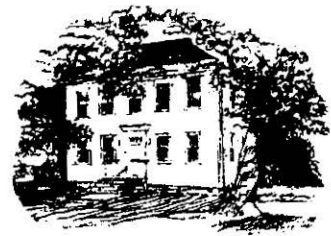


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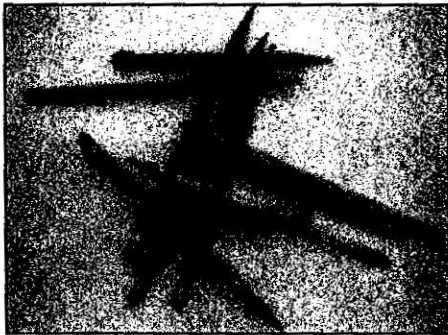
... then and now

From The Indian Hill Historical Society



Buckingham Lodge
1861

The Evolution of the Pencil



Considered the most user-friendly instrument in the world, the pencil is portable, leak proof, provides a deletion eraser, and is not subject to mechanical failures. For centuries it has been used to record ideas and create art.

The Greek poet Philip of Thessalonica described scribing on papyrus with a disk made of lead about 20 A.D. The word pencil is derived from the Latin *penicillum* – an instrument like a hollow reed into which animal hairs were placed to form a brush. *Peniculus* is the term meaning brush, a diminutive form of the Latin word for tail, since brushes were made with tails of animals.

When graphite was discovered in the 1500s it replaced the hairs and gained popularity because it left a darker mark. In 1564 in Borrowdale, England shepherds found a pure vein of graphite beneath a fallen oak tree. The material was called plumbago (meaning imitation lead), and the shepherds used it to mark their flocks. It was dirty and messy to handle, so they covered it, using string as a holder. Later it was squared off and sandwiched between two pieces of wood.

By 1662, Friedrich Staedter opened the first pencil shop in Nuremberg, Germany, selling wood pencils that he manufactured. The owner's expertise was passed down to subsequent generations, and other pencil making families got started in Germany. The A. W. Faber Company was nearby in the village of Stein. German pencil cores consisted of graphite, sulphur, and various binding agents. Meanwhile British pencil makers were using Borrowdale plumbago to make pencils for export. In 1795 a French chemist, Nicolas Conte, discovered that mixing graphite dust with clay produced a pencil superior to German pencils. Every pencil maker knew basic techniques of joining, and each used innovations to make his product distinguishable.

Though some attribute the first American made pencil to a schoolgirl in the late 18th century, large scale U.S. pencil production began in the Concord, MA cabinet shop of William Monroe. With the War of 1812 and the embargo on imported pencils, he manufactured his own, along with other small pencil makers near Boston, each of whom had his own formula for additions to graphite. Joseph Dixon later invented a machine that produced 132 pencils a minute. Although American pencils were inferior to European, they were less expensive.

After the Civil War U.S. mass production of pencils grew to an estimated 20 million per year. Different kinds of pencils were used for specific tasks, and Hyman Lipman of Philadelphia patented a pencil with an attached eraser in 1858. Some of the most prosperous companies were Eagle Pencil, Eberhard Faber, American Lead Pencil, and Joseph Dixon Crucible.

Eastern red cedar was used in many American pencils. The strong splinter resistant wood was soft enough to sharpen but stable enough that it did not bend. When supplies of it diminished, pencil manufacturers used the California incense cedar tree. Nowadays the average cedar tree yields over 172,000 pencils. Imported components are: Bavarian clay, Brazilian wax, gum from Asia, and graphite from Sri Lanka.

The U.S. has become the world's leading pencil manufacturer and user. Once a cottage industry, it is now a full-fledged commercial endeavor—but still uses essentially the same technique as 300 years ago. A typical pencil writes about 45,000 words, or can draw a single line 35 miles long, and absorb 17 sharpenings. Only 7 inches long and 1/4 inch wide, it has many uses other than scribbling. As a toy it has been twirled, tapped, and doodled with; as a tool it has been used to stir paint, prop up windows, repair divots, and rewind tapes from videocassettes. The pencil has endured for centuries as a humble but valuable item, and it continues to be an effective communication device.