

TRADE SECRETS

MAKING AN EDGE

In the first of a two-part series **Jan Špidlen** reveals his version of an old Italian edge-making technique

The edgework and purfling are as important as the scroll or the varnish. We can learn a lot about a maker from the edges, corners and curve of the purfling strips and we even use them to decide the authenticity of an instrument. It's difficult to describe what makes an edge or corner pretty; in fact, it's easier to describe what makes it ugly. The rest of the violin has been constructed geometrically, often using tried-and-tested proportional methods such as the golden section. Every part of the instrument – including the edges and corners – should be in sympathy with this. I don't mean we should prepare technical drawings for every detail with golden sections all over the place, but the shapes must be constructed with an idea behind them and not by accident.

It's not easy to make such a nicely proportioned and formed shape and I fight it every time, but a good method can be a great help. Let me introduce my way – I have already made the rib structure and set the outline of the plates according to the outline of the ribs.



A washer is a great way to draw an overhang on to the plate

1 The rib structure must be placed precisely, with its centre line on the join of the plates. There are many ways to draw an overhang, but I find that using a washer works best. There's such a variety of sizes that you can find a suitable one for any instrument. Here I have decided on an overhang width of 2.3mm. I draw another line immediately around the ribs, at the same time, to make it easier to place the ribs back on the same spot later. I then repeat the procedure for the other plate.

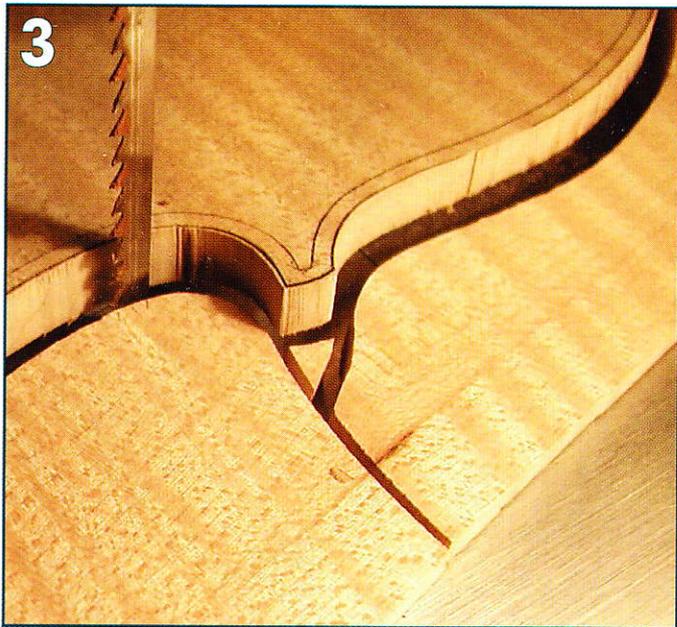
Photos: Jan Špidlen



It's useful to draw the corners with a template

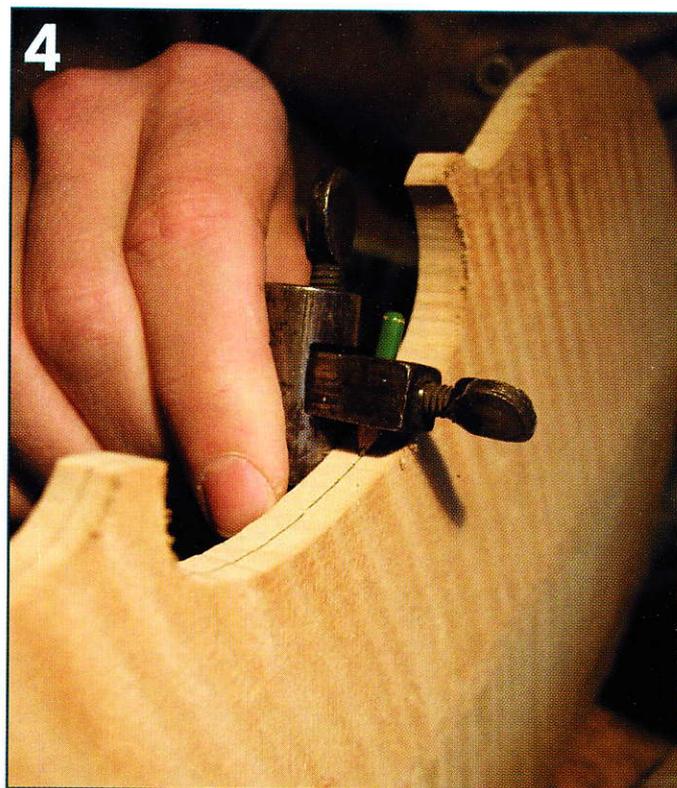
2 I use a template to draw the corners. Their size and shape changes the look of the whole instrument. Along with the edge width, they also affect joints of the purfling: if you use long and slim corners then the purfling strips will meet very early and result in long points; on the other hand, short and thick corners lead to blunt purfling joints that overshoot the edge.

In this case I am using a template taken from a Strad, which I have slightly modified according to my own taste and experience. It is hard to set the correct size and shape before you see the final results with purfling, channel, edge, varnish and perhaps even some wear. It's important to get feedback on your work and then check and adjust the old templates, especially at the corners. Don't forget, with all this concentration on beautiful corners, to draw the button on the back plate – 22mm wide and 15mm high works for me.



3 Holding the plate perpendicular to the saw blade when cutting the outline

3 The plates are now ready to be sawn. I guess everybody now uses a small band saw for rough work such as this. Make sure you don't cut into the line; on the other hand, the more extra wood left now, the more work for later. As the plate is lying on the ridge of the arching, it has to be held so that it is perpendicular to the saw blade.



4 Drawing a line around the side about 5mm from the flat side of the plate

4 About five years ago I learnt a new way of making an edge. I first heard about it from the authors of Peter Biddulph's book on 'del Gesù', who had rediscovered this system. I believe it really was used by many Italian masters of the 18th century, including Guarneri 'del Gesù'.

To sum it up: first lower the edge but leave it higher than the final level you want; next hollow the channel right to the edge; and finally cut a bevel that lowers the edge to the final height. This method was presented as an extremely easy way of making a good edge. In fact it is no easier than any other system but the results can be much better. If you follow certain critical measurements and use the correct gouges you get a nicely proportioned edge. Nowadays I branch off from this method, but the principle stays the same.

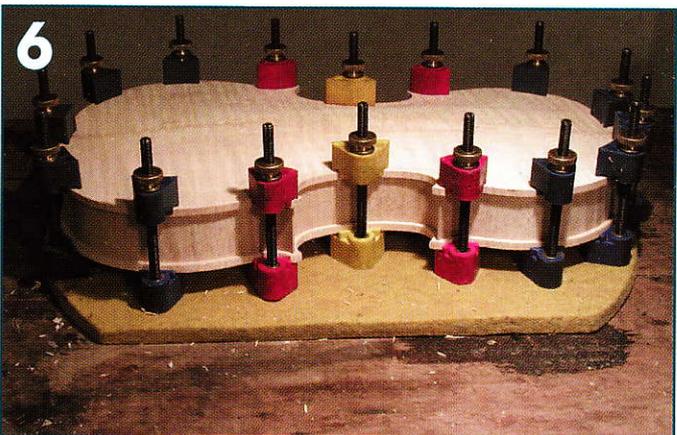
Begin by drawing a line around the side, set at about 5mm from the flat side of the plate.



5 The 5-10mm flat strip I leave around the edge of the plate

5 Next I cut the rough shape of the arching using the usual gouges and planes. I cut the arching so that the centre of it is nearly at its final proportions and make a flat strip 5-10mm wide at the edge of the plate. The height of this flat edge is the same all around the plate and this is the first important measurement. The back's final edge thickness should be about 3.8mm, so I initially make this flat edge 4.6-4.7mm high. The edge of the belly should be 0.2mm higher, around 4.8-4.9mm, so that the final thickness will be about 4mm.

6 Now it's time to set the final outlines and shapes of the corners. Before I do so, I close the body temporarily, just with a few drops of glue on the rib structure. It's important to place the plates exactly, using the outline of the ribs drawn on them earlier. ▶



6 Temporarily closing the body before finalising the shapes of the corners



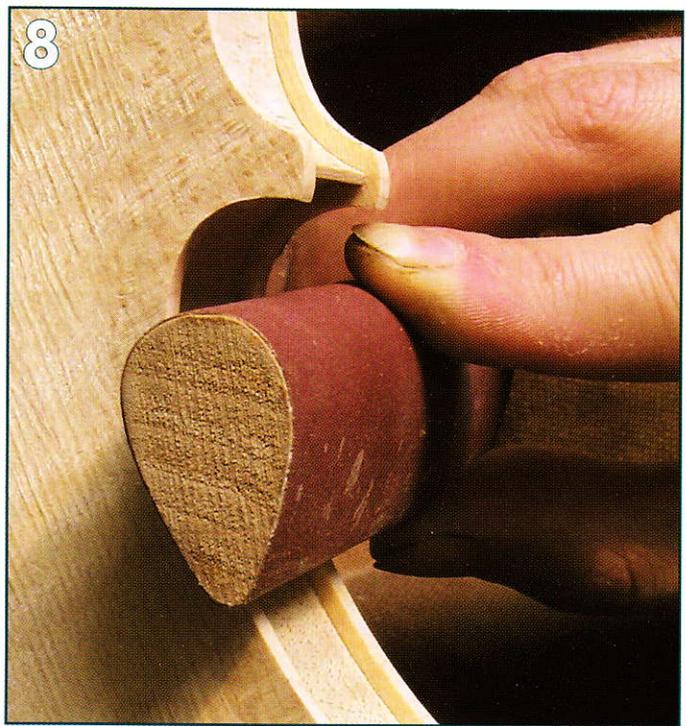
It's easiest to cut a smooth curve with a sharp knife

7 I use a knife to cut most of the edge and a little flat plane for the outer curves. These tools must be very sharp, particularly for the spruce. The extreme difference between the hard and soft grain makes it difficult to cut an even curve and it's impossible with a blunt tool. The width of the overhang is determined by the template for the corners. It should be about 2mm and consistent around the body of the instrument.

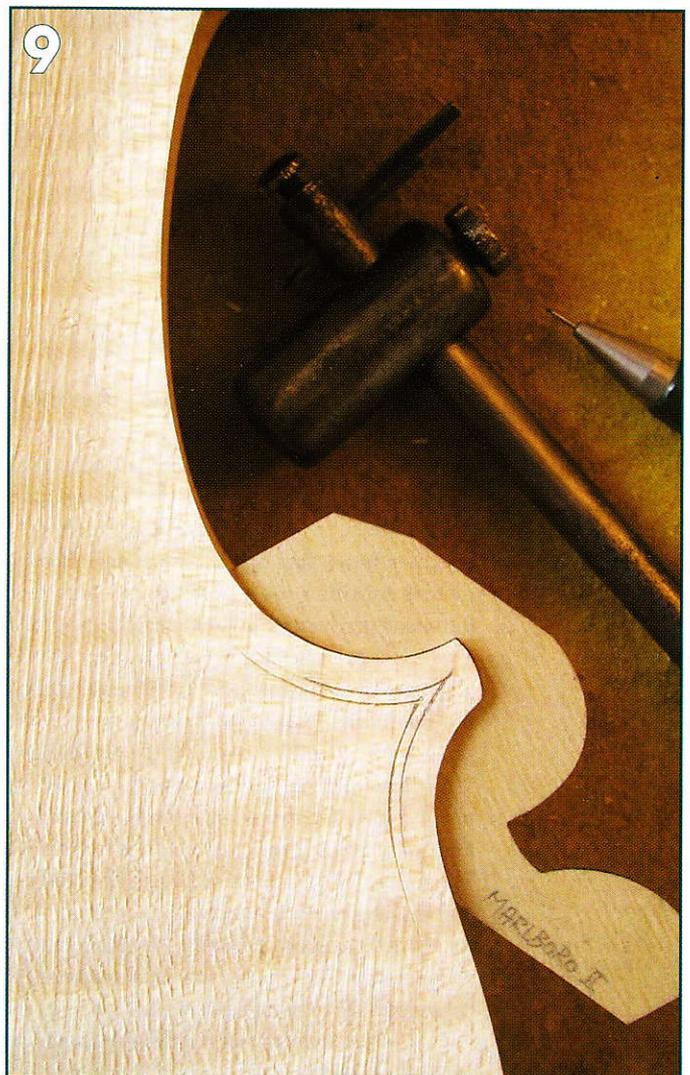
8 It's important to keep an eye on the angle of the edge as it should always be perpendicular. The easiest way to do this is to file both plates at the same time. A standard metal file would leave marks in the wood, so I prefer a sandpaper file. The shape of the corners is controlled with the same template as used for the original drawing.

9 Finally I check the outline by eye to correct any irregularities. Look at the whole shape from a distance – nothing should disturb the flow of the lines. I draw the purfling joins into the corners so I can see how they'll look, as this is the last chance to make adjustments. At this stage you can forget about the templates for a moment – your eye is the best judge. ■

In next month's Trade secrets Jan Špidlen continues his series with an explanation of his purfling method



I get a perpendicular edge by filing both plates at the same time



Drawing the purfling into the corners – it's my last chance to adjust it