

Article #4: Bobbins



Having worked over a broad series of disciplines ranging from patternmaking, industrial sculpting and musical instrument making/repairing the opportunity came my way to think about Tapestry Bobbins. Living on the West Dean Estate and working occasionally at the college I am privileged to know the weavers in the Tapestry department. With theirs and other weavers' advice I slowly developed the form that I am currently working with. There were 'tweaks' – mostly to do with enlarging and reducing radii on corners – and I was ready to go to the next stage.

I work with talented engineer, John Peskett of Aston Products, developing the bobbin shapes. After the drawing stage John spends some time programming one of his CNC lathes to perform the task of turning the basic form as well as turning the tips. It is unusual for an engineer to turn wood on one of his machines but the dust and shavings are contained and all is well. The turning process is quite different to turning on a woodworking lathe. You would be forgiven for thinking that you put the wood in one end and bobbins are spat out at the other end. This is far from the case. There is a constant input as each bobbin is turned. Every piece of timber is different and feed speeds and spindle speeds are constantly adjusted to attain the optimum result. In some cases a second programme is used which has a very different approach. With this programme I turn heads from burr wood.

One of the most enjoyable tasks is visiting timber merchants. From my early days as a musical instrument maker I have always enjoyed searching for the timbers that peaked my interest and imagination. The market has changed over the years with more timber coming from the African Continent than ever before. I am always thinking about the 'palette' of woods that I can use. As well as the practical issue of 'turnability' there is both colour and texture. Colour is rarely a solid colour. It could be a 'spalted' boxwood with blue/grey mottling in it, Cocobolo or Kingwood with fine, darker contrasting lines or Olive wood, which has random veining in it. Choice of wood is restricted to a piece that will speak well on such a small object. I have a soft spot for English Ash but unless it has a very fine tight grain then its beauty is lost. Similar with Yew (technically the only 'softwood' that I use). One of the few exceptions to this is the open grained black Bog Oak. I love the notion of a bobbin made from 5000 year old wood.

With the engineered approach that I work within I can create a 'composite' bobbin made from several pieces. This has a knock on effect as regards the materials that I can choose to use. Burrs like Thuya, Jarrah and the stunning Masur (Karelian) Birch can all be utilised. Because of the compound construction of the more elaborate bobbins then a material that may be weak on its own is not a structural problem anymore and the extreme grain patterns are not a problem.

I have just started working with a 'stabilized' wood. This is a process that stabilizes an 'unstable' material. Submerged in a very low viscosity resin a piece of wood is subjected to cycles of high pressure and vacuum until the tissue has been saturated with the resin. It is then cured in an oven and the result is a piece of wood that is stable. Often part of the process uses a coloured resin, which tends to infiltrate the softer sap wood and reflect the structure of the material, accenting the original growth pattern. I recently found a supplier that does it with both pine-cones and..... Sweet corn cobs! (perhaps not). Other materials that I use include Buffalo Horn, Silver, polyester resins and 'Casein Ivory'. This is a resin made from the milk protein casein. It can be polymerised and piped into moulds as two distinct colours and the resulting material has a 'grain' similar to that of Ivory.

I choose from several finishes – oil, wax, lacquer or nothing. Sometimes the choice is dictated by the wood used and other times by the choice to create a particular effect. Sometimes, just simply to give purchasers an option – one Bubinga oiled, one plain or waxed.

Some woods have little 'depth' in their surface, others have patterns created by grain and contrasting texture within the wood. Panga Panga and Mango each have a mixture of very hard resinous material and a softer, more graining one. Imagine looking at a tree trunk lying on the ground. Look at the end with its growth rings and think of it sliced into planks, each cut parallel to the surface it lies on. The planks cut through the centre of the tree have growth rings perpendicular to the cut surface of the plank and the grain lines run the length of the face these pieces of timber are known as 'quarter sawn'. The planks on the top and bottom of the stack have growth rings that are more parallel with the face of the plank and tend to exhibit a more florid grain pattern. This timber is known as 'slab cut'. With a turned object you get the whole gamut of grain patterns. On one axis slab is opposite slab and on the axis you see quarter opposite quarter. Within a tree you have particular cells that weave in and out of other cells in a radial direction. On a quarter sawn surface these cells or 'rays' are bisected. On some woods these rays appear as a delicate bloom (Bubinga, Maple, Satinwood for instance). On others, such as oak they appear as large ribbons, floating across the surface. In some woods the slab face has a very pronounced grain pattern. One in particular has feather like markings on the slab face, hence it's common name of 'Partridge Wood'. When you consider that side grain reflects light and end grain absorbs it you can see what is happening with some woods. With a curl in the grain a particular point in the wood may appear dark because you are looking straight into the end of the grain. As you move the wood you are looking increasingly at the side of the grain and it gets lighter and lighter (look at the back of a violin). A beautiful effect. A burr wood is a complete mish-mash of end and side grain and displays a very random dance. Some Mahoganies and in particular Satinwood have a visual movement in the grain that is a consequence of the spiral growth of the tree changing direction every few, subsequent, years. The resulting 'ply' creates a stunning effect. One of the most frustrating woods is Birds eye maple. Each 'eye' has a surrounding grain distortion, which moves as you twist and turn the bobbin. 'Frustrating' because, no matter how dense the eyes are on the plank to start with, the chances of hitting any as you cut up the plank are low. Still, very attractive when you get some.

A further development of the bobbins is to go beyond their functionality and use them as an armature for something more sculptural. I have always wanted to do a piece as a memorial to people who lost their lives



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anonymously in war. I always thought this would take the form of bas-relief, terracotta panels with faces and hands emerging from tree roots and rocks. This has never quite happened but bobbins came to the rescue. John re-designed and programmed tips that look like bullet heads. The body and stem of the bobbin is wrapped in linen putties with a bleached bone protruding (the button reshaped in casein ivory) and where the yarn would be wrapped is now rusty barbed wire.

Seed forms are a possibility and, at present, I am working on a piece that will have a horn and casein ivory 'barcode' inlayed with the whole packaged in a cellophane windowed box ('Commodification of Art')

Lots of fun to be had with such a simple form. Thanks for reading and hope to see you some time,
Andrew Dickinson of [Artisan Bobbins](#).