

*Clem Labine's*  
**TRADITIONAL  
BUILDING**  
Historical Products For Today's Professional

S E P T E M B E R / O C T O B E R 1 9 8 9 V O L . 2 N O . 5 \$ 5 . 0 0

Special Issue On Historic Windows



Bulk Rate  
U.S. Postage  
PAID  
Permit No. 1  
Manchester, N.H.

Address Correction Requested.  
Return Postage Guaranteed.  
69A Seventh Avenue, Brooklyn, N.Y. 11217

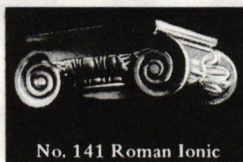
the standard of quality since 1860

# SCHWERD'S

## wood columns



No. 140 Scamozzi



No. 141 Roman Ionic

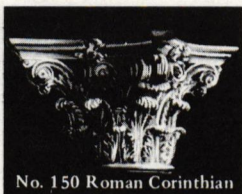


No. 142 Greek Ionic

**COLUMNS**  
— Schwerd columns are durable.

Our 100+ years of experience in manufacturing wood columns has proven that the durability of a wood column depends upon the strength of the joint and the quality and thickness of the wood.

Schwerd column construction was developed to meet each specific requirement. The wood is the highest quality, thoroughly seasoned Northern White Pine. The pride of craftsmanship and skilled techniques acquired by 100 years of specialized experience is applied. The resulting product is a "Schwerd Quality Column" specified by architects with complete confidence. Both standard and detail columns can be furnished from 4 in. to 50 in. in diameter and up to 35 ft. in length with matching pilasters.



No. 150 Roman Corinthian



No. 152 Temple of Winds



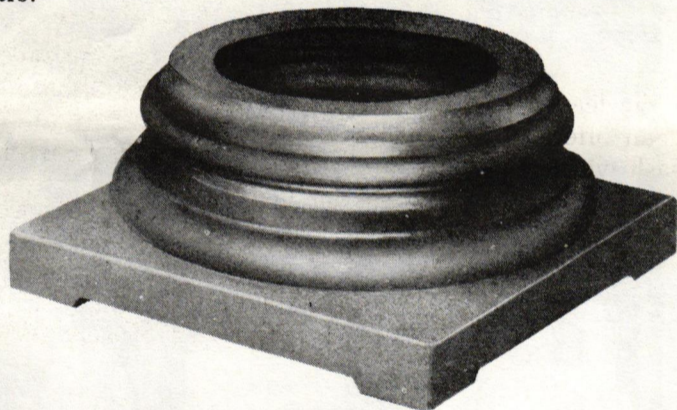
No. 144 Modern Ionic

If you are one of our old customers during the many years since our beginning in 1860, you know our product; if not, send us your inquiries and orders and join our list of satisfied customers.

■ **SEND FOR OUR FREE CATALOG** ■

Schwerd's complete aluminum bases for 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, and 30 in. dia. columns.

Schwerd's - Aluminum ventilated plinth and aluminum turned member base are manufactured of thick metal and are recommended for all exterior columns in the above diameters to provide a maintenance free, seamless base which is guaranteed against deterioration for a lifetime.



**A. F. SCHWERD MANUFACTURING COMPANY**  
telephone: 412-766-6322  
3215 McClure Avenue Pittsburgh, Pa. 15212

Circle No. 161



## Cast plaster architectural elements

Cornices • Medallions  
Pilasters • Capitals  
Pedestals • Brackets  
Plaques • Moldings  
& Much More

**ARCHITECTURAL  
SCULPTURE  
LTD.**

242 LAFAYETTE STREET  
NEW YORK, NY 10012  
(212) 431-5873

Circle No. 245

### In This Issue

Profile: Robert Meadows . . .	4
Wood & Clad Windows . . . .	7
Wood Window Specs . . . . .	8
Window SourceList . . . . .	9
Window Handbook . . . . .	15
Window Repair . . . . .	18
Computer Analysis . . . . .	20
Storm Windows . . . . .	22
Metal Windows . . . . .	24
Related Window Products . .	26
Product Literature . . . . .	29
Architecture . . . . .	30
Siegel's Scratchboard . . . .	31
Editorial Index . . . . .	31
Advertiser Index . . . . .	31

## VICTORIAN WALLPAPERS

- Handprinted Borders, Friezes, Ceiling Papers & Coordinated Wall Fills.
- Available Directly from our Studio by Mail Order.
- In-house Design Service.
- Color Catalog with Binder: \$10.00

**BRADBURY & BRADBURY  
WALLPAPERS**  
P.O. BOX 155-L • BENICIA, CA. 94510  
(707) 746-1900

Circle No. 13

*Landmarks*

RESTORED BY C. GUNNETT  
CIRCA  
**1830**  
HISTORICAL PRESERVATION ASSOCIATION

Erie Landmark Co. offers custom-lettered bronze markers for indoor-outdoor use.

Standard size oval, rectangle:  
7" x 10" . . . . . \$90.00  
(plus \$2.25 for shipping and handling)  
(plus MD state sales tax where applicable)

- National Register Plaques
- All Sizes from Medallions to Roadside Markers
- Graphics & Logos Reproduced
- Metal Photo Images

Call or send for **FREE** brochure:  
**Erie Landmark Company**  
Suite 211  
90 West Montgomery Ave.  
Rockville, Maryland 20850  
Tel: (301) 460-9575  
**Toll free: (800) 874-7848**

Satisfaction guaranteed  
Please allow 6 to 8 weeks for delivery

Circle No. 27

## TRADITIONAL BUILDING

Historical Products  
For Today's Professional

69A Seventh Avenue  
Brooklyn, NY 11217  
(718) 636-0788

Editor & Publisher **Clem Labine**  
Managing Editor **Judith Siegel Lief**  
Contributing Editor **Eve M. Kahn**  
Art Director **Judith Siegel Lief**  
Advertising Manager **Susan Littman**  
Circulation **Tana Bigelow**  
Data Security **Magnolia C. Shepherd**

A Note To Contributors: TRADITIONAL BUILDING solicits reviews of historical products from building and preservation professionals. A query letter to the editor describing the product and scope of the review is suggested. Photos of outstanding examples of Neo-Traditionalism and Architecture are also sought. While we will be careful of all materials submitted, we cannot be responsible for non-receipt or loss; please keep copies of all materials sent.

TRADITIONAL BUILDING (ISSN 0898-0284) is published bimonthly by Historical Trends Corporation, 69A Seventh Avenue, Brooklyn, NY 11217. Telephone: (718) 636-0788. Subscription rate to professionals in architecture, construction, and preservation in the U.S. and possessions: \$18/yr. (6 issues). Rate for non-professionals and subscribers outside U.S.: \$30/yr., U.S. funds.

Contents of TRADITIONAL BUILDING are fully protected by copyright and must not be reproduced in any manner whatsoever without written permission from the publisher.

© Copyright 1989 by Historical Trends Corporation. All rights reserved.

PRINTED AT THE LIGHTHOUSE PRESS  
Manchester, New Hampshire

To lead off this Special Issue on Traditional Windows, we'd like to tip our editorial hats to the man who has done more than anyone to raise the quality of historic window work in the U.S.

# The Prophet Of Historic Windows

The National Park Service's Chuck Fisher has caused dramatic changes in the kind of windows that are being placed in America's old buildings. Here's how he made it happen.

❖ by Clem Labine

**T**he 1970s were the low point for historic windows. The energy crisis had accelerated window replacement in older buildings. And the typical replacement was a poor-quality bronze-anodized aluminum window with totally square moldings. When wood replacements were used, they bore little resemblance to the original units. And the steel window industry was geared to new construction, totally ignoring the historic preservation market.

It was during those dark ages that Charles Fisher of the National Park Service's Preservation Assistance Div. devised an ambitious plan to improve the quality of window work in historic buildings. His position in the National Park Service's Washington office involved with the Federal historic preservation tax incentive program enabled him to develop a program that would ultimately involve manufacturers, architects, contractors, building owners, and historic preservation review staffs across the country.

## Aluminum Window Dilemma

Most of the insensitive aluminum window work of the late 1970s had been justified in terms of costs and manufacturer inability to supply better products for the preservation market. Chuck Fisher set out to establish high-level contacts with leaders in the window industry — contacts that continue to this day. By pointing out the considerable market potential, especially in light of the then new Federal tax incentives for rehabilitation of historic properties, Chuck got the more forward-thinking companies intrigued by the preservation market.

The information Chuck turned up from these high-level contacts was quite revealing. For example, the cost of custom work, such as arched-top heads and custom paint colors, was much lower than commonly believed. But *better and earlier planning* by the architect was essential to benefit from the semi-custom capabilities of the companies.

In addition to custom colors and special tops, critical issues in the early 1980s included muntin grids and custom-contour panning. Rejecting the flat muntin grid commonly in use, Chuck Fisher developed guidelines for the National Park Service that labeled as "inappropriate" fake muntins for smaller buildings and elaborate windows. (The guidelines considered the possible use of fake muntins in high-rise buildings and large institutional complexes — *provided* a more appropriate applied muntin system was adopted by manufacturers.) The new generation of applied muntins consisted of a trapezoidal-shaped muntin applied to the exterior and integral to the frame, with a depth eventually reaching 5/8" as the optimum for good shadow lines.

## Panning Over Wood

Another area of concern was the common practice of using flat panning over the existing window frame — totally obliterating the historic molding lines. Once Chuck discovered through his contacts that the cost of custom contour panning to match the historic appearance was relatively low, the National Park Service became a leader in requiring such a feature in Tax Act projects.

Chuck Fisher's work also extended to national manufacturers of wood windows. He discovered early on that most companies had unrealized custom manufacturing potential. Meetings with plant officials and top management helped influence some positive design changes.

Recognizing that insulating glass dictated wide muntin profiles with multiple lites, he encouraged development of true divided lite sash with an attached single-lite storm panel on the room side that rode with the operable sash. Such a design was used in the 1920s — and a few small shops had been offering it in New England. With prodding, one of the leading manufacturers began offering true divided-lite sash with applied interior storm panel.

## Getting The Word Out

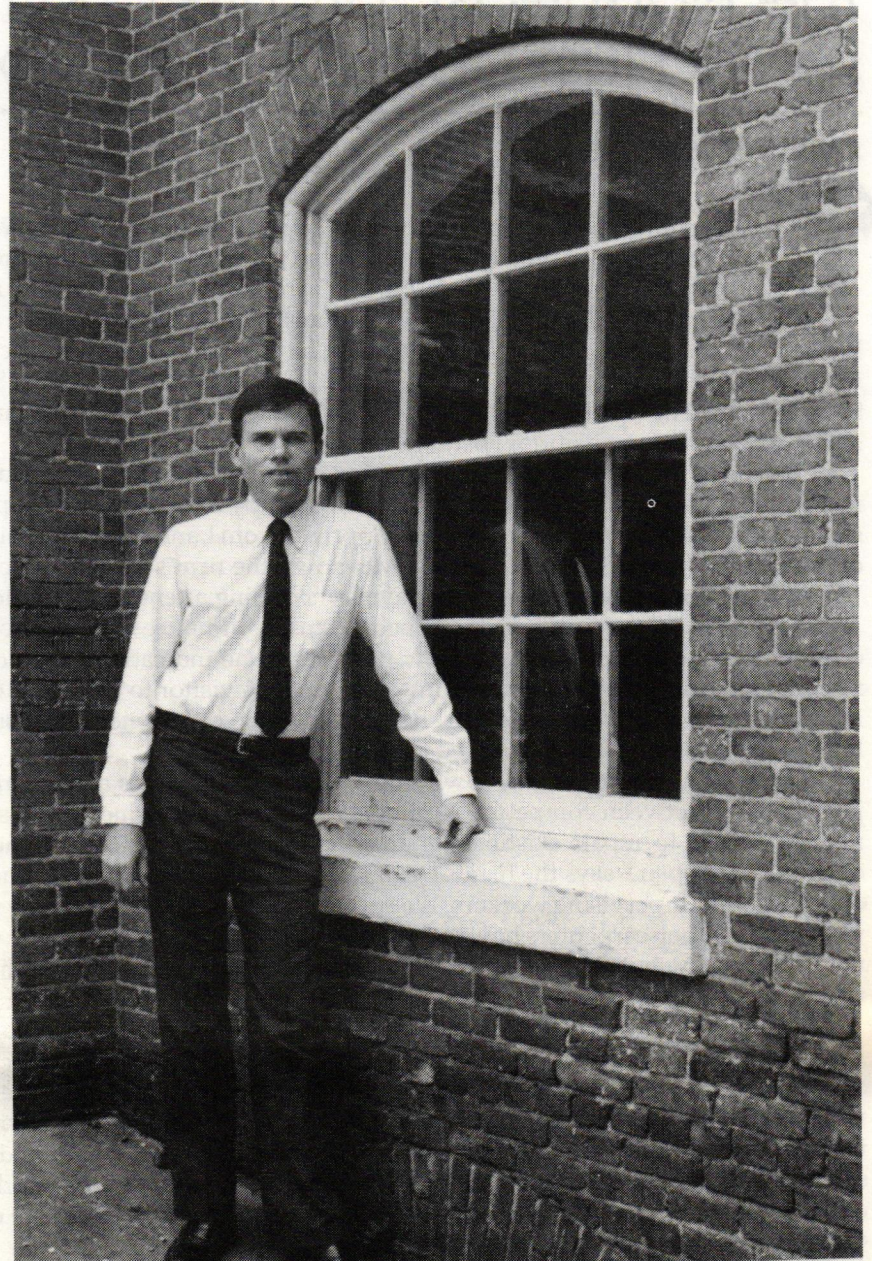
Much of the true custom work for the historic preservation field comes from smaller window companies. Recognizing that the capabilities of most of these companies are not widely known, Chuck launched a National Park Service project in 1985 to develop a national directory of companies offering window work suitable for historic buildings. With cooperation from the Center for Architectural Conservation at Georgia Tech, companies were surveyed to determine their capabilities, and an annotated list of nearly 100 companies was included in a 30-page *Window Directory for Historic Buildings* completed in 1986.

The year 1986 was a major turning point in Chuck's effort to promote quality window work. Up to that time, Chuck had preached the gospel of sensitive window work in workshops and articles. To accelerate the pace of getting information out, he laid plans for the 3-day Window Conference and Exposi-

## THE WINDOW GOSPEL

**"Deteriorated historic windows should be repaired rather than replaced wherever possible. In the event replacement is necessary, the new windows should match the historic ones in design, color, size, configuration, reflective qualities, shadow lines, detail, and material. Only when it is not feasible to match the historic fabric should substitute window material be considered . . . and only when it is shown through such means as field mock-ups that it possible to match closely both the detail and the overall appearance of the historic windows."**

— From *The Window Handbook*, Edited by Charles E. Fisher



tion in Boston in December of 1986. With the co-sponsorship of 10 major organizations, this national conference attracted over 600 architects and other professionals.

## Taking The Show On The Road

Currently, Chuck Fisher is working on an update of *The Window Directory* that will include an expanded section on storm windows and a new section on window repair companies — two areas that he feels are critically important.

Along with the Mid-Atlantic Regional Office of the National Park Service, the Historic Preservation Education Foundation, and a volunteer committee of professionals working on window preservation, Chuck is involved with a superb traveling exhibit of historic windows. "Windows Through Time" opened in New York this summer, and next goes on display in October at Independence National Historical Park in Philadelphia.

Fisher also continues to advise architects, preservation officials, and the window industry on complex window problems involving historic properties. Encouraging the use of half screens on the room side, window repair, fire shutters, and better detailing of replacement windows remain high on his priority list.

Chuck is quite modest about his role in the Historic Window Revolution. He points out that the work has been greatly aided by people in the window industry, representatives of historic preservation agencies and commissions, and many individuals working on projects across the country. All true. But if it hadn't been for Chuck Fisher's energy and persistence for the past 12 years, all we'd see today would be endless rows of dreary aluminum windows with flat fake muntins!❖

traditional building profile

# The Window Wizards

In the course of their work on historic buildings throughout the Northeast, architects at Robert E. Meadows' firm have solved just about every type of window problem there is.

by Clem Labine

They don't specialize in windows, of course. Robert E. Meadows, P.C. Architect is a broad-based firm that handles historic preservation projects of every description . . . from restoring the carousel in Brooklyn's Prospect Park to designing a neo-classical terrarium for the Bronx Botanic Garden. And in between, there have been dozens of projects that include Gracie Mansion, South Street Seaport, Old Westbury Gardens, Sailors Snug Harbor, The National Arts Club, the Richmondtown Restoration, and the American Museum of Natural History.

Even though they handle a wide range of design and preservation assignments, the firm's architects find that windows occupy a big part of their professional life. "We do a lot of work requiring approval from Landmark Commissions or the National Park Service," says Bob Meadows, the firm's principal architect. "And these administrative bodies are paying increasing attention to windows."

As a result, the firm has developed extensive in-house expertise for handling just about every type of window problem. One indication of the central role that windows play in the company's activities: A visitor to the firm's offices in Manhattan's South Street Seaport district finds the conference room stacked high with sample windows dropped off by hopeful vendors.

Being an expert in historic windows, of course, involves a lot more than just choosing between competing suppliers of replacement windows. It's often more desirable to repair existing windows than to replace them. "When the decision is to repair," says the firm's Dean Koga, "the problem then becomes one of training and supervising workers. We're doing a window repair job now where we've had to teach carpenters how to do epoxy consolidation. The first few weeks were a bit rocky, but the project is going smoothly now," Dean says with some relief.

And even when replacement windows are called for, there are pitfalls. Larry Jones, another of the firm's architects, says: "Some of these manufacturers are stretching their technology too thin when it comes to making big double-hung windows." He tells of being called in recently to inspect a two-year-old window installation. "There were big 5-ft.-tall double-hung windows operated with spring balances. The nylon strings started breaking after two years, and each time a string broke the spring fired into the room like a rocket. I took a picture of one of the errant springs sticking into the sheetrock ceiling!"

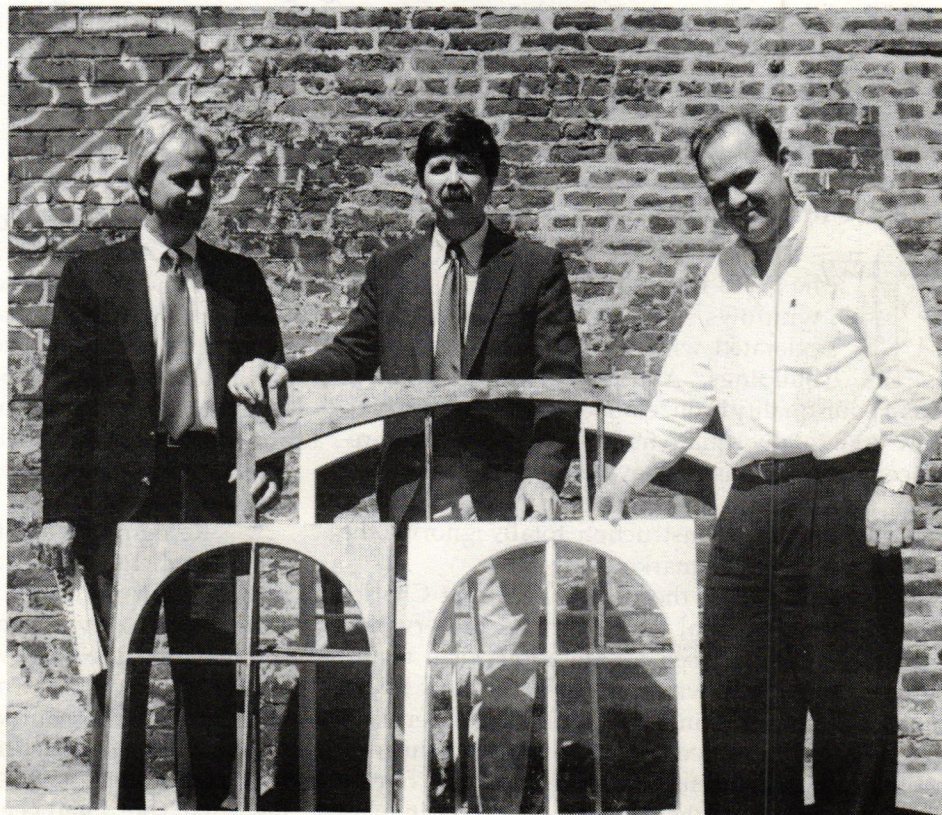
## The Voice Of Experience

"We make every effort to retain old windows," says Bob Meadows. "Not only does that ensure that historic character is kept, but it's often more economical and less messy to repair the old windows. And you usually end up with a better product because the wood and hardware in old windows is often superior to what you get today," declares Meadows.

"The joinery makes the window," Bob states emphatically. "And the joinery in old windows is often stronger than in new windows that are designed for mass production. One of our basic specs for a replacement wood window is: 'Joinery shall exactly match the unit to be replicated.'"

Meadows' firm has developed several contractors with whom they work on window repair projects. Techniques used range from simple scrape/putty/paint to epoxy consolidation and dutchman repairs requiring skillful splicing in of new wood.

"Often, we need to add thin strips of wood to the sides of old sash to



Larry Jones (left) and Robert Meadows (middle) are in the process of inspecting some wood sash that is being restored by George Lucey (right) of Lake Construction Corp. The 19th-century sash, from Sailors' Snug Harbor on Staten Island, was in surprisingly good shape despite decades of neglect.

re-establish a tight fit in the frame . . . unless we are adding weatherstripping," says Dean. "But when you're cutting slots for weather strips, you have to be careful not to cut the tenons. I've seen sash, weakened in this fashion, break apart when someone gave a good tug to open it."

The Meadows firm uses aluminum windows as replacements in certain applications — but feels that the advantages of aluminum windows have been overstated. "The anodized colors will last for a reasonably long period," says Bob Meadows. "But it's another story if you have to use a painted finish to get historic color-matching. I've seen paint peel off aluminum windows after 5 years."

Vinyl claddings on wood windows pose similar problems. "I've seen distinct color changes in vinyl that's weathered for three or four years," says Larry.

"Just about any wood shape can be duplicated in aluminum," adds Dean, "but a high-quality custom aluminum window is often more expensive than a high-quality custom wood window."

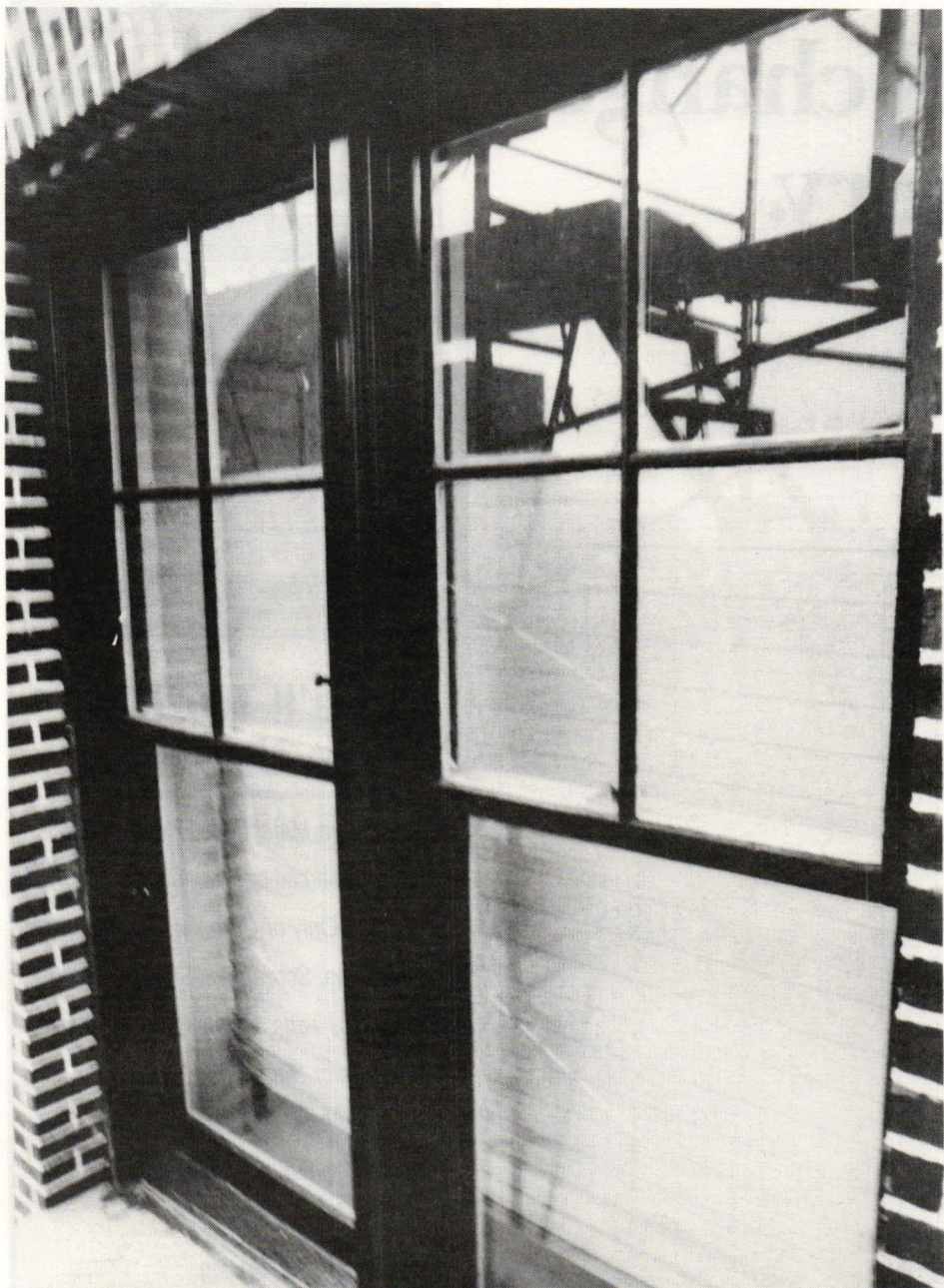
The Meadows firm's "repair rather than replace" philosophy extends to steel windows. They are just starting a job on a building with steel windows that are in bad shape. Preliminary investigation has indicated that they can repair the old windows for about half the cost of new replacements. The Meadows architects are in the process of having the contractor restore a sample steel window that will establish quality and cost benchmarks before plunging into a full-scale repair program. ♦



BEFORE: This 1840s building in Montgomery, N.Y., had been vacant for 10 years. The rehabilitation designed by Robert Meadows involved placing 5 shops and 3 apartments into the old building.



AFTER: New wood windows, storefronts, and millwork were custom-produced to Meadows' drawings by Millwork Specialties of Brooklyn, N.Y., preserving the traditional character of the building.



These repaired 4-over-1 units are part of a 180-window restoration project supervised by Robert E. Meadows, P.C. Architect. in a large apartment building. Sash was removed from the occupied apartments in the morning of Day 1 and an acrylic panel fastened in place. Sash was taken away, rehabilitated, and reinstalled the next day.




Sash was taken to the shop for quick repairs. Glass was removed, and all loose paint and putty carefully stripped with scrapers. After repairs, the sash was re-glazed with the original 1/4-in glass. Next day, when the sash was put back into the window frames, integral brass weatherstripping was also installed.



Loose joints were taken apart, glued with epoxy, and repinned. Rotted or damaged wood was restored with epoxy consolidant and filler. When an individual rail was beyond repair, a new "dutchman" was spliced in. If more than 35% of a sash was beyond repair, a whole new sash was manufactured.

— Photos on this page: Kathleen Rowe, Robert E. Meadows, P.C. Architect



## STEEL WINDOWS

- Heavy Intermediate
- Standard Intermediate
- Commercial
- Residential




For Landmark and Historical Preservation Commissions



**A & S Window Associates Inc.**  
88-19 76th Avenue, Glendale, N.Y. 11385 (718) 275-7900

Circle No. 234

## Custom Wood Windows

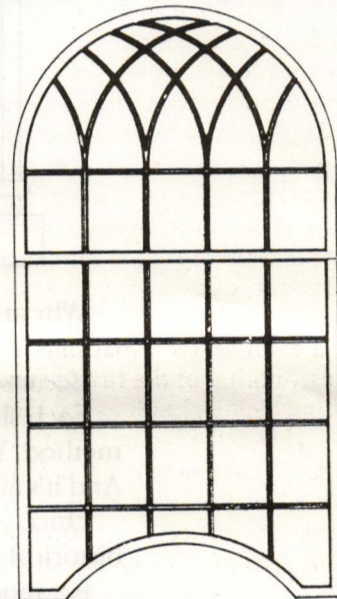
Ricketson Woodwork specializes in custom wood windows, glazed with true divided lites of half inch insulating glass.

Since 1902

Whatever your woodworking requirements, we welcome your inquiry.

*One of hundreds of windows replaced at the historic Providence County Courthouse. Mahogany sash with small lites of insulating glass.*

Ask about our new tilt/turn window and lift slide doors.



**RICKETSON WOODWORK**

THE HARTFORD BUILDERS' FINISH CO., INC.  
34 Potter Street, P.O. Box 23, Hartford, CT, 06101

Circle No. 230



### HOPE'S STEEL WINDOW HARDWARE

Scroll handles, casement operators and numerous other solid bronze, heavy-duty items in the original fine old designs.

Direct from "Hope's" the first steel window maker in the U.S.A., established in 1912.

We carry a large stock. Also many old patterns are available for special orders. Call or write. Send samples if possible.

**HOPE'S**  
LANDMARK PRODUCTS INC.

P.O. Box 580  
95-99 Blackstone Ave., Jamestown, NY 14702-0580  
Phone (716) 665-6223 FAX (716) 665-3365

Circle No. 236

Insulate Historic Windows from the Inside with:

## THERMO-PRESS INTERIOR INSULATING WINDOWS

Since 1977

- Drastically stops cold drafts & heat loss
- Custom Fitted. Attractive
- Easy to remove & clean
- Preserves the historic look of your building
- Available in ultra-violet filtering acrylic
- Estimates available by phone

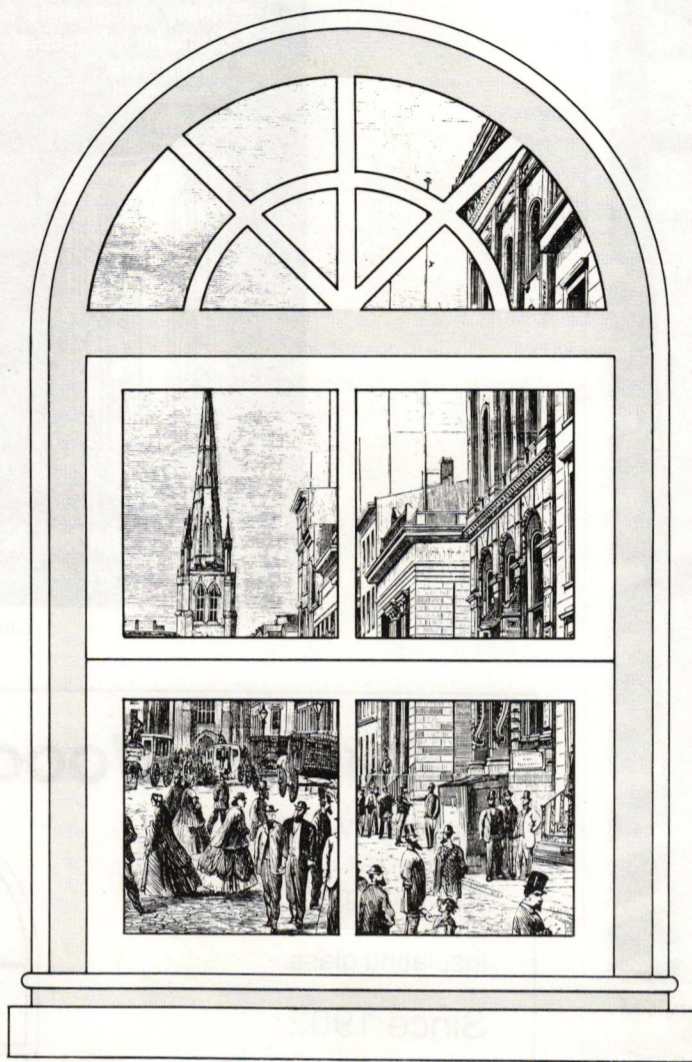


**THERMO-PRESS® CORP.**

5406 Distributor Drive  
Richmond, VA 23225  
(804) 231-2964  
Commercial & Residential Sales

Circle No. 231

# Restoration Glass will change your view of history.



Why are more and more architects specifying Restoration Glass™ from S. A. Bendheim for their restoration projects?

Because of its *imperfections*.

Each sheet is handmade by craftsmen, using the original cylinder method. Yet this glass easily meets today's tougher building codes. And it's available in two levels of distortion.

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

For more information on Restoration Glass and its use in commercial and residential projects around the country, call toll-free 800-221-7379. In New Jersey, 201-471-1733. Fax: 201-471-3475.

Or write S.A. Bendheim Co., Inc., 61 Willett Street, Passaic, NJ 07055.



**Bendheim**

Circle No. 71

## THE REHABILITATION OF

# OLD WINDOWS

Repair • Retrofit • Replacement

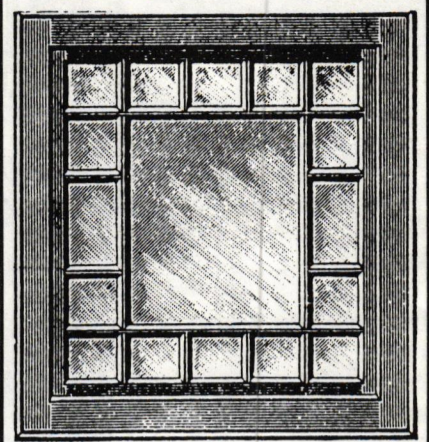
- Consulting
- Window Repair and Reconstruction
  - Aluminum • Steel • Wood
- Window Weather Stripping
  - Air • Water
- Custom Manufacturing
- Duplication of Wood Windows

*R. A. Corapi Co.*

2307 Oakdale Avenue  
Glenside, PA 19038  
(215) 887-0556

Circle No. 224

## Restoration Windows



### We'll Tackle The Unusual:

- ◆ Custom Matching Of Historic Detail
- ◆ Commercial or Residential
- ◆ Sash Only or Complete Window Unit
- ◆ Storms, Screens, & Storefronts
- ◆ Round Tops & Other Special Shapes
- ◆ Large or Small Jobs
- ◆ Antique or Reproduction Glass
- ◆ Single-, Double-, or Triple-Glazing
- ◆ Fast Turn-Around
- ◆ Economical Pricing

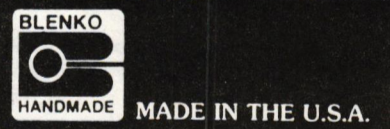
We can custom-match your historic window, work to your drawings, or design traditional windows from our inventory of historic profiles and components. For price quote, write or call with your specs. Or send for free brochure.

**Midwest Wood Products**

1051 S. Rolff Street  
Davenport, IA 52802  
(319) 323-4757

A Midwest Architectural Wood Products Ltd. Company

Circle No. 146



hand blown window glass made in the "old timey" wood mold method. maximum size sheets 18" x 23" untrimmed panes, cut-to-size quotation upon request



we also make crown rondels in a range of sizes and colors. Inquiries, for special items, are welcome call 304-743-9081

**THE BLENKO GLASS CO., INC.**  
MILTON, WEST VIRGINIA 25541

Circle No. 219

## wood and clad windows

# Revival Of The Wood Window

**Wood windows, because of their superior aesthetic, performance, and repair characteristics, are making a big comeback in both rehabilitation and traditionally styled new construction. The key to a happy purchase: Tightly written specs that make sure you get what you want.**

A few years ago, the wood window seemed to be going the way of the brontosaurus. Countless ads touting aluminum and vinyl windows declared how superior these new materials were to wood. Nonetheless, the wood window is making a remarkable comeback. After experimenting with alternative window types, designers have realized that the old standby wood window has several fundamental advantages:

- ✓ Traditional Look and Feel
- ✓ Good Thermal Properties
- ✓ Ease Of Fabrication Into Custom Shapes
- ✓ Simplicity Of Repairs

For example, Richard Pelletier, president of Historic Windows in Alstead, N.H., runs a company that can make both aluminum and wood windows. Pelletier says he's seen a gradual shift among architects from aluminum to wood as the material of choice. Pelletier is happy with the trend: "A wood window works better, looks better, is easier to repair, and lasts longer than aluminum windows," he says.

The frequent rap on wood windows is maintenance: A wood window should be kept painted. But when looked at over the entire life of the window, wood windows frequently have better maintenance characteristics than alternative materials. Says Pelletier: "I've never seen a 30-year old aluminum window that wasn't in bad shape . . . and almost impossible to repair. But I've seen lots of wood windows older than 30 years that still function well — and are simple to repair when they need work."

Repair simplicity is especially apparent on double-hung balance systems. Wood windows over 100 years old with weights and pulleys are routinely repaired; you can still get replacement cast-iron weights and pulleys (see p. 26). And some resourceful folks are also fashioning replacement weights out of mild steel bar stock.

The simplicity of the weight-and-pulley setup contrasts with the manufacturer-specific systems using spring balances and vinyl jamb-liners. Repairs will be difficult in a decade or two if the manufacturer is no longer producing those specific items.

### Replacements in Historic Buildings

When existing wood windows are absolutely beyond repair, and replacements

are called for, there are several problems to be addressed.

On old buildings — especially Tax Act projects — the issue of historic compatibility becomes paramount. Replacement windows have been one of the primary areas of dispute between the National Park Service and developers and architects.

On old buildings, replacement windows must accurately replicate the appearance of existing historic windows. All too frequently, the profiles of muntins, sash, frames, and moldings in replacement windows differ from those in the originals. For example, the muntins in a new double-glazed window may be much wider and flatter than the original muntins. Even though the new window may duplicate the number of existing panes, the character of the historic window is lost due to the change in profile and relief.

Another problem with many replacement windows is the use of panning — metal molding installed over the original surrounding wood molding, or which replaces the existing molding altogether. When panning does not match the existing molding, a further loss of historic character occurs.

Because of vital importance of windows to facade appearance, for Tax Act jobs the Park Service usually requires detailed shop drawings that show all details of the original window and proposed replacements (see illustration).

### Stock Vs. Custom

For retrofits, wood windows must nearly always be made to order because of the problems of trimming and detailing a stock window to an old opening.

However, often the entire window unit doesn't need replacing, just the sash. Some companies, such as Marvin Windows, provide sash-only replacements. You just remove the loose existing sash and slip in a new jamb liner and sash.

Wood windows clad in vinyl or aluminum are usually prohibitively expensive to custom-manufacture because of the heavy tooling costs for dies and extrusions. So the question becomes whether a stock clad window will possess the right "look and feel" for a retrofit job — as well as fitting the existing opening.

A related issue is the integrity of the cladding. If the cladding becomes damaged during installation or afterwards, any water that penetrates into the wood core becomes trapped, and the window can quickly rot. Major manufacturers, such as Pella, have carefully worked out the details of their cladding systems. But beware of clad unit from a back-alley shop.

Removable muntins aren't satisfactory for most rehabilitation jobs, but may meet client needs on new construction. For this reason, we've included the availability of this feature in the supplier listings in the accompanying SourceList.

### For More On Replacement Wood Windows

A thorough review of the aesthetic, historical, and technical factors in specifying replacement wood windows will be found in the *The Window Handbook* and *The Window Workbook*. See review and ordering information on p. 15. — CL♦

### Who's Included On The SourceList

*There are hundreds of millwork shops that will make wood windows. The 51 suppliers we've included on the SourceList are the ones who, in the opinion of the editors, provide the best combination of quality and historic sensitivity, along with an interest in serving the special needs of architects and contractors on historic projects.*

## U.S. WOODWORKING: The More Challenging The Better



The advantage of using U.S. Woodworking, according to manager Warren Weilbacher, is that "we can make

windows in any shape or any size in any material — the other guys use only pine or mahogany." Almost all of the company's recent projects have involved restoration, including massive double-hung windows for New York's City Hall and 27 x 16 ft. clerestory windows for Ellis Island. Windows and doors are their specialty; they also make molding and millwork.

For more information on U.S. Woodworking, see the pullout SourceList in this section. — EMK

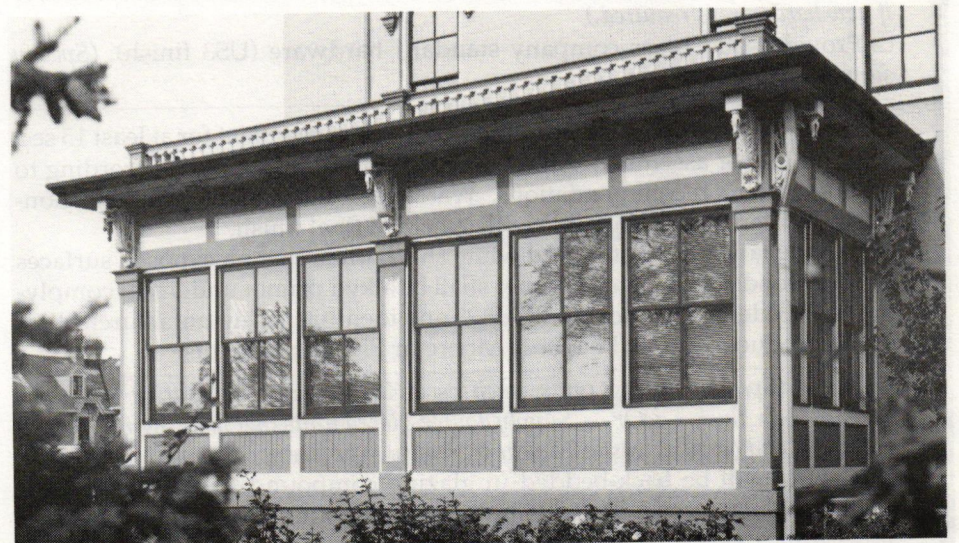
### MARVIN WINDOWS: Semi-Custom Units

In the 1940s, the Marvin Lumber and Cedar Company gave birth to a window division. These days, Marvin Lumber is a small, local, 85-year-old lumberyard, while its offspring, Marvin Windows, is the country's third largest wood window manufacturer.

The company specializes in "made-to-order" units. "We go to the parts pile and make what you want and put your name on it," says Frank Marvin, president of the company and grandson of its founder. Stock designs include casements, double-hung tilts, hoppers, awnings, bows, bays, and various non-operable shapes such as circles, ovals, and polygons.

Aluminum-clad and unclad replacement sash are also available. True divided lites are an option on all units. Marvin was the first national manufacturer to standardize production of curved glass windows; curved glass single-hungs are currently available in 9 standard sizes.

For more on Marvin Windows, see the SourceList in this section. — EMK



# WHEN IT COMES TO REPLACEMENT WINDOWS, CLOSE DOESN'T COUNT.



Circle No. 226

You need a window that doesn't fit like you need a hole in the wall. But if you have a non-standard opening, that's exactly what you get with most replacement windows. Instead of messing with fit kits and extenders, why not specify the brand of window that's made to order, so it fits exactly right, right from the start. Every Marvin window is carefully constructed by hand to your specifications, regardless of shape, size or style. Standard or custom. For more information about Marvin replacement windows, return the coupon below or call toll-free **1-800-346-5128** (In MN, 1-800-552-1167, In Canada, 1-800-263-6161).

Send to: Marvin Windows, Warroad, MN 56763

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone \_\_\_\_\_



## KEDDEE: Custom Restorations

After 30 years as a chemical engineer, David Finnegan left the white-collar world ten years ago to become The Keddee Company, a one-man millwork manufacturer.

He prefers restoration projects, especially challenging ones: milling unusual muntins, customizing major manufacturers' products, or carving just about anything. "I do things *right*," he says emphatically. "Architects should spend six months with someone like me, to learn the fine points of millwork."

His work appears on some of Rhode Island's finest historic structures, ranging from the 20th-century commercial Irons & Russell Building in downtown Providence to the 18th-century Smith-Appleby House in Smithfield. His company's name, by the way, derives from the names of his family: son Kevin, wife Eugenia, David himself, son David, and daughters Eileen and Erin.

For more information on The Keddee Company, see the pullout SourceList in this section. — EMK

### The Joinery Makes The Window . . .

## Specification Checklist For Premium-Quality Historic Wood Windows

Here's a checklist to consider when specifying replacement double-hung wood windows in old buildings — along with some typical language that can be modified to suit your particular job. (Of particular importance are the items listed under "Submissions.") In addition, all standard performance specifications should be included.

**WOOD:**  Grade 1, ponderosa, sugar or northern white pine, mahogany, teak, or other fine-grained lumber that has been kiln-dried to 6 to 12% moisture content at time of fabrication.

**SIZES, THICKNESSES, & PROFILES:**  Work shall be fabricated to designs, dimensions, and details shown on the approved shop drawings, and shall replicate configurations and profiles on existing windows except where specifically indicated otherwise. (Note: *Inexpensive stock sash can run as thin as 1-3/8 in. High-quality sash is usually as thick as 2 in.*)

**JOINERY:**  All joinery shall match that of existing sash in all respects. — Or — Sash stiles & rails shall have haunch mortise & tenon joints, glued & pinned with teak, aluminum, or stainless steel pins.  
 Muntins shall have coped mortise & tenon joints.  
 Mitered or coped joints shall be used for molded members.  
 All wood jambs and sills shall be connected with dadoed joints.

**OPERATING SYSTEM:**  Units require two balanced, vertically sliding sash, with two pair of concealed sash weights, pulleys, a pair of lift handles in lower rail, and a lock on meeting rails of lower and upper sash.  
 Original sash weights shall be reused wherever possible. When new weights are required, they shall match the originals in weight. Replacement weights can be cast iron, or square mild steel bar stock, as specified.

**WEATHERSTRIPPING:**  Brass, interlocking weather strips designed for permanent resilient sealing under bumper or wiper action. Provide weatherstripping at perimeter of each sash. Weatherstripping shall be completely concealed when sash is closed.

**HARDWARE:** (Specify whether existing hardware is to be restored and reused, or if new hardware is required.)  
 Provide solid brass company standard hardware (US3 finish). (Specify supplier, if desired.)

**FINISH:**  All wood shall be immersed in water repellent for at least 15 sec. after milling or assembly. Allow repellent to dry thoroughly, according to manufacturer's recommendations. Water repellent shall be paintable, non-toxic, and certified compatible with specified final finish.  
 Provide fabricator's standard white shop prime coat on exposed surfaces only of wood components. Primer shall be alkyd primer undercoat complying with Federal Specification TT-P-25 and identified as manufacturer's best grade product. Supply Benjamin Moore or Pittsburgh Paints.

**GLASS:** (Specify glazing units, such as: Hand-blown "restoration" cylinder glass, 3/32 in. thick. — Or — Supply double-glazed units that meet Sigma Quality Test CBA and carry at least a 10-year warranty to be free of condensed moisture.)  
 Glazing will be back-bedded in glazing compound and fastened with glazing points every 6 in. Install glazing compound and tool to provide a

substantial wash away from glass.

**GLAZING COMPOUND:** Use oil-based glazing compound, non-staining and non-bleeding, complying with Federal Specification TT-C-410 for face glazing compound. Use DAP #33 Glazing Compound or equivalent. *If insulated glass is being used:* Use silicone sealant that vendor certifies is compatible with the unit seal on insulated glass units.

**GLAZING POINTS:**  Glazing points shall be galvanized steel, installed every 6 in.

**FASTENERS:**  Comply with NWMA requirements for fabrication, and with manufacturer's recommendations and standard industry practices for type and size of installation fasteners.

Fasteners, unless originally exposed, shall be concealed. Where surface fastening is required and approved by the Architect, it shall be by means of countersunk screws or bolts, with screw or bolt head concealed with wood plugs. Finishing nails, where required, shall be well set and puttied.

**Window Fabrication Adhesives:** Use non-staining casein or cold resin glue.

**Window Fabrication and Installation Fasteners:** Use zinc-coated or non-ferrous nails and screws.

**Interior Wood Stops:** Secure with exposed brass tapered wood screws with tapered washers made for such installations.

**Hardware and Accessory Installation:** Use brass screws

**WINDOW CASING & MOLDINGS:** (Specify whether existing moldings are to be removed and reused, or if identical new moldings are to be milled and installed. Field test might be required to determine if existing moldings and casings be reused without damage in removal and reinstallation.)

**FIELD MEASUREMENTS:**  Contractor is responsible for field measuring all dimensions for the required window work.

### SUBMITTALS:

**Site Visit:** Vendor shall submit letter certifying he has visited the site and is thoroughly familiar with all field conditions.

**Installers:** Submit letter certifying contractor will use adequate numbers of skilled workers who are thoroughly trained and experienced in replacing windows in historic buildings. Contractor shall certify that workers are familiar and experienced with the materials, methods, tools and equipment needed to install historic windows.

**Sample Window:** Vendor shall submit sample window showing prior successful production of units similar to those required. Such samples will show fabrication techniques, workmanship, hardware, and accessories similar to those required.

**Weatherstripping:** Submit 12" long samples of all weatherstripping required.

**Moldings:** Submit 12" pieces of each molding type required for each window and casing with specified finish.

**Shop Drawings:** Submit shop drawings showing both horizontal and vertical sections of both the original window (when appropriate) and the replacement window. The sections will be carefully detailed so that all parts of the window are shown and all materials are specified. Drawings shall include dimensioned wall elevations, and full-size section details of every typical composite member and joinery, including all glazing and weatherstripping details. — CL ♦



# WOOD AND CLAD WINDOWS SourceList

CSI# 08610

◆ BY EVE M. KAHN

COMPANY	SPECIALTY	Literature	Wood Type	Cladding & Standard Colors	Removable Muntins Available	Weather-stripping	Storms	Screens	Wood Finish	Special Architectural Shapes	Amount of Custom Work	Price Range
Andersen Corporation 5th Ave. N., Dept. TB Bayport, MN 55003 (612) 439-5150	The largest manufacturer of wood and clad windows. Mostly stock, with "Flexiframe" custom option. Some single glazing; mainly High-Performance and High-Performance Sun double glazing.	Free Circle No. 249	Ponderosa pine	Vinyl: white, brown	✗	Vinyl	✗	✗	Preservative	✗	20%	Moderate
Architectural Components 26 N. Leverett Rd., Dept. TB Montague, MA 01351 (413) 367-9441	Five-person shop specializing in reproductions of 18th- & 19th-century windows, patterned after Connecticut River Valley architecture; pegged-through mortise-and-tenon construction. Some stock designs. Single glazing standard. Usually in antique-style bubbled glass.	Free flyer; send \$3 for catalog. Circle No. 142	Eastern white pine			Bronze	✗	✗	Preservative	✗	80%	Moderate
Camden Window & Millwork 1551 John Tipton Blvd., Dept. TB Pennsauken, NJ 08110 (800) 345-2338	Specialty millwork shop: wood windows, doors, moulding, wainscot; any wood to architect's specifications. Replication for historic and landmarks projects. Exclusive residential work on interiors as well as exteriors.	Free Circle No. 223	As specified			As specified			Primer and preservative	✗	100%	Expensive
Carado Corporation 201 Evans Dr., Box 920, Dept. TB Rantoul, IL 61866 (217) 893-4444	Large (700 employees), old (founded 1866) wood and clad window manufacturer. Stock line includes bay, casement, awning styles. Double glazing standard; triple & low-E also available.	Free	Western pine	Aluminum: bronze, white	✗	Vinyl	✗	✗	Primer	✗	10%	Moderate
Clawson Manufacturing 1225 Rogers, Dept. TB Missoula, MT 59807 (406) 549-7884	Fifty-person, family-owned maker of wood and clad windows; almost exclusively for new construction. Divided lite and removable muntins; double, triple, & low-E glazing available.	Free	Ponderosa pine	Aluminum: white, bronze, sand	✗	Vinyl		✗	Preservative	✗	4%	Moderate
Coastcraft 1002 East F St., Dept. TB Tacoma, WA 98401 (206) 272-1154	Mid-size custom window shop that can handle large orders. High-end residential and commercial renovation and new construction. All glazing types available.	Free	As specified		✗	Gal-ion	✗	✗	Preservative	✗	90%	Expensive
Colonial Woodworks Box 19965, Dept. TB Raleigh, NC 27619 (919) 783-5592	Wood-window shop offering double-hung, Palladian, round, & half-round units with double glazing only. Designs based on historic styles. Large selection of compatible woodwork, doors, etc.	Send \$5 for catalog.	Clear white pine			Vinyl	✗	✗	Preservative	✗	10%	Moderate
Corapi Company 2307 Oakdale Ave., Dept. TB Glenside, PA 19038 (215) 887-0556	Eleven person shop specializing in larger buildings. Exact replicas of existing wood windows. Dowel-jointed corners. Recycled glass and interior storms available. Will also work on aging aluminum and steel windows.	Free Circle No. 224	As specified			Zinc or brass	✗		As specified	✗	100%	Expensive
Custom Millwork Box 562, Dept. TB Berryville, VA 22611 (703) 955-4988	Small custom millwork shop with restoration experience. Pegged, mortise-and-tenon, or dowel construction, depending on window shape. Single-, double-, triple-hung units. Antique glazing available.	Free	As specified			Bronze	✗	✗	As specified	✗	100%	Moderate to expensive
Drumms Sash & Door Box 207, Dept. TB Drumms, PA 18222 (717) 788-1145	Small millwork shop offering stock and custom wood windows. Stock line includes double-hung units with up to 24 panes, traditional six-pane barn and three-pane cellar windows. Single or double glazing available.	Free Circle No. 247	Clear white pine		✗	Vinyl	✗	✗	Primer	✗	50%	Moderate
Dubouque Sash & Door 950 Jackson, Box 577, Dept. TB Dubouque, IA 52001 (319) 557-8851	Small wood window and door shop, primarily for restoration. Victorian houses and storefronts a specialty. All glazing types, including reproduction and low-E, available.	Free	As specified		✗	Vinyl	✗	✗	Preservative	✗	100%	Expensive
Duratherm Rt. 32, Dept. TB N. Vassalboro, ME 04962 (207) 872-5558	Mid-size high-end wood window manufacturer, mainly for large commercial construction or restoration projects including colleges, corporate headquarters, civic structures. Triple glazing standard; many other options.	Free	Teak, mahogany, American ash		✗	Neoprene		✗	Primer	✗	100%	Expensive

TRADITIONAL BUILDING'S Wood And Clad Windows SourceList ■ II ■ CSI# 08610

COMPANY	SPECIALTY	Literature	Wood Type	Cladding & Standard Colors	Removable Grilles Available	Weather-stripping	Storms	Screens	Wood Finish	Special Architectural Shapes	Amount of Custom Work	Price Range
Englander Millwork Corporation 2369 Lorillard Pl., Dept. TB Bronx, NY 10458 (212) 364-4240	Small shop specializing in duplicating historic millwork, especially circle and round-top windows using true divided-lite construction. Insulated glass on request.	None	As specified			As specified	✗	✗	None	✗	75%	Moderate
Gibbons Sash & Door Box 76, Rt. 1, Dept. TB Hurley, WI 54534 (715) 561-3904	Small shop specializing in wood windows to specification. Mainly new construction. All joints doweled to permit odd angles. Various glazing types offered.	Free Circle No. 225	As specified		✗	Polypropylene	✗	✗	As specified	✗	80%	Expensive
Harbrook Architectural Wood 146 Vley Rd., Dpt. TB Scotia, NY 12302 (518) 370-0032	Consultation, design, & installation of wood windows for restorations, rehabs, & new construction in the Northeast. Provides wide range of special architectural shapes, window types, & store-fronts. Experienced with landmark review boards.	Free Circle No. 240	As specified	As specified	✗	As specified	✗	✗	As specified	✗	100%	Expensive
Herrick & White 3 Flat Street, Dept. TB Cumberland, RI 02864 (401) 658-0440	Woodwork shop that can make windows in unusual sizes and shapes, mainly for commercial new construction and restoration projects on East Coast. All glazing types available, with true divided lites preferable.	None	As specified		✗	As specified	✗	✗	As specified	✗	100%	Expensive
Historic Window Box 138, Jct. 123 & 123A, Dept. TB Alstead, NH 03602 (603) 835-2918	Mid-size wood-window restoration specialists. Will reproduce existing units. Can also salvage old sash: from commercial to museum quality work, depending upon price. Antique, reproduction, or modern glazing in single, double, or triple strength.	Free	As specified			As specified	✗	✗	As specified	✗	100%	Moderate to expensive
Ideal Company Box 2540, Dept. TB Waco, TX 76702 (817) 752-2494	85-year-old mid-size millwork manufacturer with line of stock wood and clad windows: casement, awning, tilt double-hung, round top, true divided light. Various glazing types available including triple and low-E.	Free	Pine	Aluminum: white, bronze	✗	Vinyl	✗	✗	Preservative and primer	✗	10%	Moderate
J.B. Sash & Door 280 2nd St., Dept. TB Chelsea, MA 02150 (617) 884-8940	Mid-size company specializing in wood and clad tilt replacement sash for double-hung windows. Double glazing with removable muntins standard; low-E available.	Free	Sugar and ponderosa pine	Vinyl: white	✗	Vinyl	✗	✗	None	✗	5%	Moderate
The Keddee Company 794 Hartford Pike, Dept. TB Scituate, RI 02857 (401) 934-2000	One-man restoration specialist. Will carve or mill wood as needed; can customize major manufacturers' products and salvage old sash. All glazing types available.	Free	As specified			None	✗	✗	As specified	✗	100%	Moderate
Lincoln Wood Products 701 N. State St., Dept. TB Merrill, WI 54452 (715) 536-2461	Large stock wood & clad window manufacturer. Double-hung, casement, glider units, & replacement sash. Some true divided lite, also removable & sealed-in muntins. Double glazing standard; single strength, low-E, & argon-filled available.	Free	Western pine	Aluminum: white, bronze, beige, grey	✗	Vinyl	✗	✗	Primer	✗	5%	Moderate
Lindsay Sash 1995 Commerce Dr., Dept. TB N. Mankato, MN 56001 (507) 625-4278	Small company specializing in wood and clad replacement double-hung sash. All units swing out for cleaning. Double glazing standard; single strength also available.	Free	Ponderosa pine	Aluminum: white, brown		Vinyl	✗	✗	Preservative	✗	20%	Moderate
Lititz Planing Mill 302 E. Front St., Dept. TB Lititz, PA 17543 (717) 626-2186	77-year-old planing mill with thousands of cutters for creating antique muntin profiles. All glazing, including recycled, and all wood types available.	Free	As specified		✗	As specified	✗	✗	As specified	✗	100%	Expensive
Marvin Windows Dept. TB Warroad, MN 56763 (800) 346-5128	Third largest manufacturer of custom and stock wood & clad windows and tilt replacement sash. Odd stock designs include non-operable pentagonal and Gothic-head windows, half rounds with spider-web muntin patterns, round-top double-hung. Single or double glazing with low-E or other high-performance panes. Also curved windows.	Free Circle No. 226	Ponderosa pine	Aluminum: white, brown, bronze, grey	✗	Vinyl	✗	✗	Primer	✗	50%	Moderate to expensive
Maurer & Shepherd Joiners 122 Naubuc Ave., Dept. TB Glastonbury, CT 06033 (203) 633-2383	Small woodwork shop that reproduces 17th- and 18th-century windows for old and old-style homes. Recycled glass a specialty. Can recreate any muntin or trim profile.	Free Circle No. 36	Oak or eastern white pine			None	✗	✗	Linseed oil & turpentine	✗	100%	Expensive

TRADITIONAL BUILDING'S Wood And Clad Windows SourceList ■ III ■

CSI# 08610

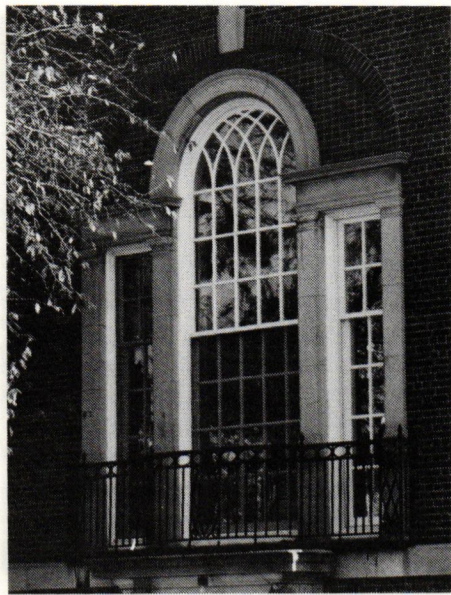
COMPANY	SPECIALTY	Literature	Wood Type	Cladding & Standard Colors	Removable Grilles Available	Weather-stripping	Storms	Screens	Wood Finish	Special Architectural Shapes	Amount of Custom Work	Price Range
Messing Planing Mill 5020 Arsenal Street, Dept. TB St. Louis, MO 63139 (314) 664-3544	Small 77-year-old shop that makes windows, doors, and other woodwork, mainly for residential restoration projects. All glazing types available in single or double strength.	None	Sugar pine		✗	None	✗	✗	None	✗	100%	Moderate
Midwest Wood Products 1051 S. Rolff St., Dept. TB Davenport, IA 52802 (319) 323-4757	Small wood-window manufacturer. They have stock components for double-hung, storm, and screen windows that can be assembled in custom sizes. Double glazing standard; antique, reproduction, single, and triple glazing available.	Free Circle No. 146	Northern white, sugar, or ponderosa pine			As specified	✗	✗	Preservative	✗	100%	Moderate
Millwork Specialties 189 Prospect Ave., Dept. TB Brooklyn, NY 11215 (718) 768-7112	Ten-person millwork shop that makes wood windows mainly for restoration projects. Stock line includes casements and double-hungs. Various glazing types available. True divided lites only; also storms and screens with wooden frames.	None	As specified			Vinyl	✗	✗	As specified	✗	80%	Expensive
MW Manufacturers Box 559, Dept. TB Rocky Mount, VA 24151 (703) 483-0211	Major manufacturer of stock wood and clad windows. Double-hung, casement, awning, bay, round-top, and non-operable odd shapes. Any new glazing type available.	Free	Ponderosa pine	Vinyl: white, brown	✗	Vinyl or TPE		✗	Preservative		8%	Moderate
New Morning Windows 10425-A Hampshire Ave. S., Dept. TB Bloomington, MN 55438 (612) 944-5120	Mid-size manufacturer of non-operable wood and clad windows of unusual shapes and sizes. Units and cladding colors designed to complement products of major manufacturers. Any new glazing type available.	Free Circle No. 227	Ponderosa pine	Aluminum: 12 colors	✗	None	✗	✗	Preservative	✗	100%	Expensive
Norco Windows 811 Factory St., Dept. TB Hawkins, WI 54530 (715) 585-6311	Major manufacturer of wood and clad windows, mainly for new construction. Stock units, with or without true divided lites, include awning, tilt double-hung, round top, casement. Any new glazing except triple offered; double standard.	Free	Ponderosa pine	Vinyl: white, brown, almond; Aluminum: white, brown, beige	✗	Polypropylene	✗	✗	Primer	✗	15%	Moderate
North Pacific Joinery 76 W. 4th St., Dept. TB Eureka, CA 95501 (707) 443-5788	Small millwork shop specializing in redwood windows and doors; established 1922. Mainly residential new construction. Any new glazing type available.	Free	Redwood			Vinyl		✗	Preservative	✗	100%	Expensive
Northwest Window Works 3227 164th St. SW, Dept. TB Lynnwood, WA 98037 (206) 743-4442	Mid-sized wood window manufacturer. Mainly West Coast residential and specialty commercial projects. Arches and divided lites with insulated glass and 1-1/4" muntins a specialty. Low-E, heat mirror, and insulated leaded glass available.	Send \$2 for catalog.	As specified		✗	Q-Ion, foam		✗	Preservative	✗	100%	Expensive
Pella 102 Main Street, Dept. TB Pella, IA 50219 (515) 628-1000	Second largest manufacturer of wood and clad windows. Stock units include casement, awning, double-hung. Double glazing standard; sealed-in blinds available.	Free	Western pine	Aluminum: any color	✗	Vinyl		✗	Preservative	✗	20%	Moderate to expensive
Petersen Planing Mill Company 3320 Rutger St., Dept. TB St. Louis, MO 63104 (314) 772-2700	Mid-size millwork shop that makes windows. Large and small sizes, elliptical shapes a specialty. Some restoration experience. Any glazing type offered.	None	As specified		✗	As specified	✗	✗	As specified	✗	100%	Moderate
Point-Five Windows 1314 Duff Drive, Dept. TB Ft. Collins, CO 80524 (303) 482-6971	Mid-size wood-window restoration specialists. Muntin profiles copied from muntins on historic buildings around the country. Replacement sash only also available. Single or double glazing with modern float glass or hand-blown cylinder glass.	Free Circle No. 228	As specified			As specified	✗	✗	As specified	✗	100%	Expensive
Pozzi Wood Windows Box 5249, Dept. TB Bend, OR 97708 (503) 382-4411	Major manufacturer of wood windows; subsidiary of Bend Millwork Systems. Over 4,000 window products plus custom shapes and sizes. Various glazing types available.	Free	Ponderosa pine	Aluminum: white, bronze, champagne	✗	Vinyl	✗	✗	Primer	✗	40%	Moderate to expensive
Ricketson Woodworking 34 Potter St., Box 23, Dept. TB Hartford, CT 06101 (203) 522-3257	Family-owned mid-size millwork shop, founded 1902. Mainly high-end new construction, large commercial and residential projects; some restoration. All glazing types available.	Free Circle No. 230	As specified			As specified	✗	✗	As specified	✗	100%	Expensive

TRADITIONAL BUILDING'S Wood And Clad Windows SourceList ■ IV ■

CSI# 08610

COMPANY	SPECIALTY	Literature	Wood Type	Cladding & Standard Colors	Removable Grilles Available	Weather-stripping	Storms	Screens	Wood Finish	Special Architectural Shapes	Amount of Custom Work	Price Range
Ruffin & Payne E. Laburnum & Vawter Ave. Box 27286, Dept. TB Richmond, VA 23261 (804) 329-2691	A family-owned lumberyard that makes wood windows based on local Colonial architecture. Can also customize the products of other manufacturers. Tilt and non-tilt. Single glazing standard on Colonial windows.	None	Western pine			Vinyl			None	✗	100%	Moderate
Selrite Millwork Corporation 581 Rahway Ave., Dept. TB Union, NJ 07083 (201) 964-1555	Mid-size millwork manufacturer; large round tops a specialty. Mainly residential new construction. Any new glazing available.	Free	As specified		✗	Vinyl	✗	✗	None	✗	100%	Moderate
Staples Millwork 32 Taunton Ave., Rt. 140, Dept. TB Norton, MA 02766 (508) 285-4477	Mid-size custom millwork shop specializing in the replication and restoration of wood windows. Reproduction glass and hardware available.	Free Circle No. 208	As specified			As specified	✗	✗	None	✗	100%	Moderate
Tischler und Sohn 51 Weaver St., Dept. TB Greenwich, CT 06830 (800) 282-9911	Top-of-the-line German-based window manufacturer. Primarily new construction, large homes or commercial projects. Any new glazing available. Optional cladding has air space, to allow wood to breathe.	Free	Mahogany	Aluminum: any color		Neoprene	✗	✗	As specified	✗	100%	Expensive
United States Woodworking 35 Engineers Rd., Dept. TB Hauppauge, NY 11788 (516) 234-4910	30-person millwork shop, specializing in windows and doors. Mainly restoration of commercial buildings and larger homes. Any glazing except antique glass.	Free Circle No. 120	As specified			Vinyl or zinc	✗	✗	Primer	✗	100%	Expensive
Walbrook Mill & Lumber Company 2636 W. North Ave., Dept. TB Baltimore, MD 21216 (301) 462-2200	Lumberyard, hardware store, & cabinet shop that makes wood windows, mainly for restoration. Family-owned, 70-year-old business, mainly for Baltimore & D.C. area. Double glazing standard; low-E available but not antique or reproduction glass.	Free	White pine		✗	As specified	✗	✗	As specified	✗	100%	Moderate
Webb Manufacturing Box 707, Dept. TB Conneaut, OH 44030 (216) 593-1151	Large manufacturer of stock non-operable wood windows: round, oval, half round, quarter round, octagon. Single or double glazing.	Free	Ponderosa pine		✗	None	✗	✗	Primer	✗	10%	Moderate
Wes-Pine Wood Windows King St., Box 1157, Dept. TB W. Hanover, MA 02339 (617) 878-2102	Mid-size wood window manufacturer specializing in true divided lite Colonial-style units with low-E glass. Primarily residential. Various glazing options available, as well as sash-only replacements.	Free Circle No. 222	Ponderosa pine		✗	Vinyl	✗	✗	Primer	✗	25%	Moderate
Window Millwork Shop 218 Shrewsbury St., Dept. TB Worcester, MA 01604 (508) 791-8352	Small shop that provides windows for both new construction and restoration work. Has worked on large commercial projects in Boston area. Recycled and reproduction glazing available.	None	As specified		✗	As specified	✗	✗	As specified	✗	100%	Moderate
Windsor Window Company 900 S. 19th. St., Dept. TB W. Des Moines, IA 50265 (515) 223-6660	Large stock wood & clad window manufacturer. Line includes casement, awning, and double-hung, mainly for residential new construction. Double glazing standard; other options available.	Free	Ponderosa pine	Aluminum: white, bronze	✗	G-Ion	✗	✗	Primer	✗	3%	Moderate
Wood Window Workshop 26 Gansevoort St., Dept. TB Albany, NY 12202 (518) 463-6767	Small company specializing in restoring old sash; can also remill components or entire unit. Subsidiary of building supply company, so some stock products available. Mainly New York state since work done on site.	Free	As specified	Aluminum: white, bronze, tan	✗	As specified	✗	✗	As specified	✗	80%	Moderate
Woodstone Company Patch Road, Box 223, Dept. TB Westminster, VT 05158 (802) 722-4784	Small wood-window manufacturer for high-end new construction and large restoration projects; period reproductions, including double glazing with thin muntins, a specialty. Pegged mortise-and-tenon construction. All new glazing types.	Send \$3 for brochure.	Most hardwoods and softwoods		✗	As specified	✗	✗	Preservative	✗	100%	Moderate to expensive
J. Zeluck 5300 Kings Highway, Dept. TB Brooklyn, NY 11234 (718) 251-8060	Mid-size wood window and door manufacturers for high-end new construction and large restoration projects; top-of-the-line product. All types of new glazing offered.	Free	Mahogany			Bronze or neoprene		✗	None	✗	100%	Expensive

### MIDWEST WOOD: Small Or Large Orders



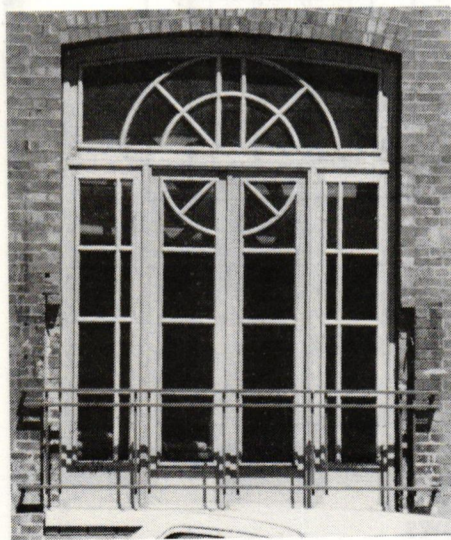
Midwest Wood Products is a user-friendly establishment. Their brochure includes not only side and front views of their double-hung windows, storms, and screens but also a glossary of window terminology and an illustrated diagram of window parts. Midwest will work on small orders of a few windows or replacement sash, and they'll also tackle large replication projects like storefronts (a handsome turn-of-the-century example is depicted in the brochure).

A basic price list comes with the brochure. Costs range from \$30.32 for an unglazed double-hung unit with room for two 16 x 16 in. panes to \$144.95 for a glazed window with two 44 x 48 in. panes. Add \$3.50 per sq. ft. of glass for insulated glazing and \$2.25 per lite for true divided lites.

For more on Midwest Wood Products, see the SourceList. — EMK

### GIBBONS: Dowelled-Joint Specialists

Gibbons Sash & Door uses only dowelled joints on its windows. "The mortise and tenon is designed for 90 degree angles," says owner John Gibbons. "But we get asked to do all kinds of odd angles, that other people won't do. A dowel is much more flexible than a mortise and tenon; it can go into any joint."



Recent projects range from a post-and-beam window wall for a storefront to an elliptical-head window that wraps around the corner of a house. Their work is divided equally between new construction and restoration; Gibbons says that both are challenging. "Either we have to duplicate everything exactly as it was on an old building, or we work with architects who specify every detail—the muntins, the sills. We'll make all the custom profiles they want."

For more about Gibbons Sash, see the SourceList in this section. — EMK

# History in the Remaking

When restoring any building for historic certification, the windows will often determine final approval. Camden Window & Millwork has maintained a 100% success record in reaching that approval.

Camden Window & Millwork specializes in detailed restoration and custom duplication of all wood windows. With rigid field testing for air, water and sound infiltration, we're able to balance energy and preservation requirements with design elements to create the maximum visual impact.

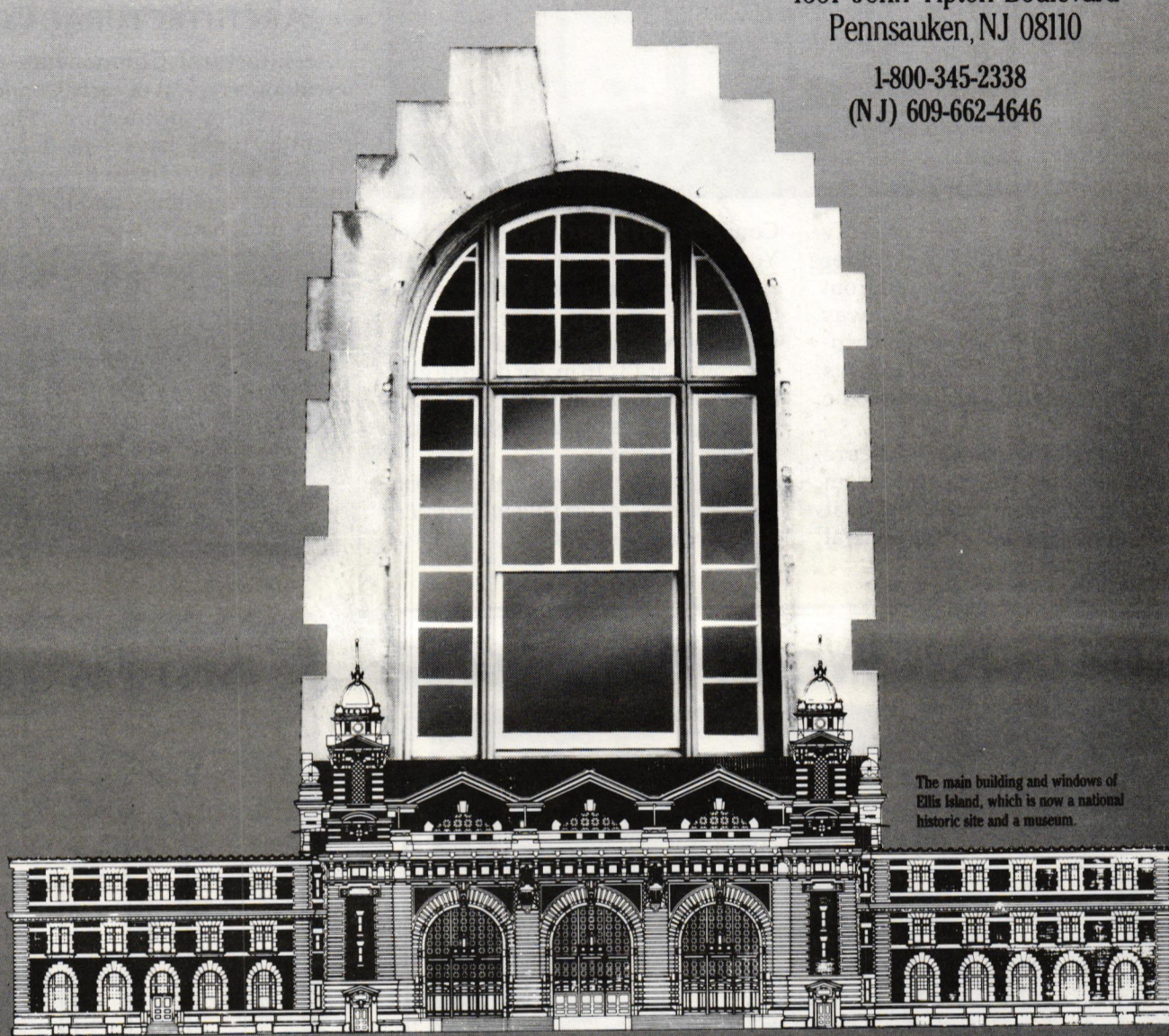
Restoration is cost-effective, many times, less than the market price for "new" installed windows.

From the sashes of the main building on Ellis Island to the arched windows of Carnegie Hall, we remake history with precision craftsmanship.

**Camden Window & Millwork**  
*When History Must Be Repeated.*

1551 John Tipton Boulevard  
Pennsauken, NJ 08110

1-800-345-2338  
(N.J.) 609-662-4646



The main building and windows of Ellis Island, which is now a national historic site and a museum.

Circle No. 223

### WOODSTONE . . . TEN YEARS OF PROFESSIONAL WOODWORKING SERVICES

. . . not only does WOODSTONE manufacture only the finest custom solid wood windows, doors and architectural millwork . . .  
. . . available in virtually any size, shape or wood species imaginable . . .

#### WOODSTONE OFFERS SERVICE!

TRADITION & TECHNOLOGY™ including:

- \*Mortise & tenon joinery, even in our most intricate sash bar & muntin patterns.
- \*CAD CAM design service to match any other manufacturers' dimension standards.
- \*Glass from Beveled to Bull's Eye, Low-E to Leaded and Tempered to Tinted.
- \*True made-to-order manufacturing with large & small project capacity.
- \*A 24-hour FAX service for prompt detail description and job costing.
- \*On-the-road consultation & site visits . . . before and after the sale.
- \*Guaranteed pricing.
- \*Product Warranty.
- \*Accurate project completion schedules.
- \*ASTM performance certification.
- \*Insulating glass available in virtually any shape.
- \*An established landmark historical reproduction track record.
- \*A thin 1" overall bar & muntin width with true divided lite insulating glass.

For an illustrated brochure, please send \$3.00. Visa & Mastercard welcome.



THE WOODSTONE COMPANY  
BOX 223, DEPT. TB, WESTMINSTER, VERMONT 05158  
802-722-3544 OR 802-722-4784 FAX 802-722-9528



# WOODSTONE®

WOODEN WINDOWS & DOORS

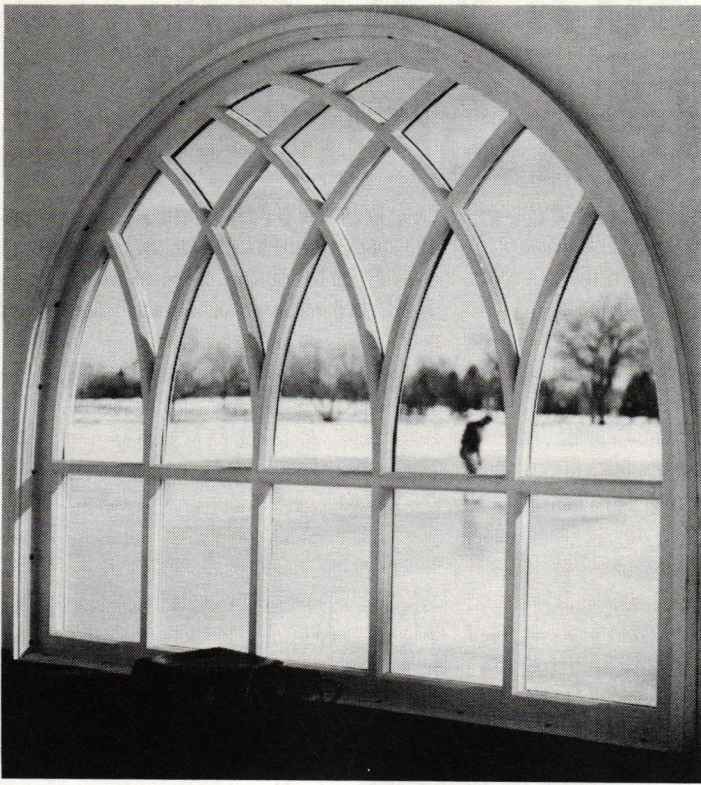
## POINT-FIVE WINDOWS: Leak-Proof Sash

Point-Five Windows derives its name from the maximum cubic feet of air per minute per foot of seal that its windows will leak. "And they usually test even better than that," says its owner, Dave Lundahl.

The company's products include replacement sash and complete windows, both designed specifically for old buildings. The cast-bronze hardware is based on turn-of-the-century designs.

The windows are typically glazed with hand-blown cylinder glass, which all but disappeared from the scene when rolled glass was developed in the 1880s. Weatherstripping is intended to be, as Lundahl puts it, "conspicuously absent," unless the sash is open.

Eight standard profiles are available, all of which are copied from muntins on important buildings that Point-Five has worked on: the Federal



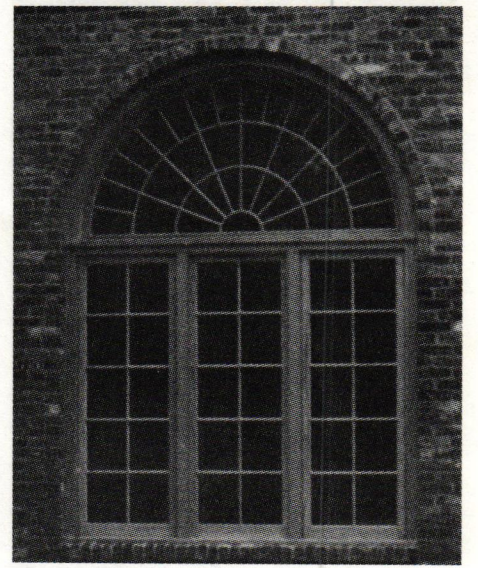
Court House in Providence, the New York Life Building in Kansas City, the Asher Levy Bathhouse in New York City. The muntins come in custom widths in increments of 1/16 in., beginning at 13/16 in. for double glazing and 9/16 in. for single glazing. Custom profiles can be provided for a \$950 set-up charge.

For more information on Point-Five Windows, see the pullout SourceList in this section. — EMK

## WOODSTONE: Custom Windows Via CAD/CAM

The Woodstone Company can take a customer's sketch and turn it into window specs via a CAD/CAM system. "We can figure out virtually an infinite number of dimensional possibilities," says co-owner Jay Eshelman. Among the company's specialties are one-inch-wide muntins on true divided-lite insulated-glass units and a high-tech weight-and-pulley counterbalance system. The windows are guaranteed for ten years. About 20 people work for the company, and they are comfortable with any wood species from teak to pine.

For more information on The Woodstone Company, see the pullout SourceList. — EMK



## ARCHITECTURAL COMPONENTS: 18th-Century Sash

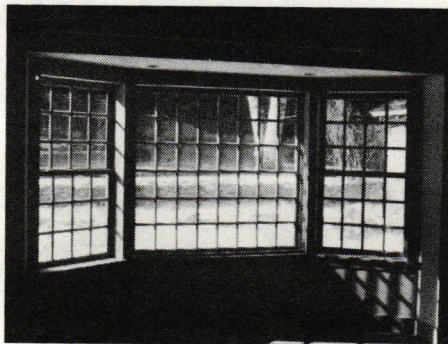
Architectural Components makes windows typical of early Connecticut River Valley architecture. The 18th-century units have 1-in.-thick muntins, a holdover from those found on Jacobean buildings, and the 19th-century units have 5/8-in.-thick muntins,

which reflect the delicacy of Georgian and Federal architecture.

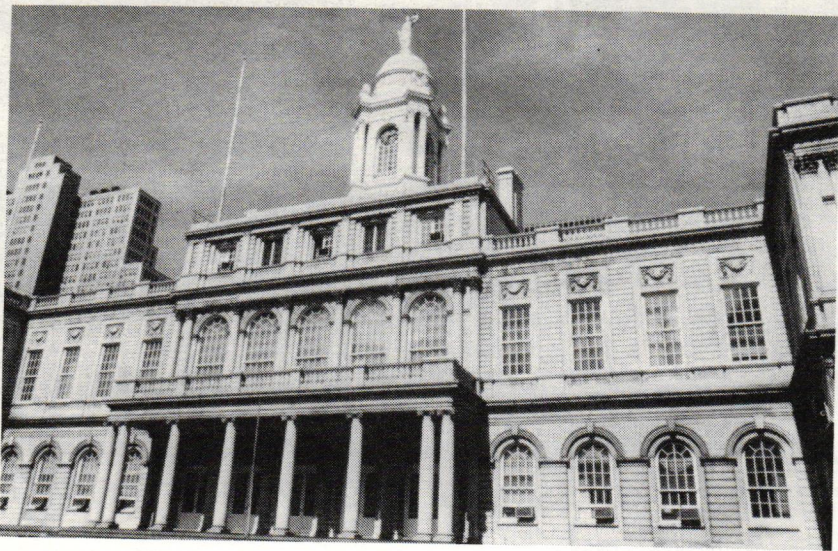
The upper sash is fixed and the lower is operable. Single glazing is standard, usually with antique or reproduction panes. Prices range from \$46 for an unglazed 15/16-in.-thick 18th-century unit with four 6 x 8 in. panes to \$466 for a 1-1/8-in.-thick 19th-century unit with 12-over-12, 9 x 12 in. panes and a 2-1/4-in.-wide sill.

The company also takes on custom orders. "I imagine there's something out there I wouldn't want to do, but I haven't come across it yet," owner Chuck Bellinger says.

For more on Architectural Components, see the SourceList. — EMK



## Landmark Wood Windows



New York's City Hall: New windows by United States Woodworking.

For 42 years, United States Woodworking has combined old world craftsmanship with modern technology to capture the detail and character of a landmark's original design and construction. Faithful reproductions for restorations or custom manufacture of new designs. United States Woodworking's 50,000-sq. ft. facility produces:

- ▲ Highest Quality Wood Windows
- ▲ Double-Hung, Casement, Gothic, Round Tops, & Special Shapes
- ▲ Mortise & Tenon Joinery
- ▲ Doors
- ▲ Architectural Paneling
- ▲ Mouldings
- ▲ Cabinetry

Also: Engineered working drawings and specifications for Architects, Installers, and Landmark Commission approvals.

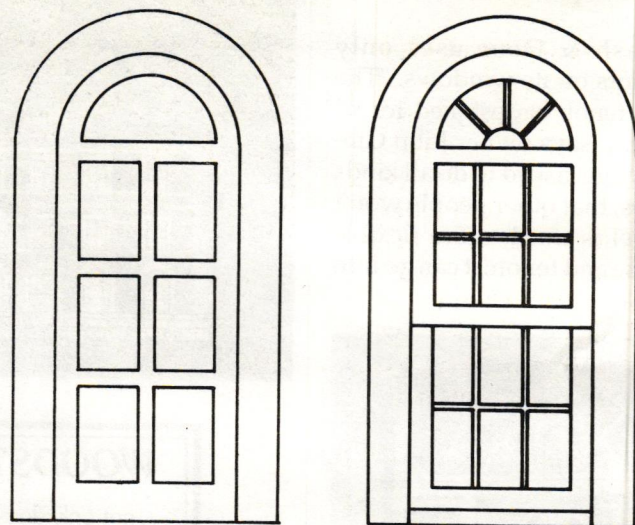
Send your specs for a quote. Or call or write for free brochure.

**UNITED STATES WOODWORKING, INC.**

35 Engineers Road, Hauppauge, NY 11788 (516) 234-4910

Circle No. 120

## MILLWORK SPECIALTIES



- Experienced in Landmark jobs
- Restoration or new construction
- Windows in any thickness
- Sugar pine, poplar, oak, mahogany
- Detailed shop drawings for Landmark approvals
- Round and arched tops
- Stock or custom windows
- Glazed or unglazed
- Storefronts
- Custom doors & entryways

Call or write with your specs for a prompt quote.

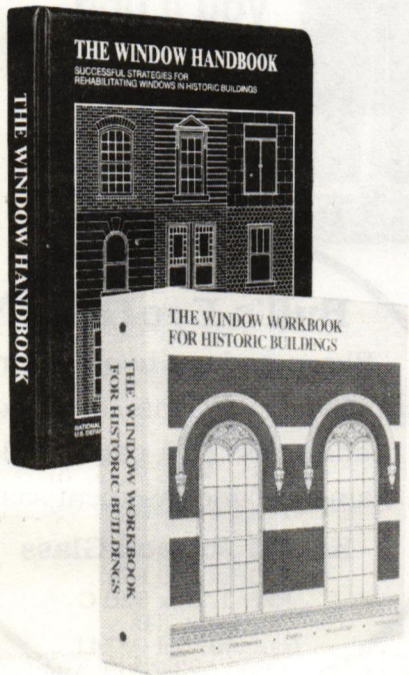
**(718) 768-7112**

**MILLWORK SPECIALTIES**  
189 Prospect Avenue, Dept. TB  
Brooklyn, NY 11215

## The "How To" Of Window Rehabilitation

Looking for technical information on the repair and replacement of historic windows? Need a reliable window reference for Tax Act projects? Two reference manuals compiled by the National Park Service are the best source for know-how on (1) making the repair/replace decision; (2) rehabilitating old windows; (3) procuring appropriate replacement windows. The two manuals come in the form of hefty 3-ring binders.

The first manual, "The Window Handbook," contains 125 pages of brief, well-illustrated

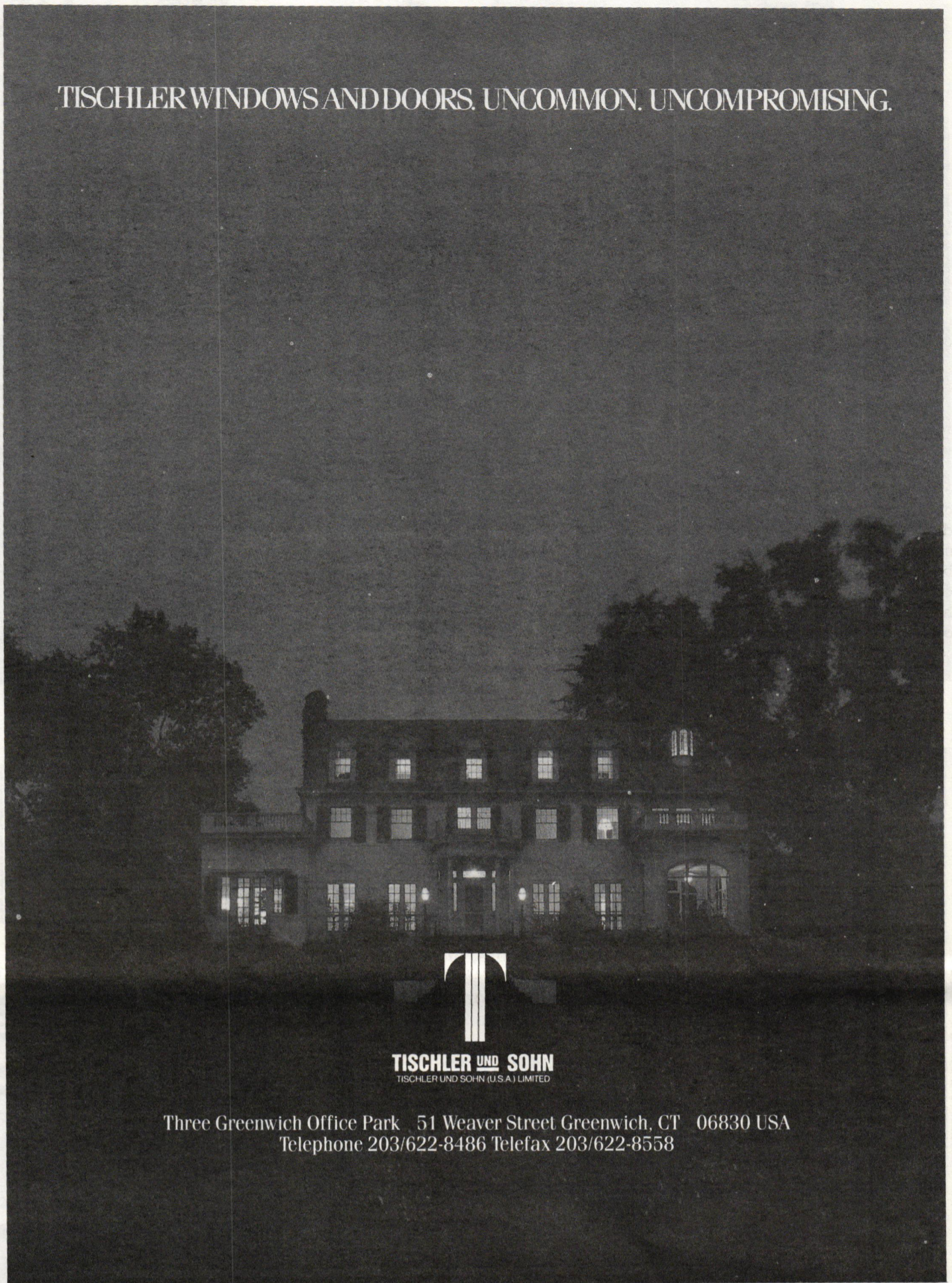


case studies called Preservation Tech Notes. The Tech Notes describe both innovative and traditional procedures for repairing and/or replacing historic windows. The Tech Notes give lots of specific detail...including costs and product information...so you can adapt the same procedure to other projects. The Tech Notes are divided into six categories: (1) General Guidance; (2) Planning & Evaluation; (3) Repair & Weatherization; (4) Double-Glazing Historic Windows; (5) Replacement Sash & Frames; (6) Screens, Awnings, & Accessories.

The second Manual, "The Window Workbook," contains 368 pages on the preservation and rehabilitation of windows in older buildings. The contents are based on papers given at the national Window Conference sponsored by the National Park Service. It's a great guide for architects, developers, contractors, and building managers. Among the topics addressed are: energy conservation, historic technology, maintenance, custom fabrication, repair techniques, and government regulations. There's also a 30-page directory of companies that do all special types of window work.

Purchased separately, "The Window Handbook" costs \$30, and "The Window Workbook" costs \$48.25. Together, the set of two costs only \$70, postpaid. Order from: **Historic Preservation Education Foundation, P.O. Box 27080, Central Station, Washington, D.C. 20038.** — CL ♦

TISCHLER WINDOWS AND DOORS. UNCOMMON. UNCOMPROMISING.

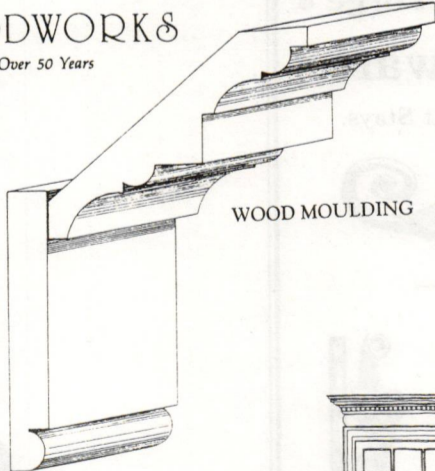


**TISCHLER UND SOHN**  
TISCHLER UND SOHN (U.S.A.) LIMITED

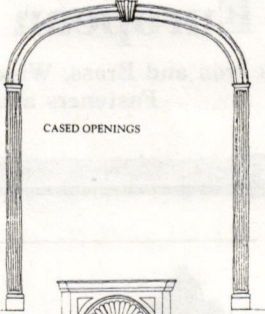
Three Greenwich Office Park 51 Weaver Street Greenwich, CT 06830 USA  
Telephone 203/622-8486 Telefax 203/622-8558

Circle No. 239

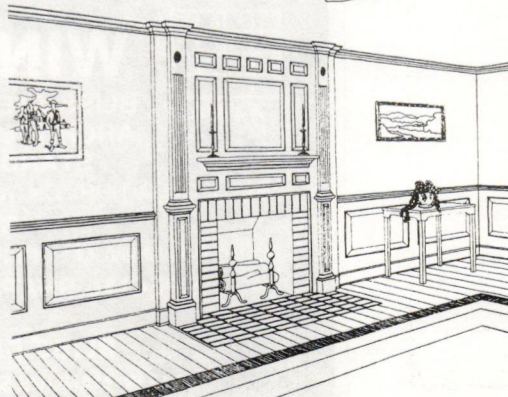
**COLONIAL WOODWORKS**  
*Distinctive Craftsmanship for Over 50 Years*



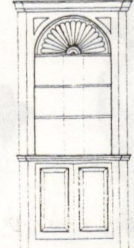
WOOD MOULDING



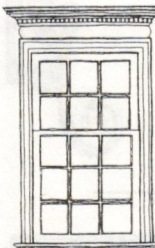
CASED OPENINGS



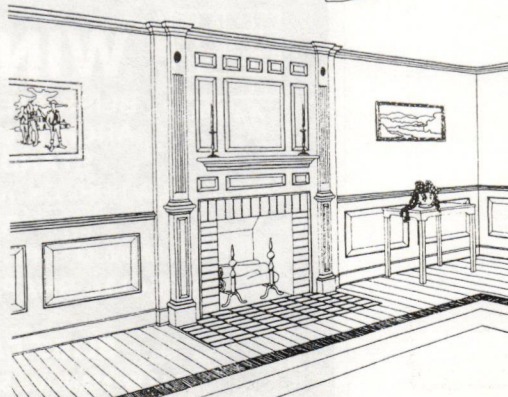
MANTELS



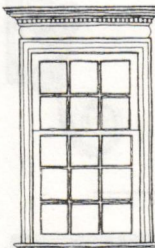
CORNER CUPBOARDS



COLONIAL INSULATED WINDOWS

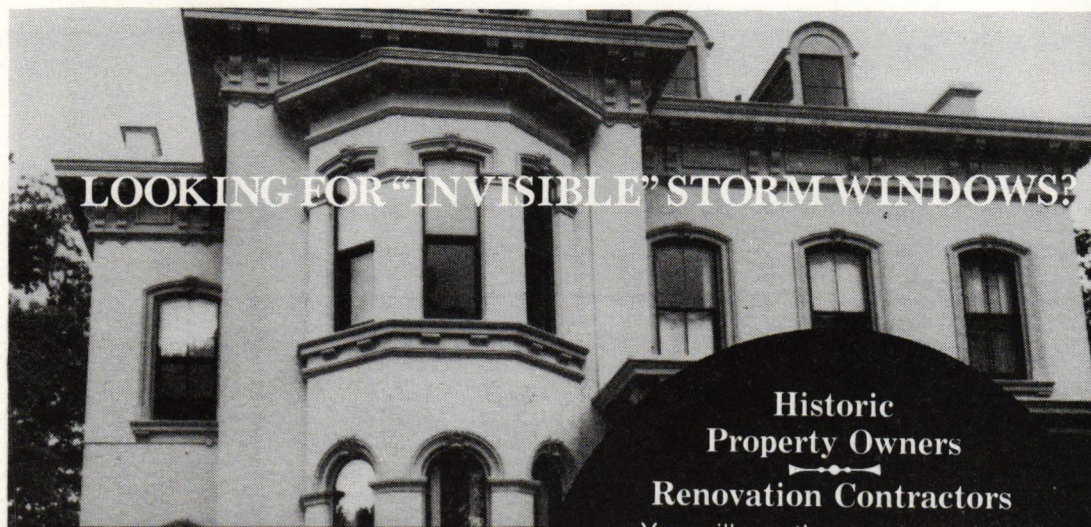


WAINSCOTE PANELING



FULL WALL PANELING

Send \$5.00 for 60 page catalog to:  
**COLONIAL WOODWORKS**  
Department TB  
Post Office Box 10612  
Raleigh, North Carolina 27605  
(919) 833-1681



LOOKING FOR "INVISIBLE" STORM WINDOWS?



HERE THEY ARE!

**Historic  
Property Owners  
Renovation Contractors**  
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"

Circle No. 69

For free product information, use the reader service coupon on page 29 or the business reply card you'll find inserted in this issue.



**DOORS & WINDOWS**

Specialists in 18th and 19th century architectural millwork including colonial style mortise and tenon small pane window sash, plank window frames, fanlight windows, interior and exterior doors, entryways, French doors, mantel-pieces, wainscotting, raised panel walls, mouldings and more. Custom orders and orders to "match existing" welcome.  
ILLUSTRATED BROCHURE \$3.00.

**ARCHITECTURAL COMPONENTS**  
26 North Leverett Road, Dept. TB  
Montague, MA 01351 413-367-9441

Circle No. 142



**Transylvania Mountain Forge**  
EST. 1860  
**European Hardware**

Black Iron and Brass, Window Casement Stays, Fasteners and More.



For catalog send \$2.00 to: Transylvania Mountain Forge  
Graystone Manor, Dept. TB  
2270 Cross St., La Canada, CA 91011  
Distributors for the U.S.A.

Coming Next Issue:  
*Ornamental Metalwork  
& Traditional  
Roofing Materials!*

**Bull's-Eye Glass**

Blown and cut to order for transoms, sidelights, and doors. Leaded glass panels. Also diamond-pane casement sash.

**Kraatz Russell Glass**  
Grist Mill Hill  
RFD 1, Box 320 C  
Dept. TB  
Canaan, NH 03741  
603 523-4289

Circle No. 254

**TORRANCE STEEL WINDOW CO., INC.**

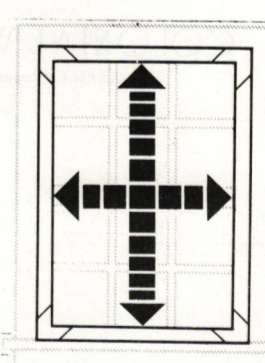
Residential and Architectural Stock and Custom Fire Rated Windows



Residential Architectural

Member Steel Window Institute  
1819 Abalone Ave., Torrance, CA 90501  
Phone: (213) 328-9181, 775-6195 Fax: 213-328-7485

Circle No. 237




**Spring Tite Interior Storm Windows**

- Fits neatly inside existing casing.
- Approved by National Historic Society and HUD.
- Will accommodate windows up to 1-1/2" out of square.

For more information call  
**National Energy Corporation**  
Franklin St., Mill Pond Pl., Westerly, RI 02841  
401-348-1030

Circle No. 132



**MEMBER STEEL WINDOW INSTITUTE**

**WINDOWS**  
BLISS STEEL & ALUMINUM  
ARCHITECTURAL, COMMERCIAL, INDUSTRIAL  
STANDARD, CUSTOM & SPECIAL BUILT  
PROJECTED, HORIZONTALLY PIVOTED, SIDE & TOP HINGED, EXPLOSION RELEASE  
**STEEL SECURITY WINDOWS**  
ALUMINUM SCREENS, MECHANICAL OR MOTOR GANG OPERATORS  
**SPECIAL SHAPES FOR NEW AND RESTORATION WORK**  
Manufactured By  
**BLISS-CASHIER METAL PRODUCTS, INC.**  
617 W. MANLIUS ST., P.O. BOX 310, E. SYRACUSE, NEW YORK 13057  
CALL (315) 437-3396 FOR CATALOG & QUOTE

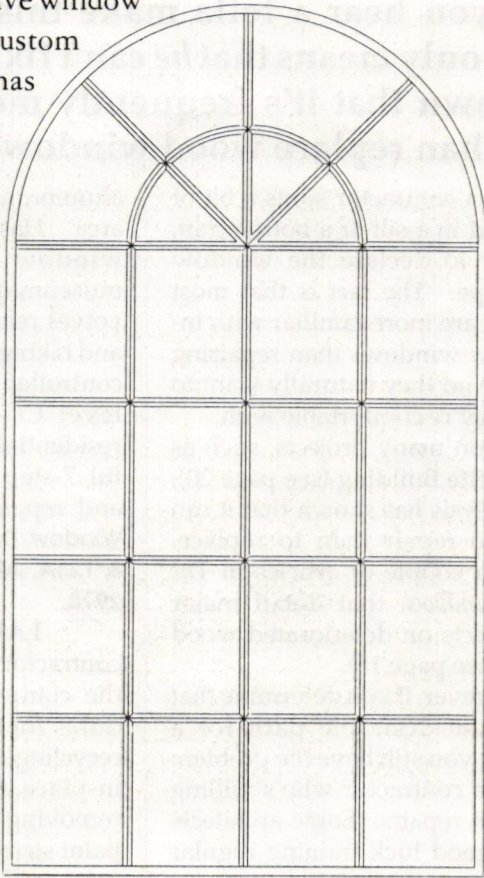
Circle No. 235



## DESIGN SOLUTIONS FOR AGE OLD PROBLEMS

### Custom Window Company

is a leader in innovative window design. The name, Custom Window Company, has become synonymous with the rejuvenation of Historic buildings, designing window systems that emulate historic steel and wood fenestration from low maintenance thermally broken aluminum. The design and budgeting staff are always available to assist you. Call today.

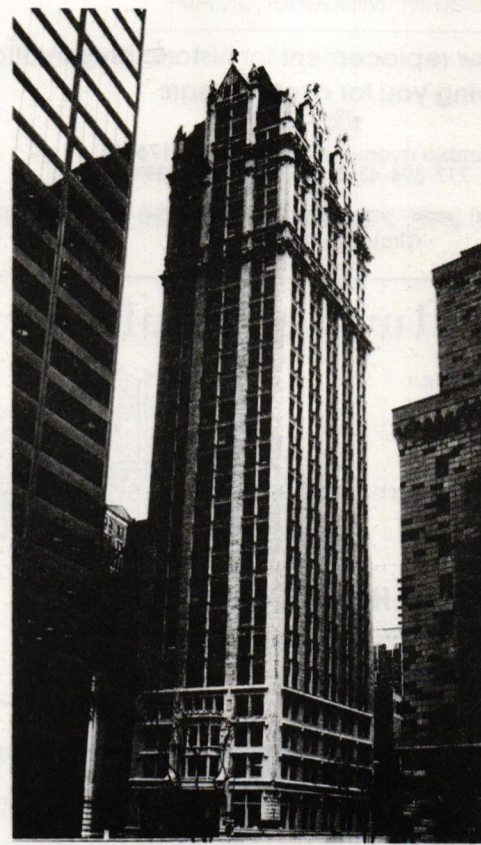


**custom window**  
P.O. BOX 118, ENGLEWOOD, COLO.

WATTS: 800-255-1820 FAX: 303-789-0111 PHONE: 303-761-2909

Circle No. 238

## Proven Performance Time and Time Again



Since 1954 Kasson & Keller, Inc. has been manufacturing aluminum windows and doors. Professionals say that Kas-Kel's storm window line is the most versatile manufactured in the Northeast. Our windows are designed for installation on exterior or interior window openings. Whether it be a high rise or single story building, Kas-Kel windows are a proven performer time and time again.



**KAS-KEL**

Kasson & Keller, Inc. School Lane, Fonda, NY 12068

Circle No. 233

## HARBROOK

Architectural Wood & Glass

### Wood Window Specialists

Providing design, consultation, supply and installation for new construction and landmark restoration.

530 Broadway  
New York, N.Y. 10012  
(212) 941-1124

146 Vley Road  
Scotia, N.Y. 12302  
(518) 370-0032

Circle No. 240

## BETA EPOXY

...for structural, stabilizing  
and cosmetic applications.

- PRODUCTS: Epoxies & Safety
- TRAINING on-site or in classroom
- CONSULTATION services



Epoxy field experience since 1975

Call (301) 279-2612

P.O. Box 1462, Rockville, MD 20850

Circle No. 218



## BAREWOOD INC.

Fine custom woodworking and carving artistically executed  
cherished pieces lovingly repaired or recreated  
CUSTOM FABRICATION

EXPERT REPAIRS ••• REPRODUCTION

Windows	Fireplace Mantle/Mirrors
Doors/Sashes	Cornices
Custom Moulding/Millwork	Wainscoting/Panelling
Staircase Parts	Woodturning/Spindles/Columns
Decorative Woodcarving	Handrails
Furniture/Cabinets	

106 Ferris Street, Brooklyn, New York 11231  
(718) 875-9037

Circle No. 167

## Windw Repair Is Smooth Sailing With **WEST SYSTEM** Epoxy.



WEST SYSTEM® epoxy was developed for boat building and repair. This versatile two-part system for bonding and coating wood stands up to even the toughest marine environment. It's ideal for any repair and reconstruction project where moisture resistance and high strength are priorities. Write for your free catalog.

**GOUGEON BROTHERS, INC.**

Dept. TB, P.O. Box X908, Bay City, MI 48707

PHONE: (517) 684-7286 FAX: (517) 684-1374

Circle No. 246

**AWC**  
architectural window consultants  
Robert M. Michener, Jr. AIA

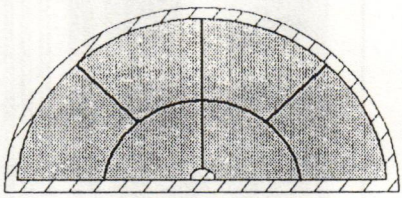
specialist in window replacement for historic preservation  
serving you for over 10 years

3328 columbia avenue • lancaster, pa 17603  
phone: 717-394-4313 fax: 717-394-0394

Circle No. 250

**Historic Millwork Duplicated**

- ▲ windows, doors, mouldings
- ▲ mortise and tenon joints
- ▲ true bar and muntin patterns
- ▲ insulated glass



**ENGLANDER MILLWORK CORPORATION**  
2369 Lorillard Place, Bronx, NY 10458  
(212) 364-4240

Circle No. 252

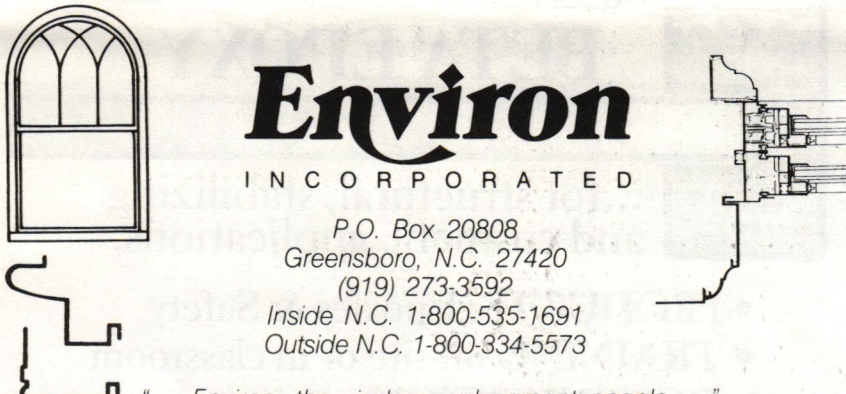
**Staples Millwork**

32 TAUNTON AVENUE, NORTON, MA. 02766  
PHONE: 508/285-4477 FAX: 508/285-4488

member architectural woodwork institute  
National Trust for Historic Preservation

**STILE & RAIL STAVE CORED DOORS**  
Built to your specifications.

Circle No. 208



**Environ**  
INCORPORATED

P.O. Box 20808  
Greensboro, N.C. 27420  
(919) 273-3592  
Inside N.C. 1-800-535-1691  
Outside N.C. 1-800-334-5573

"... Environ, the window replacement people ..."

Circle No. 241

# F·I·R·E·B·A·C·K·S

The classic way to protect your fireplace



A beautiful, hand-cast Country Iron Foundry Fireback will protect the back wall of your fireplace from dangerous and costly heat damage, while radiating more heat into your home.

Our catalog, containing 35 antique and contemporary designs, is available for \$2.00 (refundable with purchase).

Dept. T909, P.O. Box 600, Paoli, PA 19301  
(215) 296-7122



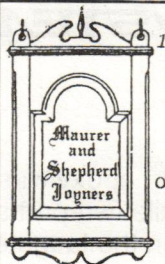
Circle No. 176

**REPLACEMENT SASH**  
Any size, or layout: circle, oval, gothic, or cottage. Sash or complete window unit. Custom mouldings, doors. Raised panel shutters, millwork to detail. Send sketch, specifications for price.

**DRUMS SASH & DOOR CO. INC.**  
PO Box 207  
Drums, PA 18222  
(717) 788-1145

Circle No. 247

17th and 18th Century  
Millwork



Maurer and Shepherd Joiners  
Windows, Doors & Entryways  
Raised Panel Walls  
Old Glass, Mouldings, Wide Pine Flooring  
Beaded & Feather edge boards  
CUSTOM WOODWORKING

**Maurer & Shepherd Joiners**  
122 Naubuc Avenue  
Glastonbury, Connecticut 06033  
(203) 633-2383

Circle No. 36

## wood window repair

### "Those Windows Can't Be Fixed!"

When you hear a fella make this pronouncement, often it only means that *he* can't fix them. Experience has shown that it's frequently more economical to repair than replace wood windows.

As soon as a contractor spots a bit of rotted wood in a sill or a bottom rail, he's likely to declare the window beyond hope. The fact is that most contractors are more familiar with installing new windows than repairing old ones. And they naturally want to do what they're comfortable with.

But on many projects, such as the Marquette Building (see page 20), careful analysis has shown that it can cost less to repair than to replace. There are a couple of articles in *The Window Handbook* that detail major repair projects on deteriorated wood windows (see page 15).

However, if you determine that repair is the desirable path for a specific job, you still have the problem of finding a contractor who's willing to fuss with repairs. Some architects have had good luck training regular carpenters to tackle window restoration. As long as the workers have had experience on preservation projects, the odds are good that they'll adapt successfully to this new task.

There are also some contractors who specialize in window repair. Below we've listed a few of the companies we've run across who have a good track record in wood window restoration.

**CORAPI CO.** — Medium-size window contractor that will repair or replicate aging wood — or even aluminum and steel — windows. Strong preservation orientation. Specializes in larger projects, such as commercial, government, and institutional buildings. **Corapi Company, 2307 Oakdale Ave., Dept. TB, Glenside, PA 19038 (215) 887-0556. Circle No. 224**

**HISTORIC WINDOW** — Medium-size contractor that both repairs windows and manufactures new units, in either wood or

aluminum. Serves the New England area. Has 3 quality levels for wood window repair: Quality A is a museum-quality restoration that involves removing sash from the frame and taking it to the shop for a carefully controlled 14-step process. Quality level C — satisfactory for most residential jobs — is essentially a careful 7-step in-shop stripping, repair, and repainting procedure. **Historic Window, Dept. TB, P.O. Box 138, Jct. 123 & 123A, Alstead, NH 03602 (603) 835-2918.**

**LAKE CONSTRUCTION** — A contractor specializing in restoration, the company has developed procedures for the economical repair and recycling of wood windows. Will do in-place epoxy repairs, as well as removing windows to his shop for paint stripping, replacement of rotted parts, and reglazing. Handles larger jobs. Among their many projects is window restoration for Sailors' Snug Harbor, Staten Island, NY. **Lake Construction & Development Corp., 150 King St., Dept. TB, Brooklyn, NY 11231 (718) 852-7771.**

**REPLACEMENT SYSTEMS INTL.** — Midwestern contractor will restore or replace wood windows. Services include epoxy consolidation, replacement of deteriorated wooden parts, weatherstripping, possibly retrofitting with insulated glass, and refinishing with high-performance paints. Specializes in the larger commercial and institutional buildings. Can also custom make wood windows that replicate the historic originals when necessary. Offers exclusive pivot sash hardware for easy-cleaning energy-conserving sash. **Replacement Systems International, Ltd., P.O. Box 2304, Dept. TB, Kalamazoo, MI 49003 (616) 345-8214. —CL♦**

The answer to some of your toughest restoration problems.


## ABATRON Wood Restoration System

An unprecedented advancement in the regeneration of rotted, damaged or even missing wood. Each 5-can kit consists of:

**LiquidWood A** (resin) and **B** (hardener): impregnating consolidant to renew crumbling, rotted wood to its original strength and hardness.

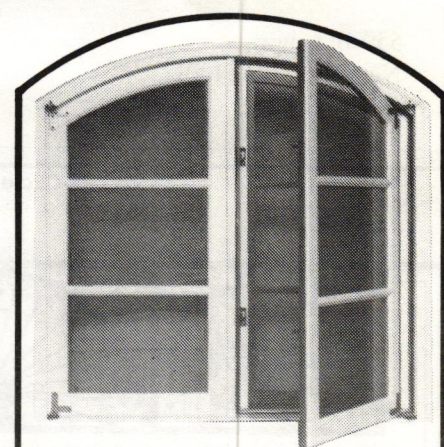
**WoodEpoxy A** and **B**: structural adhesive paste, filler and wood substitute with exceptional strength. Does not shrink; can be shaped, sanded, colored, sawed and even nailed.

**ABOSOLV**: solvent and thinner for LiquidWood and WoodEpoxy.

from this:  Ideal for building restoration and antiques. Irreplaceable structural and decorative parts can be easily restored. Easy to use; requires only simple hand tools to apply. Available in 5 pint, 5 quart and 5 gallon sizes. Call or write for free brochure.

to this:  **ABATRON, INC.**  
141 Center Drive, Dept. TB  
Gilberts, IL 60136  
312/426-2200

Circle No. 130



Bow top double casement window

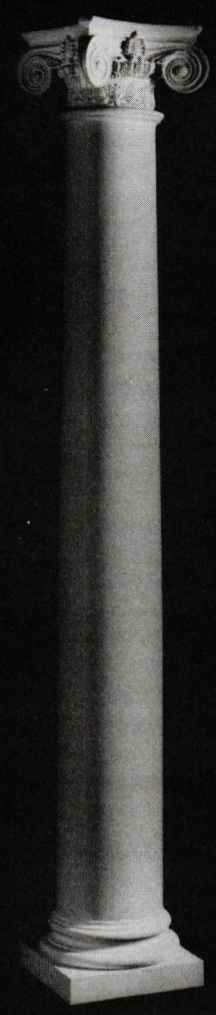
Engineering and manufacturing a wide range of fenestration products to architectural specification

## Gibbons Sash and Door

Box 76, Hurley, WI 54534  
(715) 561-3904

Circle No. 225

**CHADSWORTH**  
EXPECT THE BEST



Authentic Replication of Greek and Roman Orders

Chadsworth Columns and Capitals available in redwood, pine and other species.

EMPIRE WITH NECKING—featured with our plain column shaft and attic base moulding—is a modern version of the Ionic. The volutes on this magnificent capital gradually spiral outward and then tighten to form central eyes. Two classic mouldings, the egg and dart and the bead and reel, enrich this exquisite capital. The necking and the abacus are adorned with sprigs of honeysuckle.

Architectural Columns  
French Gobelin Tapestries  
Table Bases  
Pedestals

**CHADSWORTH**  
INCORPORATED

Column, Tapestry or Table Base Brochure—\$2.00 each  
All Three Brochures—\$4.00

For information and brochures:  
P.O. Box 53268, Dept. 21  
Atlanta, Georgia 30355  
404-876-5410

Circle No. 18


**TRADITIONAL CRAFTSMANSHIP MEETING TODAY'S RESTORATION NEEDS**



We specialize in the restoration and replication of traditional architectural cast metal ornamentation including: canopies, facades, store fronts, entrances, railings, light fixtures, grills, fountains, gates and furniture.

Our manufacturing materials include cast iron, brass, bronze and aluminum.

Included in the services we provide are design, documentation, estimating, manufacturing and installation.



**HISTORICAL ARTS & CASTING, INC.**  
1939 South 4130 West, Unit F  
Salt Lake City, Utah 84104  
Tel: 801-974-0242 Fax: 801-974-5832

Circle No. 121

**FOUNDATION RESTORATION**



**PermaJack®**  
**Jackson**

ASK ABOUT OUR 5-YEAR WARRANTY & OUR EXTENDED WARRANTY

**WHEN YOUR HOUSE NEEDS A HELPING HAND**

- DESIGN & PLANNING SERVICES
- OVER 50,000 PIERS INSTALLED NATIONWIDE
- EACH PIER DRIVEN TO BEDROCK OR EQUAL LOAD BEARING STRATA
- ECONOMICAL TO INSTALL FROM OUTSIDE OR INSIDE
- CONSULTING SERVICES
- OTHER STRUCTURAL REPAIRS

INSTALLING STEEL PIERS SINCE 1974

OFFICES LOCATED IN JACKSON, MS; MONTGOMERY, AL; AND ATLANTA, GA.

FOR INFORMATION CALL:  
**1-800-468-2603**



BEDROCK OR EQUAL LOAD BEARING STRATA

Circle No. 144

**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 • 800-641-4038



**NOW AVAILABLE!**

Circle No. 52

# wood window repair

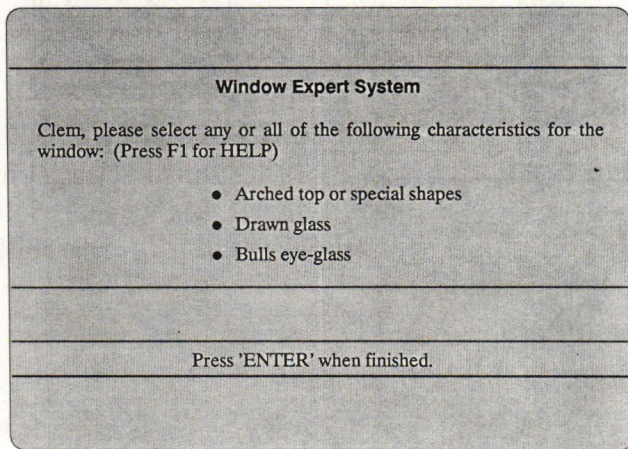
## A Computer "Expert"

**It takes an expert to decide whether it's more economical to repair or replace wood windows. Soon, you can have your own personal window expert on your desktop.**

❖ by Constance W. Ramirez and John H. Myers

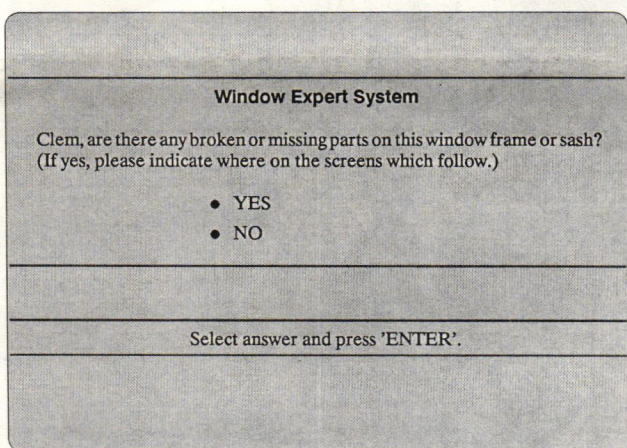
Work now being done by the U.S. Dept. of the Army through the Center for Architectural Conservation at Georgia Tech may make life simpler for anyone who needs to evaluate the condition of windows and make sound "repair or replace" decisions. The project is called "Window Expert System" and, in essence, it stores the knowledge of experts in a computer program that then directs non-experts through the evaluation process. The non-expert arrives at a technically and philosophically sound decision just as an "expert" would.

Figure 1



The Window Expert System starts with a computer program "shell" developed by specialists in expert systems. The shell is then loaded with technical information on window types, sizes, materials, the Secretary of Interior's Standards, information from Preservation Briefs and Tech Notes — and names, addresses, and capabilities of window manufacturers. It is then programmed to go through the same steps as a human expert to evaluate a window and come up with a correct decision on significance and condition, recommend action, and list suppliers of products and services appropriate for the recommended action.

Figure 2



Window Expert System runs on IBM-compatible personal computers and portables — so it can be used on-site for window-by-window analysis. While the program can be used by any property owner, it is designed mainly as a planning tool for users with hundreds of windows in many buildings.

The program, like a human expert, may be "trained" by adding or changing the information by which decisions are being made. If the system is too "lenient," the rules can be tightened. If new products or services become available, they can be added to the program.

### The 3 Parts Of Being Expert

The program guides the user step-by-step through a series of questions in three major sections:

(1) The first stage collects basic data on the building. (Intelligent window decisions can only be made in context of the building's importance.)

(2) The second step evaluates the relative significance of each window type in the building. Usually, some windows are more important architecturally than others in the same building. The program asks a series of questions like the one in Fig. 1, and ultimately assigns a significance level to each window type.

(3) The third step is a window-by-window assessment of physical condition, within each identified type. A series of questions like the one in Fig. 2 helps the user describe conditions.

The program then uses the information on significance and condition to make repair/replace recommendations for each window. The system can use information stored in commonly used database programs like dBase, and it can store the results in a database as well. For example, the Window Expert System will read from a database of window manufacturers' capabilities and inform the user where appropriate products are available.

### Solutions For Other Problems

This new approach to analyzing historic preservation issues holds great promise for many other preservation problems where there are large inventories of historic buildings. For the Army, which maintains about 10,000 pre-1940 build-

ings and over 100,000 archeological sites, expert systems offer the opportunity to ensure uniform inspection and analysis criteria necessary for budget and manpower decisions. For this reason, the Army has been leading the field in applying computer programs to historic resource management.

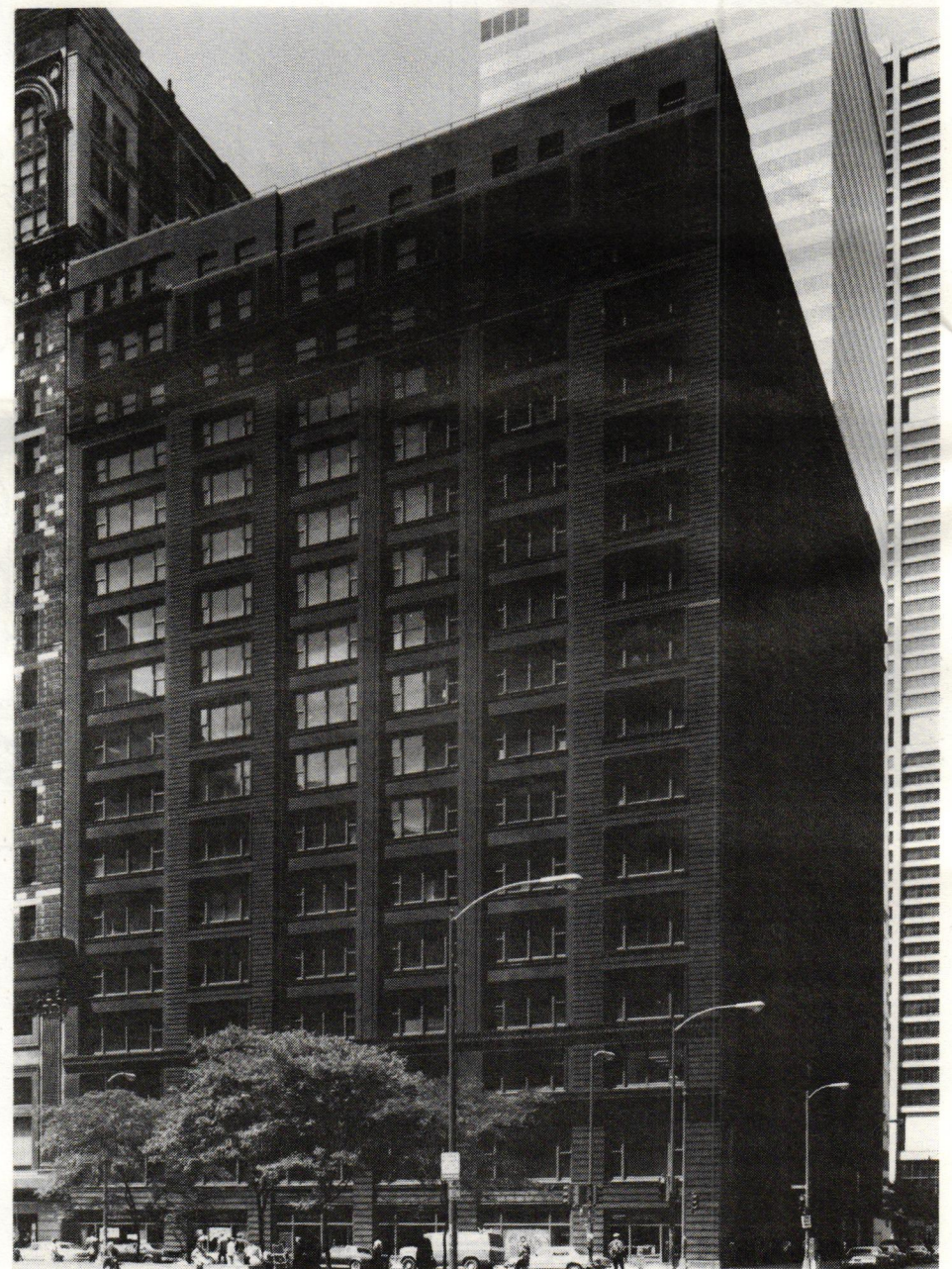
The Window Expert System is the first such program targeted to building maintenance, and is a forerunner of powerful and inexpensive aids for solving technical problems. The Window program will allow property owners and managers to work more effectively with architects and engineers to achieve solutions that protect the significant features of historic buildings. It joins other Army programs such as the Cultural Resources Information System and Geographical Resources Analysis Support System that aid the development of historic preservation plans.

The Window Expert System is still in the developmental phase, but ultimately the Army and the Center see the program as one to be shared with other users ranging from federal agencies to historic house museums. ❖

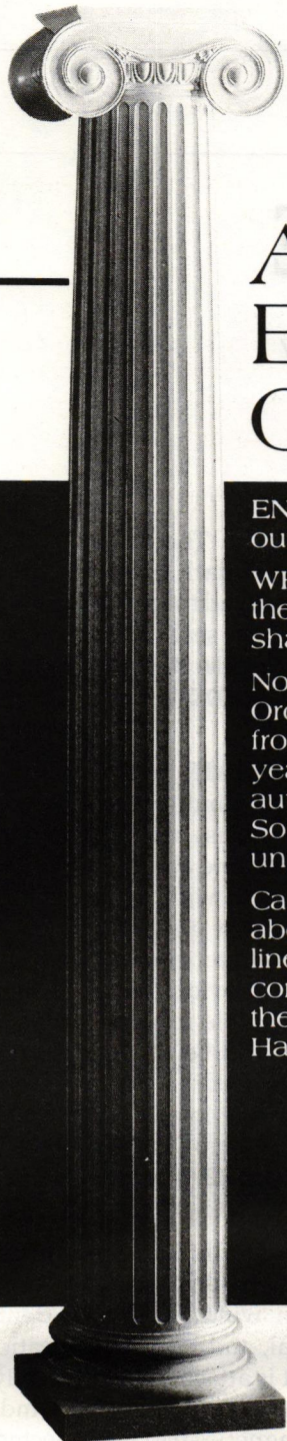
**To get additional information about the Window Expert System, contact: Richard Hayes, Facilities System Div., U.S. Army Corps of Engineers, Construction Engineering Research Laboratory, 2092 Newmark Drive, Champaign, IL 61821. Or: John H. Myers, Center for Architectural Conservation, College of Architecture, Georgia Tech, Atlanta, GA 30332 (404) 894-3390.**

*John H. Myers is Director of the Center for Architectural Conservation and author of Preservation Brief No. 9: "The Repair of Historic Wooden Windows." Constance Werner Ramirez, Ph.D, is Historic Preservation Officer for the Dept. of the Army and develops policies for management of archeological sites and historic buildings on military land.*

## Window Repair: \$65,000. New Windows: \$1,600,000.



**When Holabird & Root, Chicago, undertook the \$17-million rehabilitation of the Marquette Building for the owner, Bankers Life & Casualty Co., it was clear the windows were a major part of the job. Project Architect Walker C. Johnson, AIA, analyzed three options: (1) High-quality aluminum replacement windows. Cost: \$1,600,000. (2) Modifying existing sash to accept insulating glass. Cost: \$860,000. (3) Repair existing sash. Cost: \$65,000. Careful analysis showed that just repairing the old windows would still allow the building to meet ASHRAE energy performance standards — and that the energy saving of the two more costly options would not yield an adequate payback. It was a case of good preservation practice and good economics going hand in hand. ❖**



## An Emphasis On Entasis

ENTASIS. A curving outwards along the outline of a column shaft . . .

WHY such an emphasis? To counteract the inward curving optical illusion of a shaft bounded by straight lines.

Nothing less than such attention to the Orders of Architecture can be expected from a company who for more than ninety years has been manufacturing the finest authentic Architectural Columns available. So fine that our redwood columns carry an unprecedented ten-year warranty.

Call us today - or write for information about additions to our expanding product line of other wood and non-wood components and to learn more about the advantages of specifying Hartmann-Sanders.



**HARTMANN SANDERS CO**

4340 Bankers Circle  
Atlanta, Georgia 30360  
(404) 449-1561 • (800) 241-4303

*An Old Company With New Ideas*

Circle No. 158



## Everything for the Traditional Building.

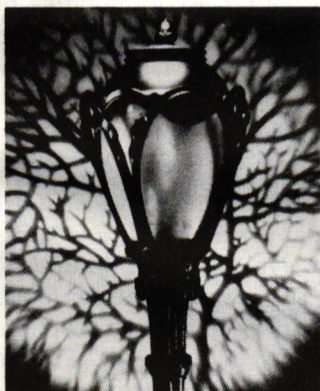
Decorative Hardware ~ Plumbing Fixtures & Accessories  
Architectural Trims & Medallions

CATALOG \$2.00  
CONSULTANT AVAILABLE

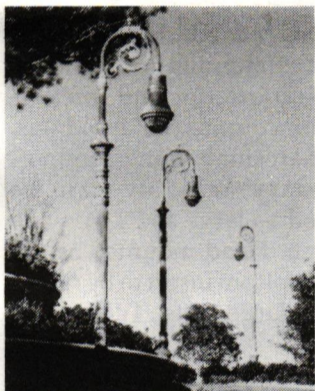
**Restoration Works Inc.**

810 Main Street  
Buffalo, N.Y. 14202  
(716) 856-8000

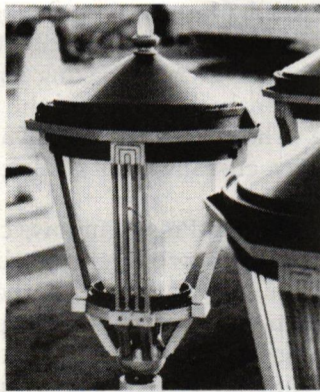
Circle No. 41



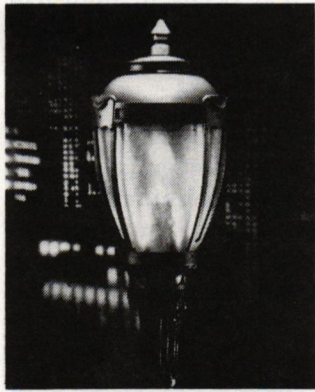
CENTRAL PARK NY



BEVERLY HILLS CA



INDIANAPOLIS IN



BATTERY PARK CITY NY

## SENTRY IS LIGHTING UP AMERICA

All across the U.S.A.—from Beverly Hills to the Venice-like Lower Canal in Indianapolis, the Columbia SC governor's mansion, Quincy MA office park, Buffalo NY neighborhood restoration—Sentry luminaires are lighting up parks, streets, plazas, and campuses brilliantly and efficiently.

Sentry offers you a selection of the most beautiful luminaire + post packages in the U.S.A.—or a new design created expressly for you.

Write, call or fax for immediate attention. Sentry sales representation is nationwide. See us in Sweet's and LAFile.



Sentry Electric Corporation 185 Buffalo Avenue Freeport, New York 11520  
Telephone 516-379-4660 Fax 516-378-0624

Circle No. 102

J.E. SMITH J.E. SMITH J.E. SMITH J.E. SMITH



**BALDWIN**  
*Made in U.S.A.*

**SPRINGFIELD** FORGED BRASS HANDLE SET  
**\$190** reg. \$375

**BIG INVENTORY!  
LOW PRICE!  
SUPER SERVICE!  
SAME DAY SHIPMENT**



J.E. SMITH J.E. SMITH J.E. SMITH J.E. SMITH

CALL  
**1-800-345-5625**

CALL US FOR ALL YOUR BUILDER'S HARDWARE NEEDS!

FAX 203-757-0234

Ask for Free Color Catalog ▶



**621 BANK ST. • WATERBURY CT 06721**  
Since 1897






Circle No. 136

storm windows

# STORMS: THE TREND'S INSIDE

Storm windows are now available that upgrade thermal efficiency — *without* detracting from historic looks.

When you've got to improve the energy performance of windows in historic buildings, some sort of double glazing is usually called for. Options include: (1) installing a traditional exterior storm window; (2) installing an interior storm window; (3) routing out the historic sash to insert a double-glazed thermal unit; or, (4) replacing the deteriorated sash with a new double-glazed one that preserves the historic character.

Storm windows — interior or exterior — are often the most economical double-glazing strategy. Whether the storm goes inside or out is usually decided by a combination of aesthetic, technical, and perhaps legal factors — if the property is in a historic district or is subject to Tax Act review.

Outside storm windows are often the best strategy when dealing with simple 1 over 1 windows. Well-designed exterior storms have a minimum impact on appearance — and have been approved by the National Park Service for use on Tax Act projects.

Outside storms have serious drawbacks, however, with multi-lite sash because the exterior storm panel masks the muntin profiles of the prime window. For windows with distinctive glazing bar patterns, interior storms are often the way to go. There have been dramatic developments in the past few years in the types of interior storm windows available. For example, the new magnetically attached interior storms are especially useful on steel casement windows; they grab right to the steel frame.

Many of the high-quality exterior and interior storm windows don't have self-storing panels, which

is why they look better than the ubiquitous triple-tracks. But the property owner may have to figure out where to store the glazing panels during the summer.

For more details on improving the thermal efficiency of historic windows, consult the Window Handbook (see review on p. 15). Below you'll find a list of some of the leading suppliers of storm windows for historic buildings.

**ALLIED WINDOW, INC.** —

The company makes four lines of aluminum storm windows: one for exterior mounting, and three types for interior mounting. Allied specializes in custom designs and custom colors, priding itself on making "invisible" storm windows. The company has supplied storm windows for many historic and Tax Act projects.

For exterior installation on commercial, industrial, and residential buildings with double-hung windows, Allied has its Historic One Lite (HOL) line. The HOL storms are available with: (1) A single removable panel; (2) One fixed and one removable panel; (3) Two removable panels. Units are custom-engineered to the installation, and can be made with arched, round, and segmental heads. Even circular shapes can be provided; all panels are inside-removable.

For interior installations, Allied has its Magnetic One Lite (MOL), Allied One Lite (AOL), and Slide-A-Way (SAW) lines. The MOL line is designed primarily for double glazing of fixed windows. It attaches magnetically to steel tape or steel angle affixed to the window frame. Because of its aluminum frame, it can utilize glass panels — and undivided glass panels

as large as 64 in. x 92 in. have been successfully installed.

The AOL line has been approved for interior installation on Tax Act projects. There are a couple of ways to attach it to the inside of a window frame. Panels snap out easily from the aluminum frame with mechanical clips. Units are custom-engineered, ranging from single removable panels to multiple panels for massive openings (openings as large as 12 ft. wide and 18 ft. high have been handled). Special shapes follow line of existing windows. Screen panels and special glazing are offered. **Allied Window, Inc., 2724 W. McMicken Ave., Dept. TB, Cincinnati, OH 45214 (800) 445-5411. Circle No. 69**

**DEFENDER, INC.** —

Company makes interior storms that feature in-jamb or face-mounted vinyl frames — in several colors — with acrylic glazing panels. Five different interior storm systems are offered to fit just about every shape and style of window. The acrylic glazing panel can be installed or removed without special tools. **Defender, Inc., Dept. TB, Box 3582, Bridgeport, CT 06605 (800) 257-2882.**

**KASSON & KELLER** —

Company provides aluminum secondary windows, both exterior and interior-mounted, for commercial buildings. The Manhattan single-hung commercial secondary window can be manufactured as large as 72 in. wide by 120 in. high. Head-mounted balances allow the bottom insert to be raised or lowered on large units. Tilt-in glass and screen inserts allow easy removal for cleaning and repair. The units are engineered to meet wind and structural loads that occur in high-rise buildings. **Kasson & Keller, School Lane, Dept. TB, Fonda, NY 12068 (518) 853-3421. Circle No. 233**

**MAGNETITE CORP.** —

Offers interior storm system with ABS alloy edging and a continuous flexible strip magnet. Several framing systems allow installation on any existing window; size limited only by glazing dimensions. Self-storing models are available. All units are custom made, so unusual shapes are possible. Uses acrylic or glass panels in thicknesses up to .25 in. Specialty glass, such as solar reflective and low-E, is available. **Magnetite Corp., 8356 Tom Drive, Dept. TB, Baton Rouge, LA 70815 (800) 624-8483.**

**NATIONAL ENERGY CORP.**

— Supplies the Spring-Tite interior storm window, which is designed to slip easily inside a window jamb and be held in place by friction pressure supplied by internal spring mechanism. No magnets, Velcro, or other mounting strips required. The frame is extruded PVC; the corner key is injection-molded nylon with aluminum pop rivets. The springs are made from tempered stainless steel. Glazing can be acrylic or double-

strength glass. The frames come in white, tan, or dark brown; neoprene gasketing around the perimeter makes a tight weather seal. **National Energy Corp., 105 Franklin St., Dept. TB, Westerly, RI 02891 (401) 348-1030. Circle No. 132**

**PANELAIR** —

Sells a simple inside storm window consisting of a sheet of clear glass set in a vinyl gasket within a U-frame aluminum channel. Also available with acrylic glazing, double-strength glass, and UF-3 for ultra-violet protection. A vinyl bulb-type gasket provides an air-tight seal. Frames available in white or brown, which can also be painted to match existing woodwork. Held securely in place by spring-loaded clips for easy access and removal. **Panelair, 203 Spark St., Dept. TB, Brockton, MA 02402 (508) 588-8900. Circle No. 232**

**PLASKOLITE** —

Company supplies custom-made Winsulator inside storm windows for residential, commercial, and industrial locations. Storm unit is attached magnetically to a steel banding affixed to the window frame. Magnetic strip is connected to the extruded vinyl frame via a flexible bellows that accommodates out-of-square surfaces. Glazing is acrylic; vinyl frame comes in white, brown, or tan. **Plaskolite, Inc., P.O. Box 1497, Dept. TB, Columbus, OH 43216 (614) 294-3281.**

**THERMO-PRESS CORP.** —

Company provides an inside storm window in which a continuous 1/2-in. hook Velcro strip is stapled to the window trim or to a wood strip attached inside the window jamb. An extruded PVC frame with a strip of loop Velcro is pushed against the mating Velcro strip; weathertight seal is provided by an inner vinyl gasket extruded to the PVC frame. Acrylic glazing sheet is permanently bonded to the PVC frame. The PVC frames are available in many custom colors, including wood stains.

Thermo-Press windows can be divided into two sections, like a double hung window. The bottom panel can self-store into the top panel, allowing easy access to the prime window. Interior screens also available. **Thermo-Press Corp., 5406 Distributor Drive, Dept. TB, Richmond, VA 23225 (804) 231-2964. Circle No. 231**

**ULTRASTORM CORP.** —

Offers an interior storm window that slips inside the window jamb and is held by friction generated by an internal Spring-Tite mechanism. The frame is extruded PVC with acrylic glazing. It'll accommodate windows that are as much as 1-1/4 in. out of square. Compression clips are used to compress the spring-loaded frame, then storm unit is positioned inside window jamb and clips are removed. Frame then springs into place. **UltraStorm Window Corp., P.O. Box 380, Dept. TB, Lincoln, MA 01773 (508) 358-5524. — CL ♦**

## Panelair®

### INTERIOR STORM WINDOW Preserves Original Architecture

The Inside Storm Window is manufactured with glass (or optional plexiglas) which is marine glazed to prevent moisture penetration and surrounded by a heavy duty aluminum frame. A vinyl bulb-type weather stripping provides the airtight seal. It is lightweight and held securely in place by spring loaded clips. The clips can be turned by hand, allowing easy access for cleaning or removal.

#### Advanced Design



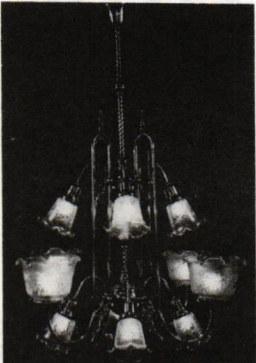


Panelair 203 SPARK STREET BROCKTON, MA 02402 (508) 588-8900

Circle No. 232

### VICTORIAN AND TURN OF THE CENTURY

Chandeliers, Sconces & Fixtures



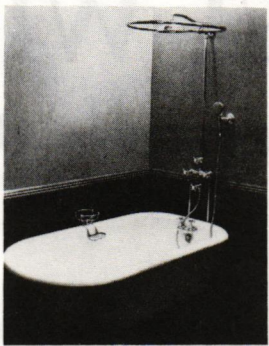
Design • Contract • Manufacturer • Restoration  
• Replacement Parts & Glass Shades

**THE MOST COMPLETE SOURCE FOR ANTIQUE AND REPRODUCTION GAS, OIL AND ELECTRIC LIGHTING**

Lighting Catalog **\$4.00**

THE FINEST LAMP & FIXTURE RESTORATION AVAILABLE

### ANTIQUE BRASS SHOWERS & FIXTURES



• Claw Tubs • Brass & Chrome Showers • Shower Rings • Pedestal Sinks • Faucets • Oak High Tank Toilets • Cage Showers • Cross Handles • Porcelain • Hard-to-Find Parts • A Huge Selection of Accessories • Expert Advice


Plumbing Catalog **\$5.00**

**ROY ELECTRIC CO., INC. (718) 434-7002**  
SHOWROOM: 1054 Coney Island Ave., Brooklyn, NY 11230

Circle No. 43

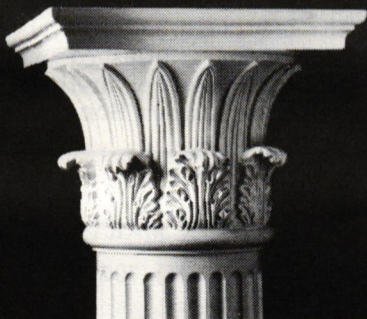
# WORTHINGTON

## THE PREMIER NAME IN COLUMNS



Catalog \$3.00

WORTHINGTON GROUP, LTD.  
P.O. Box 53101 • Atlanta, GA 30355  
404-872-1608



Circle No. 163

*Cartouches*

*Friezes*

*Centerpieces*

*Brackets*



*Niches*

*Cornice*

*Grilles*

*Mouldings*

*We offer over 1500 handcrafted plaster ornaments for the building industry. Custom reproduction is also available.*

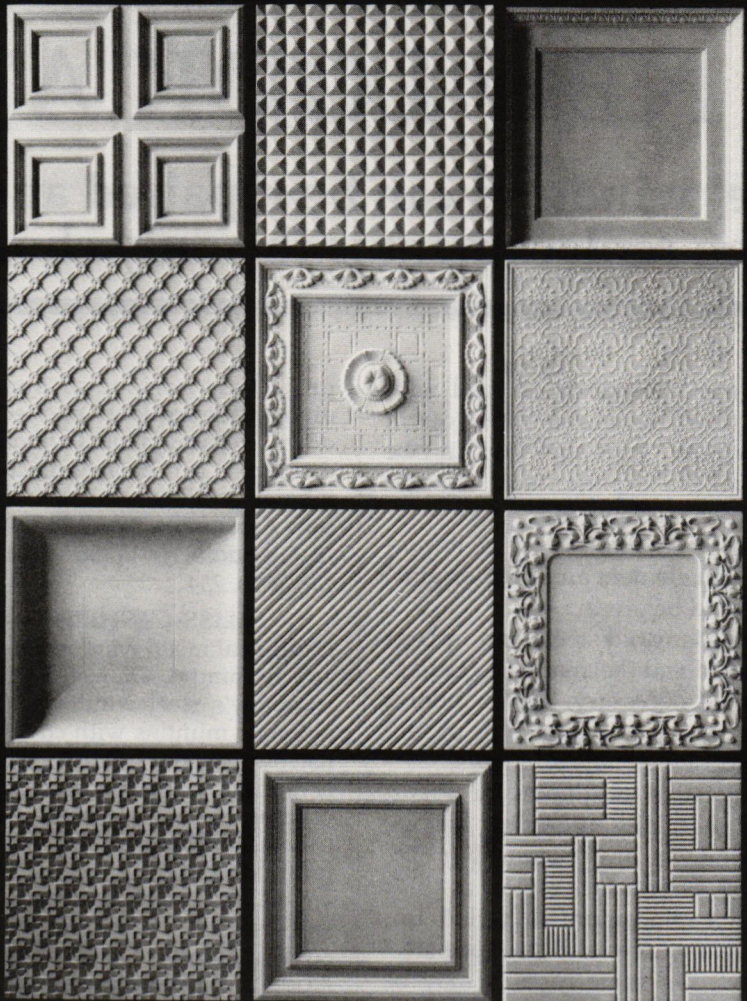
The Fischer & Jirouch Co.  
4821 Superior Ave., Dept. TB  
Cleveland, OH 44103



Bus. Tel. (216) 361-3840  
FAX Tel. (216) 361-0650

Circle No. 196

## SUSPENDED PLASTER CEILING TILES



PATENT 4,887,884 & 4,883,883 (BY CANADIAN PATENT HOLDING - A.V. 1989)

# ABOVE VIEW, INC.

241 EAST ERIE STREET • MILWAUKEE, WI 53202 • 414-271-4477

Circle No. 248

## HOW TO LIGHT AMERICA

### SPRING CITY DOES IT WITH GRACEFUL, ORNAMENTAL CAST IRON LIGHTING POSTS

Look around America and you will see Spring City Cast Iron Lighting Posts as part of the charm of landscapes in thousands of cities, towns and villages. There are reasons for the wide popularity of these posts: grace and beauty to enhance any location; the enduring quality of cast iron; historical accuracy and the superb American craftsmanship which has been a tradition at Spring City for over 60 years.

The light sources we offer include: incandescent; mercury vapor; metal halide and high pressure sodium.

Call or write today for our full color literature.

See Us in Sweets and LA File

**SPRING CITY ELECTRICAL MFG. CO.**  
P.O. Drawer A, Spring City, PA 19475-0030  
Phone: 215-948-4000  
FAX: 215-948-5577




**MADISON POST**  
Shown in New York City's Public Park System. Heights vary from 6'3" to 12'6" (excluding luminaire + adapter), 18 1/2" O.D. base. Available with twin arms for 2 luminaires and as a bollard.

**WASHINGTON POST**  
Shown at the Peabody Hotel in Memphis, Tenn. 12' to 16'10" heights (excluding luminaire) 21" and 24" O.D. bases. Available as 4 or 5 luminaire unit.

Circle No. 103



steel & aluminum windows

# A NEW LOOK AT STEEL WINDOWS

Steel windows can be repaired and thermally upgraded. But there are times when replacement is the only choice.

Many thousands of steel windows have been ripped out in the mistaken belief they couldn't be repaired. But experience of the past few years has shown that:

- ✓ Steel windows are an important design element and their original look should be preserved;
- ✓ Many old steel windows can be repaired and thermally upgraded;
- ✓ If necessary, steel windows can be replaced with matching or sensitively designed new windows.

Detailed techniques for repairing and thermally upgrading historic steel windows are contained in *The Window Handbook* (see review p. 15).

If replacement is called for, several companies still produce steel windows. In some cases it may be desirable to make the replacement units from aluminum. *The Window Handbook* gives a detailed review of a commercial rehab in Lowell, Mass., in which the original steel windows were replicated in aluminum by Custom Windows Co. of Denver (see below).

**A & S WINDOW ASSOCIATES** — Manufactures steel windows in four weights: Residential, Commercial, Standard Intermediate, and Heavy Intermediate. For preservation work, they can match the pre-war 14 in. x 20 in. or 12 in. x 18 in. pivoting ventilator windows. Windows are available with weather-stripping applied into integral grooves in the sections. Windows can be prepared for inside or outside glazing, putty or bead, single or insulated glass. Styles available include casement,

projected, horizontal and vertical pivoted, terrace doors, and security windows. Vertical pivoted windows, when oversized, can be manufactured with tubular ventilator sections. **A & S Window Associates, 88-19 76th Ave., Dept. TB, Glendale, NY 11385 (718) 275-7900. Circle No. 234**

**BLISS-CASHIER** — Makes traditional metal windows in both steel and aluminum. On restoration jobs, the company's steel windows incorporate old-style muntins with cove detail and narrow sight lines. Old lite sizes are easily fabricated. Their windows have been used on Tax Act projects. Available in two weights: commercial and architectural. Makes both projected and pivoted ventilators, as well as security windows, and casements. Offers custom work and curved heads. **Bliss-Cashier Metal Products, 617 West Manlius St., Dept. TB, East Syracuse, NY 13057 (315) 437-3396. Circle No. 235**

**CORAPI CO.** — Medium-size window contractor that will repair or replace steel and aluminum windows, although their specialty is wood windows. Mainly handles larger jobs. **Corpai Company, 2307 Oakdale Ave., Dept. TB, Glenside, PA 19038 (215) 887-0556. Circle No. 224**

**CUSTOM WINDOWS** — Company produces custom aluminum windows and has extensive experience in replicating, in aluminum, old wood and steel windows for preservation and Tax Act projects. (A detailed review of one of their steel window replacement projects is contained in *The Window Handbook*.) Their 8300 Historical Renovation series maintains the ap-

pearance of historical windows, while providing thermal barrier construction and true divided-lite fenestration. Steel windows can be made in casement, projected, and stationary styles. The firm also produces aluminum window systems for commercial, institutional, and industrial buildings — stock and custom. **Custom Window Co., 27700 S. Vallejo, Dept. TB, Englewood, CO 80110 (303) 761-2909. Circle No. 238**

**ENVIRON, INC.** — Custom design and fabrication of aluminum and vinyl replacement windows for the commercial, institutional, housing, and historical markets. Extensive experience in getting approvals for Tax Act projects. Can also replicate steel windows in aluminum. Has own installation crews to ensure high-quality workmanship when windows are installed. **Environ, Inc., P.O. Box 20808, Dept. TB, Greensboro, NC 27420 (919) 272-3592. Circle No. 241**

**HOPE'S ARCHITECTURAL PRODUCTS** — Company produces steel windows for new construction or restoration. All windows are custom-fabricated to specific project requirements. Hope's "Jamestown" Series and "Landmark" Series are available in fixed or operable styles. All ventilators come with weather-stripping applied to an integral dovetail groove. "Jamestown" Series windows accept up to 1-in. insulated glass ("Landmark" Series up to 5/8 in.), using snap-in glazing beads. Steel casement doors, 3/4-hr. fire-rated windows, and replacement hardware also offered. All products furnished with factory-applied finishes of urethane, Kynar, or polyester powder. **Hope's Ar-**

**chitectural Products, 84 Hopkins Ave., Dept. TB, Jamestown, NY 14701 (716) 665-5124. Circle No. 236**

**SEEKIRCHER WINDOW REPAIR** — A small window contractor specializing in the maintenance and repair of steel windows in the New York metropolitan area. **Seekircher Window Repair, 630 Saw Mill River Rd., Dept. TB, Ardsley, NY 10502 (914) 693-1920.**

**TORRANCE STEEL WINDOW** — Specializes in steel casement windows and doors in two grades: Standard Intermediate and Residential/Architectural — in both stock and custom sizes. Also produces 3/4-hr. fire-rated windows. The Standard Intermediate line is 1-1/4 in. thick, and includes fixed, projected, and casement designs. For insulating glass, 1/2 in. could be glazed with putty, and the balance provided with a steel bead. The Residential/Architectural line is 1 in. thick, and features residential steel casements. Units can also be used in light commercial construction. Also: Industrial security windows, commercial projected windows, and steel window hardware. **Torrance Steel Window Co., 1819 Abalone Ave., Dept. TB, Torrance, CA 90501 (213) 328-9181. Circle No. 237**

**WILLIAM BAYLEY CO.** — Produces steel windows for new construction and restoration. Projected, casement, and awning style windows available. Also will custom-manufacture steel windows to your specs. Offers Bayseal weatherstrip — self-locked in a dovetail integral retaining groove in the window section. **William Bayley Co., 1200 Warder St., Dept. TB, Springfield, OH 45503 (513) 325-7301. — CL**

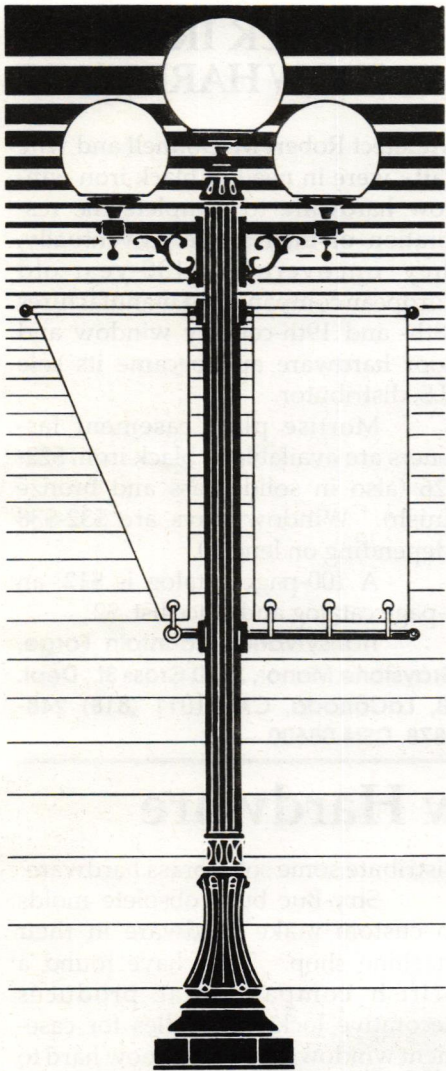
# BLAINE

1919 BLAINE DRIVE, HAGERSTOWN MARYLAND 21740  
(301) 797-6500 FAX (301) 797-2510

WINDOW HARDWARE INC.

Circle No. 221



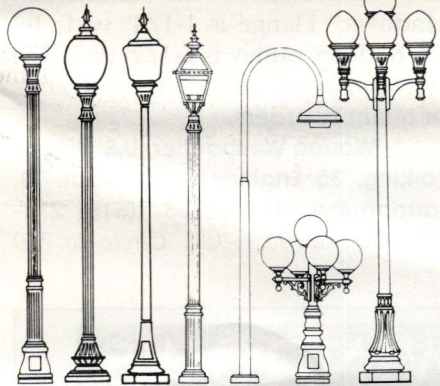


# STERNBERG

Lighting city streets, railroad stations and parks across the country, Sternberg has earned its reputation as a quality manufacturer of historic ornamental commercial scale lampposts, bollards and coordinated wall units.

When making your selection, consider these important features: Elegance and variety of authentic design, heavy duty cast aluminum, welded for single unit construction and durability. Maintenance free, weather resistant and vandal proof. Quality packaging and care in shipping.

Insist on the name that's been a standard of excellence for over sixty years. Call or write for our catalog today. Or see Sweet's File 16512-STE Sternberg Lanterns Inc., 5801 N. Tripp Ave., Chicago, IL 60646, 312-252-8200.



Circle No. 166

**THE ORIGINAL CAST.  
LIGHTING FIXTURES**

APOLLO FLUSH

APOLLO SCONCE

SATURN

APOLLO

BY Art Directions  
6120 Delmar Blvd.  
St. Louis, Mo. 63112  
314-863-1895  
Fax: 314-863-FAST (3278)

## Push Button Light Switches

In  
Single and Three Way  
**Solid Brass Cover Plates**  
Decorative and Plain

Also In

- Chrome
- Brown
- Ivory

Finishes

For Color Brochure  
Send \$1.00 to:  
**Classic Accents**  
Dept. TB P.O. Box 1181  
Southgate, MI 48195

Circle No. 75

**SOLID/FLUE®**  
made this  
historic chimney  
work...safely!

Solid/Flue® restoration systems make vintage chimneys NEW from the inside out with no compromise to the architectural beauty.

For your next project call  
1-800-444-FLUE for the  
professional dealer in your  
local area.

**SOLID/FLUE®**  
**CHIMNEY SYSTEMS, INC.**  
LINING AND RESTORATIONS  
370 100th St. SW, Byron Center, MI 49315

Circle No. 3

**Reggio Registers**

*Solid brass and cast iron* USA made  
Reggio Registers™  
enhance the beauty of your wood floors and fine carpets. Maximize heat circulation from woodstoves, solar collectors, gravity and forced hot air heating systems. Choose from elegant brass or traditional cast iron registers and grilles. Request our new color catalog for styles, sizes, and prices. Available for \$1.00 from:  
**The Reggio Register Co.**  
Dept. Z909, P.O. Box 511,  
Ayer, MA 01432  
(508) 772-3493

Circle No. 147

**A-BALL**  
PLUMBING SUPPLY

**America's Most Distinctive Plumbing.**

Complete lines of Modern, Victorian, and European plumbing in generations of styles. New things for claw-footed tubs. Shower conversions in polished chrome or solid brass. High tank toilets, pipes and parts. Ornate register grates. Whirlpool tubs and roman spouts. Pedestal basins. Brass basins. Porcelain fixtures

and do-it-yourself tub resurfacing kits. A-Ball offers a comprehensive plumbing catalog with over 400 quality accessories and hardware inspired by the past and the present. When you're looking for distinctive plumbing, especially unusual and hard-to-find items, call A-Ball. Catalog available.

**A-BALL PLUMBING SUPPLY**  
1703 W. Burnside St., Dept. TB, Portland, OR 97209  
Phone (503) 228-0026

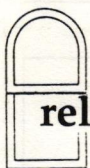
Circle No. 242

**STOP BIRDS**  
From  
Dehabilitating  
Your Cherished  
Home.

Nixalite stainless steel needle strips are an impenetrable barrier to birds, and practically invisible too. They give you an effective, humane way of ending bird nuisances and maintenance costs. Send for your free information packet today.

**NIXALITE of AMERICA**  
1025 - 16<sup>th</sup> AVE. • BOX 727  
EAST MOLINE, IL 61244 • 309-755-8771  
800-624-1189 • FAX 309-755-0077  
SPECIALISTS IN BIRD CONTROL

Circle No. 37



related window products

## Replacement Hardware Is Easy

Blaine Hardware, in Hagerstown, Md., specializes in finding obsolete hardware. It buys old companies or defunct product lines (recently Crestline, Cupples, and International Hardware), which accounts for its inventory of over 5,000 items. For items no longer in production — especially ornamental and decorative hardware — Blaine can machine pieces on premises. A recent restoration at Princeton University consisted of Blaine's making patterns for 675 pieces of win-

dow hardware.

The Hagerstown shop is primarily mail order; you send them a sample and written request (including quantity), they send you the part(s), if available, or a recommendation for a substitute. There are also two retail stores in Silver Springs, Md. and Stone Park, Ill. that offer window repair.

**Blaine Hardware, 1919 Blaine Drive, Dept. TB, Hagerstown, MD 21740 (301) 797-6500. CSI# 08600 — JL Circle No. 221**

## NEW ANTIQUE GLASS

If you've heard the term "Antique Glass," you may not know that what is being described is blown glass. At least that's the case with Blenko Glass, suggests owner Richard Blenko. Blenko's Antique Glass is blown sheet glass and is used in stained glass applications, for panes in transoms and sidelights, and for exotic windows.

A fourth generation Blenko and the great grandson of William John Blenko (the first American to produce sheet glass, who also patented a process for creating a ruby sheet glass

that holds the color true), Richard stresses the distinction between blown (antique) and another glass he manufactures, cast (dalles de verre or slab) glass. Slab glass is 1" thick and used in more contemporary designs. Also available are hand-spun rondels used for leaded glass. Antique Glass runs about \$5-\$6 per sq. ft., and dalles de verre is \$5-\$6 per 8" x 12" slab. Both are available as "crystal" (clear).

**Blenko Glass, PO Box 67, Dept. TB, Milton, WV 25541 (304) 743-9081. CSI# 08800 — JL Circle No. 219**

## Specialty Glass A Specialty

When it got too expensive for owner Ron Glazer to run his 100-year-old glass manufacturing and distribution business, he decided to become a factory agent. He now distributes bent, insulated, patterned, custom etched, and beveled glass.

Bent glass is usually specified by a pattern illustrating the curve. A sample price for approximately 10 sq. ft. with a 20" radius is \$200.

**RGS Industries, 130 E. 30th Street, Dept. TB, New York, NY 10016 (212) 679-8104. CSI# 08800 — JL**

## Sash Weights Count

Architectural Iron is best known for its decorative iron work. However, it is also one of the few sources for sash weights. This sideline began with a restoration in Brooklyn Heights, N.Y. Architectural Iron found it needed several thousand weights so it started manufacturing the parts in house.

There are stock 1-1/2 lb. weights for \$2.40 apiece and 2 lb. weights for \$3.20 apiece. Custom weights are accommodated.

**Architectural Iron Company, Box 126, Dept. TB, Milford, PA 18337 (717) 296-7722. CSI# 08700 — JL**

## "Wavy" Glass For The Antique Look

For restoration projects that demand authenticity, S.A. Bendheim imports mouthblown Restoration Glass, made using the original cylinder method. The pits and imperfections that define this method give windows an antique look.

The glass comes in two thicknesses: "Full" and "Light." "Full," the more distorting, is 1/8" thick and costs between \$4.99 and \$6.25 per sq. ft. (price depends on size of order.) "Light," 3/32" thick, costs between \$4.10 and \$5.15 per sq. ft.

Recent projects using Bendheim's Restoration Glass include: The Octagon (Washington, D.C.), Trinity Church (Newport, RI), and Strawberry Banke (Portsmouth, NH).

S.A. Bendheim Co., now run by the three sons of its founders (S.A. and Margaret Bendheim), is the oldest importer of stained glass in the United States. It also imports a large variety of specialty glass.

**S.A. Bendheim Co., Inc., 67 Willett St., Dept. TB, Passaic, NJ 07055 (800) 221-7379; in NJ (201) 471-1733. CSI# 08800 — JL Circle No. 71**

## Glass Blowing — A Team Effort

Susan Russell and Michael Kraatz, glass blowers (both were trained at the Rhode Island School of Design), run a glass blowing studio in Canaan, New Hampshire. Among other specialties are authentic bull's-eye glass panels made using the traditional method. The bull's-eye lites are used primarily for transoms, doors, and sidelights.

Although they prefer to quote prices for individual projects, some sample sizes and prices are as follows: 6" x 6" for \$27, 6" x 8" for \$31, 8" x 10" for \$50, 10" x 10" for \$63, and 10" x 12" for \$98.

**Kraatz Russell Glass, Grist Mill Hill, RFD 1, Box 320C, Dept. TB, Canaan, NH 03741 (603) 523-4289. CSI# 08810 — JL Circle No. 254**

## BLACK IRON WINDOW HARDWARE

Architect Robert McDonnell and wife Patty were in need of black iron window hardware to complete the restoration of their home. Eventually, they uncovered a 130-year-old European company that manufactures 18th- and 19th-century window and door hardware and became its sole U.S. distributor.

Mortise plate casement fasteners are available in black iron, \$22-\$26 (also in solid brass and bronze finish). Window stays are \$32-\$38 (depending on length).

A 100-page catalog is \$12; an 8-page catalog and price list, \$2.

**Transylvania Mountain Forge, Graystone Manor, 2270 Cross St., Dept. TB, LaCanada, CA 91011 (818) 248-7878. CSI# 08600 — JL**

## Exotic Window Hardware

Stry-Buc Industries has a catalog filled with hundreds of new and obsolete door and window hardware items that they distribute to manufacturers. Says Cindy Ervin, Sales Manager, "We inventory 10,000 items and have access to an additional 40,000."

Among the stock items are: window balances, mounting hardware, cam handles, weatherstripping, screen and storm window replacement hardware, roller assemblies, vent arms, and more. Most of the pieces are cast bronze (white and red), although they also

distribute some solid brass hardware.

Stry-Buc buys obsolete molds to custom make hardware in their machine shop. They have found a British company that produces decorative locking handles for casement windows, which are now hard to find. Inventory also includes a "tape balance" to be used instead of weights and pulleys; it is inexpensive, yet has been used on some historical renovations.

**Stry-Buc Industries, 546 Church Lane, Yeadon, PA 19050 (800) 352-0800 in PA (215) 626-3200. CSI# 08600 — JL**

## SASH PULLEYS RISE AGAIN

One annoyance when rehabilitating old windows is finding pulleys for the sash weights. The problem was so vexing for U.S. Woodworking that they are now manufacturing their own pulleys.

Housing, flange, and pulley wheel are made from Zytel glass-reinforced nylon resin. Pulley wheel rotates on a brass axle. The entire unit is rustproof, avoiding problems that

arise when steel pulleys corrode and start to bind. The pulley is sized for most institutional and commercial windows: Flange is 1-1/4" wide by 5-7/8" deep; pulley is 2-1/2" dia. The Zytel pulleys are \$7 apiece; discounts for quantity orders.

**Warren Weilbacher, U.S. Woodworking, 35 Engineers Rd., Dept. TB, Hauppauge, NY 11788 (516) 234-4910. CSI# 08700. — CL Circle No. 220**

## EPOXY REPAIR OF WOOD WINDOWS

When confronted with rotting sash and sills, epoxy repair is often the most economical solution. The epoxy process consists of a wood consolidant, which saturates and strengthens rotted wood, followed by an epoxy paste that fills in and reshapes damaged wood. (For a detailed case study on window repair with epoxy, see *The Window Handbook*, reviewed on page 15 of this issue.)

The epoxies listed below are two-part systems. Differences are in curing time, mixing ratio, and viscosity. Check specific products carefully; some epoxies can be sanded, drilled, planed, stapled, nailed, stained, and painted (for example, Abatron's WoodEpoxy), others can't. Epoxies weather well because their chemical properties allow the polymer to shrink and expand with the wood. But all epoxies are sensitive to weather conditions during application; there are some weather conditions that greatly hamper curing.

Note that most epoxies have a two-year shelf life, so make sure that the batch you buy is fresh. Following are leading suppliers of wood epoxy systems; free literature is available.

✓ **ABATRON, 33 Center Drive, Dept. TB, Gilberts, IL 60136 (312) 426-2200.** The largest supplier of epoxies to the restoration market. Their epoxy is convenient for site use because the ratio of resin to hardener is 1:1 (you can eyeball the measure.) Prices are: 1 gal. of wood consolidant (LiquidWood), \$52.50; 1 gal. paste (WoodEpoxy), \$48.00. Quantities in pints, quarts, gallons, and 5 gallon pails. *Circle No. 130*

✓ **CONSERVATION SERVICES, 8 Lakeside Trail, Dept. TB, Kinnelon, NJ 07405 (201) 838-6412.** Their epoxies are more flexible than wood so they don't shear. The consolidant has a low viscosity for deep penetration into the wood. 1/2 gal. of consolidant, \$55 and 7/8 gal. (4 liters), \$68. *Circle No. 175*

✓ **DELL CORPORATION, P.O. Box 1462, Dept. TB, Rockville, MD 20850 (301) 279-2612.** A general contracting firm that distributes the Beta Epoxy system. Their low-viscosity (flows like water) consolidant (E1200 - parts A and B) comes in a 1-liter unit and is \$21.65. The filler (FM-250C) comes as a powder and mixes with the consolidant to make 10 oz., \$2.80 a bag. They also sell Rottex (good for cosmetic work), which is two-part paste epoxy mixed in a 1:1 ratio; 2.2 lbs. is \$18.60. *Circle No. 218*

✓ **GOUGEON BROTHERS INC., 100 Patterson Ave., Dept. TB, Bay City, MI 48706 (517) 684-7286.** Manufacturer of West System epoxy; largest supplier of epoxies to marine construction and repair market. The focus of their recipe: strength and water resistance. One qt. of 105 Resin and .44 pt. of 205 Hardener are mixed in a 5:1 ratio, \$16.85 and \$7.45 respectively. 406 Colloidal Silica (dry filler added to the mixed resin and hardener to form an adhesive paste), \$4.50 for 1.9 oz. Low-density 410 Microlight (dry filler mixed with resin and hardener to form an easily sanded filler), \$5.90 for 2.3 oz. They also sell gloves, brushes, application tools, and pre-calibrated dispensers for easy site use, \$7.00/pr. *Circle No. 246 — JL*

**VINTAGE WOODWORKS**  
Fredericksburg, TX

Victorian & Country  
**GINGERBREAD**

Order our delightfully old-fashioned 50 page mail-order CATALOG... and claim the romance of another century.

**PORCH TURNINGS** create charm.

**GABLE DECORATIONS** Crown jewels for your roofline!

Our custom-length **SPANDRELS** work magic!

- SOLID WOOD • PROMPT SHIPMENT
- BUY DIRECT & SAVE
- SATISFACTION GUARANTEED

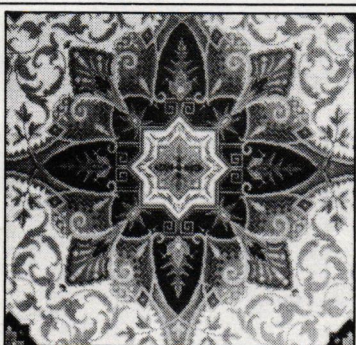
We love "bringing back yesterday in quality & service."

50 Page Illustrated Old-fashioned MAIL ORDER CATALOG \$2. BY RETURN MAIL

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Send to the folks at: **VINTAGE WOODWORKS**  
513 South Adams, #1629  
Fredericksburg, TX 78624

**J.R. BURROWS & CO.**  
HISTORICAL-DESIGN MERCHANTS  
Shop at 6 Church Street, Boston, MA  
617/451-1982



President Taft House Carpet c. 1870

Burrows & Co. offers the restoration community an extraordinary collection of Wilton and Brussels carpets in nineteenth century patterns. Period pattern papers in the mill's archives are the source for a diverse range of designs from 1800 - the 1910's. Custom woven to order on antique looms in 100 tuft per inch worsted Wilton quality.

P.O. Box 418, Cathedral Station,  
Boston, MA 02118 Catalog \$4.00

**AHRENS**

**Relines/Restores Masonry Chimneys**

With The **ONLY UL Listed, Two-Liner Cast-In-Place Masonry Process**

- First liner insulates and strengthens
- Second liner 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.

**AHRENS chimney technique**

UL Listed

2000 Industrial Ave.  
Sioux Falls, SD 57104

**1-800-843-4417**

Circle No. 244

**Your Award-Winning Source for Elegant Woodwork**



Everything you need in Victorian gingerbread, turnings and carvings, in premium grade solid hardwoods. Factory-direct savings.

Period Bars, Backbars, Servers, Ceilings, Seating, Gazebo Kits & accessories.

We'll build to your specifications, supply any or all component parts. Complete custom design services.

Interior/exterior restoration projects, Victorian to Ultra-Contemporary, our specialty.

Send for Catalog. Over 135 color pictures of products and design ideas. \$4.50. Free if ordered on Company letterhead.

**10th Anniversary** 1979-1989

**Best of Show. Blue Ribbon. Expo Show.**

**Expo Blue Ribbon Winner** Dept. 190

**Post Office Drawer 609 Carlisle, PA 17013**  
(717) 243-0063 (800) 367-1884 Outside PA FAX (717) 243-6502

Circle No. 131

**Bear Creek Lumber**

**WESTERN RED CEDAR**



and other **SPECIALTY LUMBER PRODUCTS**

**DELIVERED DIRECT ANYWHERE NATIONWIDE TO YOUR BUILDING SITE.**

For information send \$2.00 to

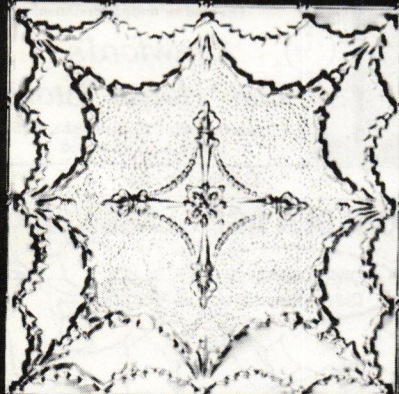
**BEAR CREEK LUMBER**  
Dept. TB P.O. Box 669  
Winthrop, WA. 98862  
Tele: (509) 997-3110

Circle No. 202

**HAVE A CEILING YOU CAN LOOK UP TO**

21 PATTERNS AVAILABLE  
VICTORIAN TO ART DECO

2'x4' Sheets For Easy Handling  
Shipped Anywhere



**TIN CEILINGS**

Send \$1.00 for Catalog to:  
**CHELSEA DECORATIVE METAL CO.**  
9603 Moonlight Dr., Dept. TBB  
Houston, Texas 77096  
Questions: 713-721-9200

Circle No. 19

**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
- brackets
- corbels
- rosettes
- balusters
- urns
- capitals
- festoons
- finials
- scrolls
- leaves
- friezes
- marquee
- enrichments
- glass pendant frames
- crests
- garlands
- panel ornaments
- lion heads
- conductor heads
- and fittings

Over 1300 catalog items available in zinc or copper. Custom reproduction inquiries invited. W.F. Norman also produces building cornices, lintels, capitals, window hoods, finials and weathervanes.

**Complete catalog \$2.50**

**W.F. Norman Corp.** P.O. Box 323 Nevada, MO 64772 800-641-4038 (in Missouri: 417-667-5552)

Circle No. 82

**EARLY AMERICAN ONION LANTERNS**

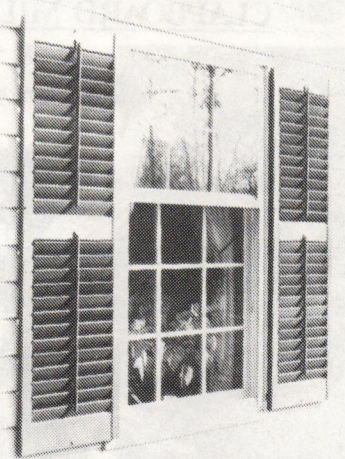
- For indoor or outdoor use
- Constructed from Solid Copper & Brass

SEND \$2.00 FOR COLOR CATALOG SHOWING NUMEROUS MODELS AND STYLES OF POST LANTERNS, WALL LANTERNS, SCONCES, CHANDELIERS, ETC.

**NEWSTAMP LIGHTING COMPANY**  
227 Bay Road, North Easton, MA 02356  
(508) 238-7071

Established 1939  
Circle No. 80

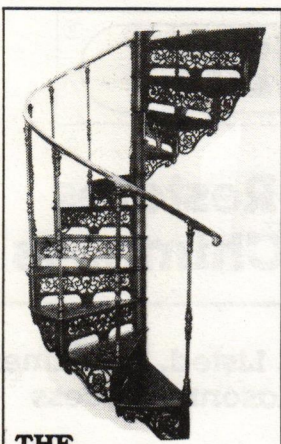
**EXTERIOR WOOD SHUTTERS**



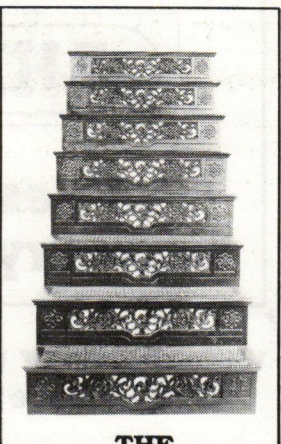
**Hard-To-Find Wood Shutters** with moveable louvers can be used outdoors or in. Fixed louver, raised panel, and custom arches also available. Order unfinished or primed and painted. Hinges and holdbacks shipped daily by UPS.

Brochure: (203) 453-1973  
**SHUTTERCRAFT** 282 Stepstone Hill  
Guilford, Conn. 06437

Circle No. 44



**THE BARCLAY**



**THE KENSINGTON**

**Steptoe Manufactures & Distributes Quality Restoration Products:**

- Cast iron spiral staircases
- Cast iron straight staircases
- W.F. Norman steel ceilings (Canada only)
- Anaglypta & Lincrusta embossed wallcoverings (Canada only)
- Shower convertos for old tubs (Canada only)
- Brass & steel railing systems
- Lawler cast iron railing & architectural detail
- Custom casting
- Solid teak garden furniture
- Plaster cornice & medallions
- Wood cornice moulding
- Exterior lighting

**STEPTOE & WIFE ANTIQUES LTD.**

322 Geary Avenue  
TORONTO, ONTARIO M6H 2C7  
(416) 530-4200 FAX (416) 530-4666

*One Hundred Years Behind the Times.*

Circle No. 47



*Antique Heart Pine Flooring  
Original growth Southern Longleaf Pine  
Quality assured.*

**GOODWIN LUMBER COMPANY**

Rt. 2, Box 119-AA, Micanopy, FL 32667  
(904) 373-9663

Circle No. 253

**MAD RIVER WOODWORKS**

ARCHITECTURAL MILLWORK

- MOLDINGS
- PICKETS
- SCREEN DOORS
- PORCH PARTS

CATALOG \$2.50

P.O. Box 163 Dept. TB, Arcata, CA 95521

Circle No. 35



**Classic Decorator Wood Mantels.**

Add elegance to a new or existing fireplace with a handcrafted wood mantel. 40 styles — from Louis XV to Williamsburg Colonial to Modern. Send for FREE brochure. Readybuilt Products, Dept. TB, 1700 McHenry St., Baltimore, MD 21223. (301) 233-5833

**READYBUILT**  
*Keeping families warm for more than half a century.*

Circle No. 217

## AUTHENTIC ANTIQUE PLANKS

for  
**Flooring and Paneling**

Add a touch of uniqueness and authenticity to your next project. The natural rusticity of our Authentic Antique Planks, used as flooring or paneling, will enhance any home, office or commercial space. Why install boring flooring? Why abuse new wood to make it look old? Use the real thing! Write or call for a free brochure.

147 W. PHILADELPHIA ST.  
YORK, PA 17403  
(800) 233-9307  
IN PA (717) 843-8104

# Aged Woods®

Circle No. 243



- Your design or ours
- Your fabric or ours
- Your research or ours
- Your budget or ours

For assistance send project details

**TRADITIONAL WINDOWS ARE WELL DRESSED**


Specializing in documented draping

### Vintage Valances

Box 43326 B  
Cincinnati, Ohio 45243  
(513) 561-8665

Draper for Lincoln Home restoration

Circle No. 51



FINE EUROPEAN FAUCETS AND ACCESSORIES

**WATERCOLORS**

GARRISON ON HUDSON NEW YORK 10524 914 424 3327

Circle No. 53

Buy the original from us - not an imitation


## TIN CEILINGS

- 22 Patterns available: 2 ft. x 8 ft. and 2 ft. x 4 ft. size
- Brass and copper-plated patterns available in 2 ft. x 4 ft. size
- Lay-in panels in 2' x 4' and 2' x 2'
- 10 cornice moulding styles
- Fast and easy installation
- Shipped anywhere
- Send \$1 for brochure

**A A ABBINGDON AFFILIATES, INC.**  
Dept. TB, 2140 Utica Ave.  
Brooklyn, NY 11234  
(718) 258-8333

Circle No. 1

MAKERS OF COLONIAL AND EARLY AMERICAN LIGHTING FIXTURES



**AUTHENTIC DESIGNS**

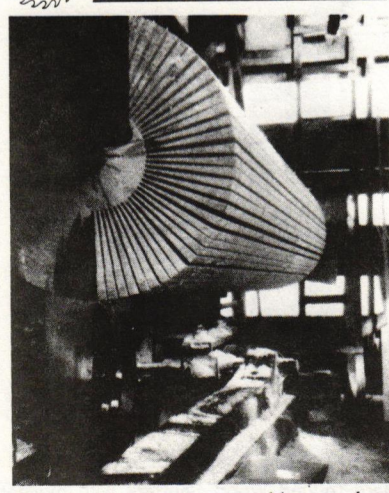
47 The Mill Road, West Rupert, Vermont 05776  
(802) 394-7713

Catalogue \$3.00

Circle No. 6

Maine's Only Producer of Traditional "Quartersawn" Pine Clapboards

**DONNELL'S CLAPBOARD MILL**




With special 19th century machinery we have revived an almost forgotten sawing process. We produce the authentic air-dried radially sawn clapboards for the exacting customer or the discriminating builder. For informative brochure please send \$1.

**Donnell & Donnell**  
Country Road, R.R. Box 1560  
Sedgwick, Maine 04676  
(207)-359-2036

Circle No. 26

## BATHROOM Machineries



**Early American Bathroom FIXTURES & ACCESSORIES**

Classic Brass & Hard-To-Find Parts  
Send \$3 For Complete Color Catalog

BOX 1020-K • MURPHYS, CA 95247  
(209) 728-2031

Circle No. 172



**POSTS AND SOLID COPPER LANTERNS**

The finest quality hand crafted, custom and Victorian replica fixtures. Compare our exquisite lanterns and decorative castings to any other. They are built to last a lifetime in all weather conditions.

**WARD industries**

14128 Bonnie Court  
Middlebury, IN 46540  
Ph: (219) 825-2548  
Fax: (219) 825-5645

Circle No. 108

**Protect Wall Corners The Great Old-fashioned Way**

Our unfinished **Cornereads** compliment any period or decor. They're among hundreds of hard-to-find, "old style" items we have to enhance your old house or capture a bit of the past in your newer home. Each cornerbead is 4 7/8" x 1 1/2" dia., with 90° notch.

**Beechwood.** Ea. \$9.75; 6 or more \$8.75.  
**Oak.** Each \$13.50; 6 or more \$12.00. Add freight: \$2.50 (1-5); \$6.50 (6 or more). WI residents add 5% tax. VISA/MC, or AMEX accepted.

To Order Call TOLL-FREE  
**1-800-556-7878**  
In Wis.: 414/542-0685  
Or, send for more information.

**Crawford's Old House Store**

550 Elizabeth St. • Rm. 25 • Waukesha, WI 53186  
Dealer Inquiries Invited

Circle No. 22

**GOLDEN AGE GLASSWORKS**

SHOWROOM NOW OPEN!!  
Call For Appointment

- CUSTOM WINDOWS
- Museum Reproductions
- Restorations
- Victoriana
- Residences/Institutions
- (Original Old American, Imported Canadian, and English Glass Sold.)
- Many Victorian Pieces

**B. Arrindell**  
339 Bellvale Rd., Warwick, NY 10990  
(914) 986-1487

Circle No. 28



## FREE PRODUCT LITERATURE

These suppliers will send free literature about historical products to TRADITIONAL BUILDING's professional readers. Circle the appropriate number on the enclosed postpaid card — or use the form at right.

### ◆ Division 4 — MASONRY

- 144. **Foundation Restoration** When foundations need a helping hand, Perma Jack piers can be driven to bedrock or load-bearing strata. Economical to install from inside or outside. Consulting services available. 5-Year warranty. Free literature. **Perma Jack**
- 244. **Chimney Flue Liner** — Poured-in-place, two-liner system; no-mess one-day process. First liner strengthens and insulates; second liner seals & protects. UL listed. Nationwide dealer network; free brochure. **Ahren's Chimney Technique**
- 176. **Cast Iron Firebacks** — Firebacks are hand-cast from original designs dating back to Colonial period. Pieces are not only decorative, but also prevent deterioration of firebox masonry. Prices range from \$75 to \$400. Free brochure. **Country Iron Foundry**
- 3. **Flue Liner** — One-piece "solid-flue" poured-in-place masonry lining eliminates fire hazard of old unlined chimneys and adds strength. Installs without breaking through walls. Tested safe at zero-clearance to combustibles. Free brochure. **Solid Flue**

### ◆ Division 5 — METALS

- 27. **Historic Markers** — Custom-made plaques for indoor or outdoor use. Standard solid-bronze cast plaques, 7 in. x 10 in., are \$90 plus shipping. Other dimensions and styles available. Free brochure. **Erie Landmark**
- 121. **Custom Casting** — Foundry custom-casts architectural ornament in iron, aluminum, and bronze. Works from your specs, or can draw on extensive archive of historic ornament to make design suggestions. Free brochure. **Historical Arts & Casting**
- 46. **Historic Markers** — Historic markers in sand-cast bronze or aluminum. Also: Anodized aluminum markers with image permanently embedded in bronze or pewter finish. No charge for photos. Custom work. Free catalog. **Smith-Cornell**
- 47. **Cast-Iron Staircases** — The Kensington revives tradition of using cast iron for straight porch steps. Modular components; bolt-together assembly. Also circular stairs. Complete catalog. **Stepcoe & Wife**
- 82. **Sheet Metal Ornament** — Complete 94-year-old line of architectural sheet metal ornament includes cornices, brackets, finials, urns, cresting, conductor heads, friezes, capitals, panel ornaments, and much more. Free catalog. **W.F. Norman Corp.**

### ◆ Division 6 — WOOD & PLASTICS

- 130. **Wood Restoration** — 2-part epoxy system restores rotted wood; saves historically significant and hard-to-duplicate pieces. Repairs can be sawn, drilled, sanded, and painted. Free brochure. **Abatron**
- 243. **Antique Building Materials** — Everything from the finest Peach-bottom blue roofing slate to antique wooden floors of American chestnut, white pine, yellow pine, mixed oaks, hemlock, and rare woods. Also hand-hewn beams. Free brochure. **Aged Woods**
- Victorian Gingerbread** — Large inventory of Victorian millwork for interior and exterior: gable ornaments, porch brackets, fans, turned work, wooden grilles, gingerbread, moldings. For prices, call: 817-582-7225. **Anthony Wood Products**

- 142. **Colonial Millwork** — Specialist in 18th- and 19th-century millwork: open & closed pediment doorways, Palladian windows, mortise & tenon sashes, fanlights, paneled fireplace walls, featheredge wainscot, much more. Free flyer. **Architectural Components**
- 167. **Custom Woodworking** — Custom carving and woodwork, fabrication, and repairs: Shutters, mantels, doors, sash, moldings, staircase parts, mirrors, cornices, woodturning & spindles, columns, handrails. Free brochure. **Bare Wood**
- 202. **Western Red Cedar** — Red cedar and other lumber products delivered nationwide to your construction site. Free brochure. **Bear Creek Lumber**
- 203. **Redwood Gutters** — Millwork shop specializes in custom production of hard-to-find redwood gutters; all shapes and sizes. If you can design it, they can make it. Free brochure. **Blue Ox Millworks**
- 145. **Wide Boards** — Wide pine or oak floor boards, ship-lapped boards, feather-edged clapboards. Design consultation on flooring and paneling. Serves Maine to Maryland. Free brochure. **Carlisle Restoration Lumber**

- 18. **Classic Columns** — For porches and pure decoration: Doric, Ionic, and Corinthian columns sculpted from Ponderosa pine with exquisite craftsmanship. Many sizes and shapes; custom work available. Complete catalog. **Chadsworth, Inc.**
- Colonial Woodwork** — Colonial insulated windows, mantels, cased openings, corner cupboards, wainscot paneling, wood moldings, and full paneled walls are just a few of products offered. For pricing, call: (919) 833-1681. **Colonial Woodworks**

- 115. **Antique Lumber** — Over 50,000 sq. ft. of antique barnwood in stock: gray, silver-gray, brown, red. Pine and hemlock in random lengths and widths. Also hand-hewn beams, plank flooring, and stones for walls and flags. Wholesale only. Free brochure. **Conklin's Antique Barnwood**
- 131. **Victorian Millwork** — 19th-century designs in solid oak and poplar: fretwork, brackets, corbels, grilles, turnings, and gingerbread — precision-manufactured so product groups fit together. Free color catalog. **Cumberland Woodcraft**
- 218. **Structural Epoxy Repairs** — The Beta System can restore structural wood members that become rotted or broken. Cosmetic applications also. Products, training, and consultation services available. Free brochure. **Dell Corp.**

- 26. **Radially Sawn Clapboard** — Durability, warp resistance, and paintability are hallmarks of quarter-sawn clapboard. Now a rarity, this material is being produced again on 19th-century equipment. Free brochure. **Donnell's Clapboard Mill**
- 196. **Plaster Ornament** — Hundreds of ornaments in fiber-reinforced plaster from turn-of-the-century molds. Also: custom duplication of existing ornament from your sample. 144-pg. catalog free. **Fischer & Jirouch Co.**
- 246. **Epoxy Wood Repair** — Versatile two-part epoxy bonds and coats wood. Ideal for rot repair where moisture resistance and strength are priorities. Originally developed for boat repairs. Free brochure. **Gougeon Brothers**

- 158. **Architectural Columns** — Columns are made of clear heart redwood for maximum durability. Patented Koll interlocking stave joint gives added strength. Available in diameters up to 48". Free brochure. **Hartmann**

### Sanders Co.

- 35. **Victorian Woodwork** — 19th-century millwork in redwood and select hardwoods. Ornamental shingles, turnings, ornamental trim, moldings, screen doors, brackets, balusters, railings, and more. Catalog. **Mad River Woodworks**
- 36. **Architectural Wood Trim** — Handcrafted custom-made interior and exterior 18th-century architectural trim: finely detailed colonial doors and windows, shutters, wainscot, carved details, pediments, etc. Custom work a specialty. Free brochure. **Mauer & Shepherd Joyners**

- 217. **Wood Mantels** — Elegant carved wood mantels ready to install. Available in 26 styles, from Louis XV to Williamsburg Colonial. Openings are 50 in. x 37-1/2 in.; special sizes on request. Catalog & measuring instructions. **Readybuilt Products**
- 161. **Traditional Wood Columns** — Wood columns from 4" to 35" dia. up to 48 ft. long. Matching pilasters and 6 styles of capitals. Ventilated aluminum plinth and column bases; load-bearing capacity of 22,000 lb. Custom work done. Free catalog. **Schwerd Mfg.**

- 45. **Victorian Millwork** — One of the largest inventories of precision-milled Victorian moldings and millwork, available in both premium and commercial grades. No minimum order; rush orders handled. Full-color catalog. **Silverton Victorian Millworks**

- Victorian Gingerbread** — Authentic Victorian millwork for interior and exterior: custom-length spandrels, porch posts, corner fans, balusters, brackets, corbels, headers, gazebos, and more. For prices, call: (512) 997-9513. **Vintage Wood Works**

- 213. **Wide Plank Flooring** — Flooring, custom siding, paneling, molding, and custom woodworking services in antique longleaf heart pine, wormy chestnut, oak, and select new hardwoods. Free brochure. **Woods American Co.**

- 163. **Wood Columns** — Ponderosa pine columns in many styles; columns for exterior use are preservative-treated. Standard sizes up to 12-in. dia.; custom work to 30-in. dia. Free catalog. **Worthington Group**

### ◆ Division 7 — MOISTURE PROTECTION

- 33. **Snow Guards** — Beautiful and practical: Cast-bronze eagle snow guards prevent avalanches of snow and ice from sliding off slate roofs. Solid copper straps. Free brochure. **M.J. Mullane Co.**

### ◆ Division 8 — DOORS & WINDOWS

- 234. **Steel Windows** — Manufactures steel windows in 4 weights; for preservation work they can match pre-war 14" x 20" or 12" x 18" pivoting ventilator windows. Also: Casements and and projected designs. Free brochure. **A & S Window Associates**
- Save On Baldwin Hardware** — Baldwin mortise lock with No. 5050 design beaded knobs and beaded cylinder collar in polished brass: \$177.50 postpaid. Similar savings on other hardware. Call 800-821-2750. **Addinson Hardware**

- 69. **Invisible Storm Windows** — Match any window shape or color; removable storm windows available inside- or outside-mounted, screen and glass panels. Fixed, magnetic, sliding, or lift-out styles. Free brochure. **Allied Windows**

- 249. **Stock & Custom Windows** — Stock line includes casements, awnings, and double-hungs. Also: A custom line called "Flexiframe" can accommodate up to 60 sq. ft. of glass in any shape. Free brochure. **Andersen Windows**

- 250. **Window Consultants** — Specialist in window replacement for historic buildings and Tax Act projects has been serving the field for over a decade. Free flyer. **Architectural Window Consultants**

- 71. **Restoration Glass** — Handmade glass, mouthblown in the same manner since the Middle Ages, provides the slight distortions and imperfections that make it ideal for restorations or the antique look. Available in 2 thicknesses. Free brochure. **Bendheim Glass**

- 221. **Old Window Hardware** — Specialist in obsolete window hardware. Carries a large inventory of old parts, and can manufacture other parts as needed. Free brochure. **Blaine Window Hardware**

- 219. **Hand-Blown Glass** — A wide variety of hand-blown glasses — both clear and colored — are available for window restorations where an authentic antique look is required. Free brochure. **Blenko Glass**

- 235. **Steel Windows** — Makes traditional steel windows — as well as the same designs in aluminum. Can supply accurate copies of historic steel windows. Units have been used on Tax Act projects. Free brochure. **Bliss Cashier Metal Products**

- 223. **Custom Wood Windows** — Wood windows in any size, any shape, and any wood can be manufactured to your specifications. These wood windows have been used in the finest restorations. Free catalog. **Camden Window & Millwork**

- 224. **Historical Window Restorers** — A team of window restorers works exclusively on old buildings — either repairing the original windows or custom-building exact duplicates. Free brochure. **Corpai Co.**

- 238. **Historical Replications In Aluminum** — The 8300 Historical Renovation Series duplicates, in aluminum, old wood and steel windows. Extensive experience on preservation and Tax Act projects. True divided-lite fenestration. Free brochure. **Custom Window Co.**

- 247. **Replacement Sash** — Any size or layout: circle, oval, round-top, gothic. Sash or complete window unit. Custom moldings, doors, raised-panel shutters, millwork to specs. Complete catalog. **Drum's Sash & Door**

- 252. **Custom Wood Windows** — Custom millwork shop, experienced in restoration, can duplicate historic wood windows as well as related architectural millwork. Free flyer. **Englander Millwork**

- 241. **Aluminum Replacement Windows** — Replacement aluminum windows for historic buildings can be custom-produced to match original wood details. Design capabilities for NPS approvals. Installation provided. Free brochure. **Environ, Inc.**

- 225. **Custom Wood Windows** — Small shop specializes in wood windows — mainly for new construction. All joints dove-tailed to permit odd angles. Various glazing types offered. Free flyer. **Gibbons Sash & Door**

- 240. **Wood Window Specialists** — Provides design, consultation, window supply, and installation for both new construction and landmark restoration in the Northeast. Free brochure. **Harbrook Associates**

- 236. **Steel Windows & Hardware** — Scroll handles, casement operators, and numerous other solid

## FREE PRODUCT INFORMATION

Use this form to get catalogs of historical products in this issue. (Literature is free to qualified professionals.) We'll forward your request to the respective manufacturers.

Allow 4-6 weeks for literature to arrive.

THIS FORM EXPIRES DECEMBER 15, 1989.

Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone ( ) \_\_\_\_\_

Your Business:  Architect  Contractor  Interior Designer  
 Engineer/Consultant  Government  Other (specify): \_\_\_\_\_

Is your need:  Immediate Project?  For Your Files?

For free product information, just circle the appropriate numbers:

- 001 003 005 006 007 008 010 012 013 014 016 017 018 019 022 023 024 025 026 027  
 028 033 035 036 037 040 041 042 043 044 045 046 047 048 050 051 052 053 062 069  
 071 073 075 080 082 086 102 103 105 108 113 114 115 116 118 120 121 122 123 125  
 130 131 132 134 135 136 137 138 142 144 145 146 147 158 161 163 164 165 166 167  
 168 169 170 172 174 175 176 178 180 181 184 189 196 197 198 199 202 203 204 205  
 206 207 208 209 210 211 212 214 215 216 217 218 219 220 221 222 223 224 225 226  
 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246  
 247 248 249 250 251 252 253 254 255 256 257 258 259 250 251 252 253 254 255 256

Please enter a 1-year subscription and bill me \$18.

Mail to: TRADITIONAL BUILDING, Product Literature Department  
 69A Seventh Avenue, Brooklyn, NY 11217 (718) 636-0788. 109C

bronze items in the original heavy-duty designs. Also: steel replacement windows in original styles. Free brochure. **Hope's Landmark Products**

- 136. **Save On Solid Brass Lock Sets** — Baldwin lock sets, the standard in high-end hardware, is available at wholesale prices. Install the best and save money, too. Free brochure. **J. E. Smith**

- 233. **Aluminum Storm Windows** — Versatile storm window line is designed for installation on exterior or interior window openings on commercial buildings — single story or high-rise. Free brochure. **Kasson & Keller**

- 254. **Bull's Eye Glass** — Glass is blown and cut to order for transoms, sidelights, and doors. Leaded glass panels & diamond pane casement sash. Send for free brochure. **Kraatz/Russell Glass**

- 226. **Replacement Wood Windows** — Custom wood windows can be tailored to match historic originals. Large, efficient production facility permits economical pricing. Curved & stock windows, too. Free brochure. **Marvin Windows**

- 146. **Replacement Wood Sash** — Wood sash in any size and shape: Divided lite, round top, curved, double-hung, fixed, casement, or storm sash. Insulated glass can be supplied. Also: shutters, screen doors, and trim. Illustrated brochure. **Midwest Wood Products**

- Stock & Custom Wood Windows** — Millwork shop handles every type of door & window job — from a few windows for a residential job to hundreds of windows for a commercial rehab. For a quote, call: (718) 768-7112. **Millwork Specialties**

- 132. **Interior Storm Windows** — Interior storm windows add energy efficiency while preserving historic exteriors intact. Units fit neatly inside existing casing. Will accommodate windows as much as 1-1/2" out of square. Free brochure. **National Energy Corp.**

- 227. **Fancy-Top Windows** — Custom round- and arch-top fixed windows with true divided lites in wood or clad aluminum. Can supply unique muntins and other unusual requirements. Free brochure. **New Morning Windows**

- 232. **Interior Storm Windows** — Simple interior storm window consists of a sheet of glass or acrylic set into a vinyl gasket within a U-frame aluminum channel. Spring-loaded mounting clips allow easy cleaning and removal. Free brochure. **Panelair**

- 228. **Replacement Wood Windows** — Mid-size wood window replacement specialists. Muntin profiles copied from historic buildings. Replacement sash also available. Choice of glazings. Free brochure. **Point-Five Windows**

- 229. **Stock & Custom Wood Windows** — Specialists in stock and custom windows for new traditionally styled buildings. More than 4,000 standard designs are shown in 600-pg. Architectural Manual. Free brochure. **Pozzi Windows**

- 41. **Hardware & Fixtures Catalog** — Wide selection of brass and porcelain fittings for Victorian and turn-of-the-century houses. High-quality hardware and plumbing, ceiling medallions, and trim. Many exclusive items. Catalog. **Restoration Works**

- 230. **Custom Wood Windows** — Provides highest quality woodwork — from narrow muntin divided lite windows of insulating glass to restored paneling, casework, and furniture. Handles major jobs. Free brochure. **Ricketson Woodwork**

- 44. **Exterior Shutters** — White pine plantation shutters with moveable louvers. Also fixed louvers and 3 styles of raised panel shutters. Unfinished or painted in your color choice using your paint spec. Hundreds of sizes. Brochure & price list. **Shuttercraft**

- 208. **Stile & Rail Doors** — Stile & rail stave-cored doors are built to your specifications. Red oak, cherry, ash, mahogany, pine, and other woods. Mortise & tenon joinery; solid lumber raised panels. Free brochure. **Staples Millwork**

- 231. **Interior Insulating Windows** — Attractive custom-fitted acrylic interior panels preserve historic exterior while stopping cold and drafts. Easy to remove & clean. Phone estimates: 804-231-2964. Free flyer. **Thermo-Press Corp.**

- 239. **NATO-Quality Windows** — Top-of-the-line mahogany windows made in Germany are designed to withstand North Sea storms. Special glazings available — including bulletproof glass that resists NATO rifle bullets. Free brochure. **Tischler und Sohn**

- 237. **Steel Windows** — Steel casement windows and doors in two grades; both stock and custom sizes. Also: 3/4-hr. fire-rated windows, industrial security win-

dows, commercial projected windows, and hardware. Free brochure. **Torrance Steel Window**

- 220. **Sash Pulleys** — Replacement sash pulleys will fit most large windows for commercial and institutional buildings. Heavy-duty Zytel polymer housing with brass axle. \$7.50 each. Free flyer. **U.S. Woodworking**

- 120. **Landmark Wood Windows** — Original details in wood doors and windows faithfully reproduced for landmark projects. Custom work includes complete engineering drawings for Landmark Commission approval. Free brochure. **U.S. Woodworking**

- 222. **Colonial Wood Windows** — Replacement wood windows featuring low-E glass and true colonial-style divided lites. Custom and stock sizes. Self-storing storm windows of Ponderosa pine. Free brochure. **Wes-Pine**

- Specialty Wood Windows** — Palladians, straight, and fan transoms. Can be single-, double-, or triple-glazed. Also: solid wood entry doors with insulating core. For prices, call: (802) 722-3544. **Woodstone Co.**

### ◆ Division 9 — FINISHES

- 1. **Tin Ceilings** — 21 Patterns of stamped metal ceiling produced from original dies. 10 styles of cornice moldings also available. Installation is simple. Shipped anywhere. Free brochure. **AA Abbingdon**

- 248. **Plaster Ceiling Panels** — Plaster ceiling panels provide the elegant look of a coffered ceiling at a fraction of the cost. The 2-ft. sq. panels weigh about 8 lb. and are fire-rated. Free brochure. **Above View, Inc.**

- 245. **Plaster Ornament** — Custom-made & in-stock plaster ornament: Medallions, moldings, brackets, capitals, sculpture. Specializes in neo-classic & turn-of-the-century ornament. Free catalog. **Architectural Sculpture**

- 13. **Victorian Roomset Wallpapers** — A complete collection of Victorian wallpapers that you can combine in infinite variations. Color catalog shows 7 roomsets including: Neo-Grec; Anglo-Japanese; Morris; Aesthetic Movement. **Bradbury & Bradbury**

- 19. **Tin Ceilings** — 18 patterns of tin ceilings ideal for Victorian homes and commercial interiors. Designs from Victorian to Art Deco. Several exclusive patterns. Comes in 2-ft. x 8-ft. sheets; cornices in 4-ft. lengths. Free brochure. **Chelsea Decorative Metal**

- 22. **Vintage House Fittings & Hardware** — Authentic Victorian and Colonial reproduction hardware, plumbing, lighting, mantels, ceiling rosettes, corner beads, books and more. For restorations, or to add old touch to new home. Free brochure. **Crawford's Old House Store**

- 25. **Historic Hand-Decorated Tiles** — For fireplaces, kitchens, or bath: coordinated borders and patterns in any size. Victorian, Neo-Classical, Foliage, De Morgan, Art Nouveau, Arts & Crafts, Art Deco, and more. Period pavements. Illustrated brochure. **Designs In Tile**

- 253. **Heart Pine Flooring** — Virgin growth heartwood from southern longleaf pine has been recycled from old beams and milled into flooring & woodwork of unsurpassed quality. Free brochure. **Goodwin Lumber Co.**

- 52. **Ornamental Ceilings** — Richly ornamented metal ceilings, from original turn-of-the-century dies, include center plates, borders, corner plates, cornices, and filler plates. 72-pg. catalog. **W. F. Norman**

### ◆ Division 10 — SPECIALTIES

- 37. **Pigeon Control** — Get rid of pigeons and other birds with inconspicuous stainless steel needles that eliminate roosting places without harming your building. Humane and practical. Free brochure. **Nixalite**

### ◆ Division 12 — FURNISHINGS

- 28. **Stained & Leaded Glass** — Designer and manufacturer of leaded and stained glass windows, lampshades, architectural pieces, etc. Works from your designs, or will furnish one. Museum-quality restorations and reproductions. Free brochure. **Golden Age Glassworks**

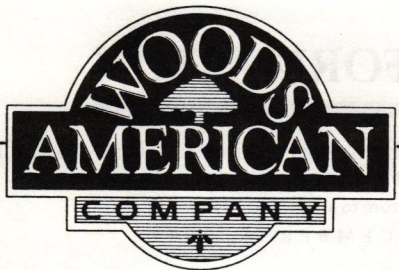
- Authentic 19th Century Carpet** — Real Victorian carpet is woven on 19th-century machinery, using original designs. Hundreds of authentic patterns available. For details and pricing, call: (617) 451-1982. **J.R. Burrows & Co.**

- 51. **Authentic Window Treatments** — Get custom-made, historically accurate Greek Revival, Victorian, & early-20th-century soft drapery valances. Custom-by-mail service. Free brochure. **Vintage Valances**

### ◆ Division 15 — PLUMBING & MECHANICAL

- 242. **Faucets & Fixtures** — Complete lines of

continued on page 31



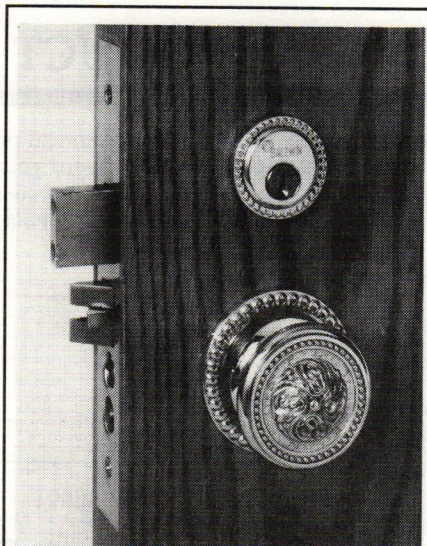
Wide Plank Flooring  
Custom Siding  
Paneling & Moldings  
Woodworking Services

Specializing in  
Antique Longleaf Heart Pine,  
Wormy Chestnut, Oak and  
Select New Hardwoods

Free Brochure  
301-432-8419

123 SOUTH MAIN STREET  
BROWNSVILLE, MARYLAND  
21715

Circle No. 213



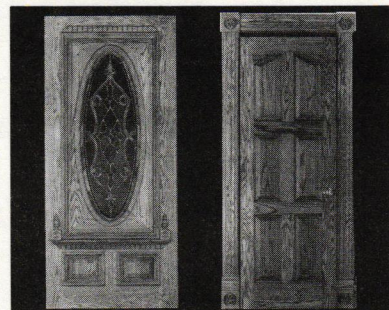
BALDWIN mortise lock with No. 5050 design beaded knobs with beaded cylinder collar and beaded thumbturn inside, in polished brass, \$177<sup>50</sup> prepaid (in USA). Miss. residents add 6% tax. Visa and MasterCard accepted. Call toll-free 800-821-2750. In Miss. call 800-321-8107. Ask for the hardware department.



126 E. Amite St., P.O. Box 102  
Jackson, MS 39205

Circle No. 45

Top Quality Precision Millwork  
CASINGS • BASES • CROWNS • CORNER BLOCKS  
**VICTORIAN ELEGANCE**  
DOORS • GINGERBREAD • WAINSCOT  
LARGEST INVENTORY OF VICTORIAN  
MOULDINGS & MILLWORK ANYWHERE

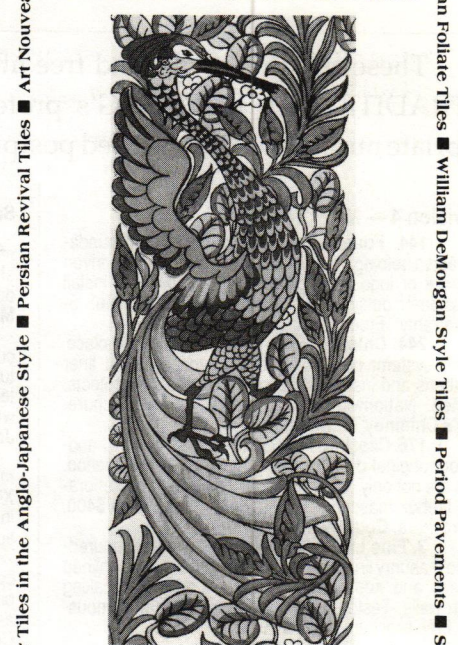


Specializing in Customer Service  
Buy Direct From Manufacturer  
Top Quality, Precision-made Products  
Premium & Commercial Grades Available  
No Minimum Order - Rush Orders are No Problem  
We're Experts in Shipping & Packaging  
Full Color Catalog with lots of Construction Ideas

SILVERTON Victorian Millworks  
Send for your free catalog.  
Phone or write to:  
P.O. Box 2987-TB6  
Durango, Colorado 81302  
303/259-5915

Circle No. 45

California Arts & Crafts Tiles ■ Art Deco Tiles  
Custom Ceramic Tiles & Murals  
Historic Reproductions ■ Traditional Patterns  
Coordinated borders ■ Quadrats ■ Corner blocks



Designs In Tile™

415/571-7122  
Dept T ■ Box 4983 ■ Foster City ■ CA ■ 94404  
© 1987 Designs In Tile Illustrated Brochure 53  
Country Tiles ■ Custom Murals ■ Folk Tiles  
Circle No. 25

**ELCANCO, LTD**  
Handcrafted electric wax candles, flame-like bulbs, services, skills and crafts for the restoration of antique lighting for the outfitting of fine design lighting.

- STARLITE Candles
- MORELITE Candles
- CANDEWICK Bulbs

also Beeswax Candlecovers  
Custom hand-crafted for your candle holder; exact height, diameter.  
Ivory or True Beeswax.  
Call (508) 392-0830 for literature or send \$1.00 to:  
ELCANCO, Ltd  
PO Box 682  
Westford, MA 01886  
Circle No. 251

**Blue Ox Millworks**  
Mouldings  
Gutters  
Siding  
Free brochure  
"You draw it—We'll make it"  
Blue Ox Millworks  
Foot of X Street, Eureka, CA 95501  
(707) 444-3437  
Circle No. 203

**REMODELES & RENOVATORS SUPPLIES**  
  
**SOLID BRASS DOOR HINGES**  
(3/2" OR 4", POLISHED AND LACQUERED)  
BALL TOP 1 pr. \$36.00 6+ \$28.80 12+ \$25.20  
STEEPLE TOP 1 pr. \$45.00 6+ \$36.00 12+ \$31.52  
BOX 45478 • BOISE, IDAHO 83711 • 1-800-456-2135  
Send \$3 for complete hardware catalog.  
Circle No. 138

**New! Protection for Your Slate Roof!**  
  
No need to take risks!  
Be sure that there is never any damage from snow or broken slates that slide off your roof!  
Cast bronze designs for durability.  
Reasonable cost makes it an excellent investment. Fast installation. Get the facts! Send today for our free brochure!  
**M.J. MULLANE CO., P.O. Box 108  
Hudson, MA 01749 508/568-0597**  
Circle No. 33

architorture

The "Little Orphan Annie" Look

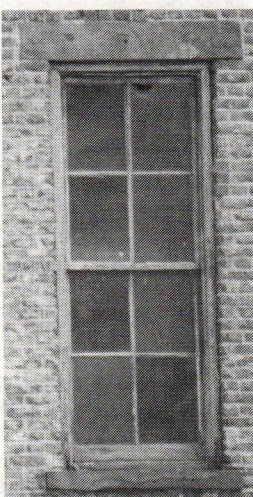


Though replacement windows like this aren't as common as in the past, they are still showing up. (These were installed in the last 18 months!) By specifying a replacement panel without any muntins or meeting rails, the designer completely changed the building. Losing just a few square feet of original window sticking (see right) gives a totally vacant, mindless look to the building. You almost expect to hear it say "Arf," just like Sandy.

Since this renovation was not a Tax Act project, the Secretary Of Interior Guidelines did not apply. But one can always hope that, in the absence of The National Park Service looking over one's shoulder, common sense will nevertheless prevail. Not in this case, alas.

— Submitted by Irwin Fields, New York, N.Y.

We will pay \$50 for accepted Architorture entries. Send to: Editor, TRADITIONAL BUILDING, 69A Seventh Ave., Brooklyn, NY 11217.



**ANTHONY WOOD PRODUCTS INCORPORATED**  
Box 1081-TB Hillsboro, TX 76645  
817/582-7225  
Illustrated catalog available - \$2.00  
Visa and Master Card Accepted

Victorian Gingerbread

- Gable Trim
- Fretwork
- Brackets
- Corbels
- Porch Posts
- Newel Posts
- Balusters
- Finials
- And Much More

Custom Turnings. Custom Sized  
Gingerbread & Reproduction  
Services Available Upon Request.  
1979 10 Years 1989

**Conklin's Authentic Antique Barnwood and Hand Hewn Beams**  
**Pennsylvania Wall Stone & Flagstone**

- Barnwood: grey, silver grey, brown, red
- 50,000-100,000 sq. ft. in stock
- Random length and width
- Plank flooring

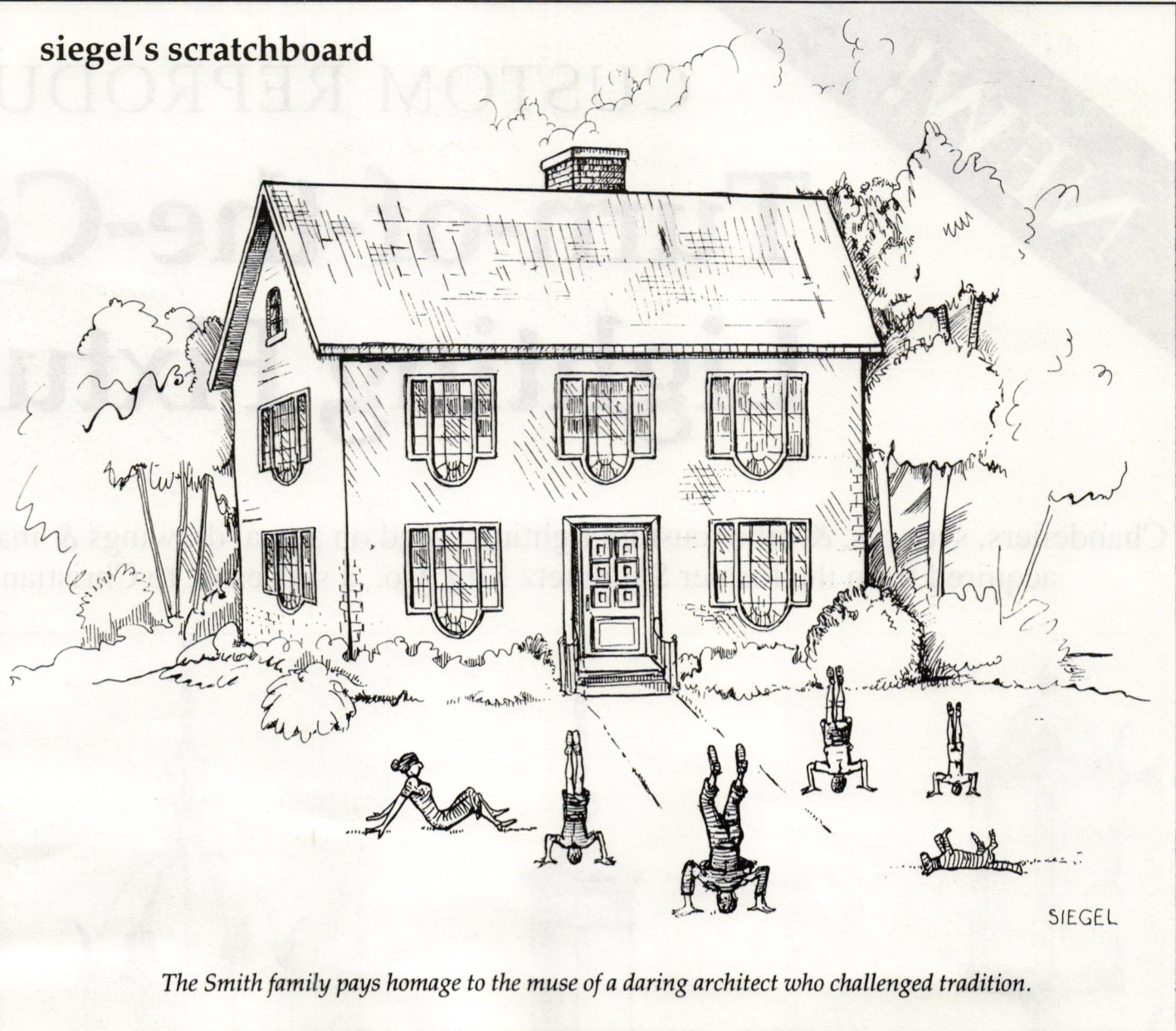
For Further Information Call Or Write  
**Leo Conklin**  
RD 1, Box 70  
Susquehanna, PA 18847  
717-465-3832  
WHOLESALE ONLY  
Circle No. 115

**WIDE PINE FLOORING & PANELING (12" TO 21" WIDE)**  
Wide Oak Boards  
Ship-lapped Pine  
  
**Carlisle Restoration Lumber**  
HCR 32 Box 679  
Stoddard, N.H. 03464-9712  
603-446-3937  
Circle No. 145

advertiser index

RS#	COMPANY	PAGE
◆ Division 4 — MASONRY		
144	Perma Jack	19
244	Ahren's Chimney Technique	27
176	Country Iron Foundry	18
003	Solid Flue	25
◆ Division 5 — METALS		
027	Erie Landmark Co.	2
121	Historical Arts & Casting	19
046	Smith-Cornell	31
047	Steptoe & Wife	28
082	W.F. Norman Corp.	27
◆ Division 6 — WOOD & PLASTICS		
130	Abatron	18
243	Aged Woods	28
---	Anthony Wood Products	30
142	Architectural Components	16
167	Bare Wood	17
202	Bear Creek Lumber	27
203	Blue Ox Millworks	30
223	Camden Window & Millwork	13
145	Carlisle Restoration Lumber	30
018	Chadsworth, Inc.	19
---	Colonial Woodworks	15
115	Conklin's Antique Barnwood	30
131	Cumberland Woodcraft	27
218	Dell Corp.	17
026	Donnell's Clapboard Mill	28
196	Fischer & Jirouch Co.	23
246	Gougeon Brothers	17
158	Hartmann-Sanders Co.	21
035	Mad River Woodworks	28
036	Mauer & Shepherd Joiners	18
217	Readybuilt Products	28
161	Schwerd Manufacturing	2
045	Silverton Victorian Millworks	30
---	Vintage Wood Works	27
213	Woods American Co.	30
163	Worthington Group	23
◆ Division 7 — MOISTURE PROTECTION		
033	M.J. Mullane Company	30
◆ Division 8 — DOORS & WINDOWS		
234	A & S Windows	5
---	Addison Hardware	30
069	Allied Windows	16
250	Architectural Window Consultants	18
008	Ball & Ball	32
071	Bendheim Glass	6
221	Blaine Window Hardware	24
219	Blenko Glass	6
235	Bliss Cashier Metal Products	16
224	Corapi Co.	6
238	Custom Window Co.	17
247	Drum's Sash & Door Co.	18
252	Englander Millwork	18
241	Environ, Inc.	18
225	Gibbons Sash & Door	18
240	Harbrook Associates	17
236	Hope's Architectural Products	5
136	J. E. Smith	21
233	Kasson & Keller	17
254	Kraatz/Russell Glass	16
226	Marvin Windows	8
146	Midwest Wood Products	6
---	Millwork Specialties	14
132	National Energy Corp.	16
232	Panelair	22
041	Restoration Works	21
230	Ricketson Woodwork	5
044	Shuttercraft	27
208	Staples Millwork	18
231	Thermo-Press Corp.	5
239	Tischler und Sohn	15
237	Torrance Steel Windows	16
---	Transylvania Mountain Forge	16
120	United States Woodworking	14
---	Woodstone Co.	13
◆ Division 9 — FINISHES		
001	A.A. Abbingdon Affiliates	28
248	Above View, Inc.	23
245	Architectural Sculpture	2
013	Bradbury & Bradbury	2
019	Chelsea Decorative Metal Co.	27
022	Crawford's Old House Store	28
025	Designs In Tile	30
253	Goodwin Lumber Co.	28
052	W.F. Norman Corp.	19
Division 10 — SPECIALTIES		
037	Nixalite	25
◆ Division 12 — FURNISHINGS		
028	Golden Age Glassworks	28
---	J. R. Burrows & Co.	27
051	Vintage Valances	28
◆ Division 15 — PLUMBING & MECHANICAL		
242	A-Ball Plumbing	25
172	Bathroom Machineries	28
147	Reggio Register	25
138	Remodelers & Renovators Supplies	30
053	Watercolors, Inc.	28
◆ Division 16 — ELECTRICAL		
---	Art Directions	25
006	Authentic Designs	28
075	Classic Accents	25
251	Elcanco	30
080	Newstamp Lighting	27
043	Roy Electric Co.	23
102	Sentry Electric	21
103	Spring City Electrical	23
166	Sternberg Lanterns	25
108	Ward Industries	28

siegel's scratchboard



The Smith family pays homage to the muse of a daring architect who challenged tradition.

NEXT ISSUE:

Ornamental Metalwork & Traditional Roofing Materials!

editorial index

ITEM	PAGE
◆ Division 6 — WOOD & PLASTICS	
Epoxies, Wood Repair	26
◆ Division 8 — DOORS & WINDOWS	
Glass, Window — Bullseye	26
Glass, Window — Handblown	26
Glass, Window — Specialty	26
Hardware, Window	26
Marquette Building — Window Repair	20
Pulleys, Window	26
Sash Weights	26
Window Expert System	20
Window Handbook — Review	15
Window Repair	4

Window Repair, Case History	20
Windows, Aluminum	24
Windows, Special Issue	1
Windows, Steel	24
Windows, Steel — Repair	24
Windows, Steel — Repair	24
Windows, Storm	22
Windows, Wood	13
Windows, Wood	7
Windows, Wood	14
Windows, Wood	8
Windows, Wood — Repair	18
Windows, Wood — Revival	7
Windows, Wood — SourceList	9
Windows, Wood — Specifications	8
◆ Division 17 — SERVICES & OTHER	
Architorture	30
Fisher, Charles — Profile	3
Meadows, Robert E. — Profile	4
Siegel's Scratchboard	31

FREE PRODUCT LITERATURE continued from page 29

modern, Victorian, and European plumbing. New things for claw-foot tubs, shower conversions in chrome or brass, high-tank toilets, pedestal sinks, and much more. Free catalog. **A-Ball Plumbing**

**172. Bathroom Fixtures** — Major collection of turn-of-the-century and country bath sinks, tubs, toilets, and accessories. Brass, porcelain, and oak furnishings — both reproduction and antique. Free catalog. **Bathroom Machineries**

**147. Floor Registers** — Beautiful solid brass and cast iron registers are made from 19th and early 20th century originals. Free catalog. **Reggio Register**

**138. Plumbing & House Fittings** — Wide range of vintage house supplies assembled for architects and contractors: Solid brass door hardware, bath accessories, doors, moldings, embossed ceilings, much more. Free catalog. **Remodelers & Renovators Supplies**

**53. Edwardian Faucets** — Exclusive importers of authentic English Edwardian and Italian transitional style kitchen and bathroom faucets, fittings, washbasin sets, bath/shower and bidet sets in chrome, brass, gold, and enamel finishes. Catalog. **Watercolors**

◆ Division 16 — ELECTRICAL

**Authentic Reproduction Lighting** — Art Deco and other turn-of-the-century lighting fixtures are cast directly from original fixtures. Antique fixtures also available. For prices, call: (314) 863-1895. **Art Directions**

**6. Reproduction Lighting** — Handcrafted 18th- and 19th-century lighting fixtures: chandeliers, sconces, and table lamps — all of solid brass. Free catalog. **Authentic Designs**

**8. Custom Lighting** — Vast selection of highest quality turn-of-the-century chandeliers, sconces and other fixtures for large public buildings can be manufactured to

original period specifications. Free brochure. **Ball & Ball**

**75. Push-Button Switches** — Available once again: push-button light switches in quality reproductions. Switch plates in plain brass or ornamented. Brochure has details and prices. **Classic Accents**

**251. Electric Wax Candles** — Handcrafted electric wax candles, flame-like bulbs — plus services, skills, and crafts for the restoration of antique lighting and fine lighting design. Free brochure. **Elcanco, Ltd.**

**80. Lanterns & Sconces** — Large selection of Early American lanterns, sconces, and chandeliers for indoor and outdoor use. Constructed from solid copper and brass. Catalog free to professionals. **Newstamp Lighting**

**43. Vintage Lighting** — Victorian and turn-of-the-century chandeliers and sconces: gas, oil, and electric. Antique and reproduction fixtures; replacement parts and glass shades. Free catalog. **Roy Electric**

**102. Exterior Street Lighting** — A variety of traditional poles in both cast iron and cast aluminum, plus a selection of luminaires including rare Art Nouveau and Art Deco styles. Free brochure. **Sentry Electric**

**103. Cast-Iron Light Poles** — Highest-quality cast-iron light poles in historical styles can be purchased separately, or with wide selection of luminaires. Also sign poles, clock supports, and bollards. Custom work. Free brochure. **Spring City Electrical**

**166. Historic Street Lights** — Large selection of historic cast-aluminum light poles and luminaires, plus matching wall-mounted fixtures and bollards. Free brochure. **Sternberg Lanterns**

**108. Exterior Lanterns** — Handcrafted custom-built copper lanterns and posts with emphasis on Early American designs. Willing to undertake unusual custom work in copper. Free catalog. **Ward Industries** ♦



Circle No. 46

SPECIAL THANKS TO . . .

Many people helped with counsel and advice in the preparation of this Special Issue. In particular, we'd like to express thanks to: Charles E. Fisher, Preservation Assistance Div., National Park Service; Walker Johnson, AIA, Holabird & Root; Robert Meadows, Larry Jones, and Dean K. Koga of Robert E. Meadows, P.C. Architect; Richard Pelletier of Historic Window Co., and Warren Weilbacher and Robert W. Kress of United States Woodworking. — Clem Labine

**NEW!**

# CUSTOM REPRODUCTION Turn-of-the-Century Lighting Fixtures

Chandeliers, sconces, & other custom lighting based on actual drawings & manufacturing specifications acquired from the former Steinmetz Mfg. Co., a successor to Christian Cornelius & Sons.



• Shown above are only a few of the hundreds of designs available.

**BALL and BALL**  
*Custom Lighting Fixtures*

*For more information, contact:*  
Whitman Ball  
Ball and Ball  
463 W. Lincoln Hwy  
Exton, PA 19341  
PHONE (215) 363-7330 • FAX only (215) 363-7639

Circle No. 8