

Winter 1996

STAINED GLASS



QUARTERLY OF THE STAINED GLASS ASSOCIATION OF AMERICA

U.S. \$8.50



90TH ANNIVERSARY!

And Better than Ever

Published Continuously Since 1906 by the Stained Glass Association of America



Rhododendron

As an artisan and proponent of the American School of Glass, I find Kokomo glass an important asset in the creation of fine works in leaded glass and in glass mosaics. The unique opalescent qualities and textures of Kokomo glass, as well as their extensive palette of colors enabled me to create the "Rhododendron" window using Kokomo glass exclusively. Smooth and granite catspaw glass, a personal favorite, was used to represent the foreground foliage and moss covered rocks and shrubbery. This handrolled glass, which was often used by the "Old Masters" displays beautiful translucency in both reflective and transmitted light. A combination of various cathedral and opal hammered glasses were plated to produce the atmospheric effects in the background. Subtle graduations of color and tone were accomplished by plating Kokomo's streaky cathedral glasses with light opalescent glasses, thereby producing depth and shadow. "Painting with glass" can truly be achieved using Kokomo.

It is no wonder why, over 100 years ago, Kokomo played an important part in the American School movement, as it does today.

Steven Stelz
Stelz Studios
Flemington, NJ

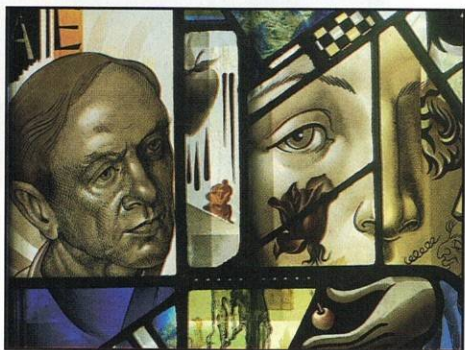
**KOKOMO
OPALESCENT
GLASS** 

Phone: 317-457-8136
Fax: 317-459-5177
Online: <http://www.kog.com>
Email: koglass@kog.com

Contact your local stained glass distributor concerning availability of Kokomo Opalescent Glass in your area.
Circle 93 on Reader Service Card

Table of Contents

Features



Dick Millard: A Diverse Life, A Versatile Talent

by Kimberly Kicera

A look at Dick Millard's unusual background and how it influenced his career as a designer and painter of stained glass.

(Photo left.)

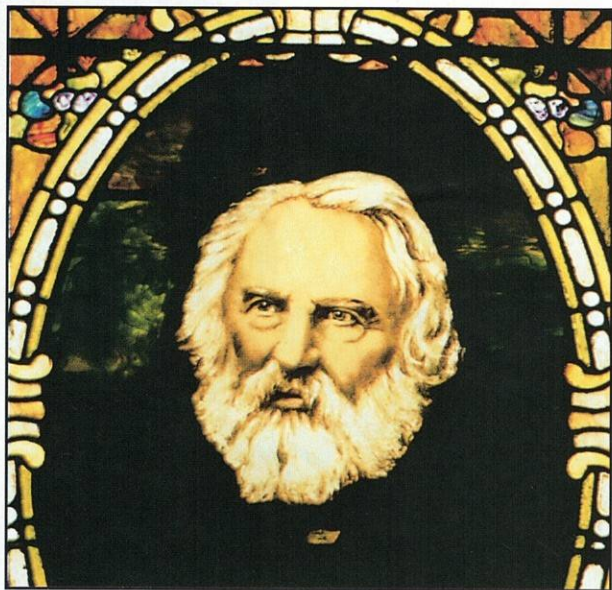
Page 266

Restoring an Irish Masterpiece

by Ken Ryan

Page 272

Read what went into the restoration of the *East Window* of St. James Church, Dublin, after that window was destroyed in an accidental explosion at a nearby brewery. (Photo right)



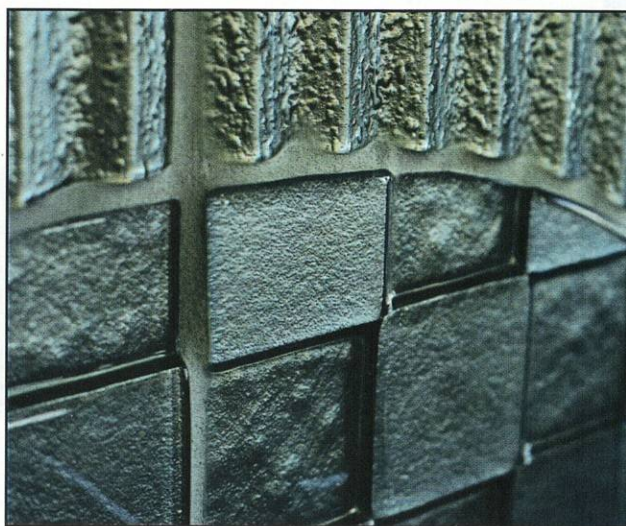
J. Horace Rudy

and The Rudy Brothers Stained and Leaded Glass Company

by Joan Gaul

Page 277

An in-depth look at J. Horace Rudy, a stained glass artist working in the first half of the 20th century. (Photo above)



The Tile Techniques of Hal Bond

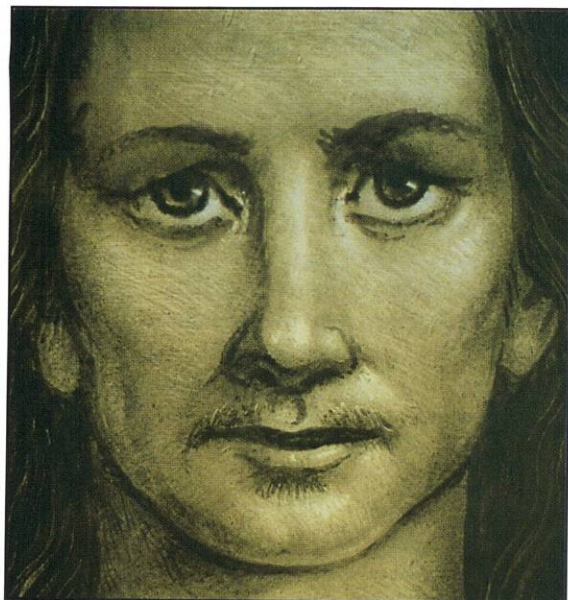
by Geoffrey Wichert

Page 290

Artist Hal Bond is finding new artistic and market outlets using stained glass techniques to create glass tiles. (Photo above)

Winter 1996

VOLUME 91, NUMBER 4



Cover Story

The Enigmatic Von Gerichtens

by Helene Weis

Page 283

A look back at the life and stained glass work of Ludwig Von Gerichten, a founding member of the SGAA.

Cover Photograph: *The Visitation*, from the Shrine of the Sacred Heart in Washington, D.C. This window was fabricated between 1922 and 1924 in Von Gerichten's Munich studio.

Special Features

- Page 293** **The Tariff Question Revisited.** An in-depth look at one of the key reasons for the creation of the Stained Glass Association of America—tariff laws concerning stained glass imported into the United States in the early part of the century.
- Page 306** **The History of Protective Glazing.** This is the second part of *Stained Glass Magazine's* look at Inspired Partnerships landmark study of protective glazing.
- Page 317** **So You're Going to be a Stained Glass Man!** Reprinted from the Winter 1949-1950 issue of *Stained Glass*, this letter from "an Old Hand" to an apprentice offers sometimes amusing, sometimes biting advice which is still relevant almost fifty years after it was written.

Departments

Page 248	President's Message	Page 260	New Products
Page 252	ComputerTALK:	Page 261	Catalogue Ads
Page 254	Notes and News	Page 264	Book Reviews
Page 256	From the Editor's Desk	Page 323	Sources of Supply
Page 258	Educational Opportunities	Page 328	SGAA Officer's Page
Page 260	Stained Glass Mart		

RICHARD H. GROSS, Editor

KATHERINE E. GROSS, Business Manager

EDITORIAL AND ADMINISTRATIVE OFFICES

6 SW Second St., Suite #7

Lee's Summit, MO 64063-2352

(800) 438-9581

(816) 524-9313

(816) 524-9405 (fax)

E-Mail Address: sgmagaz@kcnet.com

FRANK W. KRESEN, Copy Editor

VIRGINIA C. RAGUIN, Historical Consultant

LELAND A. COOK, Photographic Consultant

KIRK D. WEAVER, Controller

HELENE WEIS, Associate Editor

778 South Fifth St.

Philadelphia, PA 19147

(215) 247-5721

ARTHUR J. FEMENELLA, Contributing Editor

3 Brighton Court

Annandale, NJ 08801

(908) 735-6840

PUBLISHING CONSULTANTS

Gumbinger Media Service, Inc.

Kansas City, MO

(816) 468-4400

PUBLISHER

Stained Glass Association of America

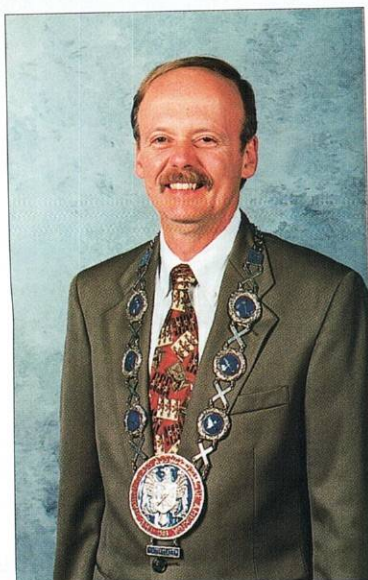
P.O. Box 22642

Kansas City, MO 64113

(816) 333-6690/(800) 888-7422 (SGAA)

fax: (816) 361-9173

e-mail: sgaofa@aol.com



PRESIDENT'S MESSAGE

There are two important events in the stained glass community this winter, and it is my pleasure to be able to announce both of them here.

The first is the Annual Winter Meeting of the SGAA. January 17th and 18th is the time for members of the SGAA to make their opinions heard! I encourage everyone to attend the Winter Meeting in Kansas City and participate as the SGAA continues its mission of filling a leadership role in the stained glass industry. The SGAA is experiencing tremendous growth, and there is a place in our organization for anyone who wants to play a part in the craft's future! I urge everyone who wants to take an active role to attend. Information on how to attend this winter's meeting is available from the SGAA headquarters by calling (800) 888-SGAA (7422).

For those who are unable to attend, I urge you to contact your board members and make your opinions known! Those of us who serve on the board work hard to make the stained glass profession better for everyone involved, but we cannot be truly successful in that mission without constant feedback from the members. If there is an issue you would like to see addressed or a topic you would like covered, please let a board member know so that we may address those issues.

Secondly, the SGAA will be unveiling its new *Sourcebook '97* this winter. This new publication is designed to be a tool to enhance communication within the stained glass community and also to promote the craft to architects and building planners whose building projects could benefit from the inclusion of glass art.

Sourcebook '97 features the complete SGAA Membership Directory as well as informative articles useful to those in a position to specify stained glass for inclusion in a building project. The *Sourcebook '97* Membership Directory will feature Accredited and Active members in a geographical-by-state listing and all members in a comprehensive alphabetical listing. It will also demonstrate our commitment to excellence by including sections of the SGAA bylaws, an abstract of the Restoration Guidelines and other documents which illustrate the SGAA's longstanding insistence on professionalism and quality. This important new publication will be mailed to all members of the Stained Glass Association of America and to more than 7,000 architects and building planners.

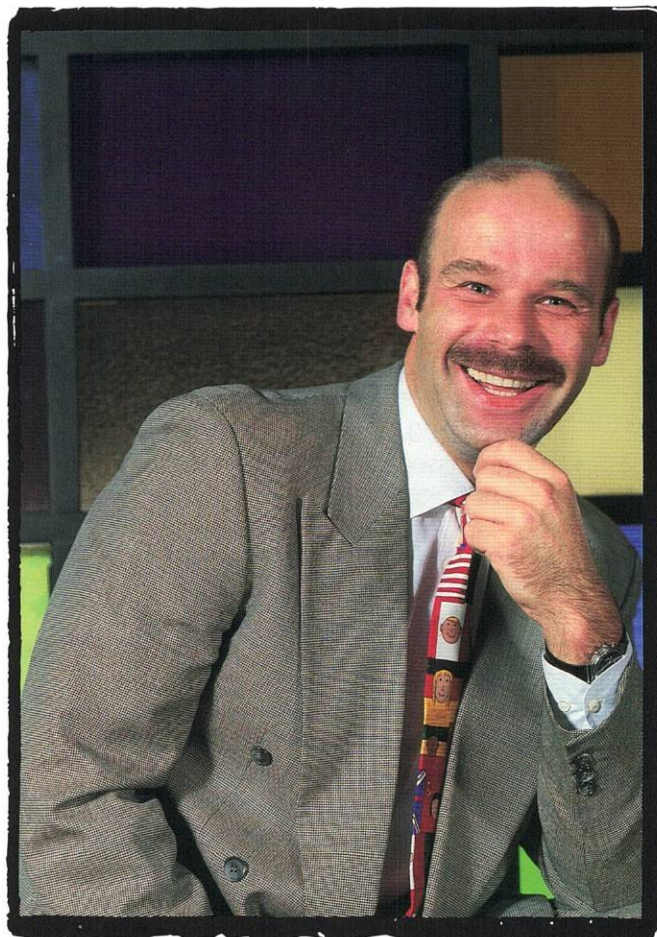
With the publication of *Sourcebook '97* come some important changes in *Stained Glass Magazine* as well. With a complete publication dedicated to the Membership Directory, those pages will no longer appear in *Stained Glass*. Beginning with this issue, these changes will allow the magazine to devote even more pages to editorial articles.

If you're an SGAA member, your copy of *Sourcebook '97* will be coming in mid-January. If you're not an SGAA member and you want to make sure you get a copy of *Sourcebook '97*, contact Kathy Murdock, SGAA Executive Secretary, at (800)888-SGAA to find out how you can reserve a copy.

The Universal Language of Glass

Fire. Sand. Hand. Heart.
Glass has a language all its own.
A lore. An inexplicable quality that
captivates. Enchants. Ask
great artists who choose this as
their medium. Ask hobbyists,
manufacturers, tradespeople. Or, ask
Siegfried Walter Ernst Diesterbeck,
better known as Siggy. "It's opened
worlds for me," he says. Since
his boyhood apprenticeship in the
glass industry of Germany,
he's worked his way up to become
an international expert in most
every aspect of glass science and
technology. Now he's opening the
West—heading Bendheim's new
California operation. Make "fast
access," "huge selection," "unparalleled
service" part of your vocabulary.

Buy from Bendheim.



*"Take advantage of
our experience."*

Bendheim

S.A. BENDHEIM CO., INC.

61 Willett Street, Passaic, New Jersey 07055

Tel: 1-800-221-7379 Fax: 201-471-3475 Outside the USA: 201-471-1733

S.A. BENDHEIM WEST, INC.

3675 Alameda Avenue, Oakland, California 94601

Tel: 1-800-900-3499 Fax: 510-535-6615 Outside the USA: 510-535-6600

Importers & Distributors of Specialty Glass since 1927
Wholesale to the trade/Call for your catalogue!

"Monumental..."

best describes this long-overdue volume. . . this impressive work should be a part of every art library's reference collection..."

Library Journal

That's quite a compliment coming from the foremost authoritative review journal in the library field. Of the thousands of books they review each year, the *SGAA Reference and Technical Manual* is judged to be among the finest reference books available.

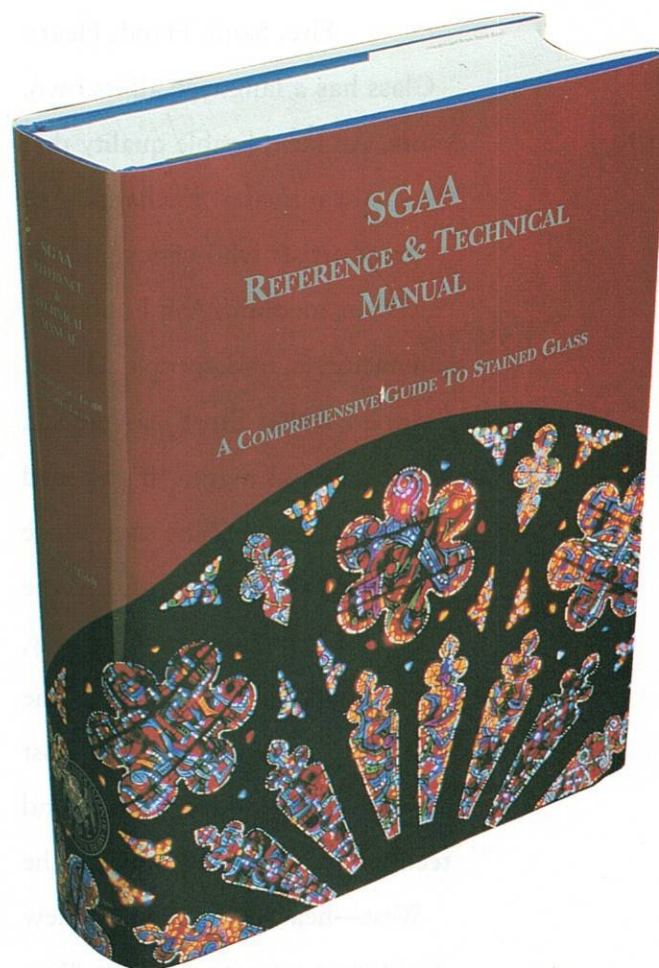
Only 1,000 copies of this superbly bound and embossed second edition are available. The 816 page volume, with 16 pages in full color, has over 400 illustrations, is fully indexed, and has an extensive glossary of terms. Printed on the finest archival quality paper, the definitive text is destined to become the cornerstone of your studio library.

A truly world-class work, the *SGAA Reference and Technical Manual, Second Edition*, meticulously details and explains:

- The histories of stained glass and the Stained Glass Association of America
- Glass selection
- Working with glass
- Health and safety Glazing
- Design techniques
- Etching
- Engraving
- Repairing and restoration
- Installing, lighting, and photographing stained glass
- Studio layout
- The business of stained glass: proposals, contracts, copyrights, product liability
- Designing a stained glass curriculum and *much, much more!*

This monumental volume is the ultimate gift for that special stained glass crafter.

Order your copy today!



Save time! Credit card orders call toll free:

1-800-888-SGAA (7422)

Ask about special SGAA member prices!

SGAA Reference and Technical Manual, Second Edition

Please send me _____ copies @ \$225 (US \$) plus \$10 shipping and handling (US); \$20 (CAN); \$15 OVERSEAS

☐ Check enclosed (payable to **SGAA Stained Glass School**).

☐ Please bill my: ☐ Visa ☐ MasterCard Account # _____ Expiration Date _____

Cardholder Signature _____

(Required for all credit card purchases)

Name _____

Street _____

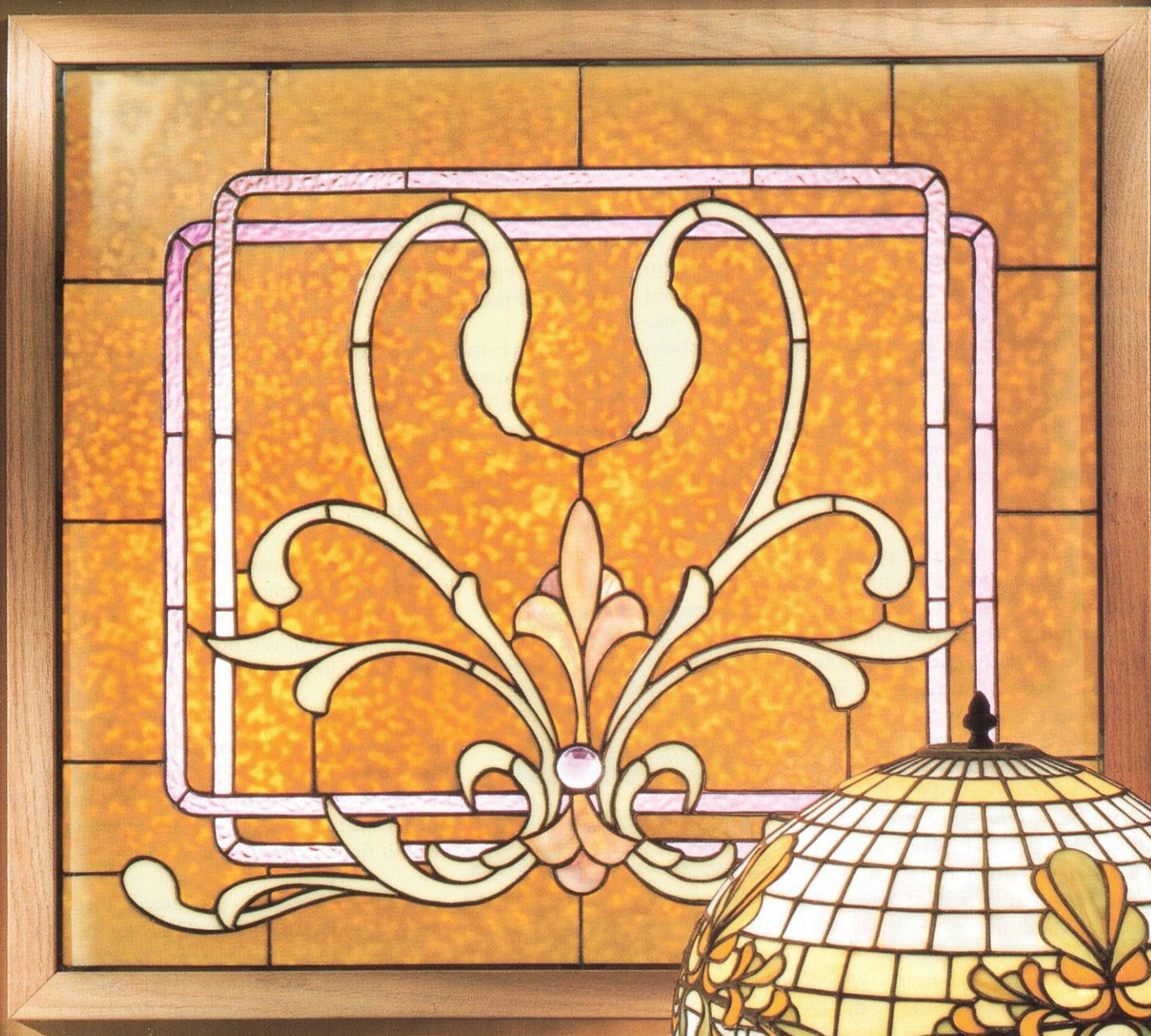
City _____ State _____ Zip _____

Phone A/C () _____

Send this completed form with your check or credit card information to:

SGAA Stained Glass School
P.O. Box 22642
Kansas City, MO 64113
1-800-888-SGAA (7422)

Please allow 4-6 weeks for delivery



Mottles by
WISSMACH

Each sheet of Wissmach glass is a work of art in itself, making your work easier right from the start!

The Paul Wissmach Glass Company, Inc.
P.O. Box 228, Paden City, WV 26159-0228
Tel: (304) 337-2253 • Fax: (304) 337-8800



Computer *TALK*: Back Up Your Data

by G. Berton Latamore

The other day I came into my office and turned on my computers as usual. Instead of the normal boot sequence, however, my new Pentium 100 system displayed this message on its screen: "Hard-drive boot error"!

This is the nightmare of every computer user. Staring at it, I took a deep breath and began asking myself, "What do I have on that hard drive, and do I have backups?"

Fortunately for me, the problem was not a hard-drive failure; it was just a loose cable connection. Many PC users have not been as fortunate, however. The fact is that if you use it long enough, any hard drive will fail. When that happens, all the data on it is lost.

The one big weakness of computers is the fragility of electronic data. Books written by scribes 3,000 years dead are still readable. Professional MIS organizations are happy if their electronic data survives 10 years. If your hard drive fails or your computer is stolen from your office—as happened to a friend of mine—everything on it is lost. If a file is damaged, vital data may be destroyed, or an application may not run.

These kinds of things happen every day. A few years ago some important features in my copy of Microsoft Word stopped working without warning. Something had wiped out an important housekeeping file. I had never heard of this file before, so I did not have a copy of it on floppy disk. Fortunately, I do back up my hard disk to tape regularly, and I was able to restore the file from that.

PCs are exposed to many unrecognized hazards. Stereo speakers set too close to a computer can destroy data with the magnetic fields they generate. Excessive heat, dirt and normal wear can damage data or destroy a hard drive while fire, flood or earthquake can wipe out your computer system.

The only defense you have against these threats is data backups. MIS groups copy their mainframe and

server hard drives to tape weekly and store the tapes off site in a vault. These copies have literally saved companies in an emergency. Today, many firms cannot survive the loss of their data files.

PCs are more exposed to potential hazards than these larger systems that are usually kept in secure, climate-controlled locations. The information PCs hold is often just as vital to the company as the data in larger systems. Too often, the only copy of a vital spreadsheet analyzing key business data or a salesperson's contact list resides on a PC hard drive.

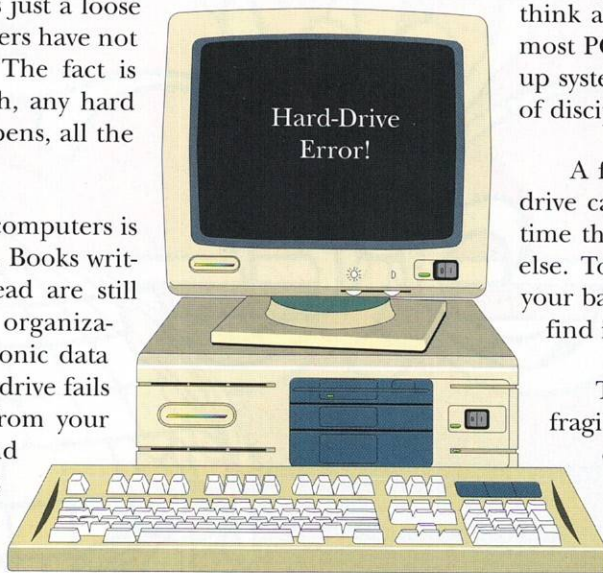
Despite this, most PC users never think about backing up their data, and most PCs are not equipped with a backup system. Part of the problem is a lack of discipline in protecting data.

A full tape backup of a large hard drive can take half a day, during which time the PC is unavailable for anything else. To get around this, you can start your backup at closing time and usually find it finished the next morning.

Tapes, however, are even more fragile than hard drives. They use linear access rather than random access, so the tape drive writes from one section on the tape to the next sequential section. One result of that is that a tiny

bad spot on a tape caused by a speck of dirt can crash a backup. When that happens you can reformat the tape—another overnight operation. That will fix some problems but will not cure a physical problem on the tape. The only solution for a physically damaged tape is to throw away a \$100 tape.

Fortunately, new answers to the backup problem are appearing. The best is probably the Jaz Drive, a random access disk drive (similar in principle to the familiar floppy disk except that it holds 1 GB of data). These are more expensive than tape drives—\$500 for an internal system or \$600 for an external, which can be moved from one PC to another. However, it can do a backup in a fraction of the time of tape and with fewer problems, and, because it is random access, you can find individual files much faster than you can on tape. In fact, you can



even boot from it if your hard drive fails or if you need to create a special environment to run an important application. This can happen with applications that demand very large amounts of computer memory or other resources. In such a situation you could build essentially a second hard drive with all the environmental software, the application and its data all on one Zip drive.

The technology is well proven—the maker, I-Omega, was the builder of the famous Bernuli box backup systems of the 1980s. A 1 GB disk costs \$125; that's more than a tape, but it is less likely to fail and makes a cheap second hard disk. An office can buy one external unit and several disks to back up all its PCs.

A Backup Plan

Whatever technology you choose, you must follow a good backup schedule to protect your data. You should back up important files such as your accounting records onto floppy disk every time you change them. Because floppies are so fragile, I keep two disk copies of everything. Even then I have had problems occasionally when both floppies fail simultaneously.

Many users think this is enough, but it is not. Every PC and Macintosh hard drive should be fully backed up at least once a week, and the backup copy should be stored in a different building to protect valuable data from fire, flood and other disasters. Be careful handling and storing this data. One of my favorite stories concerned the director of computer services for a small hospital who made weekly backups of the hospital's computers and then took them home for safe keeping. On his way, he carried them past the radiology department, where every tape was wiped clean as he walked past.

More than anything else, a backup plan requires discipline. Too often good plans are slowly forgotten over time. Then when disaster strikes, the backup data is not there. Backups require only a fraction of the time you save by using your computer. If you implement a good plan and stick with it, the day you see "Hard-drive boot error" written across your computer screen, you will know you have the situation under control.



C A M E L E A D

60# Minimum Each Size

Wire & Tape Solder

Oleic Acid

Sheet Lead

Came Lead

Lead Tape

Catalogs Available

Crown Metal Company, Inc.

117 E. Washington St.

Milwaukee, Wisconsin 53204

Circle 73 on Reader Service Card

Notes and News

ANNOUNCEMENTS

Queens, NY—Oct. 5, 1996. Ellen Mandelbaum received the American Institute of Architects Religious Art Award for Excellence in Design for her *10 Chapel Windows and Window Wall* for Adath Jeshurun Synagogue (featured in Winter 1995 issue of *Stained Glass*). Ellen Mandelbaum Glass Art produces original stained glass for private and public spaces. Mandelbaum is known for her ability to personalize designs for private and public spaces.

Sunderland, MA—January, 1997. Horizons, The New England Craft Program has summer staff openings for Head of Studio and Assistant in Glass. This is an intensive summer art program for high school students from June 18 to Aug. 4. Send resumes and slides to Horizons, 108 N. Main St. South, Sunderland, MA 01375. Contact: Jane Sinauer (413) 665-0300.

Siena, Italy—January, 1997. Vetrare Artistiche Toscane announces 3-month apprenticeships starting in January 1997. The topics covered are of benefit to both amateurs and professionals working in stained and fused glass. English is spoken in the studio, and participants will be assisted in finding suitable accommodation. Intensive hands-on courses are also available. Contact Gianni Bracciali, Vetrare Artistiche Toscane, Via della Galluzzo n.5, 53100 Siena, Italy. Phone & Fax 011-39-577-48033.

Cookeville, TN—Feb. 1, 1997. Joan Derryberry Art Gallery is reviewing slides for the 1997/98 school year exhibitor schedule. This non-profit gallery is located in the University center on the campus of Tennessee Technological University. All media accepted. Gallery provides opening reception and B/W announcements. No fees, deadline Feb. 1, 1997. Send 20 slides, slide descriptions, resume statement and SASE to Dr. Carol Ventura, Department of Music and Art, Box 5045, Tennessee Technological University, Cookeville, TN 38505 (615) 372-6084.

Kansas City, MO—May 15, 1997. The Stained Glass School, a 501(c)(3) entity of the Stained Glass Association of America, announces deadlines for two separate scholarship programs. The Dorothy L. Maddy Scholarship for the school year 1997-98 consists of one award up to \$1000, to a student enrolled in an academic program. Previous stained glass experience is necessary. Deadline: May 15, 1997. The Stephen Bridges Memorial Scholarship consists of free tuition to either Advanced Techniques of Stained Glass Painting or

Painting of Transparency Sketches. These one-week classes are presented by Richard Millard during August 1997 at his New Hampshire studio. Eligible persons must have previous stained glass experience. Deadline: June 1, 1997. Applications can be obtained from the SGAA, PO Box 22642, Kansas City, MO 64113 (800) 888-7422 (816) 361-9173 fax.

Ed Hoy's International is celebrating their 25th Anniversary year in business. Originally established as Creative Craftsmen in August of 1971 as a precision decorative etching company, it evolved into Ed Hoy's International, a division of Creative Craftsmen, with 65,000 square-foot building dedicated to the distribution of Creative Glass Products worldwide. Look for a variety of specials throughout the year to celebrate this anniversary. (800) 323-5668 (708) 416-0448 fax.

COMPETITIONS

Stevens Point, WI—Jan. 6, 1997. The 25th Annual Festival of the Arts will be held Sunday April 6, 1997 in the courtyard of the Fine Arts Building at the University of Wisconsin. 5 slides will be accepted for the juried competition. Registration fee is \$50, jury fee is \$10. Cash prizes for "best of show" and "awards of excellence" will be awarded. Deadline Jan. 6, 1997. Lora Hagen (715) 366-4377

Pontiac, MI—Jan. 15, 1997. The 13th Annual Image, Light & Structure '97 is now accepting entries in flat and fused glass for the month of April during Michigan Glass month. Entry fee \$25 for up to 3 entries. Deadline Jan. 15, 1997. For information contact: Diane Eissinger (313) 699-9344.

Marietta, OH—May 9-11, 1997. The Indian Summer Festival, Inc. will be sponsoring "Marietta Mayfest '97, a juried arts and crafts festival; all media invited. Activities include traditional craft demonstrations, live entertainment, workshops and apprenticeships along with children's activities. Jury fee \$10; contact Melissa Hill PO Box 266, Marietta, OH 45750 (614) 373-8027.

Asheville, NC—July 18-21. The Southern Highland Craft Guild presents its 49th Craft Fair of the Southern Highlands with craftsmanship from the mountains of nine southern states. A full schedule of musical entertainment by regional performers is planned, along with colorful demonstrations and free children's workshops. (704) 298-7928.

CONFERENCES

Sydney, Australia—Jan. 16 - Jan 27. The Australian Association of Glass Artists presents the 10th Biennial Ausglass Conference. This combination of conference, workshops and exhibitions will investigate the social, economic, political and cultural influences of the glass arts. Contact: Victoria Kerghney, PO Box 754 Newtown, NSW 2042, Australia. Phone & Fax: 011 61 2 9519-7109.

Bennington, VT—Feb. 5-9, 1997. The North Country Studio Conference will be held at Bennington College, with intensive studio workshops. A number of media will be taught, including Kiln Formed Glass with Newy Fagan. Evening presentations and programs will provide time for discussions with early morning group activities available. Contact NCSC, PO box 875, Hanover NH 03755 (603) 795-2889.

Toronto, Canada—April 4-6. Artists in Stained Glass will present a mini conference at Toronto's Harbourfront, a centre for the arts on Toronto's shore. Canadian, American and International speakers will focus on design. The exhibition, "Entrances," will address the design aspect of stained glass in a pseudo-architectural sense. Some latecomers may still get into the exhibition. Call (519) 334-3119.

EXHIBITS

Asheville, NC—Sept. 19-Jan. 4. The Asheville Art Museum will feature Josef Albers' exhibition "Glass, Color and Light." The art represented will include the German-born American artist's glass paintings and constructions, preparatory drawings and related oil paintings. Asheville Art Museum (704) 253-3227 (704) 251-5652 fax

New York City, NY—Nov. 21-Feb. 2. The Bard Graduate Centre of Studies in the Decorative Arts will present "An Alliance of Art and Industry: The Brilliance of Swedish Glass, 1918-1939." Approximately 120 works will demonstrate the broad range of glass designed and produced in Sweden from 1918 to 1939, including stemware one-of-a-kind pieces and limited-production glass. Contact Tim Mulligan 18 W 86th St. New York, NY 10024 (212) 501-3072.

New York—Apr. 19-Oct. 26, 1997. The Corning Museum of Glass will present 200 pieces of mid-twentieth-century Italian glass from the collection of the Steinberg Foundation in Liechtenstein in the special exhibition, "Italian Glass, 1930-1970: Mas-

terpieces of Design from Murano and Milan." Contact: Lezli White (607) 974-8797.

TOURS

France—Summer 1997. Artists in stained glass, David Wilde and Swiss artist Francoise Bolli Bornand are planning a guided tour of contemporary French stained glass during mid-July of 1997. Studio visits and discussions with local artists are planned, along with spin-off trips to the great Cathedrals of France and appropriate wining and dining. Call David Wilde (519) 334-3119 for a trip package, or in Europe call Francoise Bolli at 41 32 51 20 54.

Baltimore, MD—June 29-July 6. Following the Art Glass Suppliers Association Show in Baltimore, join Kay Bain Weiner for a night cruise to Bermuda on Celebrity Cruise Lines - Meridan. Noted stained glass experts will present lectures, demonstrations and slide presentations. \$849 per person, inside cabins; \$999 per person, outside cabins. Contact Kay Bain Weiner (908) 232-1212 (908) 232-0056 fax.

TRADE SHOWS

Las Vegas, NV—Mar. 13-16, 1997. The 4th annual Glass Craft Expo will feature more than 100 classes in all categories of art glass design, techniques and marketing. A trade show exhibit will run Mar. 14-16 with new products and services with manufacturers, demonstrations and art glass gallery. For registration packet, contact: Las Vegas Management 2408 Chapman Dr. Las Vegas, NV 89104-3455 (800) 217-4527 (702) 734-0636 fax.

Philadelphia, PA—May 2-4. The 3rd Annual Philadelphia Furniture Show is founded on Philadelphia's rich furniture-making tradition and is committed to presenting work of the highest quality in wood, fibers, metals, glass and ceramics. The show will be held at the Pennsylvania Convention Center with an expected attendance of 15-20,000. Philadelphia Furniture Show 162 N., 3rd St. Phila., PA 19106 (215) 440-0718 (215) 440-0845 fax.

WORKSHOPS 1996-1997

Dec. 14-15 Painting On Glass

Instructor: Al Husted
Location: Albert Stained Glass Studio, Brooklyn, NY
Fees: \$275 all materials included
Limit 6 students
Contact: (718) 625-6464

Dec. 21 Glass Mosaics

Instructor: Julia Keiser
Location: Albert Stained Glass Studio, Brooklyn, NY
Fees: \$140 all materials included
Contact: (718) 625-6464

Dec. 22 Beginner Stained Glass

Restoration Hands On Workshop
Instructor: Al Husted
Location: Albert Stained Glass Studio, Brooklyn, NY
Fees: \$140 all materials included
Contact: (718) 625-6464

Jan. 14-Feb. 13, 1997 Five wks T & Th

Artistic & Scientific Glassblowing
Instructor: Harold Wolfgang Eberhart
Location: University of MI, Ann Arbor, MI
Fees: \$600
Contact: (313) 764-8490

Jan. 16-19, 1997 Advanced Fusing,

Slumping, Moldmaking & Kilnworking
Instructor: Dan Fenton
Location: TimberWolf Studios, Lawrence, MA
Fees: \$450 all materials & firings included
Deposit: \$150
Limit 10 Students, Application by Dec. 15
Contact: (508) 681-7707

Jan. 27-Feb. 8 Glassblowing with Ed

Broadfield, offhand glassblowing—beginner to advance levels
Instructor: Ed Broadfield & associate instructor
Location: Raku Gallery, Jerome, AZ
Fees: \$850 all materials included.
Limit: 12 students
Contact: (520) 639-0239

Feb. 20-23, 1997 Pyrex Lamp Glassblowing

Instructor: Harold Wolfgang Eberhart
Location: University of Michigan
Fees: \$600
Contact: (313) 764-3385

Mar. 11-Apr. 10, 1997 Five wks T & Th

Artistic & Scientific Glassblowing
Instructor: Harold Wolfgang Eberhart
Location: University of MI, Ann Arbor, MI
Fees: \$600
Contact: (313) 764-8490

May 16-18, Beginner/Intermediate Flameworking (not beadmaking)

Instructor: Elizabeth Mears
Location: Glass Workshop, Barnstable, MA
Fees: \$495 (\$250 deposit). All materials included
Limit: 8 students—1 bench/torch setup per student.
Contact: (508) 362-0175,

Statement of Ownership,
Management, and Circulation
(Required by 39 U.S.C. 3685)

1. Publication Title: Stained Glass, 2. Publication No.: 552-830, 3. Filing Date: 08/26/96, 4. Issue Frequency: Quarterly, 5. No. of Issues Published Annually: 4, 6. Annual Subscription Price: \$30.00, 7. Complete Mailing Address of Known Office of Publication (Street City, County, State and ZIP + 4) (Not printer): 6 SW Second St., #7, Lee's Summit, Jackson County, MO 64063-2352, 8. Complete Mailing Address of Headquarters of General Business Offices of Publisher (Not printer): P.O. Box 22642, Kansas City, MO 64113-0642, 9. Full Names and Complete Mailing Address of Publisher, Editor, and Managing Editor (Do Not Leave Blank): Publisher (Name and Complete Mailing Address): Stained Glass Association of America, P.O. Box 22642, Kansas City, MO 64113-0642; Editor (Name and complete Mailing Address): Richard H Gross, 6 SW Second St., #7, Lee's Summit, MO 64063-2352, Managing Editor (Name and Complete Mailing Address): Richard H. Gross, 6 SW Second St., #7, Lee's Summit, MO 64063-2352, 10. Owner (If owned by a corporation, its name and address must be stated and also immediately thereafter the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated.) (Do Not Leave Blank.) Full Name: Stained Glass Association of America, a nonprofit corporation, no stockholders. Complete Mailing Address: P.O. Box 22642, Kansas City, MO 64113-0642, 11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages or Other Securities (If none, so state): None, 12. For Completion by Nonprofit Organizations Authorized to Mail at Special Rates. The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes: Has Not Changed During Preceding 12 Months, 13. Publication Name: Stained Glass, 14. Issue Date for Circulation Data Below: Fall, 1996, 15. Extent and Nature of Circulation A. Total No. Copies (Net Press Run), Average No. Copies Each Issue During Preceding 12 Months 6325, Actual No. Copies of Single Issue Published Nearest to Filing Date 7800, B. Paid and/or Requested Circulation (1.) Sales through dealers and carriers, street vendors, and counter sales (not mailed), Average No. Copies Each Issue During Preceding 12 Months 2694, Actual No. Copies of Single Issue Published Nearest to Filing Date 3822, (2.) Paid or Requested Mail Subscription (include advertiser's, proof copies/exchange copies) Average No. Copies Each Issue During Preceding 12 Months 2878, Actual No. Copies of Single Issue Published Nearest to Filing Date 2872, C. Total Paid and/or Requested Circulation (Sum of 15B(1) and 15B(2)) Average No. Copies Each Issue During Preceding 12 Months 5573, Actual No. Copies of Single Issue Published Nearest to Filing Date 6694, D. Free Distribution by Mail (Samples, Complimentary, and other free.) Average No. Copies Each Issue During Preceding 12 Months 42, Actual No. Copies of Single Issue Published Nearest to Filing Date 42, E. Free Distribution outside the mail (Carriers or Other Means) Average Number Copies Each Issue During Preceding Twelve Months, 0, Actual Number Copies Of Single Issue Published Nearest to Filing Date, 0, F. Total Free Distribution (Sum of 15D and 15E) Average Number Copies Each Issue During Preceding Twelve Months, 42, Actual Number Copies of Single Issue Published Nearest to Filing Date, 42, G. Total Distribution (Sum of 15C and 15F) Average No. Copies Each Issue During Preceding 12 Months 5615, Actual No. Copies of Single Issue Published Nearest to Filing Date 6736, H. Copies Not Distributed (1.) Office use, left over, spoiled, Average No. Copies Each Issue During Preceding 12 Months 711, Actual No. Copies of Single Issue Published Nearest to Filing Date 1064, (2.) Return from News Agents Average No. Copies Each Issue During Preceding 12 Months 0, Actual No. Copies of Single Issue Published Nearest to Filing Date 0, J. Total (Sum of 15G, 15H(1) and 15H(2)) Average No. Copies Each Issue During Preceding 12 Months 6326, Actual No. Copies of Single Issue Published Nearest to Filing Date 7800, Percent paid and/or Requested Circulation (15C/15Gx100) Average Number Copies Each Issue During Preceding Twelve Months, 99%, Actual Number Copies of Single Issue Published Nearest to Filing Date, 99%, 16. This Statement of Ownership will be printed in the Winter 1996 issue of this Publication, 17. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on this form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including multiple damages and civil penalties). Signature and Title of Editor, Publisher, Business Manager, or Owner s/s Katherine Gross, Business Manager.

From the Editor's Desk



Sourcebook '97

One of the best aspects of my job is that it is never boring. In each issue of *Stained Glass*, I have the pleasure of being introduced to the work of professionals—past and present—whose work represents the pinnacle of stained glass achievement. Stained glass is an artform with which one cannot help but become fascinated. That is the reason it is such a pleasure to have been involved in **Sourcebook '97**.

For those not yet familiar with this new publication from the Stained Glass Association of America, **Sourcebook '97** is, first and foremost, a communications tool for members of the SGAA. It will list the complete membership of the SGAA and provide a means for stained glass professionals to find and contact other professionals involved in the craft of stained glass. However, to call it simply a communications tool is to rob it of a great portion of the appeal this new publication is sure to have.

Sourcebook '97 is also a tool for architects and building planners. It will present informative articles for those who might not be familiar with specifying stained glass and working with studios. It is my hope that this new publication will be a boon for the art glass industry in that it will provide an easily accessible starting point for those interested in including glass art in their building projects and yet who might be uncertain of where to turn to find qualified professionals capable of providing the finest art glass possible.

Of course, the creation of new artwork is not the only facet of the stained glass industry; **Sourcebook '97** will also address the restoration and preservation of existing stained glass. A carefully selected abstract of *The Stained Glass Association of America's Standards and Practices for the Restoration of Historic Stained Glass Windows* is also included to assist those who need more information on preserving stained glass for future generations to enjoy.

Finally, it must be said that for a publication to be a comprehensive guide to all of these aspects of the craft of stained glass would require a book hundreds (if not thousands) of pages long. That is not the intention of **Sourcebook '97**. The book is intended to serve as an entryway into the exciting world of stained glass art. The information in **Sourcebook '97** will point to the greater reservoir of knowledge and experience available from the members of the SGAA.

Sourcebook '97 will release in early January and will automatically be mailed to the members of the SGAA. Copies will also be mailed to an extensive list of architects and building planners. Those interested in ordering extra copies should contact SGAA Executive Secretary Kathy Murdock at 1-800-888-SGAA (7422). Whether you are already involved in the craft of stained and art glass or are a newcomer to the field and interested in a resource which will help you learn more about the craft, **Sourcebook '97** has something to offer. I encourage you to take advantage of this latest publication from the SGAA!

Richard Gross

re-novate
 re-trofit
 re-style
 re-build
 re-roof
 re-frame
 re-brick
 re-weave
 re-plicate
 re-plumb
 re-pair
 re-install
 re-bind
 re-paint
 re-tile
 re-gild
 re-laminate
 re-glaze
 re-furbish
 re-produce
 re-surface
 re-create
 re-condition
 re-construct
 re-store



re- prefix

1. Again: anew
2. Backwards: back

Two letters say it all!

It doesn't matter what you call your business - your profession - your passion.

If you derive inspiration by looking *back* in time . . .

If you seek to give expression *anew* to our cultural heritage . . .

You belong at **RESTORATION**®

RESTORATION — the largest assemblage of products, services and expertise dedicated to the traditional and historical marketplace.

A unique 3-day exhibition and conference where you can:

- See hundreds of exhibits displaying materials, products and techniques for preserving or re-creating building exteriors/interiors, landscapes/gardens, and collections of all types
- Learn how to apply what you see on the exhibit floor at dozens of seminars and panel discussions
- Share your experiences with thousands of your peers

Mark your calendars for:

RESTORATION 97

April 18-20, 1997

The Inforum
 Atlanta, Georgia

RESTORATION/CHICAGO

October 17-19, 1997

The Merchandise Mart
 Chicago, Illinois

For information call, fax or write today!

Specify show and whether you are interested in exhibitor or visitor information.

RAI/EGI Exhibitions, Inc.

129 Park Street, North Reading, MA 01864 USA

tel 508.664.8066 (visitor info)

tel 508.664.6455 (exhibitor info)

fax 508.664.5822

e-mail: show@raiegi.com

see our web page at <http://www.raiegi.com>

®RESTORATION is a registered trademark of RAI/EGI Exhibitions, Inc.

RESTORATION®

DEDICATED TO THE TRADITIONAL AND HISTORICAL MARKETPLACE

Explore new horizons...

EDUCATIONAL OPPORTUNITIES

COLLEGE DEGREE PROGRAMS

Australia

Peninsula School of Art/Monash University
Bronwyn Hughes, Coordinator of Glass
Studies
McMahon's Rd.
Frankston, Victoria 3199, AUSTRALIA
(011) 61 3 9904 4343/(011) 61 3 9904 4652
fax
D, F, H, P, R

Washington

Prof. W.B. Grosvenor, MAT
Anni Ryan
Art Dept., Whitworth College
300 W. Hawthorne Rd.
Spokane, WA 99251
(509) 466-1000 ext. 4472/(509) 466-3221 fax
A, C, D, I, L, P, S, O Thincasting, Dalle de
Verre ▲

United Kingdom

Swansea Institute of Higher Education
Architectural Glass Department
Alexandra Road
Swansea, Wales SA1 5DU
011-1792-481179 phone & fax
A, D, E, F, H, I, L, P, R, S, T, U

COLLEGE CREDIT COURSE

Michigan

Harold Eberhart, Master Glassblower
University of Michigan
H.H. Dow Bldg Chemical Engineering
2300 Hayward
Ann Arbor, MI 48109-2136
(313) 764-3385/(313) 764-0459
G, O: Lamp (Torch) Glassblowing for Boro-
silicate (Pyrex) and Soda Lime Glass

United Kingdom

Swansea Institute of Higher Education
Faculty of Art and Design
Rodney Bender
Townhill Road
Swansea, Wales SA2 0UT
011-1792-481285 / 011-1792-205305 (fax)
A, D, E, F, H, I, L, P, R, S, T, U

ORGANIZATION-SPONSORED PROGRAMS

New Jersey

Markeim Art Center
Stained Glass Program
Paul Friend, Artist In Residence
Lincoln Ave. & Walnut St.
Haddonfield, NJ 08033
(609) 795-6336 / (609) 428-1199 fax
D, L, P, R, T

ORGANIZATION-SPONSORED CLASSES

North Carolina

Glass Extravaganza
Vicki Payne
6006-B Old Pineville Rd.
Charlotte, NC 28217
(704) 522-9900/(704) 522-9925
D, F, L, T, U, O Overview Stained Glass
Techniques

INSTRUCTORS

Colorado

Barbara Saul
Creative Stained Glass Studio
85 S. Union Blvd. Unit C
Lakewood, CO 80228
(303) 998-0444/(303) 988-2013
D

Ed Broadfield

9665 W 23rd Avenue
Lakewood, CO 80215
(303) 202-2999
G

Michigan

Harold Eberhart, Master Glassblower
University of Michigan
H.H. Dow Bldg Chemical Engineering
2300 Hayward
Ann Arbor, MI 48109-2136
(313) 764-3385/(313) 764-0459
G, O: Lamp (Torch) Glassblowing for Boro-
silicate (Pyrex) and Soda Lime Glass

Barbara Krueger, MS (Historic Preservation)
4450 Fenton Rd.
Hartland, MI 48353
(810) 887-1283/(810) 887-2165 fax
C, D, H, L, ●

New York

Ellen Mandelbaum, MFA
Ellen Mandelbaum Glass Art Studio
10-20 45 Road
New York City, NY 11101
(718) 361-8154
D, P, O: Architectural Stained Glass ■▲

Virginia

Ronald Neill Dixon, N.D.D.
(Nat'l Diploma of Design for Stained Glass
from Great Britain.)
977 Seminole Trail, Ste. 298
Charlottesville, VA 22901
(800) 934-2565/(804) 845-1947 fax
D, H, P, O: Cartooning.

EDUCATIONAL OPPORTUNITIES

Washington

Prof. W.B. Grosvenor, MAT
Art Dept., Whitworth College
300 W. Hawthorne Rd.
Spokane, WA 99251
(509) 466-1000 ext. 4472/(509) 466-3221 fax
A, C, D, I, L, P, S, O Thincasting, Dalle de Verre ▲

INDEPENDENT WORKSHOPS & SEMINARS

Arizona

Antonius Glass Studios
Jim Antonius
2118 Old Kettle Dr.
Prescott, AZ 86301
(520) 445-0905 (call to fax)
A, D, F, L, P-Reverse, Q, O: Glue Chipping

Hartman's Glass Art Studio
Judi Hartman
2710 North Steves Blvd. #10
Flagstaff, AZ 86004-3952
(520) 526-4911 Phone • (520) 526-6990 Fax
glassart@primenet.com
A, C, F, G, L, ●

California

Diaphanous Glass Beads
Kim Osibin & Leah Fairbanks
P.O. Box 151613
San Rafael, CA 94915-1613
(415) 472-6070 or (415) 485-1369
Q

Colorado

Creative Stained Glass Studio
Barbara Saull/Amy Nowell
85 S. Union Blvd. Unit C
Lakewood, CO 80228
(303) 988-0444/(303) 988-2113 fax
A, C, D, F, G, L, P, T

Kansas

Beardon Stained Glass
Doug Beardon
7600 Metcalf
Overland Park, KS 66204
(800) 473-4527
C, L, T

Massachusetts

Glass Workshop
Caryn Samuell
P.O. Box 441
Barnstable, MA 02637
(508) 362-0175/(508) 362-1581
A, C, D, F, L, T

Timberwolf Studios

Kevin Frank
PO Box 247
Lawrence, MA 01842
(508) 681-7707/(508) 685-2479 fax
F, P

New Hampshire

Environmental Glass Associates
Dick Millard
RR #1 Box 196
Antrim, NH 03440
(603) 588-2378
P, O Transparency sketches

New York

Albert Stained Glass Studio & Fusing Center
Al Husted
57 Front St.
Brooklyn, NY 11201
(718) 625-6464
C, D, F, L, P, R, T, O: Mosaics

Hands On Glass Studio

Rodi Robner
261 Baker St.
Corning, NY 14830
(607) 962-3044
F, G, O Copperwheel engraving

Stained Glass Imagery, Inc.

Robert Lennox
1294 Forest Ave.
Staten Island, NY 10302
(718) 720-7527 Phone/fax
A, F, P

Legend

A: Abrasive Etching & Engraving
B: Beveling
C: Copperfoil
D: Design
E: Chemical Etching
F: Fusing, Slumping & Warm Glass
G: Glass blowing & Hot Glass

H: History & Philosophy
I: Installation & Structure
L: Lead Glazing
M: Metal Leafing
P: Glass Painting
Q: Bead Making
R: Restoration
S: Screen Printing

T: Soldering Techniques
U: Business
W: Brilliant Wheel Cutting
O: Other (specific technique)

Instructor certification:

■ SGAA Certified
▲ College Affiliated
● Other

Disclaimer—STAINED GLASS magazine promotes programs and instruction in the art of stained glass, but does not represent the legitimacy or competence of any programs, instructors, courses or instructional media or materials, in any form, electronic or otherwise. STAINED GLASS magazine makes every effort to ascertain the qualifications and competence of instructors and the professional content of materials furnished. However, it is the responsibility of each student to inquire and thoroughly verify the competence of any instructor listed and the professional content of any material furnished or recommended. STAINED GLASS magazine does not endorse, support or comment on any program or instructor. It is the student's responsibility to inquire and obtain any curricula vitae for an instructor and the content of any course offered. Neither STAINED GLASS magazine nor the publisher of STAINED GLASS magazine are in any manner liable or involved in disputes between any parties, students, individuals or organizations using the list published in STAINED GLASS magazine. Comments or communications concerning any course, instructor or individual person associated in any manner with the lists offered or materials furnished are solicited and will be held in strict confidence.

For information on how to reach thousands of potential students in this Educational Opportunities Section, please contact:

Stained Glass Magazine
6 SW Second St. Suite #7
Lee's Summit, MO 64063

Or call toll-free:

1-800-438-9581

Stained Glass Mart

PAINTING: MOST STYLES. Specializing in realistic. Call or write for brochure. Bryan Lewis, PO Box 6694, Lee's Summit, MO 64064. (816) 524-9907

WIRE: TINNED COPPER—gauges 14-20, \$3⁰⁰/lb., 50 lb. spool (bulk) F.O.B. Connecticut. Bare brass and copper also. Nonferrous Metals Co., (860) 274-7255 / (860) 274-7202 (fax).

WANTED—stained glass craftspeople. Opportunity to restore stained glass windows by Tiffany, Sullivan, Lamb, Connick, Wright and other masterworks. We have a large international art department that will give you the opportunity to help create some of the finest new windows being made today. Positions for apprentice, craftsman and field-crew foreman.

Pay based on skill and productivity. Field-crew foremen earn \$1000 to \$1600 per week. With Blue Cross Health Insurance and paid vacation. Only career-oriented professionals need apply. Send resumé to Bovard Studios Inc., 3007 W. Grimes Avenue, Fairfield, Iowa 52556.

BRASS ENGRAVING—Sign your work with a brass plate. Name or studio and year on 1/4" brass strip you solder to came, foil, lamps, etc. Sample \$3⁰⁰. The Brassplate Engraving Co., 1618 Central Ave. NE, Minneapolis, MN 55413 (612) 789-3624

ARTIST WANTED with experience and imagination for stained glass window design. Looking for knowledge of traditional church design with ability to go beyond and create innovative artwork. Write to: Mark Schoem,

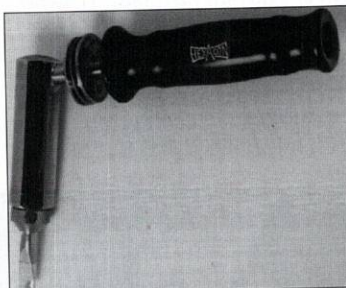
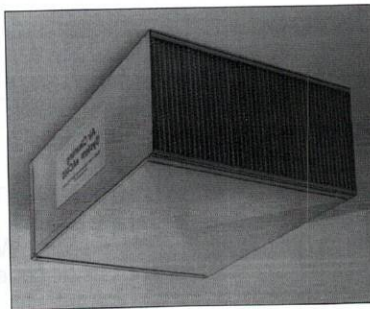
Ancient Arts, 333 W 7th St., San Pedro, CA 90731 or call (310) 832-7613 or fax (310) 832-3891.

FOR SALE—Stained glass studio and home for sale in Scottsdale, Arizona. Great opportunity to own a well-established business in a prime area. The full-service studio has been in business for more than 20 years. Home is ranch-style four bedroom, on one acre. Send request for further information to: 11424 North 71st Street, Scottsdale, AZ 85254.

HERITAGE GLASS is leaving the dalle glass market to focus on their flooring market. The remaining inventory is being sold at a discount. Call or fax for current color list and pricing. Phone: (801) 752-5501 / fax: (801) 752-3323

New Products

PSI Woodworking Products introduces a new compact AC465 Air Cleaning System. 12" x 24" x 30" and weighs only 39 pounds. This filtration system will recirculate the air in a 20'x20' work shop eight times per hour using a washable pre-filter and a replaceable high-efficiency internal three-pocket bag filter. The unit moves 465 cubic ft of air per minute and runs on normal household current (110V/3a). A larger model AC930 carries twice the output, weighs 49 pounds, and cleans the air in a room double the size. This system runs on 110V/6a. **For more information circle 1 on the reader service card.**



25 to 300 watts. **For more information circle 2 on the reader service card.**

The Hatchet by Hexacon is a unique soldering iron constructed with head and tip angled at 102 degrees to the handle and allows the artist to solder in a more natural position to eliminate hand strain and arm and back fatigue. The Hatchet is available in models from

Diamond Glass Art has developed The King Krusher, a new system for recycling scrap and surplus glass. This hand-held device allows one to crush glass with minimal effort. The crushed glass can then be used to create kaleidoscopes, jewelry boxes, etc. while removing waste glass from the environment. **For more information circle 3 on the reader service card.**



Nikon introduces the F5 35mm camera, with the new 3D Color matrix meter with 1005-pixel RGB exposure sensor that evaluates scene brightness, contrast, and adds color evaluation to exposure calculations. The new metering system incorporates distance and, for the first time, color into the exposure equation. The F5 is 60% faster than any current 35mm camera. **For more information circle 4 on the reader service card.**

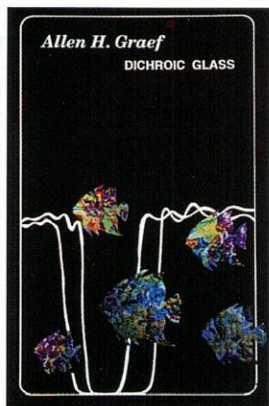


Supply Catalogues

Save Time and Money! Order your stained glass supplies from the comfort of your home or studio! Circle the number of the catalogue or catalogues you want on our special "Catalogue Section" of the Reader Service Card, then mail the card in. **It's FREE!**

PLEASE NOTE: Orders for catalogues for which there is a charge cannot be processed without payment. Send check or money order with the Reader's Service Card.

LEGEND: (R)= Retail catalogue; (W)= Wholesale catalogue; (B)= Both retail and wholesale; (M)=Manufacturer; (D)=Distributor



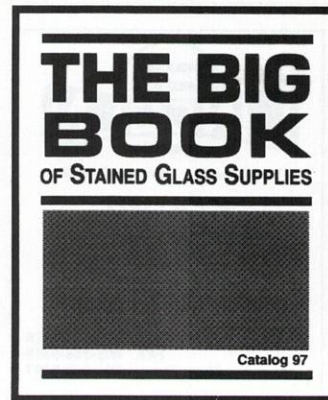
Allen's cover design has multi-colored fish swimming through the optical wave-length of the dichroic color magenta. The revised catalogue describes how dichroic glass is made and all the dichroic products that we make. The catalogue also describes our newest product—"Dichropat"® patterned dichroic glass. Send \$3 to: 3823 E. Anaheim St., Long Beach, CA 90804. Allen H. Graef Dichroic Glass (W) Circle 501 on the Reader Service Card.



Denver Glass Machinery, the manufacturer of quality art glass equipment, has a new color catalog and price list available on their electric furnaces, kilns, annealers, bandsaws, bevelers, engravers, and more. Denver Glass Machinery, Inc. (W) Circle 502 on Reader Service Card.



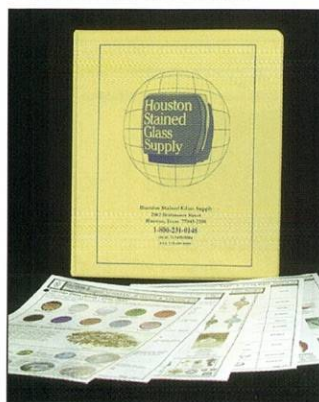
For 70 years Franklin Art Glass has been a reliable source for stained glass, tools and supplies. We offer leading product lines at competitive prices and guarantee prompt service. Franklin Art Glass. (B) Circle 503 on Reader Service Card.



Ask your retailer for the largest selection of creative glass products available... **THE BIG BOOK.** Stained glass, warm glass, hot glass and glass mosaic. Creative Craftsmen Company, Inc. 1620 Frontenac Road, Naperville, IL 60563. (630) 420-0890. (D) Circle 504 on Reader Service Card.



Producers of high-quality handcast art glass since 1978. Mottled and silver base glass is our specialty. Brochures and sample sets available. (408) 423-9593 (408) 423-9593 fax. Oceana Glass Co. (W) Circle 505 on Reader Service Card.

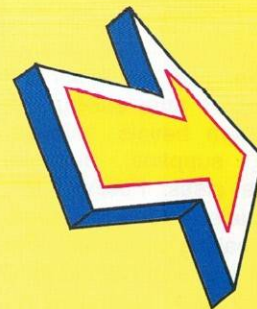


Houston's new 1997 Master Catalog includes the industry's first full-color glass selection guide. More than 5000 products are listed, including the most extensive selection of beveled glass and stained glass available. Phone 1-800-231-0148. Fax 713-690-0009. Internet: <http://www.pmadt.com/hsgs>. Houston Stained Glass Supply (W) Circle 506 on Reader Service Card.



100-page color catalogue contains over 3000 products: stained glass, bevels, tools, equipment and more. Since 1972, we've supplied hobbyists and professionals with quality products, friendly advice, and fast shipping. Delphi Stained Glass (B) Circle 507 on Reader Service Card.

Use the Reader Service Card to request product information from these Catalogue Advertisers!




Continued next page...

Supply Catalogues

Many leading retailers, wholesalers and manufacturers will provide you with valuable information just for the asking. Take advantage of the *Stained Glass* "Catalogue Section" today!

PLEASE NOTE: Orders for catalogues for which there is a charge cannot be processed without payment. Send check or money order with the Reader's Service Card.

LEGEND: (R)= Retail catalogue; (W)= Wholesale catalogue; (B)= Both retail and wholesale; (M)=Manufacturer; (D)=Distributor



**WHOLESALE
STAINED GLASS
DISTRIBUTORS**

LINCOLN

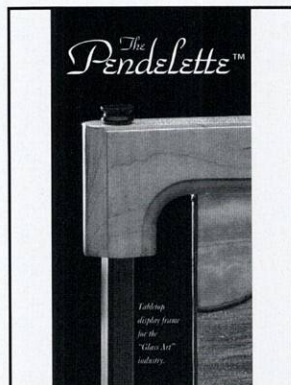
510 S 52nd St Tempe AZ 85281

**WHOLESALE
STAINED GLASS
SUPPLY
CATALOG**

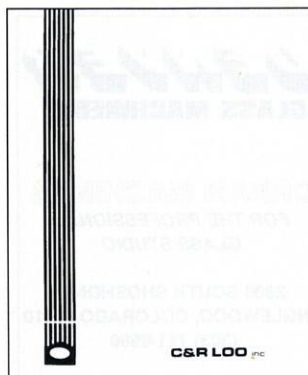
Toll Free 800-527-1419
FAX 602-968-6358
Metro Phoenix 602-968-9297

Serving the Stained Glass Trade Since 1974

Catalogue \$5.00, refunded on first purchase within six months. Tax number required for catalogue. Stained Glass tools, supplies. Super-Saver prices on tools in lots of eight or more. Lincoln Distributors (W) Circle 508 on Reader Service Card.




Framing designed to display your "glass art" on tabletop, desk, windowsill, etc. Request color brochure for wood choices, groove widths and sizes available. We also offer hanging and firebox screen frames. (423) 397-1391 or (800) 303-3980 (fax). Blackcreek Enterprises Inc. (R,W,M) Circle 509 on Reader Service Card.



The C & R Loo, Inc. Wholesale Catalogue, offering a complete selection of the finest quality art glass supplies, including Fischer real antique glass, German tools, handmade glass jewels, Bullseye, Kokomo, Wissmach, lead, copperfoil, dichroics, etc. C & R Loo, Inc. (W) Circle 510 on Reader Service Card.



Source One has beautiful bronze Tiffany reproduction and zinc lamp bases with fine detail, quality crafting, and hand-rubbed bronze finish at affordable prices. Color photo packs and free catalogues available. Source One Lamps (B) Circle 511 on Reader Service Card.



**Northwest
Art Glass**

9003 151st Ave NE Redmond, WA 98052 (206) 881-8500
Toll Free All USA & Canada 1-800-858-9444
Fax All USA & Canada (206) 881-9000
Hours: Monday thru Friday 9:00 a.m. to 4:30 p.m.
Saturday 9:00 a.m. to 1:00 p.m. September thru May

Full-line glass distributor and exporter specializing in Spectrum bevels, clusters, tools, supplies, dichroic, fusible glass. Fusing kilns, materials. Moretti rods, beadmaking equipment. For catalogues send \$7.50 (\$10 outside USA) Northwest Art Glass (B) Circle 512 on Reader Service Card.

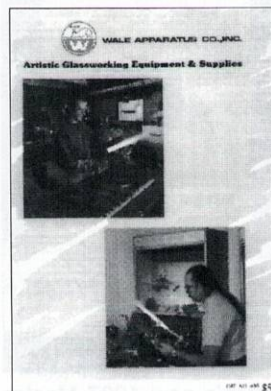
VIDREAUX

PRODUCTIONS

presents


Extended Introduction

This comprehensive four video set is an introduction to the ancient art of stained glass painting. All basic techniques and materials are covered. Brochure available. Vidreaux Productions. (R) Circle 513 on Reader Service Card.



For stained glass artisans, beadmakers, and anyone who crafts glass, Wale's 49 page catalogue lists fine tools and materials—whatever it takes to create the glass designs of your dreams. Wale Apparatus Co., Inc. (B) Circle 514 on Reader Service Card.

**STAINED
GLASS
PRODUCTS**



United Art Glass!

1032 E. Ogden Avenue • #128
Naperville, IL 60563

Established in 1970 as a full-service Stained Glass store supplying all products and services to the Hobbyist and Resale clientele. Quantity discounts offered in our comprehensive catalog. United Art Glass (R) Circle 515 on Reader Service Card.

Supply Catalogues

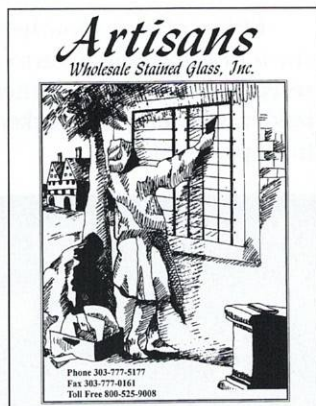
Save Time and Money! Order your stained glass supplies from the comfort of your home or studio! Circle the number of the catalogue or catalogues you want on our special "Catalogue Section" of the Reader Service Card, then mail the card in. **It's FREE!**

PLEASE NOTE: Orders for catalogues for which there is a charge cannot be processed without payment. Send check or money order with the Reader's Service Card.

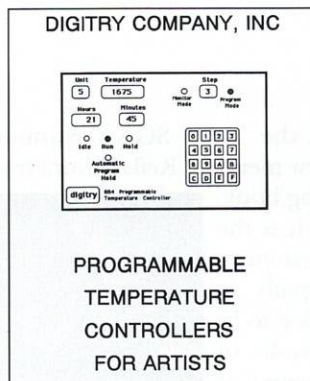
LEGEND: (R)= Retail catalogue; (W)= Wholesale catalogue; (B)= Both retail and wholesale; (M)=Manufacturer; (D)=Distributor



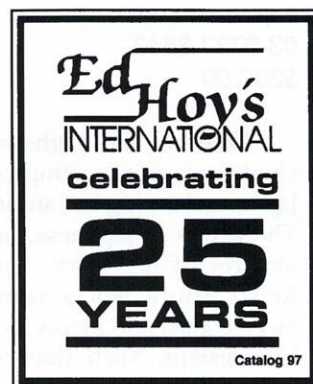
Our catalog features 169 pages of the most current and reputable items for the stained glass community. Call for a FREE copy of your most up-to-date source book. 1-800-229-7728. Franciscan Glass Company, Inc. (W) Circle 516 on Reader Service Card.



Artisans Wholesale Stained Glass is a full-line stained glass distributor. We take pride in having a knowledgeable staff who delivers fast, friendly and reliable service to our customers' needs. Artisans Wholesale Stained Glass, Inc. (W) Circle 517 on Reader Service Card.



Designed for glass and ceramic artists, Digitry Temperature Controllers are ideal for fusing, slumping, beadmaking, annealing, etc. Used in studios and schools worldwide, where they are prized for their ease of use and flexibility. Tel 207-774-0300; fax 617-484-5220. Digitry Co. Inc. (B) Circle 518 on Reader Service Card.



Celebrating 25 years of international wholesale distribution of 8000 products for stained, fused, torchworking, mosaic and glass painting work. We are Service, Stock and Selection. Ed Hoy's International. (W,M) Circle 519 on Reader Service Card.



American Bevel Inc. is a manufacturer of bevel glass clusters. We have 84 different clusters. Our new "Designer" program is a full, stand-alone CAD program. Check us out at <http://www.americanbevel.com>. American Bevel Incorporated. (B, M) Circle 520 on Reader Service Card.

Look for these Catalogue Advertisers on *Stained Glass* Magazines internet home-page:

<http://www.artglassworld.com/mag/sglass/sglass.html>



Book Reviews

Glass Art by Keiko Miura

1991

Shunjuhsha Co. Ltd.

2-18-6, Sotokanda

Chiyoda-Ku

Tokyo 101

Japan

03-3787-3643

\$200.00

One of the highs of the 1996 SGAA Summer Conference was meeting a new member, Keiko Miura from Japan and seeing her stunning book. The text is in Japanese, but it is the pictures of her work that astonish. Keiko Miura works principally in faceted glass and pieces molded to fit her designs. Such thick chunks of glass are rarely seen. The name of her company is "Roclair"—rocks through which light shines.

The installations are mostly of monumental size; some are several stories high and some are walls of great length. The book itself is large: 140 ten-by-fourteen inch pages. Two or three pages are devoted to each installation. Each illustrates Miura's watercolor designs, presents striking photographs of whole interiors and shows details of the glass.

While color is the predominant impression, there are some installations of all clear glass—rods and buttons combined with large sheets (pp. 6 - 17). Although large chunks dominate, still there is one work which consists of tiny flowers (pp. 84 - 85).

Miura's are mostly abstract designs, but there are some charming little ducks (pp. 128 - 9), a window wall of water lilies (pp. 89-91), and from a Christian church comes a Good Shepherd with a flock of sheep (pp. 56 - 59), each of which has a very distinct and charming personality. One of the most moving works is a depiction of the head of Jesus crowned with thorns (p. 45).

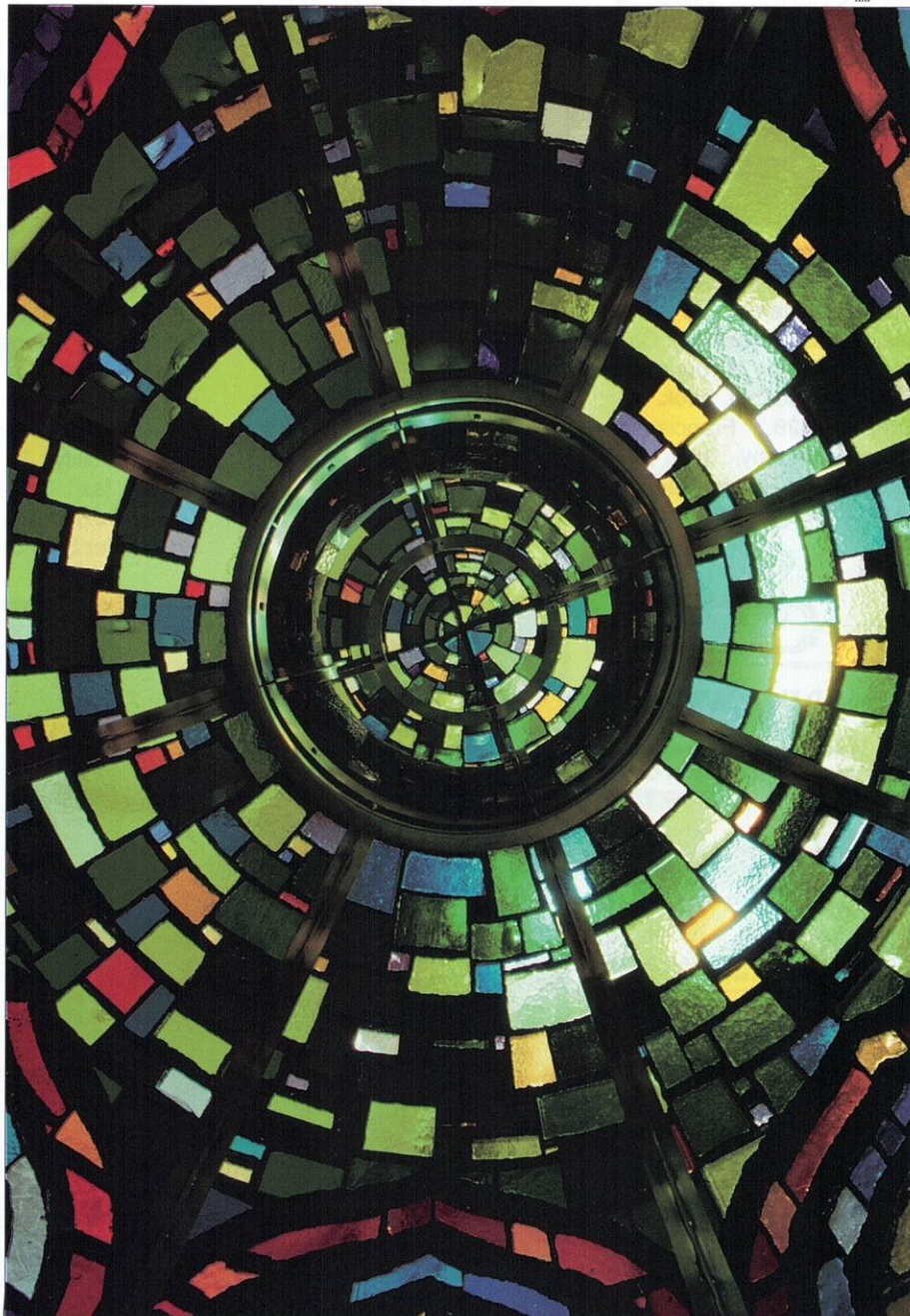
Some of the installations are in churches and homes, but most are in

secular public buildings—in department stores, club houses, an elevator lobby in an office building, an auditorium in a concert hall and the reception area of the headquarters of the Hiroshima Bank. Perhaps the most unusual is a colored glass floor with a fountain.

On the last four pages are smaller pictures of Miura at work in Germany, where her glass is made, stirring molten glass and producing shell-shaped glass poured in molds. She is also shown with molded pieces of very large size, which you will see in a completed installation for IMP, International Market Place (pp. 109 - 113).

Other photos show her in her studio in Japan, where she is drawing a huge cartoon with a paintbrush so large it resembles a broom. Another shows Miura seated on a step ladder, watching her workers chopping and laying out the huge pieces of glass.

SG
fini



"The power of glass to convey color is quite unique; no kind of painting can at all come up to it. It is true, we cannot have the infinite gradations of our great color artists; we cannot round one tint imperceptibly into another, as it is given them to do; so much we grant; but for power and brilliance, or even harmony and sweetness, glass well made and skillfully used has a scale of beauty which no gradated pigments laid on an opaque surface can hope to equal. Glass is a luminous material, full of points which catch the light like the facets of a diamond; and it is this which accounts for the gem-like luster of old windows. Always light, because always suspended against the day, they yet respond with indescribable sympathy to every change in the heavens, answering one by one, sweet vassals of sunbeams, according to place and aspect, to the inspiration of light. In the north and east, they proclaim the sun's rising with a flush of radiance, which gradually melts into repose, as the great exhibitor passes round the south to glow there in the splendor of noon, and finally blazes and sinks behind the glorious western window, which waits all day for that beatitude of sunset, with which its beauty is identified."

—Francis Wilson Oliphant,
from *A Plea for Painted Glass* (1855)

Franklin Art Glass Puts Great Color In Your Hands

We've been supplying quality stained glass and supplies to the industry for more than 70 years. That's the best recommendation we can give you that our prices, selection and service are the best you will find.



Franklin Art Glass

222 East Sycamore St. • Columbus, OH 43206

To order, call toll-free:
1-800-848-7683 or fax: (614)-221-5223

Circle 92 on Reader Service Card

T O Y O

SUPERCUTTER® SERIES



TC-1

Comfort-grip Supercutter.®

A lightweight, molded barrel,
tapered and contoured for
a comfortable grip.

A choice of six fluorescent
colors so you will never
misplace your cutter again.

Like all the tools in the
Supercutter series, the
Comfort-grip features a
replaceable cutting unit
with a self-oiling, precision-
ground Toyo wheel.

© 1995 Glass Accessories International, Inc.

G A I

Circle 18 on Reader Service Card

Dick Millard

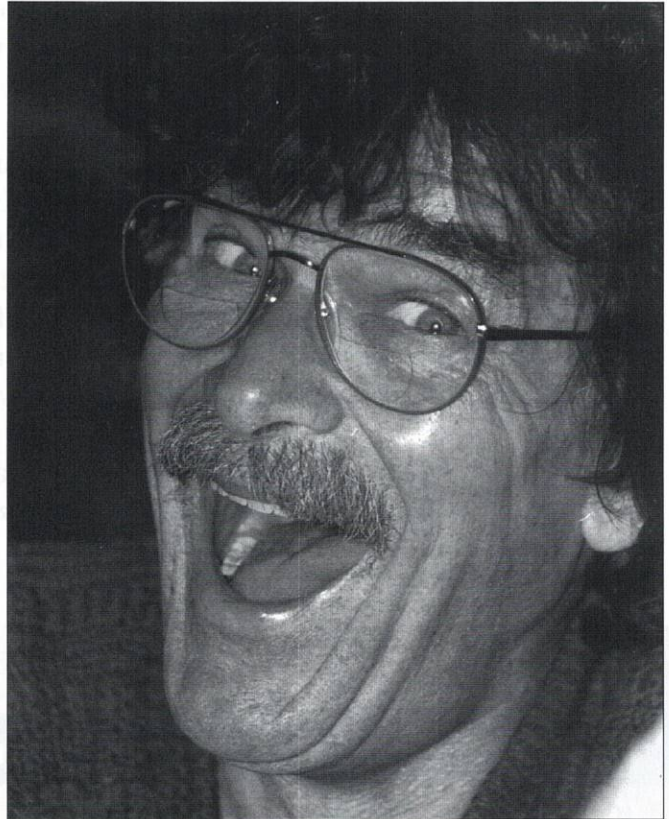
by Kimberly Kicera

What kind of background does an artist need to be successful in stained glass? Of course, there is no one answer; any successful artist or studio owner would tell a different story. Sometimes that story is not what one might normally expect....

From his colorful parentage, to his earliest involvement in a landmark study of the developmental differences between twins, to his career as a child model and actor, to his oyster-picking days in Australia, to his earliest involvement in the field of stained glass at Rambusch Studios, Dick Millard has led a life as diverse as any individual in the stained glass field today. Millard is a former editor of *Stained Glass Quarterly* (Fall 1984 to Winter 1985), author of a book of basic painting and of more than 400 articles on stained glass, and a noted practitioner and teacher in the field of stained glass design and painting. His varied life has developed Dick Millard into an incredibly versatile and talented artist.

Millard's father was a painter and decorator from Melbourne, Australia, who ran away to sea at the age of 14 to work on sailing ships. His mother was born in La Plata, Argentina, of English parents who had migrated from Durban, South Africa. She was raised in South Braintree and Randolph, Massachusetts.

His parents met in New York City at the Loew's Lincoln Studio Apartments, located on the current site of the Julliard School of Music at Lincoln Center. The building was described by Thomas Craven in his book *Art in America* as housing the world's greatest concentration of practitioners of all aspects of the arts during the '20s and '30s. Dick's father had a studio there and needed a model. Dick's mother had moved to New York City to become a dancer at 14 and was modeling for a number of artists, including illustrator N.C. Wyeth and sculptors Anna Hyatt Huntington, Paul Manship and Malvina Hoffman to supplement her living expenses. Through a



mutual friend, they were introduced and married. She was 22. He was 40.

Dick and his identical twin brother, Ronald (Buddy), were born seven years later at the NYC Presbyterian Medical Center. During the '30s, the hospital was conducting a landmark study of the developmental differences between identical and fraternal twins. Dick and brother Buddy were a part of that study, which was to leave a lasting impact in the study of twins and twinning.

By the time they were three, Dick and Buddy were child models with the John Robert Powers modeling agency. They did ads for Del Monte, Sealtest, Bosco, Nestle's, Bloomingdale's and Campbell Soup. They also did fashion shows. The two most memorable to Dick are

A diverse life...

a fund raiser for "Bundles for Britain" in which he met the Duke and Duchess of Windsor and a show which was held at "Bring em Back Alive," Frank Buck's private zoo on Long Island.

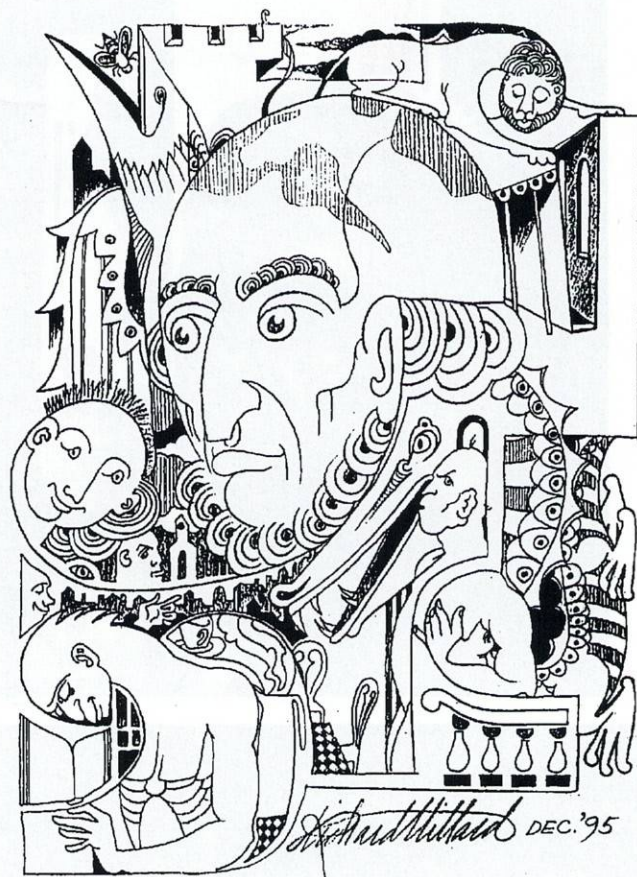
By the time they were six, the twins began careers as child actors with appearances in *This Rock*, starring Billie Burke (the good witch in *The Wizard of Oz*), Zachary Scott and Jan Sterling. Their second show was the Mike Todd production of *Catherine Was Great*, which starred Mae West, Gene Barry and John Houston. Maila Nemi, who was also in the show, went on to be known as "Vampira."

The last show Dick and his brother appeared in was *Seven Lively Arts*, starring English comedienne Beatrice Lillie and Bert Lahr, the cowardly lion in *The Wizard of Oz*. Music for the show was composed by Cole Porter, and the opening night decor was designed by Salvadore Dali.

Dick's appearance in *Seven Lively Arts* is one he will never forget, though one for which he'll never be



Above: Millard created this "fantasy doodle monogram" from inspiration he found in the work of Thomas Buechner and of Pablo Picasso. Millard is currently developing a series of these monograms.

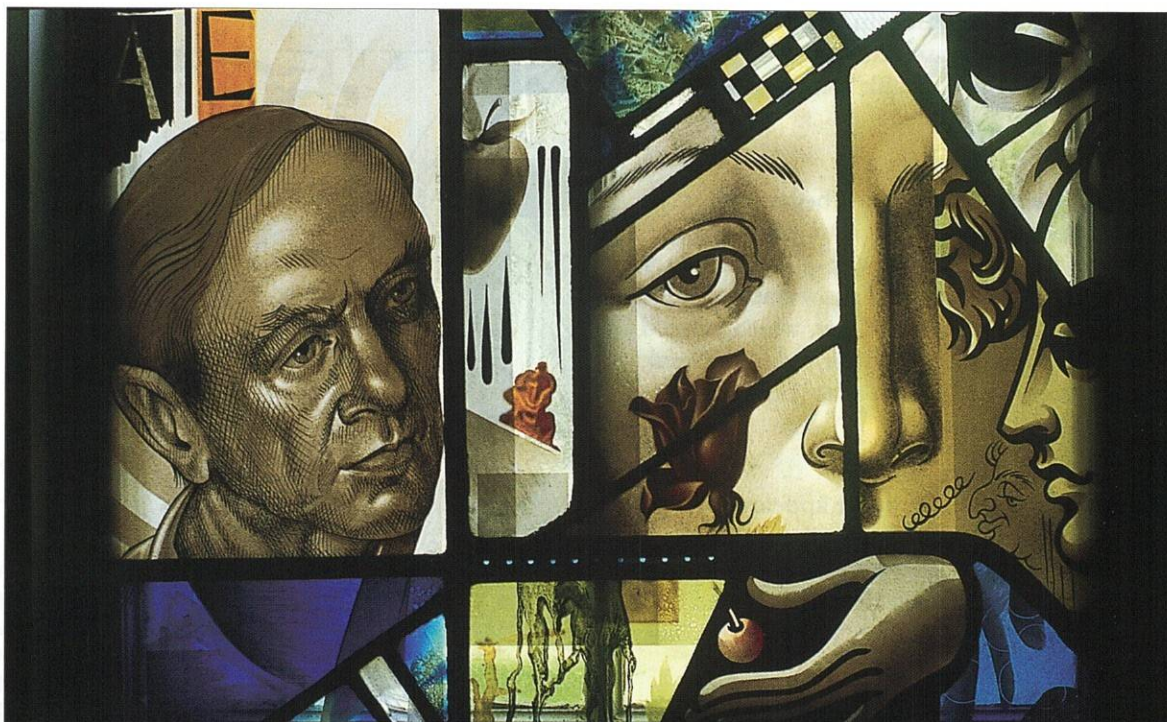


Above: From a series of sketches inspired by Thomas Buechner, an SGAA Honorary Member, whose work Millard saw at Corning Museum in New York. Buechner's work encouraged Millard to try his hand at caricature and whimsical drawings.

remembered. Cast as a girl, he was outfitted with a baby blue pleated satin dress, a flowered straw hat, blue patent leather shoes with pearl buttons and a braided blond wig. Dick recalls looking just like Joyce van Patten, a child actress he had worked with in *This Rock*. His father suggested Dick carried himself "with the elegance and grace of a hippo."

Dick and Buddy withdrew from the show prior to its closing because Buddy had been selected from more than 600 applicants to play the lead in Clarence Brown's *The Yearling*, with Dick as his understudy. Unfortunately for the Millard twins, while director Clarence Brown was traveling cross country to view selected candidates, he signed Claude Jarmon Jr. from his own hometown and never arrived in New York City.

a versatile talent.



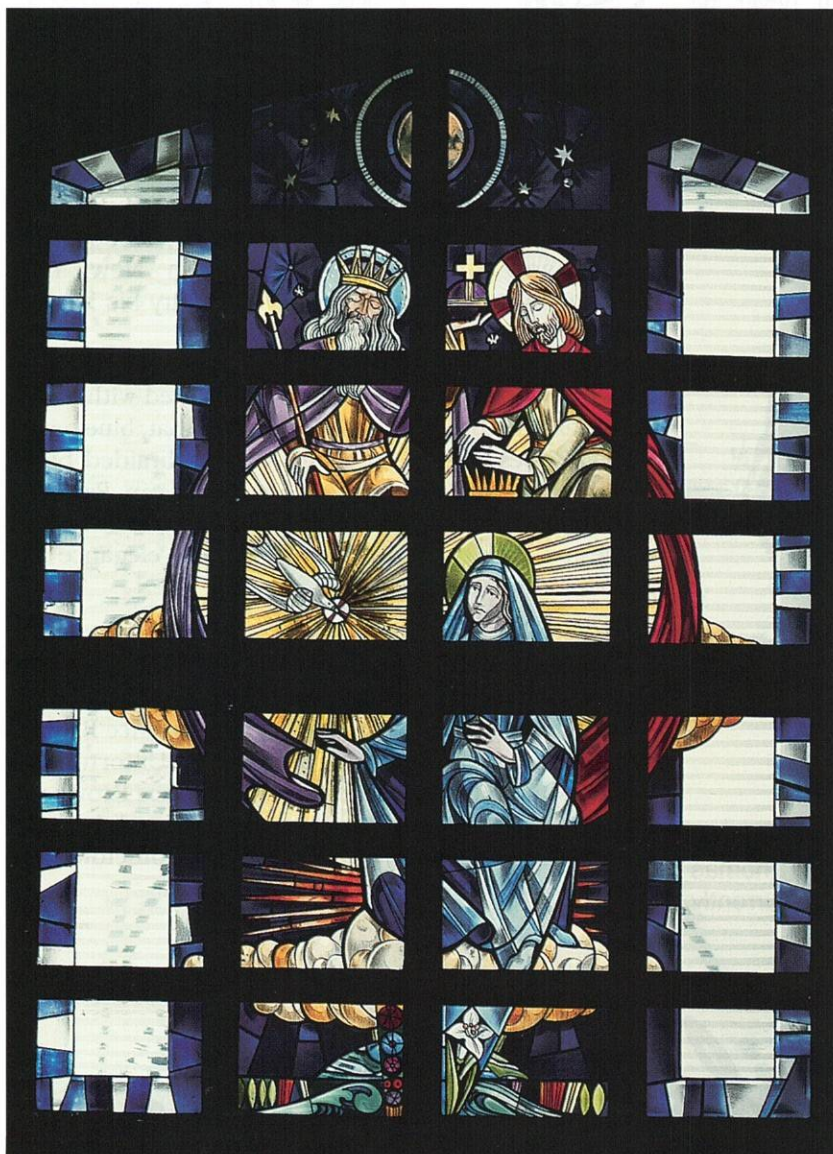
Because Dick and his brother missed out on roles in *Star Spangled Family* and *Barnaby and Mr. O'Malley* during their long wait for Clarence Brown, their mother became disgusted with show business, and the family moved to Plattekill, N.Y., where they lived for three years. They raised chickens and rabbits and lived off their acre-and-a-half vegetable garden.

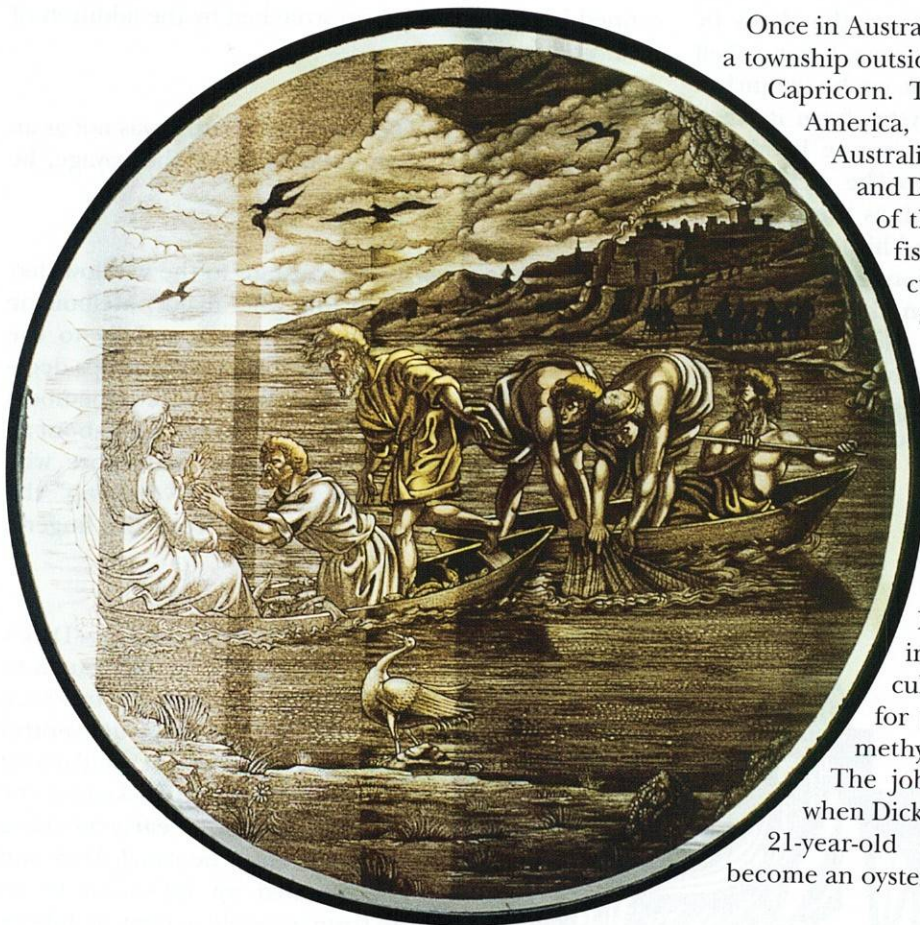
Three years later they moved to Mamaroneck, N.Y., because Dick's aunt, Jean Chadwick, needed help administering her dance school. Jean Chadwick—known to Dick and his brother as Auntie May—began her career as Edouardo Cansino's dancing partner. (Cansino was the father of Rita Hayworth.) Later she was an exotic dancer whose signature act began by her stepping down from a 10-foot high opaquely spangled champagne glass to perform scantily clad on stage.

While living in Mamaroneck, N.Y., Dick and his brother spent much of their free time at the Kentucky Riding Academy

Top: *Albinus Elskus*. This is the third panel in a series designed on "twentieth-century greats in stained glass." (24"x18")

Left: *Nativity*. (Approx. 6'x9', 1991) Millard designed this window for Rohlf's Stained and Leaded Glass Studio, Mt. Vernon, New York.





Above: Sample from 1996 of a painting procedure used to duplicate Sharp and Steel panels for Holy Apostles, New York City. It began with a clove oil tracing with quill, followed by two overmatts of water. A kerosene float bed with oil shading was then used for selected strengthening of shadows. A final flat matt on the reverse of the panel provides the finished work on the right half of the roundel.

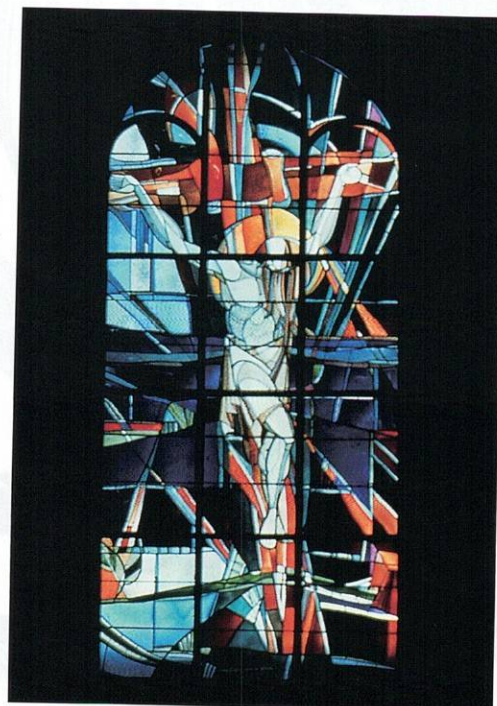
exercising, washing and grooming horses under the direction of Jim, a one-legged cowboy who had lost his leg to frostbite years earlier riding the range in Montana. It was on his way to the stables that Dick—lost in the world of his imagination—rode a borrowed bike into a parked car and lost the knuckle of his left thumb.

Soon after Dick's accident, his parents decided to migrate to Australia to join the family his father had left behind there. The family left for Australia in 1949 on the *Pioneer Reef*, a 12-passenger freighter. Dick shared his cabin with a jazz historian named Charlie and retired New Zealand prize fighter Tom Heeney, who told his story of losing his chance at the heavyweight boxing championship of the world to Gene Tunney. The trip passed quickly in Dick's mind as he was constantly entertained by the practical jokes Heeney played on fellow travelers.

Once in Australia, the family settled in Lakes Creek, a township outside of Rockhampton on the Tropic of Capricorn. Though they were in 9th grade in America, they were placed in 6th grade in Australia. Discipline was strict at the school, and Dick recalls it was administered in one of three ways: a kidney punch, a closed-fisted punch to the temple, or "the cuts," which were administered by striking the tips of a child's finger with a slender bamboo cane. After receiving "the cuts" once too often, Dick left school vowing never to return.

Dick's first job upon his departure from school was with W.J. Hoare and Company in Rockhampton, Australia. He worked in the back of the grocery and agricultural-supply store making up orders for bran, pollard and mash, kerosene, methylated spirits and horhound beer. The job ended after three short months when Dick received an adventurous offer from 21-year-old entrepreneur Charlie Jones to become an oyster picker on the Great Barrier Reef.

Dick's adventure in the oystering business was not as romantic as he hoped. The oyster boat was an old wooden craft less than 30 feet long, and Dick's cabin was one of four bunks claustrophobically confined behind the noisy, exposed, diesel-powered engine in the bow of the boat. As a picker, Dick was dropped off alone on a reef of one of 97 islands leased by Jones.



Left:
Crucifixion,
6'x13'.
Designed for
Advent
Glassworks,
Ft. White, FL,
1981.

Dick recalls harvesting oysters from the shells by tearing off and discarding the shell covers, leaving shell bases affixed to the reef. He'd squat on his haunches under intense sun, detaching the oyster from its shell with a movement holding the knife in one hand and drawing the blade toward his thumb. The nicks in his thumb burned in the salt water, and, as the tide rose, sand sharks gathered playfully around his legs attracted by the blood from his wounds. Occasionally sharks would brush his legs, creating abrasions from their rough skin. Dick recalls being left standing on the reef amid the sharks with the tide lapping in rapid advancement on his chest, trying to hold his day's pickings safely out of the water. Once back on board, dinner was always the same:

canned beef vegetable soup stretched by the addition of flour and water.

After two weeks, Dick knew his destiny was not as an oyster picker, and, upon completion of the voyage, he ventured in other directions.

His next job was as the assistant to the window decorators at Myer's Emporium, the major Melbourne department store. Dick regularly took a dolly to the warehouse on Tattersall Lane to pick up the props decorators needed for their window designs. He remembers one particular day when a passerby complained about all the naked mannequins in the department store windows, and he was assigned the task of "clothing" the mannequins with lingerie procured from the lingerie department.

The job at Myer's didn't last long, however, as Dick's mother and father decided the family should return to America. For Dick, the trip back to America was uneventful until he arrived at the Panama Canal. The ship docked for the night, awaiting early-morning entrance into the canal. Dick and Buddy accepted an invitation to go ashore from a couple of crew members. Once ashore, they found themselves at a night club sipping sodas and surrounded by "ladies of the evening." For country boys from the outback of Australia, the discomfort was beyond anything they had ever experienced. Fortunately, one of the crew members, sensing their discomfort, suggested they leave. Once back at the ship, Dick recalls his father spending the rest of the night explaining "the birds and the bees."

Upon arrival in New York City, they were met at the dock by their mother and driven temporarily to their aunt's home in Mamaroneck. Then the family found their own home in New York City, behind the Museum of Natural History. Their mother got a job in the layette department of Arnold Constables, the twins got jobs as magazine salesmen (which lasted one day) and then as stock boys for Welcome Wagon, and



Left: Illustration which accompanied a story entitled *The Tao of Glass* in the Spring 1996 issue of *Stained Glass Magazine*. Dick Millard is a former editor of *Stained Glass*.

their father went to work teaching apprentices for the "Master Painters," a group composed of the principals of the major painting and decorating companies in the city who would conduct the union negotiations in representation of the employers. As part of his job, Dick's father was required to teach classes to apprentices one day a week in a variety of disciplines, including graining, marbling, goldleafing and burnishing, applied decoration and color theory.

Shortly after their father started working at the trade school for the Master Painters, he met Viggo Rambusch Sr., who expressed the need for young boys for apprenticeships at Rambusch. Dick seized the opportunity, interviewed and was hired to work for Rambusch with the promise of an apprenticeship slot when one opened. Originally, he worked under Mr. Paulson, who was in charge of the filing, records, blueprints, matting and

mounting of sketches in the Church Interiors and Lighting Department. He worked as Mr. Paulson's assistant, running errands for the department. After a few months in that department and becoming increasingly enchanted with stained glass, he transferred to the seventh-floor stained glass design room. There Dick also ran errands for the department and produced scale layouts in India ink for the designers.

Soon an apprentice slot became available in the sixth-floor stained glass department. Dick applied and secured the apprenticeship position at a starting wage of \$22.77 per week. That was the commencement of his varied career in the stained glass field, which has spanned 40 years.



Thoughts On...

Kicera: Dick, what one person from your life was most instrumental in your development as a stained glass artist?

Millard: Many people were instrumental in my development as a stained glass designer and painter. Stephen Bridges was my mentor, yet Robert Pinart, Joep Nicolas and Robert Sowers were quite inspiring and generous, as was John Gordon Guthrie after my apprenticeship. There have been many more, including Albinas Elskus, Jean Jacques Duval and John Nussbaum.

Kicera: How would you describe yourself as an artist?

Millard: I am a stained glass designer/painter. "Artist" is the most over- and misused word in our medium, followed closely since the mid 1970s by the word "restoration."

I was trained in the studio ... required to accommodate the needs of many different clients. I'll call the style of my design "varied competent" without the pretension of calling it art. That is for others to determine. As for restoration, I hate that word. Unfortunately, I don't know of another whose range in addressing painting needs is as broad as mine.

Kicera: What one project in your life has brought you the most satisfaction?

Millard: There have been many. One of the more challenging was resurrecting the obliterated flesh painting on John La Farge's *Dawn Comes on the Edge of Night*, recognized as the apex in La

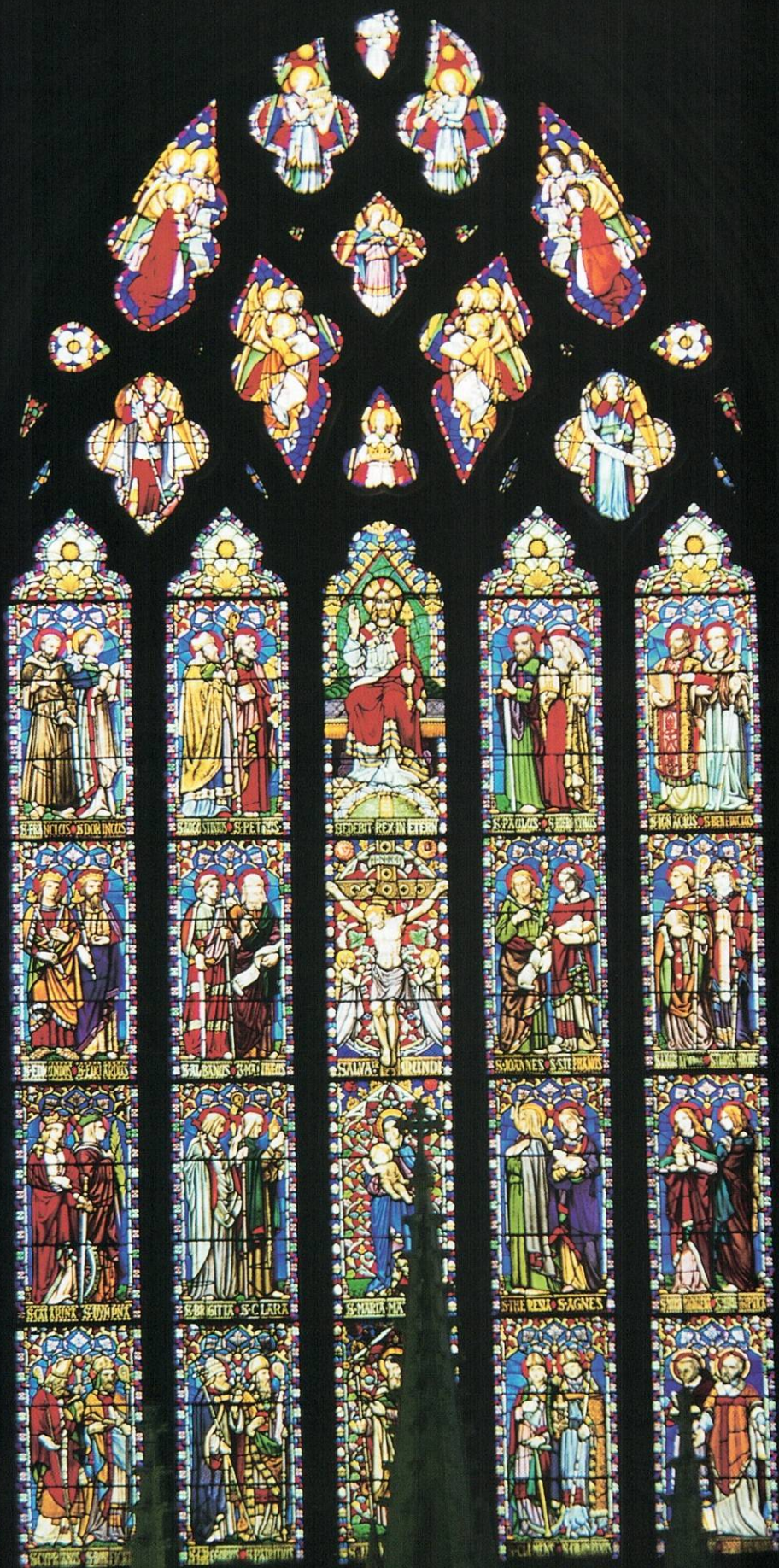
Farge's pursuit of the ideal figure in glass. It was purchased from the Packer Institute in Brooklyn for around \$30,000, and, after the needed refurbishing, it was on the market in Newport, Rhode Island for an asking price of \$2,000,000. It was sold to a California collector for an unknown price.

Kicera: Whose work in the field do you admire most? Why?

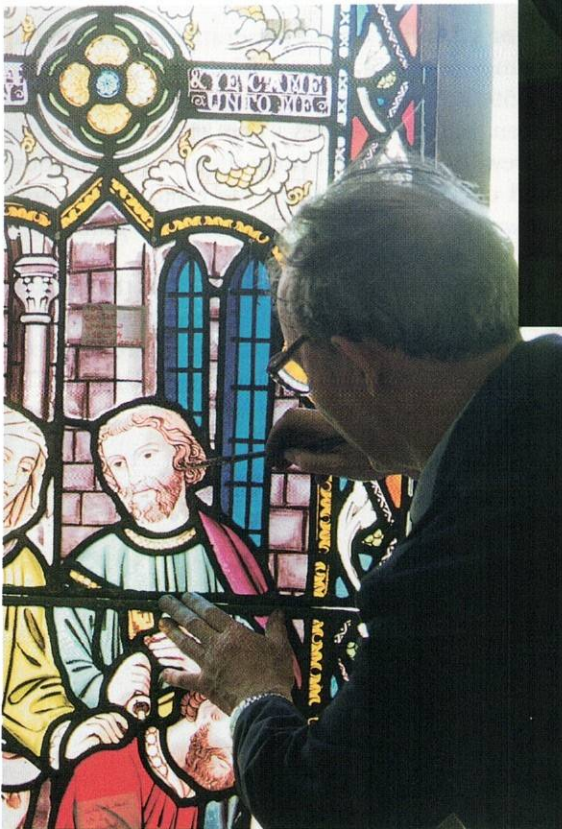
Millard: I admire Robert Pinart, Albinas Elskus, Sylvia Nicolas, Benoit Gilsoul, Jacques Duval, Hilda Sachs and George Meistermann, among others, because of their unique and exciting approaches to our medium as well as their respect for its properties and parameters.

Kicera: What advice would you give to a young person today who wants a career in the stained glass design field?

Millard: Because of the small number of training and apprenticeship opportunities available at qualified studios, getting into the field is not as easy as it was in the late '40s and '50s. In the absence of an apprenticeship, learn anatomy, drawing, composition, color and design. The same broad principles apply to all media. Then gain exposure to the material of glass and take courses provided by qualified instructors. I was very impressed, for example, with the Swansea School in Wales. They seemed to provide excellent training by skilled and experienced practitioners. Probably the best advice I could give, however, is to do your homework to find the best instructors in different disciplines within glass.



Restoring an Irish Masterpiece



Opposite Page: *East Window*, St. James Church, Dublin, Ireland. This window was restored by Abbey Stained Glass Studios after it was destroyed in an accidental explosion in Dublin. This window is an example of the mid-Victorian revival of stained glass.

Above: The painted glass is fired on a Plaster of Paris tray.

Left: A craftsman inspects the restored artwork.

Article by Ken Ryan, Managing Director of Abbey Stained Glass Studios, Dublin

Up to the early 1900s most of the stained glass windows in Ireland were imported from Germany and France. These were very pleasing works in light pastel shades with large pieces of painted glass and a minimal amount of lead. However, there is a sameness about these works as one travels through the country and visits different churches.

After the turn of the century there was an explosion of talent in Ireland in the design and manufacture of stained glass windows. An *Túr Gloine* (The Tower of Glass) was established by a group of artists such as A.E. Child, Sarah Purser, Michael Healy, Evie Hone, Wilhelmina Geddes, Beatrice Elvery, Ethel Rhind and Catherine O'Brien in 1903; they produced fine works for almost 50 years. However, the most outstanding artist Ireland has produced was Harry Clarke (1890-1931). In his short lifetime he worked at a frenzied pace and gathered around him a group of highly qualified artists who could follow his unusual techniques.



The perished lead was stripped away and each piece of glass cleaned.

New styles of stained glass called for very dark colors: purples, blues, greens and rubies. They also contained a large number of leads throughout as a part of the artwork. Great emphasis was placed on acidizing and plating glass, and two or three layers of glass were quite common.

One of the most impressive examples of Irish stained glass can be found at St. Brendan's Cathedral in Loughrea, County Galway. This Cathedral is home to the greatest cross section of stained glass in Ireland. Among the artists whose work can be seen at St. Brendan's is Michael Healy, who began his stained glass work in 1904 and completed his final commission in 1937. His West Transept windows depicting *The Ascension* and *The Last Judgement* are a joy to behold when the afternoon sun shines through the colored jewels in the windows.

Among Harry Clarke's technical and artistic masterpieces, one of his finest is the *Geneva Window*, which was commissioned by the Irish Government for presentation to the International Labor Organization in Geneva. This window depicts scenes from plays by a number of Irish writers. One of the plays by Liam O'Flaherty showed an obese Mr. Gilhooley drooling as he watched a beautiful girl dancing in the scantiest clothing. The Irish Government, having commissioned the work, paid for it but were unhappy with it and did not feel that it was suitable to represent Ireland.

After Harry Clarke's death in 1931 and much correspondence with the Irish Government, the window was returned to the Clarke Studios, who refunded the commission fee of £450. This stained glass treasure was on exhibition for a number of years and was recently sold to the Wolfsonian

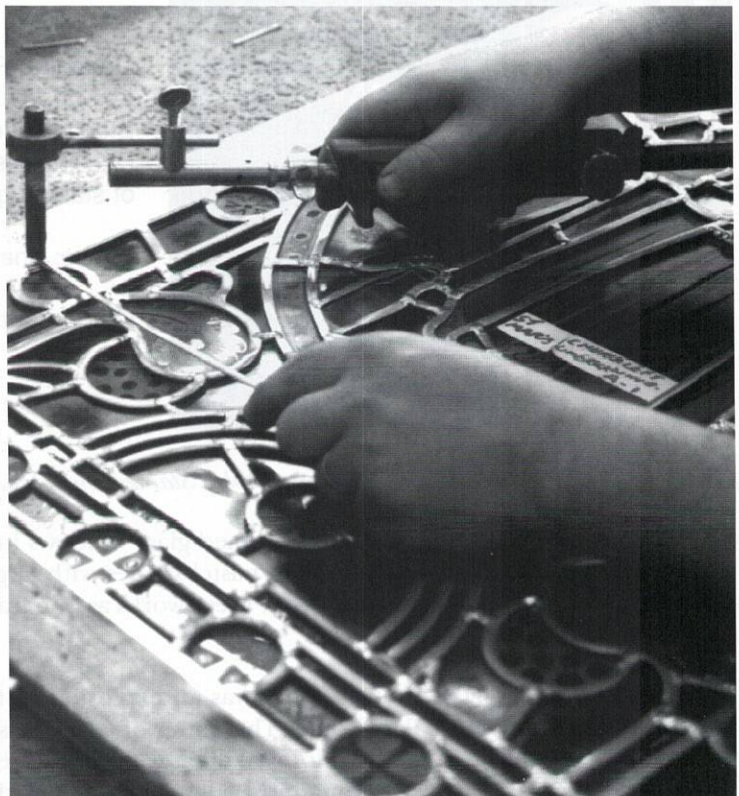
Institute in Florida. This is a most unfortunate loss to Ireland but of course a great gain for the United States of America.

Currently in Ireland there is a re-awakening of interest in the beautiful stained glass which surrounds us. Most of it is part of either Catholic or Church of Ireland churches. These works of art are being cataloged, and their condition is now being monitored.

Recently, one of the large brewing vats in Guinness Brewery exploded accidentally in the early hours of the morning. Thankfully, no one was injured in the blast. However, the brewery is in a high-density section of Dublin close to the city center; the complex covers a large part of old Dublin and is next to St. James Church, which was home to a magnificent stained glass window by one of Ireland's first stained glass artists, Michael O'Connor.

O'Connor's Studios were in operation from 1830 to 1880; the window for St. James Church was commissioned in 1859. It is an extremely complex five-light window with ten major traceries. The explosion in the Guinness Brewery caused this huge stained glass window to be sucked outward, away from the building. It came crashing down and was smashed beyond recognition.

The first step was to try to recover all of the broken glass. The craftsmen of the Abbey Stained Glass Studios were dispatched to the church grounds, where they collected literally bucketsful of tangled stained glass. The



Lead joints are soldered.

remainder of the 50-foot-high stained glass window, still hanging precariously *in situ*, was numbered, and these bits and pieces of panels were removed to be taken to the Studios.

As the window consisted of panels representing 20 different subjects, no one was exactly sure which panel went where. Luckily, the National Gallery of Ireland had cataloged this window. One of their slides was used to create a three-foot-tall print showing the original window. This gave us the information we needed for the next harrowing stage.

All the many fragments of broken glass had to be laid out and matched with the remnants of the removed panels. Several months of painstaking jigsaw work let us place all of the fragments in our possession. However, there were still missing pieces, and, even of those we had, some were damaged beyond recognition.

We took rubbings of the stained glass to give us a plan for each panel. Then we started to remove the 150-year-old lead. The perished lead, no stronger than paper, easily came away from the glass.

Each piece of glass had to be cleaned dry by rubbing them with wire wool; the old, hardened putty at the edges of the glasses was gently chipped away. Some of the glass had such a thick layer of grime and pollution that they were cleaned with an acid solution.

Once the pieces were cleaned and arranged, we had to fill in the gaps. Advice on the depths of color of various pieces and aid in completing some of the destroyed Latin inscriptions came from Dr. Michael Wynne, Keeper of the National Gallery of Ireland.

Artist Kevin Kelly began painting glass to match artwork which the great Michael O'Connor had painted 150 years earlier. One of the problems we encountered was that the stained glass had aged. Over the years, some of the painted work had faded. We therefore had to reproduce this aging by gently rubbing the painted work with an artist's brush before kiln-firing the glass. These newly-painted pieces match closely the older, aged elements of the panels. Approximately 20 percent of the original glass had to be replaced.

With the glass pieces replicated, the leading-up started in earnest, and all hands in our studio were involved. New leads were cut and fitted around the irregularly shaped glasses and soldered at the joints. The panels were then cemented, making the lead comes more rigid and, of course, waterproof. The final in-studio portion of this job was to solder on copper tie wires to hold the windows securely to the new tie bars on site.

One year after the explosion in the Guinness Brewery, the craftsmen of the Abbey Stained Glass Studios returned the window to St. James Church. It took three weeks to carry out the reinstallation and refit-



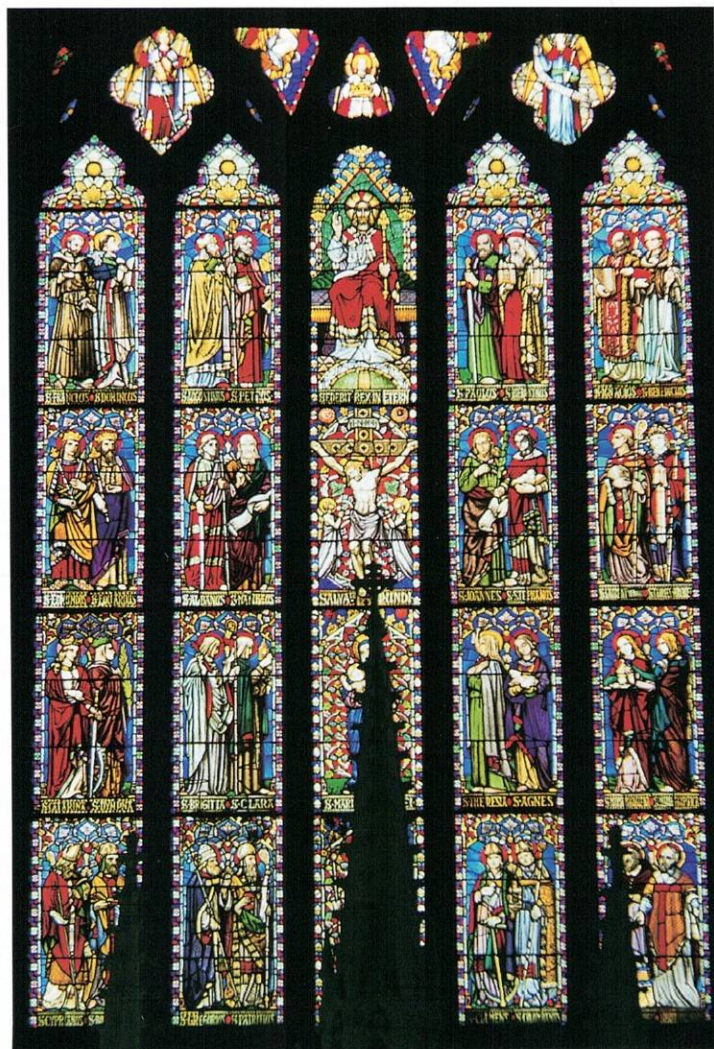
Cement putty is forced into the lead.

ting of the many panels of this window. When the protective screen and scaffolding were removed, one could almost hear the gasps of amazement from those in attendance, who anxiously waited to see the restored stained glass window. It was impossible to distinguish the new glass from the old. Because all of the glass was cleaned, it looked and sparkled like it must have when it was originally installed, almost a century and a half ago.



Right: *Our Lady Mother of God*. Detail from the *East Window* of St. James Church, Dublin.

Below: Detail of *East Window*.



The Abbey Stained Glass Studios were founded by my late father in 1944. We are proud of our record of restoration of stained glass in Ireland. Some of our recent projects include Lough Derg Basilica, Cavan Cathedral, Enniscorthy Cathedral, Kildare Cathedral, Limerick Cathedral, St. Patrick's Cathedral Dublin, Killarney Cathedral, pro Cathedral Dublin, Loughrea Cathedral, Tuam Cathedral, Ballina Cathedral and many other projects.

The Abbey Stained Glass Studios, 18 Old Kilmainham, Dublin 8, Ireland. The Abbey Stained Glass Studios can be reached by telephone at: 011-353-1-6777-285.

J. Horace Rudy

—and—

The Rudy Brothers' Company Stained and Leaded Glass

by Joan Gaul

If stained glass history remembers J. Horace Rudy at all, it is because in 1894 he stopped Charles Connick on a street corner. Rudy said he knew Connick was an artist and invited him to first view and later join the stained glass studio that Rudy and his family had founded in the then-booming industrial city of Pittsburgh.

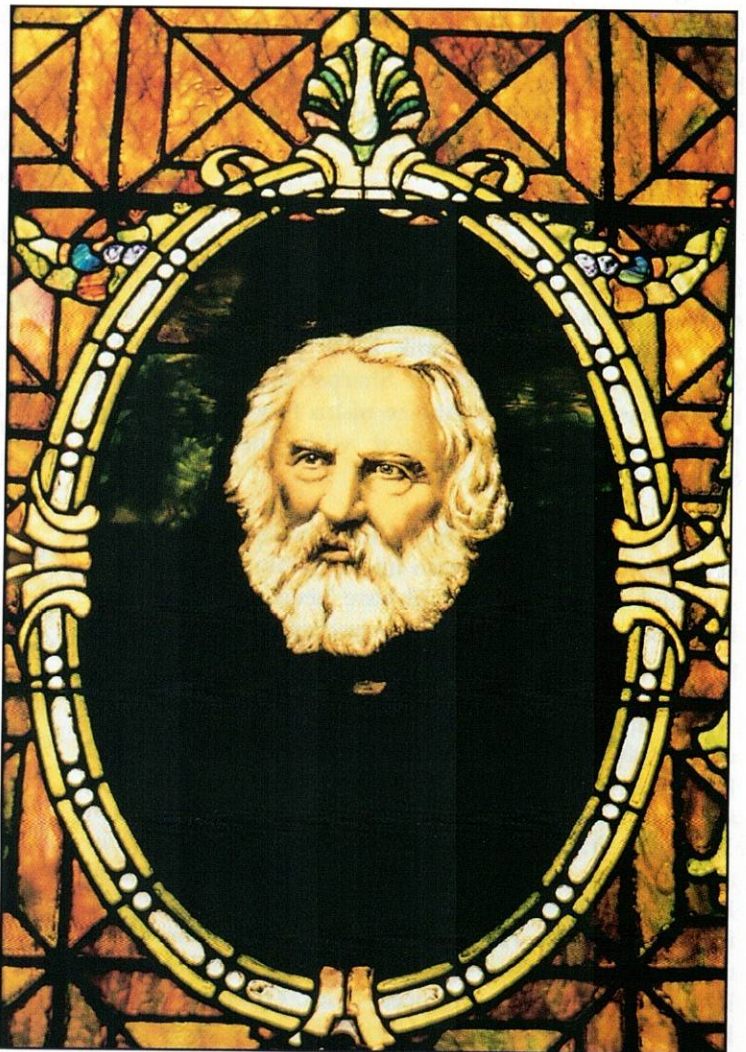
Thus Rudy unknowingly helped midwife the Neo-Gothic movement, which swept ecclesiastical art through the first half of the 20th century and contributed to the downfall of the Rudy Brothers Company of Pittsburgh and York, Pennsylvania.

NORRISTOWN AND PHILADELPHIA

J. Horace Rudy was born the second son of John H. and Emma Fillmore Rudy on September 30, 1870, in Norristown, Pennsylvania. Each of John and Emma Rudy's four sons had special talents: Frank, the oldest, has been credited with organizing the YMCA in Norristown; Isaiah, the youngest, was listed as a chemist in the 1892 Norristown records; Jesse, the third son, was listed as a painter. However, Jesse Rudy was better known as a baseball player, and Horace turned out to be the painter.

Horace Rudy received his first outside technical training at the Spring Garden Institute in Philadelphia. He apprenticed with a furniture maker and then moved to Alfred Godwin's glass studio. There, Rudy worked with Godwin and two Englishmen: R. Appleby Miller, who had been trained by Walter Crane, and Frederick Wilson.

Rudy credited Miller with recognizing his abilities and developing the color sense that became a hallmark of his windows. Frederick Wilson was a master of opalescent glass and sweeping composition. As an apprentice, Rudy had superb masters. Few of his larger picture windows are documented, but those at the Zion United Church of Christ (1913-1915) in York and the Mifflin Avenue



Portrait, possibly of John Greenleaf Whittier from a Linden Public School window. Photo courtesy of Pittsburgh History and Landmarks Foundation.

Methodist Church (1924) in Pittsburgh show how well he learned his craft.

In 1892, Rudy enrolled at the Pennsylvania Academy of Fine Arts. Western art's upheaval that began with Manet and Cezanne toward the end of the nineteenth century did not miss Philadelphia. The Pennsylvania Academy was rich with American talent, but Thomas Eakins had been dismissed from its faculty in 1886 for his insistence on drawing from life.

Robert Henri, a talented student eager for more than the Academy's routine, went to France in 1888 and returned in late 1891 to informally instruct, encourage and instill confidence in a group of young artists. Horace Rudy became an intimate part of the group that included John Sloan, William Glackens and Everett Shinn. Rudy's time in Philadelphia profoundly influenced his later life but left little trail except for passing references. He was Robert Henri and John Sloan's "socialist friend, J. Horace Rudy"; Bennard Perlman put Rudy and Sloan in the same class painting from plaster casts. In 1893, Rudy was part of Sloan's Charcoal Club, a group of young, free-wheeling artists who met informally for studio sessions. Rudy's time in Philadelphia with his young, talented and intellectually inquisitive friends was short, but those he met remained his friends long after his artistic career took a different turn from theirs.

PITTSBURGH

Legend says the Rudy Brothers came to Pittsburgh in 1893 at the behest of H. J. Heinz, the food magnate, to work on his factory-building program. H. J. Heinz was a community leader; Frank Rudy was then General Secretary of the YMCA in Sharpsburg—H. J. Heinz' home town and the birthplace of his food fortune. It is likely Heinz was connected with the YMCA in Sharpsburg.

In the recession of 1893, the promise of continuing work with a good man who had a visible company and splendid connections would have been appealing. The Rudy Brothers had everything necessary to run an art glass business.

By 1894 all four Rudy brothers were in Pittsburgh with Rudy and Reich. By 1895 Reich was out, and the Rudy family ran Rudy Brothers Art Glass. The enterprise flourished, and Rudy Brothers Company incorporated in 1904 with Frank as President, Horace as Vice President and Isaiah as Secretary-Treasurer. By 1905, there were Rudy Brothers windows in three Heinz Company buildings and in H. J. Heinz' mansion. Rudy Brothers windows were in hospitals, churches, schools, office buildings and wealthy residences from Ohio to eastern Pennsylvania and from the oil-rich northern areas of the state to North Carolina. A Rudy Brothers Company

booklet of the period listed 328 separate commissions, 74% of them residential.

Houses built for the wealthy in Pittsburgh between 1890 and 1915 had art glass windows, their size and number dictated only by taste and budget. Decorative motifs in glass were popular, but often a landscape or one or two young women in a garden were used on the stairwell. Togged men and historic or allegorical figures were popular for schools and institutions. In work done between 1901 and 1905, Heinz favored uplifting maxims surrounded by cherubs or discrete ornamental borders for his factories. The five allegorical windows at Peabody High School (1907) present glass art with the optimism typical of the pre-War period. These five windows are signed, are in relatively good condition and remain in place—something that can't be said for much of the Rudys' work.

St. Stephen's Episcopal Church in Sewickley (1894) was probably the first of the Rudys' church commissions. A documented *Christ in the Temple* remains, and there is also a window of original design that carries Horace Rudy hallmarks. With changing tastes and neighborhoods, urban renewal and a dearth of reliable church records, documentation is a problem. Nonetheless, certain angels in Allegheny General Hospital's Park Memorial Windows, created in 1905 but now lost, serve as a kind of spiritual signature on certain Rudy Brothers windows.

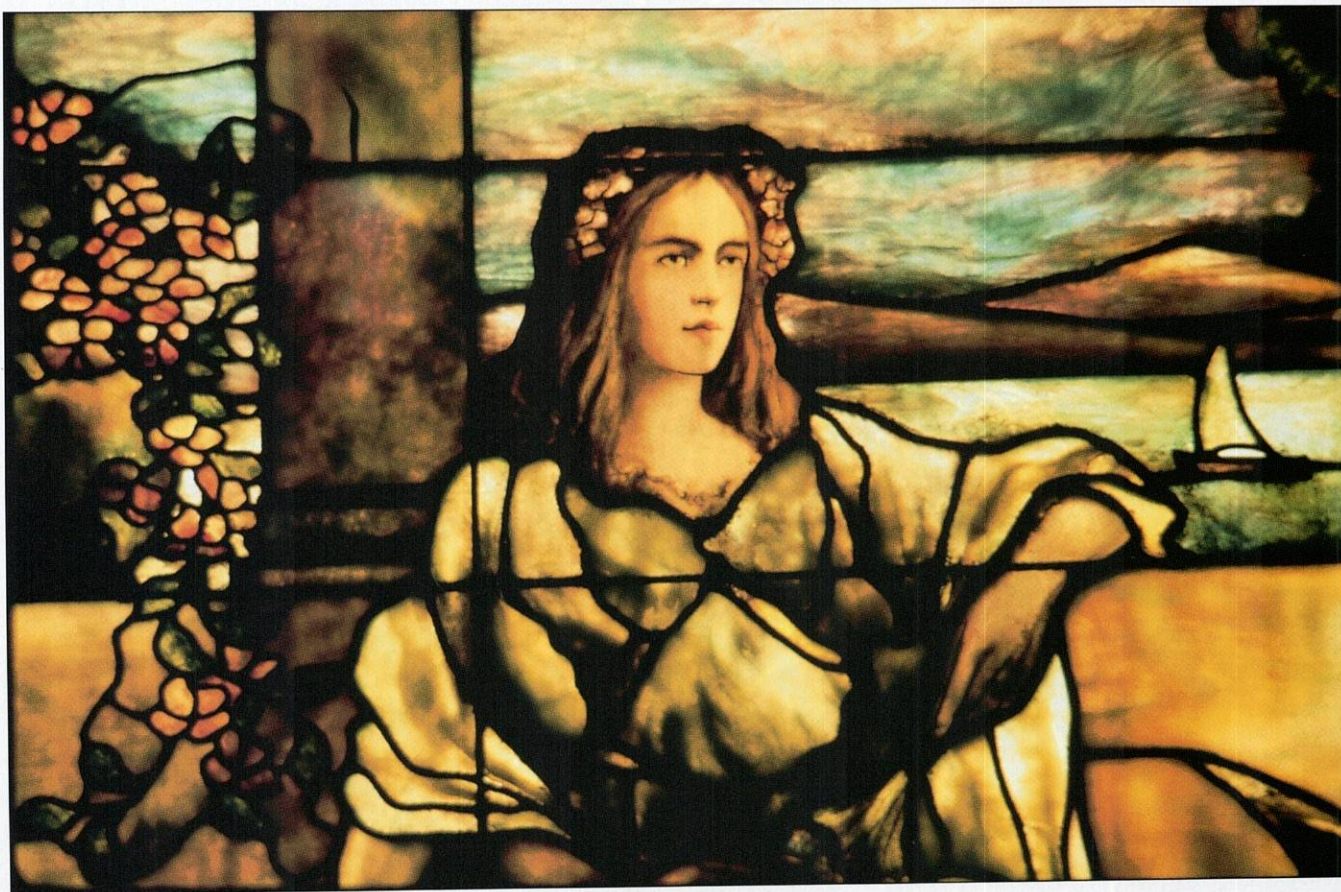
The Rudys connected well with architects, which helped their business grow. Whether it was Frank's salesmanship or Horace's ability to understand, capture and produce the desired effect, they were successful. The series of gifted young men Horace discovered and befriended (partly as apprentices and partly as replacements for the friends he'd left in Philadelphia) also helped.

In *Adventures in Light and Color*, Charles Connick remembered his time with the Rudy Brothers studio and having Horace Rudy as a friend and guide to music, art, theater and literature. Connick, Lawrence Saint and George Sotter wrote of Horace Rudy in the Summer 1940 issue of *Stained Glass*: Connick described sketching trips and group sessions drawing from life; Saint credited Rudy with deepening his understanding of English and for encouraging him to attend the YMCA; Sotter wrote of Rudy's encouragement, for convincing both Sotter and Saint to attend the Pennsylvania Academy.

The time spent with friends must have abated when Horace met and married Marian Emig in 1900. Their marriage led to a geographic split in the company. Marian, who was from a prosperous family near York,

Opposite Page: Sanctuary window from St. John's Episcopal in Lancaster, PA. Photo by David K. Noss.





Stairwell window at D.J. Kennedy house in Pittsburgh. It is attributed to the Rudy Brothers and is typical of their residential work. *Photo courtesy of the Pittsburgh History and Landmarks Foundation.*

came to Pittsburgh. In 1901 Horace built her a house that stands today, a beautifully restored tribute to an exuberant artist in glass. It was both a home and a catalog of capabilities, with small roundels set in the front door and great swirled ones in the third-floor studio window, bordered by panes of brilliant opalescent glass. There was a large glass mosaic fireplace, booked-glass patterns in the dining room and a brilliant, upbeat *Tree of Life* inscribed with "Life is a measure to be filled, not a cup to be drained."

The Rudys lived there fewer than four years. Marian had their first child, was expecting their second, had recently lost a parent and was, according to her daughter-in-law Lorraine, lonely.

In 1904, Horace Rudy left Pittsburgh for York, where he continued to work on important Pittsburgh accounts: large houses on the North Side and even larger ones as wealth moved west to Sewickley; bursts of construction in the Pittsburgh Public Schools; commercial enterprises and, increasingly, churches. While Horace Rudy continued as a Pittsburgh presence, his day-to-day guiding spirit was gone.

More than Horace's absence whittled away at the Rudys' Pittsburgh enterprise. Within the family, Jesse, who had served the company as stained glass worker and clerk, left in 1905 to open a billiard parlor, which he later expanded to a bowling alley. Emma Rudy died in 1906. Frank, though still president, became involved in developing and arranging concerts. John Rudy, the father, died in 1923. Isaiah helped Jesse in his sports parlors and for at least one year in the late 1920s managed both the Rudy Brothers Company and the Brunswick Billiard Parlor.

Architectural tastes changed. Building of Victorian and Edwardian homes declined as Neo-Gothic churches came in. The architect Ralph Adams Cram led the movement that pitted 13th-century-style painted glass against opalescent windows. Viewed many years later, some of the battles seem both silly and destructive; however, with the residential market shrinking, church and mausoleum windows meant serious money and equally serious philosophical differences.

By the 1920s, opalescent windows had lost. Horace Rudy's talent with glass was diverse, but his interest was color; he apparently never embraced the Neo-Gothic.

His Pittsburgh apprentices—particularly Connick and Saint—were in the forefront of the Neo-Gothic movement and stayed there. Some years after both Connick and Rudy had died, the 1894 windows in Sewickley's St. Stephen's Church were replaced by windows from the Connick Studios.

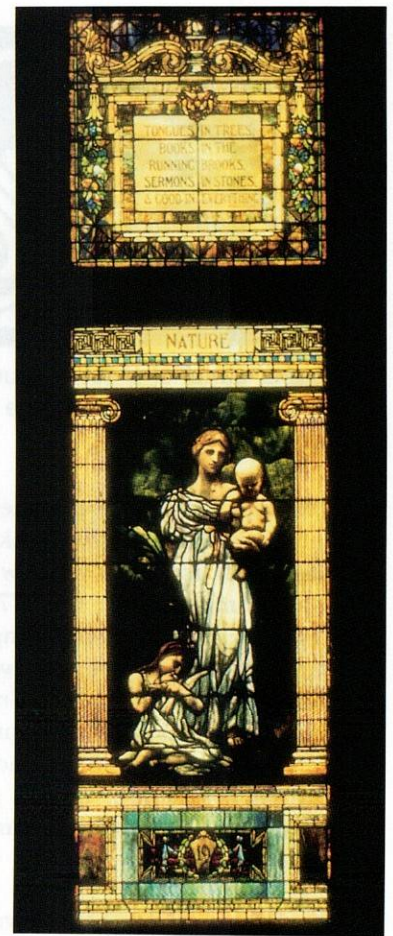
YORK

The bulk of Horace Rudy's work in York seems to have been churches in many styles and for many denominations and faiths. While records are scarce, the work is plentiful. A short walk in downtown York offers a glimpse of Rudy's diversity and the intelligence with which he addressed different religious and philosophical traditions.

The interior of the First Moravian Church (1910) is suffused in a rosy glow created by nave windows of painted designs. The altar window is a traditional "Road to Emmaus," done in rich opalescent plated and drapery glass.

The First Presbyterian Church (1916) has a cool white interior. Its nave windows alternate a pattern of lilies with a pattern of leaves and vines in rich, deep tones of rippled and cats-paw opalescent glass on a background of tones of streaky blue glass. Each window is bordered in panels of opalescent glass and topped with a fan that echoes the fans on the three rich memorial picture windows in the rear alcove.

In Christ Lutheran Church (1918-19), the purity of its high-ceilinged sanctuary's interior is enhanced by the apparent simplicity of its windows. All windows but one have a Christian symbol in the upper third of the tall panels of semi-translucent white glass and are bordered by a painted silver stain motif encased in thin bands of opalescent glass. The memorial plinths contain a garland set in a bed of crackled, crinkled, bubbly glass, which in turn is bordered by translucent and opalescent glass. The odd window's portrait of Martin Luther is painted in the manner of the portrait windows Rudy did for the Pittsburgh public schools.



Panel from Rudy Brothers installation which dates from 1907 at Peabody High School. Photo courtesy of the Pittsburgh History and Landmarks Foundation.



Rudy Brothers Company, Pittsburgh, c. 1901. From left to right (as identified by Charles J. Schmidt, a Rudy apprentice): unknown, Isiah (sic) Rudy, unknown, unknown, Chas Schmidt, Harry McAnulty, Chas Connick, Old Man Rudy, Geo Sotter, unknown, Jesse Rudy, Lobengier. Photo courtesy of Library and Archives Division, Historical Society of Western Pennsylvania.



The upper panel of a set of four dining room windows dating from 1901 in the Horace Rudy home. Photo by Photon.

The tour's fourth stop is the Mellon Bank building, formerly the First National Bank of York. What was the President's Office has a window done by Horace Rudy (1924) to commemorate the 1777-78 financial activities in York that saved the struggling new republic. Its five painted glass panels gleefully evoke the patriotism and pride of the period before the Great Depression. Horace Rudy wrote a brief credo in connection with his church work: "There seems to be no shade of feeling that cannot be expressed in color, using it always according to its temperament, extending its range and deepening its power."

"Individuality is that characteristic which distinguishes one from another. In the practice of art as in the practice of virtue, something is to be considered besides the thing or the deed: that something is the quality called individuality. Nature contains the elements in color and form, as the keyboard contains the notes of all music: but the artistic pick and choose, and group with skill these elements that the result may be beautiful, as the musician gathers his notes from his chords; until he brings forth from chaos glorious harmony."

Some blocks away there is another, quite different church. The Zion United Church of Christ contains 256 windows by Horace Rudy. They range from painted traditional scenes in the Sunday School rooms, to traditional and semi-traditional opalescent personifications of the Christian virtues in the nave, to a crisp, modern rendition of the former building's steeple in the stairwell, to fruit-and-vine aisle windows with wire detailing, to an astonishing rich blue picture window in the rear of the nave that represents Christ Ascendent but looks like a dramatic rendering of the climax of Mallory's *Quest for the Holy Grail*. The whole, while not as sublime as Rudy's work in the First Presbyterian Church, is a tour de force.

Rudy continued to find and nurture talent. In 1908, 15-year-old B. Hay Gilbert joined the firm. Gilbert would later reorganize the Rudy Brothers' York operation as The Rudy Glass Company, Inc., and create windows for schools, churches and chapels. Rudy's son Charles—who in 1912 at the age of 8 was already firing glass—was perhaps his father's greatest student. He followed his father,

Saint and Sotter to the Pennsylvania Academy. There he decided that his field was sculpture rather than painting, a decision that Horace accepted gracefully. Charles' brilliant and very successful career ended with his death in 1986.

Horace Rudy's civic involvement grew in York. By 1925, he was on the City Planning Commission, advocating playgrounds, parks and clean water. He designed the York city seal and helped plan the city's 1927 sesquicentennial celebration.

In 1962 Isaiah Rudy cited 1929 as their last good year; that was the year they did \$65,000 worth of business. The national financial collapse and Great Depression found Horace Rudy with consignment glass on hand, contracts cancelled and the bank foreclosing.

J. Horace Rudy became insolvent in 1931, and, according to family members who survive, it broke his heart. Letters at the York Historical Society accentuate his distress. Horace Rudy died in 1940, and the Rudy Brothers Company's Pittsburgh operation, which had dwindled to repair, ended with Isaiah's death in 1966.

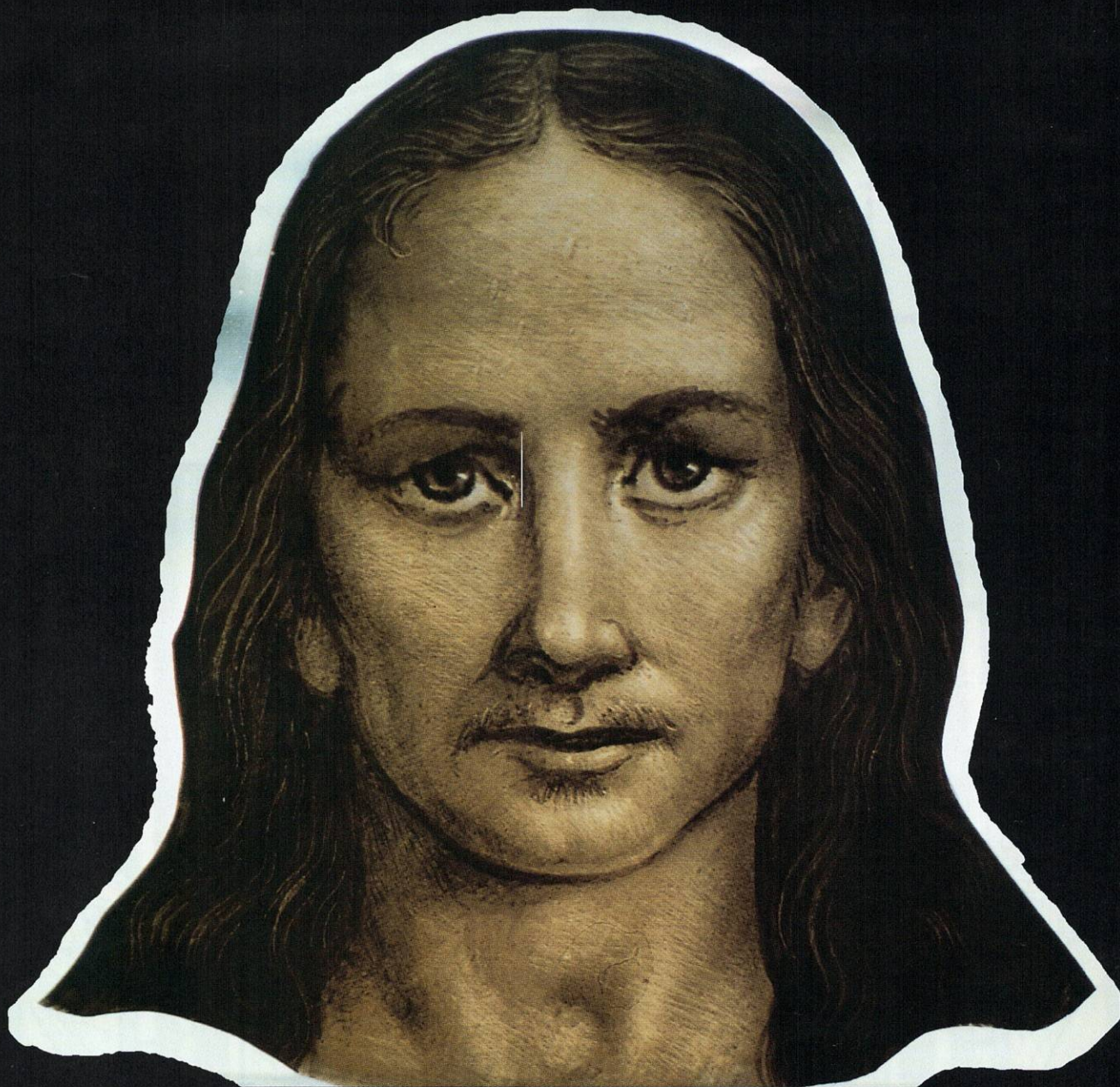
But the story doesn't end there, it goes on in J. Horace Rudy's windows—some glorious, some routine... some that are known and some that remain to be found. It goes on with people seeking to solve the mysteries of an extraordinary family in a not-so-idyllic time. And of J. Horace Rudy, a man whose greatest gift may have been to teach those he knew. He trained them not only in how to do art or master a craft but also to believe that they could do it. Horace Rudy believed that doing it was worth the risk.

In the Summer 1940 issue of *Stained Glass*, Lawrence Saint wrote that "Horace lived on a high plane, had good habits, loved his family and encouraged his assistants. In a recent letter, he wrote: *Frederick Wilson taught me to help those next to me; he said, 'You do not have to hunt for those you can benefit with advice or other help—look about you and you will find your field.'*"

In Spring 1996, the Western Pennsylvania Historical Society acquired archives and cartoons from Lorraine Rudy, the late Charles Rudy's widow. When those archives are fully cataloged and available to the public, there may be more of the Rudys' story to tell. In the meantime, Pittsburgh's John H. Heinz Regional History Center plans a major show on Pittsburgh glass in the fall of 1997, which will include reference to the Rudy Brothers Company.

Pittsburgh-based writer Joan Gaul first learned of Charles Connick while writing *The Heinz Memorial Chapel*. At a Chapel reception during the 1995 SGAA Summer Conference, she was asked what she knew of the Rudy Brothers. Her answer at the time was "Nothing." Since then, she's learned a lot.





The Enigmatic Von Gerichtens

by Helene H. Weis

When I heard that 1996 is the 90th anniversary of *Stained Glass Magazine* (which has had several different names since its birth), it seemed like the time to gather the research on the Von Gerichten family. It was Ludwig who was the first editor.

On a hot day members of some 30 studios gathered in Chicago to found the Stained Glass Association of America. The President was Joseph E. Flanagan, the secretary was Ludwig Von Gerichten and the treasurer was August Mueller. By 1906 it was decided to start a publication. Ludwig, the secretary, was the natural choice to handle this assignment.

"We all thought the paper was a good idea," Von Gerichten said, "but the main difficulty was to get contributions of news and articles from the members. There were many kind promises but no copy from anyone for months. But I finally hit upon a ruse to draw fire from my dear fellow members. I wrote a scathing reply to one of my own articles and printed it under an assumed name.

"In the next issue I answered that in detail, admitting the truth of some of the arguments brought forth but stoutly maintaining the points in my first article.

Top: This Von Gerichten painted head comes from the collection of Dennis Shobe. Photo by Henry Weis.



Photo By Henry Weiss

The Assumption of the Blessed Virgin Mary Into Heaven

Even this did not at first bring results, so I increased my opposition the following month, all under different names—and that did the trick!

“Everyone watched for the paper each month, eager to follow the controversy and to contribute their own point of view.

“I rarely had to write a ‘fill-in,’ and the magazine was on its way.” (“Founding the Association: a Retrospect,” by Ludwig Von Gerichten, *Stained Glass*, Winter 1936-37)

Joseph Flanagan’s obituary (*Ornamental Glass Bulletin*, June 1928) names him as the first editor, but this

is an error. Ludwig Von Gerichten found it was more work to produce even a simple sheet, at first a monthly, so he gave up the position after two years. Ludwig continued to be active in the Stained Glass Association, which made him an honorary member in 1940.

Ludwig Von Gerichten looked like the example of a romantic artist. His broad-brimmed hat and beard make him look very much like the head of Rubens that decorated the boxes of crayons that I had as a child. Although they came from Bavaria, the site of much stained glass effort, Laura Katherine Hewetson, Ludwig’s granddaughter, is sure that Von Gerichten never apprenticed in stained glass studios there. A relative, Col. T.



THE DESIGNING AND DRAUGHTING DEPARTMENT.



A CORNER OF THE SHOW ROOM.

Original photos from the Von Gerichten studio. *Photos courtesy of Dennis Shobe.*



A 1908 depiction of St. Cecilia from Saint Boniface Roman Catholic Church, Philadelphia, PA. Photo courtesy of Jean Farnsworth, Philadelphia Census of Stained Glass.

Cullmann, settled in Alabama in a town now called Cullman. At age 14, Ludwig came to Cullman to join his father and older brother Theodore, who was then serving as their cousin's secretary. Brothers and cousins helped to establish the younger members of the family, as was the case with many European immigrants.

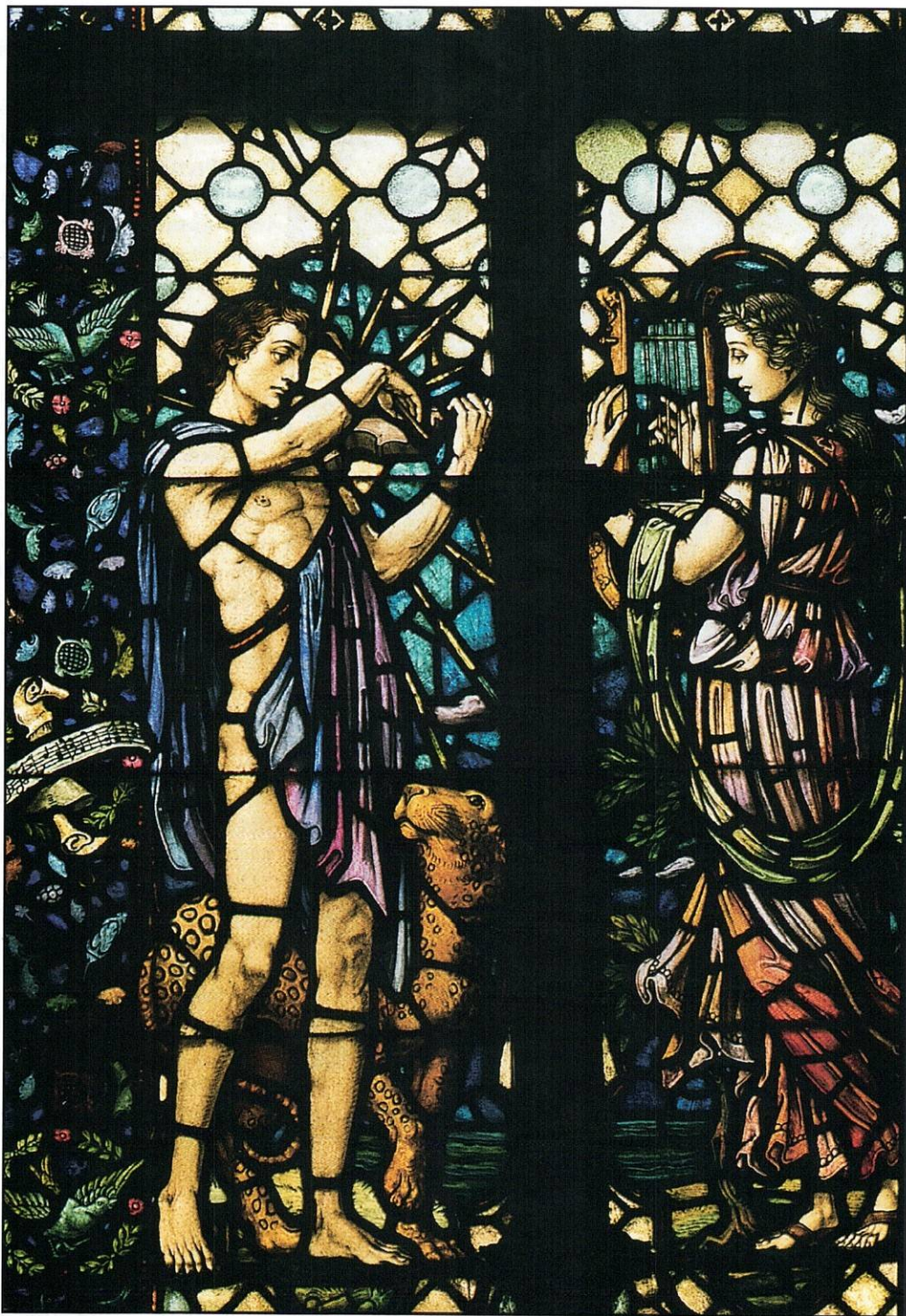
Ludwig did not stay long in Cullman. He left in 1887 to study at the Cincinnati School of Art, which was connected to the Art Museum. He soon got a job as glass painter at William Coulter & Son Studio, which was bought in 1892 by studio manager Gerald C. Riorden. It seems likely that young Ludwig was taken on as a result of the new owner's expansion.

By 1891 he had learned enough to produce stained glass windows for Central Presbyterian Church in Birmingham, Alabama. That was his first independent commission. A very old photograph by Theodore shows young Ludwig selling a design in a room in Cullman, probably belonging to their cousin. While Von Gerichten still worked for Riorden for another year or two and continued his art studies, he set up a business in Columbus, Ohio, and soon persuaded his brother Theodore to join him as bookkeeper.

In 1893 the brothers established the Capital City Art Glass and Decorating Company. Ludwig was president and Art Director; Theodore was Secretary-Treasurer. A photograph of their early beginnings shows the brothers, two employees and Ludwig's young wife, Katherine, in front of the building on 428 South High Street. The panels displayed in the window are typical of the ornamental domestic windows popular at the time and do not hint at the studio with more than 100 employees that was to develop.

Soon after, the brothers had joined to incorporate The Von Gerichten Art Glass and Ecclesiastic Studios, established in the building shown in the 1897 catalog at 63-67 E. Long Street. The early picture included Katherine, Ludwig's wife, in the line-up, although it is unknown if she was an employee or simply joined in the picture. Another picture of the glass-painting shop shows an unknown woman cartooning; perhaps that woman was Theodore's daughter-in-law Mabel Von Gerichten, who studied art at Ohio State University. Mabel is listed as secretary in a 1934 Columbus City Directory.

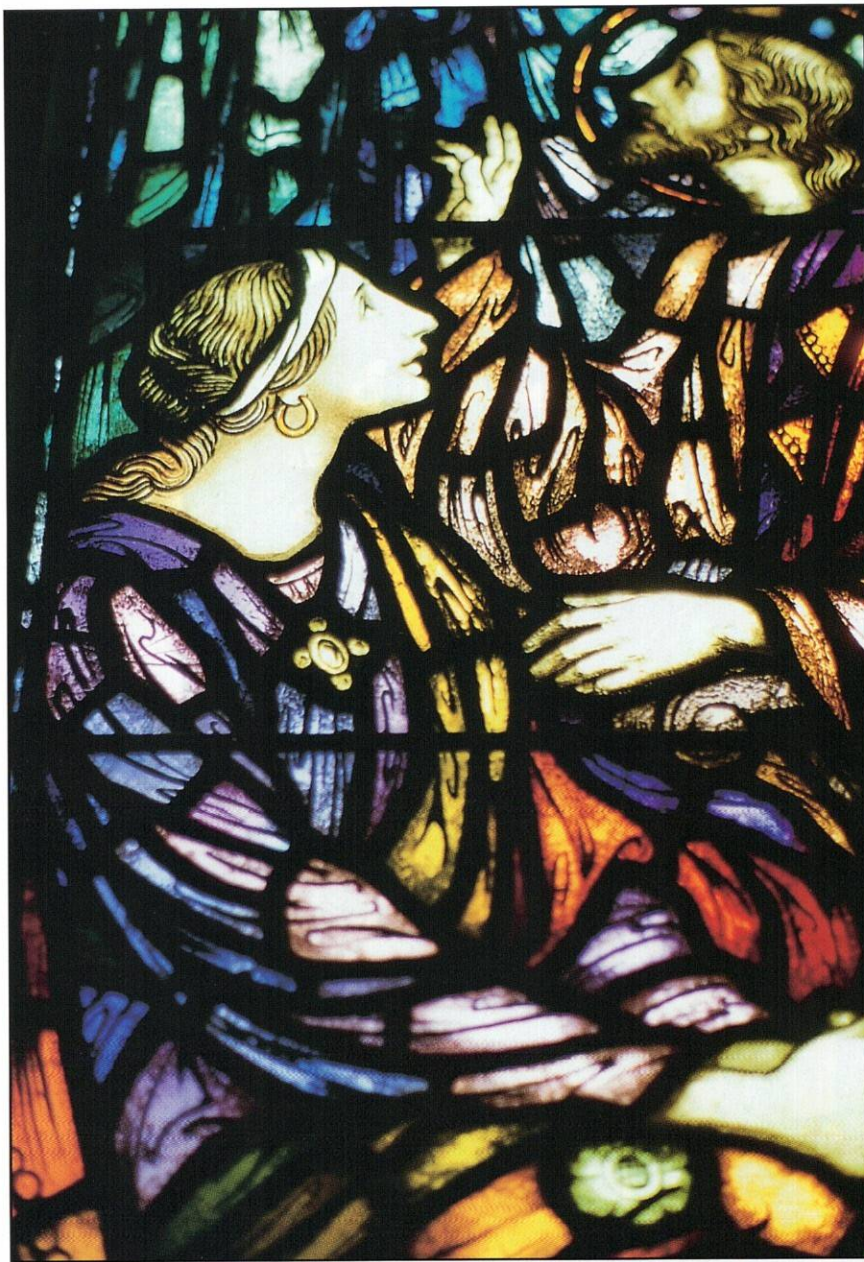
There were said to have been more than 100 employees at the height of the studio's prosperity. Theodore Von Gerichten, grandson of the first Theodore, remembers the studio's large building on 549-557 South High Street. It served as studios and homes for two Von Gerichten families with lively children. There were signs on the exterior advertising the many enterprises. On the second floor front was *Glass Painting Studio & Art Glass Beveling and Mirrors*; On the first floor front was *Plate & Window Glass. Von Gerichten Art & Beveled Glass*. The front



Music; from a series of Arts & Sciences designed by Walter Reiser for Von Gerichten Studios for the Scottish Rite Cathedral, Indianapolis, IN. Photo courtesy of Willet Studio.

side, second floor, advertised *Glass & Marble*, while the first floor advertised *Copper, Metallic Sash*. On a sign on the length of one side of the first floor was *Von Gerichten Art Glass Co*. From the beginning, they advertised statues, fine wood work, church pews, plate glass mirrors and marble. The second floor housed beveling glass and sil-
 vering workshops, while on the first floor were the show room, reception area and the stained glass studio. Later the company also supplied mosaics and had a studio address in Venice for a while.

Initially, Ludwig Von Gerichten played an active role in The Stained Glass Association of America's years-long battle to get the tariff raised on foreign-made stained glass entering the United States. European windows entered under a low tariff as "works of art." The SGAA wanted it declared and taxed as a commercial product so it would be sold here at a more competitive price. Ludwig wrote an article, "Is the Present Tariff High Enough to Protect the American Craftsmen Against European Competition?" (*Ornamental Glass Bulletin*, April 1908), which was considered important enough to



Detail of *Jesus at the Home of Mary and Martha*. Good Shepherd Episcopal Church, Lexington, KY. 1926. Photo by Henry Weis.

reprint twice, once December 1920 and once Spring 1953.

However, Ludwig Von Gerichten would later reverse his position on the tariff question. While he and his brother ran a successful U.S. studio, something came between the brothers, though today the impetus of their feud is unknown to the surviving family members. About 1913 Ludwig sent an employee named Schmidt to Munich to start a German branch of the studio. Ludwig could not get there himself because World War I was escalating.

The Columbus Ohio *Dispatch* was quoted in the Association's magazine (May 1917) when it described Ludwig going to Washington to try to get his finished German windows to the U.S. The trip was in vain.

An article by Geo. H. Bradshaw describes Ludwig's justifying his changing his mind on the tariff issue (*Ornamental Glass Bulletin*, September 1914). "I soon learned that Mr. Von Gerichten's trip abroad had not diminished his usual inclination to talk, and I soon found myself entranced with this gentleman's 'hundred-thousand-dollar-a-minute' ideas, and I was quite an attentive listener, I assure you.

"After some time had passed and I saw the hand on the safety valve pointing to and indicating that we had passed the blowing-off stage, I began to feel easy and—strange to relate— found an opportunity to ask questions, and, having our business in mind and desiring to pick up a few crumbs from under Von's table, I asked how he got along with the tariff question and if it did not eat into his big profits."

In the next issue (*Ornamental Glass Bulletin*, October 1914) Ludwig counters, saying he hopes not many in the SGAA will disagree with him and sacrifice work quality in order to compete with the foreign product. He says "There is no man in our profession who has worked harder to make Congress see its folly in eliminating the tariff." He calls himself not unpatriotic but "progressive" and explains his actions by stating that he warned everybody all along of what he would have to do. Since windows made abroad come into the country duty free if they are donations to an incorporated religious institution, he advised his customer churches to that effect.

Ludwig's Munich studio benefited in making windows for Germany as well as for the U.S. with a lower-paid German work force under the supervision of Schmidt. However, there was a New York sales office under Ludwig's supervision. The year 1919 saw a larger number of Von Gerichten windows installed in the U.S. than in any other year. Hewetson's knowledge of her grandfather's studio attributes this to orders filled and held in Germany until they were free to be shipped to the American customers at the close of the War.

The Munich studio closed in 1932, just before Hitler came into power. While Mr. and Mrs. Ludwig Von Gerichten came home to live in New York, Schmidt oversaw the dissolution of the Munich operation he had supervised for so long.

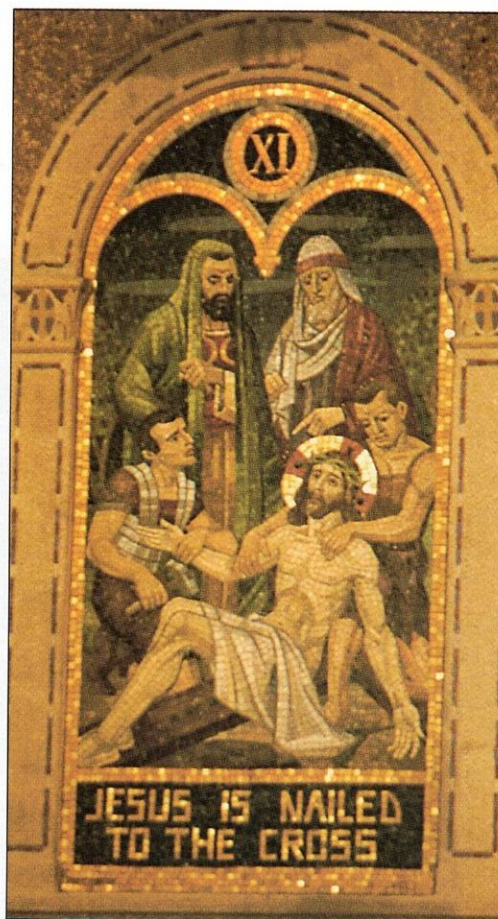
When the Von Gerichtens returned to Columbus, it was to set up a completely separate studio. One of the sales samples seen at Shobe's studio is believed to have come from Munich and was signed "Louis Von Gerichten." The brothers did not discuss their differences. It is only a supposition that the tariff may have been the entering wedge. Nevertheless, when Ludwig wrote Theodore's obituary (*Stained Glass*, Spring/Summer 1939) it contained these words: "In 1932 Ludwig severed all official connections with his old company and built and managed his own studios at Columbus, whereas Theodore Von Gerichten continued to manage the old studio. While he never did any artistic work, he had a fine sense of art and knew a good window when he saw one."

In any stained glass enterprise of its size with one person a designer, another a cartoonist and still another a glass painter—perhaps even more than one painter on the same panel—the outlines blur so we cannot attribute any window to the work of any one individual. Von Gerichten windows changed over the studio's existence. All of the variations of their stained glass I have seen appear to derive from the German style. They are fine examples of this type, with marvelous color but also full of light. Even simple quarries are made of mouth-blown glass. This is easily explained by the large German community in Columbus and that many of the employees were Munich-trained or students of those who were.

The painting style is characterized by a powdery stipple with a very subtle blending from light to dark. The 1897 catalog proudly proclaimed their painted figures as having "the best flesh in the world." Unmounted heads seen at Shobe's Studio are wonderful examples. No colored enamel is used; they are painted on white glass. A most delicate wash looked as if it had been applied across the faces with a powder puff. On the back was a thin, flat mat from which the eyes had been washed away, leaving eyeballs and highlights on the pupils white—a startling effect. In Mr. Shobe's collection some of the designs are marked with designers' names: William Williams and Jacob Renner.

When touring and photographing Von Gerichten windows *in situ*, I visited the Church of the Good Shepherd in Lexington, KY, where I recognized the Von Gerichten style first from the profiles. Even the young women have long noses. The most exciting part of the tour was the Shrine of the Sacred Heart in Washington, D.C. There are 86 windows made in Germany (1922-24); the stations of the cross, font and other decoration are in Venetian glass tesserae. That on the font is finer and more delicate work of that type than any I have ever seen before; some of the pieces are as tiny as seed pearls.

The neo-gothic style of glass painting, which was more popular about 1920, relies heavily on crisp, black painting with cross-hatched shadows. It is a rule to leave



Mosaic station of the cross from the Shrine of the Sacred Heart Roman Catholic, Washington, D.C.

some of each piece of glass free of paint. Areas of background glass, if intense enough to completely blend into the whole, may be unpainted altogether. The color palette uses more primary colors and incorporates mostly reds and blues rather than secondary and tertiary shades.

Taste for neo-gothic called for medallion windows, symbols and decorative poses of figures instead of more realistic scenes. These artists were obviously versatile enough to change their style when it was appropriate. The brothers sought or trained employees to contribute and above all worked hard, with imagination.

There is a Japanese film called *Rashomon*, in which four characters each give quite a different version of the same event. The name has become a byword and could be applied to the story of this family. When the Von Gerichten studio run by Theodore was closed at his death in 1938, Franklin Art Glass bought the stock. Therefore, Jim Helf was one of the people I asked about them. "Well," he said, "of course I remember them but I was only a kid." When I confided I was having trouble getting the story straight because my sources didn't agree, he replied, "Now you've met the Von Gerichtens."

(Note: The family name is spelled with a lower case v but the studio name was always spelled with a capital V, which I have used throughout in this article.)



The Tile Techniques



of Hal Bond

by Geoffrey Wichert

Stained glass is at once the most ancient and modern of arts. A window made today of blown glass, hand painted, leaded together and set in saddle-bars may—by the casual observer—be mistaken for one 800 years old. However, the artisan who made it could have just as well cut dichroic glass with a computer-driven waterjet, assembled it with copper foil and mounted the product with titanium clips in a skylight.

Our art continues to evolve. Some changes happen so slowly they encompass generations. Right now, innovations are coming almost too fast to follow. Yet new standards for health and safety threaten some of our most

venerable techniques, making it necessary for artists who choose to work in glass to seek out new artistic and market options.

Hal Bond is one glazier who has done exactly that: beginning with his earliest experiments in glass fusing in the 1980s, he saw tile as a natural application for glass. Instead of coating a clay slab with a thin layer of glass, Bond opted to make the entire tile of glass, thus utilizing all of the colors, optics and performance this medium can offer. Subsequently, he adapted every expressive technique he discovered to tile. He now has a complete system for custom designing glass art that mounts as tile, thus expanding the horizon for art glass in an architectural setting beyond the window and panel.

There are many ways to make glass tiles. Molten glass can be cast, compatible sheet glass can be fused in a kiln or frit and stringer can be melted together. However, the techniques offered here yield a simple, working method which can produce some of the most opulent and impressive results. Using one of the most common and least expensive types of glass—commercial plate (or “crystal”)—and the kilns most studios already have, it is possible to make tiles like those illustrated in this article. Basic mold-making know-how, a computerized temperature controller and imagination are all that’s required for even the more sophisticated projects.

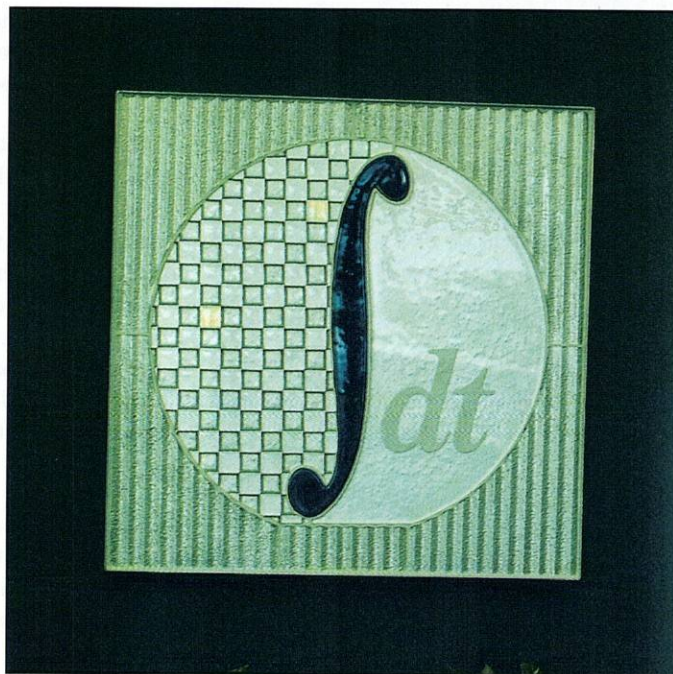
Stained glass design offers a natural transition to tile. “I like working generally with smaller pieces and working up a hierarchy of design. It’s a holdover from my stained glass days,” Bond said.

Bond begins each project, then, very much as he always has. A careful set of measurements are taken and laid out on the design table. Some unusual elements (such as allowance for electrical outlets) may seem strange at first, but are easily adapted to using the methods of the tile setter. Once a design is decided upon, Bond cuts out the individual shapes. Of course, glasses from different sources have different colors and slump points, so Bond works exclusively with one type of plate that he knows and of which he has a sure supply.

The first step is to texture the back of the tile. In the projects shown here, all the clear glass was given the same basic texture for continuity. All that is required is laying the cut pieces out on a kiln shelf covered with refractory shelf paper, heating them to the point where the glass takes on the texture of the shelf paper and cooling them slowly enough to prevent heat shock. For small pieces this process is almost exactly the same as firing paint or stain.

“With a two-by-two-inch tile, the heat being held by the kiln shelf will slow the cooling enough so that it will be properly annealed,” Bond said. “But as the glass gets larger—depending on the kiln and the type of kiln shelf—you need to control that situation. It’s the relationship between the area and the thickness. A combination of the two. Everything needs to be annealed. It’s

just a matter of how long to make the anneal cycle and how long the anneal soak time.”



One application for tiles such as these is in the creation of corporate logo designs, such as the one pictured above.

When the glass has reached the proper temperature, its edges will lose the sharp definition produced in cutting and become rounded. Not only does this signal slumping, but it gives the tile a pleasantly finished look. The lower edge may be sharp and require smoothing. At this point, the basic tile is done.

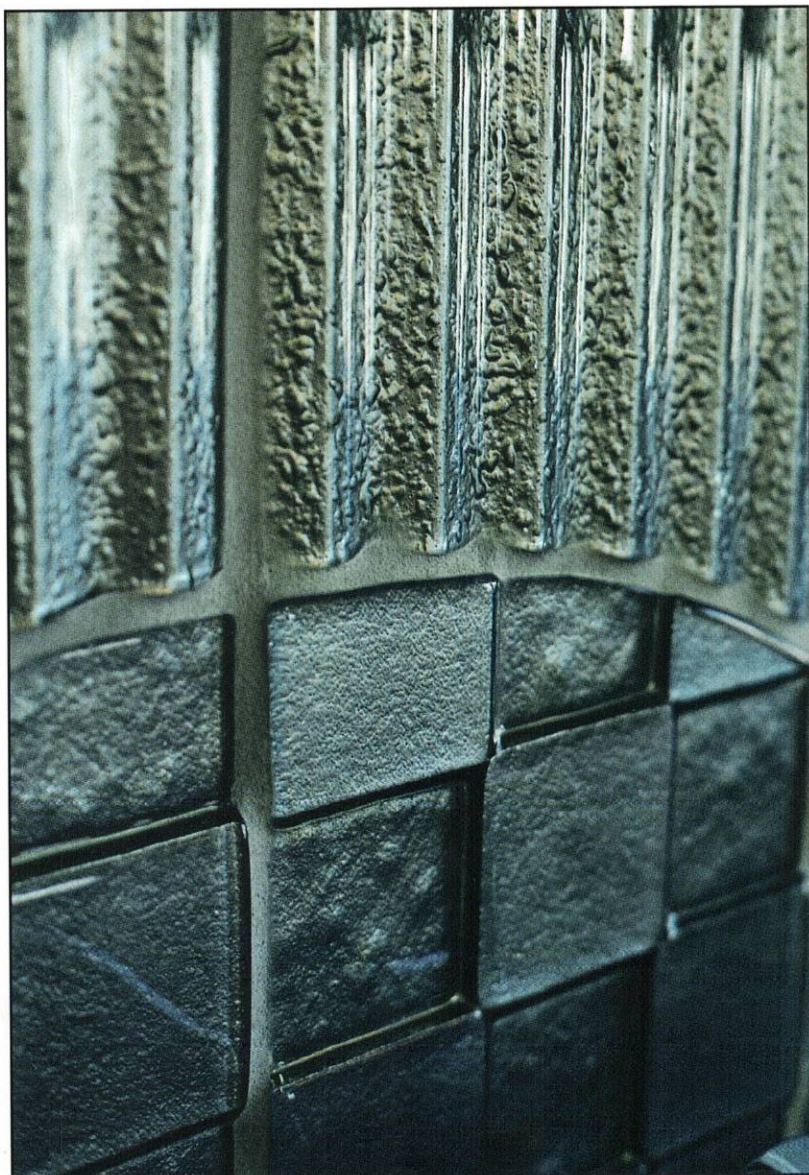
Making the more complicated shapes such as the checkerboard or the corrugated tile is less difficult than it looks. The checkerboard mold is simply built up by cutting squares of fiber paper and arranging them in a grid pattern on another sheet

of paper. When the glass slumps, both the fiber texture and the checkerboard pattern result. Any number of patterns could be created in this way. The parallel vertical lines were done on a simple slumping mold made of a standard mixture of cement fondue and vermiculite. Bond cast his mold using a piece of galvanized roofing metal for a pattern. The tiles to be slumped on this mold are fired twice; once for the fiber texture and again on the mold. The exact location of the corrugations is determined by carefully placing the pre-cut shape; it will not change dimension unless over-fired.

The most striking element of these projects may be how the metallic coating on the backs of the tiles accentuates their texture and reflects light back into the room. All the more surprising, then, is that this effect can be produced with ordinary paint. Depending on the desired result, one can also use silver leaf or have the tiles silvered. However, if the intention is to set the tile in a conventional material, care must be taken to see that whatever backing is used is not harmed by the mastic.

“Select a paint that will hold up to the conditions,” Bond said, adding that leaf or mirror must be properly sealed. “Both silver leaf and aluminum leaf are very susceptible to damage by the alkaline mortar, so you’re totally dependent on your sealer for protection. There are a variety of sealers, and you need to choose a good one.”

Mortar and grout are a subject unto themselves. “If you’re supplying tile for someone else to install, you have



Bond began experimenting with tile techniques in the early 1980s. He creates entire tiles made of glass to take full advantage of all of the variations of light and texture offered by the medium.

to be prepared for them to be using a variety of materials. They could use silicone, or they could use mirror mastic. There are all kinds of silicones. There are acid-free silicones. Then there are thin-set mortars, which are very alkaline. That's the most common adhesive in the tile industry. I generally specify a white thin-set mortar because what I've noticed is if my tiles have any transparency whatever—translucency—a gray mortar really dulls the color while a white mortar bounces the colors out. You could specify an epoxy mortar and get away from the alkaline cement.

"Then there are sanded grouts and unsanded grout, and sanded grout is required when the grout line is, I believe, more than one-eighth of an inch. If you use an unsanded grout for too broad a line, the grout will fall out when it shrinks," Bond said.

The sand in grout can scratch the glass, especially black or other soft colors, so care is necessary when cleaning off the excess. The whole question of setting tile is one that the inexperienced should discuss with a professional or a do-it-yourself center.

The key to a process like this one is to experiment freely and take notes on whatever is done. That way, mistakes can be detected and avoided while success can be repeated. There is limitless potential in the idea that anything now done with tile could be done with glass. Even the artist who would never design a bathroom counter or kitchen backsplash will find occasion to profit from imagining an art project as tile and creating it that way.

This technique could not have developed without the support of clients willing and able to envision something no one had seen. Hal Bond worked with Joyce F. Martin, project designer at the Center of Design for an Aging Society, who was interior designer for Integrated Design Technologies at their new Hillsborough, Oregon, facility. IDT is interested in new processes and in this case saw an opportunity to convey that sensibility to everyone who enters their lobby. At Roth Distributing Company in Tigard, Oregon, Bond worked with Neil Kelly, President of Signature Cabinets; Kathleen Donohue, Vice President & General Manager; Sales Manager Sue Francis; and Cathy Bennett of the Portland showroom.

Hal Bond's career recalls the recent history of stained glass. In the 1970s he made Victorian reproductions by day while exploring artistic possibilities at night. Resolving this dilemma took him from Colorado to the Troutdale, Oregon, workshops of Tim O'Neill and Ed Carpenter. There he encountered new materials and innovative ways to use them. The '80s saw Boyce Lundstrom and Dan Schwoerer, at the Bullseye factory in nearby Portland, unlocking glass chemistry to produce fusible glass, which Bond crafted into unique glass tiles.

In 1988 he teamed up with pioneering artist Ruth Brockmann. Their collaboration led to two huge glass murals for the State Office Building in Portland. Breaking with tradition, Bond reconceived the mosaic as a system of tiles. His work since, including that shown here, has grown directly from this breakthrough.

"Where my interest lies is getting these things into environmental spaces, into people's homes and businesses. Integrating them as materials that are being used and lived with."

Geoffrey Wichert operated a stained glass studio in Southern California from 1973 to 1980, moving to Portland, Oregon, in that year. He divides his time between making glass art, looking at it and closing the gap between those activities by writing about what he sees.

The Tariff Question Revisited:

The Impetus for the Formation of the SGAA

by William Serban

The establishment of the Stained Glass Association of America (SGAA) is directly linked with the issue of protective tariffs, that is, taxes on goods coming into the country which are designed to enable the fledgling stained glass industry to become established in the United States. The "tariff question," as it was called in the nineteenth century, pitted U. S. stained glass studio owners and workers against European stained glass studios, importers, church officials and American artists. In retrospect, the history of the tariff question reveals several interesting general factors about the U.S. stained glass industry that are often overlooked by art historians:

- By the mid-nineteenth century, U.S. stained glass workers joined decorative artists such as wrought-iron and mosaic makers in proclaiming their work as the equal of their European counterparts and sought tariff protection against what was perceived as unfair labor and apprenticeship practices.

- U. S. stained glass studio owners disagreed strongly with U. S. painters and sculptors on the tariff question, with the latter groups opposing tariffs because they wanted access to fine European art as a model for their own work.

- In the nineteenth century, luminaries like Louis C. Tiffany and John La Farge split with stained glass makers by advocating duty-free art. By the twentieth century, Tiffany and La Farge supported protective tariffs for stained glass.

In addition to the fact that stained glass was one of the earliest art forms to manifest independence from European dominance, U.S. stained glass workers proved equal to the task of playing the game of tariff politics. From the first appearance of stained glass on the tariff schedule in 1842 to the present, the focus of attention for tariff issues has constantly shifted among American governmental institutions on the political merry-go-round. The earliest days of the tariff question involved Congress and the bureaucracy, specifically the Customs Bureau. In the twentieth century, the Executive Office of the President has played a greater role, although Congress continued to keep its finger in the tariff pot. Completing the tour of governmental institutions, the U. S. Supreme Court managed to become involved by hearing a case in 1892 about stained glass tariffs.

The political legacy that remains is a record of stained glass studio owners, designers and workers—most of whom were SGAA members or officials—seeking redress by:

- Testifying before Customs Bureau officials about the enforcement of tariffs on stained glass

- Writing, calling and giving testimony to congressional committees and elected representatives about stained glass tariffs

- Writing, calling and submitting written evidence to U. S. presidents in order to support tariff legislation and enforcement

- Submitting legal briefs and being cross-examined before the Supreme Court about the tariff question

In retrospect, the history of the tariff question reveals several interesting general factors about the U.S. stained glass industry that are often overlooked by art historians.

The Tariff Question: Background

Before the formation of the SGAA, domestic stained glass studios had faced more than half a century of competition from Europeans (primarily the Germans, French and British) for the lucrative market of American churches, homes and office buildings. Struggling to gain a foothold in the marketplace, stained glass makers of the nineteenth and early twentieth centuries shared the bitter national dissent over the nation's tariff policy with the large industries such as steel, cotton and sugar. The overriding issue was whether the federal government should tax imported goods in order to protect American industries who were not as efficient. The economic rationale for this policy was that the benefits of employment resulting from protecting nascent industries offset the higher consumer prices for these commodities. The United States never fully answered the tariff question during this era. Tariff rates frequently rose or fell with the change of political parties at election time. Special-interest groups on both sides of the issue had to be constantly vigilant so that opportunities were seized immediately to gain ground or avert losses.

Stained glass is a perfect example of the topsy-turvy U.S. tariff policy. The stained glass industry first received specific tariff protection in 1842, when imports were listed as taxable at a rate of 30% of value.¹ Over the next 40

16" Horizontal Glass Roughing Lap



- ★ 16" Tapered Iron Plate (Wheel)
- ★ Removable Splash Guard
- ★ Unobstructed Access to Lap Plate
- ★ Removable Grit Catch Pan
- ★ Water Can, Valve, Holder and Grit Chute
- ★ Ball Bearings, Neoprene Sealed and Greased for Life
- ★ Heavy Welded Steel Chasis
- ★ 1/2 hp Heavy Duty Motor

Water through the drip valve slowly feeds abrasive grit to the wheel surface. Tapered iron plate turns at 220 RPM and is reversible with a flat side. The tapered side permits large pieces of glass to be abraded with easier control. Pieces larger than 8 inches can be abraded by turning the work piece. The flat side of the wheel is suitable for abrading small work pieces. Unit comes fully assembled with 1/2 hp, 110v, 60hz motor, instructions and guarantee. Size: 22" L x 21" W x 30" H. Shipping weight 80 lbs.

No. 5030—Horizontal Glass Lap

Covington Engineering Corp.
SINCE 1848 P.O. Box 35 715 W. Colton Ave.
Redlands, CA 92373

FREE CATALOGUE

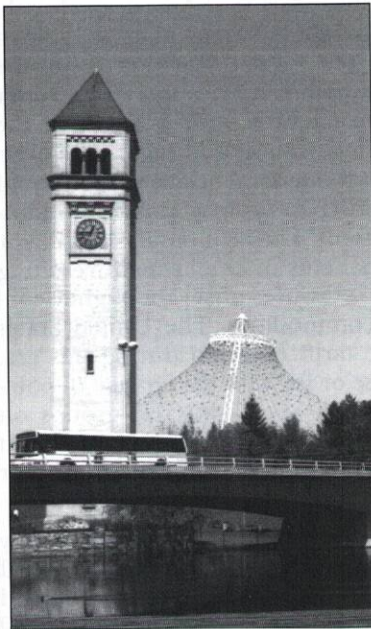
(909) 793-6636

Circle 46 on Reader Service Card

years, stained glass tariffs were amended twice from a low of 24% in 1857 to a high of 40% in 1864.² In 1883, Congress said yes to both sides of the tariff question by raising stained glass rates to 45% and by passing a provision for duty-free entry of windows intended for religious institutions. Since 1883, debate rages, even today, over the extent and application of religious exemptions for imported stained glass windows. From 1883-1934, stained glass tariffs were changed six times from a low of 30% to a high of 60%. The Reciprocal Trade Agreement Act of 1934 briefly ended direct congressional involvement with tariffs and instructed the president to negotiate rates with individual countries.

Leading the tariff debate for duty-free stained glass were European studios and their allied importers. Records show infrequent direct lobbying by the European stained glass studios. Occasionally a statement by the Franz Mayer Company or F.X. Zettler firm of Munich, Germany, appears in testimony. More often the German studios retained New York law firms in order to fight their tariff battles. There is some evidence of direct British lobbying in the early tariff struggle and French involvement in the 1950s and 1960s. Mostly, pressure for duty-free stained glass came from import firms. This is because the import agents had to deal with the tariff issue at the Custom House as the windows were assessed a tax before entry into the U.S. When testimony was forthcoming, European studios and importers hammered home the point that the quality of imports far exceeded the American product. The lobbying strategy was to suggest to legislators that the tariffs bolstered a poor product and denied Americans access to the highest form of artistic endeavor.

Join us in Spokane



for the

88th Annual SGAA Summer Conference

Spokane '97, July 8-12

This year's conference will be held at the Ridpath Hotel. If you are not already an SGAA Member, now is the time to join. Special conference discounts are available to members. Don't wait to make your conference reservations—call Kathy Murdock, SGAA Headquarters, 1-800-888-SGAA (7422) today.

Bring the family; the Ridpath is only blocks from Spokane's historic Riverfront Park, clock tower, sculpture walk, waterfalls, IMAX theater and the Spokane Marketplace.

However, European studios and importers did not need to exert much effort on behalf of tariffs, because they had a strong ally and advocate in the halls of Congress through the active involvement of the American clergy. Although the Protestant denominations were a presence, the primary supporter of duty-free stained glass was the Roman Catholic Church. America's first Catholic cardinal, Rev. James C. Gibbons, was a long-standing activist in the cause of tariff reduction. Gibbons and most American clergymen firmly believed that the best art was produced by the established glass houses of Europe. Thus, any art works that were to reflect on the Deity and adorn cathedrals and churches must originate from the highest level of artistic proficiency.

As a result, Roman Catholic prelates frequently petitioned members of Congress for low tariffs or duty-free entry on religious articles and decorative works. These petitions pointed out the financial hardship the tariffs imposed on clergymen and their congregations engaged in building and decorating churches. The strategy was to influence Congress to expand the free list of art works for religious and educational institutions by declaring stained glass as a painting. In fact, clergymen referred to stained glass as "painted" glass in order to promote the idea that it is painting eligible for duty-free entry. Since it was a long-standing policy of Congress to support artistic, cultural, religious and antiquarian interests with a free list, the addition of stained or painted glass was seen by the clergy as merely correcting an omission in the existing law. Church officials were careful not to ask for duty-free entry of non-religious or educational art works so as not to offend American workers. However, stained glass windows for churches comprised 60-80% of the American market.

Cardinal Gibbons was particularly effective in soliciting petitions to Congress from the clergy. He also commanded considerable influence in governmental circles. It was through his insistence in the gravity of the tariff question over stained glass that the U.S. Supreme Court saw its way to cut through the normal two-to-three-year docket to hear the case of *United States v. Perry* only six months after the Circuit Court's decision.³

The case of *United States v. Perry* is the only case in U.S. history involving stained glass to reach the Supreme Court. The case itself is a classic example of the confusion

DichroMagic®

State Of The ART Dichroic Glass

17 Brilliant Colors

Over 35 Different Types Of Glass In Stock Ready To Coat

Uroboros 90 or 96 C.O.E.

Bullseye 90 C.O.E.

1,1.5,2, or 3mm Float Glass

NEW! - 1.5mm Borofloat Sheet

Perfect For Fusing Excellent For Hot Glass

FULL 16"X16" SHEETS

Send us your company information and we will put you on our mailing list for a free 1997 DichroMagic® Product Guide

 **Austin
Thin Films, Inc.**

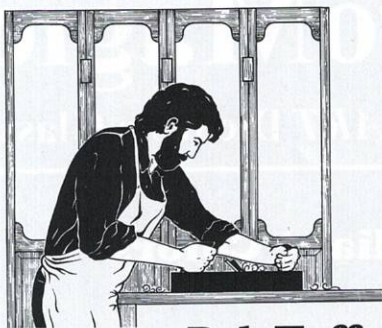
800 Paloma Dr., Suite 100
Round Rock, TX 78664
512-246-1122 Fax-512-246-1133



Circle 89 on Reader Service Card

that arises when Congress passes laws that are ambiguous and the conflict that results when executive-branch agencies must exercise discretion in the face of competing interests. The case arose out of the importation of stained glass windows containing representations of saints and biblical subjects. The windows originated from Germany and were being imported by the firm of Perry & Ryer for the Convent of the Sacred Heart in Philadelphia, PA. The *S.S. Rugia* arrived in the Port of New York November 24, 1890, and Customs officials immediately assessed a 45% tariff on the windows.⁴

Perry and Ryer appealed to the U.S. Board of General Appraisers, the appeals board established for disputes over tariff assessments. At the Appraisers' hearing, several prominent stained glass makers testified, including



Bob Tuff

P.O. Box 14326
St. Paul, MN 55114
(612) 603-1249

Deluxe Hardwood Privacy Screens

Handcrafted specifically
for Stained Glass
Artisans Worldwide

**Together We
Create Heirlooms**

Charles and Richard Lamb, Edward Colgate and John Morgan. The Board upheld the assessment, and the importers carried the issue to the U.S. Circuit Court of Appeals. The Circuit Court, after hearing elaborate arguments, reversed the decision of the Board of General Appraisers.⁵

After intervention by Cardinal James Gibbons, the Supreme Court agreed to hear the appeal by the Treasury Department (the parent agency of the Customs Bureau). In its decision, the Supreme Court ruled that stained glass was not a fine art and therefore not eligible for duty-free status according to the 1890 tariff act. In a carefully worded decision, the Court held that stained glass was an "object of art" and therefore was more suited to tariff treatment for tapestries than fine paintings or sculpture. Thus, the Supreme Court reversed the Circuit Court and ordered that the tariff stand.

The tariff debate was equally acrimonious within the American arts and crafts community. On the one side, the fine arts community—representing most American painters and sculptors—supported the tariff policy of "free art." This meant that custom duties should not be levied on imported works of art. The thinking was that because the world's best art was produced in Europe, high tariffs discouraged American importation of quality art, and this forced domestic artists to bear the expense of traveling abroad in order to observe good work. This "free art" movement, spearheaded by Kate Field of the National Art Association, numbered among its adherents such

notables as Albert Bierstadt, Charles Meritt Chase, Thomas Eakins and Augustus St. Gaudens.⁶ Also among this elite group were the names of three stained glass luminaries: Maitland Armstrong, John La Farge and Louis Comfort Tiffany.⁷

Essentially, Congress supported the free-art concept but treated stained glass as a special case. In 1868, the pastor of the First Church Society of Boston petitioned the Boston Custom House and later the U.S. Senate Finance Committee to waive the tariff on the British stained glass windows ordered for a new church.⁸ The windows had an estimated value of between \$10,000 and \$15,000. In his request, the pastor reasoned that allowing these windows to enter duty free would "raise the standard of taste in matters of art" and would supply a good model to "improve manufactures of that character in the United States." In a stinging response, the Finance Committee report stated that Europeans "are generally impressed with the idea that Americans have a false taste" and they might consider "offering us works of gaudy and meretricious style rather than of the purest and best examples of art or workmanship."⁹ Thus, there would be no guarantee that the quality of art would be raised by importing stained glass; the committee denied the request.

The Senate report did acknowledge that religious and cultural societies were permitted by Congress to receive duty-free works of art. However, the report specifies sculpture, paintings, books, maps and antiquities as more in line with congressional intent. Thus, free art and stained glass were initially viewed by members of Congress as exclusive issues. The failure of the American stained glass industry to cite this 1868 statement of congressional intent was a serious omission.

In opposition to the "free art" movement of the fine arts community were most American stained glass studios. These studio owners contended that the domestic stained glass industry already equaled the quality of the European product. What kept the American stained glass producers from economically surpassing their European counterparts were the threefold disadvantages of 1) the tariff duties Americans paid on sheet glass, whiting and other raw materials available only from Europe, 2) the higher American standard of wages needed to pay studio personnel and 3) the European apprenticeship system that provided extensive "free" labor.

The apprenticeship system was singled out by Americans as particularly disadvantageous because it required young workers to serve a number of years without monetary compensation in exchange for their stained glass training. Given these factors, the Americans contended that the indigenous stained glass industry was doomed to extinction without tariff protection.

The American stained glass industry, therefore, vigorously supported what was then the Republican Party position favoring high-tariff protection over the Democratic Party's stance on free trade. As the political winds blew in the direction of major tariff revision, stained glass studio owners and workers demonstrated surprising political aplomb at lobbying, petitioning and producing dozens of pages of testimony before congressional committees. Eventually spokesmen for stained glass protectionism became adept at meeting in smoke-filled rooms, mobilizing letter-writing campaigns and gathering statistics to

substantiate position statements made before political leaders such as William McKinley, Nelson Dingley, Oscar Underwood and Reed Smoot, each of whom sponsored significant tariff-revision bills.



Your wholesale supply house

1-800-428-6693

(770) 760-9404

Fax: (770) 760-9032

Buy Direct From The Manufacturer

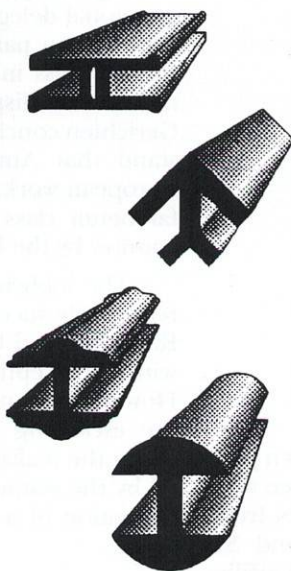
The Stained Glass Lobby: 1842-1903

The development of a stained glass lobby in the nineteenth century was fragmented and achieved mixed results. The scope of political activity to influence tariff legislation was either single-studio, local or regional in scope. In most instances, a stained glass studio owner and his workers would take time to write Congress or visit a legislator. As time went on, several studios from a given city would send a petition, or regional studios would join in a political effort. In the New York, Pennsylvania and New Jersey area, however, there were efforts to form a regional association in order to present a more systematic lobbying effort.

One of the first examples of the single-studio lobby occurred in 1864. During this time Congress was reviewing legislative proposals to raise tariffs. On record with the U. S. House Ways and Means Committee is a petition from the Charles Belcher Co. of New York City.¹⁰ In the petition, Mr. Belcher listed the impact of tariffs on the imported materials he used in his stained glass work. He noted that tariffs on completed works by foreign studios would make his business more viable. Included in his petition were two samples of enameled glass approximately two inches wide by four inches in length to illustrate the quality of work that American studios could produce.¹¹ While there is no indication of the direct impact of Mr. Belcher's petition, it must have had some influence since the Congress voted to increase tariffs on stained glass from 30% to 40%.

An instance of lobbying by a city consortium of stained glass studios occurred in 1890 through the efforts of Wm. Coulter and Son of Cincinnati. Mr. Coulter circulated a petition from the "Glass Stainers of Cincinnati" to Ohio Senator John Sherman in order to bring to his attention a "nugatory" tariff decision by the U.S. Attorney General.¹² The petition was signed by Coulter, representing 20 employees; Vollmer, Toomer & Marx with 24 workers; The Boura Art Stained Glass Works and its staff of 30

**We specialize in manufacturing
Restoration Grades of Lead Came to order.**

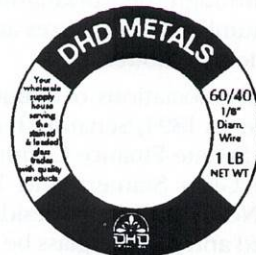


Call for prices on:

- Lead Came
- Zinc Came
- 4 Restoration Grades of Lead Available
- Antique Lead Came
- High Heart Leads
- Colonial Leads
- Hollow Heart Leads
- Galvanized Steel Rebar
- Copper Foil
- DHD Flux
- Custom Dies Available



**Now available!
Solder specifically
formulated by
DHD Metals!**



Circle 35 on Reader Service Card

people; and The Artistic Glass Painting Co. and their 25 employees. Coulter notes in his petition that Cincinnati studios cannot compete with foreign work because "[w]ages in Europe are one-half what is paid in this country, wages form nine-tenths of the cost of the work and we pay a duty on raw material and antique glass, 30 to 60 per cent." Coulter laments that "[w]ith all these disadvantages against us, the finished article is allowed to come in duty free."

The final lobbying strategy was the formation of regional associations in order to present petitions to Congress from a broad cross-section of firms from multiple cities and states. In the 1880s and 1890s, there is evidence of lobbying by several stained glass associations that

Exotic Hardwood Framing Stock

Enhance and protect your
Glass Art with the beauty
and rich color of exotic
hardwoods.

- Purple Heart, Paduk, Rosewood, Zebrawood, Wenge and more.
- Domestic hardwoods also available
- Laminations or solid wood
- Unfinished on 6 foot lengths
- 1", 1½" and 2" widths, ¾" channel
- Many attractive profiles



Write or fax for information:

Summit Stained Glass

657 SW 2nd Street
Lee's Summit, MO 64063

Tel: (816) 525-0037
Fax: (816) 525-1736

Circle 94 on Reader Service Card

pre-date the SGAA. For instance, in 1888 there was a petition to the U. S. House Ways and Means Committee with the signatures of nearly 200 stained glass workers from New York, New Jersey, Cincinnati, Chicago and St. Louis.¹³ Although the workingmen gave no formal affiliation, the number of signatures and variety of cities caused Congress to take notice.

Formal associations of stained glass workers are also in evidence. In 1894, Senator Henry Cabot Lodge, a member of the Senate Finance Committee, received a petition from The Glass Stainers and Lead Glaziers Protective Union of New York City.¹⁴ President James Carchic asked that stained and painted glass be stricken from the free list in the Wilson Tariff Bill under consideration. Another petition was sent that same year to the House Ways and Means committee from The United Stained Glass Workers of New York. Again, the thrust of the petition was to keep stained glass off the free list. The organization's president, Francis Lathrop, included a table of wages per week comparing the United States and foreign wages. In the table, the following firms are specifically mentioned: Mayer & Co., Munich; Zettler & Co., Munich; Westphal, Berlin; Hernsdorf, Berlin; Schneider & Schatz, Cologne; Varble & Larzh, Dusseldorf; Frankreich, Belgium; and Heaton, Butler & Bayne, London.

Lathrop pointed out that an entry-level glazier making \$18-20 per week in the United States exceeded the highest-paid figure painters at Mayer & Co., who made only \$10-14 per week. American figure painters were quoted as making \$25-35 per week at that time while a European glazier made between \$4 and \$9 per week.

During the 1890s, there is evidence of the growing involvement of several key stained glass makers who eventually helped establish the SGAA: James Lamb, John Morgan and Ludwig Von Gerichten. Messrs. Lamb and Morgan signed petitions in 1894¹⁵ and 1897¹⁶ seeking tariff protection and removal of stained glass from the free list. The 1897 petition is on behalf of 14 studio owners from New York, Philadelphia and Buffalo. They claimed in their petition that "[w]ith a fair protection, which we are justly entitled to, the beautiful art of making stained glass windows would become a flourishing industry and give employment to a large number of designers, painters and skilled workmen. Without this protection our business must languish and will fall entirely into the hands of foreign manufacturers."

Ludwig Von Gerichten, the first editor of *The Stained Glass Quarterly*, wrote long and detailed letters to his congressional delegation. One letter to William McKinley in 1897 gave a painstaking analysis of the costs of making stained glass in Germany and the United States.¹⁷ Once more, the disparity in wages was highlighted. Von Gerichten concluded that "[w]e do not wish to assume the stand that Americans in this line can beat the best European work, but the American manufacturers make a far better class of goods than what is imported to this country by the Europeans."

The lobbying of domestic stained glass makers was reasonably successful during the era from 1842 to 1903. Rates hovered between 40 and 45% from 1864 to 1900, with the exception of a revision in 1894 lowering it to 35%. However, the need for constant legislative vigilance and the escalating time and expense of lobbying brought about the realization that a more unified effort was needed by the stained glass industry. The result would be the formation of a nationwide trade association for stained glass.

The SGAA and the Tariff: 1903-1933

The National Ornamental Glass Manufacturers Association (NOGMA) was established in 1903, with an initial membership representing studios in most major U.S. cities. This association, the predecessor to the SGAA, was created like any trade association with the purpose of enhancing the profession, promoting sound business practices and marketing the product. But the tariff question was a major impetus for the establishment of NOGMA.

Immediately NOGMA formed a tariff committee to monitor the political scene and set up an organizational structure to communicate with members and to mobilize them for political purposes. Henry Hunt, a future NOGMA president, noted that the organization had three roles regarding the tariff: 1) keep track of tariff rates and monitor importation, 2) see that duties are assessed properly and 3) educate people to purchase their home product.¹⁸

The first president, Joseph Flanagan of Chicago, was an active member of NOGMA's tariff committee. The tariff committee gave exacting and lengthy reports on the



Since 1906

J. SUSSMAN, INC.

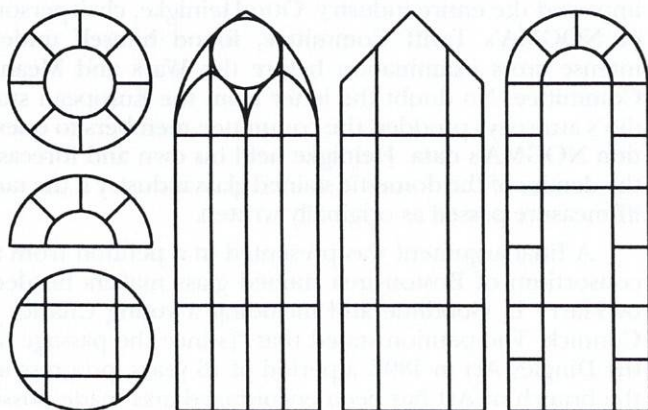
109-10 180th Street • Jamaica, New York 11433

Tel: 718-297-0228

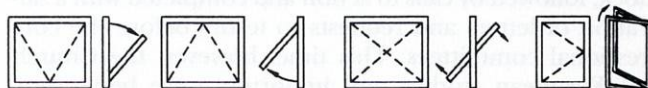
Fax: 718-297-3090

**Churches
Synagogues
Mausoleums
Chapels
Memorial Buildings**

AMERICA'S FINEST CUSTOM MADE WINDOWS



**Single, Double and Triple Glazed Windows
Thermally and Non-Thermally Broken**



PROJECT-IN PROJECT-OUT CENTER-PIVOTED CASEMENT

Ventilators and Casements

J. Sussman, Inc. is the oldest and largest supplier of Custom Made Windows and Special Aluminum Extrusions for the Stained and Leaded Glass Trade. With the industry's largest selection of specialized church window systems (thermal and non-thermal break) we can supply you with the product you need at the price you want. Our over 90 years of experience is your guarantee of fine quality, fast service and competitive pricing.

Call, Write or Fax for Further Information.

WINDOWS • SKYLIGHTS • WALKWAYS • SUNROOMS • GLASS and METAL BENDING

Circle 33 on Reader Service Card

status of tariff legislation and enforcement. In 1906, NOGMA sponsored a monthly publication called *The Monthly Visitor*, edited by tariff activist Ludwig Von Gerichten of Columbus, Ohio. *The Monthly Visitor* and its successor, the *Bulletin of the National Ornamental Glass Manufacturers Association*, carried frequent statements and reports to members on tariff developments. When tariff changes were being debated, the publication would teem with passionate pleas for members to become active and contact legislators.

The first years of NOGMA were calm on the tariff front. Stained glass was assessed at 45%, based on the 1897 tariff act. Studios were becoming increasingly competitive for commissions, and some shops were marginally profitable. Then, in 1909, the situation began to unravel, and NOGMA's committee structure and communications with members began to pay off. The episode began when a group of European stained glass importers, virtually duplicating the arguments used in *United States v. Perry*, challenged the Customs Bureau's assessment of duties on stained glass. The importers claimed that such windows were pictorial paintings on glass and thus eligible for free entry. The importers petitioned the U.S. Board of General Appraisers and also made the claim that the windows were donations to a religious institution, a legal condition for tariff remission.

Instantly, NOGMA swung into action. Articles in *The Bulletin* were written by F.S. Lamb, Tariff Committee chair, apprising the members of the situation. Lamb and other NOGMA officers were dispatched to testify before the Board of General Appraisers. The importers were chal-

lenged by NOGMA to prove that the windows were donated. The importers sought several adjournments in order to solicit depositions from the alleged donors.

Debate also ensued on whether the windows in question were "painted" or "stained." The point NOGMA tried to establish with government attorneys was that painted glass was not equivalent to a painted canvass. Therefore, NOGMA officials argued, the tariff provision waiving duties on paintings does not apply to heavily-painted stained glass windows. The Board of General Appraisers sided with NOGMA and the domestic stained glass industry. Credit for the victory was also shared by other participating organizations representing studios and workers, such as the Special Committee on tariff revision of the Eastern Glass Manufacturers Association, The Decorative Glass Workers Protective Association and the Amalgamated Glassmakers International Association of America (the latter group being affiliated with the American Federation of Labor). The victory was proclaimed in *The Bulletin*, and members were thanked for their support. But the triumph was short-lived.

Three years later, in 1912, a petition was sent by Cardinal James Gibbons to Congress seeking changes in the tariff schedule on stained glass.¹⁹ More than 200 Roman Catholic clergymen signed the document. Those signing ranged from archbishops and bishops to local parish priests. Cardinal Gibbons pointed out in the petition that the cost of quality stained glass was disproportionately high due to the 45% tariff and that churches should be exempted from paying custom duties.

In 1913, the Democratic Party placed tariff reform on its agenda with a pledge to lower tariffs on necessities and raise them on luxuries. Moreover, politicians from both parties were reluctant to tangle with the highest American official in the Roman Catholic Church. The result was a bill sent to the House Ways and Means Committee and the Senate Finance Committee to lower tariffs to 30% and allow churches to import stained glass duty free.

As one might anticipate, the reaction from NOGMA and other stained glass organizations was initially one of shock, followed by calls to action and completed with a saturation of letters and requests to testify before the congressional committees. This time, however, the Church and European studios and importers were better prepared than in 1909. The New York law firm of Curie, Smith & Maxwell—the firm that handled the *United States v. Perry* case—was again retained by Mayer & Co. to handle the lobbying effort. The attorneys fired off petitions to the congressional committees overseeing tariff revision, accusing NOGMA and the domestic stained glass lobby of inflating their claims about European stained glass production costs and profits, refusing to divulge statistics about domestic production and market share and downplaying the recent financial success of American studios.²⁰

Some of the Catholic clergymen besides Cardinal Gibbons also entered the fray in opposition to American stained glass producers. Henry Moeller, the Archbishop of Cincinnati, wrote the House Ways and Means Committee to express his view that churches should have imported stained glass windows “considered the world over as great works of art.”²¹ But, Moeller emphasized, prohibitive tariffs prevented this in his archdiocese. James H. Blenk, Archbishop of New Orleans, told the Ways and Means Committee that NOGMA’s opposition to the tariffs was misguided.²² Blenk actually quoted the February 1913 issue of NOGMA’s *Bulletin*, which claimed that 6,000 domestic stained glass workers generated \$7 million annually. Blenk goes on to cite NOGMA figures that place the value of European imports at \$260,000 or 4% of stained glass production. Blenk states that in the United States there was a sufficient market for “ordinary ornamental design” in residences, halls, signs and public buildings to allow domestic manufacturers a comfortable living. However, real artistic stained glass windows, Blenk maintained, must come from the art center of Europe, and thus the stained glass tariff should be eliminated for churches.

NOGMA’s rebuttal was threefold. The first argument claimed that stained glass was a luxury and Democrats would break a promise by lowering the tariff on it. This argument was repeated throughout NOGMA correspondence and testimony. The New York firm of Heinigke and Bowen sent a letter to the Ways and Means Committee stating that stained glass is “unquestionably a luxury.”²³ NOGMA member Alfred Godwin of Philadelphia echoed Heinigke and Bowen by proclaiming himself an ardent supporter of the Democratic principle of taxing luxuries, not necessities.²⁴ Another Philadelphia artist, Nicola D’Ascenzo, asked “Is it fair, therefore, to place the rich man’s tax upon the free list?” D’Ascenzo answered his question by stating that “[t]he writer can show you hundreds of church windows in Washington, Philadelphia and New York that were donated by persons having large

fortunes at their disposal.”²⁵ H. H. Jacoby of St. Louis characterized the placement of stained glass on the free list as “a little joke” which “the shrewd importer is trying to play on you.”²⁶

The second argument against the tariff proposal held that the majority of stained glass work is church work and that lowering the tariff would put U.S. producers out of business. Here the statistics cited by Archbishop Blenk were bandied about. The NOGMA position was that roughly 80% of the American stained glass market was in churches. Thus, any tariff revision affecting liturgical art impacted the entire industry. Otto Heinigke, chairperson of NOGMA’s Tariff Committee, found himself under intense cross examination before the Ways and Means Committee. No doubt the letter from the European studio’s attorneys prodded the committee members to question NOGMA’s data. Heinigke held his own and forecast the demise of the domestic stained glass industry if the tariff measure passed as originally written.

A final argument was presented in a petition from a consortium of Boston-area stained glass makers headed by Harry E. Goodhue and including a young Charles J. Connick. The petition stated that “[s]ince the passage of the Dingley Act in 1897, a period of 16 years, progress in the branch of Art has been encouraged and made possible by the levy of duties on imported art windows, whether intended for presentation or for sale. Until this encouragement was provided, there was no development in this field.”²⁷

The essence of the argument was that the years 1897 through 1912 had been a period of moderate growth for domestic stained glass firms; therefore, why tinker with a good thing? The petitioners predicted that no matter how diligent and hard working members of U.S. firms could be, passage of the tariff will make it impossible for domestic manufacturers to continue in their field of work.

Two other tactics were used by NOGMA to counter the tariff proposal. One was a public relations strategy using an advertisement in *The Bulletin* and area newspapers proclaiming in bold letters “A GREAT INJUSTICE.”²⁸ The ad goes on to explain that importers were delaying making a claim to stained glass windows for St. John the Divine Cathedral stored at the port of New York. The text explains that the importers were hoping to pay a lower tariff if Congress passed the current proposal.²⁹ The NOGMA ad asked the American public, “Are tactics of this kind fair to this country? Is it just to the American Manufacturer? Is it right to the American Workman?”

The final stratagem was to sway the opinion of the Roman Catholic clergy on the tariff question. This argument implied that the Church hierarchy was siding against the American working class on this issue. Louis J. Lederle of Spiers-Lederle Glass Co. in New York noted to the Ways and Means Committee that he was aware “that the European manufacturers were present with their able attorneys and a petition bearing signatures of many of the Catholic clergy.”³⁰

John J. Kinsella of Chicago wrote the Ways and Means Committee that he had visited Cardinal Gibbons personally and “the Cardinal stated he would not do anything further in connection with this controversy, as he now realized that the American laborer must be protected.”³¹

Kinsella listed other high-ranking Catholic clergymen who opposed the tariff revision. He also observed that the Catholic Church had initially contended that it was seeking a tariff exemption "in the interest of small churches." Kinsella said this claim is in error because most stained glass for small churches are made by American studios. He concluded that "[i]t is the rich Cathedrals and wealthy parishes and congregations that use the foreign glass."

An interesting sidelight outside the purview of NOGMA was the plight of Mr. William Blenko Sr. of The Blenko Antique Art Glass Co. in Clarksburg, W.Va. Mr. Blenko, a future SGAA member, wrote Congress asking that "Antique" glass be added to the tariff list since it was not specifically cited in the bill.³² Blenko explained that for the past five years he had been attempting to manufacture antique glass in the United States and that "for three years I worked at it at a continual loss of time and money." Blenko conceded that he had begun to turn a profit over the past two years. However, at that moment, Blenko wrote, German glass manufacturers were dumping antique glass in America "at a price which it is utterly impossible for me to touch." He further explained how American stained glass studios always had to pay tariffs on imported raw materials and that his business was created in an effort to partially eliminate the domestic dependency on foreign raw materials.³³

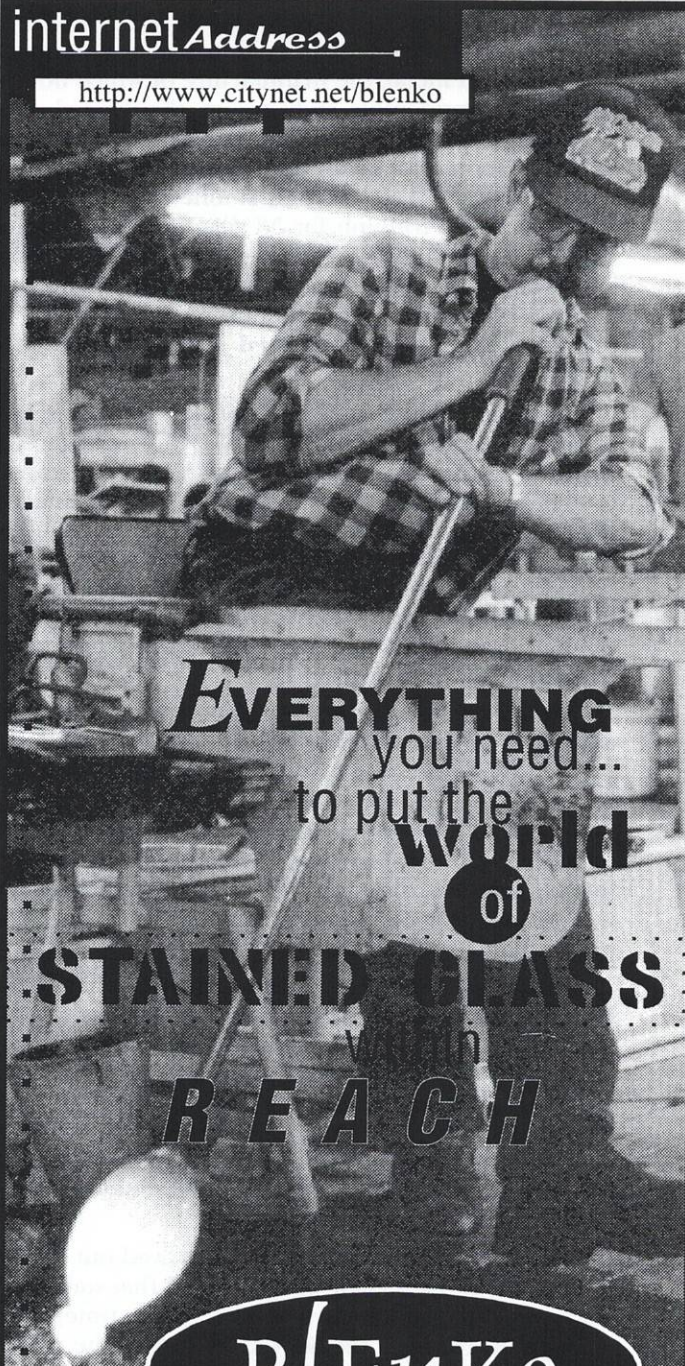
The Democratic-controlled Congress faced an onslaught of petitions and personal visits during this legislative session. NOGMA representatives lobbied until the final congressional vote was cast, but the effort could not prevent a major defeat. The final act called for the duty on stained glass to be reduced from 45% to 30%, thus giving a partial victory to the importers, the Church and foreign studios. More significantly, in classic smoke-filled-room political fashion, a last-minute change of paragraph 655 substituted the word "include" for "exclude" in reference to stained glass being on the duty-free list of goods imported by religious societies. The importer lobby had won a victory of major proportions.

NOGMA officers did not take the adverse action lying down. As a rule of thumb in hardball politics, when one branch of American government fails you, turn to another branch. In this case, NOGMA shifted its attention from the legislative to the executive branch. Within a year after stained glass was placed on the duty-free list, NOGMA Tariff Committee members had testified before the U.S. Board of General Appraisers, affiliated with the Customs Bureau in the Treasury Department.³⁴ The case involved a protest from a Mr. Theo Rose regarding a Custom House assessment of a tariff on stained glass windows he was importing. NOGMA representatives questioned the congressional intent of paragraph 655.

The Treasury Decision rendered by the Board of Appraisers interpreted stained glass more than 20 years old as eligible for the free list and all new stained glass windows to be subject to a 30% tariff. The Appraisers stated "[w]e are of the opinion that paragraph 655, as enacted in the law of 1913, was a compromise between those who argued for free importation for the benefit of churches and houses of worship, and those who argued that the domestic industry of manufacturing such goods should be protected; and it was concluded as we read the law, that stained or painted glass windows made more than 20 years before importation should be admitted free, but that stained and painted glass

internet *Address*

<http://www.citynet.net/blenko>



EVERYTHING
you need...
to put the
world
of
STAINED GLASS
within
REACH

Blenko:

· a r t · g l a s s · c o m p a n y ·

: Antique Sheet Glass
: Dalle De Verre
: Hand Spun Rondels
: Custom Castings

PO BOX 67
MILTON WEST VIRGINIA 25541
304/743-9081 FAX 304/743-0547

windows which were in part molded, cast or mechanically wrought from metal, the manufacture of which now constitutes a considerable industry in the United States, should be excluded if manufactured within 20 years prior to importation, thus saving and protecting the industry as it now stands."³⁵ This decision stunned the import triad and provided a triumph for NOGMA and the domestic industry. It also meant turning to another branch of government, as the importers appealed the decision to the judicial branch. But for the moment, NOGMA had bought more time and plugged one more leak in the import dam.

The 1914 Board of Appraisers decision was barely complete when the conditions of World War I altered the situation in the domestic stained glass industry and ushered in a scenario that would affect the United States after World War II as well. With the outbreak of World War I, transportation links were severed, and the flow of German stained glass windows to America halted. The Americans pounced on the opportunity to make further inroads into the liturgical stained glass window market. Opportunities abounded and profits soared.

In a sense it was the best of times for stained glass makers, to be followed shortly by the worst of times. After the end of World War I, German manufacturers—enjoying a further decline in the wage standard in addition to lower tariff rates—began flooding the United States with bargain-priced, quality stained glass. Anti-German sentiment among the American public resulting from the war was not strong enough to resist the lure of extremely low-priced, high-quality windows.

Moreover, many clergymen, convinced that German glass is the highest state of the art, awaited the war's end to resubmit orders to adorn churches and cathedrals. During 1919-1920, some domestic studios were forced to lay off employees due to shrinking business. NOGMA's leaders planned a counter strategy based on a "Buy American" campaign. *The Bulletin* urged readers to contact local newspapers and explain the dire situation of the stained glass industry.

In hindsight, the same scenario played out following World War II. By 1950 it was estimated that stained glass imports had risen nearly 500%. This time, having changed its name to the SGAA, leaders of the domestic industry hired lawyers, public relations experts and the like in retaliation.³⁶ However, the industry weathered the episode with little direct governmental intervention.

The post-WWI generation of stained glass manufacturers still looked toward Washington, D.C., to resolve its disastrous economic plight. By 1922, the Republican Party again flew the banner of protectionism, and the wheels were in motion for another round of tariff revisions. For the stained glass lobby, the strategy was to negate the influence of the Roman Catholic clergy; muster more evidence of unfair competition, dumping and questionable trade practices; push for raising the tariff at least to 45% but preferably to 60%; and get stained glass off the free list.

NOGMA did not get involved in the first stratagem, although articles in *The Bulletin* pointed out that many Catholics—including clergymen—stood for protecting the American worker and the domestic stained glass industry. NOGMA writers pointed out that many stained

glass studio owners and workers were Catholic. The NOGMA leadership, however, did not lobby the Catholic Church and deferred instead to the actions of the labor unions such as the Decorative Glass Workers' Protective Association.³⁷ The Decorative Glass Workers union officials pressured the National Catholic Welfare Council to write Congress on behalf of protective tariffs.³⁸ The union also contacted individual clergymen and asked for letters of support. The efforts of the union resulted in a smattering of letters sent to congressional committees indicating that Catholics were not unanimous about duty-free stained glass. But the Church's official efforts continued to support free importation of liturgical windows.

NOGMA's activities on tariff revision included fact-finding, testifying and to a degree vilifying European studios and importers. The key figures in these efforts were Ludwig Von Gerichten and Otto W. Heinigke. Von Gerichten told congressional committee members a riveting story about having his German stained glass studio confiscated by the German government upon the outbreak of World War I.³⁹ He also provided a firsthand account of the cost difference between the United States and Germany in making stained glass windows.

Otto W. Heinigke, chair of the Tariff Committee and NOGMA's official representative, proved to be very effective.⁴⁰ He combined tempered testimony pertaining to the economics of stained glass making with occasional barbed remarks aimed at the European studios. For example, in the middle of a discussion on the labor costs of stained glass manufacture, Heinigke would note to the congressional delegation that many memorial windows of American soldiers who died in WWI were being made by German studios.⁴¹ This ploy was effective because congressional leaders would mention this anecdote throughout the subsequent hearings.⁴²

Another ploy Heinigke used to sway legislators against the importers was the disclosure of letters from Munich's F.X. Zettler, a major German stained glass studio owner with a large volume of American business, to the American Catholic clergy. Heinigke accused the other side of sending out "importers' propaganda" in the form of letters to American bishops who were about to make major purchases of German stained glass. Submitted as evidence was a letter from Zettler to the Bishop of St. Helena, Montana, asking him to write Congress in support of lower tariffs.⁴³ Zettler mentioned in his letter that he will be installing 56 windows in that diocese's cathedral and the amount of tariff would be high. Another letter was provided by Heinigke written by Louis Merkel (an agent for the German studios), warning the Bishop of Chicago that the American manufacturers were very active before Congress and to make his views known on duty-free stained glass. The letter also cites the same issue of *The Bulletin* that was in the 1913 letter by Archbishop Blenk of New Orleans.

The outcome of the 1922 tariff was another split decision for NOGMA. The tariff rate was increased to 55%, but stained glass for religious purposes was retained on the duty-free list if the window was valued at more than \$15 per square foot. The square-footage provision was a compromise to ensure that cheap pattern work was kept out of the U.S. while painted glass of more value could enter.

Another provision of the 1922 act was a presidential valuation clause which met with the approval of the NOGMA leadership. The valuation clause, also known as the flexible provision, established the practice still used today of extending "most favored nation" status to other countries with equalized trade provisions toward the United States. On the other hand, countries that are denied most-favored-nation status may experience an increase of up to 50% *ad valorem* over the existing tariff rate. The implementation of the valuation is at the discretion of the president. For stained glass professionals, this means lobbying one president instead of numerous congressmen in order to correct a trade imbalance such as between the U.S. and Germany.

Unbeknownst to NOGMA leaders, an exhausted Congress was realizing that the tariff question was consuming a disproportionate amount of their time and resources. The 1922 tariff act signaled the end of what economic historians call the "congressional-control tariff era" lasting from 1789 to 1922. Soon to be ushered in was the "presidential-flexibility tariff era," 1923-1934, that eventually led to the "reciprocal trade era," 1934-1947, and our modern period of the General Agreement on Tariffs and Trade (GATT), 1947-present.

Although NOGMA leaders were somewhat glum about the congressional decision to retain stained glass on the free list, they showed considerable foresight in realizing the marked shift in tariff policy that had taken place through the valuation provision. Otto Heinigke wrote in *The Bulletin* that the valuation provision contained the potential for direct action against unfair competition.⁴⁴ He also realized the importance of building a strong set of economic statistics in order to prove to the government that unfair trade existed. NOGMA set its sights on working with the U.S. Tariff Commission, established in 1917 under President Woodrow Wilson, to create a stained glass industry profile. This decision shows flexibility in working with an executive branch agency as well as maintaining ties with the legislative branch.

The last tariff revision of the protectionist era took place in 1929, just prior to the onset of the Great Depression. This round of tariff hearings was different from the previous 50 years in that there was a conspicuous absence of the Roman Catholic Church. In fact, the only major proponent for the duty-free provision was the firm of Mayer & Co. Another change from the 1919 scenario was the presence of the executive branch in the debates through the U.S. Tariff Commission.⁴⁵ Although no Commission member was present at the congressional hearings, the stained glass manufacturers, called the

Custom Aluminum Frame Fabrication

NEW OR REPLACEMENT
FRAMES AND VENTILATORS
FABRICATED FROM YOUR
TEMPLATES

SPECIAL EXTRUSIONS FOR:

- ★ LEADED GLASS
- ★ FACETED GLASS
- ★ PROTECTIVE GLAZING
- ★ SINGLE OR DOUBLE
GLAZED BENT SHAPES

SMOOTH GALVANIZED
REINFORCING BARS IN STOCK

WRITE OR CALL:

Caff Co.

370 Vista Park Drive
Pittsburgh, PA 15205
412/787-1761
FAX: 412/788-CAFF(2233)

Circle 42 on Reader Service Card

SGAA since 1925, and the European importers both made frequent reference to trade statistics gathered by the Tariff Commission.

The plan for the SGAA was to increase the 55% *ad valorem* rate and eliminate stained glass from the duty-free list. The importers wanted the tariff rate reduced to 25% and retention of stained glass on the free list.

George L. Payne, of Paterson, N.J., was the SGAA spokesman. His testimony cited Tariff Commission figures showing increases in stained glass imports ranging from 9,000 square feet in 1922 to a high of 111,836 square feet in 1925 and an average rate of 77,000 square feet.⁴⁶ Interestingly, Payne described the American stained glass product as standing for higher quality than in the past and charged that the European product was poorly done for the American market. Payne also accused the importers of underhanded tactics through the practice of "knock-down."⁴⁷ This involves importing only the unleaded pieces of a window and paying a low duty per pound as imported glass rather than as a stained glass window. The glass pieces would be assembled and installed in the United States by affiliates of the importers or by local studios under subcontract. Payne's charges were denied by Mayer & Co. In his final statement to the congressional panel, Payne said that he had just returned from the annual SGAA meeting in Philadelphia and he noticed that there were several resignations from the organization because firms were going out of business.⁴⁸ Payne said that the importers were the source of these business failings.

Mayer and Co., through their attorney Manton M. Wyvell of New York, countered that domestic manufacturers were accounting for \$7 million per year and that imports made up only 4% of U.S. stained glass purchases.⁴⁹ Wyvell also noted the impact of the Tiffany Studios on the domestic stained glass market and observed that the Europeans were no competition to the opalescent style of work.⁵⁰ Mayer & Co. suggested to congressional leaders that they were only one of 11 importers of stained glass and that they had no formal organization. Instead, the SGAA was portrayed as a calculating, deceptive and overly-influential pressure group obstructing well-meaning foreign businessmen.

The tariff act was passed in 1930, after the beginning of the Great Depression. It increased the duty rate to 60% and retained stained glass on the duty-free list. This represented the last major involvement of the SGAA before Congress with the tariff question until the 1960s.

In the interim, the Democrats, advocating free trade, returned to power in 1932 under Franklin D. Roosevelt. In 1934, Roosevelt pushed through Congress the Reciprocal Trade Agreement Act that totally revolutionized U.S. tariff policy. This act established the principle of reciprocity (*quid pro quo* tariffs with each country), lowered tariff rates dramatically (30% for stained glass) and formalized the process for granting most-favored-nation status.

For more than two decades, Congress was not a major player in the tariff question. In the early 1950s, the SGAA became alarmed over the dramatic rise of post-WWII stained glass imports, as noted earlier. However, another significant episode of SGAA involvement with Congress over the tariff did not occur until 1962, and the dispute was quite unlike any earlier tariff battle.

The 1950s were a period of great experimentation in stained glass in terms of material technology. One of the major innovations was the development of non-leaded glass; that is, faceted glass or *dalle de verre*. Faceted glass consists of one-inch-thick chunks of glass that are chipped into small pieces, set in a pattern on a table and cemented with concrete (later epoxy) between the pieces. The faceted glass panels were heavier and stronger. These panels were also devoid of extensive painting and thus less labor-intensive than leaded panels.

Instead of Germany being the protagonist in this case, it was France that provided the foreign competition. American firms like Willet Stained Glass Studios in Philadelphia and the Rambusch Decorating Co. in New York competed with firms like Gabriel Loire Studio in Chartres, France for the opportunity to incorporate this new stained glass innovation. The first occasion for the liturgical use of faceted glass in the United States occurred in 1956, when architects announced that they would accept bids from stained glass firms for the First Presbyterian Church of Stamford, Connecticut. The competition for this commission was very intense, and domestic studios were incensed when they learned that the Loire Studio was awarded the contract. What tipped the scale in Loire's favor was an exemption from the 30% tariff passed by Congress. The waiver of the duty was part of a rider that was tacked on to a bill exempting tariffs on guar seed, sponsored by Senator Thomas Dodd of Connecticut. Through the tariff waiver, the Loire firm was able to undercut the American price due to lower labor costs.

In 1962, two additional private bills sought tariff exemption for churches in Hartford, Connecticut and Phoenix, Arizona. The pattern was now established for the reentry of Congress into the tariff process. The SGAA, through executive director John G. Lloyd and member Henry Lee Willet, along with cooperation from the International Brotherhood of Painters, Decorators and Paperhangers, went before the U.S. Senate Finance Committee to raise objections to Congress's intrusion in tariff matters.⁵¹

Lloyd's statement to the committee highlighted the fact that the stained glass craft had been struggling to establish itself for more than 150 years and that Congress had established a long-standing practice of providing tariff protection. Lloyd said that he represented 53 American studios (estimates during the 1913 and 1922 tariff debates placed the number of U.S. firms at between 200 and 500) and 150 artists and craftsmen. He further stated that these studios in the SGAA were "small, family-type businesses, the skills for which have been handed down from father to son for generations." Lloyd summarized the SGAA's position as being in favor of strict enforcement of the 30% tariff because labor costs varied so greatly between the U.S. and other countries. He assured the committee that the quality of the U.S. product was high and deserved protection from foreign firms.

The Senate committee listened politely and asked questions about John La Farge's influence on stained glass, but the members chose not to act on the matter. The issue eventually faded from SGAA attention. In place of the tariff, the SGAA had formal interaction with the federal government in the late 1970s over a regulation to ban glass from doorways, with OSHA in the 1980s over studio safety and most recently in the 1990s with the lead issue—a congressional effort to ban lead in the environment which had the side effect of threatening to eliminate lead came from stained glass.

Conclusion

It is said that the conditions of the present are the results of actions in the past. In the case of the American stained glass industry, the conclusions about the tariff questions are ironic. On the one hand, SGAA members today are probably inclined to support a "free trade" posture, in which efficient production and open markets are the rules by which the stained glass industry should operate. One option in the 1800s and early 1900s that was not fully explored by American manufacturers was establishing studios abroad to take advantage of cheap labor. Only Emil Frei and Ludwig Von Gerichten followed this approach; they had argued this point many times to fellow SGAA members, but their message fell on deaf ears.

On the other hand, the nature of democratic government to create laws and regulations that are vague, confusing and difficult to enforce speaks volumes to the need to have a strong and effective trade association to represent the industry. Thus, the current strength of the SGAA today to handle the lead issue is our legacy from the days of the tariff question.

1. U.S. Congress. 27th Congress. 2d Session. Committee on Manufacturers. *House Report 461*. Washington, D.C.: Gales and Seaton, 1842, pp. 39-44; U.S. Congress. 27th Congress. 2d Session. *House Document 244*, Washington, D.C.: Gales and Seaton, 1842, p. 24, lists the category "Glass, colored or paintings on glass" as scheduled for a tariff rate of 30% *ad valorem* and indicates no prior tariffs in this category for the tariffs of 1832, 1828, 1824, and 1816. This verifies that 1842 is the first tariff act specifying stained glass.
2. John Gilbert Lloyd. *Stained Glass in America*. Jenkinstown, PA: Foundation Press, 1963, Ch 8.
3. 146 U.S. 71. Motion to Advance. J. Cardinal Gibbons to the U.S. Supreme Court, March 3, 1892.
4. 146 U.S. 71-72.
5. 146 U.S. 75-76.
6. *New York Times*, April 6, 1892, p. 7, col. 1; *New York Times*, May 19, 1892, p. 3, col. 3.
7. *New York Times*, May 18, 1892, p. 7, col. 1.
8. Correspondence, Rufus Ellis, Pastor, et al, First Church Society of Boston to U.S. Congress, Senate Finance Committee, June 22, 1868. National Archives Record Series 43A-F28.2.
9. U.S. Congress. 40th Congress, 2d Session. *Senate Report 164*. Washington, D.C.: U.S. Government Printing Office, 1868, p. 2.
10. Correspondence, Charles Belcher & Co, New York City, to U.S. House of Representatives, Committee on Ways and Means, 1864. National Archives Record Series H.R. 41A-F27.7.
11. *Ibid.* The two pieces of glass are permanently encased in the archival records. The pieces are etched glass patterns in diamond and cross shapes.
12. Correspondence, The Glass Stainers of Cincinnati and Wm. Coulter & Son to Hon. John Sherman, January 1890. National Archives Record Series 49A-F29.4.
13. Correspondence, workingmen employed in the manufacturing of painted and stained glass to U. S. House of Representatives, Committee on Ways and Means, January 1888. National Archives Record Series H.R. 48-H3 1-3.
14. Correspondence, The Glass Stainers and Lead Glaziers Protective Union, James Carchic, President, to Henry Cabot Lodge, February 17, 1894. National Archives Record Series 53A-F29.4.
15. Correspondence, Glass Stainers of the United States to U. S. House of Representatives, Committee on Ways and Means, January 15, 1894. National Archives Record Series 53A-H33.2.
16. U.S. Congress. 54th Congress 2d Session. House of Representatives. Committee on Ways and Means. *Tariff Hearings Before the Committee on Ways and Means*. Washington, D.C.: U. S. Government Printing Office, 1897, pp. 273-274.
17. Correspondence, Ludwig Von Gerichten, Capital City Art Glass and Decorating Co., Columbus, Ohio to Hon. William McKinley, January 16, 1897. National Archives Record Series 54A-F28.8.
18. U.S. Congress. 63d Congress, 1st Session. Senate. Finance Committee. *Answers to Questions Relating to Tariff*. Washington, D.C.: U.S. Government Printing Office, 1913, p. 43.
19. The 1912 petition was a second effort after a petition dated March 3, 1899 failed to bring about any congressional action on placing stained glass on the duty-free list. The signers of the petition included the bishops from dioceses in all of the major cities in the United States. The petition was addressed to the Chairman of the House Ways and Means Committee. The second petition was dated March 3, 1912.
20. Correspondence, Curie, Smith & Maxwell, New York City, to Hon. Oscar Underwood, May 5, 1913. National Archives Record Series 63A-H3 1.3.
21. Correspondence, Rev. Henry Moeller, Archbishop of Cincinnati, to Chairman, House Ways and Means Committee, January 30, 1913. National Archives Record Series 63A-H3 1.4.
22. Correspondence, Rev. James H. Blenk, Archbishop of New Orleans, to Hon. Oscar Underwood, April 11, 1913. National Archives Record Series 63A-H31.4.
23. Correspondence, Heinigke & Bowen to Hon. Oscar Underwood, undated. National Archives Record Series 63A-43.4.
24. Correspondence, Alfred Godwin, Philadelphia, Pa., to Hon. Oscar Underwood, April 17, 1913. National Archives Record Series 63 A-H3 1.4.
25. Correspondence, Nicola D'Ascenzo, Philadelphia, Pa., to Hon. Oscar Underwood, April 16, 1913. National Archives Record Series 63A-H3 1.4.
26. Correspondence, H.H. Jacoby, President, Jacoby Art Glass Co., St. Louis, Mo., to Hon. Oscar Underwood, April 15, 1913, National Archives Record Series 63A-H3 1.4.
27. U.S. Congress. 63d Congress, 1st Session. House of Representatives. Committee on Ways and Means. *Memorandum of the American Manufacturers of Stained Glass Windows*. Submitted April 29, 1913. National Archives Record Series 63A-H3 1.4.
28. Correspondence, Ludwig Von Gerichten, President, Von Gerichten Studios, Columbus, OH., to Hon. Oscar Underwood, July 9, 1913. Attachment. National Archives Record Series 63A-H3 1.4.
29. Correspondence, Ludwig Von Gerichten to Hon. Oscar Underwood, July 9, 1913. Attachment. "Cathedral Window Awaits New Tariff," *New York Sun*, July 1, 1913. National Archives Record Series 63A-H3 1.4.
30. Correspondence, Louis J. Lederle, Spiers-Lederle Glass Co., New York City, to Hon. Oscar Underwood, April 1, 1913. National Archives Record Series 63A-H31.4.
31. Correspondence, John J. Kinsella, President, John J. Kinsella Co., Chicago, IL., to Hon. Oscar Underwood, September 21, 1913. National Archives Record Series 63A-H3 1.4.
32. Correspondence, William Blenko, The Blenko Antique Art Glass Co., Clarksburg, W.Va., to Hon. Oscar Underwood, March 29, 1913. National Archives Record Series 63A-H31.4.
33. Correspondence, William Blenko, The Blenko Antique Art Glass Co., Clarksburg, W.Va., to Hon. Oscar Underwood, April 29, 1913. National Archives Record Series 63A-H31.4.
34. Joseph E. Flanagan, "The Tariff Question Again," *The Ornamental Glass Bulletin*, Vol. 9, October 1915, pp. 4-9.
35. F. S. Lamb, "Tariff Decision," *The Ornamental Glass Bulletin*, Vol. 8, December 1914, p. 3-4.
36. For a more complete discussion of this episode, see E. Crosby Willet, "History: The Stained Glass Association of America," pp. 32-33, in *SGAA Reference & Technical Manual*. Lee's Summit, MO: The Stained Glass Association of America, 1992.
37. U.S. Congress. Senate. Finance Committee. *Hearings: Tariff Free List*. Washington, D.C.: U.S. Government Printing Office, 1921, pp. 4951-4953.
38. *Ibid.*, pp. 4953-4963.
39. U.S. Congress. House of Representatives. Committee on Ways and Means. *Tariff Information, 1921. Hearings on General Tariff Revision. Part V. Free List*. Washington, D.C.: U.S. Government Printing Office, 1921, p. 4151.
40. *Ibid.*, pp. 4151-4153.
41. *Ibid.*, p. 4159.
42. U.S. Congress. 63rd Congress, 1st Session. House of Representatives. Committee on Ways and Means. *Hearings on General Tariff Revision. Part I. Schedule B*. Washington, D.C.: U.S. Government Printing Office, 1921, p. 670.
43. *Ibid.*, p. 675.
44. Otto W. Heinigke, "Statement of the Provisions of the Tariff Law on Stained Glass," *The Ornamental Glass Bulletin*, Vol. 16, October 1922, pp. 6-8.
45. The Tariff Commission took a favorable view of the domestic stained glass industry from the outset. In its 1922 *Annual Report*, the Commission said "[i]t is of interest to note that recently some of the American decorators of international reputation have favorably commented on painted-glass church windows produced in this country and have, in several ways, endeavored to encourage and foster growth of this phase of art." (p. 18)
46. U.S. Congress. 70th Congress, 2d Session. Senate Finance Committee. *Tariff Act of 1929: Hearings Before a Subcommittee of the Senate Finance Committee on HR 2667, Schedule 2*. Washington, D.C.: U. S. Government Printing Office, 1929, p. 628-639.
47. *Ibid.*, p. 638.
48. *Ibid.*, p. 632.
49. *Ibid.*, p. 621-622.
50. U.S. Congress. 70th Congress, 2nd Session. Senate. Finance Committee. *Tariff Readjustment—1929, Vol 11. Schedule 2*. Washington, D.C.: U.S. Government Printing Office, 1929, pp. 1619-1621.
51. U.S. Congress. Senate Finance Committee. *Hearings: Stained Glass—Bicycles—Religious Articles*. Washington, D.C.: U.S. Government Printing Office, 1962, pp. 60-72.

William Serban, Ph.D., is chairperson of the Political Science Department at Xavier University in New Orleans, La. He is indexer of *Stained Glass Magazine* and co-author of *Stained Glass: A Guide to Information Sources*.

The History of Protective Glazing

Part Two of a Series on Inspired Partnerships' Study of Protective Glazing

Europe

The Corpus Vitrearum Medii Aevi (CVMA) in Europe records that the earliest known important protective glazing installation for which there is reliable documentation is the application of external diamond-pane leaded glazing over *The Five Sisters* window at York Minster Cathedral in 1861. This medieval window dates from the third quarter of the thirteenth century and contains approximately 1,250 square feet of glass. More protective glazing was installed over the west and east windows in 1862.

The York Minster installations are well documented and therefore an extremely important case study in the history of protective glazing. Records show that the same energy, aesthetic and conservation concerns prevalent in America today were debated over the York Minster protective glazing project a century ago!

Twelve stoves were expected to guarantee a temperature of 50°F at York, but the great expanse of glass made this difficult to achieve. The *Yorkshire Gazette* of June 29, 1861 has an article on the heating of York Minster which stated, "The Dean and Chapter have determined to glaze the outside of *The Five Sisters* window, in the North Transept, with plate glass, to obviate the great draught of cold air through [sic] that expanse of glass; this work will also have the additional advantage that it will protect the beautiful stained glass which in heavy gales from the north is in danger of sustaining considerable damage."

In the *York Herald* on July 17, 1862, a letter to the editor complained about "the covering of *The Five Sisters* and the Great West Window with plate glass which takes away the depth of slay of the mullions and richness of effect,...besides forming a space for dust to lodge in."

Subsequent mention of this early protective glazing installation occurred in 1906 and 1907 in papers concerning the restoration of York Minster. Large plates of "Hartley's rough patent glass" had been used as the 1861 protective glazing. However, these plates had been fastened with iron bars which, due to expansion and contraction, had broken the protective glazing and split the stone mullions. These broken plates were to be replaced with a "complete skin of clear crown glass in diamond

quarries, similar to work already done at the Chapter House."¹

In 1921, the Society for the Protection of Ancient Buildings suggested venting the external glazing over York Minster's windows "especially on the south side, to leave opening in the clear borders of the internal glass at the top and bottom of each light. These openings should be filled with copper wire gauze to keep out insects.... The object of this is to provide ventilation between the glasses and to minimize the effect of condensation produced by changes of temperature in an unventilated space."²

Seven years later, the Society changed its opinion to "no protection be put to the glass unless it is very certain that there is real risk of damage happening for want of it."³ According to Mr. Peter Gibson, the former stained glass conservator at York, "the current English view is to install protective glazing only when necessary and to vent it to either the inside or outside."

During the 1970s, Gibson researched the history of several other English protective glazing installations which are recorded in CVMA newsletters:

1. A church in Cothel, Cornwall, is known to have had protective glazing removed in 1880. It is not known when the protective glazing was installed, but the quarries produced a diamond-shaped corrosion pattern on the outside of the medieval window. The 1480 window was possibly "altered" between 1535 and 1540. Unfortunately, this building was no longer in existence when the CVMA printed this information.⁴

2. The William Peckitt Commission Book at the York City Art Gallery contains an entry which refers to glazing on a William Peckitt window at Audley End in Essex. The entry, dated March 1782, records the purchase of nine panes of strong glass for fixing behind the painted glass in the frame for the panel made for Sir John Ramsden, High Sheriff at Byram Hall, near Ferrybridge, Yorkshire.⁵ Unfortunately, this building had also been demolished. Further investigation of Peckitt's work indicates that he often mounted stained glass in suspended frames; therefore the "strong glass" may have served only to strengthen an autonomous panel rather than to fill the role of "protective glazing" as specified in Inspired Partnerships' study.

3. As initially reported in the *British Society of Master Glass Painters* (#8, 408) communications, the Collins-Martin window at Redbourne had outer glazing in iron frames, set before 1845.

Several other nineteenth-century protective glazing installations were documented elsewhere in Europe and reported by Stefan Oidtmann in his published dissertation entitled *Die Schutzverglasung—eine wirksame Schutzmassnahme gegen die Korrosion an wertvollen Glasmalerien* (December, 1994).

4. The great northeast windows at the Orvieto Cathedral, Orvieto, Italy, were covered with protective glazing sometime between 1826 and 1886. Unfortunately, this nineteenth-century installation is not well documented.

5. In 1897, the windows of the small Romanesque church of Lindena (Mark Brandenburg, Germany) were protectively glazed by Dr. H. Oidtmann of Linnich, Germany; the secondary glass was probably installed to protect the window from environmental deterioration.

6. Gabriel Mayer of Franz Mayer'sche Hofkunstanstalt, Munich recalled his father and grandfather mentioning—though he has no documentary evidence since the company records were destroyed in 1944—that nineteenth-century Mayer & Co. and F.X. Zettler (Munich) installations sometimes included large sheets of clear glass for protective purposes.

Given the abundance of stained glass in Europe and the few protective glazing installations recorded, it is readily apparent that the usage of protective glazing during the nineteenth century in Europe can only be described as rare at best.

Its limited use continued until World War Two. Then the perceived value of protective glazing changed drastically. For most of their history, the major cathedrals throughout Europe had established restoration programs, but few had pressing concerns regarding the deterioration of stained glass from atmospheric pollution and moisture. When these great windows were systematically removed for protection from aerial bombing, a unique opportunity to document them arose. Upon reinstallation, the resulting photo survey showed enormous damage to the paint and glass caused by damp storage below ground. As a result of this new awareness, many windows such as those at Cologne, Regensburg and Munich were automatically covered with protective glazing upon reinstallation after the war.

Further studies of medieval glass corrosion caused by acid rain since World War Two have strongly influenced the Europeans to cover their windows with protective glazing. In Germany, protective glazing became common with the repair and restoration of churches since the mid 1950s. Since then, protective glazing has

NEW! LOW PRICE!

AFFORDABLE PROFESSIONAL SIZE RING SAW: TAURUS II

- SLIM DESIGN
- LIGHTER WEIGHT
- FEWER PARTS
- GRID WORK SURFACE

A Diamond Coated Ring Blade in a Saw That:

- ✓ Cuts in all directions
- ✓ Will not break
- ✓ Cuts all shapes
- ✓ Cuts faster
- ✓ Grinds as it cuts
- ✓ Cuts larger pieces
- ✓ Cuts "underwater"
- ✓ Outlasts other blades 4 to 1



For more information contact your local supplier or

GEMINI SAW COMPANY

25916 Senator Ave., Harbor City, CA 90710
Tel: 310-891-0288 • Fax: 310-891-0265

Circle 44 on Reader Service Card

become common throughout Central Europe and in Austria as well as the Netherlands. Gabriel Mayer, a principal of the Franz Mayer'sche Hofkunstanstalt, Munich, concurred with this observation and noted that his company reinstalled many windows with protective isothermal glazing in Germany in the 1950s. Most of these installations were reportedly vented.

The European studios from Hungary and England which responded to Inspired Partnerships' survey questionnaire indicated that they promote the use of protective glazing only under specific conditions. France has only recently begun to use protective glazing. Considerable scientific study of European protective glazing installations and their effect on stained glass—particularly medieval glass—has been undertaken since World War Two.

United States

Stained glass was installed on a very limited basis in America before the 1830s and was not commonly used until the 1860s. Prior to the 1860s, most of the stained glass in the U.S. was imported from England, Germany, Holland, France and other European countries. Imported plate glass was available in America by the late 1830s, but it was expensive. As in Europe, the use of protective glazing in the United States during the nine-

Quality Bronze Bases



60 styles of bronze Tiffany reproduction bases available.
NOW AT EVEN LOWER PRICES!
Request our color Photo Pack.

Source One
Lamp Bases

7600 Metcalf, Overland Park, Ks 66204
Call 800-473-4527 Fax 913-381-4413

At Affordable Prices

Circle 37 on Reader Service Card

teenth century was extremely rare. Additional "strong glass" to fill a window opening with a second layer could not be justified when the stained glass already served to keep the weather out. Glass-making technology in the U.S. evolved throughout the mid-nineteenth century, and eventually inexpensive domestic plate glass was available for use as protective glazing.

Several attempts to manufacture plate glass in the U.S. during the 1850s ended in failure. The first truly successful plate glass enterprise, the New York Plate Glass Company, was not established until 1880 in Creighton, Pennsylvania. The company changed its name to the Pittsburgh Plate Glass Company in 1883.⁶

Although defined as an infant industry in 1879, new technology reduced manufacturing costs; the cost to the consumer of plate glass dropped by 50% between 1879 and 1884.⁷

As American ingenuity spread through the glass industry, the domestic output of polished plate rose to 82% by 1890, while rough plate (more commonly used for protective glazing) rose to 97%.⁸ Further, domestic plate-glass production tripled, from 1,055,224 square feet in 1890 to 3,342,573 square feet in 1919.⁹ This growth is attributable to technological improvements in plate glass manufacturing. For example, a United States patent for tempered glass was issued on December 15,

1874; tempered glass is stronger and more difficult to fracture than ordinary glass.

In 1897, the Marsh Plate Glass Company in Floreffe, Pennsylvania, installed the first continuous *lehr* for annealing plate glass, reducing the annealing time from three days to three hours.¹⁰ With these developments and others, American machinery was being sought abroad. Electric-powered grinders and polishers also played a significant role by 1900.

However, until the First World War, plate glass was produced almost entirely by the "casting" method, in both the U.S. and Europe. Glass was melted in regenerative pot furnaces. The pots were removed from the furnaces by a crane, skimmed and partly inverted over a flat, cast-iron casting table, which was covered with fine sand to prevent the glass from sticking or chilling too quickly. The molten glass was poured in a continuous stream just ahead of an enormous water-cooled cast-iron roller. The roller was lifted and the glass removed to a series of *lehrs*, yielding rough-rolled glass.

Polishing the rough-rolled glass was costly. Various pieces of rough glass were fitted onto a plaster bed, on a circular table up to 30 feet in diameter. The table was transferred to a grinding frame, where large iron disks, supporting smaller iron disks, were spun on the sheets with increasing pressure. First coarse sand and water, then finer sand and finally emery and water were fed to the grinding surfaces, gradually wearing away irregularities. The process took approximately one hour. The table was used again for polishing, using felt wheels, a finer abrasive rouge (iron oxide) and water. Upon completion of the grinding and polishing, the rough plate was half its original thickness.

Prior to 1889, it took nearly 10 days to produce a piece of polished plate glass from the raw materials. Max Bicheroux of Germany developed a new type of rolling machine shortly after the First World War. His machine produced sheets of predetermined length in a semicontinuous process. In 1922, U.S. automaker Henry Ford introduced continuous rolling in the manufacture of automobile glass and revolutionized the American glass industry—soon to be the largest producer of plate glass in the world.

Making the blank, grinding and polishing became an automatic and continuous process, like an assembly line. This process was adapted by Libby Owens Ford Glass Co. in 1925. Using the pot-casting and continuous-rolling method of 1922, it took 54 hours to produce plate glass; the semicontinuous method of 1925 further cut production time to only 22 hours! The introduction of ever-larger sheets of glass produced with increasing technical efficiency and lower costs made double glazing more and more common.

The American development of plated opalescent windows by John LaFarge, Louis Comfort Tiffany and others led to some of the earliest use of protective glazing in the United States. Plated opalescent windows consisting of several layers of glass inherently called for the use of large outer glass plates to keep the window interspaces free of dirt and moisture. The exterior plate(s), integral with the window, effectively served as protective glazing.

Many plated windows were installed throughout the country by the early 1890s, but most are not representative of the typical protective glazing installation. Within a decade, plated windows were sometimes covered with a full back-plate of rough (unpolished) or ribbed plate glass. A recent restoration of 1902 plated windows found at Old St. Paul's in Baltimore and made by Maitland Armstrong (a Tiffany colleague) appears to have had original "textured" protective glazing. This exterior glazing was set in an iron frame and bolted to the angle-iron sash holding the stained glass.¹¹

There are reports of domestic ribbed plate glass installed over German imports from the late nineteenth century in the Northeast. However, Theodore C. Von Gerichten, whose grandfather founded Von Gerichten Art Glass Company (Columbus, OH) in 1893, does not recall any practice of installing protective glazing over their domestic windows or those they imported from Munich, Germany. A search through hundreds of nineteenth-century and early twentieth-century photos of Chicago churches uncovered no examples of protective glazing over stained glass.

Only three examples of protective glazing in the United States prior to 1900 have been substantiated by the Inspired Partnerships study. All three represent the usual concept of protective glazing as a separate layer over traditional (single layer) stained glass. St. Thomas Episcopal Church in Taunton, Massachusetts was severely damaged by fire in January 1898. An article in the parish magazine in September 1898 listed repairs and improvements as a result of the fire and noted "...the rose window guarded against leaks by storm sash." The Second Church of Christ in New York City has original protective glazing from 1899. The St. Vincent de Paul Church in Chicago has $\frac{3}{16}$ " thick rough plate glass set in copper t-bars from 1897. Stained glass windows by Mayer & Company of Munich were inserted behind the temporary glazing sometime before 1900.

A number of documented protective glazing installations have been identified from the first quarter of the twentieth century. The art glass at Wellington Avenue Congregational Church, constructed in a bustling Chicago neighborhood in 1910, was installed in hollow-core steel window frames behind wire safety glass. Crammed into a small site on a residential block, the use of protective glazing may have been motivated by build-

S O U R C E ' 9 7



I N T E R N A T I O N A L
A R T G L A S S
S U P P L I E R S
T R A D E S H O W



Exhibits 26-27 June 1997

Education 27-28 June 1997

**Baltimore Convention Center
Baltimore, Maryland**



Presented by Art Glass Suppliers Association International (AGSA)
Produced and managed by Offinger Management Company, Inc.

Yes! I want more information about Source'97. Please add my name to your mailing list. I am a Buyer ☐ I am an Exhibitor ☐

Your Name _____

Company Name _____

Address _____

City _____

State/Province _____

Nation _____

ZIP _____

+4 _____

(Tel) _____

(Fax) _____

Mail to: AGSA Headquarters, P.O. Box 2188, Zanesville, OH 43702-2188 USA. Tel: 614-452-4541, Fax: 614-452-2552.

SGQ Win/97

Circle 20 on Reader Service Card

WHOLESALE
STAINED GLASS
LINCOLN
DISTRIBUTORS
520 S. 52nd Street # 210 Tempe, AZ 85281

A
**FULL LINE
DISTRIBUTOR**

WHOLESALE ONLY
Catalog: Send \$5.00 & your tax license,
or call with your VISA or M/C.
800-528-1419
FAX 602-968-6358

Member
SGAA

Member
Art Glass
Society of America
INTERNATIONAL

Circle 13 on Reader Service Card

ing codes designed to limit the spread of fire rather than any concern for "protecting" the simple art glass.

Plated Munich-style windows at St. Mary's Church in Beaverville, Illinois, were covered with plate glass provided by the Pittsburgh Plate Glass Company in 1911. Today, several types of plate glass, mostly ribbed, are found on the church.

The C.J. Connick Collection at the Boston Public Library provides valuable insight on how one of the most prolific American stained glass studios, Connick Associates, handled the use of protective glazing in the early twentieth century. Although the studio was formed in 1912, protective glazing was not mentioned in company contracts during the first few years in business. However, the Collection contains dozens of references to protective glazing installations starting around 1920, when Hyde Park Baptist (Union) Church in Chicago paid an extra \$100 for protection glass in an outside frame. A mausoleum in Rosehill Cemetery, Chicago, was to have "protection glass furnished by the donor...installed by Temple Art Glass Company," an indication that protective glazing was sometimes sub-contracted to local glaziers. By the late 1920s, job records in the Connick Collection often indicate whether "protection glass" was ordered or not.

Other early American protective glazing installations include a stained glass window by Willet Studios in Calvary Church, Chestnut Hill, Pennsylvania, that was covered with plate glass for \$250 in 1915. The Chapel of St. James of Quigley Seminary in Chicago has ribbed plate glass protective glazing from 1917, while Buena Memorial Presbyterian Church in Chicago has leaded diamond-pane protective glazing from 1922. Both of these installations, as apparent with many others around the country, became a protective layer by default. Once available, stained glass was simply inserted behind external glass rather than replacing it.

An August 1925 parish monthly from St. Mary of the Immaculate Conception of Michigan City, Indiana, states that the imported F.X. Zettler windows installed from 1925-1927 "will all be protected against the weather by storm glass." Protective glazing was a frequent option by 1925, the year Mr. Henry Hunt spoke on "Setting Storm and Leaded Glass" at the National Ornamental Glass Manufacturers Association conference held in Pittsburgh.

Protective Glazing and the Building Industry

As protective glazing became common to the stained glass industry, it began to attract attention from the architectural community and manufacturers. *Good Practice in Construction: Part II*, published in 1925 by The Pencil Points Library, illustrates a leaded glass window in a stone wall with double glazing and notes "extra glass affords protection to the expensive leaded art glass from the weather and possible exterior damage." No venting of the air space is indicated.

The same reference also describes a "double, double type" ventilator. The manufacturer, J. Sussman, Inc. has been making steel windows for churches since 1906, and Jack Sussman believes his father, the company founder, made double-glazed ventilators from the start.

A 1926-27 Sweet's Architectural Catalog listing for The Philadelphia Supplies Company, Inc., has sectional views of a double glazed window with a 3/4" air space between the storm and leaded glass, and "double, double" ventilators.

Stained glass has always served a specialized market, complicating the research for double glazing. The Philadelphia Supplies Co. was the only one out of 15 steel window companies listed in the 1926-27 Sweet's to promote double-glazing. Most of the manufacturers targeted the industrial market, which had little need for protective glazing. The Great Depression brought church construction to its knees, which further limited the demand for items such as stained glass. Although protective glazing was becoming more readily accepted in the U.S., it still remained the exception rather than the rule before World War Two.

In residential construction, the notion of glass storm windows as "double glazing" did not become popular until after the Civil War. Storm sashes were regularly available in sash and blind company catalogs by 1900. The catalogs tout the benefits of storm windows in terms of energy savings, greater comfort and the ability to prevent illness. Noelke-Lyon Manufacturing Company asked, "Why should anyone be without these items (storms) that easily save their cost in a few seasons?"¹²

Early residential storm windows were often installed on hooks or hinges for easy seasonal installation and removal; they usually had elliptical holes on the bottom rail that served as hand-holes and vents during unseasonably warm weather. By the 1920s, extruded rubber weatherstripping led to double-insulated steel casement windows, featured in the 1924 *Audel's Carpenters and Builders Guides*. However, these windows had limited success, and single-pane steel windows remained prevalent until the 1950s.

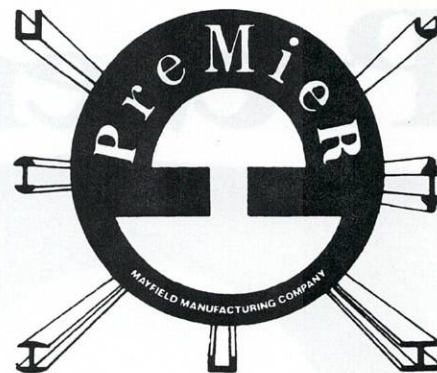
The architectural firm of Keck & Keck (Chicago) designed the first thermalpane window as a sealed unit in 1935 to alleviate condensation and dirt. By 1941, double-hung and casement thermalpane windows were commercially available in wood or steel.

"By building a wall of captive air, the inner pane is kept comparatively warm even though the outer pane may be very cold. This greatly decreases the heat transmission through the window and simultaneously eliminates foggy windows and dripping sills," C.J. Phillips reported in *Glass: The Miracle Maker*. Energy tests at that time indicated a savings of 23% to 36% for double glazing. Further studies in the *Architectural Forum* and *American Builder* revealed that in many cases "double glass insulation pays for itself in two years or less, in fuel savings alone."¹³

These studies were likely developed for houses with 24-hour occupancy. Without any published concerns for how intermittently-used buildings should be heated, someone reading this in the 1940s might conclude that if double glazing is so effective in terms of energy, it should be used everywhere. Regardless, the value of double-glazing was further advanced during the 1940s in residential and commercial building markets, which traditionally lead the building industry as a whole.

Methods of producing stronger glass evolved in the years leading up to, during and immediately after World War II. Even leaded glass was not spared, as dalle de verre was developed in France in 1937. Eventually dubbed faceted or slab glass in America, such windows can be more than 1" thick and were originally set in a hard cement matrix (now epoxy). Generally less expensive and much stronger than leaded glass, slab glass has grown in popularity since its introduction in the U.S. in the 1940s. Ironically, despite its wall-like strength, protective glazing has been installed in recent years over several slab-glass installations in the United States.

An advertisement for tempered, polished glass from Libby Owens Ford appears in the 1950 Sweet's catalog. Sold under the trade name of Tuf-flex®, it was made by a process of reheating and sudden cooling, yielding an outer glass surface in a state of high compression, which is highly resistant to breakage. Glass treated in this way is three to five times stronger than regular plate glass in sustaining wind loads, three times more resistant to thermal shock and five to seven times more resistant to impact. Tempered glass, like Tuf-flex®, shatters if cut and must be made to size specifications before it is tempered—a purchasing and scheduling hurdle for glazing contractors looking for greater strength and job-site flexibility.



We Manufacture...

- Lead
- Zinc
- Brass
- Copper



- For added strength we offer a "Crossover" adjustable "U" channel.



- Over 50 profiles now available in a light .012 gauge as well as standard .016 gauge.



- These popular lead profiles plus more than 100 additional styles available in five different alloys.

- Custom orders are welcome!

Contact your dealer and ask for the best in came products..
Ask for PREMIER



MAYFIELD

Manufacturing Co.
Birmingham, Alabama

1-800-749-6061

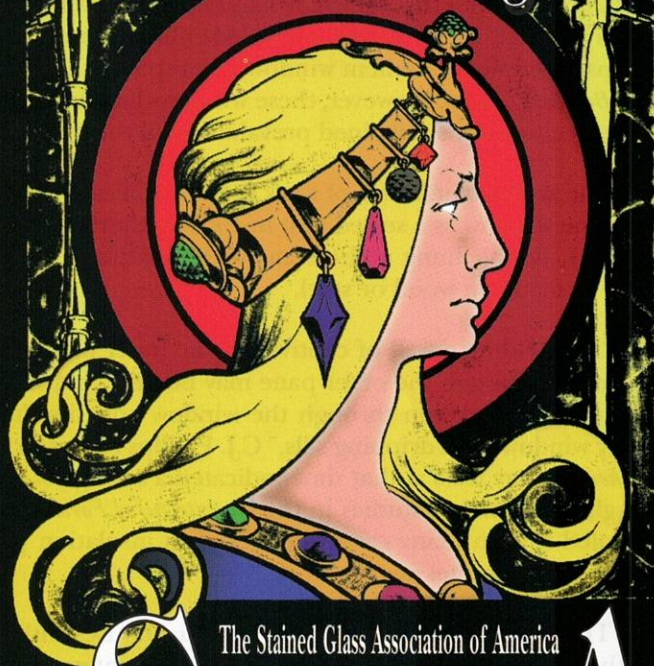
Circle 41 on Reader Service Card

Presenting...

Only
\$6⁰⁰
+S&H

Part of the proceeds from the sale of this book go to benefit the Dorothy L. Maddy Scholarship fund.

Historical Coloring Book

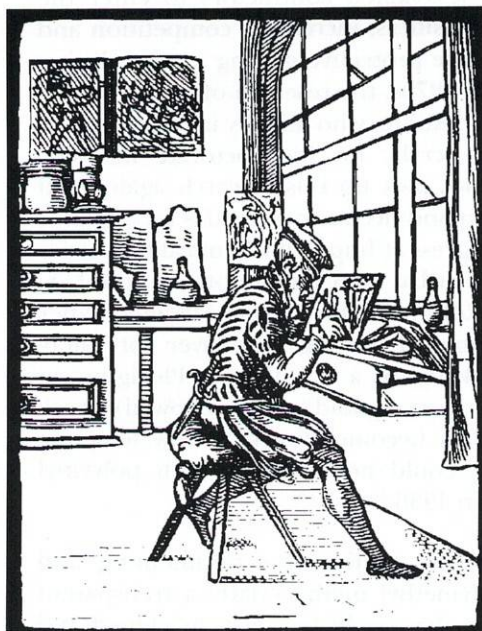


SGAA

The Stained Glass Association of America's *Historical Coloring Book* is an intelligent collection of illustrations from the first 90 years of *Stained Glass Magazine* specially adapted for coloring. Unlike regular coloring books, each of the 16 illustrations is printed on a full 8½"x11" page of high-quality translucent paper stock and is accompanied by historical notes about the piece.

The images selected for the *Historical Coloring Book* represent stained glass dating from the pre-Romanesque to the Modern period and were drawn from issues of *Stained Glass Magazine* as old as 1912. These coloring books make great Christmas gifts or client gifts and are perfect for anyone interested in the history of stained glass.

The SGAA Historical Coloring Book



Order your copy today!

The SGAA Historical Coloring Book is only \$6⁰⁰ plus \$1⁵⁰ shipping.
Mail check, money order or credit card information to:

Stained Glass Magazine
6 SW Second Street, Suite #7
Lee's Summit, MO 64063

Visa and Mastercard orders call toll-free 1-800-438-9581.

SPECIAL QUANTITY DISCOUNTS ARE AVAILABLE!

Quantities of 5-50 coloring books, \$5⁴⁰ each (10% discount); Quantities of 50-100 coloring books, \$5¹⁰ each (15% discount); Quantities of 101+ coloring books, \$4⁸⁰ each (20% discount). Shipping & handling: \$3 for 2-24 coloring books.

Shipping and handling is free on orders of 25 or more.



SGAA Historical Coloring Book Order Form

Name: _____

Address: _____

City _____ State/Province _____ Zip/Postal Code _____

Telephone: _____

☐ Single Copy Orders

Single copy orders of the *SGAA Historical Coloring Book* are \$6⁰⁰ plus \$1⁵⁰ shipping and handling. Please enclose a check or money order for \$7.50 or fill out credit card information below and return this form to *Stained Glass Magazine*, 6 SW 2nd St, #7, Lee's Summit, MO 64063.

☐ Quantity Orders

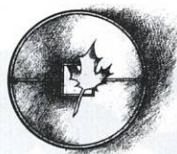
☐ 5-50 @ \$5⁴⁰ each. _____ books = \$ _____
☐ 50-100 @ \$5¹⁰ each. _____ books = \$ _____
☐ 101+ @ \$4⁸⁰ each. _____ books = \$ _____
 Total: \$ _____

☐ Visa ☐ Mastercard Exp. Date: _____

CC#: _____

Signature: _____

SATTLER'S



**STAINED
GLASS
STUDIO LTD.**

Our new studio offers:

Contemporary stained glass in collaboration with artists, designers and architects.

Variations of 200 antique glass colors in stock.

Etching, firing (6'x4'), painting, sandblasting.

Restoration also available in all traditional & historical stained glass.

Ask for a free estimate

RR #1, Pleasantville, N.S. BOR 1GO

Canada: PH (902) 688-1156 (Fax 1475)

Germany: PH 49-8195-326 (Fax 8420)

Circle 60 on Reader Service Card

The 1950s saw the introduction of glass alternatives for protective glazing. Alternatives included translucent fiberglass sheets and a barrage of sheet plastics to follow, which greatly simplified protective glazing installations.

More and more window manufacturers recognized the rapidly changing market after World War Two and began designing frames to accommodate double glazing. A terra cotta rose window detail by the Architectural Terra Cotta Institute from around 1950 shows two pre-formed glazing grooves, one for stained glass and the other for storm glazing. A National Metallic Sash Company brochure illustrates a window sash for double glazing manufactured in brass, bronze, aluminum, steel and stainless steel.

According to a company brochure, the Twin Beam Corp. was incorporated in 1925, but its "twin beam" section was not designed until 1950 and then specifically for churches. The Series 100 was double glazed and 2½" deep. The outer glass is plain, the inner glass leaded. "The system is considered highly protective, highly efficient in reducing heating and air-conditioning loads, in reducing transmission of street noise."

A company brochure for J. Sussman's steel windows from the early 1950s shows double glazing in a stone-and-wood setting. A later catalog illustrates the 300 Series, an aluminum double-glazed church window that Sussman

has produced since 1959. The 300 Series "is specially designed to receive protective glass on the exterior and stained glass on the interior. This 'Double Glazing' protects the stained glass from vandalism while also insulating from the heat and cold and reduces outside noise infiltration. The insurance and fuel costs can be substantially lower...either glass can be installed without disturbing the other. The exterior glass can be installed at time of erection to close up the building and the stained glass installed at a later date at the churches' own convenience." None of these manufacturers vented the air space.

The commercial availability of sheet acrylics drastically changed the glazing industry and created new opportunities for less-skilled contractors to enter the protective glazing business, increasing competition and sales. Dominating the protective glazing market during the 1960s and early 1970s, the research of acrylic actually dates back to Otto Rohm, who initially investigated the polymerization of acrylic for his doctorate in 1901! However, he did not pick up this research again until 1920, seeking to expand his business in the race against similar work in progress at Imperial Chemical Industries (ICI) in Britain and at Du Pont Laboratories in the U.S. Eight years later, Rohm and his associate Walter Bauer developed a polymethyl acrylate interlayer for safety glass that was marketed by a U.S. firm as Plexigum® in 1931. It was better than celluloid (which yellowed) or cellulose acetate, which becomes brittle at low temperatures. However, it could not compete with polyvinyl butyl, introduced in 1936.¹⁴

Bauer and Rohm continued experimenting and came up with polymethyl methacrylate, a transparent glass-like substance that could be sawn, machined and cast in sheets. They also discovered that polymerization occurred through exposure to light. Instead of cementing two sheets of glass together as with Plexigum, this polymer separated cleanly from the glass in a strong sheet. The new material became known as Plexiglas® and was commercially available in both Germany and the U.S. in 1936.¹⁵

Du Pont and ICI meanwhile continued research, focusing on casting and molding acrylic into rods, tubes and blocks. With the commercial introduction of acrylics coming and a joint desire to forestall patent litigation, all three companies agreed to an intricate set of cross-licensing agreements in 1936. First, Rohm announced Plexiglas®, followed by ICI in Great Britain with Perspex® and then Du Pont with Pontalite®, called "a new, water-clear plastic, strong as glass, flexible and non-shattering."¹⁶

Bauer and Rohm's American sister firm, Rohm and Haas, obtained a license for casting acrylic sheet from the German firm in late 1935 and in January 1936 sent Donald S. Fredrick to Darmstadt for two months to

familiarize him with acrylic-sheet manufacture and fabrication. Fredrick then demonstrated Plexiglas® to the U.S. Army Air Corps and won a decree stating that polymethyl methacrylate was the only plastic sheet material approved for use in military planes. Du Pont did not know exactly how Rohm was casting large acrylic sheets until 1939, when a licensing agreement granted Du Pont half the annual sheet capacity of Rohm and Haas. The name Plexiglas® implied a flexible improvement over glass while Du Pont's Pontalite® did not. Shortly after its introduction, Du Pont dropped the name Pontalite® in favor of the name Lucite®. Soon thereafter, Du Pont controlled the U.S. acrylic market.¹⁷

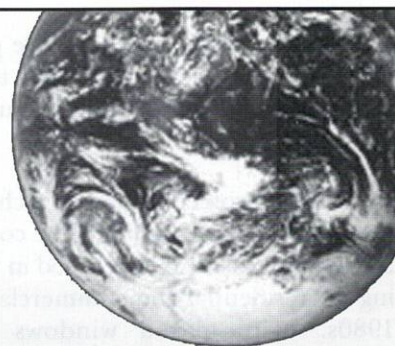
Laminated glass incorporates both glass and plastic technology. Developed by Bernard Carsten in 1912, it was manufactured by the Progressive Windshield Company of Chicago (later the Chicago Bullet Proof Equipment Company). The Prohibition era accelerated the need for laminated glass, and it was used by police and banks, as well as in some get-away-cars! Chicago Bullet Proof Equipment Company's specialized line of glazing materials protected people from people; it also protected stained glass from people and from natural disasters. Variations of their high-impact material found a home in hurricane-prone areas such as Florida.

Laminated glass is comprised of a tough, flexible interlayer of plastic sandwiched between two or more sections of glass. According to the Glass Association of North America, laminated glass is made by one of three methods today: plasticized polyvinyl butyral (PVB) sheet, which includes Monsanto's Safelex®, Du Pont's Butacite® and Sekisui's S-Lec®; aliphatic urethane (AU) sheet, which includes JPS Elastomerics Stevens® and Deerfield Urethane's Duraflex®; and ultraviolet-cured acrylic resin (UV-CAR), which includes UCB Radcure's Uvekool®.¹⁸ PVB and AU are placed between two or more lites of glass and bonded by heat and pressure. UV-CAR is a liquid laminating system which crosslinks and bonds to both plastic and glass when exposed to ultraviolet light.

In the late 1980s, Du Pont began to mass-market a Butacite® family of advanced composite glazing products with names such as Du Pont Sentry Glas®, Spallshield® and Butacite® interlayer. According to company trade literature, these glazing types offer the same natural light and viewing characteristics of conventional window glass while being able to withstand the impact of a nine-pound 2"x4" traveling at 34 mph or a 26-pound cinder block at 40 mph. Each of these glazing products features a Butacite® PVB interlayer.

Softer, less brittle and stronger than acrylics, polycarbonates were first developed as a resin in the 1960s and manufactured in sheets in 1970 by General Electric Plastics. GE dubbed their product Lexan®, and its popularity and trade name has become so widespread that in the protective glazing industry many consumers and installers generically refer to any plastic sheet material as "lexan" regardless of the actual product.

Although it weighs about the same as acrylic products, the impact resistance of Lexan® is said to be 30 times stronger than acrylic and 250 times greater than standard glass. Upon installation, the clarity of Lexan® is almost that of glass, but it will yellow and haze over a few years. GE continues to develop new variations such as Lexan XL®, which is coated with an acrylic non-yellowing ultra-violet protective surface. It has been subjected to a three-year exposure test in which it was observed to bleach, resulting in a clearer product with slightly higher light transmission and less yellowing. Lexan MR5® is coated with a silicon abrasion-resistant coating called Margard® to reduce scratching. Polycarbonates have been the most preva-



Glass the World Over

Northwest Art Glass, ideally located on the Pacific Rim, can offer competitive service for container shipments door to door.

We consolidate and expedite your glass needs as well as prepare documentation for customs.

Our 23 years of experience insures fast, efficient and reliable service from the international Port of Seattle.

Call or fax for Trade catalogue and export pricing.



**9003 151st Ave N.E.
Redmond, WA 98052
Toll Free USA & Canada:
1-800-888-9444
FAX: 206-861-9300**

Northwest Art Glass



Circle 49 on Reader Service Card

lent material used for protective glazing since the mid-1970s, but chronic aesthetic and technical problems are changing the perception of this incredibly strong material.

Today, protective glazing technology has evolved to the point of triple-glazing! The concept of triple-glazing for stained glass was developed in the wake of triple-glazing for residential and commercial windows by the mid-1980s. Triple-glazed windows were developed in response to increasing demands for energy performance, an important concern for buildings and spaces occupied for long periods of time.

Some consider triple-glazing the "cutting edge" of protective glazing. The Mormon Church, considered to be among the best builders of energy-efficient churches,

is reportedly specifying triple-glazed window units on all new Mormon churches. J. Sussman currently offers two triple-glazed window types, the 5200 Series and the 5600 Series. The 5600 Series is incorporated into a 3½" thermally broken frame and "can accommodate protective insulated glass with another ⅝" minimum air space between the art glass to maximize the protection and insulation of the art glass.... The separation of art glass and protective glass is achieved by a channel that is an integral part of the extrusion (not an add-on piece). This channel acts as a condensation gutter and helps prevent air and water infiltration."

Custom made triple-glazed units are also being fabricated today in which the stained glass is sandwiched between (not behind) outer glass layers.



About the Inspired Partnerships Study

Inspired Partnerships, a not-for-profit organization based in Chicago, IL, received a \$34,320 grant from the National Preservation Center in October 1994 to investigate the virtues and liabilities of various protective glazing installations over stained glass. The study was conducted over an 18-month period from October 1994 to April 1996 and addresses energy, security, sound and light transmission and aesthetic and conservation issues surrounding the use of protective glazing. Although some aspects of this research are applicable to all protective glazing, the study concentrated on the virtues and problems associated with installations over stained glass in houses of worship. Churches and temples have specific energy, maintenance and security concerns which tend to be unique to their function, management and operation.

"Protective glazing" (PG) is defined as a secondary layer of sheet glass or plastic on the exterior of a stained glass window. PG is also described as "storm," "double," "outer" and "secondary" glazing, and these terms are used interchangeably throughout the study. "Stained glass," for the purpose of this study, pertains to all types of leaded glass. In addition to research, the study included: 1) a stained glass studio survey; 2) a field survey of 100 protective glazing installations in four different U.S. regions; 3) *in situ* testing of two protective glazing installations; 4) an energy model of an intermittently heated building and 5) the alteration of 10 protective glazing installations.

Inspired Partnerships first assembled a Protective Glazing Advisory Committee that included the following people: Rolf Achilles, Art & Industrial Historian (Chicago, IL); Arthur J. Femenella, Stained Glass Consultant with Femenella & Associates (Annandale, NJ); Dr. Mark Gilberg, Research Scientist with the National Preservation Center of the National Parks Service (Natchitoches, LA); Thomas Harboe, Director of Preservation with McClier (Chicago, IL); Barbara Krueger, Stained Glass Artist and Historian (Hartland, MI); Richard Pieper, Restoration Consultant (New York, NY); Andrew Rudin, Energy Consultant (Melrose Park, PA); Dr. Wayne Simon, P.E. (Evergreen, CO); and Neal A. Vogel, Director of Technical Services with Inspired Partnerships (Chicago, IL). Several Committee members served as authors and editors of the final report as well.

Susan Reilly, P.E. of EnerModal Engineering, Inc., was also commissioned by the National Preservation Center to report on the energy value of protective glazing over stained glass. Many other people provided assistance for this study but are far too numerous to mention. However, those who deserve special recognition include: Susanna Aulbach, German Translator; Matthew Bellocchio, Roche Organ Company; Chris Botti and Mike Smoucha, Botti Studio of Architectural Arts; Janice H. Chadbourne, Curator of Fine Arts, Boston Public Library; Richard Cieminski, Jon-Lee Art Glass; Marit Eisenbeis and Charles Kiefer, Inspired Partnerships; Betty Kirpatrick, Hermosa Mountain Studio; Gabriel Mayer of Franz Mayer'sche Hofkunstanstalt, Munich, Germany; Virginia Raguin, Holy Cross College; Jack and David Sussman, J. Sussman, Inc.; Susan Tunick, Friends of Terra Cotta; Theodore Von Gerichten; Kirk D. Weaver, Pittsburgh Stained Glass; and David Wixon, Wixon & Associates. Inspired Partnerships would also like to thank the numerous stained glass studios who provided assistance by completing questionnaires and reporting past experiences with protective glazing.

So You're Going to Be a Stained Glass Man!

A Letter from an Old Hand to an Apprentice

by Joep Nicolas

What on earth made you decide to embrace this craft? I never decided to become a stained glass artist: I studied law and philosophy, but I got involved in this career probably by atavism and circumstance. I've been swept on by an affluence of commissions, and, looking backward, I still cannot understand why providence decided, or even tolerated, that I should make all these square miles of glass windows. But then I know other fellows, quite prominent in the field, who started out as cabaret dancers, as jazz players or bellhops. But those, just like myself, are the doomed ones—or call it the chosen ones—who apparently had no alternative.

But you, my dear, you could be a politician, or a salesman, or an insurance broker, or anything. Why then a stained glass man? I can only visualize two valid reasons: first, because you like the idea of engaging yourself in this most poetic activity; second, because you do not like the way stained glass is made nowadays and you want to go about it in a different way.

The first reason testifies to a romantic predisposition, the second to a nonconformist mind. Neither one nor the other characteristic alone would suffice to make you achieve greatness, so I hope you have both and subscribe to reason one as well as to reason two. That classifies you among the romantic revolutionaries, who are dangerous in politics, inadmissible in the business world, but quite valuable in art. They are the people who out of a vague veneration for ancient sacred glories would like to overthrow the triteness of the present, the hollow formulas, the platitudes, the compromises between pseudo-intellectualism and profit motives; they are the ones who will put up a fight even for a lost cause, for a magnificent folly: those who can take it when a smart guy tells them they are in the wrong racket. But they will have to carry with them these two seemingly opposed elements throughout life: the ideal of ever-escaping, ever-receding beauty, and the clear vision of the possibilities and opportunities to realize this

ideal—if not in entirety, then at least partially. They must be dreamers as well as critics; they must be poets as well as debunkers of hollow phrases, subjective visionaries as well as sober appraisers of objective conditions and human reactions.

If they are only romantic dreamers you may find them weeping over the intended beauty of their own mediocre products; if they are only revolutionary modernists, they will pride themselves on daring exploits which by-pass purpose, and history soon will deflate their boisterous products.

You will hear some dreamers talk about “dripping jewels” and “symphonies in color” only to discover that their jewels look like a gaudy platter of assorted jellies and their symphonies might be more akin to the appalling chant of a calliope. Others will talk about the purity of the craft, which should subsist on rigid lines and primary colors, which should go back to “elementary” or “stylized” forms, banning all “pictorial” or “literary” elements. You will find them in contemplation before their straight-edge saints, their slipcover simplifications, their ecstatically gesticulating robots, executed in neon sign colors, all of which constitute an already well-worn convention of not-so-new modernism.

FOR 1/8" TO 3/4" CLEAR TEXTURED GLASS



THERE ARE NO ALTERNATIVES

TSUNAMI™ SEAFOAM™ OCEAN™ CASCADE™ RAIN™ KORI™ ONAMI™
CLEAR TEXTURED GLASS...AVAILABLE IN 1/8" TO 3/4"

DUNCAN
PATTERNED GLASS

PH-FAK 206.937.2548 • E-MAIL duncangl@k.netcom.com

DISTRIBUTORS:
HOLLANDER GLASS CANADA (800-268-0467) • FRANKLIN ART GLASS (800-849-7693)
STUDIO DESIGN (905-651-6003) • ED HOY'S INT. (705-420-0990) • S.A. BENDHEIM (201-471-1733) • CLINE GLASS (800-547-8417)
TOHMA SHOJI CORP. TOKYO (033-235-1671) • KONA STAINED GLASS LTD. (604-577-1332)

Circle 81 on Reader Service Card

But of course there are also dreamers who think that they perpetuate and constantly revive the old traditions of centuries about which they have some crooked notions. Those will sell you a quick-frozen Chartres with politely sterilized faces from Elizabeth Arden, or else they might emulate more heroic styles with bearded bogeymen attired in nondescript drapes, hangings and tablecloths. You will also find that they express themselves repetitiously in a host of symbols which nobody asks for, but which people will accept readily because there was some space left.

Besides these wide-eyed dreamers of many varieties, I must mention the solid sleepers, who by the law of inertia and of least resistance go on producing, while they sleep, that kind of windows which might be called the common denominator of all the values least stirring, least discussable and least noticeable.

These people are not dangerous; don't quarrel with them. They are nice fellows; they attend conventions, sing the praise of the craft, quoting and misquoting great poets; then they return to their comfortable beds, which are supported by their "libraries" or "archives" chiefly made up out of thousands of devotional images of French or Italian extraction, and widely peddled by Barclay Street. They excel in sweet faces, and I do not know why they remind me of morticians revamping the "beloved face" and arranging dignified funerals.

My poor young friend, what should you do now that you have heard all these diatribes? What can you do without placing yourself in one of these derided categories of dreamers and sleepers? Please laugh about my bitterness and do what you like to do.

Tomorrow I might go about making something which a well-meaning person inadvertently will call "dripping jewels." Many times I have enjoyed hearing people rave about the "splendid colors" in one of my windows, which in reality was a monochrome grisaille painting. I also was happy sometimes making "pure" windows with nothing but a few pieces of pot metal and some strips of lead, and not a bit of paint. Although I do not believe in "stylizing" or "simplifying," I know that style and simplicity are essentials of any work of art. But "style" is different from willfully enforced "stylization" and "simplicity" is the contrary of "simplification." This "simplification" business is rather a yearning of the entangled and inhibited mind, frequently coupled with inadequate draftsmanship.

Enough now of all the things which are not so good; after all this you have a right to ask me for some positive directions—and here they come.

First of all: even I subscribe to this dusty adage, "The art of stained glass must be a handmaiden of architecture." Dusting it off for everyday use, I interpret it as follows: never spoil a building by making a window which is too noticeable and which looks heterogeneous or too

self-advertising. This is a limitation put on your creative and subversive instincts, especially because your services are seldom called for in quite modern buildings. Mostly you will be submitted the plans of an edifice—and let it be a church, for that matter—which even in modernized version recalls some historic style. Now you don't have to consult books and find an exact affinity; you do not have to ape windows of that certain style. Go at it with an open mind: see first how much you can subdue the light without obliging the people to pray in the dark or to sit forever with artificial illumination. If you make your windows too dark, you bypass their purpose. If you make them too light, you err equally.

Determine the right medium and study the scale—the distances in the space. Do not cram too-large figures in the openings. Decide how much you can do and how rich you can go for the allotted remuneration. From the beginning you must plan the engineering of your execution. This may influence the character of your composition. There are ways and means of saving on labor in order to spend on the meaning and grace of your product. A resourceful mind can say much with little. And in the matter of color old Mr. Goethe may be quoted: "In der Beschraenkung zeigt sich erst der Meister," which means, "only in moderation is mastery."

Now here is a general rule which goes for all windows, no matter if they are rich in color, or if they are severe and nearly monochrome, if they have a lot of painting or are sober and simple in treatment. What counts is the harmony of *contrasting* values.

Too many equivalent values will destroy each other. Space your heavy elements and weigh them out against lighter ones, be it in colors, matting or even in lead Concentrations. It is an error also to make windows in which all the pieces of glass are approximately the same size: the interest starts by the contrast of small scraps against large slabs. A window with nothing but tints is bloodless. A colored window without some whites is choked to death.

I do not care if you use perspective but it never should look like reality: your perspective can be admitted only if it fits into the underlying abstract composition in such a way that the window goes on in its overall rhythm—having as strong contrasts in its second plan as it has in the first. The perspectival elements should be highly arranged and skillfully used as bidimensional divisions of the surface.

Don't be afraid to tell a story, but tell it in the right measure and fit it into the stresses which divide and uphold your surface. You may sometimes go into great detail, but all the detail must be subordinated to the equilibrium of unequal values; it never should disturb the harmony of the great volumes.

Your subject matter must be a pretext for composing, and expression must never disrupt composition.

INTERNATIONAL FIELD GUIDE TO ARTISTS



FOR TEN YEARS NOW, the business of bringing artists together with their markets has been the business of THE GUILD. From North America to Europe and the Orient, art professionals in the know and on the go are searching the pages of our annual sourcebooks.

FOR WHILE THESE BOOKS are classy enough to grace anyone's coffee table, they're sure gathering no dust in the service of those whose success depends on knowing who's who and who's new in the world of artists and artisans.

IF ART'S YOUR TRADE, buying or selling, it may be time to make a startling discovery.

THE GUILD.

Call us today at 1.800.969.1556.

Circle 95 on Reader Service Card

This requires good draftsmanship. If you have to worry over a face or a hand or drapery, your composition is threatened. On the other hand, your composing ability must be instinctive and spontaneous; otherwise you might willfully distort your figures just to force them into the arabesque you are striving for. You see, in between all these abysses you have to perform like a tightrope walker; don't fall to the left, don't fall to the right, but go straight ahead. If you are afraid, you certainly will fail. You've got to acquire great ease and grace; nobody is interested in your audacity or in your fear. Work and work and try to be a well-balanced human being. The qualities of mind and heart will put their mark on your work.

This is a proud program, my friend. If you feel like living up to it, be welcome, then join us in the limbo of forgotten artists and artisans. That's what I call it, for we know that in a mechanized world we are serving a lost cause. We are working our heads off and none of us will achieve fame or fortune. Someday you may create a gorgeous set of windows for a new church. The Building Committee puts out a nice booklet, your windows are even reproduced. The names of everybody are proudly

displayed: the architect, the contractor, the salesmen of every part and detail. But do not look for your name: you did not sell these windows, you only made them. So what? Would you prefer to be a lawyer, a politician, a banker, or for that matter, a salesman of stained glass windows? Let them have their particular brand of fame and fortune. If you love your craft, if you love to work at it, honestly and devotedly, there will be in your life more beauty, more joy and more poetry than in the tortuous existence of a movie star. So you've got to do it for this motive alone, because your predisposition fits into a handicraft, which is a greater art than many more pretentious ways of self-expression. Clean of plutocratic desires in the midst of a plutocratic world, clean of publicity lust in a world of publicity maniacs, you've got to be an anonymous, not-so-well-paid stained glass man—not for fame, not for money, not for any form of recognition, but just because you cannot help loving it.

Reprinted from Stained Glass Vol. XLIV, Winter 1949-1950

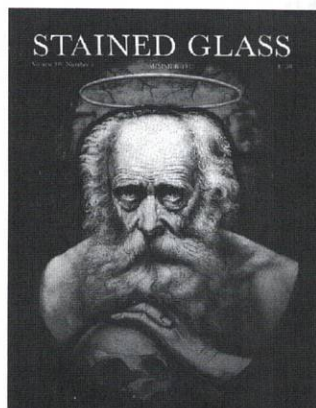


Anniversary Sale!

Very Limited Quantities Remain! As Low as \$2⁵⁰ Each

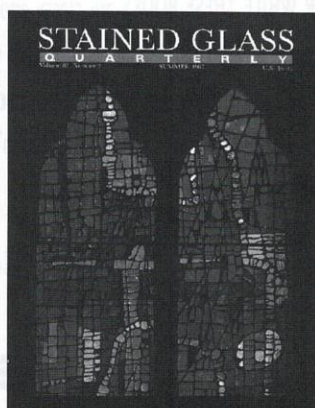
Many of these issues will be gone soon! Don't miss this opportunity to buy the issues you need. The complete set of 28 remaining back issues is available for only \$2⁵⁰ per issue in the U.S. or \$3⁵⁰ outside the U.S.

Don't need the whole set? Single back issue prices are \$4⁰⁰ in the U.S. and \$5⁰⁰ outside the U.S.



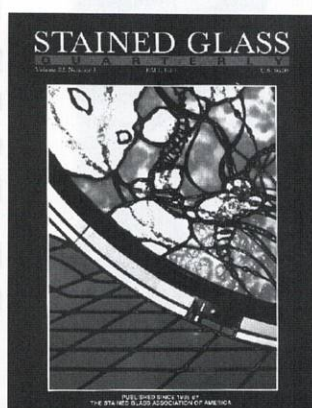
Summer 1985

Galle • Environments and Applications • Hall of Justice • Phillips Stained Glass Studio • Spectrum Glass



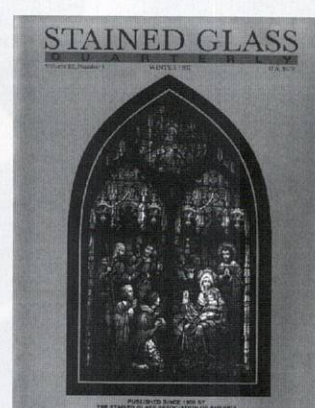
Summer 1987

H. Schardt • Fremont Antique • N.Y.C. Library Windows • Karel Dupre • Faces in Stained Glass • Innerland • Real Stained Glass • Structural Support Systems • Using A/V Aids



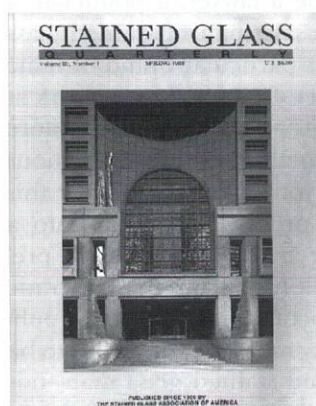
Fall 1987

Stained Glass Overlay • Stained Glass by Dog sled • Planetarium Windows • Glass Laminating • Glass Portrait • J&R Lamb Studios • Music • B. Rose's Mausoleum Windows • LaFarge



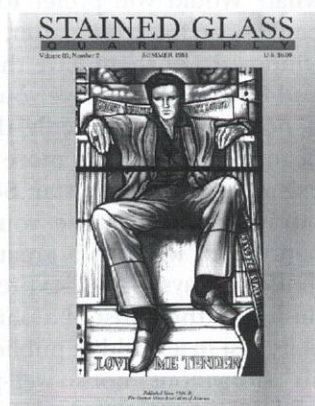
Winter 1987

My Early Years by R.W. Coomber • Public Spaces • Transylvanian • E. Miller • J.L. Kraft's Jade Window • Music, Part II • Regional Stained Glass Shows



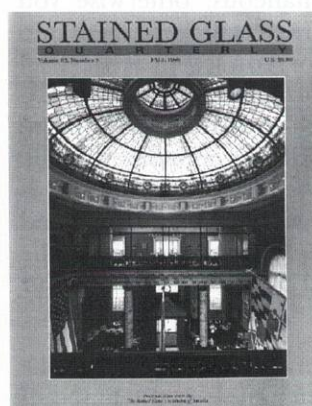
Spring 1988

Lamps • Symbolism of Color • B. Beskow • Surveying for Restoration • American Craft Museum Exhibit



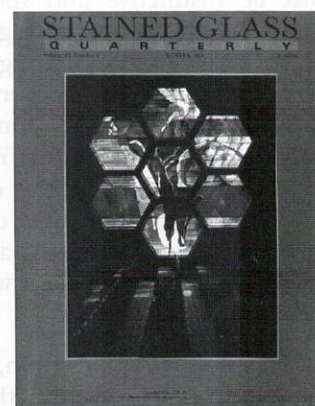
Summer 1988

Rock and Roll Stained Glass • St. John's Abbey • Restoration • Irish Stained Glass • Design Resources • Designing for Developers • Shutterbug Help • St. Teresa of Avila in Glass • DuPont's Laminated Glass



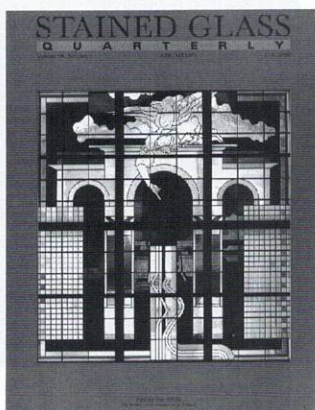
Fall 1988

Rambusch • Notes • Judith Schaecter • Lead Milling Marks



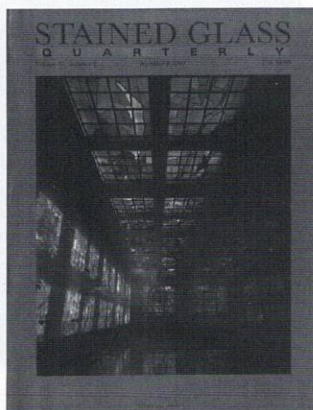
Winter 1988

Restoration • Dieterich Spahn • Sun Dance Teaching • 36 Women, 12 Countries • Lead: Safe Work Practices • Protective Glazing



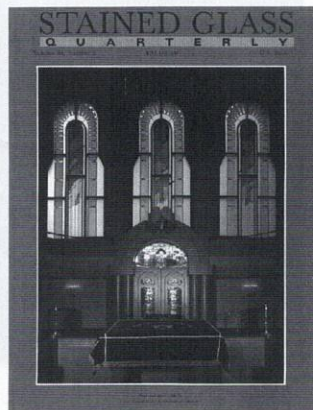
Spring 1989

Unlikely Combination • D. Wilson • See Your World • Australia's Stained Glass • Publication



Summer 1989

Preservation • Glass with a Conscience • Judson Studios • J. Carpenter • From Gallery to Gallery • Restoration • From the Wilds



Fall 1989

Stained Glass Man • The Glassmaster • The Tudor Rose of York • Non-Objective Design for Stained Glass • Lyrical Geometry • 61 Years of Collaboration



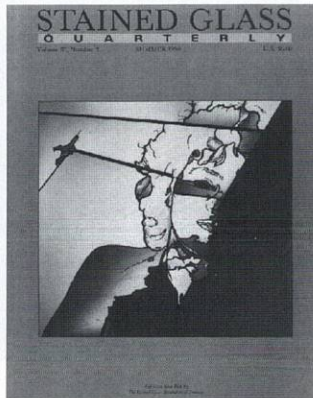
Winter 1989

Metamorphosis in Glass • The Musee du Vitrail • The Luminous Basilica • Shattering • Wind Load on Windows • Elizabeth Speaks



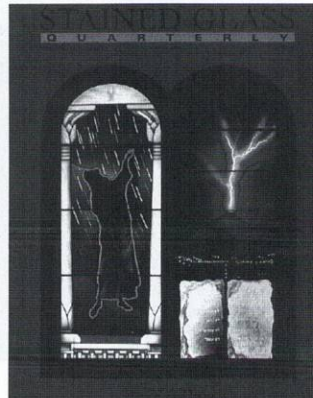
Spring 1990

Of Paint and Painters • The Other Windows • Against the Odds • A LaFarge Masterpiece



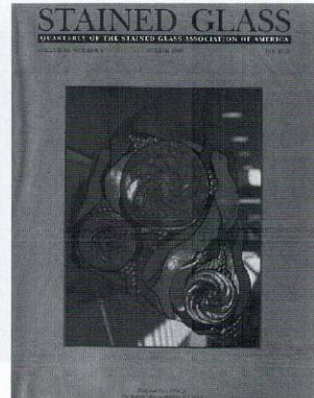
Summer 1990

R. Pinart Interview • Heart, Mind and Soul • About Consultants and Restorers • Windows of Clarity and Intent • H. Sharp



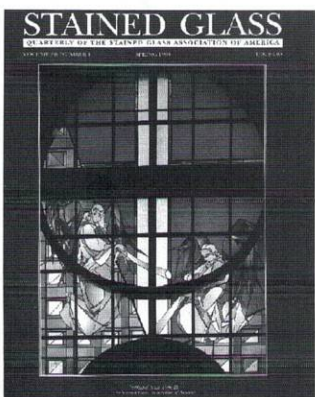
Fall 1990

The Lead Issue • Lutz Hauschild Interview • A Natural View • Many Vices • Illuminated Literature • Patrick Reyntiens



Winter 1990

Lead Safety • A Civic Celebration • Old Philosopher • The Stained Glass of New Orleans



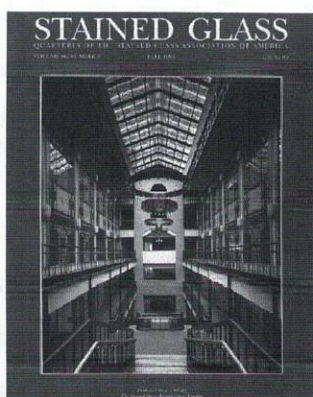
Spring 1991

Poland • Lique Window • Transition to Glass • Jewels of the South



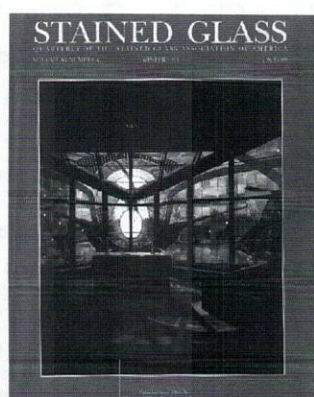
Summer 1991

Painting Experience • Fribourg Cathedral • A Total Environment • Armstrong Windows • Controlling Lead • Lead Patina



Fall 1991

Building Blocks of the Americas • Viterous Maximus • Tiffany Travels to Japan • City Offices Profile • Those Familiar Faces • Secrets of a Stained Glass Shop



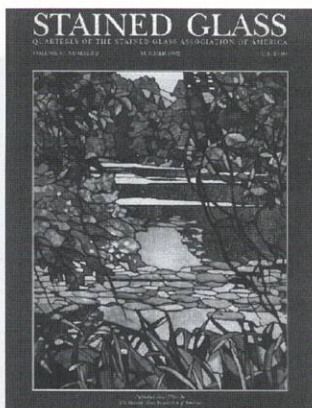
Winter 1991

Lead • Medical Setting • Hartley Wood • Mind's Eye • Hurricane Hugo • Motorcycles • Business Losses



Spring 1992

Canadian Window • Sweden • Man and Machine • Magic • Reynolds Memorial Window • Tales in Glass • Roca's Particular Poetry



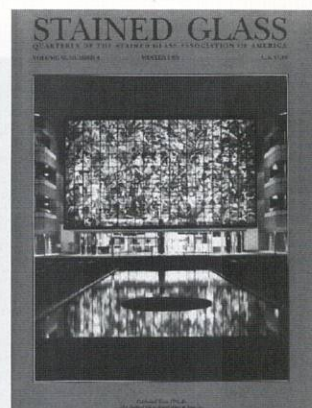
Summer 1992

On-Site Workshops • The Alchemists' Art • Personal Visions, Silent Voices • O. Prather • Stained Glass Windows • Slovenly Peter Essay



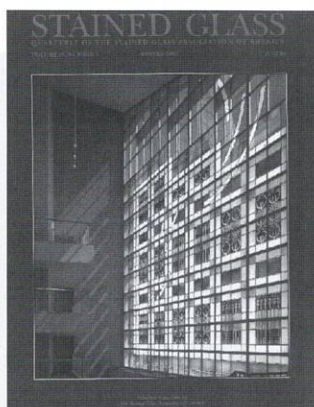
Fall 1992

His Evocative Style • Coloring the Light • Dancing on the Ceiling • J. Chicago's Holocaust • R. N. Dixon • On Blooming Late • Luke Verrier • Viollet Le Duc, Part I



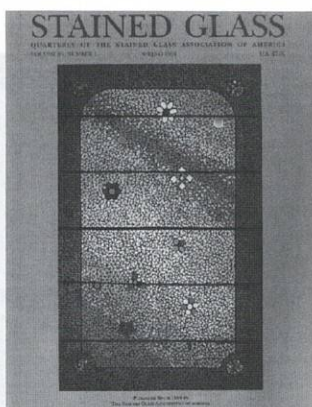
Winter 1992

Art Commissioning Process Survey • Japan • The Snowy Owl • B. Laws Profile • Bathroom Ceilings • A Canadian Master • Red Cross Knight • Viollet Le Duc Part II



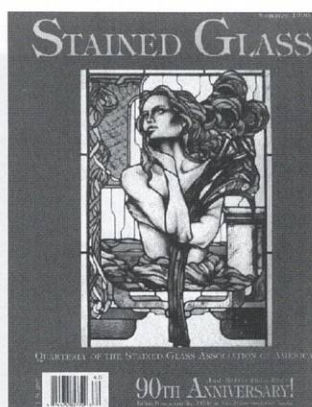
Winter 1993

The Temple Window • EGA Exhibition in Review • Stained Glass Postage Stamps • Gilbert White: Tribute • Meade Memorial Church • Restoration Standards • Teknix: Fusing • Viollet Le Duc Part VI



Spring 1994

Belcher Mosaic • Family Tradition Revisited • Unworthy Obscurity • Restoring Stained Glass Paint • Teknix: Painting on Glass



Summer 1996

Geometry, Vision • Crown Jewels • Tax Deductions • Deregulation • The Stanisic Studio • Contemporary Grecian Urns • Terrorism • Hawaiian Suite • King George III • Studio Insurance • Tallow • Media Relations



Fall 1996

Nashville • The Renovation of St. Aloysius • California Gothic • Father Dan Hillen • 1% For the Arts • The Caring Place • King of Kings: Contemporary Designs, Modern Architecture • The Stained Glass Panel • J. Flanagan

Please Check
Issues Desired:

☐ **Complete Set; \$70 in the U.S. or \$98 outside the U.S.**

Individual Issues, \$4⁰⁰ each in the U.S. or \$5⁰⁰ each outside the U.S.

☐ Summer '85
☐ Summer '87
☐ Fall '87
☐ Winter '87

☐ Spring '88
☐ Summer '88
☐ Fall '88
☐ Winter '89
☐ Spring '89
☐ Summer '89
☐ Fall '89
☐ Winter '89
☐ Spring '90
☐ Summer '90
☐ Fall '90
☐ Winter '90

☐ Spring '91
☐ Summer '91
☐ Fall '91
☐ Winter '91
☐ Spring '92
☐ Summer '92
☐ Fall '92
☐ Winter '92
☐ Winter '93
☐ Spring '94
☐ Summer '96
☐ Fall '96

Save on Back Issues!

Back Issues Ordered: _____ x \$4⁰⁰ (\$5⁰⁰ outside U.S.)

Total Enclosed: \$_____ Please make check payable to *Stained Glass Magazine* or enclose an International Money Order. U.S. Funds only. We can also charge your Visa or MasterCard.

Account Number

Exp. Date

Cardholder signature (required for credit card purchase).

Name/Company Name

Street (Shipping) Address

City

State/Province

Zip/Postal Code

Country

Phone/Fax Number

Mail to: *Stained Glass Magazine*, 6 SW Second St. #7, Lee's Summit, MO 64063. Credit card orders call toll-free 1-800-438-9581.

Please allow eight weeks for delivery.

Sources of Supply . . .

Sections

Came, Solder, Copper Foil

Came: Brass and Copper
Came: Lead and Solder
Came: Metal Crowned
Came: Zinc
Copper Foil

General Suppliers Glass Suppliers

Glass: Antique
Glass: Beveled
Glass: Dalle
Glass: Dichroic
Glass: Glue-Chip
Glass: Jewels
Glass: Rolled

Materials and Components

Adhesives
Domes
Doors: Wood
Epoxy Resin
Fillgree: Brass
Fluxes and Patinas
Frames & Sash: Metal
Frames & Sash: Wood
Hooks & Suction Cup Hangers
Lamps & Lighting Parts
Lamp Making Systems
Paints & Stains
Reinforcing Bars
Sandblast Etching
Screens: Wood
Videos: Dalle de Verre
Wire: Brass & Copper

Tools and Equipment

Beveling Equipment
Blades & Wheels: Diamond
Brushes
Computerized Design Systems
Drills: Diamond
Engraving Equipment
Glass Cutting and Processing
Grinding & Grozing Machines
Kilns, Fusing & Painting
Mitre Vises
Online Services
Saws: Band
Saws: Came
Saws: Ring
Soldering Irons

CAME, SOLDER, COPPER FOIL

CAME: BRASS AND COPPER

Franciscan Glass Company Inc.
100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Mayfield Manufacturing Company
18 West Oxmoor Road
Birmingham, AL 35209
(800) 749-6061

Washington Metallic Products
P.O. Box 39521
Tacoma, WA 98439-0521
(206) 582-5825/(206) 582-5316 (fax)

CAME: LEAD AND SOLDER

G.A. Avril Company
P.O. Box 12050
Cincinnati, OH 45212
(800) 331-9173

S.A. Bendheim Company, Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Canfield Quality Solder
P.O. Box 3100
Union, NJ 07083
(800) 526-4577

Crown Metal Company Inc.
121 East Washington Street
Milwaukee, WI 53204
(414) 384-6500

DHD Metals Inc.
P.O. Box 165
Conyers, GA 30207
(800) 428-6693/(707) 760-9032 (fax)

Franciscan Glass Company Inc.
100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Fry Metals
4100 Sixth Avenue
Altoona, PA 16602
(814) 946-1611/(814) 944-8094 (fax)

Gauthier Non-ferrous Products Inc.
12320 April Street
Montreal, Quebec H1B 5N5
(514) 645-2378/(514) 645 7574 (fax)

Hirsch Metals Inc.
6001 Broken Sound Pkwy Ste #502
Boca Raton, FL 33487
(800) 521-0352/(407) 241-7002 (fax)

Hollander Glass Canada Inc.
Toronto
3095 Universal Drive
Mississauga, Ontario L4X 2E2
(905) 625-7911/(905) 625-6759 (fax)
Outside Ontario phone toll free
(800) 268-0467

Hollander Glass Central Inc.
Chicago
1505 Centre Circle
Downers Grove, IL 60515
(708) 629-7721/ (708) 629-7325 (fax)
Outside IL phone toll free
(800) 323-4293

Hollander Glass East Inc.
New York
140 58th Street
Brooklyn, NY 11220
(718) 439-6111/(718) 439-3603
Outside NY phone toll free
(800) 221-6207

Hollander Glass Inc.
Los Angeles
10579 Dale
Stanton, CA 90680
(714) 761-5501/(714) 761-0183 (fax)

Hollander Glass Texas Inc.
Houston
4600 S. Pinemont Dr
Houston, TX 77041
(713) 460-0045/(713) 462-3646 (fax)
Outside TX phone toll free
(800) 421-0449

Houston Stained Glass Supply
2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Jennifer's Glass Works Inc.
4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

Mayfield Manufacturing Company
18 West Oxmoor Road
Birmingham, AL 35209
(800) 749-6061

Northwest Art Glass
9003 151st Avenue NE
Redmond, WA 98052
(800) 888-9444/(206) 861-9300 (fax)

Taracorp Industries Inc.
1200 16th Street
Granite City, IL 62040-4495
(800) 851-3300/(618) 451-4400

Wensley Metal Products Company
1445 Osage Street
Denver, CO 80204
(800) 253-1278/(303) 623-1600

Willard Industries
101 New Bern Street
Charlotte, NC 28220
(800) 476-1230

CAME: METAL CROWNED

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Prism Glassworks Inc.
Box 482, 4915 Farwell Street
McFarland, WI 53558
(800) 866-5801/(608) 838-6061 (fax)

CAME: ZINC

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Chicago Metallic Corporation
Chicago, IL
For distributor referral
(708) 563-4600

Hollander Glass Canada Inc.
Toronto
3095 Universal Drive
Mississauga, Ontario L4X 2E2
(905) 625-7911/(905) 625-6759 (fax)
Outside Ontario phone toll free
(800) 268-0467

Hollander Glass Central Inc.
Chicago
1505 Centre Circle
Downers Grove, IL 60515
(708) 629-7721/ (708) 629-7325 (fax)
Outside IL phone toll free
(800) 323-4293

Hollander Glass East Inc.
New York
140 58th Street
Brooklyn, NY 11220
(718) 439-6111/(718) 439-3603
Outside NY phone toll free
(800) 221-6207

Hollander Glass Inc.
Los Angeles
10579 Dale
Stanton, CA 90680
(714) 761-5501/(714) 761-0183 (fax)

Hollander Glass Texas Inc.
Houston
4600 S. Pinemont Dr
Houston, TX 77041
(713) 460-0045/(713) 462-3646 (fax)
Outside TX phone toll free
(800) 421-0449

Houston Stained Glass Supply
2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Jennifer's Glass Works Inc.
4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

Mayfield Manufacturing Company
18 West Oxmoor Road
Birmingham, AL 35209
(800) 749-6061

COPPER FOIL

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Hollander Glass Canada Inc.
Toronto
3095 Universal Drive
Mississauga, Ontario L4X 2E2
(905) 625-7911/(905) 625-6759 (fax)
Outside Ontario phone toll free
(800) 268-0467

Hollander Glass Central Inc.
Chicago
1505 Centre Circle
Downers Grove, IL 60515
(708) 629-7721/ (708) 629-7325 (fax)
Outside IL phone toll free
(800) 323-4293

Hollander Glass East Inc.
New York
140 58th Street
Brooklyn, NY 11220
(718) 439-6111/(718) 439-3603
Outside NY phone toll free
(800) 221-6207

Hollander Glass Inc.
Los Angeles
10579 Dale
Stanton, CA 90680
(714) 761-5501/(714) 761-0183 (fax)

Hollander Glass Texas Inc.
Houston
4600 S. Pinemont Dr
Houston, TX 77041
(713) 460-0045/(713) 462-3646 (fax)
Outside TX phone toll free
(800) 421-0449

Houston Stained Glass Supply
2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Venture Tape Corp.
30 Commerce Road
Rockland, MA 02370
(800) 343-1076

GENERAL SUPPLIERS

Albert Stained Glass
57 Front Street
Brooklyn, NY 11201
(718) 625-6464/(718) 625-5380 (fax)

Anything in Stained Glass
1060 Route 47 South
Rio Grande, NJ 08242
(609) 886-0416

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

D & L Stained Glass Supply
4939 North Broadway
Boulder, CO 80304
(800) 525-0940/(303) 449-8737

Delphi Stained Glass
2116 East Michigan Avenue
Lansing, MI 48912
(800) 248-2048

Franciscan Glass Company Inc.
100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Franklin Art Glass Studios Inc.
222 East Sycamore Street
Columbus, OH 43206
(614) 221-2972
Toll Free (outside Ohio) (800)
848-7683

Hollander Glass Canada Inc.
Toronto
3095 Universal Drive
Mississauga, Ontario L4X 2E2
(905) 625-7911/(905) 625-6759 (fax)
Outside Ontario phone toll free
(800) 268-0467

Hollander Glass Central Inc.
Chicago
1505 Centre Circle
Downers Grove, IL 60515
(708) 629-7721/ (708) 629-7325 (fax)
Outside IL phone toll free
(800) 323-4293

Hollander Glass East Inc.
New York
140 58th Street
Brooklyn, NY 11220
(718) 439-6111/(718) 439-3603
Outside NY phone toll free
(800) 221-6207

Hollander Glass Inc.
Los Angeles
10579 Dale
Stanton, CA 90680
(714) 761-5501/(714) 761-0183 (fax)

Hollander Glass Texas Inc.
Houston
4600 S. Pinemont Dr
Houston, TX 77041
(713) 460-0045/(713) 462-3646 (fax)
Outside TX phone toll free
(800) 421-0449

Houston Stained Glass Supply
2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Ed Hoy's International
1620 Frontenac Road
Naperville, IL 60563-1762
(800) 323-5668 (USA and Canada)
(708) 420-0890/(708) 416-0448 (fax)

Jennifer's Glass Works Inc.
4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

Kam Stained Glass
Prince Mouteab Street (Alarbain
Street)
Jeddah 21421, Saudi Arabia
(9662) 680-1384
(9662) 680-4146 (fax)

Lincoln Distributors
520 South 52nd Street, Suite 210
Tempe, AZ 85281
(800) 528-1419
(602) 968-9297 in AZ

Northwest Art Glass
9003 151st Avenue NE
Redmond, WA 98052
(800) 888-9444/(206) 861-9300 (fax)

Standard Ceramic Supply Company
P.O. Box 4435
Pittsburgh, PA 15205
(412) 276-6333

United Art Glass Inc.
1032 East Ogden Avenue #128
Naperville, IL 60563
(800) 323-9760/(708) 369-8168

Vic's Crafts & Videos
6006-B Old Pineville Road
Charlotte, NC 28217
(704) 522-9900

GLASS SUPPLIERS

GLASS: ANTIQUE

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Blenko Glass Company
P.O. Box 67
Milton, WV 25541
(304) 743-9081

Fremont Antique Glass Company
3614 Second Avenue NW
Seattle, WA 98107
(206) 633-2253

Hollander Glass Canada Inc.

Toronto
3095 Universal Drive
Mississauga, Ontario L4X 2E2
(905) 625-7911/(905) 625-6759 (fax)
Outside Ontario phone toll free
(800) 268-0467

Hollander Glass Central Inc.

Chicago
1505 Centre Circle
Downers Grove, IL 60515
(708) 629-7721/ (708) 629-7325 (fax)
Outside IL phone toll free
(800) 323-4293

Hollander Glass East Inc.

New York
140 58th Street
Brooklyn, NY 11220
(718) 439-6111/(718) 439-3603
Outside NY phone toll free
(800) 221-6207

Hollander Glass Inc.

Los Angeles
10579 Dale
Stanton, CA 90680
(714) 761-5501/(714) 761-0183 (fax)

Hollander Glass Texas Inc.

Houston
4600 S. Pinemont Dr
Houston, TX 77041
(713) 460-0045/(713) 462-3646 (fax)
Outside TX phone toll free
(800) 421-0449

Houston Stained Glass Supply

2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Jennifer's Glass Works Inc.

4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

C&R Loo Inc.

1085 Essex Avenue
Richmond, CA 94801
(510) 232-0276/(510) 232-7810 (fax)

GLASS: BEVELED

S.A. Bendheim Company Inc.

61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Franciscan Glass Company Inc.

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Houston Stained Glass Supply

2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Ed Hoy's International

1620 Frontenac Road
Naperville, IL 60563-1762
(800) 323-5668 (USA and Canada)
(708) 420-0890/(708) 416-0448 (fax)

Jennifer's Glass Works Inc.

4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

Northwest Art Glass

9003 151st Avenue NE
Redmond, WA 98052
(800) 888-9444/(206) 861-9300 (fax)

Redfield's Beveling

13 East Seventh Street
Lawrence, KS 66044
(913) 843-4039

GLASS: DALLE

Blenko Glass Company

P.O. Box 67
Milton, WV 25541
(304) 743-9081

Heritage Glass Inc.

1081 East, 2200 North
Logan, UT 84321
(801) 752-5501/(801) 752-3323 (fax)

GLASS: DICHROIC

Austin Thin Films

800 Paloma Drive #100
Round Rock, TX 78664
(512) 246-1122/(512) 246-1133 (fax)

Franciscan Glass Company Inc.

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Allen H. Graef-Dichroic Glass

3823 East Anaheim Street
Long Beach, CA 90804
(310) 494-3823

C&R Loo Inc.

1085 Essex Avenue
Richmond, CA 94801
(510) 232-0276/(510) 232-7810 (fax)

GLASS: GLUE-CHIP

S.A. Bendheim Company Inc.

61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Carolina Glue Chip Manufacturing

P.O. Box 237
North Wilkesboro, NC 28659
(800) 327-1805/(910) 838-9833 (fax)

Duncan Patterned Glass

4007 16th Southwest
Seattle, WA 98106
(206) 937-2548 Phone/Fax
E-mail: jamesd2174@aol.com

Hollander Glass Canada Inc.

Toronto
3095 Universal Drive
Mississauga, Ontario L4X 2E2
(905) 625-7911/(905) 625-6759 (fax)
Outside Ontario phone toll free
(800) 268-0467

Hollander Glass Central Inc.

Chicago
1505 Centre Circle
Downers Grove, IL 60515
(708) 629-7721/ (708) 629-7325 (fax)
Outside IL phone toll free
(800) 323-4293

Hollander Glass East Inc.

New York
140 58th Street
Brooklyn, NY 11220
(718) 439-6111/(718) 439-3603
Outside NY phone toll free
(800) 221-6207

Hollander Glass Inc.

Los Angeles
10579 Dale
Stanton, CA 90680
(714) 761-5501/(714) 761-0183 (fax)

Hollander Glass Texas Inc.

Houston
4600 S. Pinemont Dr
Houston, TX 77041
(713) 460-0045/(713) 462-3646 (fax)
Outside TX phone toll free
(800) 421-0449

Houston Stained Glass Supply

2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Jennifer's Glass Works Inc.

4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

Pearson Sales Company

4356 Baldwin Ave
El Monte, CA 91731
(818) 575-8902

GLASS: JEWELS

S.A. Bendheim Company Inc.

61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

C&R Loo Inc.

1085 Essex Avenue
Richmond, CA 94801
(510) 232-0276/(510) 232-7810 (fax)

GLASS: ROLLED

S.A. Bendheim Company Inc.

61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Bullseye Glass Company

3722 Southeast 21st Avenue
Portland, OR 97202
(503) 232-8887

Franciscan Glass Company Inc.

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Hollander Glass Canada Inc.

Toronto
3095 Universal Drive
Mississauga, Ontario L4X 2E2
(905) 625-7911/(905) 625-6759 (fax)
Outside Ontario phone toll free
(800) 268-0467

Hollander Glass Central Inc.

Chicago
1505 Centre Circle
Downers Grove, IL 60515
(708) 629-7721/ (708) 629-7325 (fax)
Outside IL phone toll free
(800) 323-4293

Hollander Glass East Inc.

New York
140 58th Street
Brooklyn, NY 11220
(718) 439-6111/(718) 439-3603
Outside NY phone toll free
(800) 221-6207

Hollander Glass Inc.

Los Angeles
10579 Dale
Stanton, CA 90680
(714) 761-5501/(714) 761-0183 (fax)

Hollander Glass Texas Inc.

Houston
4600 S. Pinemont Dr
Houston, TX 77041
(713) 460-0045/(713) 462-3646 (fax)
Outside TX phone toll free
(800) 421-0449

Houston Stained Glass Supply

2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Jennifer's Glass Works Inc.

4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

Kokomo Opalescent Glass Company

1310 Market Street, Box 2265
Kokomo, IN 46902
(317) 457-8136

Northwest Art Glass

9003 151st Avenue NE
Redmond, WA 98052
(800) 888-9444/(206) 861-9300 (fax)

Oceana Glass Company

359 Coral Street
Santa Cruz, CA 95060
(408) 423-4988

Spectrum Glass Co. Inc.

P.O. Box 646
Woodinville, WA 98072
(800) 426-3120/(206) 483-6699

Uroboros Glass Studios Inc.

2139 North Kerby
Portland, OR 97227
(503) 284-4900

Paul Wissmach Glass Company

420 Stephen Street, P.O. Box 228
Paden City, WV 26159
(304) 337-2253

Youghiogheny Opalescent Glass

P.O. Box 800
Connellsville, PA 15425
(412) 628-3000

MATERIALS & COMPONENTS**ADHESIVES****Dewey Associates Inc.**

459 Main Street # 102
New Rochelle, NY 10801
(800) 448-2306
Fax: (914) 633-4175

DOMES**Franciscan Glass Company Inc.**

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Kam Stained Glass

Prince Mouteab Street (Alarbain Street)
Jeddah 21421, Saudi Arabia
(9662) 680-1384
(9662) 680-4146 (fax)

DOORS: wood**Franciscan Glass Company Inc.**

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(415) 948-0736 (fax)

Houston Stained Glass Supply

2002 Brittmoore Street
Houston, TX 77043
(800) 231-0148
(713) 690-8844 in TX

Jennifer's Glass Works Inc.

4875 South Atlanta Road
Smyrna, GA 30080
(800) 241-3388/(404) 355-3080

EPOXY RESIN**Biwax Corporation**

45 East Bradrock Drive
Des Plaines, IL 60018
(847) 824-0137

Blenko Glass Company

P.O. Box 67
Milton, WV 25541
(304) 743-9081

FILIGREE: BRASS**Mika International Inc.**

6000 North Bailey Avenue, Suite 3
Amherst, NY 14226
(800) 579-0880/(716) 838-3915 (fax)

FLUXES AND PATINAS**S.A. Bendheim Company Inc.**

61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Canfield Quality Solder

P.O. Box 3100
Union, NJ 07083
(800) 526-4577

Franciscan Glass Company Inc.

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Fry Metals

4100 Sixth Avenue
Altoona, PA 16602
(814) 946-1611/(814) 944-8094 (fax)

Gauthier Non-ferrous Products Inc.

12320 April Street
Montreal, Quebec H1B 5N5
(514) 645-2378/(514) 645-7574 (fax)

FRAMES & SASH: METAL**Custom Aluminum Frame**

Fabrication (Caff Company)
370 Vista Park Dr.
Pittsburgh, PA 15205
(412) 787-1761

J. Sussman Inc.

109-10 180th Street
Jamaica, NY 11433
(718) 297-6040
(718) 297-3090 (fax)

FRAMES AND SASH: wood**Blackcreek Enterprises Inc.**

1360 Lake Front Drive
Dandridge, TN 37725
(423) 397-1391/(800) 303-3980 (fax)
e-mail: blkrk@usit.net

Summit Stained Glass

657 SW 2nd Street
Lee's Summit, MO 64063
(816) 525-0037/(816) 525-1736 (fax)

LAMP MAKING SYSTEMS**Franciscan Glass Company Inc.**

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Odyssey Lamp Systems Inc.

10140 Romandel Avenue
Santa Fe Springs, CA 90670
(800) 228/2631/(310) 941-0149

The Wooden Base Place/LCW

135 King Hills Lane
King City, Ontario, Canada L7B 1A3
(905) 841-2848 phone & fax

H. L. Worden Company

P. O. Box 519
Granger, WA 98932
(800) 541-1103/(509) 854-1557

LAMPS AND LIGHTING PARTS**Dewey Associates Inc.**

459 Main Street
New Rochelle, NY 10801
(800) 448-2306/(914) 633-4175 (fax)

Franciscan Glass Company Inc.

100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

Source One Lamps

7600 Metcalf
Overland Park, KS 66204
(800) 473-4527

PAINTS AND STAINS**Fenton Glass Studio**

4001 San Leandro Street, 8
Oakland, CA 94601
(510) 533-5515

Reusche & Company of T.W.S. Inc.

1299 H Street
Greeley, CO 80631
(970) 346-8577

Standard Ceramic Supply Company

P.O. Box 4435
Pittsburgh, PA 15205
(412) 276-6333

REINFORCING BARS

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Custom Aluminum Frame
Fabrication (Caff Company)
370 Vista Park Drive
Pittsburgh, PA 15205
(412) 787-1761

SANDBLAST ETCHING

Crystal Galleries
1036 North Citrus
Covina, CA 91722
(818) 915-6553

Glastar Corporation
20721 Marilla Street
Chatsworth, CA 91311
(800) 423-5635 / (818) 998-2078 fax

Venture Tape Corporation
30 Commerce Road
Rockland, MA 02370
(800) 343-1076

SCREENS: WOOD

Hiawatha Craftsman
PO Box 14326
St. Paul, MN 55114
(612) 629-3008

VIDEOS: GLASS PAINTING

Vidreaux Productions
107 West Broughton St.
Savannah, GA 31401
(800) 997-2842/(912) 233-9795

WIRE: BRASS AND COPPER

Nonferrous Metals Company
P.O. Box 2595-SGM
Waterbury, CT 06723
(860) 274-7255/(860) 274-7202 (fax)

TOOLS AND EQUIPMENT

BEVELING EQUIPMENT

Covington Engineering
P.O. Box 35
Redlands, CA 92374
(714) 793-6636

Glastar Corporation
20721 Marilla Street
Chatsworth, CA 91311
(800) 423-5635 / (818) 998-2078 fax

BLADES AND WHEELS: DIAMOND

Diamond Tech International
4002 West State Street
Tampa, FL 33609
800-937-9593

Lunzer Inc.
330 West 42nd Street
New York, NY 10036
(800) 234-2666/(212)-921-4753 (fax)

BRUSHES

Standard Ceramic Supply Company
P.O. Box 4435
Pittsburgh, PA 15205
(412) 276-6333

COMPUTERIZED DESIGN SYSTEMS

GlasDesign Systems
2040 Casa Roble Lane
El Dorado Hills, CA 95762
(800)-850-9340/916-933-9340

DRILLS: DIAMOND

Diamond Tech International
4002 West State Street
Tampa, FL 33609
800-937-9593

Lunzer Inc.
330 West 42nd Street
New York, NY 10036
(800) 234-2666/(212) 921-4753 (fax)

Starlite Industries
1111 Lancaster Ave
Rosemont, PA 19010
(800) 727-1022/(610) 527-4463 (fax)

ENGRAVING EQUIPMENT

Lunzer Inc.
330 West 42nd Street
New York, NY 10036
(800) 234-2666/(212) 921-4753 (fax)

GLASS CUTTING AND PROCESS- ING

Billco Manufacturing Company
100 Grandview Boulevard
Zelienople, PA 16063
(412) 452-7390/ (412) 452-0217 (fax)

Diamond Tech International
4002 West State Street
Tampa, FL 33609
800-937-9593

Glass Accessories International Inc.
10112 Beverly Dr.
Huntington Beach, CA 92646
(714) 962-1777 (voice & fax)

GRINDING & GROZING MACHINES

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Diamond Tech International
4002 West State Street
Tampa, FL 33609
800-937-9593

Glastar Corporation
20721 Marilla Street
Chatsworth, CA 91311
(800) 423-5635 / (818) 998-2078 fax

KILNS, FUSING & PAINTING

S.A. Bendheim Company Inc.
61 Willett Street
Passaic, NJ 07055
(800) 221-7379/(201) 471-1733

Evenheat Kiln Inc.
6949 Legion Road
Caseville, MI 48725
(517) 856-2282

Paragon Industries Inc.
2011 South Town East Boulevard
Mesquite, TX 75149-1122
(800) 876-4328/(214) 288-7557

Skutt Ceramic Products
2816 Southeast Steele Street
Portland, OR 97202
(503) 231-7726

MITRE VISES

Quicksilver Glass Company
9528 West 116th Terrace
Overland Park, KS 66210
(800) 625-7274

ONLINE SERVICES

Art Glass World
4002 West State Street
Tampa, FL 33609
(800) 299-3313

SAWS: BAND

Diamond Tech International
4002 West State Street
Tampa, FL 33609
800-937-9593

Franciscan Glass Company Inc.
100 San Antonio Circle
Mountain View, CA 94040
(800) 229-7728/(800) 229-7730 (fax)

SAWS: CAME

Diamond Tech International
4002 West State Street
Tampa, FL 33609
800-937-9593

SAWS: RING

Gemini Saw Company
25916 Senator Avenue
Harbor City, CA 90710
(310) 891-0288/(310) 891-0265 (fax)

SOLDERING IRONS

Esico•Triton
P.O. Box 247
Deep River, CT 06417
(203) 526-5361

STAINED GLASS ASSOCIATION OF AMERICA

ADMINISTRATIVE OFFICES

KATHLEEN MURDOCK, Executive Secretary
P.O. Box 22642, Kansas City, MO 64113
(800) 888-SGAA (7422), (816) 333-6690; fax (816) 361-9173
e-mail: sgaofa@aol.com

ELECTED OFFICERS 1995-1996

PRESIDENT

Gary Helf, 222 E. Sycamore St., Columbus OH 43206, (614) 221-2972

FIRST VICE PRESIDENT

Kirk D. Weaver, 160 Warden St., Pittsburgh PA 15220, (412) 921-2500

SECOND VICE PRESIDENT

Jim Whitney, 2530 Superior Ave., Cleveland OH 44114, (216) 348-1616

FINANCIAL SECRETARY

William W. Judson, 200 So. Avenue 66, Los Angeles CA 90042, (213) 255-0131

TREASURER

Art Femenella, 3 Brighton Court, Annandale NJ 08801, (908) 735-6840

RECORDING SECRETARY

Susan Conrad, 1214 North St., Lafayette IN 47904 (317) 423-1951

BOARD OF DIRECTORS

Truett George, P.O. Box 174, Ft. White FL 32038, (904) 497-2050

Bill Wright, R.R.2, Box 250, Bloomington IL 61704, (309) 378-4651

John W. Clark, 28 So. Stolp Ave., Aurora, IL 60506, (708) 896-4181

Dennis Harmon, 410 Maple Ave., Nashville, TN 37210, (615) 255-5446

Ronald Dixon, 977 Seminole Trail #298, Charlottesville, VA 22901, (804) 847-6140

Ardra Hartz, 8077 Telephone Rd., Newburgh IN 47630 (812) 853-3821

Walter Grosvenor, 11715 N. Hemlock, Spokane WA 99218, (509) 466-8225

STANDING COMMITTEES & CHAIRS

APPRENTICESHIP: Walter W. Judson, 200 So. Avenue 66, Los Angeles CA 90042, (213) 255-0131

AUDIOVISUAL AIDS: Helene Weis, 778 South Fifth St., Philadelphia, PA 19147, (215) 247-5721

BY-LAWS: Truett George, P.O. Box 174, Ft. White FL 32038, (904) 497-2050

CONFERENCE: Walter Grosvenor, 11715 N. Hemlock, Spokane WA 99218, (509) 466-8225

EDUCATION: Walter Grosvenor, 11715 N. Hemlock, Spokane WA 99218, (509) 466-8225

ETHICS: John Kebrle, 2829 Bachman Dr., Dallas TX 75220, (214) 357-5922

HEALTH AND SAFETY: Jim Whitney, 2530 Superior Ave., Cleveland OH 44114, (216) 348-1616

HISTORICAL STUDIES: Robert O. Jones, 1511 Hasosaw Nene, Tallahassee FL 32301, (904) 656-1148

LONG RANGE PLANNING: Truett George, P.O. Box 174, Ft. White FL 32038, (904) 497-2050

MARKETING: Ron Dixon, 977 Seminole Trail, #298, Charlottesville, VA 22901, (804) 847-6140

MEMBERSHIP: Susan Conrad, 1214 North St., Lafayette IN 47904 (317) 423-1951

NOMINATIONS: E. Crosby Willet, 10 East Morland Ave. Philadelphia PA 19118, (215) 247-5721

PRODUCTS, PROCESSES & DEVELOPMENT: Stevan Stanisic, 190 Cascade Dr. Huntington, WV 25705, (304) 736-7560

PUBLICATIONS: John W. Clark, 28 So. Stolp Ave., Aurora, IL 60506, (708) 896-4181

RESTORATION AND REPAIR: Art Femenella, 3 Brighton Court, Annandale NJ 08801, (908) 735-6840

EMERITUS MEMBERS

LIFE MEMBERS: William Blenko

HONORARY MEMBERS: Kenneth Urschel, Thomas Buechner, Helen C. Hickman, Hilda Sachs, Cecil Wilson, Peter Gibson, Frank L. Reusché, Richard T. Feller

SGAA FELLOWS: Bernard O. Gruenke, Harold F. Hollman, James Helf, Otto C. Winterich, Michael Poremba, Patrick J. White, Gerhard Hiemer, Bill R. Laws

LIAISONS

ARCHITECTURAL: William Wright, A.I.A.

GALLERIES: Saara Gallin

GLASS & METAL ASSOCIATIONS: Gerry Hiemer

CENSUS OF STAINED GLASS WINDOWS IN AMERICA: Robert Wysocki

The Stained Glass Association of America is a non-profit national organization founded to promote the finest in stained and art glass. In addition to publishing STAINED GLASS magazine, it sponsors educational programming and public awareness programs for the stained glass craft and the community-at-large. Statements and opinions expressed in STAINED GLASS magazine are not necessarily those of the Association. For more information contact the Executive Secretary, 1-800-888-7422.

STAINED GLASS (ISSN 1067-8867, USPS 552-830) is published quarterly for \$30 (U.S.) \$46 (Foreign) per year and is the official journal of the Stained Glass Association of America. STAINED GLASS, 6 SW Second St., Suite 7, Lee's Summit, MO 64063-2352. Second-class postage paid at Lee's Summit, MO and additional mailing offices. POSTMASTER: Send address changes to STAINED GLASS, 6 SW Second St., Suite 7, Lee's Summit, MO 64063-2352.

STAINED GLASS Copyright © 1996 by The Stained Glass Association of America. All rights reserved. Reproduction in whole or part is prohibited. Address unsolicited material to Richard H. Gross, Editor, 6 SW Second St., Suite #7, Lee's Summit, MO 64063-2352. Manuscripts will be returned only if accompanied by a self-addressed stamped envelope. The editor reserves the right to reject any editorial or advertising material. Our E-Mail address is sgmagaz@kcnet.com. Our internet homepage address is: <http://www.artglassworld.com/mag/sglass/sglass.html>.

SUBSCRIPTION RATES: DOMESTIC is \$30.00 per year; OUTSIDE THE U.S. is \$46.00 per year (U.S. currency only, International Postal Money Order). Address all subscription correspondence to STAINED GLASS, Circulation Department, 6 SW Second St., Suite #7, Lee's Summit, MO 64063-2352, or call toll-free 1-800-438-9581. For change of address, give old address and new address including zip codes. Allow six weeks for change to become effective. STAINED GLASS is available on microfilm and microfiche at Columbus Microfilm Co., 1600 Universal Rd., Columbus, OH 43207. The full text of STAINED GLASS is also available in the electronic versions of the *Art Index*.

FREE PRODUCT AND SUBSCRIPTION INFORMATION

For instant response:

1. CIRCLE

the numbers on the card that correspond to the key numbers at the bottom of the advertisements that interest you.

2. TEAR

out the perforated card. Please print or type your information as indicated and then mail. WE PAY THE POSTAGE!

MORE

information on products and services will be sent to you by the advertisers.

Quick reference guide to reader- service numbers in this issue of *Stained Glass*

Display Advertisers

	RS#	PG#
ART GLASS SUPPLIERS ASSN.	(20)	309
AUSTIN THIN FILMS	(89)	295
BENDHEIM, S.A.	(38)	249
BLINKO GLASS CO.		301
CAFF CO.	(42)	303
COVINGTON ENGINEERING	(46)	294
CROWN METAL CO.	(73)	253
DHD METALS	(35)	297
DUNCAN GLASS	(81)	317
FRANKLIN ART GLASS	(92)	265
GEMINI SAW CO.	(44)	307
GLASS ACCESSORIES	(18)	265
THE GUILD	(95)	319
HIAWATHA		296
HOLLANDER GLASS		CVR 4
HOUSTON STAINED GLASS SUPPLY	(29)	245
KOKOMO OPALESCENT GLASS CO.	(93)	CVR 2
LINCOLN DISTRIBUTORS	(13)	310
MAYFIELD MANUFACTURING	(41)	311
NORTHWEST ART GLASS	(49)	315
RESTORATION '96	(45)	257
SATTLER'S S.G. STUDIO	(60)	314
SGAA COLORING BOOK		312
SGAA SOURCEBOOK 97		CVR 3
SGAA TECHNICAL MAN.		250
SOURCE ONE LAMPS	(37)	308
SUMMIT STAINED GLASS	(94)	298
SUSSMAN, INC.-J.	(33)	299
WISSMACH GLASS CO.	(88)	251

Catalogue Ads

AMERICAN BEVEL	(520)
ARTISANS WHOLESAL	(517)
BLACKCREEK ENTERPRISES	(509)
CREATIVE CRAFTSMEN	(504)
DELPHI STAINED GLASS	(507)
DENVER GLASS MACHINERY	(502)
DICHOIC GLASS	(501)
DIGITRY SYSTEMS	(518)
FRANCISCAN GLASS COMPANY	(516)
FRANKLIN ART GLASS	(503)
HOUSTON STAINED GLASS SUPPLY	(506)
ED HOYS INTERNATIONAL	(519)
LINCOLN DISTRIBUTORS	(508)
C&R LOO INC.	(510)
NORTHWEST ART GLASS	(512)
OCEANA GLASS COMPANY	(505)
SOURCE ONE LAMPS	(511)
UNITED ART GLASS	(515)
WALE APPARATUS	(514)
VIDEREAUX PRODUCTIONS	(513)

STAINED GLASS WINTER 1996

Please check a box in each category:

I. Are you a regular subscriber to STAINED GLASS?
☐ Yes ☐ No

II. Type of firm:

1. ☐ Studio (in home)
2. ☐ Studio (outside home)
3. ☐ Retail Store Dealer
4. ☐ Distributor
5. ☐ Manufacturer
6. ☐ Artist Designer
7. ☐ Hobbyist

III. Title:

1. ☐ Owner
2. ☐ President
3. ☐ Vice President
4. ☐ Manager
5. ☐ Craft Worker
6. ☐ Instructor
7. ☐ Other

IV. Job Function:

1. ☐ Management
2. ☐ Sales
3. ☐ Purchasing
4. ☐ Design
5. ☐ Fabrication
6. ☐ Teaching
7. ☐ Other

V. Purchasing Authority:

1. ☐ Recommend
2. ☐ Specify
3. ☐ Approve

VI. Number of Employees:

1. ☐ None
2. ☐ 1-5
3. ☐ 6-10
4. ☐ 11-50
5. ☐ 51 or more

VII. Annual Dollar Volume:

1. ☐ Over \$10,000
2. ☐ Over 50,000
3. ☐ Over 100,000
4. ☐ Over 250,000
5. ☐ Over 500,000
6. ☐ Over 1,000,000

VIII. Reason for Inquiry:

1. ☐ Immediate Purchase
2. ☐ Future Purchase

EXPIRES MARCH 1, 1997

New Products

1 2 3 4

Display Advertisers

13 18 20 29 33 35 37
38 41 42 44 45 46 49
60 73 81 88 89 92 93
94 95

Catalogue Advertisers

501 502 503 504 505 506 507 508 509 510
511 512 513 514 515 516 517 518 519 520

Product Categories: If you circle one of these numbers, we'll send your request to all advertisers in this issue who offer that type of product.

- | | |
|---------------------------------|----------------------------------|
| (901) General Supplies | (915) Fluxes & Patinas |
| (902) Came, Solder, Copper Foil | (916) Frames & Sash |
| (903) Glass: Antique | (918) Lamps: Parts & Systems |
| (904) Glass: Beveled | (920) Reinforcing Bars |
| (906) Glass: Dichroic | (925) Beveling Equipment |
| (907) Glass: Glue Chip | (931) Glass Cutting & Processing |
| (908) Glass: Jewels | (932) Grinding & Grozing Mach. |
| (909) Glass: Rolled | (933) Kilns: Fusing & Painting |
| (910) Adhesives | (936) Saws |
| (912) Doors: Wood | |

For more product information, consult
the Sources of Supply on pages 323-327.

Name _____ Company _____
Address _____ City _____
State _____ Zip Code _____ Country _____

STAINED GLASS MAGAZINE

964

	U.S.	Outside U.S.	Outside U.S. Airmail
1 Year (4 issues)	<input type="checkbox"/> \$30.00	<input type="checkbox"/> \$46.00	<input type="checkbox"/> \$66.00
2 Years (8 issues)	<input type="checkbox"/> \$56.00	<input type="checkbox"/> \$86.00	<input type="checkbox"/> \$126.00
3 Years (12 issues)	<input type="checkbox"/> \$85.00	<input type="checkbox"/> \$130.00	<input type="checkbox"/> \$190.00

ALL SUBSCRIPTIONS MUST BE PREPAID

(Outside U.S. remit postal money order in U.S. funds only.)

☐ Visa ☐ MC CC#: _____ Exp Date: _____

Signature (for credit cards only)

Please PRINT the following information:

Name _____

Company Name _____

Street Address/P.O. Box _____

City _____ State/Prov. _____ Zip/Postal Code _____ Country _____

Telephone Number _____ Fax Number _____

Send information on: ☐ Distributor Program ☐ Membership ☐ Index/Microfilm-Fiche ☐ Advertising

TURN BACK!

You've missed an opportunity to save!

Subscribe today and save 12% off the newsstand price of *Stained Glass Magazine*!



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

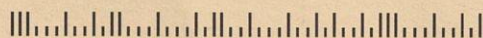
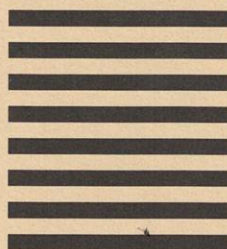
FIRST CLASS MAIL

PERMIT NO 439

RIVERTON NJ

POSTAGE WILL BE PAID BY ADDRESSEE

STAINED GLASS
PO BOX 11620
RIVERTON NJ 08076-7220



PLACE
STAMP
HERE

STAINED GLASS
6 SW 2nd St., Suite #7
Lee's Summit, MO 64063-2352

**SUBSCRIBE
NOW!**

**CALL TOLL-
FREE:**

(800) 438-9581.

We accept Visa &
MC over the phone!

**DON'T MISS AN
ISSUE!**

It's Coming...

Sourcebook



'97

Sourcebook

'97

As the Stained Glass Association of America approaches its second century, it is evolving to reflect the constant changes in the craft of stained glass. Part of our mission since our founding in 1903 is *to maintain the highest possible standards for excellence in craftsmanship, integrity and business practices*. **Sourcebook '97** is your guide to the unique world of stained glass. Within its pages you will find stained glass defined, discover how art glass is specified and see the final product illustrated in beautiful full-color studio ads. This source book is also a guide to the membership of the SGAA and an essential part of anyone's stained glass library.

To order **Sourcebook '97**, send check, money order or Visa/MC information to:

Stained Glass Association of America
PO Box 22642
Kansas City, MO 64113

You can also fax your order to (816) 361-9173 or call 1-800-888-SGAA (7422).

Releases January 1997.

Yes! I would like to order **Sourcebook '97**. Enclosed is \$6 for each copy of the source book I am ordering.

Copies: _____ x \$6 = _____ (Total Enclosed).

Name: _____

Address: _____

City _____ State/Province _____ Zip _____

Country _____ Telephone/Fax _____

☐ Visa or ☐ MC Exp Date: _____

Card Number _____

St - Just

Verrerie de Saint-Just Glass Company, France

Colonial Antique Glass

A NEW TRADITION IN RESTORATION GLASS



The Executive Office Building, restored with Colonial Antique glass, Washington D.C.

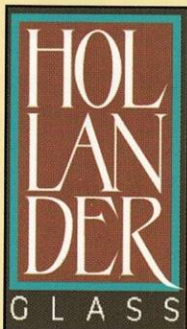


Buffalo Bill Cody's Wild West Show Coach, restored with Colonial Antique glass.

Colonial Antique by St-Just is a brilliantly clear hand blown glass with an old style charm. It is specially manufactured for restoration projects where only authentic turn-of-the-century glass is acceptable.

Colonial Antique adds elegance to reproduction furniture, and lends authenticity to modern "victorian" architecture. It is indispensable for repairs and renovations to 18th and 19th century homes and public buildings.

Colonial Antique glass is available by the sheet or by the case. Sheet size is approximately 30" x 40". Call for a quote on your restoration needs or to request a sample.



The Hollander Group
distributors of

St-Just "Colonial Antique Restoration Glass"

Hollander Glass Inc.
10579 Dale
Stanton, CA 90680
Tele: 714-761-5501
Fax: 714-761-0183

Hollander Glass East Inc
140 58th Street
Brooklyn, NY 11220
Tele: 718-439-6111
Fax: 718-439-3603
Toll free: 800-221-6207

Hollander Glass Canada Inc
3095 Universal Drive
Mississauga, ON L4X 2E2
Tele: 905-625-7911
Fax: 905-625-6759
Toll free: 800-268-0467

Hollander Glass Texas Inc.
4600 S. Pinemont Dr.
Houston, TX 77041
Tele: 713-460-0045
Fax: 713-462-3646
Toll free: 800-421-0449

Hollander Glass Central Inc.
1505 Centre Circle
Downers Grove, IL 60515
Tele: 708-629-7721
Fax: 708-629-7325
Toll free: 800-323-4293