

Box Bits # 9

Grain Match on 4 Corners From a Single Board

Introduction

Way back in Box Bits # 1 we discussed resawing of stock to achieve continuous grain on all four sides of a box.

Now what happens if the beautifully grained length of stock you have will not allow for resawing because it is too thin?

Do we revert to 3 matches and a non-match corner?.....Nope..we just think “outside of the box” and adapt the method shown to give us four corner matches as detailed in this article.

A Recap of Box Bits # 1

Figure 1 from Box Bits #1 shows us a single length of stock with the cuts made as per the diagram and we can see that the corners cut at B, C & D will have matching grain but the corner made by joining A and E will not.

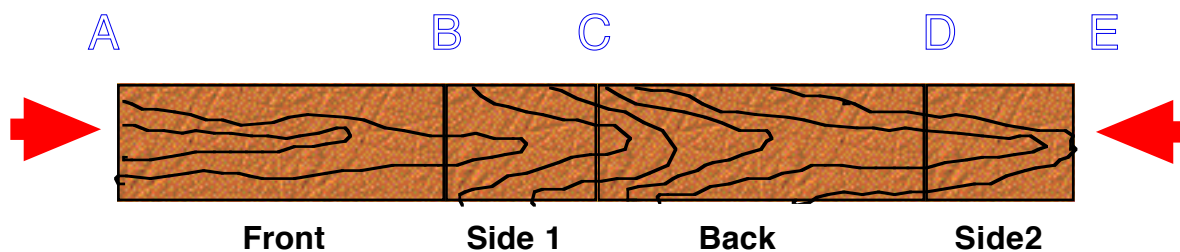


Figure 1

The Plan

By re-arranging the cut plan, we can cut 5 pieces to make up the four sides of the box and achieve a grain match on all four corners of the box.

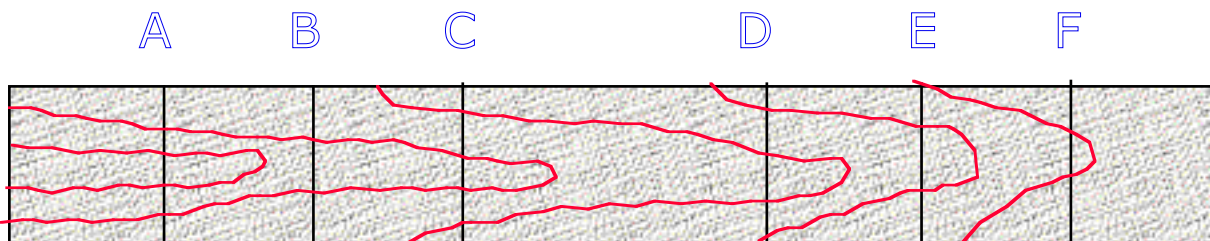


Figure 2

The cuts as shown in **Figure 2** are:

CD is the rear of the box

BC and **DE** are the sides of the box.

AB and **EF** make up the front of the box.

The Front of the box is a composite of 2 lengths of the stock, and is joined in the centre so that the length of the front joined at **F** and **A** is exactly that of the rear length.

That is $AB + EF = CD$

For the exercise all corners are assumed to be cut as 45° mitres except the cuts at A & F

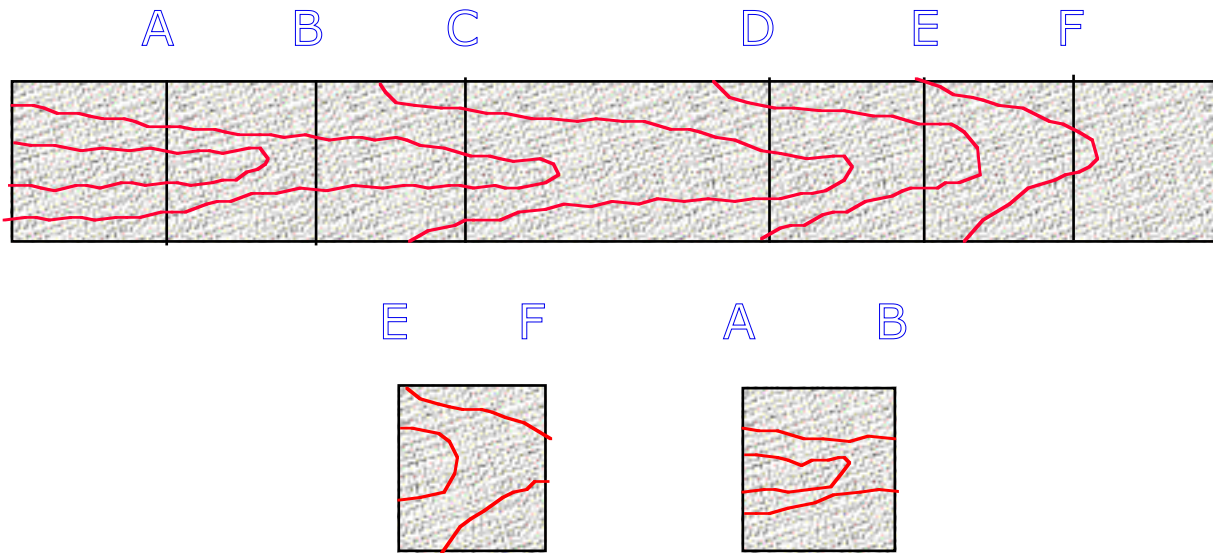


Figure 3

We would all be happy with the matches at the corners formed by

AB - BC

BC - CD

CD - DE

DE - EF

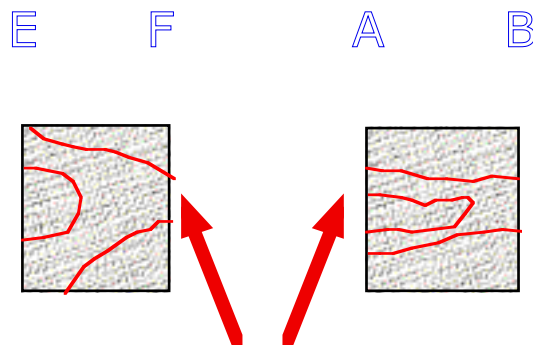
But **EF - AB** leaves a fair bit to be desired, and its in the centre of the front of the box..

So a distraction...disguise.....or **Fudge Factor** needs to be applied.

The Fudge Factor

Always remembering that the length of the box front **EB** must equal **CD**, then the disguising of the centre join in the front of the box can be done in any of several ways:

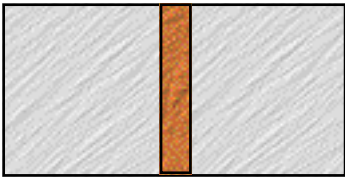
- a routed dado which is inlayed with a contrasting coloured insert
 - a replaced centre section in a contrasting stock with matching cuts to **EF & AB**
 - A shaped insert with the appropriate shapes also cut from **EF & AB**
 - a marquetry solution could also be applied
- and the list goes on.



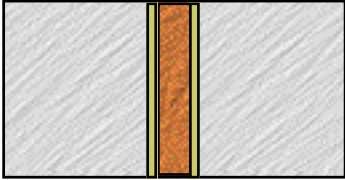
**DON'T FORGET ALL CHANGES MUST BE MADE
HERE.....NOT AT E OR B...**

(to maintain the corners' grain match.)

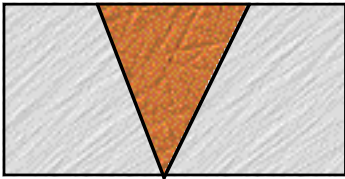
SOME EXAMPLES



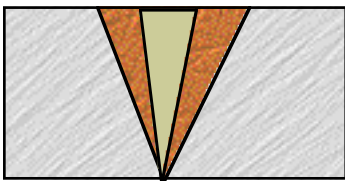
This is a straight dado insert or complete addition in a different stock. Pretty boring, but it does the job



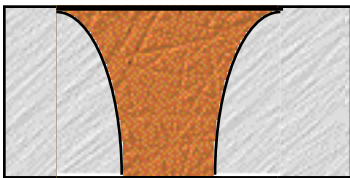
Dressing it up with a bit of lamination



A plain “wedgie”



Another “wedgie” laminated in two different stocks



Adding some curves

So, that’s how to get a four corner grain match from a single length of stock.
It pays to label the stock corners (such as A, C etc) as there are a few more bits to get confused with, and don’t forget to finish the inside of the Box Face as well...

Have Fun.