The key to cutting sharp dovetails

Peter Sefton and his students learn about the hand cutting of dovetails and use these new-found skills to make a small chestnut letter rack

I still enjoy cutting dovetails as much now as I did when I started woodworking all those years ago, and demonstrating them on my beginners' course to new woodworkers is always enjoyable.

We make a small chestnut letter rack using a range of hand skills, but first we work on grinding and sharpening our tools; if we don't have sharp tools, then we can't cut sharp dovetails!

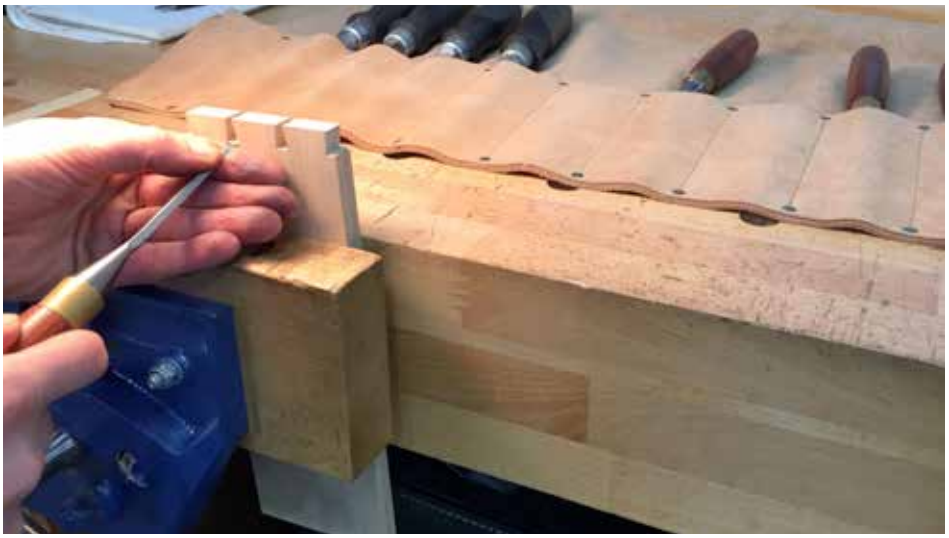
Hand-cut dovetails

We start the project by hand planing a couple of the components with a face side face edge, and down to thickness – only by using the plane can you fully understand the tool's set up and how to get it taking wafer-thin shavings just where required.

The hand cutting of dovetails brings together a variety of skills. Accurate marking out using both the square and dovetail template is needed, followed by fine sawing both on the left and right side of the tail's pencil line down to the knife cut shoulder line. Removing the waste from between the tails by sawing out with a piercing saw before careful chiselling to the shoulder line, we cut the tails first and then scribe around them to form the pins before cutting back to the marked lines with the dovetail saw and piercing saw, before cleaning up with bevel-edged chisels. The sawing of this second part has to be precise to fit the already formed tails, but the chiselling is easier as the sockets to accept the tails are larger, and easy to work between.

Dovetail glue-up

Good dovetails should always be tapped together with a small hammer and block but usually benefit from being cramped during glue-up. The glue soon swells up the timber's cut fibres and the cramps ensure the dovetails are pulled down to the shoulder line and any excess glue squeezed out. MDF cramping blocks are used with the dovetail shape cut out of them before being wrapped in parcel tape to stop them being glued to the job – always an unwelcome design addition! The project is left in cramp over lunchtime before the cramps are removed and the joints flushed down with a sharp plane. A little cleaning up with abrasive paper and the project is mopped with a couple of coats of shellac sanding sealer before being wax finished. **GW**



Paring down to the shoulder between the tails

Scribing around the tails with a scalpel

Paper shows the shoulder is tight to the timber while the square keeps it accurate

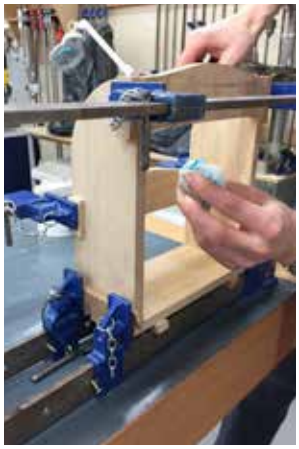
Dry joint tested by tapping into place

Chiselling down the shoulders between the pins

Brass-backed dovetail saw cutting on the waste side of the pins

Measuring the tenon shoulders

Planing the curved end-grain



Dovetail shaped cramping blocks transfer pressure onto the tails

A damp cotton cloth removes excess glue from the tenons