



Building a Violin

In part two, Dominic Excell discusses the mould. How to make it and what type to choose: internal or external?

Price of success

Inevitably, there is a price to pay for this superiority, as more care is needed to ensure an equal length and balance of shape for the four corners. However, the overall job of constructing the ribs is by-and-large easier with the internal mould than with the external.

The external mould is also used frequently by many makers. It consists of a built-up outer 'garland' of wood, which is finished on the inside to the shape of the outside of the ribs. The main drawback with this method is that one is working blind at the corner joints.

One major benefit, on the other hand, is that both sets of reinforcing strips or linings can be fitted while the ribs are in situ, and the height of the ribs can be flattened (by planing) with greater ease. But the finished sets of ribs, to my eye at any rate, is not quite so aesthetically pleasing, looking as if it had been machine-made.

There is another method for building a set of ribs, in addition to the two systems I have already mentioned. This is to build them straight off an outline drawn onto a flat board, or even off the finished violin back. This can be very useful for copying an existing violin, or for a one-off design, but the mouldless method is really only suitable for experienced makers.

You have to be very skilled at rib-bending to succeed at this technique. Alternatively, you must be willing to waste a lot of time and material whilst gaining the expertise. So it's far better to work with the mould in these early stages.

The method that I will be describing in these articles is that of the inside mould, as this is relatively straightforward to build.

Getting started

You are going to require a piece of good quality, close-grain ply; Birch is ideal. Thickness should be between 12mm and 18mm. I advocate ply rather than solid wood, as expansion and construction are far less of a problem. I once made the

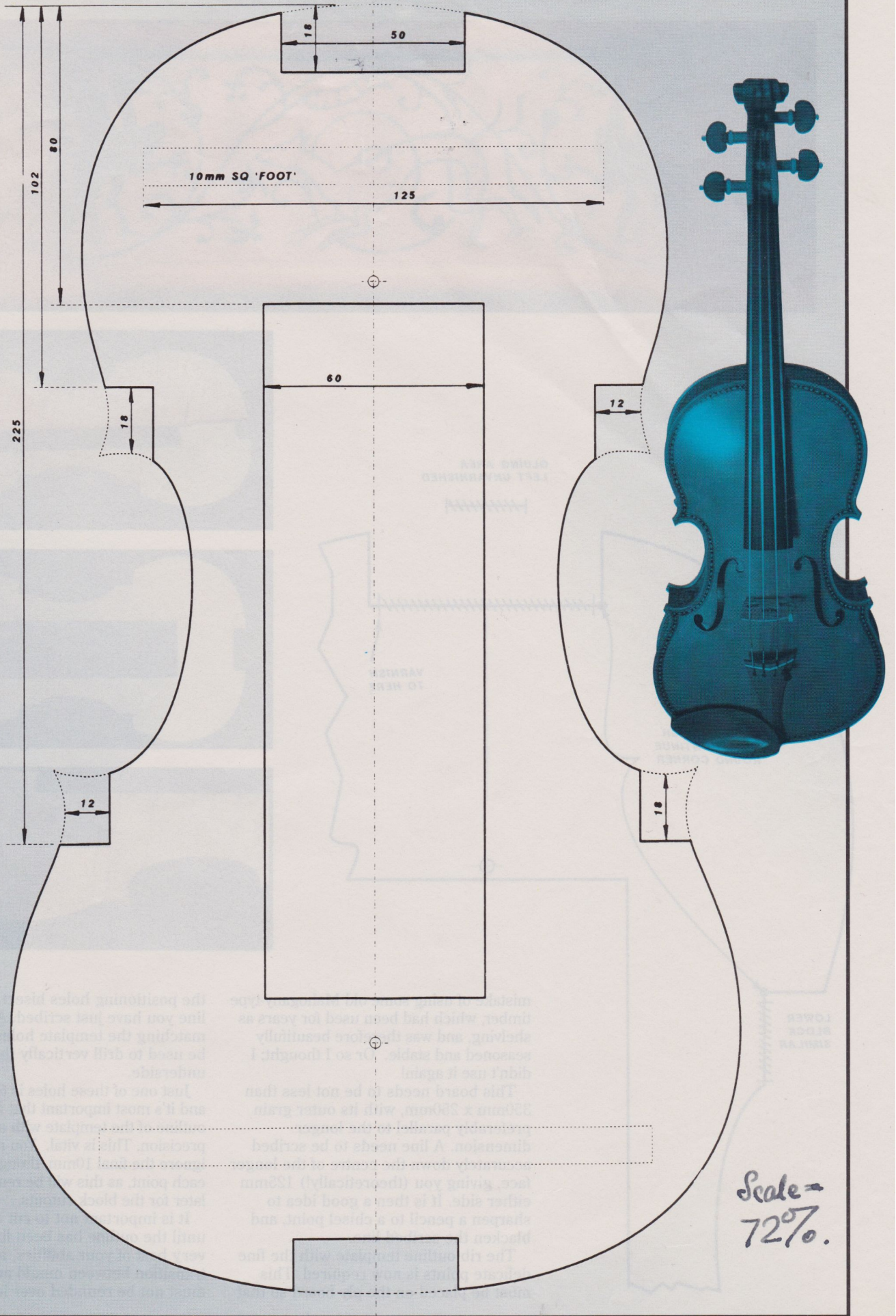


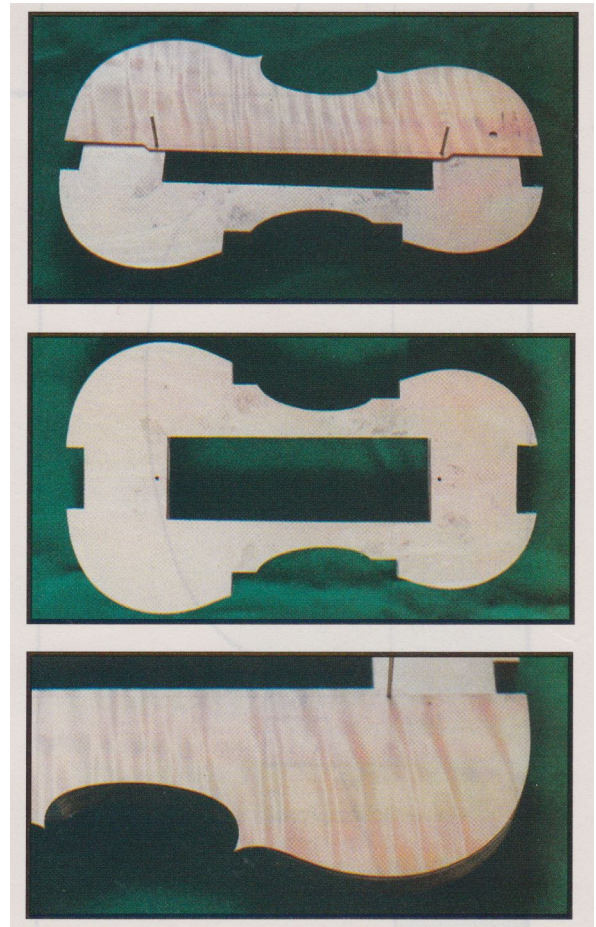
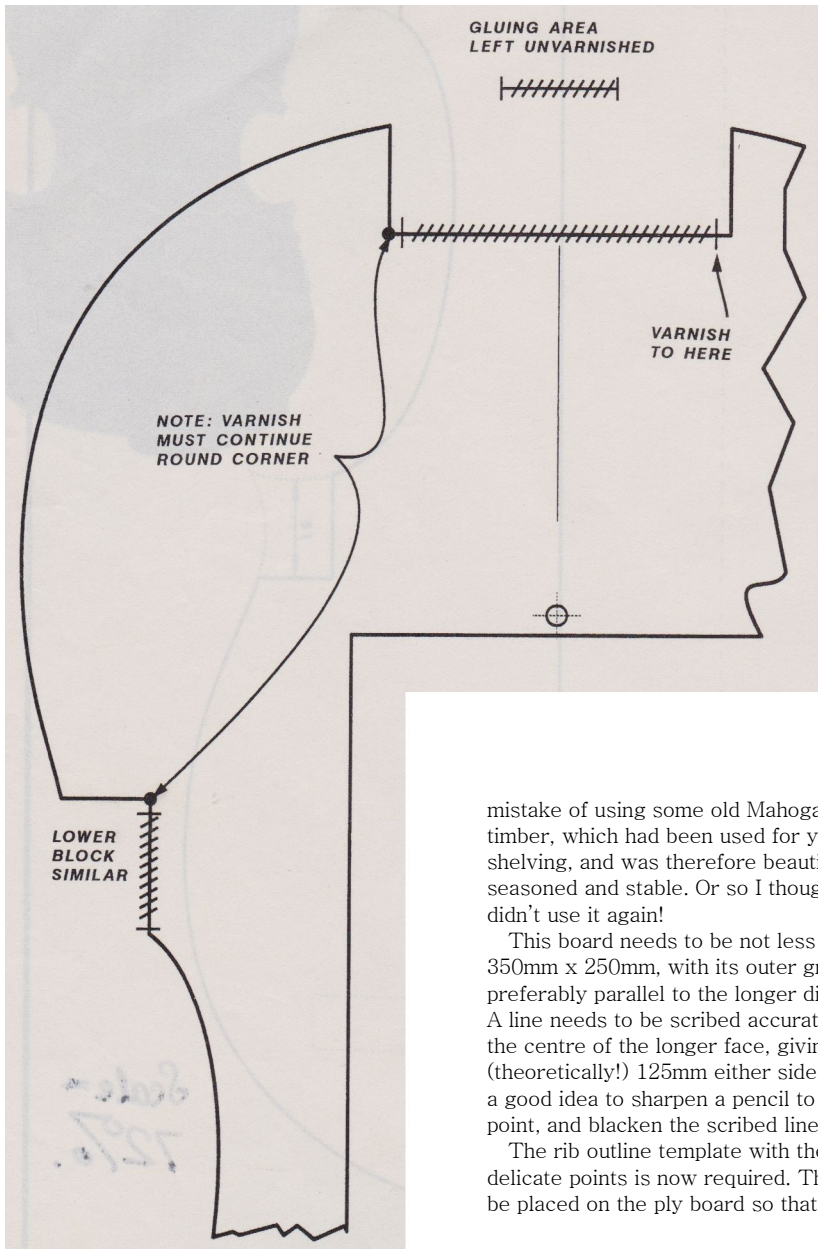
By now, you should have an accurate set of templates for the basic outlines of the violin. There will be further templates to make at a much later date, but these will be discussed when they become topical. Before we get down to work on the mould, I will describe the two types that are commonly used.

First, there is the internal type, around which the ribs are built. This is the most commonly used, and that which most of the great classical makers from the past also used. It consists of an accurately shaped board which follows the line of the inside of the ribs, with cutouts at the six block positions.

In my opinion, one can make a neater job of fashioning the corners, or points of the ribs, using an internal mould than by using the other type: the outer, or external mould.







mistake of using some old Mahogany-type timber, which had been used for years as shelving, and was therefore beautifully seasoned and stable. Or so I thought; I didn't use it again!

This board needs to be not less than 350mm x 250mm, with its outer grain preferably parallel to the longer dimension. A line needs to be scribed accurately down the centre of the longer face, giving you (theoretically!) 125mm either side. It is then a good idea to sharpen a pencil to a chisel point, and blacken the scribed line.

The rib outline template with the fine delicate points is now required. This must be placed on the ply board so that

the positioning holes bisect the centre line you have just scribed. A drill-bit matching the template holes must now be used to drill vertically through to the underside.

Just one of these holes is to the face, and it's most important that it follows the outline of the template with absolute precision. This is vital. You may, however, ignore the final 10mm, though no more at each point, as this will be removed a little later for the block cutouts.

It is important not to cut these away until the outline has been finished to the very best of your abilities, as the transition between mould and block must not be rounded over in any way. •