

# Clearing the way for glass production

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Chelmsford has had many different industries over the years. Some have continued in operation for generations, while others have gone out of business after a few years.

Among these was the Chelmsford Glass Company (1802-1820), manufacturer of window glass.

The plant consisted of a number of buildings, the largest of which was 124 feet long and 62 feet wide, and was located in Middlesex Village. [Middlesex Village is the area where Baldwin Street meets Middlesex Street in Lowell. A present day landmark is Alexander's market.] Here at the Merrimack River was the northern terminus of the Middlesex Canal where it began its 27 mile journey to the Boston suburb of Charlestown.

When the Town of Lowell was incorporated in 1826 from what had been East Chelmsford, Middlesex Village was not included. It was not until 1874 that this territory was annexed to Lowell.

In addition to the factory buildings along Baldwin Street, the company constructed several houses for the glass workers and their families.

The glass was made by melting a mixture of white, clean sand, soda ash and a small amount of limestone in a huge clay crucible. Wood ashes were sometimes substituted for the soda ash. During the melting process,

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## The way It was

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the soda ash and limestone decomposed, giving off carbon dioxide. If the gas was not completely expelled the bubbles frequently found in early glass resulted.

When the molten mass reached the consistency of molasses candy, a small blob was picked up on the end of a blowtube and blown into a big bubble. An iron rod was attached to this bubble opposite the blowpipe, which was then cut away. While still hot, the globe was then rotated rapidly in the flattening oven until it spread out into a flat disc about five feet in diameter. The lump at the point where the iron rod had been attached formed the "bull's eye" commonly found in colonial windows.

The bull's eye was eliminated when this procedure was replaced by the cylinder method in which large glass cylinders were formed and, while still hot, were cut longitudinally and allowed to flatten into a sheet of window glass which could be cut to the required size.

As much as 2,000 cords of wood were cut annually from local woodlots to provide fuel for the operation with some of it being converted to charcoal to obtain the intense heat necessary to melt the glass.

The annual output of the factory was 330,000 square feet of glass which was sold in boxes of 100 square feet for \$13. each. Course grass was used for packing material. This came from the bed of Newfield Pond (Bruce Freeman Lake) in North Chelmsford which had accidentally drained for the first time while workmen were attempting to dig a canal to Stony Brook.

Although plant production was limited to window glass, the workmen used some of the leftover molten glass to make novelty items in their spare time. The Chelmsford Historical Society has a large collection of these pieces on display in its museum at the Barrett-Byam House on Byam Road.

There was a second glass manufactory for a short time in Chelmsford. An attempt to manufacture glass off Warren Avenue in the Homestead section in the latter part of the 19th century proved unsuccessful and was soon abandoned. A few specimens of glass from this operation still exist, one of which is in the collection of the present writer.

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