

Questions and Answers

Craig Kridel and Clifford Bevan, Editors

Editor's Note: Throughout the years we have received a variety of questions pertaining to historical low brass instruments, and we continue to address these queries with our annual Questions and Answers section. For this issue, we return to the topic of the serpent and consider its classification and construction. I have invited Sabine K. Klaus, curator of The Joe R. and Joella F. Utley Collection of Brass Instruments at the America's National Music Museum at the University of South Dakota in Vermillion, S.D., to discuss some of the more

basic questions. Dr. Klaus, in her response, has continued with a question-answer exchange since, as she reports, the first instrument treatise written in German, Sebastian Virdung's *Musica Getuscht* (Basel, 1511), used this same format. We greatly appreciate her comments and thank the Joe R. and Joella F. Utley Foundation for permission to include photographs of these rare instruments. For future Question and Answers columns, please send your questions to craigkridel@mindspring.com.

Serpent of Wood and Metal

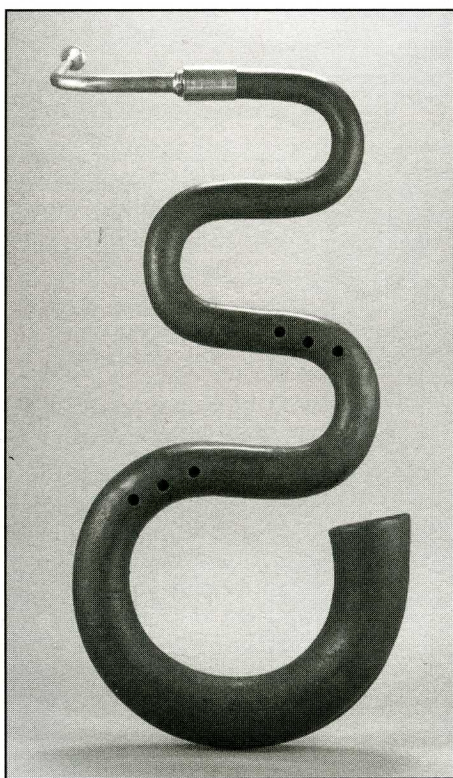
By Sabine K. Klaus

Are all serpents made of wood? No, some are made of metal. Then, is that why serpents are counted among *brasswind* instruments even though most are made of wood? That's a longer story... let me explain!

Woodwinds and brasswinds: We usually distinguish between woodwind and brasswind instruments. In most cases this distinction is clear and serves to describe the materials from which these instruments are constructed. For example, a recorder is in almost all cases made of wood, and a trumpet is usually of brass. The former is therefore classified as a woodwind and the latter a brasswind instrument. But what about the modern flute? Why is it counted among the woodwind instruments although it is constructed of silver? Well, only in the 19th century did makers such as Theobald Boehm of Munich start to use metal for their flutes. Prior to that time flutes were made of wood. Similarly, why is the serpent a member of the brasswind family, although most serpents are made of wood? In organology, the study of musical instruments, a more generic phrase is used for brasswinds with a cup or funnel-shaped mouthpiece: *lip-reed instruments*. This term is not derived from the instruments' material but from the method of sound-production. Since the sound of a serpent or a trumpet is produced by the vibrating lips of the player, both instruments are therefore classified as lip-reed instruments regardless of their materials. The term brasswind then simply refers to the material of the majority of *lip-reed* instruments—brass—that in some cases

may be quite misleading.

Now, a word about wooden serpents: Why then are most serpents made of wood, although they are a brasswind or

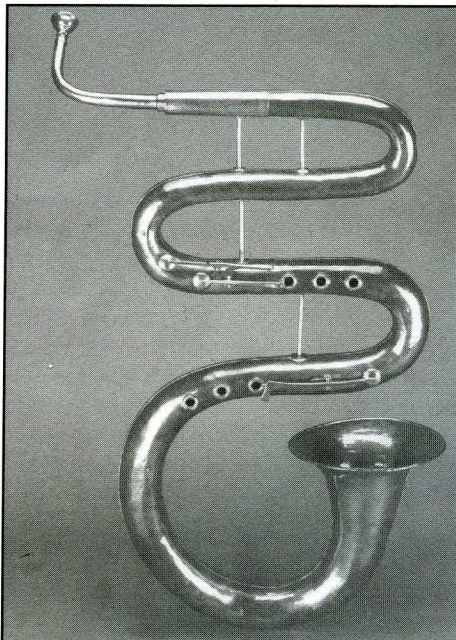


Serpent in C by C. Baudouin, Paris, early 19th century. This instrument is made of two halves of fruitwood, glued together and covered with black leather, and has six front finger holes with no thumb-hole (America's National Music Museum, Vermillion, S.D., Joe and Joella Utley Collection, no. 7123; photo by Mark Olencki).

lip-reed instrument? This has to do with the origin of the serpent, said to be invented in 1590 by Edmé Guillaume of Burgundy, France. The single-curved cornetto (a common, wooden lip-reed instrument of the period) was usually made of two halves of hollowed out wood and then covered with leather. The same technique—gluing together two matching wooden halves covered and sealed by leather—was also used to make serpents in France, only the walls were thinner than those of the cornetto. English makers of the 19th century favored a method in which shorter overlapping half-segments of wood were used like brickwork.

Why were some serpents made of metal?

The earliest treatise describing the serpent is Marin Mersenne's famous *Harmonie Universelle*, published in Paris in 1636. Mersenne already mentions the possibility of making the serpent of metal (brass or silver) rather than wood. However, no early serpents of metal are preserved. All surviving metal serpents, mostly of copper or brass, date from the 19th century. For centuries the serpent was used in churches to support Gregorian plainsong, since its sound blends extremely well with the human voice. The leather-covered wooden instrument was suitable for indoor-performances in churches, where it was well protected. In the early 19th century the serpent became increasingly popular in military and town bands and used for outdoor-performances, particularly in England. This called for a more sturdy construction to withstand the greater stress applied to an instrument used by a

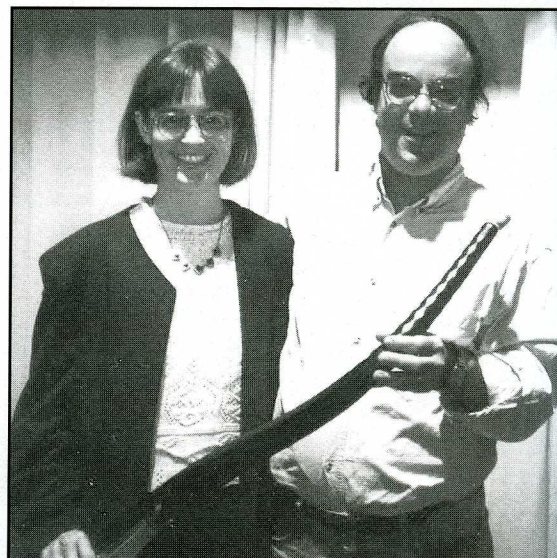
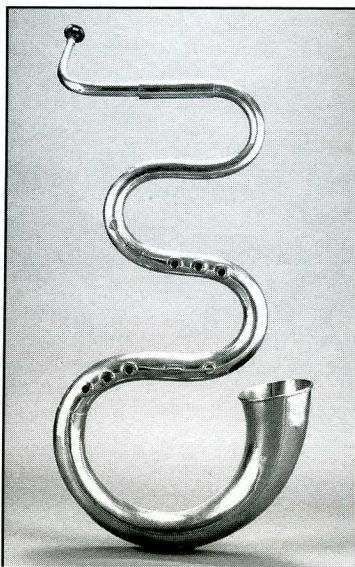


Left: Copper serpent in C by William Lander, Mere, Wiltshire, ca. 1825. Note the compact folding and reinforcing braces typical of English military serpents. In addition to the six finger holes this serpent has three closed brass keys for F-sharp, B-natural and C-sharp (America's National Music Museum, Vermillion, S.D., Joe and Joella Utley Collection, no. 7129; photo by Mark Olencki)

marching musician. In the course of this development the wooden military serpent was first strengthened by metal braces. However, such an instrument remained vulnerable to wind and rain. Thus some 19th-century serpents were constructed entirely of metal, a more suitable material for military and outdoor-use.

Some of the signed metal serpents suggest yet another reason for this shift from wood to metal. The manufacture of a leather-covered wooden serpent required very specialized skills. Many of the signed wooden examples were made by highly trained woodwind makers or artisans who concentrated on the production of the serpent, such as C. Baudouin in Paris. To meet the demands for serpents in rural churches and remote military and townbands, unspecialized craftsmen also became involved. It was easier for a brazier or a jeweler to build a serpent of metal than it would have been for a joiner or carpenter to make one of wood. Both William Lander (1763–1843) of Mere in Wiltshire, England and Nicolas Pierre Joly (1799–1885) in Bar-sur-Aube, France were metal workers who made serpents and other musical instruments as a sideline to their professional work but who were not specialized instrument makers.

William Lander was a trained brazier who supplied the small town of Mere in Wiltshire and its neighboring villages with domestic articles like pots and pans or doorbells.¹ Some contact with the militia is reported, and these military troupes and surrounding town bands must have been the customers for Lander's musical instruments. His serpent is made



Above: Author Sabine Klaus and Jeffrey Nussbaum, president of the Historic Brass Society, holding a lysarden—a wooden brasswind, lip-reed, non-serpent (tenor cornetto).

Left: 3 Brass serpent in D by Nicolas Pierre Joly, Bar-sur-Aube, 1829. Note the elegant elongated shape typical of French church-serpents. The two closed keys produce the notes B-natural and F-sharp (related to C-pitch) (America's National Music Museum, Vermillion, S.D., Joe and Joella Utley Collection, no. 7331; photo by Mark Olencki).

of two matching copper-sheet halves, similar to a French wooden serpent. Unusual is the flaring bell of the serpent, which otherwise displays a narrow, compact fold and reinforcing brass braces between the bends, both common characteristics of English military serpents.

A number of English and Scottish metal serpents from the 19th-century have survived and several names of makers are known. In France, on the other hand, serpents were rarely made of anything other than wood since they continued to be used primarily in churches. An exception is the brass serpent by the goldsmith and jeweler Nicolas Pierre Joly (1799–1885) from the small town of Bar-sur-Aube in the Champagne. This serpent, shown in photograph 3, is in a normal bass size in D, the typical French serpent pitch and displays an elegant French church-serpent shape with stretched folding. The triple-curved main tubing is made of one metal sheet folded to a conical tube while the bell is assembled from two matching halves. Although a bit unusual in its design, Joly's serpent is exceptionally well made, as one would expect from a goldsmith and jeweler and plays extremely

well. Its harmonics are perfectly in tune with each other in what is a rare occurrence for a carefully tuned wooden instrument.

Why are both types called a serpent?

The most important characteristic of the serpent is not the material but its serpentine shape. That's why both types, either of wood or of metal, are called a *serpent*, the Latin form of the word *snake*. Although the serpent may have originated from a modification of the bass cornetto, it is not really the bass of the cornetto family but, instead, comprises a family in its own right. Further, the serpent differs from the cornetto not only in its shape but also in the lack of a thumb-hole. Like the cornetto, the serpent was occasionally made in different sizes, although the bass remained the most important of them. For further descriptions of the illustrated serpents, see <http://www.usd.edu/smm/UtleyPages/Serpents/serpents.html>.

Endnotes

¹ Sabine K. Klaus, "William Lander (1763–1843), Mere, Wiltshire. A Forgotten Musical Instrument Maker Rediscovered," *The Galpin Society Journal* 57 (May 2004): 3–18.

