

# NEEDLE HISTORY: A BRIEF HISTORY OF THE SEWING MACHINE NEEDLE

## COURTESY OF SCHMETZ NEEDLES

It is a little known fact that the needle was one of humankind's first tools. Over the centuries it developed from a simple craft item to the precision tool for modern sewing machines, constantly adapted for new industrial applications and requirements. The use of sewing today does not stop at garments and furnishings, but is equally important for car seats and airbags meeting high technical safety standards. The needle has played a major part in the development of our civilization and our standard of living.

### Ancient Sewing Needles

**Bone Needle:** The most ancient sewing needles, which date back to 28,000 BC, did not have an eye but a split end which gripped the thread to be sewn (often raffia, gut or sinew). Needles from later than 17,500 BC already had the two features characteristic of the hand sewing needle today... the eye at one end and the tapering point at the other end. They were made from the materials available to human society at the time, for example, bones and antlers.



As people acquired skills in working metal materials, needles were also made from metal (Bronze Age approximately 7000 BC), first from copper, later from iron or bronze. Although there is no positive evidence as to the precise design of these needles, excellent pieces of embroidery from the pre-Christian era suggest that they were probably fashioned almost to perfection. Unfortunately, the articles made with these needles were only partially preserved and there are barely any traces of the needles themselves. This is largely explained by the effect of oxidation, which destroys metallic needles after a short time. Even needles made during the 19th century are now rarely found intact.

The invention of the sewing machine gave rise to the development of the sewing machine needle.

### Basic Needle Form

The basic form of the hand sewing needle remained the same, though the degree of tapering and the variation of the diameter over the length of the needle were slightly altered in the course of time. In order to be able to make comparisons, one must study the needle from its very point to just below the eye. Although the eye and the point have moved closer together, as the basic functional elements of the needle, they remain unaltered.

In 1755 a German named Weisenthal thought that he had found the prerequisite for machine sewing in his development of a two-point needle. This needle form was also used later on by Madersperger and others and it is even used nowadays in modern industrial machines for sewing shank buttons or for imitating hand-made seams. An Englishman called Saint used a so-called hook needle or protruding needle similar to today's crochet needle for his machine designed in 1790. Even today, hook needles are used in some single-chain, drop-stitch embroidery (Cornely), saddle-stitch and linking machines. Both types of needles, however, were of little importance for the further development of the sewing machine needle.

### **Basic Needle Form**

The basic form of the hand sewing needle remained the same, though the degree of tapering and the variation of the diameter over the length of the needle were slightly altered in the course of time. In order to be able to make comparisons, one must study the needle from its very point to just below the eye. Although the eye and the point have moved closer together, as the basic functional elements of the needle, they remain unaltered.

In 1755 a German named Weisenthal thought that he had found the prerequisite for machine sewing in his development of a two-point needle. This needle form was also used later on by Madersperger and others and it is even used nowadays in modern industrial machines for sewing shank buttons or for imitating hand-made seams. An Englishman called Saint used a so-called hook needle or protruding needle similar to today's crochet needle for his machine designed in 1790. Even today, hook needles are used in some single-chain, drop-stitch embroidery (Cornely), saddle-stitch and linking machines. Both types of needles, however, were of little importance for the further development of the sewing machine needle.



### **Krems Sewing Machine Eye-Point Needle**

Around 1800 Balthasar Krems from Mayen, Germany used a needle, for the first time, which had the eye moved close to the point. One should particularly appreciate this invention because one feature that looks so simple to us today was a sensation at that time. This eye-point needle paved the way for the mechanization of sewing world-wide.

Since then, the sewing machine needle has been developed to the form known today. The needle has accomplished its transition from a hand tool to the precision tool of the sewing machine needle.