Box Bits #1

Basic Resawing for Continuous Grain

Introduction

Now this may be telling experienced box makers how to suck eggs *, but for a new comer to the art of box making this article will explain the "Why's And How To's" of making a perfect Four Corner Match of continuous grain on all corners of their mitred corner boxes.

* See **NOTE 1** .at the end of this article.

Why?

Boxes constructed using rebated corners, box joint corners or dovetailed corners show some endgrain at the corners which interrupts the grain pattern at each corner. Boxes made with mitred corners have no disruption to the grain pattern at the corners (hopefully) and if we take the example shown in **Figure 1** below of box sides made from a single board 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 ..

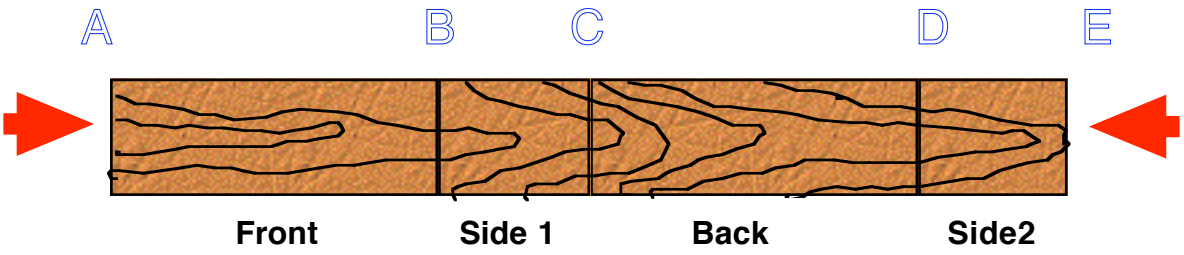


Figure 1

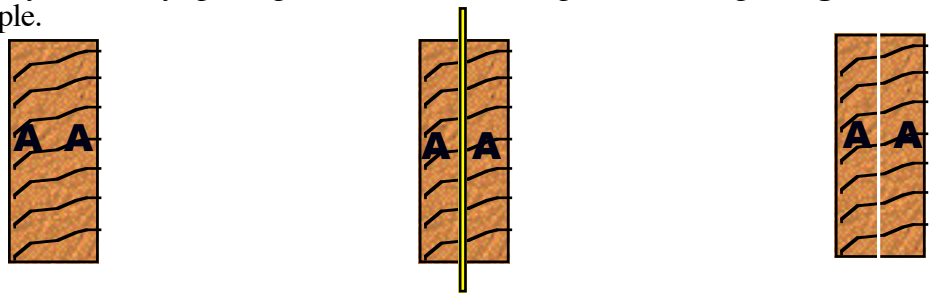
A solution

If we use different dimensioned stock to make the same sized box, resawing can give us continuous matched grain at all four corners of the box.

The stock difference is that it should be twice as thick as the original plus a saw kerf allowance, but only a little over half as long. Typically **A - C** above plus a Fudge Factor for saw kerfs etc.

Resawing

This process can be achieved by using a Band Saw, a Table Saw or a Hand Saw, and it is basically accurately splitting the stock in half along its entire length. **Figure 2** shows an example.



Stock Before Sawing

Stock Showing Sawing

Stock Split after Sawing

Figure 2

No matter what method you use to saw the stock in two it is a very good idea to mark both ends of each half with the same distinguishing mark before starting. This is important, as there are about 32 combinations of how to put these resawn boards into a box shape, and only one of them is correct

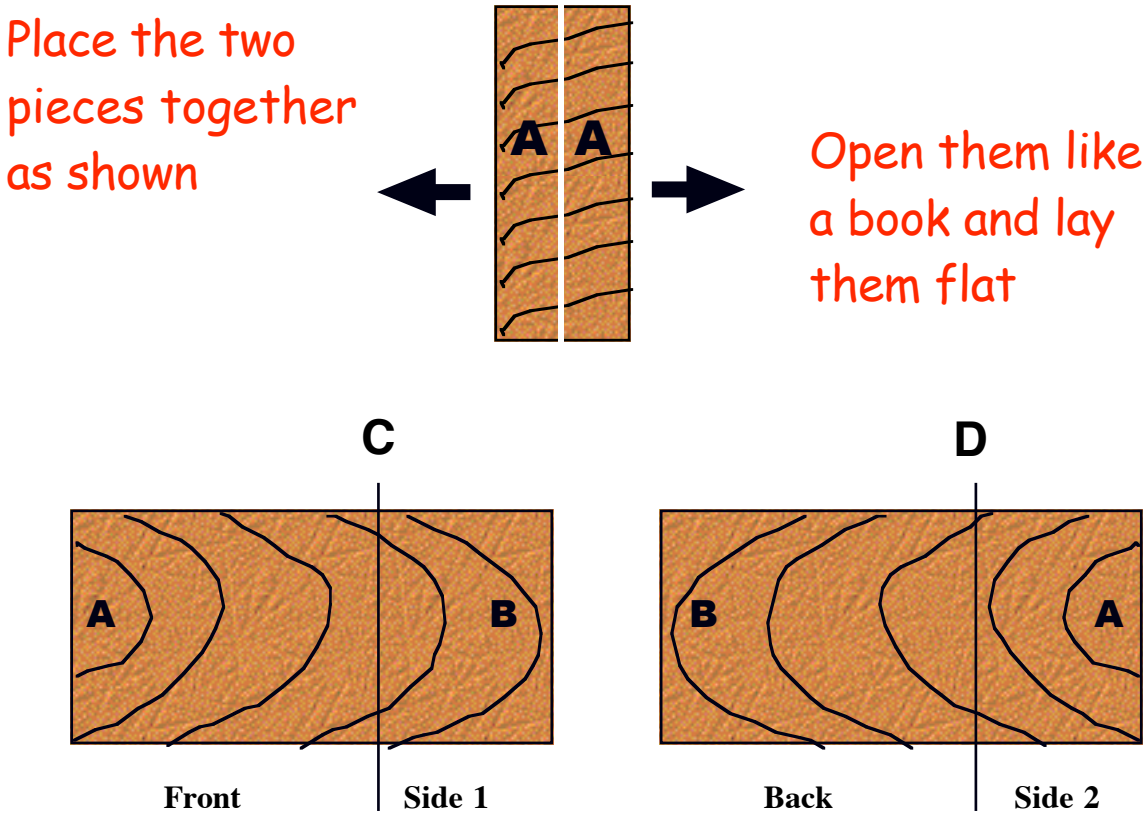


Figure 3

The exposed faces are the nearest match of grain in two pieces of stock that can be obtained by resawing and are the new outside faces of your box. Normal smoothing techniques such as Planing, Thicknessing and Sanding are used to remove any saw marks

Mark the pieces as shown.....i.e. Front /Back /Side 1/ Side 2 where:

A - C = B - D
C - B = D - A

and there will be a grain match .at all four corners as follows:

AC / CB
CB / BD
BD / DA

and most importantly,

DA / AC.

Conclusion

Those are the principles involved in resawing to produce matched grain on all corners of a box. The techniques required for Table Saw and Band Saw resawing have been discussed many times within the forums, and for Hand Saw resawing..... please see your Doctor for a Fitness Checkup and a referral to a good Psychiatrist..
Have Fun.....

*** NOTE 1**

Eggs are usually "Blown" not "Sucked"
See -
http://www.thegastronaut.com/Teaching_Grandmothers_to_Suck_Eggs.htm