

20TH NOV

This is a day I will remember!!

I'd determined to give the Denford something to do while I set about finishing the 30T gears and rather than start on the Dial – for which I have the blanks semi-prepared – the 64T & 60T gears looked to be the best bet.

My work-flow now starts with determining what size the blank material is so naturally I needed to look at the Maple plank I have to make sure that I could cut three slices at 7+mm thick. I knew it had some 'edge damage' (see Fig-127) but imagine my dismay at realizing that when I cut a piece off the one side, to make the Frame Spacers, the board finished up at 130mm and to make the 64T Gears I need a clear 132mm !!

Clearly a re-think was needed so my 'fall-back' position turned out to be making up composite boards using the 64mm x 10mm thick Maple offcuts which I rebated along the 410mm length to make half-lap joints. As I was preparing a suitable clamping jig for the glue-up I had a phone call from my Grandson (who lives with me) enquiring if I was home. On hearing that I was he suggested that I not venture out since he had just been tested Positive for COVID-19 :(

I knew I should have gone shopping yesterday but my 'needed' list was small. The rest of the day was taken up with finding out what I needed to do as far as getting a test was concerned and learning about the horrors of on-line-shopping!!

As I said - a day to remember!



21ST NOV

Back to the Maple glue-up and the 64T gears. I finished the clamping jig and glued up the three lengths to give me a 160mm x 410mm board (Fig-128 is the jig with the Maple under pressure) from which I can cut three Gears. The Denford has a 400mm 'soft' limit on the X axis but by judicious testing this morning I've found that I can push it to +205 so I do have a little more leeway than I thought.

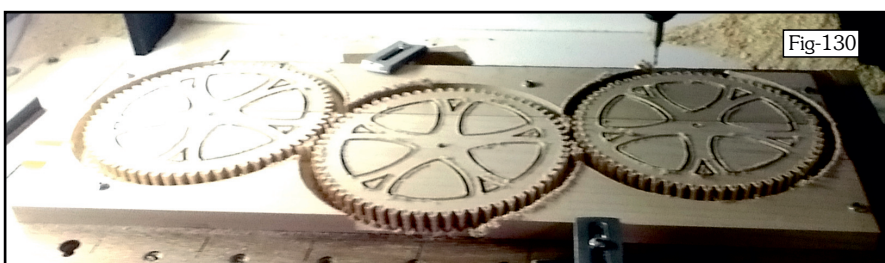
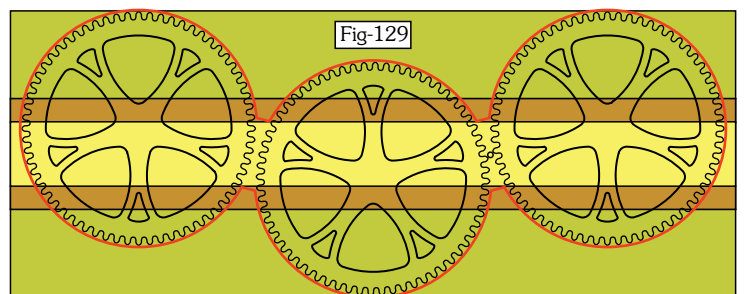


The space between the gears should be cleared by the smaller cutters when they are forming the teeth.

The brown bands in Fig-129 show the position of the half-laps.

That went pretty much to plan though I did stop the first clearance profile when it got to the bottom of the centre Gear because it was too low. A small adjustment to the position of the whole drawing in CamBam and a re-generation of the G-Code soon corrected that.

At 162mm the board is just a little too wide to allow me to clamp it on the table using the eccentric jaw so I'm going to return to clamping by screwing down. I don't have to skim the surface so there is no need to sink the screws and the heads will be avoided by using a 6mm Ø cutter to cut outside the red line in Fig-129 to clear the area around each gear to ease the separation on the band-saw.



I surmised that the clearance space between each gear would be removed by the 2mm cutter but you can see in Fig-131 that was not the case. Not that it matters :)

