Decorative Wooden Plate

At the October meeting, my first meeting, of the Kapiti Woodworkers Guild I spotted on the display table a small bowl which took my fancy. The bowl had been made with different woods joined together along curved flowing lines.
On enquiring I was told the gentle curves along the join had been made using a band saw to cut two layers of wood, one on top of the other. The cut in the top piece of wood thus matching the bottom piece. The gentle curves effectively accomodating the small variations in the shapes created by the thickness of the band saw blade.

I left the meeting quite challenged to replicate this joining method.
My first attempt using my jig saw to make the curved cuts ended in disaster with the resulting cut not even being square to the top wood surface. Absolutely no chance of them matching!

The second attempt was not much better when I duly took my two pieces of wood to our Menzshed to use their band saw. The band saw was not too well maintained and bandsaw drift, a new term I was to learn, was extreme. Add to this being growled at by a fellow Menzshed member for not using the bandsaw correctly seen me head home with my two badly cut bits of wood and my tail between my legs.

The following day was spent trying to nut out a solution to my dilemma until I finally thought that I cannot be the only person in this world having this problem, so Mr Youtube was my next stop. And yes I was to find out I was not the only one facing this challenge.

A few hours of Youtube watching and I had the solution of using a specific combination of router bits and associated spacer bearings to make templates. The next stage of my journey was to find and purchase the relevant router bits and spacer bearings. After a day of failing to find these following my world wide internet search I headed back to Mr Youtube. To my surprise my new found YouTuber friend (who I had watched to get my template solution) had added a new clip apologising for having given a specific router bit guide bearing size that was no longer available. And this I could confirm!

However my patients in getting on and making a nice wooden plate was not going to tolerate waiting on a router bit bearing to come from Mr Amazon.

It was about this stage that I finally thought thru and understood the principles of making the relevant templates. Perhaps what every good wood worker should have done at the outset rather than just “following instructions”

In earnest I then set about working out how I could use a spacer on my plunge router. My first thought was to jump in the car and head off to my Guild member friend Ian Platt to make me a steel spacer on his precision engineering lathe. Again my impatience stopped me and I concluded I would make a wood spacer on my own lathe. I estimated an accuracy of 0.2mm was needed given the radius of the curves I was going to have in my join.

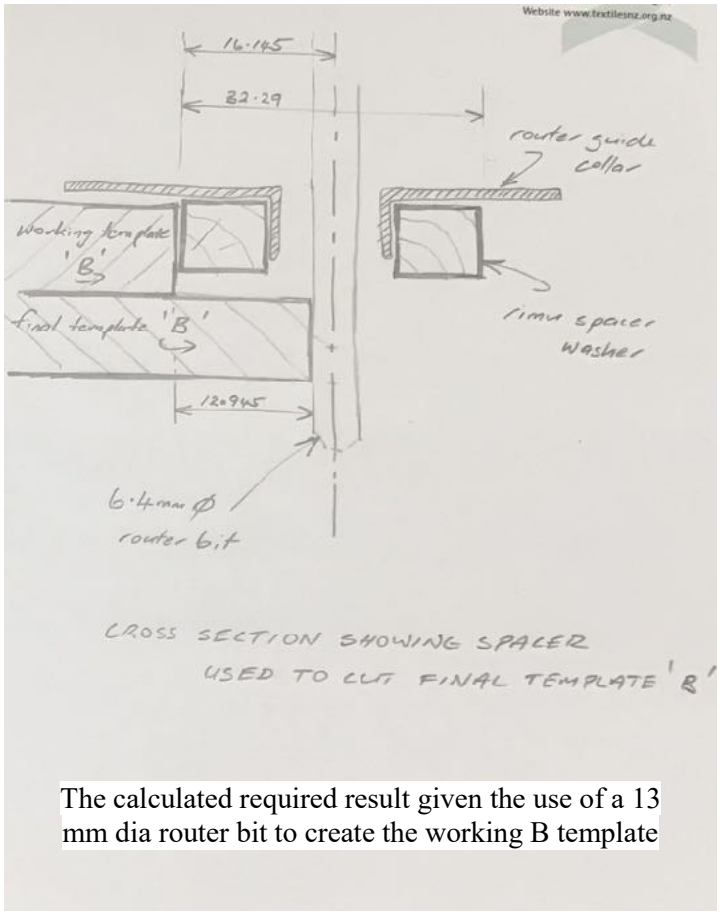
Now. if you have hung on in there and still with me, to the specific process I used.

The principle being that I needed two templates, a male and female, that I could use a flush cut router bit to shape the two pieces of wood I wanted to join… without any gaps and obvious glue lines! Note the thickness of your timber is limited by the length of you trim router bit which can be up to 50mm.
All templates I made are from 6mm mdf.

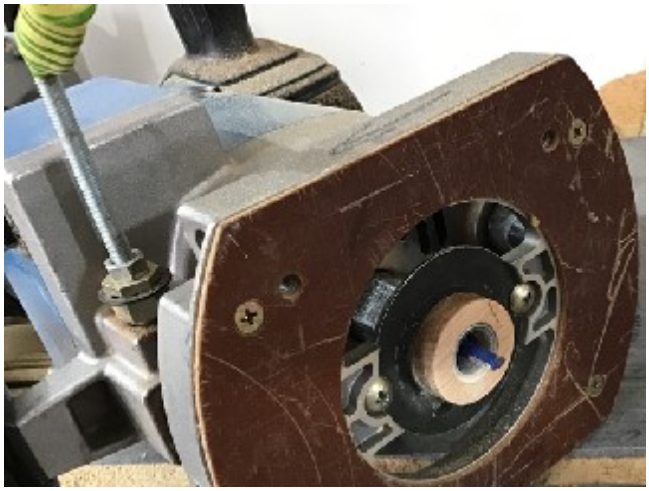
1. Create your **Master template**. Draw out the shape you want for your join. Cut along your curved line with a jig saw or band saw and then sand the cut edge to ensure you have nice flowing curves with no bumps or nicks. Suggest making this Master template longer than you need given at some future time you may wish to make a longer join than that required for your current project.
2. Making the **male working template**, template A. Use your master template to create a duplicate template by using a flush cut bearing router bit. You can use a plunge router but a router table is best. Suggest cutting the male working template roughly to shape so your router has less to cut and allow you to more easily follow the shape of your Master template.
3. Now put away your Master template some where safe. You will not need this again..unless you need to remake a subsequently damaged working template.
4. Making the **female template**, template B. Use your working male template A and a flush cutting bearing router bit to create the first of your female templates. The resulting template shape will follow the curve but be the thickness of your router bit different.
5. You need to use your **working B template** to create your **finale B template**. So you need to create a spacer on your router guide to ensure the resulting cut creates a template identical in shape to your A template. But obviously a mirror image.
6. From your now perfectly matched A and B templates you can use a flush cut bearing router bit to cut the pieces of wood you wish to join.

Good luck.

Ian Barbour
11 Sept 2022

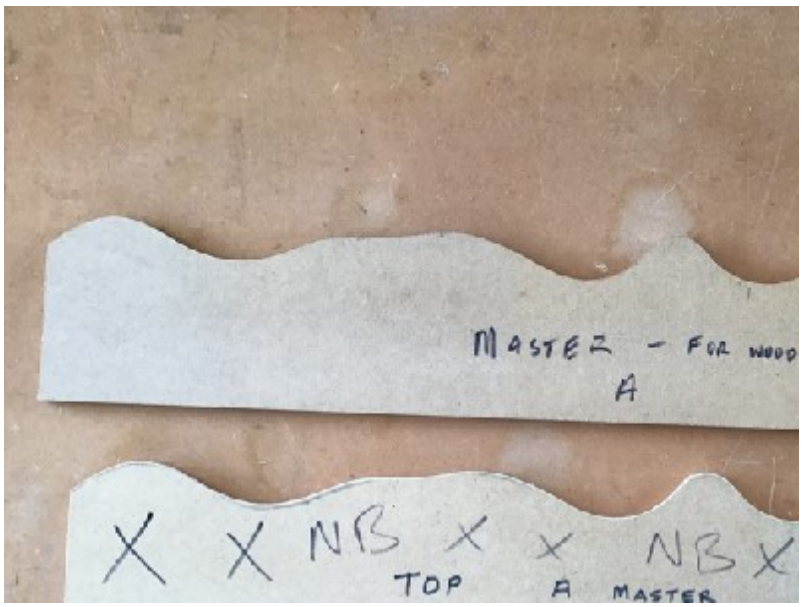


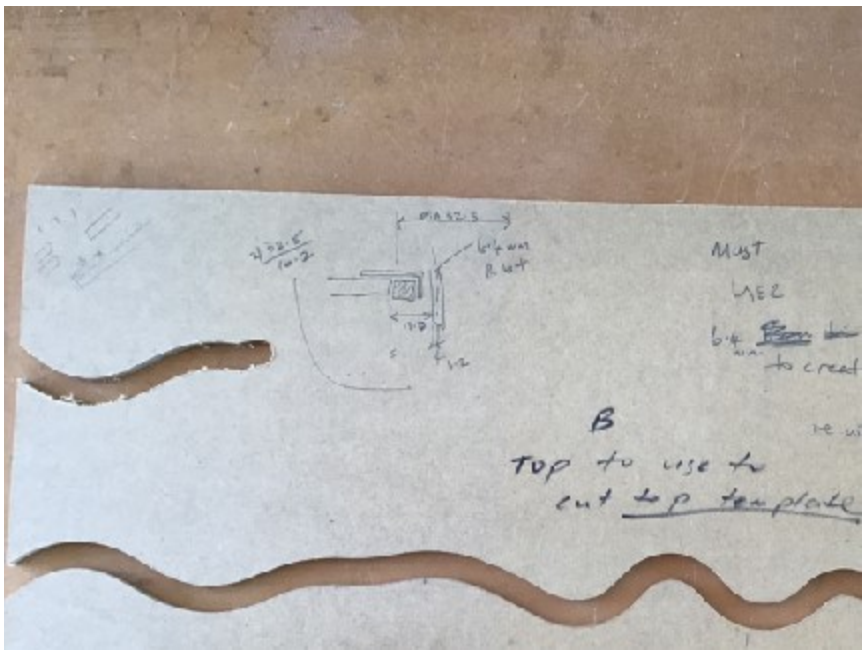
The calculated required result given the use of a 13 mm dia router bit to create the working B template

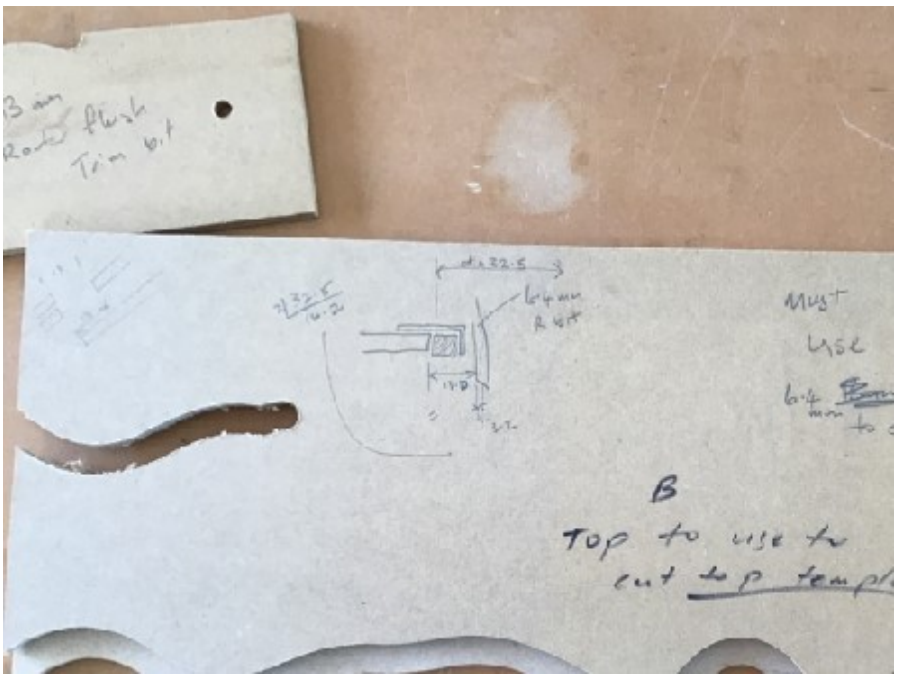


Spacer mounted on the plunge router


X X NB X X NB
TOP
A MASTER


MASTER 2 - FOR WOOD
A
X X NB X X NB X
TOP
A MASTER


MUST
B
TOP to use to
cut top template



Spacer used to create finale B template that matches
A template exactly