

Lute Roses

Delicate patterns are cut or sawn

by Lyn Elder

Today there is a tremendous revival of interest in Renaissance and Baroque music. Naturally the demand for authentic copies of historical instruments has caused many craftsmen to specialize in their production. Much study has been devoted to these instruments and to discovering the design principles and working techniques of the old makers, so that high-quality reproductions can be built to satisfy exacting scholars and performers. As a builder of historical stringed instruments, mainly lutes, I have spent several years examining museum pieces and compiling data and design information to facilitate my work. A large part of my effort has been devoted to cataloging and studying lute roses.

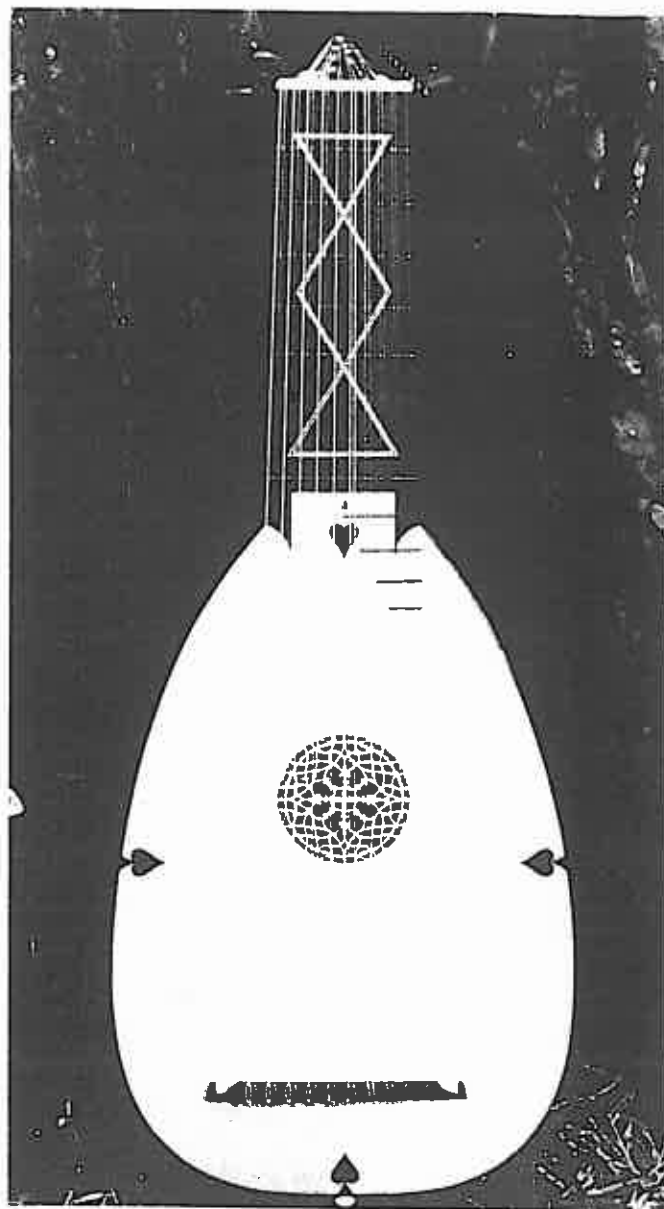
During the Renaissance the lute occupied roughly the same position the piano does today. It was the instrument every serious musician was able to play; in addition to its immense solo repertoire it was used by composers and to accompany rehearsals and performances. In keeping with its role as a working instrument, it was usually quite plain in appearance, as the modern grand piano is usually stark black. The only decorative element found on all lutes was the rose, or carved soundhole. This feature is present in the earliest lutes we know of and changed very little between the Middle Ages and the Baroque period, when the popularity of the lute declined.

The word "lute" derives from *al-'ud*, an Arab musical instrument whose name means "the wood." The lute was probably introduced into Europe during the Middle Ages, either by returning Crusaders or by the Moorish conquerors of Spain. It was already a venerable instrument when the Europeans discovered it. Although European craftsmen continually modified the instrument over the next several hundred years, they never discarded the pierced rose or strayed far from its original style. Most 17th and 18th-century lute roses are identical with, or similar to, those seen in the earliest surviving lutes and in paintings of even earlier instruments. The Islamic character of these designs persists through many variations on the symmetrical geometric figures.

Although most historical lute builders probably carved their own roses, there is some evidence that at certain periods lute bellies could be bought with the roses already carved in. This may account for the prevalence of some patterns. In large shops the job was probably assigned to apprentices, as it is tedious and time-consuming.

There is considerable disagreement among lute builders and acousticians concerning the effect, if any, of the complex

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Lute made by author is decorated in style of early 17th century, with Venetian rose of fourfold symmetry.

rose on the sound of the instrument. The sound of a lute with a normal rose would certainly be different from that of the same instrument with a three-inch open hole, because the total open area of the former is smaller. But whether the sound would be changed with a smaller open hole equal to the total open area of the rose is questionable. Some think the sound must be strained through the sieve-like pattern, while others dismiss this idea as fantasy. Whatever effect there is, however, must be minimal, perhaps unnoticeable to the average listener.

The size and position of a historical lute rose bear a definite relationship to the geometry of the lute of which it is a part. Depending on the school to which the builder belonged, the rose is centered either five-eighths or five-ninths of the way from the bottom of the lute belly to the neck joint. Although some instruments do not conform exactly to these proportions, most old lutes seem to fall into one of the above categories. The diameter of the rose is usually between one-fourth and one-third the width of the belly at the rose center line. Occasionally the rose may seem larger than one-third,

but this is usually because of a decorative border and not the open-work of the pattern itself.

Patterns

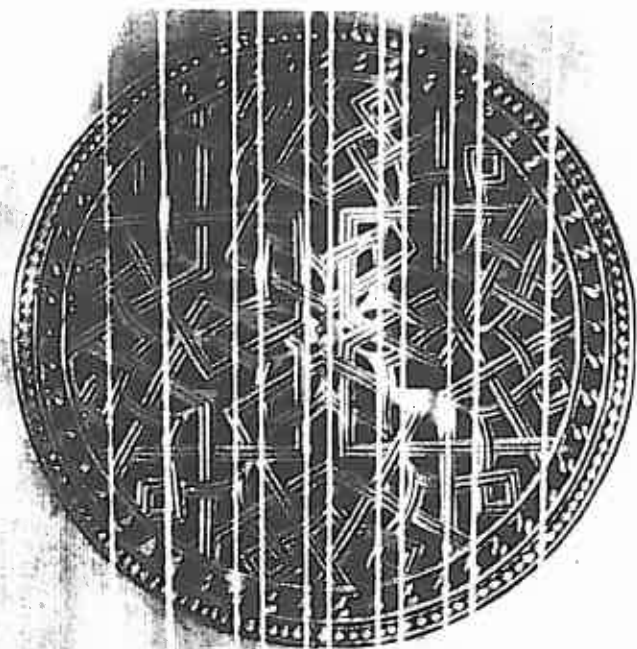
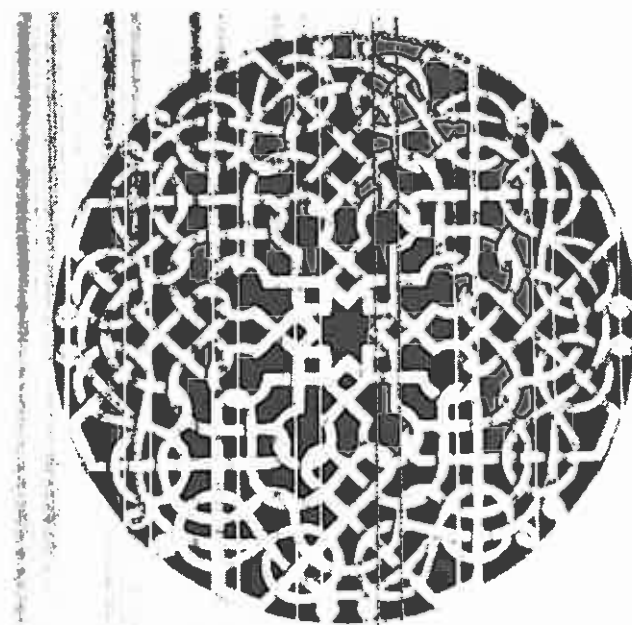
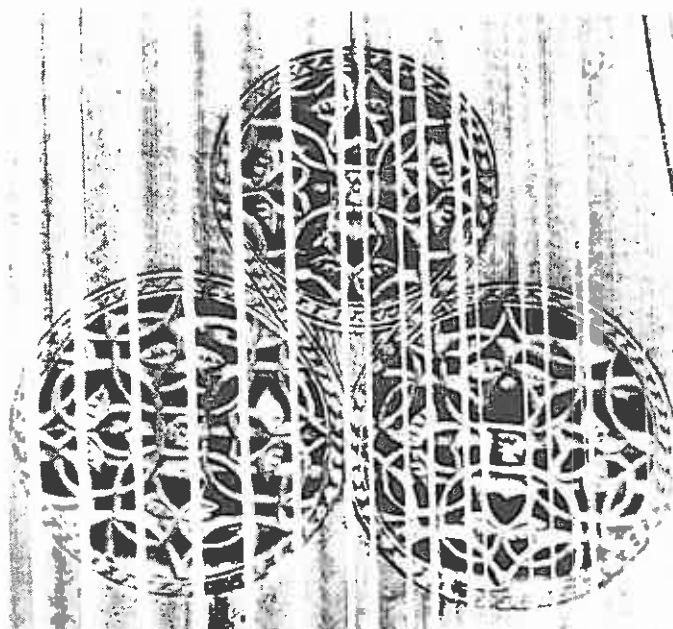
Dozens of historical rose patterns are known, but all may be categorized by their rotational symmetry, whether fourfold, sixfold or eightfold. Fourfold patterns are often seen in paintings of early lutes and were used by some Venetians and some Baroque builders. Sixfold patterns were by far the most common and varied during all historical periods. There are relatively few eightfold patterns, but one is the most famous of all lute roses: the Knot of Leonardo da Vinci, said to have been designed originally as an embroidery pattern but soon borrowed by lute makers.

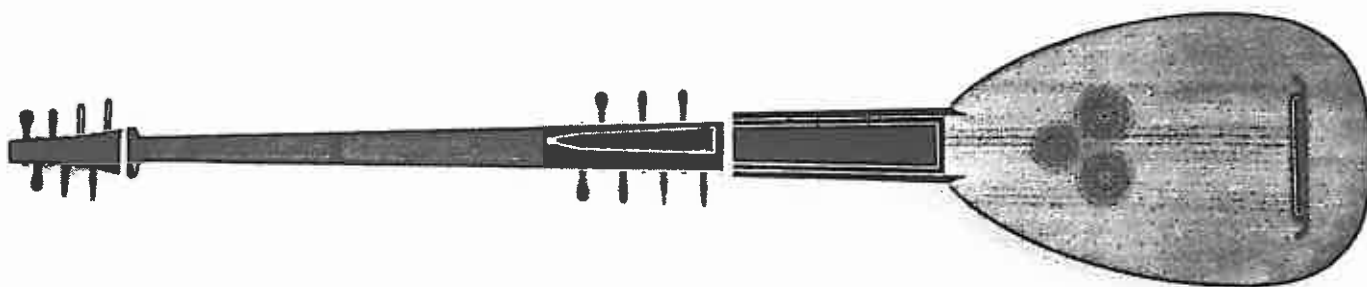
Most common patterns contain both a straight-line geometrical design and some kind of curved line motif weaving through it. The main exceptions to this general rule are the roses of the Venetian builders mentioned above. Their roses are more flowery in appearance because of the almost total absence of straight lines. These delicate patterns are the most difficult to carve because of their many unsupported figures.

Most normal-size lutes seem to have plain, borderless roses. The relief-carved border was used to increase the apparent size of the rose for a larger instrument such as a bass lute or an archlute. Since the paper patterns had to be printed with hand-cut wood blocks, it was impractical to have the same rose in several different sizes.

Theorboes and chittarones, collectively known as archlutes, have somewhat larger bodies than normal lutes and extremely long necks with two separate pegboxes. These instruments often have a group of three roses carved all together in the normal position, probably originally for the reason mentioned above—to save making an entirely new pattern block. The style caught on and was used throughout the history of these instruments, along with larger single roses. Some of the

Rose of sixfold symmetry, below, is from a 16th-century bass lute. At right from top: triple rose from 17th-century chittarone; eightfold Knot of Leonardo, carved by author; 16th-century Italian rose by author. All are slightly smaller than actual size.





Chittarone by master luthier Donald Warnock of Boston University has two pegboxes, triple rose.

triple roses are combinations of familiar designs, but some are entirely new. Most have a carved decorative border.

A characteristic of all rose patterns is the weaving effect, achieved by cutting out minute chips crossing some elements of the pattern but not others. The visual impression is that the branches are, indeed, woven through each other. This effect often amazes the unsophisticated viewer.

Carving techniques

The belly of a good historical lute is made of very thin, very close-grained spruce, usually *Picea excelsa*. It is usually of two pieces, bookmatched and joined with the finer grain at the center. Many old lutes have small additional pieces or "wings" at the very edges, presumably because the main pieces were not quite wide enough or well-grained enough all the way across. The belly blank was planed and scraped to a final thickness of less than two millimeters. Often the area under and around the rose was further reduced to around one millimeter, for ease of carving.

From close examination of museum lutes and from workshop experimentation we can tell how the old makers must have executed their roses. All the work seems to have been done with a knife or a combination of knives. This method is still in use by many contemporary builders.

First a paper pattern of the rose is glued on the underside of the belly. Then work is begun with a very thin, sharp,

pointed knife, such as the small scalpel favored currently or a specially ground X-acto blade. The piercings are made from the underside with stabbing cuts through the pattern and the spruce into a soft backing of cork, hard felt or very soft wood. This is an extremely painstaking procedure, as a little too much pressure applied in the wrong direction will split the thin wood. After the initial piercing is complete the belly is turned over and the pattern is cleaned up from the front side.

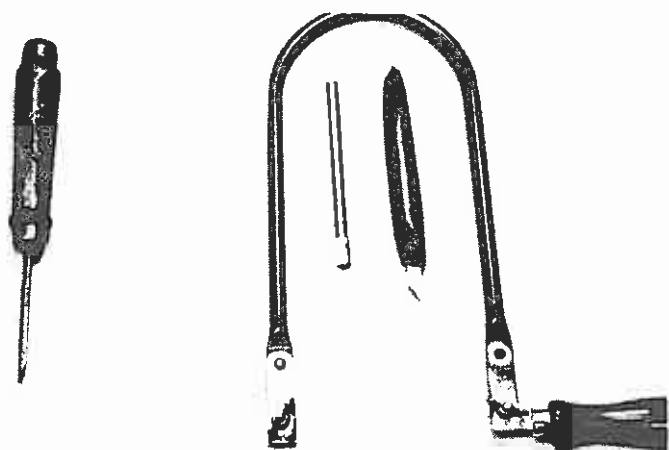
Finally the weaving is done, with either the same knife or a slightly larger one. This process can be facilitated by the application of a little water to soften the spruce. If a border is to be carved it is left for last to ensure concentricity with the main pattern. The paper is usually left glued to the underside to provide some support for the delicate pattern.

It is possible, and often necessary, to repair minor mishaps in the carving. A small piece is merely glued into place and shaped to fit the missing element. Sometimes it is so small that it must be handled with needle-nosed tweezers. The very complexity of the pattern ensures that a small discrepancy of grain or color will never be detected by most observers.

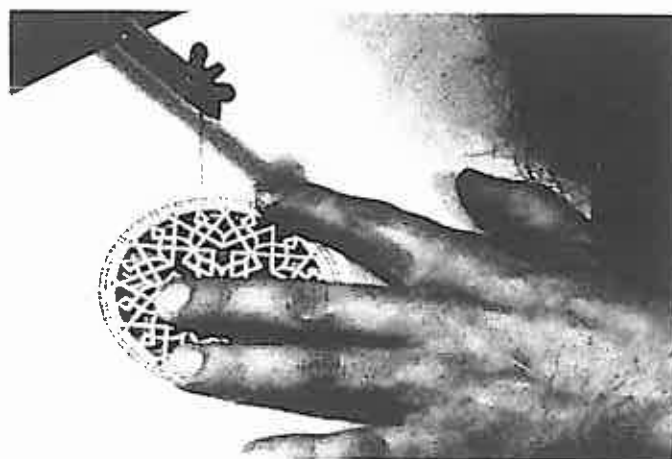
Knife carving can produce a fine, clean-looking rose and is used by some of the finest modern builders. With some experience it is quick and neat: a rose can be finished in six to twelve hours, depending on its complexity, the carver's skill and the degree of precision desired.

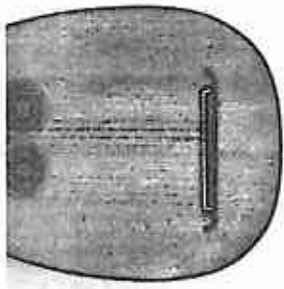
Many modern makers prefer the method favored by the

Rose-carving tools: Chisel, X-acto knives and jeweler's fretsaw flank paper pattern pasted on spruce lute belly.



In German method, which author prefers, paper pattern is glued to front of belly and cut with a fretsaw.





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German school. It is much easier for a novice to use and can give extremely fine results. In experienced hands the German method is almost as fast as the knife method. The belly wood is prepared the same way.

First the paper pattern is glued onto the front side of the belly. (Many modern makers use zeroxed or offset-printed patterns.) Directly behind the rose, on the underside of the belly, a backing paper is glued, a little larger than the rose. If a border is required it is usually carved first. Then small holes are drilled through the belly to allow the introduction of the saw blade—most patterns require these holes to be 1/16 inch or smaller.

Piercing is done with a deep-throat fretsaw or jigsaw using jeweler's blades #0 or #00. With practice this can be done so precisely that little further work is necessary. After piercing, the pattern is cleaned up with small needle files, usually #4 or #6 cut. The most practical cross sections for rose files are triangular, square, half-round, flat and mousetail.

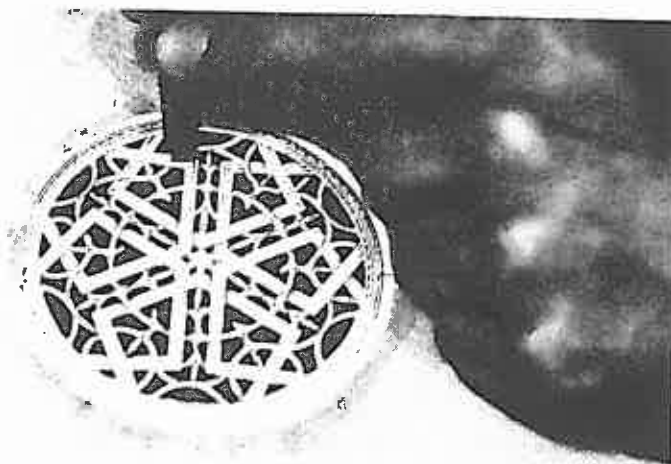
Weaving is done with a small chisel and a sharp knife, such as a pointed X-acto blade. The rose is finished off by sanding away the remains of the pattern paper with fine garnet paper and touching up wherever necessary. The paper backing is left for strength.

Before the belly is glued onto the lute shell it must be braced to resist the pull of the strings. One main brace runs directly under the rose; most old lutes also have two to nine smaller auxiliary braces under the rose. These auxiliary braces help to stiffen an otherwise weak area of the belly. All the braces are glued in place. Some makers dye them black with India ink so as not to confuse the pattern visually, while others leave them white.

Historically, lute bellies were not varnished, as were other parts of the instrument. They were either left bare or lightly sealed with thin sizing or egg white. They may have been waxed after sealing, but it is hard to tell from examining museum lutes. Most old lute bellies are quite dark and dirty after all these centuries.

Lute building is only one of the historical crafts that are being rediscovered today. We seem to be heading into a modern renaissance of hand work of all kinds. The techniques learned from studying historical crafts are useful not only in reconstructing authentic copies but also as inspiration for current designers and decorators.

Small gouge "weaves" a delicate rose of the 16th-century Bolognese style. Then remains of pattern will be sanded off.



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Some design

by Mark Sfirri

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