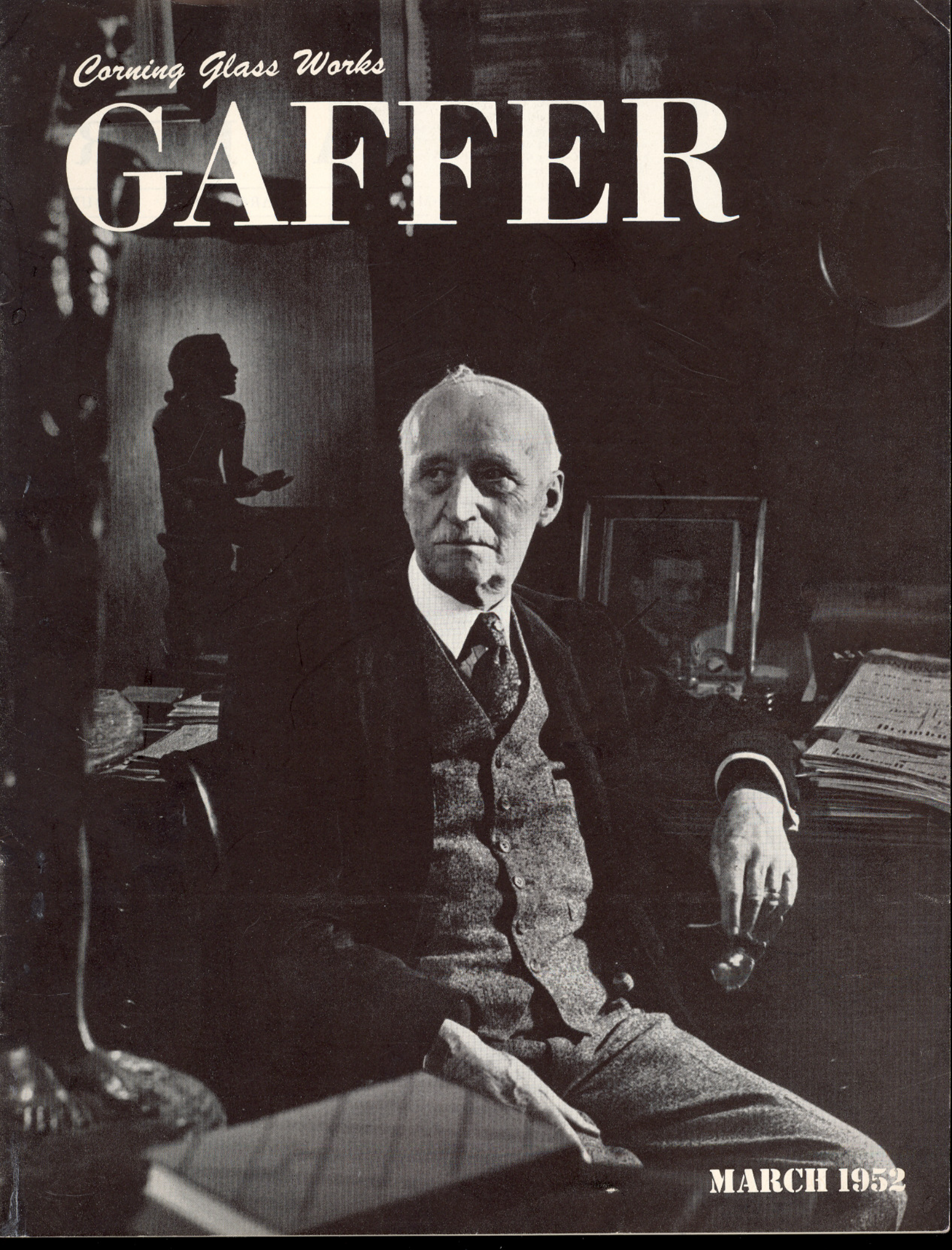
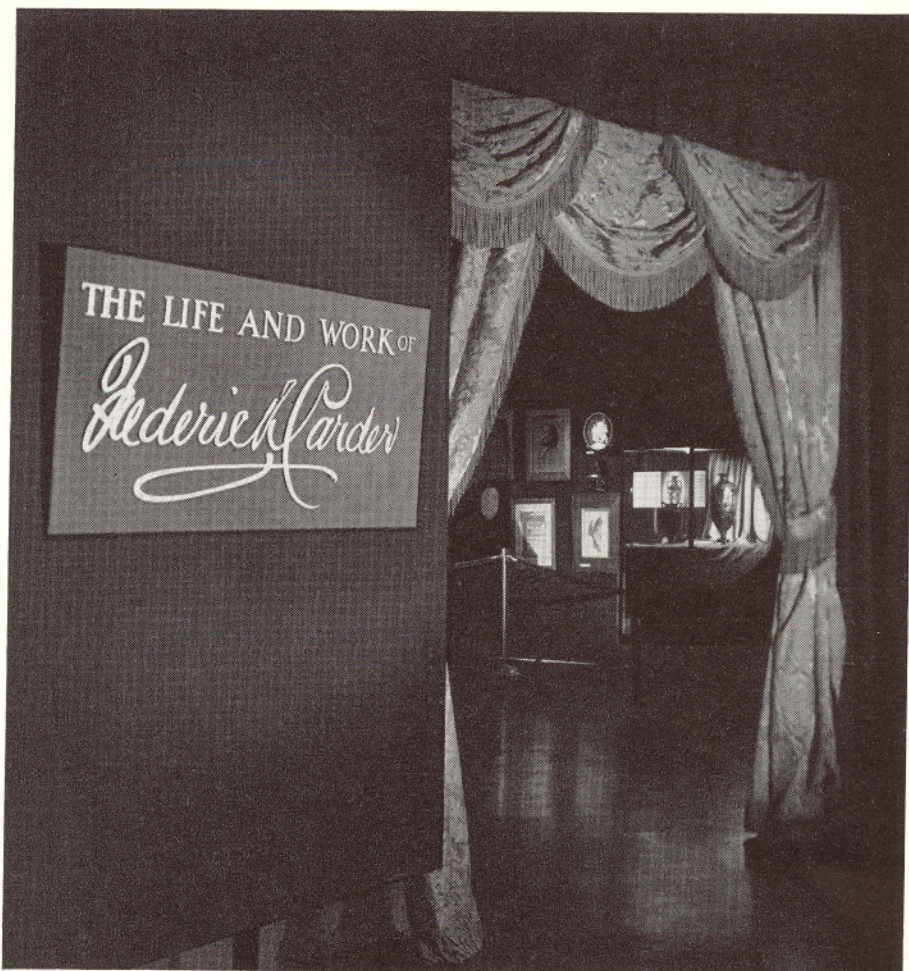


Corning Glass Works

GAFFER



MARCH 1952



THE LIFE AND WORK of

Frederick Carder.

A CURTAINED doorway framing a wall of ultramarine blue on which is a large photographic portrait of Frederick C. Carder, marks the entrance to a special exhibition in the galleries of the Corning Museum of Glass, which presents the life work of the internationally known artist, designer and glassmaker.

The extensive display, arranged by Thomas S. Buechner, Museum Director, includes works of art by Mr. Carder in the media of glass, bronze, marble, wax and oil paint.

The exhibition, which is actually a vis-

ual biography of Mr. Carder from his birth in 1864 to the present time, is divided into three general categories: Mr. Carder's English work, produced during his student days at Stourbridge Art School and as a designer with the glass firm of Stevens and Williams; his work produced as Manager of the Steuben Glass Works from 1903 to 1918; his work for Corning Glass Works from 1918 to 1934, including the paintings and sculpture in glass executed during his retirement.

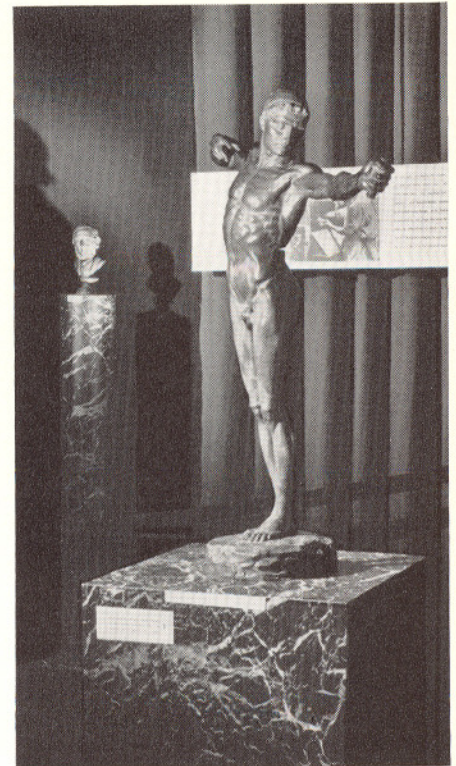
Mr. Carder was born September 18, 1864 in Wordsley, England, the second

son of Caleb and Annie Carder. Although Wordsley was in the center of the glass manufacturing business, Caleb Carder was in the pottery business, and young Fred grew up expecting to enter the family Pottery Works.

Mr. Carder's grandfather owned Leys Pottery Works and his father managed it, but young Fred had to start at the bottom. For nine long months, from six o'clock in the morning until six o'clock in the evening, the fourteen-year-old boy shovelled coal. During the next three years while Fred learned all the processes of the Pot-



Above: Some examples of Mr. Carder's work in oils, cameo carved plate, and wax on glass cameo models (vases in case at extreme right). The certificate was awarded to Mr. Carder upon leaving Wordsley Academy of Art to come to America in July, 1903, commending his work as a student and later as the Academy's headmaster. Top of photo is an unfinished cameo carved plate, white on amber matrix. Mr. Carder produced very delicate shadings in his figures and background and was quite adept at sculpturing the silhouetted designs with steel carving tools. *At right:* Thirty-inch bronze reduction of seven foot statue by Hamo Thornycroft, Fencer, for which Mr. Carder received his Art Master's certificate and a gold medal.



tery business, it became very apparent that his real interest was in the arts of printing and sculpturing.

After putting in a 12-hour day in the pottery works, Fred trudged 3 miles to the Stourbridge School of Art. This was varied on Tuesdays and Thursdays with a 3-mile walk to Dudley where he studied chemistry, electricity and metallurgy.

At Stourbridge Fred Carder qualified course by course and exam by exam until in 1891 he was able to enter a competition for his Art Master's certificate, his entry being a 30-inch copy cast in bronze of a work by Hamo Thornycroft. He not only qualified for his Master's Certificate, but won the Gold Medal of the year, and with it a national scholarship which enabled him to study for 3 years in Paris, Rome or London.

In 1881 Mr. Carder was offered a job with Stevens and Williams, a glassmaking firm specializing in cut and engraved pieces in the best Victorian manner, as designer in charge of both shapes and applied decoration. It was at his suggestion that John Northwood was invited to leave J. & J. Northwood Co., specialists in acid etched ware for the glass trade, and become Art Director of Stevens and Williams, a post which he accepted. Northwood had found in the medium of glass a form in which he could combine his artistic and scientific interests, and

the same solution was appropriate for Mr. Carder. Thus, both men became fellow employes at Stevens and Williams and worked together in the medium of their choice.

In 1887, Fred Carder was married to Annie Walker. Three children were born to the couple. Stanley, Cyril and Gladys. Stanley contracted diabetes and died at the age of seven, and Cyril was killed in World War I.

Early in his employment with Stevens and Williams, Mr. Carder began to understand that the man shaping the glass must have some knowledge of the mental process of the designer, and the two dimensional result of that process, so he started a school for the workmen in 1891. Eventually it became a full-fledged School of Art.

Fred was encouraged to travel a good deal and deal directly with the foreign customers of Stevens and Williams. As the country of Staffordshire supported a large number of glass houses and as Carder proved an ideal liaison between industry and education, he was asked by the Board of Education of the county of Staffordshire to make a report on glassmaking conditions on the continent. The information he brought back was both new and valuable and the following year he was sent to this country to make a similar report. In one year, 1902, Fred Carder went

up the Rhine, down the Clyde and through the Chemung Valley, and the beauty of all three were comparable in his opinion. Although he had accomplished a great deal in England, things were not as he would have liked them. He had many, many ideas about the future of his chosen medium and he longed for a new place to start over, a place where he could run things his own way. The place turned out to be America.

Stevens and Williams had done business with T. G. Hawkes, well-known glass-cutting establishment in Corning, with Fred Carder as liaison. When Mr. Carder came to America he made arrangements to operate a glass house to supply blanks for Hawkes' cutting wheels, and in 1903 Steuben Glass Works was established, owned and presided over by T. G. Hawkes, and managed by Carder, who named it after Steuben county.

Although the primary reason for the existence of Steuben was to make blanks for T. G. Hawkes, Carder soon introduced several lines of ware for sale directly under the name of Steuben. A slightly metallicized glass named Verre de Soie (silk glass) was among the first unusual types to appear. It is a frosted glass with a pearly iridescence on the outside, visible only when actually reflecting light.

With Fred Carder as manager, Steuben

produced an infinite variety of glassware. All types and combinations of colored glass, opals and opaques were sold profitably; cut and engraved pieces came from Steuben as well as Hawkes; several of the techniques of the ancients, like pate du verre, millefiori, and mosaic glass, were revived for commercial consumption.

The word "intarsia" was borrowed from the Italian woodworkers of the 15th century and applied to a rather unusual line made by Steuben. Glass "Intarsia" is essentially a lamination, rather than an inlay. On a clear glass vessel the design, most often leaves and flowers, is applied in a thin layer of colored glass, which is in turn cased with crystal. The result is a solid glass object with design trapped inside.

Another remarkable achievement of Mr. Carder's was the revival and popularization of a cameo glass which simulated the Chinese glass made during the reign of the Emperor Ch'ien Lung.

Perhaps the most famous of the glasses designed by Fred Carder and produced by Steuben is Aurene.

Aurene is essentially a metallicized glass, i.e., a thin coating of metal on the outside of the glass. This is accomplished by keeping the metal, usually gold or silver, in oxidized form in suspension in the hot glass. When the objects are made from this glass and subjected while hot to a reducing flame, a metallic film is produced on the surface. In order to obtain the iridescent effect, a metallic chloride is sprayed on the hot and plastic object which crackles up the surface into millions of little fibrous lines which reflect different wave lengths of light.

With the advent of World War I, the government was forced to restrict the distribution of essential materials to essential industries and Steuben, whose business was art glass, was forced to close. It was taken over by Corning Glass Works, the transfer being made by the T. G. Hawkes Company. Shortly after the transfer Fred Carder became art director of CGW.

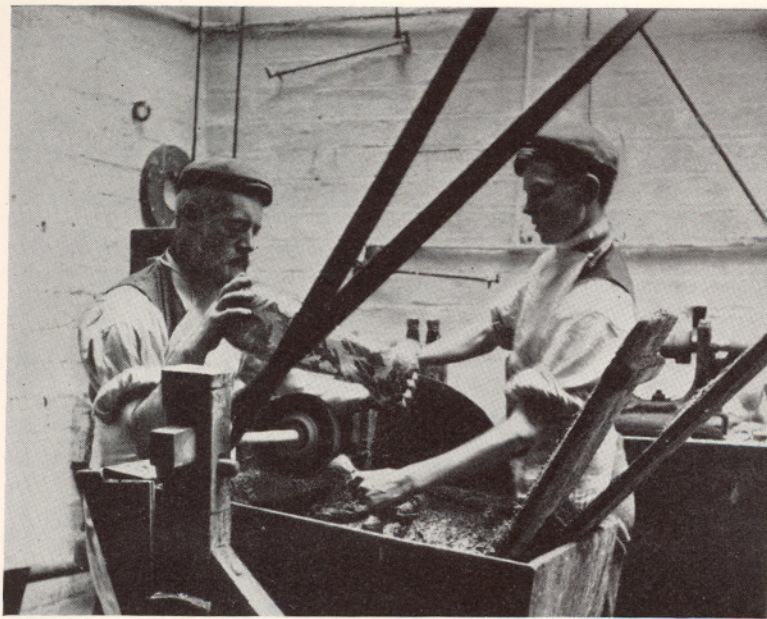
During the years that followed, CGW began to build rapidly its reputation as a

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Top: Table set with Rosaline over alabaster dishes and black reeded crystal. Aurene glass lamp shades on the chandeliers. Right foreground, on pedestal, an acid etched cameo lamp supported by bronze figurines.

Bottom: Sculptured glass monument commemorating the glass industry. The finial is "The Thinker." On four sides are the designer, furnace tender, glass blower, and lady bearing the finished object. At left of monument is Rubinoff in sculptured glass.

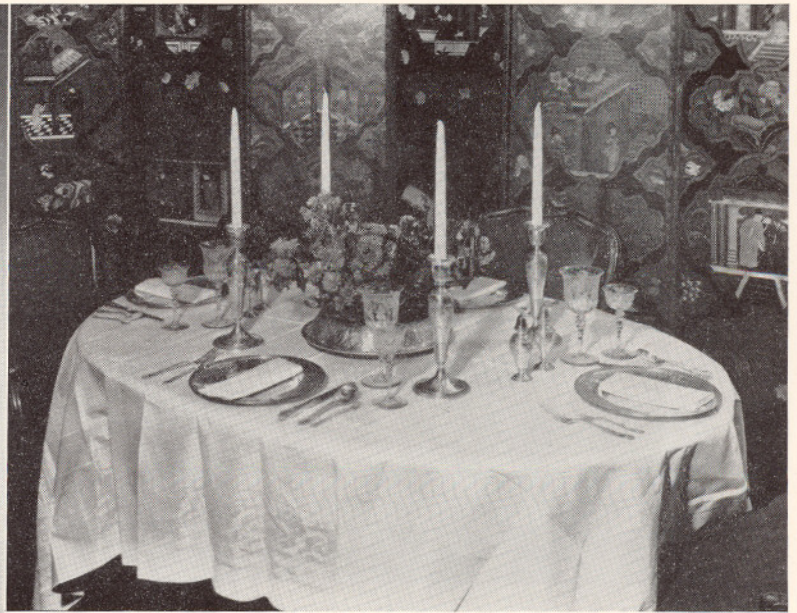




Above: Fred Carder at work at Stevens and Williams, English glassmaking firm. Early in his employment, Mr. Carder started a school to teach workmen draughtsmanship. It eventually became a full-fledged School of Art. *Right:* Following formation of architectural division by CGW, architects came to Corning with special problems and designs. Mr. Carder

stands with model he made of head of Indian chief which was used to fashion molds for final casting in glass. 800 pounds of glass were used in making the heroid sized head. *Left:* Mr. Carder is shown removing plaster cast from one of his cast glass sculpturings. *Below left:* Mr. Carder at his desk works on new designs for Steuben surrounded by examples of some of his famous designs. *Below right:* In 1950, Rubinoff, the famous violinist, visited Mr. Carder and was extremely impressed with a head of Christ in sculptured glass. He purchased it, and requested Mr. Carder to do a head of him. Photo shows the skilled craftsman working on the clay model.

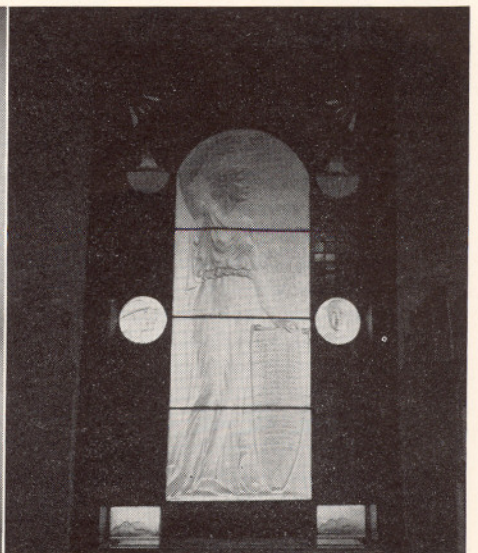
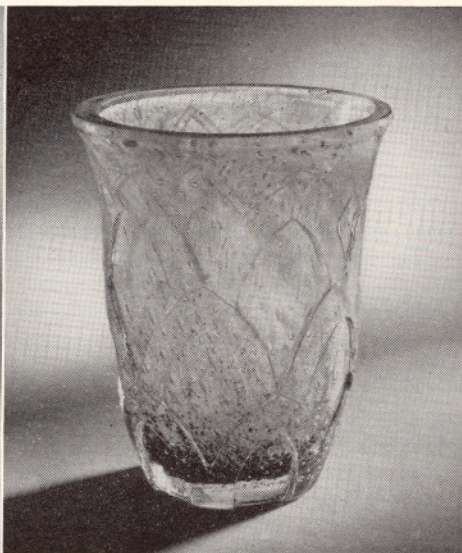




At left: Magnificent wax on glass cameo models were made by Mr. Carder and are symbolic of the profound influence and inspiration of John J. Northwood, of English firm specializing in acid etched ware for the glass trade. Above: Table setting with some of Mr. Carder's exquisite Steuben crystal designs. At right: Sculptured alabaster, an adaptation of



cameo glass. Decorative pieces and many bowls for lighting fixtures were made from this sculptured alabaster. Below left: Perhaps most famous of the glasses designed by Fred Carder and produced by Steuben is Aurene, a glass with a thin coating of metal on the outside. In order to obtain iridescent effect, metallic chloride is sprayed on the hot and plastic object which crackles up the surface into millions of little fibrous lines which reflect different wave-lengths of light. Center: A modern Carder piece in bubbly, milky crystal. Right: Memorial window in Corning Memorial Library executed by Mr. Carder in memory of Corning men who gave their lives in World War I.



G A F F E R

Death Claims William Tuttle

WILLIAM A. TUTTLE, sales engineer in the Specialty Products Department of the Technical Products Division, died last month at Corning Hospital. Mr. Tuttle had received his 35-year service pin at CGW's 100th Anniversary Banquet last December at Corning Glass Center.

A graduate of Corning Free Academy, Mr. Tuttle was a 32nd degree Mason, affiliated with Painted Post Lodge 117, F. & A. M. and Corning Consistory. He was also active in the Corning Kiwanis Club and was a member of the CGW Production Club.

Carder

(Continued from page 5)

successful tackler of tough glass problems, and Fred Carder was one of the cornerstones in the building of this reputation.

In 1925, Mr. Carder was appointed to the Hoover Commission, the object of which was to investigate the "new art" exhibits in Paris. The members of the Commission were guests of the French Government and each of the delegates represented a given craft or art, with Mr. Carder representing glass.

Architectural glass was produced in quantity by Corning in the 1920's and 30's, and Mr. Carder designed a great deal of it, specializing in particular problems like the casting of the large relief murals for Rockefeller Center. Stressing the interrelationships of the visual arts is one of the most positive factors in the teaching of the Academic system. It was no problem for Fred Carder to turn from designing delicate champagne glasses to massive slabs of architectural bas relief, or even to the functional problems of Pyrex ware design.

Active in community affairs, Mr. Carder founded the Corning Rotary Club and was its first president. He was president of the Corning City Club for a number of years, and helped found the Corning Country Club. Chairman of the Corning Free Academy Building Committee, he supervised the construction of the present building, and devised the simple "I" shaped plan which has proved itself to be exceptionally satisfactory.

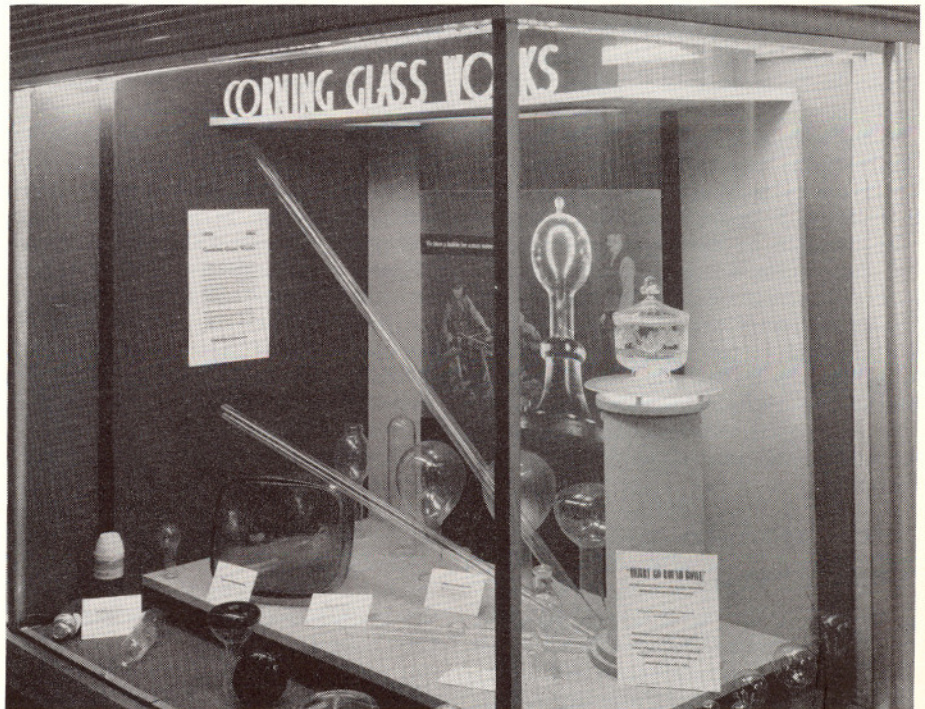
Fred Carder was officially retired in 1934, and spends almost all of his waking hours in one of two places: his studio at home, where he has started painting again after 40 years, and his studio in the old Steuben plant, where he does what he likes best—make glass.

Huber Receives Top Award Check for Period



Henry Huber, second from left, a Main Plant mason, receives check for \$403.50 from foreman Andrew Malone for idea to improve boiler fire box construction. Manager of Plant Engineering, F. S. Kriger, left. Dewey Thomas, right, Main Plant suggestion supervisor.

CGW Products Displayed in Providence



The Central Falls Plant has just completed a four-months display of Corning products in the Providence, Rhode Island, railroad station, sponsored by the Junior Chamber of Commerce.