

Glassmaking Still Centuries Old Artistry For Skilled Swedes



GLASS ARTISTRY — A craftsman at Orrefors Glass Factory near Kalmar, Sweden, working from an artist's design at right, etches a figure into a glass vase. — UPI Telephoto

By GAY PAULEY
UPI Women's Editor

KALMAR, Sweden (UPI)—An art centuries older than Christianity shaped that prized crystal vase in your living room, the tumbler or wine glasses brought to the dinner table on special occasions.

Visit glass factories in south-east Sweden, most of them with in less than an hour's drive of this coastal town, and you come away with a whole new appreciation of glass which today we take for granted in its numerous forms—from the water glass to the mirror to the picture window to fine crystal to sculptured works in museums.

Mechanical means now make possible mass production of much of the glass which goes into the world's markets. But in many parts of Europe and a few centers in the United States—notably at Corning, N.Y., where the famous Stueben crystal is made—

the hand-produced product still reigns supreme. Swedish glassmakers produce all types of glass, but it is their crystal which has become known world-wide. Much of it is exported to the United States.

Combination Of Skills
The chemist, the artist and the craftsman all combine their skills to produce that heavy crystal with its brilliance and bell-like ring when an edge is tapped sharply with the finger.

The origin of glassmaking lies with the ancients. The Swedish Glass Manufacturers' Association at Vaxjo, in the heart of the factory area, says it began as early as 5,000 B.C. But for 3,000 years it was used as a flexible mass, much the same as clay, to make decorative items. At about the time of the birth of Christ, the industrious Phoenicians had learned how to blow glass. Glassmakers of Alexandria and later of Byzantium and Venice perfected the methods.

In Sweden, glass first was melted in 1536. Forty of the 46 glass factories of Sweden now center in the southeast part of the country where wood and water—two vital items for its production—are plentiful.

The oldest factory is Kosta, founded in 1742. It was one of three works I toured—the others, Orrefors and Strombergshyttan. All are known for high quality of workmanship and design.

Sand Basic Ingredient
Sand is the basic ingredient of glass. Sand melted with soda ash and lime produces the common flint glass. A finer quality results from use of potash instead of soda ash. The finest crystal consists of a melting of sand, potash and red lead.

The lead gives weight to the crystal, but the red color disappears during the melting. Substances such as saltpeter and arsenic, the latter a highly poisonous substance used only in minute quantities, are also added to improve the melting and purify

the glass. Different types of metal oxides added to the "batch"—the factory term for the sand mixture—produce different colors. Cobalt oxide, for instance, gives a blue tint; zinc oxide, a red hue.

Paradoxically, most of the ingredients used by the Swedes are imported—the sand coming from Germany and Belgium, the potash and soda ash coming from Germany, Belgium or France. But the lakes and rivers provide the water, basic to the moulding and cooling process, and the forests the wood to stoke the furnaces.

Most of the tools for hand-blowing glass are the same today as they were 2,000 years ago—pipe, forming block, shears, pliers, and wooden moulds.

Skill And Lung Power
The glass is given its shape by the skill and lung power of the blower, who blows into the pipe as if he were producing soap bubbles, by the sizzling wood moulds into which the glass is dipped occasionally, by one hand padded with thick layers of wet newspaper gently moulding while the other hand twists the pipe, by the forming block, and

by the crude-looking shears sending slithering strings of glass to the floor as the worker cuts the molten mixture if the product is to be open at one end.

If a stem and foot are to be added, an assistant takes a small amount of glass just from the furnace, drops it onto the already shaped glass and shears off the amount needed. The stem and foot then are shaped with the same tools.

When a piece is finished, the foreman quick-cools a rim along its base with a pair of water-dipped pliers and then, a sharp blow with the plier handles and the piece breaks off cleanly.

It now is ready for the cooling chamber. It is fed by conveyor belt into a long, tunnel-like oven heated by electricity. This oven, or lehr, holds the glass from three to four hours and removes the thermal stress.

Other processes in handling the cooled glass include smoothing rough edges of such as wine glasses by another heat process—a flame from a gas jet burner licks the edge of each glass as it moves along a conveyor.

Cutting and engraving are other finishing touches. Cutting

is done in stages and the design on, say, glasses for table use is marked first by a red line in the hands of another technician.

One expert does a rough cutting first, with sand and iron disk. Cutting wheels get finer as the glass moves to the finished stage.

Constant Collaboration
Engravers work from the design of artists, but between blower, engraver and artist, there is a constant collaboration. As Mrs. Eric Stromberg, widow of owner of Strombergshyttan and its chief designer put it, "the furnace is the heart of glass. It is from there that all must work."

Engraving is done with the aid of copper wheels fed with oil and emery powder and can be anything from a simple figure cut into a cigarette box to elaborate carvings. At Kosta, I watched one engraver cutting the intricate shape of a polar bear on an ice flow into a free form block of glass.

The block was turned on its side and he was using assorted size drills working from the bottom. Upright, the bear looked encased in the block. The technicians said such an engraving

took him about one full day. At Strombergshyttan, its owner displayed a pair of sculptured horses of which she was extremely proud. The horses measured less than 12 inches each, but she said each had taken a master engraver about 300 hours. The cost of each, \$4,000.

COON HOUND MISSING

MILWAUKEE, Wis. (UPI)—"Whistles" isn't "Queenie," and thereupon hangs a tale of a missing coon hound.

Joseph Burt went to court last November to get back his hound, which he said had been picked up by two local men. He finally got her back, but she answered to the name "Whistles" and had light brown toenails.

"Queenie" had red toenails, so Burt is back in court again—trying to find his dog.

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Solons Get Test Treaty

WASHINGTON (UPI)—President Kennedy told Democratic congressional leaders today that he expects to send the limited test ban treaty to the Senate about Thursday.

This schedule was relayed to reporters by Senate Democratic Leader Mike Mansfield, Mont., after the President's weekly breakfast session with the Democratic congressional leadership group.

Mansfield said that the President had indicated that the treaty, signed in Moscow Monday would be submitted to the Senate about Thursday for its ratification.

The Senate leader said the foreign relations committee tentatively planned to begin hearings on the treaty next Monday with State Department witnesses. He said the tentative schedule called for testimony from the Joint Chiefs of Staff Tuesday and from the Atomic Energy Commission the next day.

French Begin To Fear Possibility They Will Wind Up Being Isolated

PARIS (UPI)—The fear of "isolation" is beginning to haunt many Frenchmen.

They are asking whether President Charles de Gaulle's go-it-alone policies are not leaving France far out on a limb.

De Gaulle has turned down the partial nuclear test ban agreement which was signed by the United States, Great Britain and Russia in Moscow on Monday. He has rejected bluntly Soviet Premier Nikita Khrushchev's proposal for an East-West non-aggression pact.

There will be an empty chair again—France's chair—in Moscow this week when U.S. Secretary of State Dean Rusk, British Foreign Secretary Lord Home and Soviet Foreign Minister Andrei A. Gromyko get together to discuss a lot of cold war issues—some of them issues in which France is vitally interested.

The word "isolation" for De Gaulle's present "include-me-out" foreign policies was used by one of the Fourth Republic's most respected politicians last week—former Premier Rene Pleven.

Pleven did not take De Gaulle too sharply to task for it. In fact, he suggested that "isolation" might be good tactics—if you know just when to come in off your limb. But his use of the word betrayed anxiety.

The right wing newspaper L'Aurore voiced considerably more concern. It pointed out that, in addition to boycotting the Moscow nuclear pact and the talks that follow it this week, De Gaulle still is in difficulties with his European Common Market

partners by continuing to veto Britain's admission.

Now, Aurore said, De Gaulle also faces the prospect that his great and good friend West German Chancellor Konrad Adenauer and, even more likely, Adenauer's successor, Ludwig Erhard, may side with the United States and Britain rather than with France on such issues as nuclear testing and integrated defense forces in the North Atlantic Alliance.

De Gaulle himself has held his

peace in the face of these expressions of concern.

He has withdrawn behind the tall brick walls of his country home at Colombey-les-deux-Eglises for the month of August, leaving the world—and his fellow Frenchmen—to speculate where he is headed.

One thing he did make clear, however, in his news conference last week—that he would not sit by and let the United States and Britain make a deal with the Soviets involving the future of Europe, and particularly of Germany, without his consent.

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