18th Sept

The second Op. needed on the Latch/Finger Support caused me some 'Thought'. Having no straight sides, holding it flat in a vice was not possible so my initial idea was to use a pair of curved 'Jaws' but that progressed into thinking that since I already had a drawing of the component which could be re-purposed to cut the very shape in a block of scrap pine, I could do that on the Denford and saw it in half (along the curve) making two very specific [Jaws]. Fig-15 My mistake this time was deciding that I could position the component directly on to the Denford Table and circumvent the wooden jaws altogether :(Clamping it down was a bit of an issue and I made a mess of the first two so went back to the wooden jaws idea. This meant that the Brass Bush [13] needs to be larger than the 14mm dia. as designed - it's not a critical size so is not material. As I don't have many (what I consider 'large') end-mills, I resorted to the Boring head I made some time ago which can be set to cut from ~6mm to ~100mm - depending upon the tool-bit I fit.


Fig-15

Today I've made the Bush and Clamping Screw which fixes the Latch Support in place. The support needs to be movable (a little) so that the clock can be adjusted to be 'in beat' — that is so that it sounds Tic - Toc - Tic - Toc - Tic - Toc rather than TicToc - TicToc - TicToc or even TocTic - TocTic - TocTic ...

To achieve this adjustment I've designed in a brass plate that will extend below the bottom of the Support and be housed in a cut-out in the main rear Frame upright. Each side of that has a grub screw so that the whole top end can be tilted (within about 4° either way) – I've yet to make the plate because I won't need it until I've also made the Main Frame, but details can be seen in Fig-20

I'm sure you will be well aware that, in general, it is unwise to rely on a metal thread cut in wood - I do use that method on occasion such as the M3 Grub Screws I've just mentioned but for a thread such as M5 where some force will be exerted to clamp to parts together I fit a 'Thread Insert' - Fig-16 shows one being fitted by drilling the appropriate size hole and without removing the work, drive the insert in with a Hex Bit. The spindle is turned by hand of course!

Fig-16

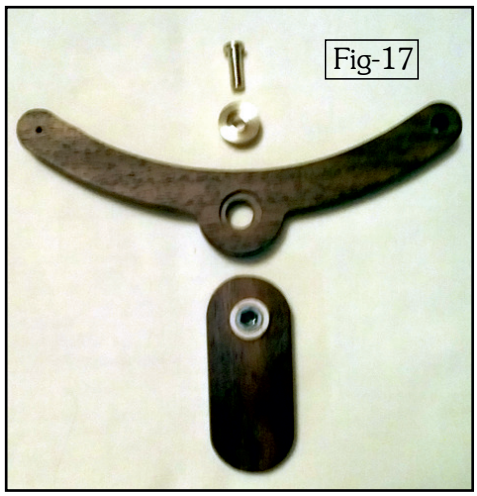
Fig-17

Figs-17 & 18 are photo's of the parts exploded and assembled, 19 a close-up of the Screw & Bush

The two small holes are for alignment pins. The Rear Support Plate will be fixed with a single woodscrew and the matching pair can be drilled in position via CNC the alignment with the spindle bearings is assured.

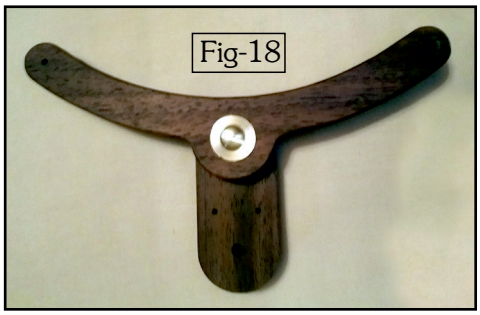
Fig-18

Fig-19