Part of the exhibition on display at the Faculty of Music at St. Andrews University

The family of Viols existed before the Violin.

Pictures of a Bass Viol, which developed into the cello. The Tenor and Treble viol were similar but smaller, and rested on ones lap.

Note the use of 6 strings known as a 6 Course, whilst some were 7 course. They had tuning similar to a guitar or lute, and frets, which were made from tied on catgut string, which could be slid around to adjust for intonation.

Note the similarity to the modern Double Bass, which came from the fretted Violone, a 4 string version of the 6 string Contra Gamba. These were played as the modern Double Bass, which also retains the original guitar tuning in fourths, contrary to the Violin, Viola and Cello being tuned in fifths.

The Contra Gamba was still in orchestral use during the time of Mozart.

ABOUT THIS EXHIBTION

INTRODUCTION

This historic collection of 18th century violins started to accumulate around 2006, and includes some important reference examples. Some instruments were acquired in playing order, though most needed to be resurrected from decades of abandonment, but all the ones displayed here are now in full playing order, and used regularly in my orchestral playing. I enjoy playing a violin that represents the period of the music.

The description's, are a blend of my knowledge about the instrument, the opinions of several friends who are professional Violin Makers/Restorers and/or Dealers, and from the many sources of published material about the makers and their instruments.

However, it is my view that any item of some antiquity can no longer be "owned" by anyone. That the ownership has long ago returned to the person or community that created it, as a testament that they were once in this world, and have left items behind in their memory.

When one acquires such an item, one simply purchases "the privilege" to keep the item, with the purpose of preserving it, ultimately putting it back into use, and to then share the item, until such a time when one returns it to the world for the next generation. In that way the memory of the owner, and our history will live on.

It is with this view in mind that I have formed the display, as one way of sharing this historic collection with musicians, music lovers and the general public.

For those who can play, beginners to professionals, school children to the very elderly, these instruments would enjoy nothing more than to make music for you… just ask, and you can try them.

A HISTORY OF THE VIOLIN

The violin as we know and hear it today evolved around 1860.

If the great Italian master Stradavari, working from about 1660 to 1737, were to listen to, and see one of his violins played on stage today, and be asked "Do you think this could be one of yours?" he would smile, shake his head and say an emphatic, "No. I do not recognise it."

He would however, be overwhelmed at the dazzling virtuosity of modern playing techniques, which he never knew, and be amazed at the immensely high notes that players today regularly use. The violin as he knew it was never intended, or even designed to be played in such manner as musicians today expect.

So what happened?

From about 1450 a family of instruments were made called the Viol, or Gamba. These were similar to the violin in shape, but had 6 strings, guitar tuning, and tied on frets made of thick gut, as the strings. They were made in Treble, Tenor and Bass versions to match the human voice. The Bass was like a smaller sized cello, and held between the knees, whilst the Tenor and Treble where as a viola, and rested on ones lap and played in a similar manner to the cello.

The sound was not loud, but sonorous and slow to speak, but blended perfectly with the voice, and perfect at playing the slow lamenting airs and music of the Middle Ages and Renaissance.

These instruments eventually spread over Europe, and entered Tudor England, where they continued to be made well into the 1750s. The music of Henry Purcell was written for the viol, with an occasional solo violin.

In Italy by the mid 1500s, music had progressed to being livelier and happier, and the viols were not really at their best in playing music of this style.

It was around 1550 in the town of Brescia (pronounced Bresher) in northern Italy, that the earliest violins were made by the maker Gasparo di Salo (Bertolotti was his real name) son of a prominent lute maker. He also made a much enlarged Bass Viol, called a Violone, which had four strings and frets. This instrument continues to this day in the form of the Double Bass, except without the frets. He then developed the treble and alto viols into a four stringed version, and produced the first instruments that we would recognise as a violin today, and were known as Baroque Violins, owing the Baroque Period in which they were made and used.

Gasparo had pupils by the names of Gio Paolo Maggini (b1580 d1630) and Andrea Amati (b1525 Cremona d1611 Cremona). They improved the basic violins of their teacher Gasparo, including better ways to make them. Through them and training others in the art, Brescia became the first centre of violin making.

Andrea Amati with his wife returned to Cremona and continued making violins, and through apprenticing others in the art, founded the second and most famous centre of Italian violin making.

His sons Antonio and Girolamo continued in their fathers footsteps as violin makers. Girolamo had a son Nicola (b1596) who continued the family line of violin makers. One such pupil of Nicola was Antonio Stradivari (b1644-1737). Even so,

by this time there were nearly one hundred violin makers in Cremona, all trained by the Amati's and their accomplished apprentices, who were by now masters of their art.

At the same time makers from Cremona began to find new markets, and spread out to Milan, Venice, Rome and Naples.

From Brescia and Cremona, violin making spread into the Italian and German borders known as the Tyrol region, and from there it spread throughout Germany and France and up to Denmark. From Milan and Venice it spread to Austria, and into the eastern European countries.

One maker from the Tyrol by the name of Jacob Rayman, also headed north. Seeking new markets he crossed the English Channel in 1650 and settled in London, and so introduced the violin family to England.

By 1780 the violin family had changed little in its two hundred year history, except for better strings. The music too had changed little, except that Mozart started to push back the boundaries. Haydn picked up where Mozart left off, and prepared a possible course for the future of music.

But then in 1780, along came the greatest revolutionist and radical German composer, Beethoven.

Beethoven's music was exceptionally demanding for both the player and instrument. He totally transformed all known orchestration methods, writing the violins at least a whole octave above what had ever gone before, and requiring huge volume from the string sections, as well as all the other instruments. Quite simply, like the viols three hundred years before, the violin family of instruments was in defeat.

The bewildered audiences had encountered heavy rock music for the first time. Traditionalists simply walked out early in deafened disgust! The Unsure came out walking in a daze. Whilst the music world revelled by saying this is the path music would take from this time onwards.

With the music of the day and improved playing techniques, musicians were already playing much higher notes than fifty years earlier, but the fingers of musicians were so cramped together it made playing difficult.

Referring to the pictures later on will help in understanding some of the terms used in the next section.

Something needed to be done.

Through the various old Violin Making Guilds, and players' recommendations, it was decided that the violin should be improved as follows:

- The length of the neck to be made longer by about 10mm. This would make the playing of high notes easier.
- Because of the longer neck, strings would be under more tension to tune up to pitch. With more tension the more volume and carrying power the violin would have to fill the new concert halls.
- The increase in string tension would need changes to the way the neck was attached to the body. A new method was conceived which also inclined the neck downwards, so as counteract the pull of the strings. The new neck alignment meant a simpler finger board of almost constant thickness.
- Because the lower strings were able to vibrate with a lot more intensity, vibrations setup in the belly could easily go beyond the allowable limits of movement, causing a rough noise of some strange note, or at worse defeating the vibration of the string. Basically the original pencil sized Bass Bar simply could not control the vibrations of the belly. To overcome this problem a longer and deeper Bass Bar would be needed.

So in summary we have:

1. Longer Neck for violins only.
2. Much stronger Neck joint, and inclining the Neck down wards, fitted with a new Finger Board.
3. Longer and stronger Bass Bar.

By 1790 the Classical or Transitional Violin had been developed. All new violins, violas, cellos and double basses were made to this new specification, and forms the basis of the modern violin today.

The next sixty years saw dramatic improvement in strings, playing techniques, and virtuosity, whilst the music demanded far more carrying power and volume.

By the 1850's the old problem with the Bass Bar resurfaced, and it was deemed necessary to fit an even stronger version of the same length, but almost twice the depth of the previous 1790 version.

By 1860 all new instruments were again made to this new specification, and it is *THIS VERSION* that forms the modern violin we know and hear today.

But wait, what about all these fabulous Baroque instruments made before 1790?

SIMPLE, they will need to be modified, else they will no longer be of any use in playing the music of the day or what may lie ahead in the future.

THE BAROQUE VIOLIN MODIFICATIONS

Firstly, the Head of the violin, consisting of the Peg Box and Scroll, is of tremendous importance. Each and every maker to this day has their own version of the Head. It is effectively a maker's signature.

It has always been deemed necessary to preserve the Head. But it forms part of the Neck, does it not? Yes.

The entire process to convert a Baroque Violin to a Classical Violin was as follows:

1. To remove the Belly.
2. Remove the old Neck and Mounting/Top Block.
3. Make and fit new Mounting/Top Block.
4. Make a new modern Neck.
5. Saw off the Head from the original Neck.
6. By using a special precision tapered joint, attach and glue the Head onto the new Neck. This single process is called a HEAD GRAFT.
7. Remove the original Bass Bar from the underside of the Belly. Make a new one to the new design, and reattach it onto the Belly.
8. Reattach the Belly.
9. Create the new neck joint and attach the neck.
10. Fit a new Finger Board.

Now, there is a good two to three weeks work in doing this modification. Like today it was going to be expensive. Very.

It is estimated that only 10% of all violins made up to 1790 survived this apocalypse, simply because they represented the best, and most valuable instruments ever made.

The other 90% of violins were simply replaced with a new one. The old baroque violin had a fate of being abandoned, given to street musicians or gypsy players, or as in most cases put on the fire.

THE CLASSICAL/TRANSITIONAL VIOLIN MODIFICATIONS

1. To remove the Belly
2. Remove the original/pre 1850 Bass Bar from the underside of the Belly. Make a new one to the new design, and reattach it onto the Belly.
3. Reattach the Belly.

There is still nearly a week's work in doing this. Like today it was going to be an expensive job. Unmodified Baroque Violins would need modifying as before, but with a newer Bass Bar.

However, by the 1850s some restorers were now keen to keep an original Baroque Neck and Head, and attach an extra piece of wood to the neck joint, so that it can be worked to realign the neck to the modern form and length.

It isn't clear why this approach was not adopted for the first modification, though the usual nail which reinforced the Baroque Neck joint would make it difficult to remove the Neck without the risk of splitting the Neck.

Like before, only the finest instruments were usually modified. The remainder of "unworthy" violins were simply traded for a new one, and by the 1860s there were by now many very fine new violins being made.

The Classical/Transitional violins were sold off by dealers at knock down prices to the growing number of amateur players, and carried on being used by their unconcerned owners. Failing that they were used as a source of old parts by makers and restorers, or put on the fire.

It is between1800-1870 that in order to sell these redundant instruments the unscrupulous practise arose of copying labels of the great masters and inserting them into old instruments, with the view of selling them for three to four times the real value.

In addition the rapid influx to the market of the cheap factory instrument from Germany, France or Eastern Europe was driving down prices of new instruments.

Time however, has played a large part in healing instruments made before 1860, so that today they can make very fine instruments for professional orchestral players.

Wood continues to harden for about five hundred years. The Belly of these violins is so much harder, stiffer and resonant today than it was 150 years plus ago.

With the vastly increased value of these pre 1860 instruments it is now an economic option to fit a modern Bass Bar into these instruments, especially if the violin is going to be used professionally or by serious amateurs.

There is even talk that the violin is due for another development in terms of structural strength, as string tensions have increased quite a lot in the past thirty years.

But then, these days there is the concept of preservation. If a pre 1860 instrument is capable of playing the musical repertoire an orchestral player can throw at it, then why not leave it alone?

Two violins in the collection are of this 1790-1860 form, and I have found no problem with them, and have been used in orchestras to play the works of Mahler and Shostakovich without problems.

There are two original baroque violins, though it is a wonder they have survived at all, as virtually nothing has come down to modern times in unmodified form.

The two playing examples in the collection, form valuable reference instruments for makers, players, and musicologists to determine the playing techniques of baroque music, its interpretation and how it would have sounded and be played in a historic manner.

It has to be said of these baroque violins, that no professional player will play them. The simple answer for this rests firmly on the player's reputation.

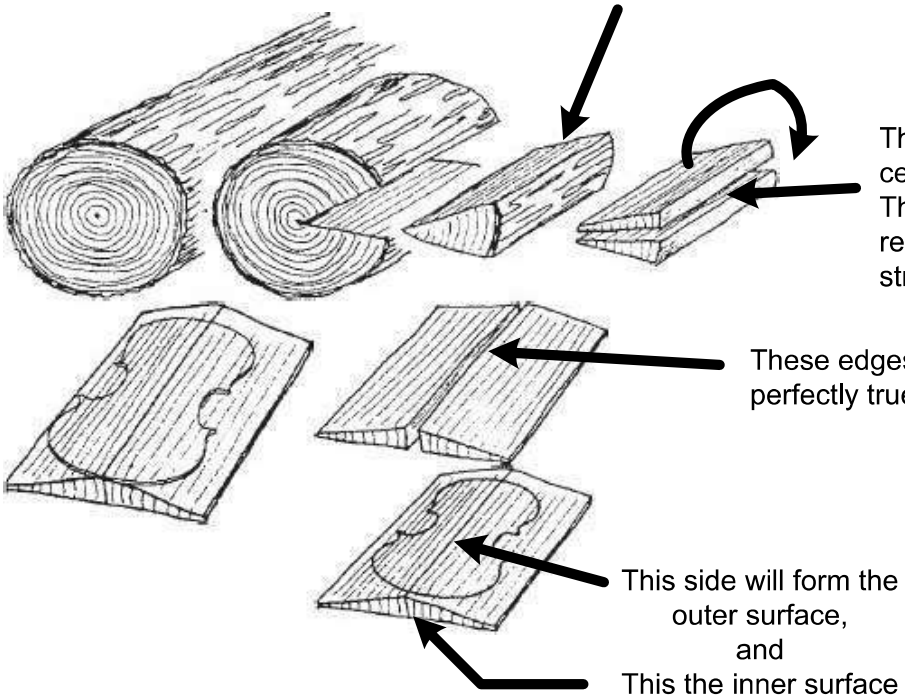
The simple fact is they don't know how to play them, or how the instrument will respond if they do. Professional players have been trained in all their playing and bowing techniques entirely on instruments with a modern setup. They will not risk their reputation with an instrument that they find at least unsettling or embarrassing.

All professional players in baroque ensembles use modern instruments, which have been made to look like the original. The neck will be similar to the original, but fitted in the modern way, and the fittings like pegs, bridge and tailpiece will be in a baroque form. Chin rests were never heard of, and weren't a standard fitment until around the 1890s. Early ones were nothing more than a 50mm length of felt covered wood, which followed the curvature of the outline. You often find old violins for sale with these still fitted.

Reference Drawings Follow

How the Back and Belly are made up from the tree

This is commonly referred to as “A Wedge” and is how violin wood is usually purchased.

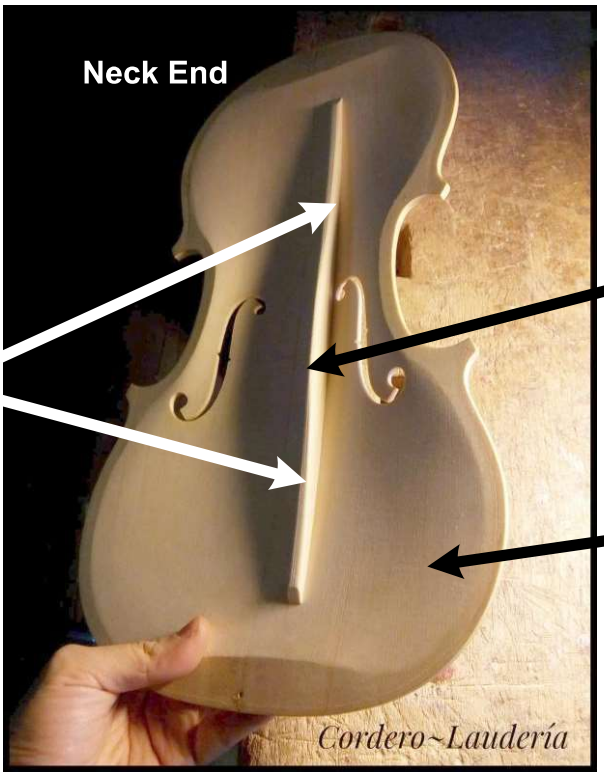


The Wedge is cut down its centre to produce two pieces. These are opened out, which results in identical grain structure in each half

These edges are planed perfectly true and glued.

This side will form the outer surface,
and
This the inner surface

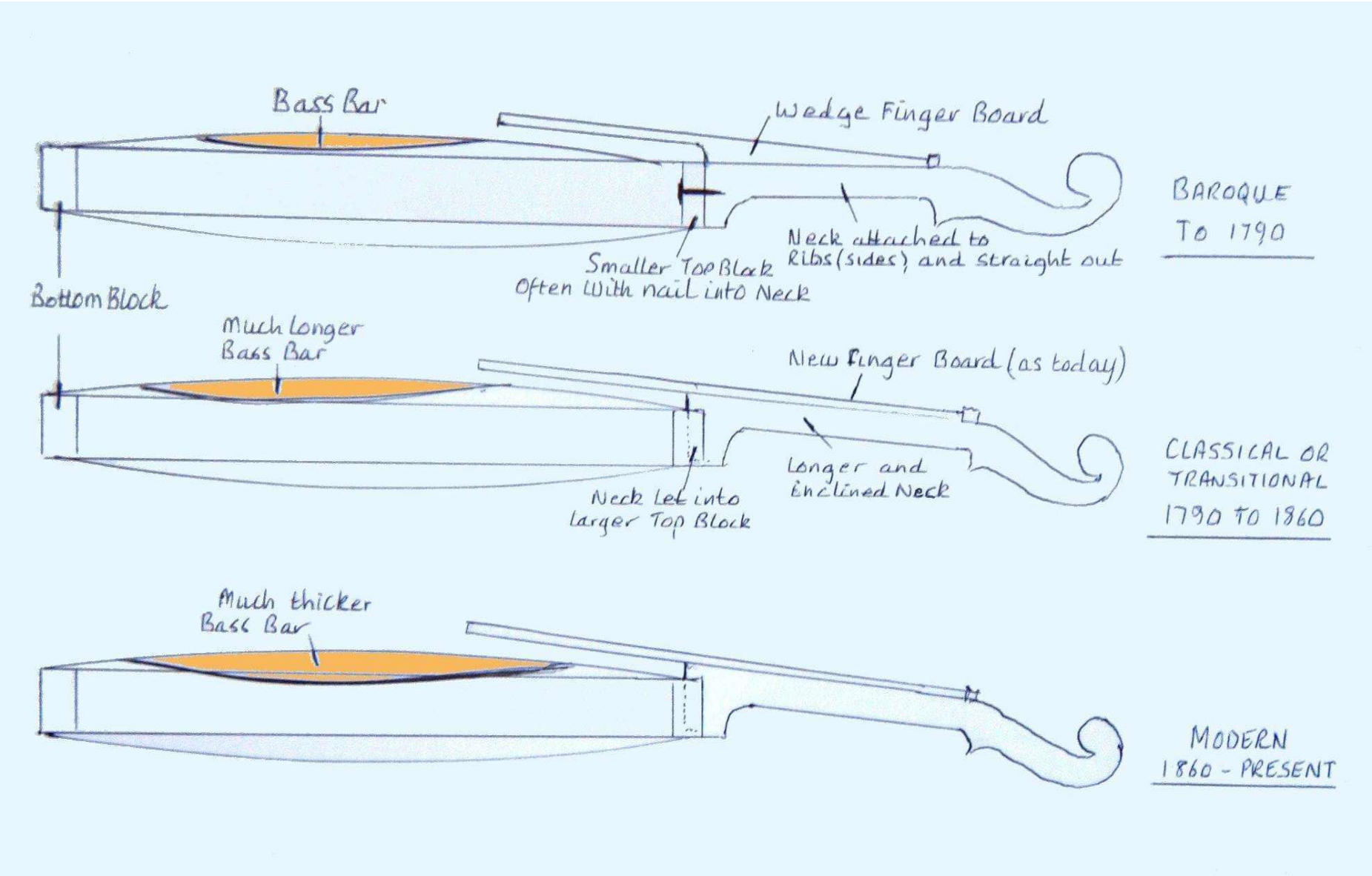
The underside of the belly

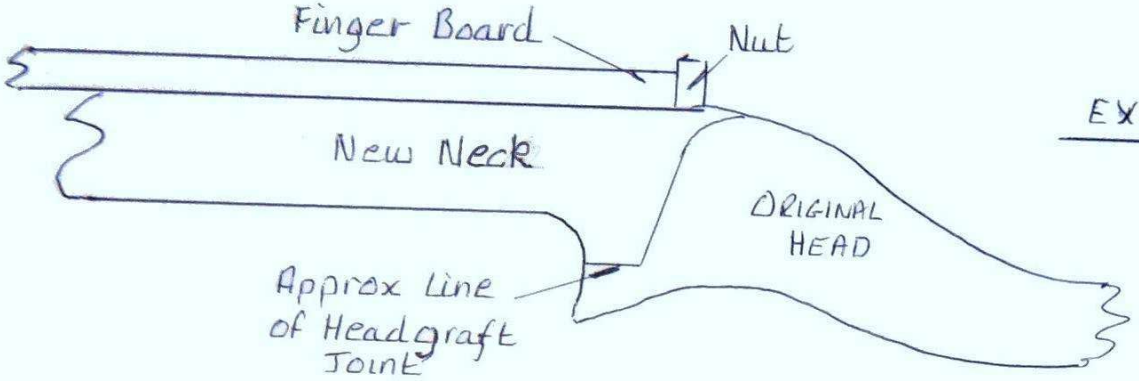


Bass Bar
This is a separately made piece which is glued to the belly, and has to precisely match the contours of the inside

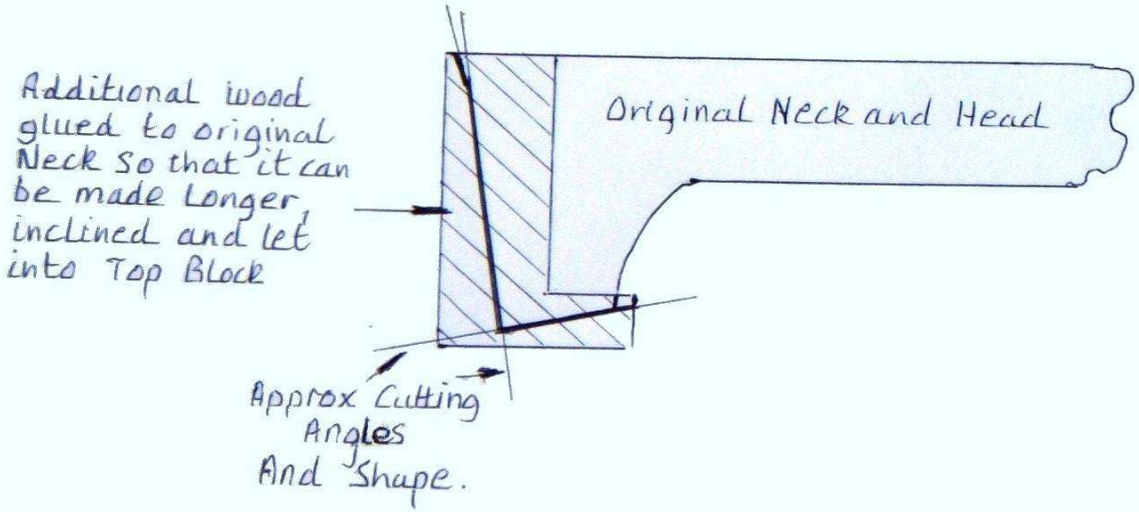
This would be the length in a Baroque Violin, and also much thinner

This is the finished inner surface of the belly which has been carved “hollowed” out

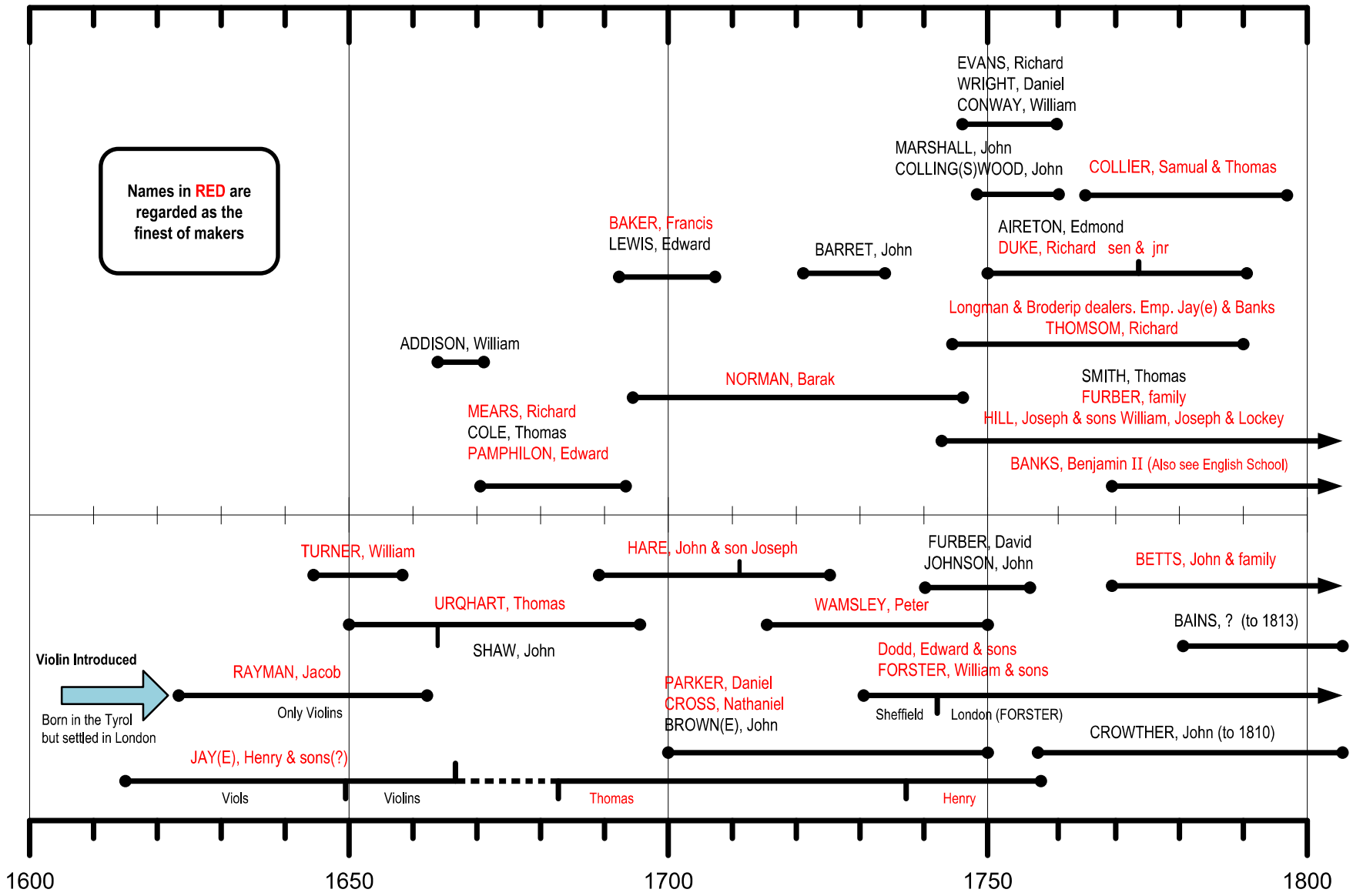

Bass Bar
Wedge Finger Board
Neck attached to Ribs (sides) and straight out
Smaller Top Block Often With nail into Neck
Bottom Block
BAROQUE TO 1790
Much Longer Bass Bar
New Finger Board (as today)
Longer and Inclined Neck
Neck Let into larger Top Block
CLASSICAL OR TRANSITIONAL 1790 TO 1860
Much thicker Bass Bar
MODERN 1860 - PRESENT



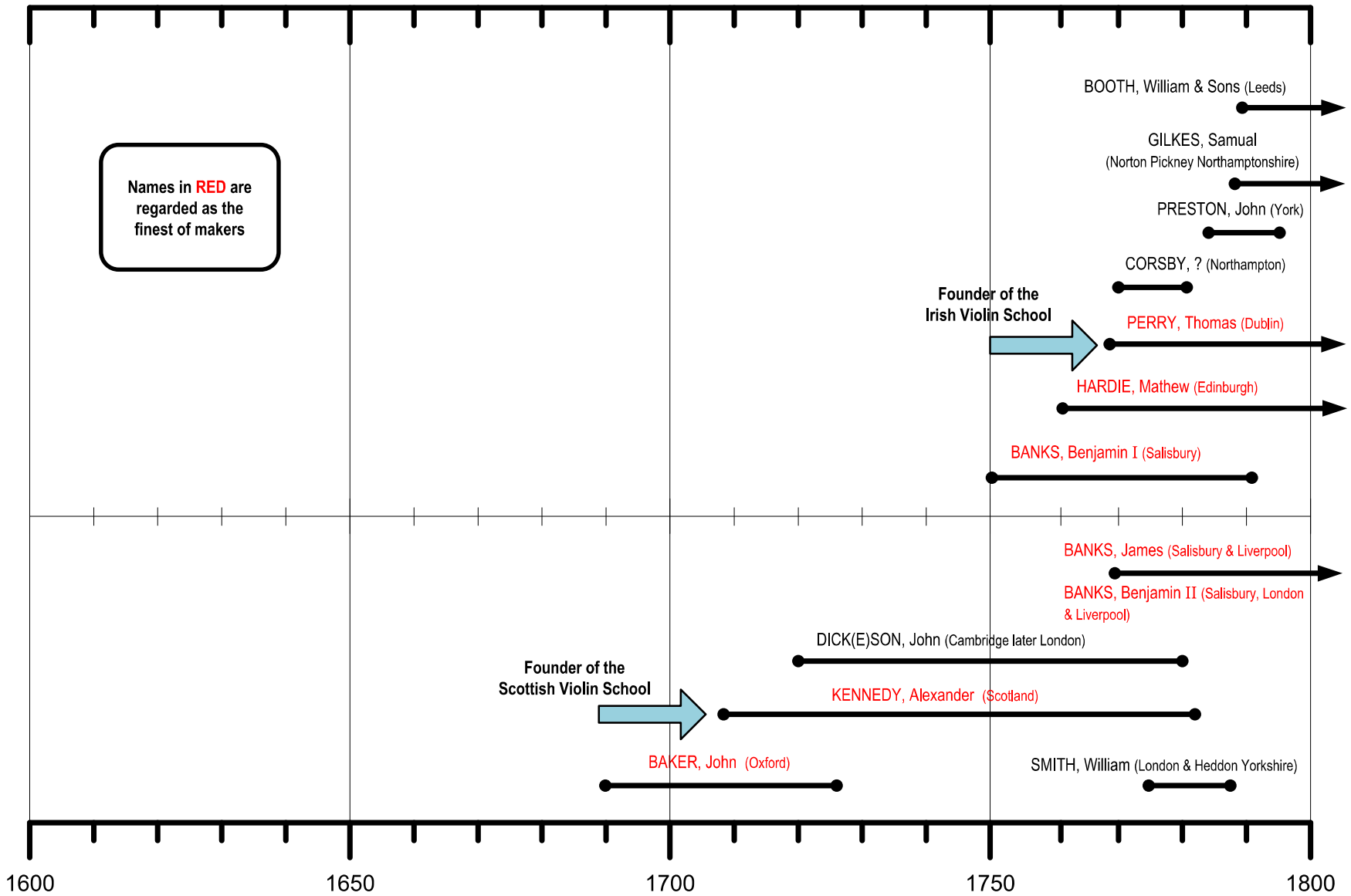
EXAMPLE OF HEAD GRAFT.



EXAMPLE OF BUILDING UP THE NECK SO THAT AN ORIGINAL OLD NECK AND HEAD CAN BE PRESERVED. MODERN ALTERNATIVE TO HEAD GRAFT.



The London School Of Violin Makers Before 1800



The English School Of Violin Makers Before 1800