

Joint solutions

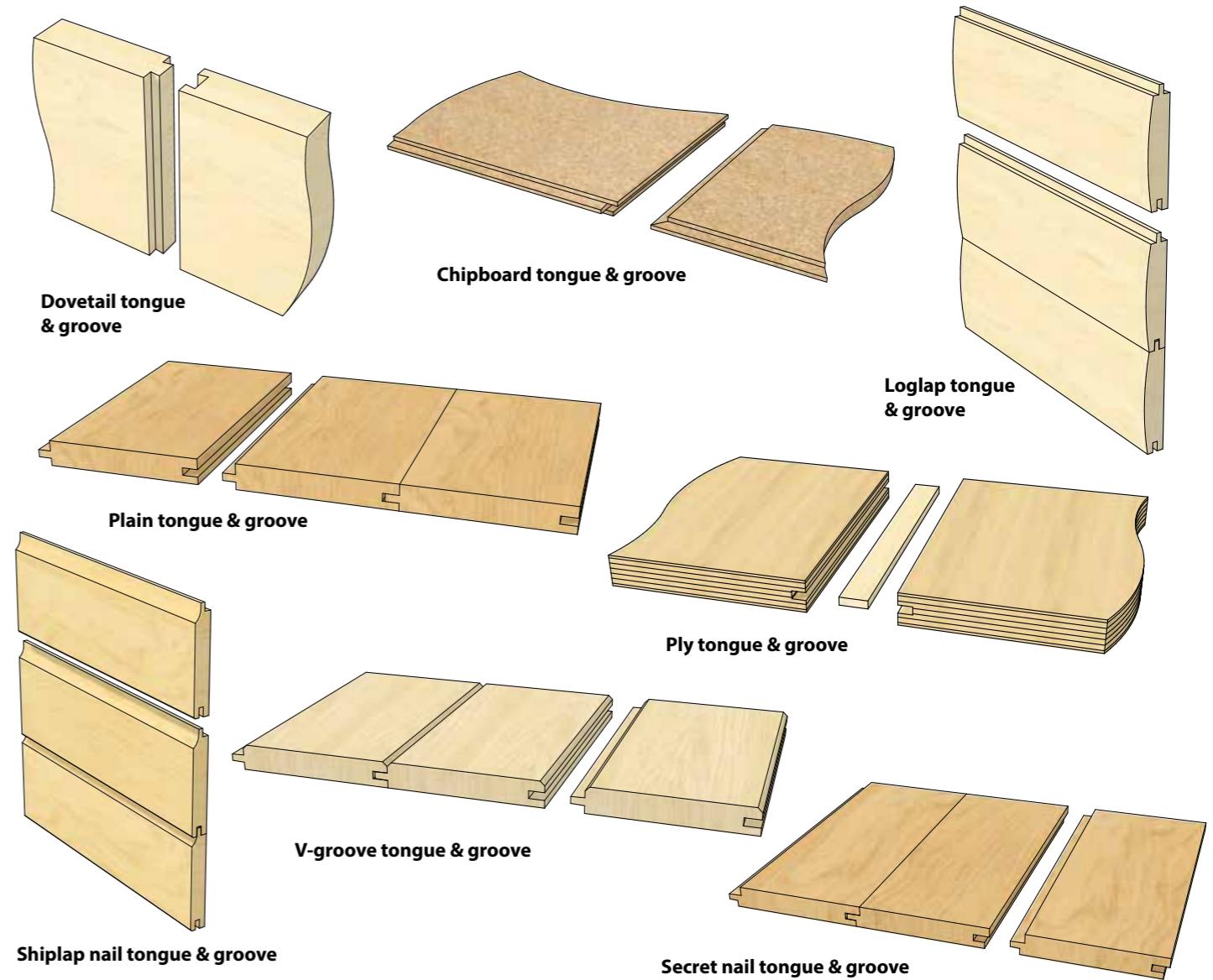
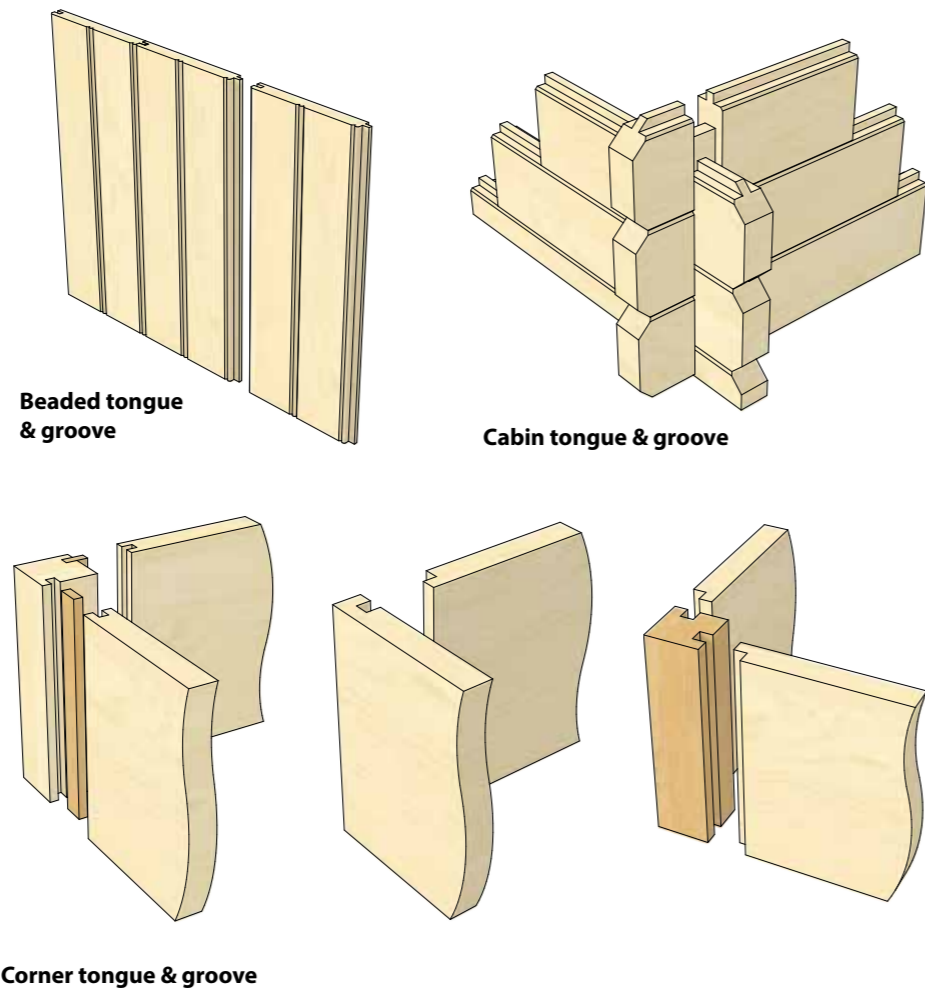
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Tongue & groove

We are nearly at the end of the road looking at different joint types. In this issue, **the Editor** looks at a favourite of his, the tongue & groove joint

The tongue & groove is very functional universal kind of joint that often gets ignored because it turns up in many places quite naturally. It tends to be used on thinner stock and is used as a means of side-by-side jointing or corner jointing, in the case of drawers. When used to cover wide areas, it is dry jointed to allow for shrinkage. Narrow areas are usually glued together, such as for benchtop or the corner joints for drawer boxes, which must be glued for strength. It has the advantage of location, strength and a means of extending board width in an aesthetically pleasing manner while disguising joint movement. You can buy softwood TGV but if you want another timber species, you can actually make it yourself.

TYPES OF TONGUE GROOVE



MAKING TONGUE & GROOVE JOINTS

By hand
This needs some old fashioned tools and skill to match. There are a number of plough planes available secondhand, which is the cheaper, easier way to buy them as the few new equivalents are very expensive. Basically, you get a set of cutters that can be fitted individually in a special body. This has a fence and a depth stop so you can set the tongue or groove width and its depth. The cutters need careful sharpening; better sets come with bead cutters to create a bead edge that not only emphasises the joint in a pleasing traditional manner, but also disguises any flaws or timber movement, which may occur. There is a learnt skill in setting up a plough plane and getting it to work well. Made up panels of tongue & groove with bead or V-groove effect were popular in Victorian and Edwardian times for

finishing the lower section of walls, especially in functional spaces, such as reading rooms, village halls, kitchens, etc. Used like this with a bull-nose moulding along the top, it is known as a wainscot; this has seen a revival in recent times where this retro style seems appropriate. As I have found, working with these planes is definitely a learning curve.

1 This Clifton combination plane is in mint condition with a price on its head – note the comprehensive set of cutters for grooving, tongues, beads and roundovers.

2 I'm going to make do with a much cheaper secondhand Record 044 model with a set of rusty, pitted blades. Here I have been flattening and honing them with a combination 300 and 1,000 mesh diamond plate and lapping fluid.





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3 Having got a good edge and with the blade projecting below the base a tiny amount, I managed to get some decent shavings and form the tongue with the wide tongue cutter.

4 The tongue cutter only needs to project very slightly below the very narrow base. The upstand behind is the fence, which has a recess to accept the tongue cutter when close to the plane body.

5 Now for the matching grooving blade, which is the same width as the gap in the tongue cutter. At all times, the fence needs to be pressed firmly against the side of the workpiece. The thin body section underneath is all that is riding on the workpiece, which can be problematic if it drops into the groove.

6 The result is a plain tongue & groove joint. It is quite hard, controlled work and only a thin shaving can be taken with each pass to avoid tearing of the wood.

7 An edge bead can be produced with a suitable bead cutter from the set that comes with the plane. Again, the tips of the cutter only just project below the base. The depth stop is missing but it was easy to see when the shape had formed properly.

8 When two or more boards are fitted together, you not only get a pleasing effect but it also has the benefit of disguising any gapping and therefore allows for shrinkage. Used as wainscoting to cover a lower wall section, it would have a moulding capping the top edge.



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By Machine

It is much, much easier to machine these joints, especially in quantity. It is a joint that actually seems made for machine rather than by hand. Whether it is a loose tongue, plain, TG and V or TG and bead there are cutters available to make it. Different cutter sets may work in different ways and you need to check the supplied instructions to use them correctly.

9 Here are a selection of cutters, which can find uses creating tongue & groove joints. We are going to use the special **Wealden TG&V** cutter set mid right in this photo. It will do the whole operation with just one cutter by changing over the groove cutter for a bearing.

10 Although it comes supplied with the groover fitted, it is the bearing that is needed first, as it determines the exact depth of the tongue. **Wealden can supply extra**

components making the arbor system quite versatile.

11 With the bearing fitted and the nut tightened, the fence is set flush with the bearing. A breakthrough fence is not required so long as the fence faces are in good condition.

12 The cutter produces a smooth planer finish as the tongue is formed. Quite a lot of chippings are produced during this stage, so dust extraction is a must.

13 The bearing is now replaced with the groover and the fence set so the groove depth is the same or a fraction deeper than the tongue. Both sets of cuts produce one half of the 'V' shape, which is complete when the boards are fitted together.

14 This joint not only looks good, but it also hides any discrepancies in surface levels.

15 An alternative is to have an edge bead on the board half with the groove and a plain tongue on the other board's meeting edge. When fitted together, you get a pleasing traditional wainscot effect.

16 The edge bead is another effective and decorative joint. I used a Titman cutter from their beading range. If you want to use tongue & groove joints, then an investment in a proper T&G or TG&V cutter set, possibly with an edge bead cutter as well, is an investment that will pay for itself quickly. ■

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