right, without reading upside down. A 10' tape, which is suitable for cabinetmakers, is 3/4" wide. The 25' and 33' lengths are 1" wide. Prices range from $3.95 to $7.95. Order from Lee Valley Tools Ltd., 12 E. River St., Ogdensburg, NY 13669, (613) 596-0350.

ON THE PORCH
Protect your porch with the durability of Teflon. Cabot’s Solid Color Decking Stains are an ideal coating for porches where pooling water and greasy dirt are problems. The stains are vapor permeable, allowing moisture to pass through the heavily pigmented coating. Completely opaque, the long-lasting acrylic stain is mildew resistant, water repellent, and sheds oil like, well, a Teflon-coated frying pan. Available in six ready-mixed colors and unlimited tinting combinations, it can be applied to most woods, including pres-
The Glenwood Baseburner 8, manufactured in 1905, is one of the finest cylinder stoves made. It can burn wood or coal and maintains a fire for 10-16 hours. Its lines are timeless making this stove a fine piece of functional art. A definite must for the family that wants the best in quality, artistry and efficiency. Other models, various sizes available.

For more information call: (413) 268-3677
Stove Black Richardson

The Glenwood Baseburner 8, manufactured in 1905, is one of the finest cylinder stoves made. It can burn wood or coal and maintains a fire for 10-16 hours. Its lines are timeless making this stove a fine piece of functional art. A definite must for the family that wants the best in quality, artistry and efficiency. Other models, various sizes available.

Hand Printed ART WALLPAPER

Apple Tree Frieze, from our Arts & Crafts collection

Kelmscott Frieze, from our Morris Tradition collection

Available by Mail Order Complete Catalog: $10.00

BRADBURY & BRADBURY
P.O. Box 155-C2 Benicia, Ca. 94510 (707) 746-1900
Some of the old shingles were dirty and peeling, but a few repairs set them right (top). Joanne chips away at the worn asphalt tiles on the porch floor (right)—one of dozens of jobs we completed together over the years.

Tunneling Through Walls

LIKE LAYERS OF PAINT, THE DAYS, months, and years peeled away. Most of the time I was ready and willing to follow my wife's lead. Joanne had a single-minded belief that our home should be as beautiful and comfortable as we could possibly make it. Yet I must confess I found myself getting in touch with my inner handyman. There actually came a time when I created my own project.

Our stairway was enclosed by two walls, like a tunnel to the second floor. I couldn't picture how to open it up until a photograph in a cooking magazine inspired me. I came up with the idea of putting in a hand rail and balusters where none existed.

We handled the demolition of the walls ourselves, but the rest of the job was complex enough to require the help of a carpenter. The final result was a slender hand rail with two gooseneck turns, one at the top landing and one at the bottom.

I'm not sure what had gotten into me. Maybe I was beginning to agree with Joanne's philosophy—that every crazy idea made the house more beautiful or comfortable and was therefore worthwhile. Maybe I had inhaled too much paint stripper. I was becoming unsure of my own sanity. Meanwhile, my wife was so proud of me that she let me sketch out the design, adding just a few of her own touches.

Joanne remains the captain. Every time I think we've embarked on our last adventure, she discovers another hidden treasure. Just the other day, she was looking at the outside of the house saying, "You know, I don't like the rough stucco on the bottom storey. It doesn't look original." I might have to decide whether to jump ship or tie myself to the mast again.
When Joanne and I began our voyage into the uncharted depths of restoration, we had no idea where we were headed. Joanne stripped through nine layers of paint to reach the original oak cabinets (top left). When she was finished, we found brass fleur-de-lis hinges (top right). Joanne added a top landing to our stairwell job—which meant calling in a carpenter (right).

Joanne began talking about how much she hated the aluminum siding on the top storey. She kept saying how lovely the old shingles must have been. One of our neighbors had found a picture of the house taken in 1920 that showed ribbon coursing, which alternates wide and narrow courses of shingles. Once that photo was framed and hanging in the kitchen, I began to detect a gleam in Joanne’s eye and a certain restlessness in her speech that I’d seen before. I knew the other shoe would eventually drop.

It fell like a steel-toed boot. Another neighbor claimed to remember that when the aluminum was put up 30 years ago, it was nailed right over the shingles. That was all Joanne needed. Some people see the past flash before their eyes at moments of truth. I saw my future: money, time, work, and mess. From that point on, I knew taking down the siding was inevitable.

I climbed a ladder and pried back a corner of aluminum to inspect what was underneath. Briefly, I thought about lying, but couldn’t bear the thought of her later discovering the truth. Yes, the shingles were still there and seemed to be in fine shape.

When we had our roof reshingled that summer, we asked the roofers to rip the aluminum off the sides of the house. Underneath were hundreds of cedar shingles, overlapping each other just like in the picture, a piece of local history revealed. They were dirty and peeling, but sound. Our painter took the time to carefully hand-scrape
Shipping Out with a Restorer

BY JOSEPH MARRA

ONE FRIDAY NIGHT, NOT LONG AFTER WE BOUGHT our old house, I came home to find a lone light shining eerily from within. You know how people who've been burglarized often sense something amiss when the key touches the lock? I felt similar trepidation.

As it turned out, my instincts were right. I found my wife Joanne on a stepladder in the pantry, razor blade in hand. The sinister beacon was a drop-light. White paint chips littered the floor around her. "These cabinets are oak," she said, smiling her most convincing, confident smile. She made it sound like she had discovered DNA.

That weekend began our first voyage on the roiling seas of restoration. The journey has lasted more than 15 years, and for most of our marriage. I now know Joanne was right about stripping the oak cabinets, and so many other projects. At the time, though, I just couldn't understand what possessed her to begin scraping through nine layers of paint without knowing what lay underneath.

Getting My Sea Legs

IT'S NOT THAT I DIDN'T TRUST HER. WE BOTH LOVED OUR pre-World War I Bungalow in Bayside, New York, and it clearly needed work. You buy a place you can afford and fix it up, right? There was no way I could accuse her of leading me astray in that regard.

What I came to understand was that our home had so many features — oak woodwork, glass doors, high ceilings, deep porches — that the superficial cleanup we had initially planned (or I had, anyway) would not do it justice. Just like a Federal spending bill, things mushroomed.

Once Joanne set her hand to the tiller, she never looked back. It was a few years, however, before I became accustomed to the hard labors of a seaman. My apprenticeship began as we stripped, sanded, and tung-oiled our way through the pantry and kitchen. The work was often back-breaking, but it was very satisfying to see the gleaming oak woodwork emerge. Underneath all that paint was an unexpected bonus: brass hinges in a fleur-de-lis design, a recurring motif throughout the house.

Slowly, we transformed our lives and our house. Once we finished the kitchen and pantry project, we began work on the front porch. After some preliminary work on the windows, Joanne argued for — and won — a new oak floor. Weeks of chipping up old asphalt tile followed. Since the porch is enclosed, we added a radiator so our kids could play there in cold weather. Joanne insisted on painting the radiator with a fancy pattern to show off the raised ornament. Then came a new front door and, last but not least, carpenter-built window boxes made of cedar.

When we bought our Bungalow (above), the ribbon shingles on the top storey were hidden under aluminum siding. Once this photograph (left) from 1920 surfaced, I knew Joanne would insist on restoring the shingles.

Searching for Shingles

EVERYTHING LOOKED SHIPSHAPE. ALL THAT WE NEEDED was the right kind of furniture to enhance the beauty of our restored house. The big, messy jobs were done — or so I thought.
SUPPLIERS

AL BAR-WILMETTE PLATERS
127 Green Bay Rd.
Wilmette, IL 60091
(847) 251-0187
Antique metal restoration, plus sources for antique door hardware.

WILLIAM J. RIGBY COMPANY
73 Elm St.
Cooperstown, NY 13326
(607) 547-1900
Original stock antique hardware in various finishes—no reproductions.

STRASSEN PLATING
3619 Walton Ave.
Cleveland, OH 44113
(216) 961-1525
Antique metals restoration, plus sources for antique door hardware.

SPECIAL THANKS TO JACK NEU OF STRASSEN PLATING FOR TECHNICAL HELP WITH THIS ARTICLE.

WILL THE PLATER DO YOUR JOB IN-HOUSE?—Many platers specialize in only one finish because it is easier to treat the water for environmental contaminants. They job out other finishes to shops across town or in the next state. This increases the chances for lost parts or lack of quality control. Choose a plater who will do the work on-site and will be there to follow your instructions.

WHAT KIND OF EQUIPMENT IS IN THE SHOP?—Generally, bigger equipment will yield a better job. A well-equipped plater will have at least one floor-mounted polishing lathe with 8" or larger wheels, plus a continuous belt sanding machine to level surfaces so they are truly flat—difficult to do with a wheel. It also pays to ask about tank size. Large tanks mean there is more of a reservoir of metal and chemicals to minimize color change during the plating process—resulting, say, in a brass job that varies from orange to yellow. A tank of at least 300 gallons is required for a quality brass job.

WILL THE PARTS BE LACQUERED?—Sprayed-on lacquer is preferable to dipped lacquer. Dipping hardware can contaminate the lacquer with polishing dust that will dull the finish. Baked lacquer is more durable than air-dried lacquer because it cross-links the polymers in the coating. Ask whether the lacquer is tinted. Some refinishers use tinted lacquer because it hides a lot of sins in brass and bronze polishing or plating.

DOES THE PLATER REGULARLY HANDLE RESTORATION HARDWARE? Request to see finished work. If the plater specializes in old-house parts, he or she will have the care to inventory and keep track of your job (say, by sets of door hardware), the skill not to dull corners and details during polishing, and the experience to recognize beautiful antique metal finishes.

SPECIAL THANKS TO JACK NEU OF STRASSEN PLATING FOR TECHNICAL HELP WITH THIS ARTICLE.

Be on Your Metal

In the 1920s, Henry Ford may have had the cheek to offer car buyers any color so long as it was black, but fiercely competitive hardware manufacturers needed to lure the buying public with myriad metal finishes. At the time there were no less than 33 standard hardware finishes recognized by the U.S. Government, many more promoted by individual manufacturers. Some were workhorse industrial coatings, such as zinc galvanizing, designed solely for protecting ferrous metals from rust, and still widely used. Others, such as Bower-Barffing, were unique but short-lived chemical treatments with both practical and aesthetic properties. These six hardware finishes are only a sampling of the variety once available to homebuilders and homeowners.

<table>
<thead>
<tr>
<th>Finish</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOWEBARFF ON CAST IRON</td>
<td>A rust-inhibiting iron finish produced with heat, steam, and chemicals.</td>
</tr>
<tr>
<td>OLD COPPER ON WROUGHT BRASS</td>
<td>A highly popular finish, the copper plate is oxidized, then selectively buffed.</td>
</tr>
<tr>
<td>DARK Sanded BRASS ON WROUGHT STEEL</td>
<td>Brass plate oxidized to green-black, then treated to bring up highlights.</td>
</tr>
<tr>
<td>BRUSHED NICKEL ON WROUGHT BRASS</td>
<td>Nickel plated on stamped brass, then treated for a satin finish.</td>
</tr>
<tr>
<td>BRASS PLATE ON WROUGHT STEEL</td>
<td>One version of brass on stamped steel; each manufacturer had their own.</td>
</tr>
<tr>
<td>SANDED BRASS FINISH ON WROUGHT BRASS</td>
<td>Solid stamped brass oxidized and treated to accent corners.</td>
</tr>
</tbody>
</table>
surface imperfections resulting from stripping or the original casting process—that will only be magnified by the final shiny plate if left untouched. There may also be hills and valleys that mar what is supposed to be a dead-level surface.

After polishing, the base metal is copper-struck in the best work. In this step the plater applies an intermediate layer of copper to help the plating stick to the base metal. When applied in a heavy coat, copper is also used to fill surface imperfections and permit another polishing of the surface. Some platers will skip this step if they can get the base metal clean enough for the final plate to adhere, but generally copper striking is the sign of a quality job.

Striking is followed by plating on the finish metal. The plate too needs to be polished for the final appearance, then further treated if a decorative effect is desired. The final step for much hardware is a coat of lacquer, which protects doorknobs, lamp parts, and the like from oxidation.

What is Plating?

Metal coatings—or plates—have been applied to objects for decoration or protection since ancient times. Gilding was used by the Egyptians. The Romans perfected ways to solder silver to common metals, or coat iron weapons using a copper solution.

The most common modern method is electroplating, where electricity is applied to two metals in a solution—a process akin to charging a battery. In the basic electroplating operation, the parts to be plated are hung on the cathode (negative terminal), while a bar of brass, zinc, nickel, copper, or other plating metal is hung on the anode (positive terminal).

When both terminals are dipped in a tank and DC current is applied between them, the plating metal disassociates itself from the bar, moves into the solution, and is then deposited on base metal parts as a thin, uniform layer. Platers can control the thickness and nature of the plate by selecting the time in the tank, amount of metal in the tank, electric current level, and so on. Other factors, such as tank size, solution makeup, metal purity, and skill of the plater, all have their influence on the quality of the final plating job.

Depending upon the kind of work they seek, plating shops may also be equipped to finish solid or plated hardware with decorative effects. Oxidized finishes that enhance the metal with a pleasing patina are produced by treating the hardware with chemicals, gasses, or heat. Brushed surfaces may be the result of a chemical or mechanical process.

Dealing with Platers

METAL PLATING IS A LARGE, WIDESPREAD field, with the bulk of the companies servicing vast orders for the industrial market—nuts and bolts, telecommunications connectors, or automotive and aerospace parts. In contrast, refinishing and replating old-house hardware is a specialty (often "mom & pop") business. Most shops are relatively small: under seven employees, plus the proprietor.

Unfortunately, the increasingly stringent environmental regulations of our era, while good for the planet at large, have hit the plating industry hard. Plating and its related operations consume gallons of water, and they produce heavy metals as a waste product. The fallout is, platers large and small have been forced to become even more specialized. Here's what to ask when shopping for a restoration plater:

IS THE COMPANY'S MAIN BUSINESS PLATING OR POLISHING?—It is easier to refinish and polish solid hardware than it is to go through the plating process. In most cities, the phone book has multiple listings for platers, but some really do just polishing and sub-contract the plating. Also, watch out for the operator that tries to repolish old plating at the price of a new plating job.
matches the original appearance, then you have a solid-metal item that was not plated. If the scratch shows a different color, you have a plated item. Non-ferrous base metals such as copper or brass were quite common for even mundane parts because they were easy to form and work.

Hardware made after 1945 that shows a silver color is probably pot metal (some mixture of zinc). Aluminum, too, was often used in the 1920s and 1930s, especially in lighting fixtures. A silver coating over a base metal, particularly on lighting fixtures, is usually silver or nickel plate. Nickel is extremely hard, while silver is soft; you can wear through the coating with fine steel wool. Also fresh silver looks white, while nickel has a yellow cast. Chrome did not appear until the 1920s and is distinctly blue in character.

Creative finishes were far from rare (see "Be on Your Metal," p. 59). Many solid and plated surfaces were antiqued by dying the clean metal then removing the dye in selected areas with buffing wheels. Corners and recesses may still show these black or brown treatments. Most solid hardware needs only to be polished and lacquered to regain its original appearance. However, if you have, say, an antique copper finish on solid brass or iron, then the hardware must be replated.

The Plating Process

REPLATING IS NOT LIKE REPAINTING; YOU can't just overcoat the old metal, even with good preparation. Not only will the plating refuse to stick, but it also won't produce an attractive, renewed surface.

The first step in quality replating is stripping off lacquer, paint, old plate, corrosion, and grime down to base metal. Like a lot of processes, the choice of method and care of the craftsman have a big influence on quality. Some platers still use a steel wire wheel for stripping—an antiquated and potentially damaging method for soft metals. Others opt for one of the “gentle blasting” technologies, such as glass or urethane bead media, that are used for delicate machine parts. Chemical stripping and reverse-plate stripping generate hazardous materials. These processes are preferred for some jobs (removing nickel plate from solid brass, for example), but require special disposal permits.

Once the object is stripped, it should be polished to smooth and level the base surface without removing details. The hardware may have pin holes and occlusions—minute

Plating Pitfalls

An experienced plater will be able to tell you in advance what to expect from a replating job. Four iron ball-and-claw table legs (top) took a new brass plate fine, but the heat cracked the glass—as predicted. This cookstove rail (below) will have to be disassembled before plating because it's hollow.

Hard and shiny, nickel-plated cast iron makes up the brightwork on most pre-1920 wood or gas stoves. Replacing this much metal will cost at least $300, but will restore the stove to like-new appearance.
Restoring the Decorative Metal Finish

Ever polish a once-brassy lamp to find it's rusting under the dirt? Ever clean a dull grey doorknocker and discover it's delightfully more detailed than you ever suspected? Chances are that's because the surface of the hardware has a decorative metal finish.

Before 1940—especially prior to the 1920s—there were literally scores of metal finishes and effects. All manner of working hardware for doors, windows, and cabinets, as well as the metal brightwork on lamps, stoves, and even furniture, might be treated to enhance the appearance (or performance) of desirable base metals like brass and bronze, or plated to make cast iron and steel look more attractive. In the best quality work, even screw heads and washers were finished to match the hardware.

Metal finishes are beautiful and highly durable, but decades of use and exposure eventually wear them out—as countless old-house doorknobs will attest. What many folks don't realize is that it's possible to restore most metal finishes to their original luster, just bring the parts to your friendly neighborhood plater.

Nickel, not chrome, is the metal plate in old houses. It fails in telltale flakes (right), but is readily renewed, as this restored fan and stove trim show. Nickel is also an authentic finish for reproduction lighting.

Know What You've Got

Before we get to advice about finding and hiring a good plater, let's back up a bit. You must determine what the base metal is and what the finish is. First, examine the back of a part from a sheltered location to get some idea of its original appearance. A reddish color indicates rose brass or bronze; yellow is brass; silver is nickel or German silver (a low percentage of silver mixed with base metals to permit a high polish). Next put a magnet to the hardware. If it sticks firmly, the part has an iron base (cast iron or stamped steel) with plating to prevent rusting.

If the magnet does not stick, scratch the back surface with a sharp awl or screwdriver in an inconspicuous spot. If the scratch...
and make it easier to spot holes and areas that need patching.

**Repairing Plates**

**FILL HOLES SMALLER THAN A DIME WITH A latex caulk that contains silicone.** For larger holes, try repairing the damaged area with polyester auto body filler, available in hardware and auto supply stores. If necessary, you can level and shape the filler as if you were patching a car door. Shortly after the filler has been mixed with hardener, it begins to set up. While it is in this soft, rubbery state, it is easy to shave and carve with a “cheese-grater” blade (such as Stanley Surforni brand). Then, when it's fully hardened, sand it smooth. Read the manufacturer's directions carefully and experiment with the filler before attempting any repairs. It’s also possible to mold a small replacement section using auto body filler and a hobby mold-making kit, but you’ll need to experiment with techniques to cast and attach the finished patch.

If the damage is not in a featured part of the pattern (say, the fill band between the cornice and the border), you may be able to patch it. Use a piece of salvaged sheet metal that matches the original pattern as closely as possible. The patch should be about 2" larger than the hole. Fold the edges under ½" inch and cut off the corners at an angle with a pair of tin snips. Then, clamp the patch in place and attach with pop rivets.

**Replacing Plates**

**PLATES THAT ARE SEVERELY DAMAGED OR rusted through can be replaced with new ones.** In some cases, the original pattern may still be available from long-time manufacturers (see “Suppliers”). Replacement plates are relatively inexpensive—about $2.50 to $5 per square foot.

Plates usually come in standard dimensions of 2' x 4' or 2' x 8', or in 2' squares. Typically, they overlap slightly and “button” together at the edges. To remove a damaged section, coax out the original cone-head-shaped nails or brads with a 6" tacking bar, taking care not to bend or rip adjacent plates. Since the plate edges will be sharp, be sure to wear work gloves when you're handling the material. If you dent the flanges of surrounding pieces, pound them flat with a hard rubber mallet.

Before installing the new section, prime both sides and paint the surface with two coats of oil-based paint. You should be able to nail the plate directly to the existing furring strips. Otherwise, cut a section of ½" plywood and screw it to the ceiling for a naiier. Drive a conehead nails into the small raised bumps, or buttons, that occur at regular intervals in the pattern.

**Painting the Ceiling**

**IF YOU’VE EXPOSED ANY BARE METAL, GIVE your ceiling the full sealing treatment.** Apply a primer coat followed by two finish coats of an oil-based paint suitable for metals. Don’t use latex or other water-based paints—rust will begin to form immediately. Avoid painting when the humidity is above 80 percent.

A ½" roller should have sufficient nap for a ceiling with a ½" relief. Thickly covered ceilings will need fewer coats. Correctly applied, a plain or decorative paint job will give your metal ceiling an edge that should last well into the next century.

**Raising the Pattern**

An easy way to show off the relief of an embossed tin ceiling is to highlight a raised design with a darker or lighter version of the basic ground color, or with complementary colors. This three-step technique works well even over heavily encrusted paint.

1) Apply the highlight coat first. Allow this to dry thoroughly.
2) Apply the second coat, working the paint well into the deeper impressions.
3) Using a pliable sponge or soft cloth, quickly wipe the paint off the areas you want to showcase. You should see the highlight color emerge along the highest points of relief.

**SUPPLIERS**

W.F. NORMAN CORP.
P.O. Box 323
Nevada, MO 64772-0323
(800) 641-4038

SHANKER INDUSTRIES INC.
3435 Lawson Blvd.
Oceanside, NY 11572
(516) 766-4477

CHELSEA DECORATIVE METAL CO.
9603 Moonlight Dr.
Houston, TX 77096
(713) 721-9200

AA-ABBINGDON AFFILIATES
2149-51 Utica Ave.
Brooklyn, NY 11234
(718) 258-8333

STEPTOE & WIFE ANTIQUES LTD.
322 Geary Ave.
Toronto, Canada M6H 2C7
(416) 530-4200

Thanks to Neal Quitno of W.F. Norman Corp., Sheldon Gruber of AA-Abbingdon Affiliates, Glenn Eldridge of Chelsea Decorative Metal Co., Ed Soucy of Ring Leg Furnishings, and Matt Miller, AIA, for technical help with this article.
RICHLY DETAILED, AFFORDABLE, AND VIRTUALLY INDESTRUCTIBLE, metal ceilings have never gone out of style since they first appeared *en masse* in the 1880s. During a heyday that lasted from 1900 to 1930, hundreds of simple and intricate patterns were stamped in steel. Manufacturers drew freely from classical Greek, French Renaissance, Gothic, Rococo, and Empire sources for inspiration. Initially twice as expensive as plaster ceilings, by 1910, these raised, embossed metal panels were cheaper than either plaster or wood. Always popular for commercial buildings, "tin ceilings" quickly found their way into homes. Residential patterns tended to be less ornate than commercial designs. They were suited to the smaller rooms of a house and often mimicked the fine plaster decoration and coffered ceilings that were out of reach for most middle-class homeowners.

Entire rooms could be decorated with pressed metal, including ceilings, mouldings, cornices, medallions, friezes, wall plates, and wainscots. Some manufacturers even hawked their merchandise as an ideal surface material for bathroom and kitchen walls—a recipe likely to produce rust.

The basic components of a ceiling included plates, borders, fillers, and cornices. The central plates were edged with a narrow border. Next came a stippled filler. The cornice or cove moulding provided the finishing touch, lapping the filler and usually anchoring the ceiling to adjoining walls.

While most residential ceilings were painted a matte white, that didn't keep turn-of-the-century manufacturers from actively hyping decorative techniques, including polychroming and gilding. Plates or panels were usually painted a light color, with darker tints used for medallions and cornices.

The handful of original manufacturers who survive today still produce original patterns that date to the late-19th and early-20th centuries. Struck from original steel dies, these replications are often so exact that one company (The W.F. Norman Corp.) simply reprints its 1908 catalog as its current pattern book.
As the first panels of a 1960s drop ceiling come down, you see the unmistakable embossing of a "tin" ceiling overhead—a raised pattern of fleur-de-lis or circles laid out in a rectangular grid. Some of the paint is popping off; water stains and rust mar the surface. Can you salvage this miracle material of the late Industrial Age? With a little know-how and elbow grease, you bet your type you can.

Pressed out of sheet steel or sheet iron, metal ceilings were occasionally tin coated, but they were rarely made of solid tin. These easy-to-install ceilings were embraced by late 19th-century homeowners as one of the first cheap fixes for failing plaster. While there's no one way to approach every repair on a pressed metal ceiling, if you stick to a few sound techniques, you'll be on your way toward a turn-of-the-century fix-up of your own.

Quick Seals for Steel

The high relief of a metal ceiling offers a forgiving surface for minor repairs.

(1) Use steel wool to remove surface rust. It isn't necessary to remove all rust, just the scale and powdery material that prevents fresh paint from adhering to the ceiling.

(2) Fill in small holes with latex-based caulk that contains silicone. Although it's water-based, it doesn't contain enough moisture to create flash-rust.

(3) Patch larger holes with auto body filler. If the hole is more than 2" across, first back up the area to be patched with a piece of flexible ¼" wire mesh. Then apply a base coat of the filler, followed by a finish coat. The filler can be shaped, shaved, or even molded to recreate some of the detail lost to damage. You'll need to work fast, since the filler hardens quickly.

Removing Paint and Rust

Metal ceilings were meant to be painted. Multiple coats of paint effectively seal the seams between plates, creating an unbroken layer of protection that thwarts rust. When breaks in the paint layer occur, they're usually warning signs of hidden water damage. Keep in mind that a 30-gauge, metal ceiling is only 1/100th of an inch thick. If there's rust, there's even less metal left. The best rule of thumb is to remove only surface rust and the loose or peeling paint that scrapes easily away. Since you'll be working on a surface that's likely to contain lead paint, take appropriate steps to reduce your exposure to paint chips and dust (see "Getting the Lead Out," July/Aug. 1992).

Most metal ceiling experts recommend using a 1" wire brush of medium stiffness, applied with just enough force to dislodge loose paint without gouging. If you're too enthusiastic with the brush, you may crush the embossment, especially where there are intricate patterns. You can also use a medium-bristle rotary brush attached to a drill. Expect to do some hand brushing in corners.

Another technique for removing loose paint is to bat the surface with a wire loop. This method is particularly appropriate for ceilings where most of the paint no longer bonds well to the steel surface. Make a loop at the end of a length of flexible, 16-gauge construction wire, and fasten it at the bottom. The finished bat should be about the length of a fly-swatter. Working in sections 2' square, bat the ceiling with the tool; the loose paint should fall right off.

To remove rust, use medium-grade steel wool or aluminum oxide sandpaper. If an area is heavily rusted, give it a couple of coats of paint. This will build up the surface...
Making the Most of a Good Impression

You don’t need to be a metalsmith to restore a tin ceiling.

BY MARY ELLEN POLSON

Surface rust is the foil of a metal ceiling. Spot brushing and a little paint will keep the steel in prime condition.
Even though many log houses were meant to have siding, the log structure requires periodic chinking and daubing.

...and Don'ts of Insulating,” May/June 1996). Thin daubing passes the moisture quickly and efficiently, but thick daubing will keep the moisture inside longer, which can cause rust and rot.

Continuously dip the trowel into water to keep it clean and so the surface will silk up and smooth out. Historically, the finished daubing surface was as smooth and flat as possible. A sleek finish propels rain off the walls faster. A rough surface that is irregular, full of exposed wood or stones (chinking), or given a brushed finish will have more surface area to slow and absorb runoff.

**Insulation Breakdown**

Once the exterior daubing has set up (over about 12 hours), move inside to insulate. Kraft-faced fiberglass batt insulation is the most common choice, but will lose its R-value if it gets wet. It also draws mice and other small rodents, who will nest in the wool, though they generally do not destroy it. Cotton insulation has the same thermal qualities as fiberglass, but if the material gets wet and dries out again, it retains its R-value. When rodents nest in cotton, they usually destroy it.

A better insulation, though expensive, is Air Krete (Palmer Industries, 10611 Old Annapolis Road, Frederick, MD 21701, 301-898-7848). It’s an air-entrained concrete-like material that is sprayed in place and completely fills the void. Air Krete provides R-3.9 per inch, will not harbor pests or rodents, and resists fire. It’s non-toxic, and its R-value is not reduced if it gets wet.

With the insulation in place, install lath on the interior. Because water runoff is not a problem, you can choose a flush surface against the upper log. Apply the daubing with the methods used on the exterior.

The method described above is not only affordable, but will extend the protection to the log frame for up to 60 years.

**TOM MOATES** restores log houses and other historic buildings, including his own home in Floyd, Virginia. DOUGLASS C. REED, president of Preservation Associates, in Hagerstown, Maryland, has restored hundreds of log houses and has written several references on the subject.
Because of the potential for rust, some log house experts eschew metal lath. Instead, they anchor the daubing to the log above—where gravity is working against them—with a line of galvanized nails spaced every 4” with about 1” of nail exposed. They trowel the daubing over the nails.

Wire mesh lath should fit snugly, but it must remain as flat as possible. If the lath cups in a concave form, the center of the daubing mix may become too heavy or fall out during installation. If the lath bows out in a convex form, the daubing may be too thin in the middle and could crack horizontally.

Will stick to the hoe in a wet chunk, hang there for a second, then fall as a blob. If it is too wet, the hoe will move through it like potato soup, and the mix won’t stick to the hoe at all. If your mix gets too wet, simply add the proper proportions of dry ingredients. Finally, add the hydrated lime.

Applying Science

If the sun is out and the weather is hot, try to arrange the day’s work in the shade. Keep the direct sun off the wet daubing as much as possible. If it dries too quickly, it will not be as strong and may crack. An occasional light misting from a garden hose while it cures will help.

Start at the end of the joint that corresponds to your dominant hand. (Righties start at the right; lefties at the left.) The direction of your work has to do with marrying the mortar “mud” against the previous trowelful. As you work each load of mud into place, it knits better if you push it against the previous batch. Before you start daubing, make sure you have mixed enough mud to complete the entire joint. If you stop mid-way, the seam will be noticeable and unsightly.

The daubing process is similar to repointing brick masonry. Put a load of mud on a plasterer’s hawk and hold it under the crack. Using a small pointed- or square-edged trowel, apply the mortar one troweful at a time. Until you gain some experience and skill, you will almost surely push the mortar through the lath. Keep at it until you get the feel—your touch should be light enough so the mortar stays put, but hard enough that you push some mortar through the lath, creating diamond-shaped fingers on the back. These keys will droop and then dry, bonding the mortar to the lath.

After the joint is full, go back over the entire length to smooth the surface. Have several different sizes and shapes of trowel handy because the joints will vary along the logs’ twists and turns. Always use the largest trowel that fits in the crack. Fill in all voids left at the edges and maintain a ½” thickness on the outside of the screen. If the material is too thick, it can retain the moisture that migrates through the wall because of climatic change (see “The Dew's
ter. You'll find sandy deposits that are fairly clean high up on the banks. Shovel the sand into plastic bags and haul them back to the site. Then dump them in 2x10 frames (like cold frames without the cover) to dry. These river sands aren't clean, which gives the mortar an authentic look. For practical purposes, though, use only about 1/3 river sand. The other 2/3 should be store-bought, washed masonry sand.

Let's Get Cooking

USE A MORTAR BOX TO MIX CAREFULLY MEASURED batches. Never prepare more daubing than you can use in 30 to 60 minutes so it doesn't dry in the pan. Thoroughly combine mortar mix and sand with a hoe. Next add water—only a little at first—and chop it back and forth. It'll be too dry, but mix it fully and only add water gradually until the mud has the consistency of biscuit dough. Passing the threshold from too dry to too wet takes an amazingly tiny bit of water.

The mortar should be wet enough to work into the lath, but dry enough so it won't fall through it. When it's right, the mud

Above: Rechinking can add a crisp and finished appearance to a log house. Left: Custom cut the lath to fit the dimensions of the joint. Below left: Nail it securely in place, but do not nail on or around wet daubing.
edge into the profile of the log above. Nail the lath along the top and bottom edges and into the 2x4 blocks. Be sure to recess the lath on the upper log (see illustration, p. 51). Use roofing nails, which have large heads, and nail securely every 4" to 6".

Make sure the wire lath is not too close to the surface. If it pops through, the resulting rust will be extremely destructive. Also test the lath by tapping it with your fingers. If you see a noticeable bounce, it needs more nails. Springy lath will flip during back out as you trowel it on.

Recipe for Success
NEW DAUBING MUST BE PLASTIC ENOUGH to move with the logs during changes in the weather and should look authentic in color and texture. High-tech chinking compounds sold for new log home kits are tempting, but they don't look right and are not suitable for the conditions of a historic log house. You have to make your own daubing.

If the existing daubing is historic, or if you find remnants of original materials, salvage a bit as a model for your new mix. Break apart some solid pieces and review the color, aggregate distribution, and size of the components. Crush some into a powder to examine the sand.

Start with the basic daubing recipe at left, then customize the ingredients to match existing materials in your building. It's best just to buy ready-mixed mortar, such as type N, which contains lots of lime for soft daubing. Standard portland cement is very hard and can do more damage than good as wood fibers grind against the rigid daubing. Select white mortar because gray is not a historic daubing color.

Hydrated lime does not have to be slaked, however pre-wetting hydrated lime makes it easier to mix and provides a stronger bond. Slowly pour the hydrated lime into a clean garbage can with a few gallons of water in the bottom. As you pour, stir it into a thick paste.

Using local sand is the best method for getting authentic color and texture. (Mortar colorants never look quite as good, plus they may fade over a short time and create uneven color.) The vast majority of original daubing contained stream-sediment sand gathered nearby. Go to the nearest stream or river after a period of high wa-

DAUBING RECIPE
This makes strong, flexible daubing. You can adjust the basic mix to your specific needs.

1 part type N mortar (white)
1/2 part hydrated lime paste
3 1/2 parts sand
(one-third gathered from a local river bank)

chinking because new materials add strength, durability, and insulation to the building—without changing its appearance.

If you're rechinking, take the opportunity to add structural support. Cut 2x4 blocks that snugly fit between the logs. The nominal 3 1/2" lumber width should not get in the way of the chinking and daubing. Otherwise, select 2x3s or other stock.

With the blocks in place, install metal lath to hold the daubing (see illustration, p. 50). Work on the exterior first to seal the building. Begin by cutting plasterer's diamond metal lath (26" x 8' stock is handiest) fitted to fill the joints. Or you can cut the lath oversize, nail the bottom edge, and fold the top edge into the profile of the log above. Nail the lath along the top and bottom edges and into the 2x4 blocks. Be sure to recess the lath on the upper log (see illustration, p. 51). Use roofing nails, which have large heads, and nail securely every 4" to 6".

Make sure the wire lath is not too close to the surface. If it pops through, the resulting rust will be extremely destructive. Also test the lath by tapping it with your fingers. If you see a noticeable bounce, it needs more nails. Springy lath will flip during back out as you trowel it on.

Recipe for Success
NEW DAUBING MUST BE PLASTIC ENOUGH to move with the logs during changes in the weather and should look authentic in color and texture. High-tech chinking compounds sold for new log home kits are tempting, but they don't look right and are not suitable for the conditions of a historic log house. You have to make your own daubing.

If the existing daubing is historic, or if you find remnants of original materials, salvage a bit as a model for your new mix. Break apart some solid pieces and review the color, aggregate distribution, and size of the components. Crush some into a powder to examine the sand.

Start with the basic daubing recipe at left, then customize the ingredients to match existing materials in your building. It's best just to buy ready-mixed mortar, such as type N, which contains lots of lime for soft daubing. Standard portland cement is very hard and can do more damage than good as wood fibers grind against the rigid daubing. Select white mortar because gray is not a historic daubing color.

Hydrated lime does not have to be slaked, however pre-wetting hydrated lime makes it easier to mix and provides a stronger bond. Slowly pour the hydrated lime into a clean garbage can with a few gallons of water in the bottom. As you pour, stir it into a thick paste.

Using local sand is the best method for getting authentic color and texture. (Mortar colorants never look quite as good, plus they may fade over a short time and create uneven color.) The vast majority of original daubing contained stream-sediment sand gathered nearby. Go to the nearest stream or river after a period of high wa-
In this case, workers rechinked with wood chunks and then redaubed each joint before proceeding.

many other critters that live in chinking. As you proceed, you'll have to determine how much daubing to remove. For museum buildings, where the goal is maximum preservation, specifications call for restoring only the damaged areas. For homeowners, however, rechinking the entire house may be preferable. It provides an opportunity to install electrical wiring, to find and repair damaged logs, and to insulate.

Strike each log with a hammer. The sound it makes will tell you about the log's condition. A sharp, solid ring indicates a good interior; a dull thud indicates a hollow log. Strike softly enough so you don't make dents. Mark areas of degradation with chalk on the log faces.

If you find localized rot, epoxy consolidation is a cost-effective repair that retains original logs. The drawback is that epoxy fillers are lighter in color than wood. (If the rotten sections are small, you can fill them with daubing.) The other option, log replacement, is costly and usually unnecessary. Logs are generally oversized for the structural loads they support, so don't assume that a compromised log has to be replaced. When in doubt, hire an engineer.

When working around obvious deterioration, especially at corners and openings, brace the logs directly above with 2x6s anchored to solid ground. Tack with at least two 20d double-headed nails. Beware when a rock or wood chunk doesn't readily fall out. It may support the logs above.

Most log-house owners are on the lookout for termites, yet a bewildering array of other insects and larvae love to call logs home. So, while the joints are open for inspection, bring a pest control expert on site.

Sound Chinking

STONE AND MASONRY CHINKING OFTEN SURVIVE LONGER THAN ORGANIC CHINKING, SUCH AS WOOD CHUNKS CUT FROM THE LOGS DURING CONSTRUCTION. You can reuse original chinking if it's in good condition. Yet even strict historic restoration projects often replace old
Buildings for Best Performance

BY TOM MOATES
AND DOUGLASS REED

OG HOUSES ARE NORTH AMERICA'S true home-grown architecture. In a continent rich with timber, they provided many of the first permanent dwellings. Whether they hide under the clapboard siding of a prosperous farm homestead or bare their notches as architect-designed Rustic retreats, an estimated 50,000 log houses still stand today.

The least durable part of the sturdy construction is the filler between the logs: stones and wood chunks called chinking covered with mortar called daubing. Log houses with exposed walls need these materials replaced every 20 to 30 years (80 to 100 years if they're protected by siding). Here's how to renew chinking and daubing.

Daubing Demolition

OLD DAUBING SHOULD COME LOOSE WITH THE tap of a hammer, but for tough spots use a prybar or masonry chisel. Compressed air works well for cleaning hard-to-reach spots. Watch out for bees, snakes, squirrels, and the...
The open soffit after structural steel has been installed. Note the fastening plate installed on the inside of the fascia. The steel strips are furring for the stucco lath.

Above: The finished cantilever.

Once the cantilever was in position, they set about strengthening the members.

The team bolted pieces of angle iron (L-shaped steel) to the ends of the old I-beams using joining plates. Next, they fastened the new steel to the wood framing in the overhang at several points. They installed steel plates on the fascia to pull it in, straighten it, and attach it firmly to the new steel. Workers also installed plywood gussets between the rafters and the soffit joists, to add strength and rigidity to the cantilever. They attached narrow steel furring strips and then steel mesh lath to the soffit for the stucco.

The ultimate indicator of success in the Purcell-Cutts House restoration is that casual observers cannot tell the museum did any work. "Many people visit the house and tell us how lucky we are that we didn't have to do anything" to it, said former Curator Michael Conforti.

The Purcell-Cutts House is open to the public during the second weekend of every month. General admission is $3. Call for or write for information and for reservations, which are required: The Minneapolis Institute of Arts, 2400 Third Avenue South, Minneapolis, MN 55404, (612) 870-3131.

Little House of the Prairie School

While it existed between 1909 and 1922, the firm headed by William Gray Purcell & George Elmslie (or P&E, as the architects called their firm) was the most prolific among the Prairie School practitioners following the lead of Louis Sullivan and Frank Lloyd Wright. More than 50 P&E designs, mostly houses, were constructed. They are scattered from Portland, Oregon, to Woods Hole, Massachusetts, but most of P&E's work was done in Minneapolis, the site of their main office.

P&E began work on a house for Purcell and his family in 1912. Construction, including a modest expansion, was completed in 1915. Interestingly, Purcell's wife took the role of client for the project, and the original drawings refer to the house as the Edna S. Purcell house. The house's last private owner, Anson B. Cutts Jr., bequeathed it to The Minneapolis Institute of Arts in 1985, along with an endowment earmarked for restoration.

Purcell left a significant written record about his house. In memoirs, he wrote that the design reflected the life lived by his family. Purcell lovingly recorded where, what, and when the family ate (the hearth; bread, milk, cookies, and apples; Sunday evenings). He wrote with pride about the house's mechanical systems, including the screw-drive automatic coal feeder and the air conditioner, neither of which, he noted, worked very well.
Utterly Beaming

Many residential buildings require structural restoration—for sway-backed ridges, sagging floors, or spreading walls. Additions, too, often mean redistributing the weight of the old house over a wide opening. To do any of this, you'll need the help of strong beams. Many of the modern manufactured beams used for new construction make excellent retrofit materials for old houses. Steel I-beams are the strongest option, but not necessarily the best because of the difficulties in cutting and welding the material on site. Engineered wood is easier to work, cheaper, and often available as stock material. Some options to consider:

WOOD: The original structural material, long wood timbers are weighty, large, and, these days, hard to come by. Plus, they may contain structural imperfections, such as knots.

GLUE-LAMINATED LUMBER (GLUE-LAM): The engineered beam most widely used in old-house restoration, glue-lam is composed of four or more layers of stock, each about 1 1/8" thick. The boards are end-joined to create any desired length and bonded face to face with adhesive. Glue-lam beams are very strong, can be virtually any length and dimension, and a wide variety of shapes, such as round or pointed arches. You cannot, however, notch or pierce them for pipes or ductwork.

LAMINATED VENEER LUMBER (LVL): Made by adhering thin wood veneers, LVL is a wood sandwich much like plywood, except the grain in the veneers is parallel. Standard LVL beams run 1 1/8" to 3 1/2" wide, but they can be sistered for thicker beams. That means you can bring each piece into the building individually before assembling them into a bulky beam. It's also very easy to work. You cannot notch or pierce it, however, and it's unwieldy for spans longer than about 20'.

I-JOIST (I-BEAM): The top and bottom of a beam do all the work. As gravity tries to bow the member, it compresses the top and stretches the bottom. The material in between simply holds the top and bottom together—and adds weight and mass. So the I-shaped beam has wide flanges with a thin web between them. I-beams are narrow, light-weight (about 2 pounds per linear foot for most applications), and as strong as an equivalent wood joist. You can order them in any length and can pierce the web. Handle with extreme care during transportation, site-storage, and installation.

TRUSS: The truss consists of two chords with diagonal members running between them. The result is a strong beam that can carry heavy loads across long expanses. Trusses are commonly used for the wide, flat roof spans of industrial settings. A big plus is that it's easy to pass ducts and pipes through trusses because of the open spaces. Also, trusses are the only material besides glue-lam that you can order in a variety of shapes, including the structure of an entire gable roof. You cannot modify trusses in the field.

ance is tight. To provide enough strength, wood members—even engineered lumber such as glue-lam—would have been too big.

The glue-lam beams were too long to bring through the house and up the stairs. So Kopp and MacDonald took advantage of the leaking built-up roofing, which needed replacement anyway. Restoration workers removed the old roofing, then cut "doors" in the sheathing to insert the reinforcing materials.

Return of the Folding Wall

THE SAGGING MAIN ROOF HAD LED TO INTERIOR problems, too. In an early attempt to halt the roof's descent, someone had placed 2X4 bracing in the attic between the second-floor ceiling and the roof. Instead of stopping movement, the bracing forced the ceiling down with the sagging roof.

This chain of events affected one of the house's most unusual elements: a folding wall between two upstairs bedrooms, much like the dividers in convention halls and classrooms today. (Late in life, Purcell wrote proudly that the wall was a practical example of the Modernist dictum, "form follows function," a quote from fellow Midwest architect Louis Sullivan). The folding wall, now bearing weight from above, became compressed, slightly bowed, and inoperable.

Stabilizing and leveling the roof elements relieved some of the pressure, but it didn't free up the mechanism, which includes a track in the ceiling. To finish the job, workers strung steel supporting cables between the roof rafters and the ceiling above the track, then tightened turnbuckles to lift the track into place (see photo, p. 42).

Lifting the Cantilever

THE SAGGING FIRST-STOREY CANTILEVER was a simpler repair. After removing the stucco from the soffit and discovering that the steel I-beams reached only halfway into the 7' eaves, Kopp devised a solution. Had the I-beams been long enough to reach the front edge, there might never have been a problem. The cure was simply to lengthen them. The restoration team jack’d up the cantilever to its proper position. They built T-shaped posts from 2X4s and set them on screw jacks under the outer edge of the cantilever (see opposite).
job. This advantage was crucial since it was impossible to specify exact dimensions ahead of time. (Workers had to jack the structure up to the correct position before they could measure for reinforcing members.) Second, welding inside the dusty, cramped quarters of the attic would be too dangerous. Kopp chose glue-lam over solid wood because the material is stronger. Even if 32'-long, solid wood beams could have been found, which is doubtful, they would need to be much thicker than glue-lam to have the same strength and stiffness—a particular problem given the tight clearances involved.

Kopp did specify steel for rectangular tubes—key elements in the structural system that were bolted to the four original ridge rafters as stiffeners (see opposite). In this case steel worked better than wood because it resists bending forces about 20 times better than solid fir of the same dimensions. That means the steel reinforcement tubes are relatively thin, so they can extend out near the ends of the ridge rafters where the clear-

---

**Why Did It Fail?**

Even with the original plans and voluminous writings left by Purcell, just why the roof framing was under-built is unclear. It’s a matter of debate among Purcell-Cutts House restorers. There are three leading theories: First, it may be the result of cost-cutting by William Purcell, the house’s original owner and co-architect. Records show that Purcell worried about the cost of his house, but that his taste was expensive (above). Second, it may be that, with an attitude of “aesthetics-now-pay-later,” the architects knowingly chose undersized framing in an attempt to achieve a thin roof profile. Because of lack of work due to World War I, Purcell and his family moved from the house after only a few years, so he probably never had to deal with the sagging cantilevers. Third, the wrong framing may represent decisions made by carpenters, who constructed a highly experimental house. They could not have had much, if any, experience in creating 7’ cantilevers.

---

The first-storey cantilever has been leveled and stabilized. Workers have replaced the stucco and are wrapping up a day’s work in this photo shot as documentation of the project.
over the years, someone had added stucco to the undersides to make the soffit appear level. This started a vicious cycle: the weight of more stucco contributed to the sagging, which was “corrected” by more stucco. Preliminary surveys found as much as 4" of stucco in some soffits.

To devise a solution that effectively straightened the cantilever, stabilized the main roof, and preserved as much of the building fabric as possible, the museum put together a restoration team led by architect Stuart MacDonald and consulting engineer Elmer Kopp. Together, they found a way to avoid a total replacement of the roof structure, which the museum simply could not afford.

Raising the Roof

IN ORDER TO LIFT THE MAIN ROOF FRAMING members to their original position, Kopp and MacDonald had to find a bearing point from which to stabilize the rafters. Original construction drawings showed a steel I-beam in the second-storey floor supporting a wide span of ceiling above the open-floor plan below. If the beam existed as it was drawn, it could become the much-needed bearing point. The plans showed that all loads placed on the I-beam would be transferred through strong structural elements directly to footings in the basement.

As drawn, the beam was located in the space beneath two closets. Curators had decided the closets were not critical for interpreting the history of the house, so they were disassembled to gain access to the space. To the delight and relief of all, the I-beam was there, exactly as drawn. Kopp and MacDonald were able to design a structural skeleton to take advantage of this support (see illustration, p. 41).

They built two wood columns extending from the I-beam to the attic, where they each support the middle of a 32' glue-lam beam (see “Utterly Beaming,” p. 44). The ends of the beams extend to the exterior walls, which bear them. Since the beams had to be positioned over windows, rather than solid wall, workers reinforced the headers over the openings. Then they built conventional 2x4 framing from each beam to the rafters.

Kopp considered a steel beam, but rejected the option for several reasons. First, workers could easily cut wood to size on the
N 1912 WILLIAM PURCELL, A PROMINENT Prairie School architect, designed a cutting-edge house for his family. He included innovations such as an automatic coal feeder for the furnace, air conditioning, and an open, utilitarian floor plan. The construction, too, was revolutionary. For example, the cantilever roof over the first-storey wing projects 7' without the support of post or pillar. It's one component of a climate control system intended to manage sunlight as it enters the house at different angles through the seasons.

Despite a modern design that included steel I-beams—or perhaps because of it—this building was plagued by structural problems for years. When the Purcell-Cutts House, as it is now called, was bequeathed to The Minneapolis Institute of Arts, the main roof was sinking and the first-storey cantilever was sagging, so the museum began a major restoration campaign aimed not only at stopping the progressive deterioration of the roofs, but bringing the building back to its original state. A look at the materials and methods they chose is a good education in today's options for load-bearing members and how they can be introduced in old houses of any scale.

A Two-Headed Dragon

THE PRIMARY OBJECTIVE WAS TO STABILIZE the main roof—a gently sloping hipped structure typical of the Prairie School. While the 2x6 roof rafters and ceiling joists might have sufficed for the triangular geometry of a gable roof, they were seriously undersized for the low pitch—barely 1' of rise over 4' of run—of Purcell's roof. As a result, each plane of the 30' x 40' hipped roof had begun to drop.

A secondary goal centered on leveling the projecting first-storey roof. This cantilever (a structural member that overhangs its supports) drooped as much as 4" because the two steel I-beams that carry it only extended half the length of the projection. To make matters worse, as the cantilever drooped back to its original state. A look at the materials and methods they chose is a good education in today's options for load-bearing members and how they can be introduced in old houses of any scale.

ANATOMY OF A RESTORATION

In the main roof, restorers constructed a framework from the second-storey floor to hold the ridge rafters. In the cantilever over the first-storey wing, they extended the short beams to the full 7' of the overhang.

COLOR KEY

- ORIGINAL WOOD
- NEW WOOD
- ORIGINAL STEEL
- NEW STEEL

PHOTOGRAPHS COURTESY OF THE MINNEAPOLIS INSTITUTE OF ARTS, UNLESS OTHERWISE NOTED;
ILLUSTRATION BY BEAR WEITER, ASAP NEW MEDIA, INC.

MAY/JUNE 1997 41