



Smithsonian

National Museum of American History Kenneth E. Behring Center

Guide to the Washington National Cathedral Stained Glass Formulae Collection

NMAH.AC.0090

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1984

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Collection Overview

Repository:	Archives Center, National Museum of American History
Title:	Washington National Cathedral Stained Glass Formulae Collection
Date:	1926-1936
Identifier:	NMAH.AC.0090
Creator:	Saint, Lawrence B., 1885-1961 (Creator) Washington Cathedral
Extent:	9.3 Cubic feet (29 boxes)
Language:	English .
Summary:	This collection consists of chemical formulae developed by Lawrence Saint for use in his stained glass work at the Washington National Cathedral. There are supporting samples, records, and notes.

Administrative Information

Acquisition Information

The collection was donated to the National Museum of History and Technology (now the National Museum of American History) by the Washington National Cathedral, through Richard T. Feller in 1977.

Provenance

The collection was transferred to the Archives Center from the Division of Ceramics and Glass (now the Division of Home and Community Life) in 1984.

Processing Information

Processed by Robert S. Harding, archivist, Valerie Herman and Calli Ward, 1984; revised by Franklin A. Robinson, Jr., archives technician, December 2008.

Preferred Citation

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Restrictions

Collection is open for research but is stored off-site and special arrangements must be made to work with it. Researchers must handle unprotected photographs with gloves. Contact the Archives Center for information at archivescenter@si.edu or 202-633-3270.

Conditions Governing Use

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Biographical / Historical

Lawrence B. Saint was born in Pittsburgh in 1885. The work he did with stained glass, especially filming (the process of making a work of stained glass, old or new, look as if it is from the Middle Ages), influenced glassmakers everywhere. At thirteen, Saint was employed in Goeddel's wallpaper store. While at Goeddel's, Saint made sketches which impressed J. Horace Ruby, a former Goeddel's employee. Saint then began working under Ruby at Ruby Brothers Stained Glass Company. Saint's chores in the studio were to grind paint, trace patterns, sweep the floors, and build fires in the pot-bellied stove. Saint worked in this studio for four years. He saved enough money to put himself through the Pennsylvania Academy of Fine Arts in Philadelphia.

After art school, Saint was employed by the H. F. Petgen Company of Pittsburgh to design a large rose window for the Roman Catholic Church of Saint Peter and Saint Paul in East Liberty, Pennsylvania. It was a mosaic of color with symbols of the four evangelists of Christ. During his last year in art school, Saint met his future wife, Katherine Wright. Their honeymoon in Europe provided Saint time to study and copy medieval stained glass. Saint made at least three visits to Europe and collected sample glass from Chartres and other cathedrals. When Saint returned to the United States he designed and painted windows for eleven years under the direction of Raymond Pitcairn, promoter of medieval arts at Bryn Athyn Cathedral in Pennsylvania. During this period, Saint started to portray figures from life to record the faces of his generation. Between visits to Europe, Saint completed six windows in eleven years. Three were figure windows, three were two small roses, and one was a grisaille window. Grisaille is a style of monochromatic painting in shades of gray, used especially for the representation of relief sculpture, or to simulate one. After his work at Bryn Athyn, Saint worked out of his own stained glass studio.

He then went to work for the Washington National Cathedral as head of its stained glass studio. He designed and executed fourteen windows for the Cathedral: the North Rose Window, nine choir aisle windows, and four others in the north transept aisles. Saint experimented with recapturing the reds, blues, and other vibrant colors achieved by medieval glass makers using formulae based on spectroscopic analyses of scraps of 13th century glass. While working for the Cathedral, a fire broke out in Saint's studio. Many windows and materials were destroyed including a window depicting Moses. Saint's most famous work for the Cathedral was the North Rose Window entitled, "The Last Judgment." This window cost \$22,687 and took twelve men to create. Saint made his own glass and applied his own process for filming it. Upon completion, Saint's work was displayed at the Free Library of Philadelphia in 1957 and in other cities. Saint said, "I trust that my material, made public, will lead others to improve on my work..."

Scope and Contents

This collection consists of 976 formulae developed by Lawrence Saint for making stained glass. A shoe box contains 3" x 5" index cards of the formulae. Included are duplicate formulae and some miscellaneous notes. There are also over eight hundred samples of glass for various formulae. Some of the formulae were missing when the collection was donated to the National Museum of American History. These are noted in the container list.

Arrangement

This collection is divided into three series.

Series 1, Formulae, 1927-1933

Series 2, Notes and Records, 1926-1936

Series 3, Glass Samples, 1927-1933

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

- Glass manufacture
- Glass painting and staining -- United States
- Glass, Colored

Types of Materials:

- Formulae, chemical
- Glass samples

Occupations:

- Stained glass artists

Places:

- Washington (D.C.)

Container Listing

Series 1: Formulae, 1927-1933

Box 1	1-100
Box 2	101-200
Box 3	201-300
Box 4	301-390
Box 5	391-449
Box 6	450-550
Box 7	551-640
Box 8	641-720
Box 9	721-809 (missing 726)
Box 10	810-1006 (missing 832-835; 861-878; 880; 883-905; 908-936; 938-945; 947-953; 955-963; 965-969; 974-975; 978-980; 984-1003)

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Series 2: Notes and Records, 1926-1936

Box 10	Notes, undated
Box 10	Duplicate formulae
Box 10	Specification for Alterations to the Loggia of the Bishop's House, Washington Cathedral Close, Mount St. Alban, Washington, D.C., Frohman, Rhobb & Little, Architects, Boston, Massachusetts, 1926 May 4
Box 10	Xerox of folders from which original formulae were taken, undated
Box 10	Complete red formulae (notes on processes for making the red plates), undated
Box 10	Glass house record, 1936 December 2
Box 29	index cards (3" x 5") of formulae

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Series 3: Glass Samples, 1927-1933

Box 11	1-42
Box 12	43-70
Box 13	71-130
Box 14	131-181
Box 15	182-218
Box 16	219-246
Box 17	247-279
Box 18	280-299
Box 19	300-329
Box 20	330-412 (missing 367; 370; 377; 379; 381; 391)
Box 21	413-459 (missing 420-424)
Box 22	460-498
Box 23	499-525 (missing 505-506)
Box 24	526-565
Box 25	566-614
Box 26	615-680
Box 27	681-749
Box 28	750-834

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