22nd Oct

I've done nothing on the Denford for a couple of days so nothing more to show as far as gears or frame are concerned. I still haven't started on the Walnut plank - but I have been thinking about the potential issues - mainly due to the problems I had cutting the Maple down the middle of the 27mm wide board.

I'm thinking that I'll need to break out the Table Saw rather than hope that the Band Saw will behave. That will mean that the kerf will be about 3mm rather than ~1mm so I might have to re-think my cutting regime. Since the board is 9½" wide that won't matter but it is a large lump and having another pair of hands on it will certainly be an advantage so I'll probably make a start on it on Sunday when my grandson should be available.

The winding spindles are now made - well the turning part is done - they still have to have the square for the Key and the locking flat milled, and I've tentatively assembled the Escape Wheel/Pinion/Spindle together and tested how that aligns with the Latch/Finger/Pendulum as seen in Fig-85. I've attached the 1st & 2nd train spindles but the Gears for those aren't made yet so that is my next task.

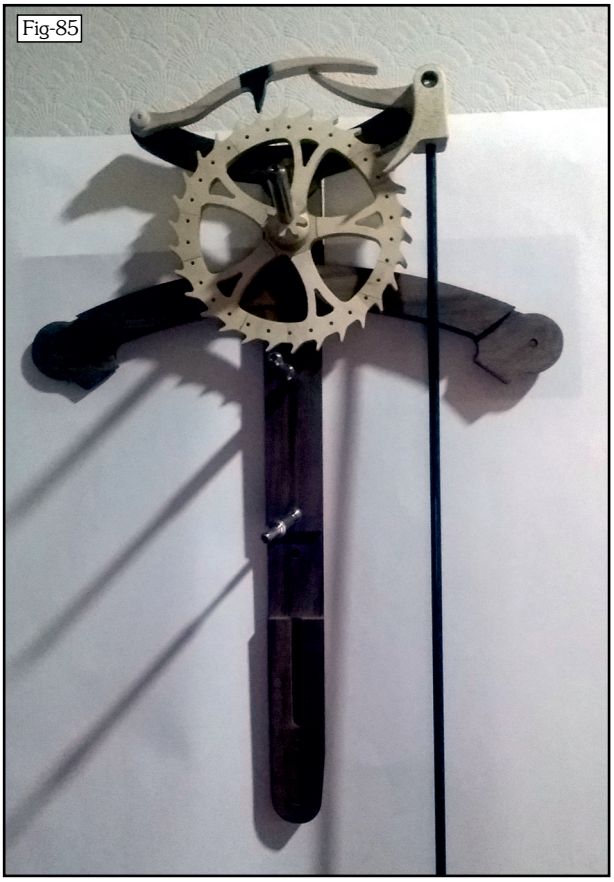
Fig-85

There are two gears on both spindles, a 32 & 60T on the 1st and a 64T + 8T Pinion on the 2nd. For a number of reasons I'd cut part of the Maple board down to 132mm wide so could get all the 32T gears out of a 340mm length of that but the 64T needs just a little wider to make sure that there is no 'trimming' of some teeth. This made me settle on creating the G-Code for 8 - 32T gears first and I needed to split the Maple down the middle which didn't go as well as the first time. Hard Maple really is 'hard' - beautiful but challenging! Even with the Bandsaw tension set for a 1" blade rather than the 3/4" I'm using the cut wandered over 5mm across the 132mm width after 200mm length so I started again from the opposite end but it took some effort to separate the two halves.

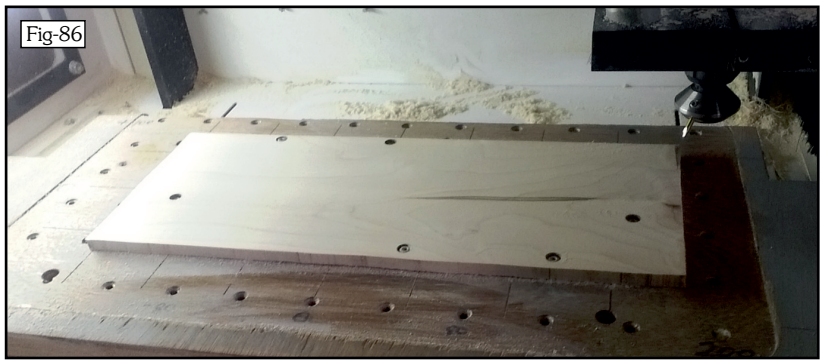
Fig-86

I might retrieve the second piece and make two 60T gears from it but first I had to machine the first half to get it near parallel before mounting it on to the Denford table. It still needed a 3mm cut before the surface was clean though. In Fig-86 you can see that it's finished up at about 9mm thick and it's interesting to see a dark streak which is totally enclosed - not that it matters, it's a natural product, and just adds character. The gears will be 5mm thick finished so there is enough timber available to not need a sacrificial sheet and once the gears are cut to 6mm deep the board can be turned over to have the second face machined leaving small tabs holding them in place to be sawn free in a third operation. This may not be possible for the 60T gears I hope to get out of the other board.