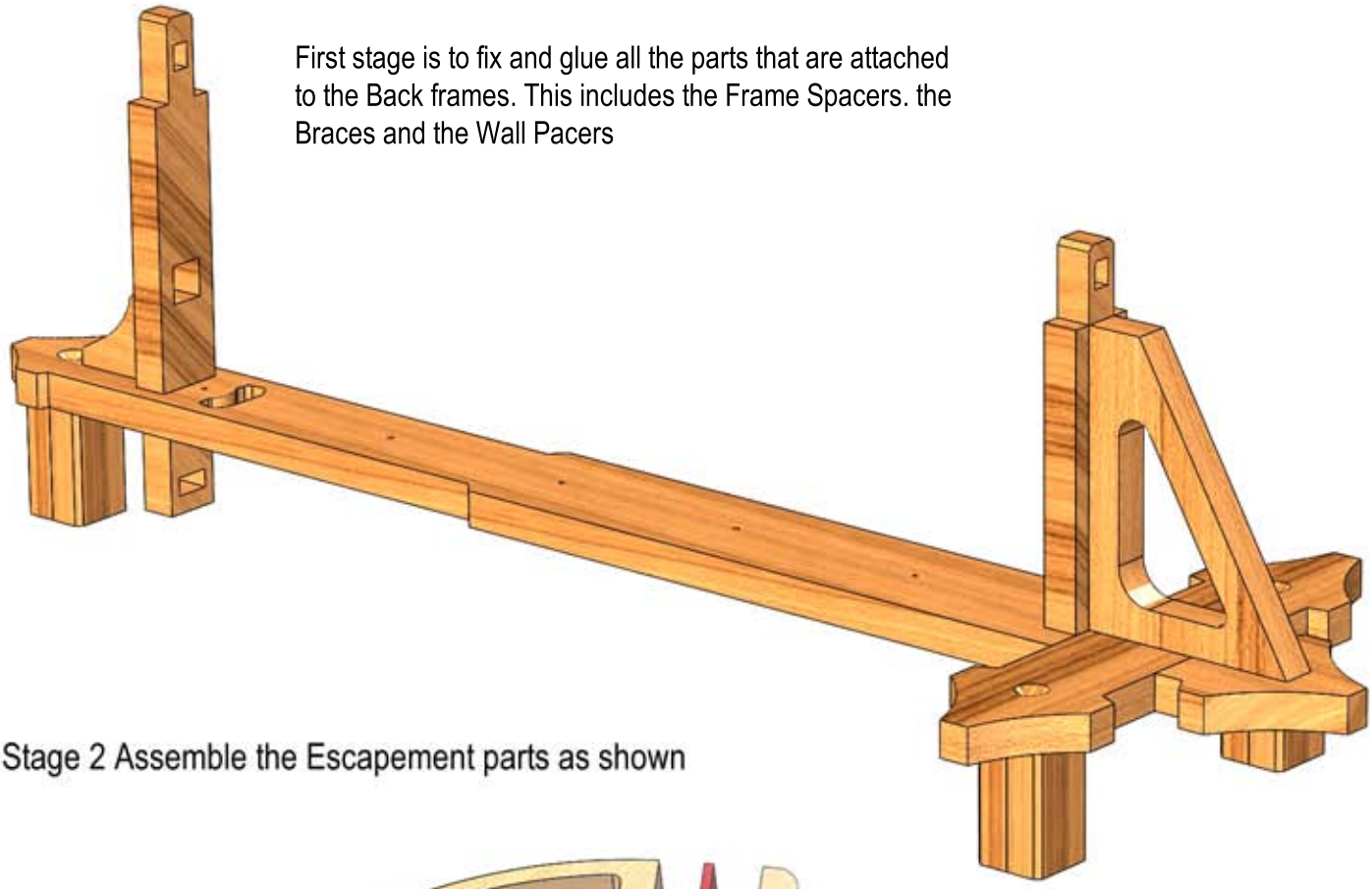
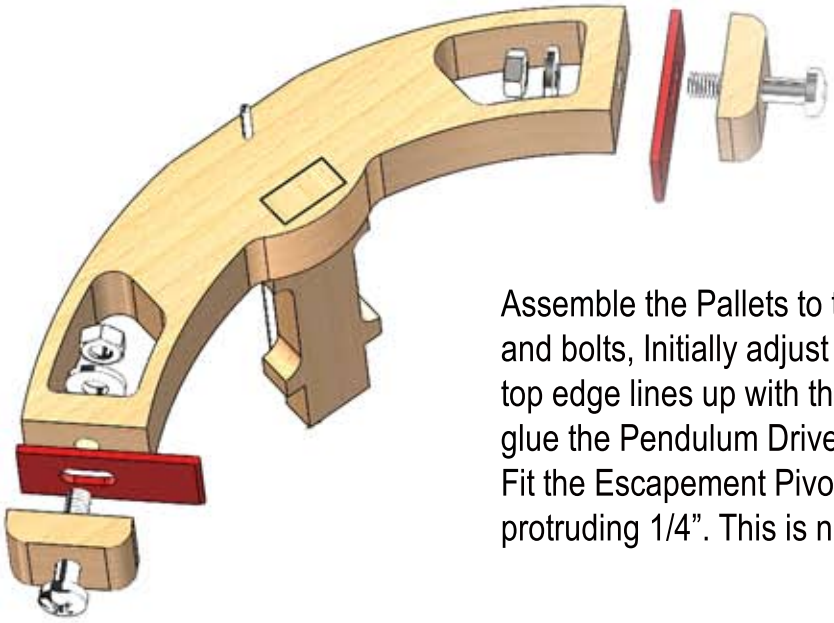
Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Stage 1 Assemble and glue all frame parts

First stage is to fix and glue all the parts that are attached to the Back frames. This includes the Frame Spacers. the Braces and the Wall Pacers



Stage 2 Assemble the Escapement parts as shown



Assemble the Pallets to the Escapement using the screws and bolts, Initially adjust the position of the Pallets so that the top edge lines up with the top of the Escapement. Now fit and glue the Pendulum Drive into the back of the escapement. Fit the Escapement Pivot through the Escapement and leave protruding 1/4". This is now ready to fit to the Back Frame.

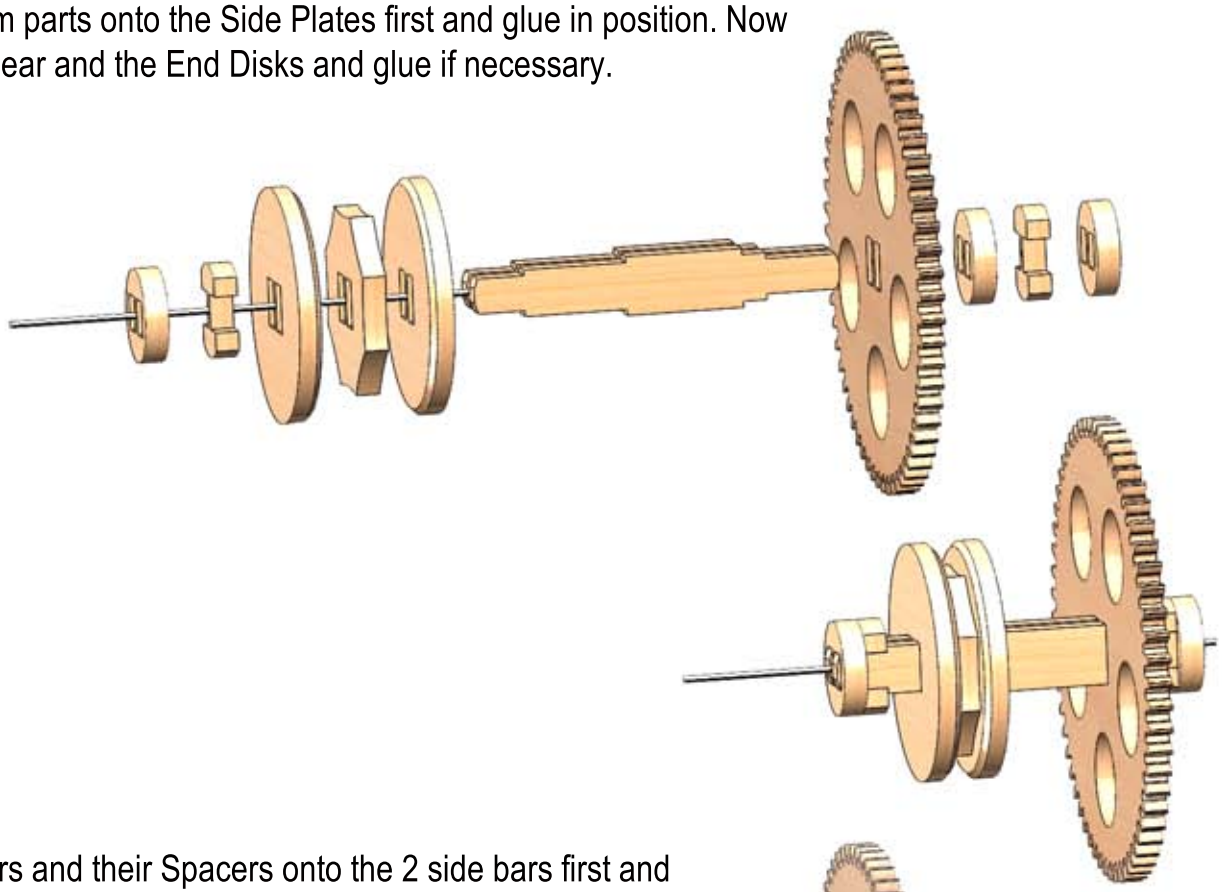
Brian Law - October 2016

Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Stage 3 Assemble the 4 Drive Train gears .

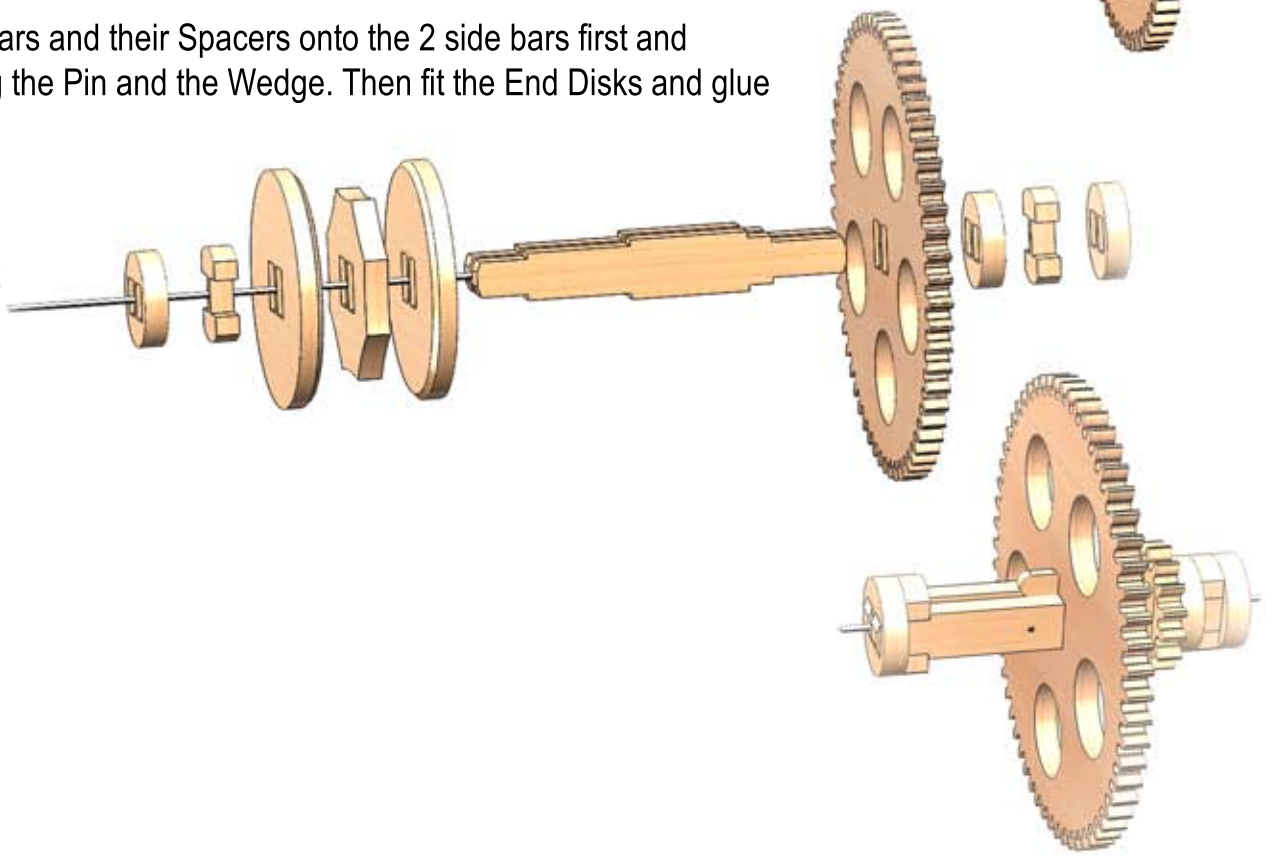
Slide the Drum parts onto the Side Plates first and glue in position. Now slide on the Gear and the End Disks and glue if necessary.

Gear Train 1



Slide the Gears and their Spacers onto the 2 side bars first and secure using the Pin and the Wedge. Then fit the End Disks and glue if necessary

Gear Train 2

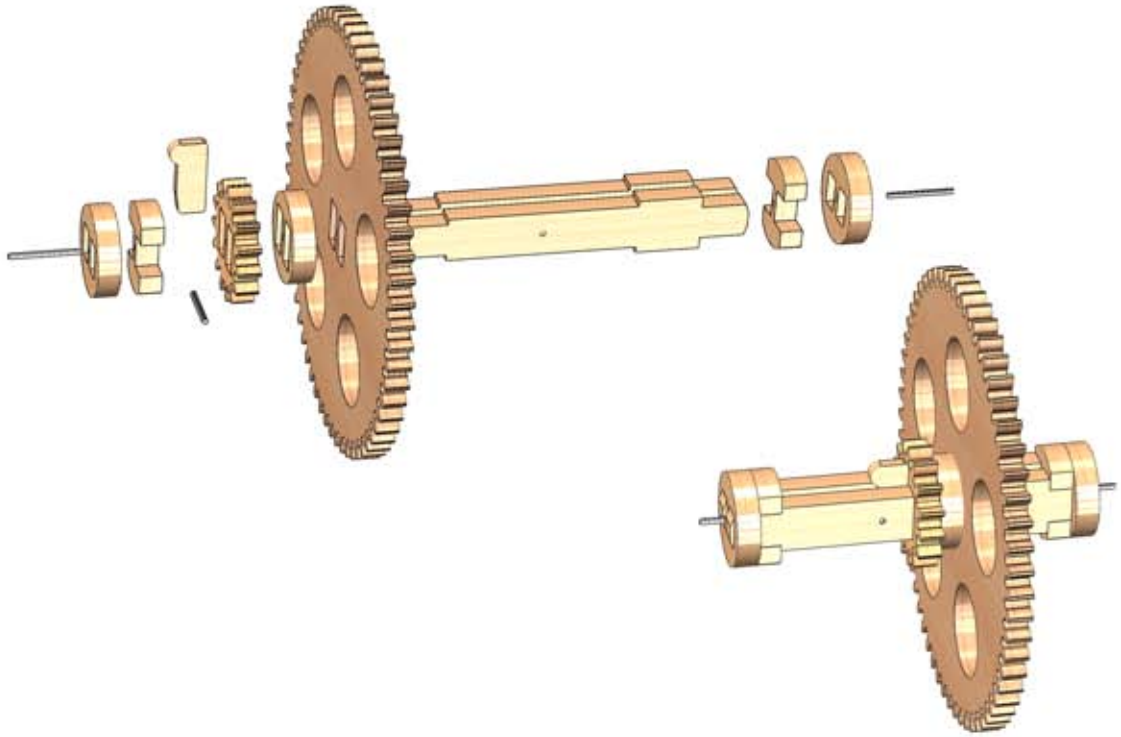


Brian Law - October 2016

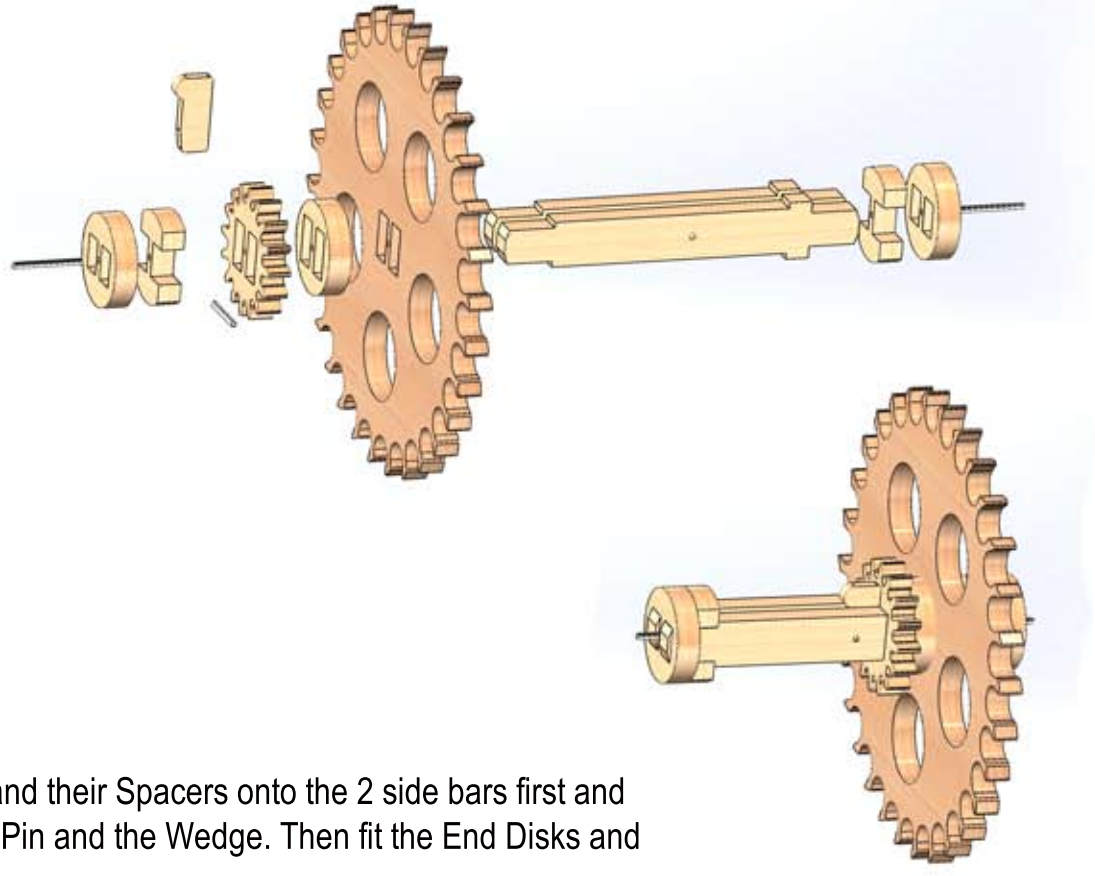
Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Stage 3 Assemble the 4 drive train gears

Gear Train 3



Gear Train 4

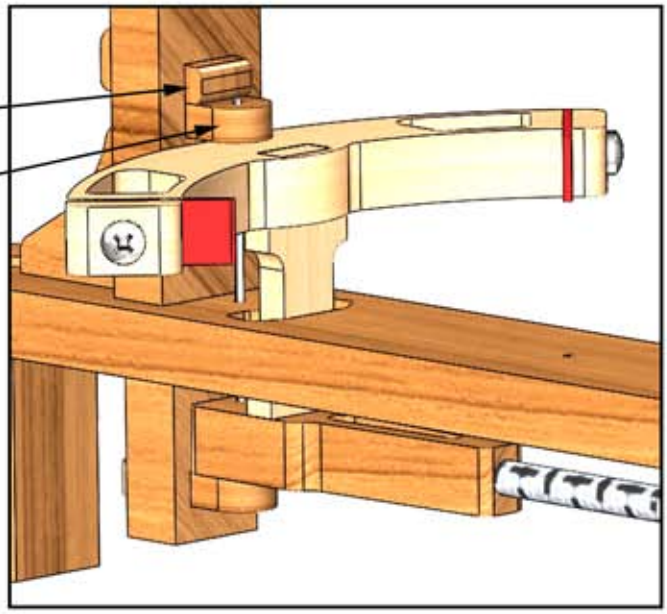


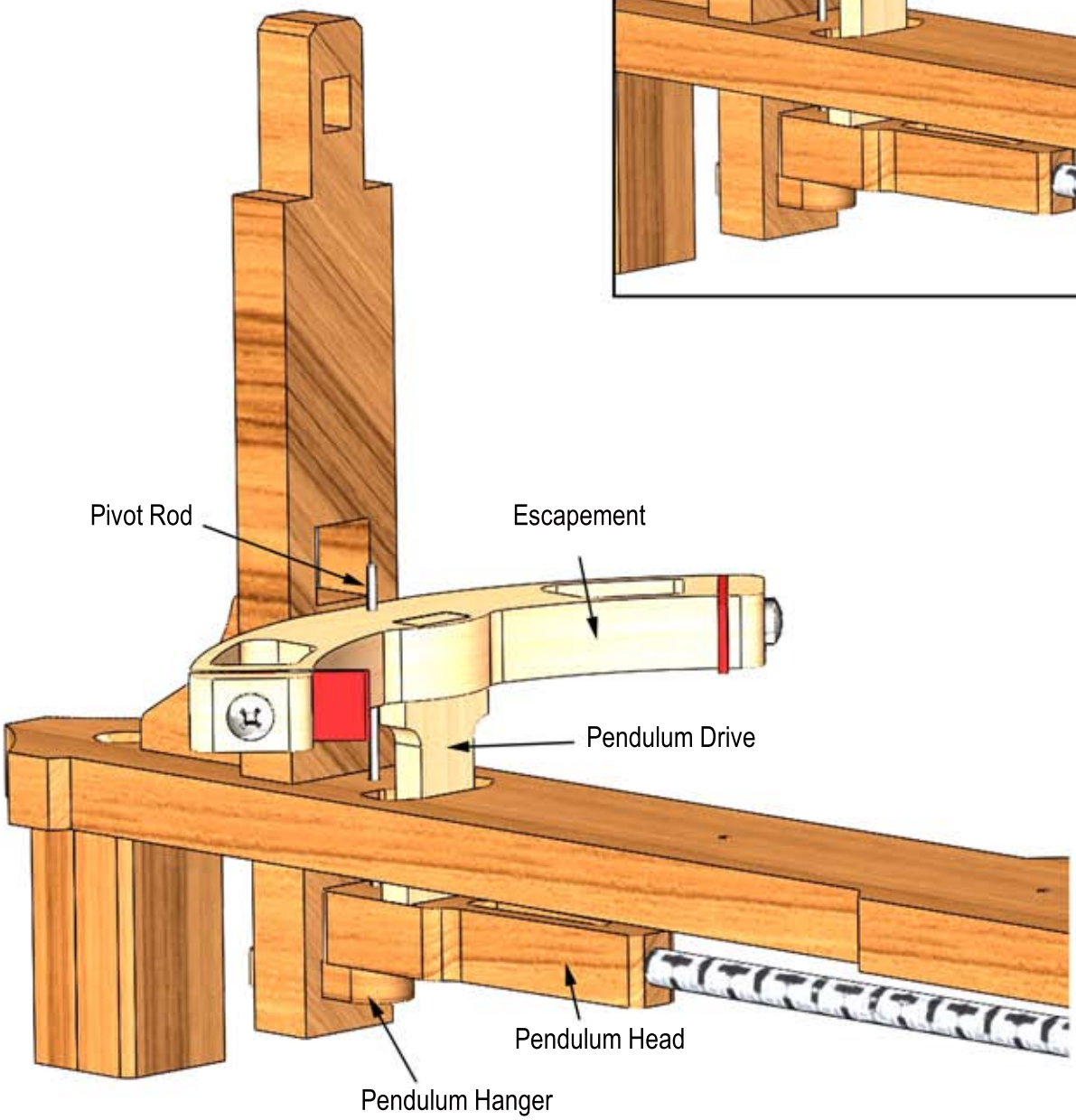
Slide the Gears and their Spacers onto the 2 side bars first and secure using the Pin and the Wedge. Then fit the End Disks and glue if necessary

Brian Law - October 2016

Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Stage 4 Fit the Pendulum to the Escapement

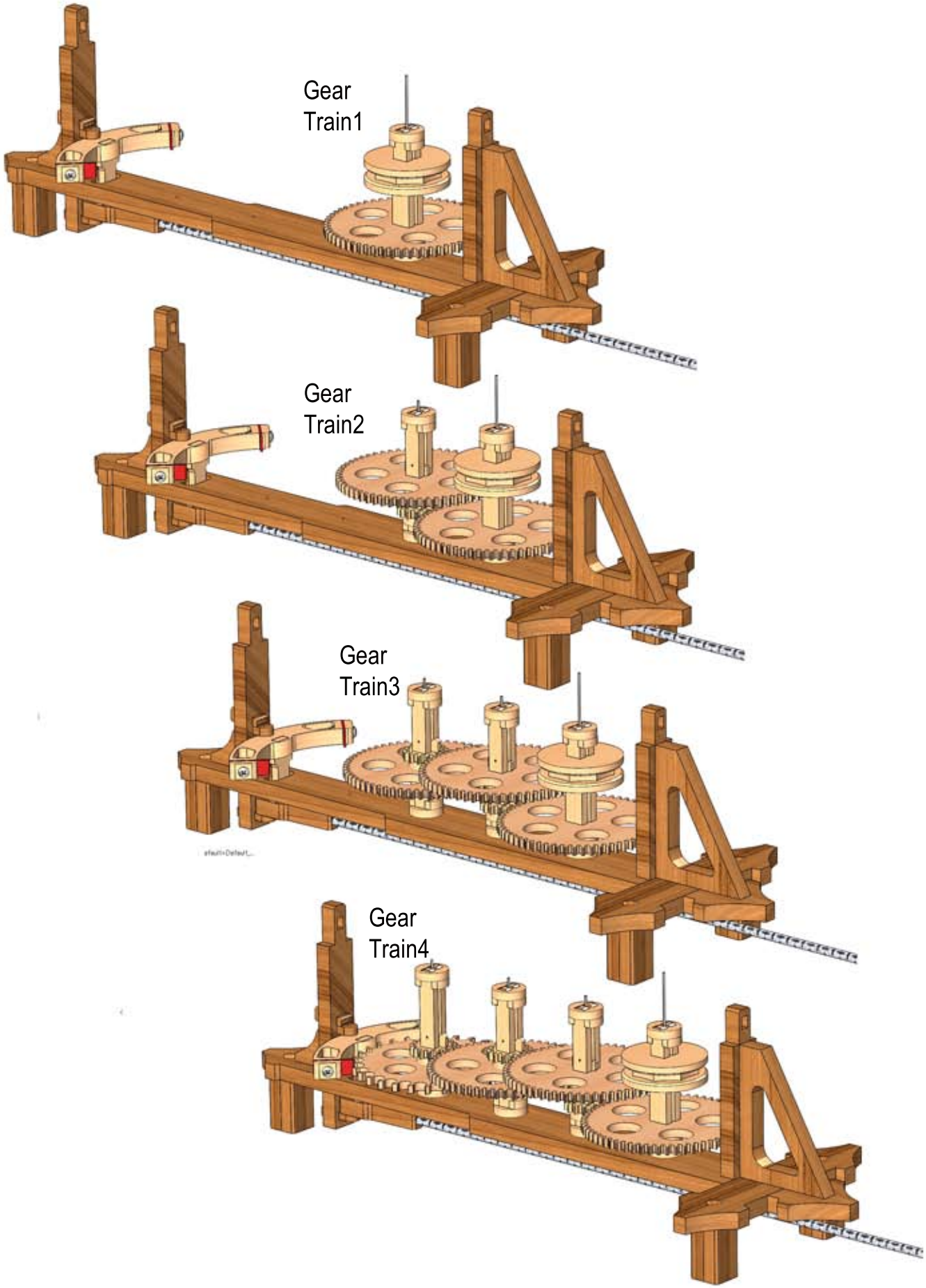




Insert the Pendulum Hanger to the back side of the Back Frame and then move the Pendulum Head into position shown. Note the Carbon Fibre tube needs to be glued into the Pendulum Head)
Now insert the Escapement through the slot in the Back Frame and insert the Pivot Rod and the The Pendulum Drive into the Pendulum Head
When the Escapement is fully engaged with the Pendulum, fit the Top Pendulum hanger and secure it in position with the Hanger Wedge.

Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

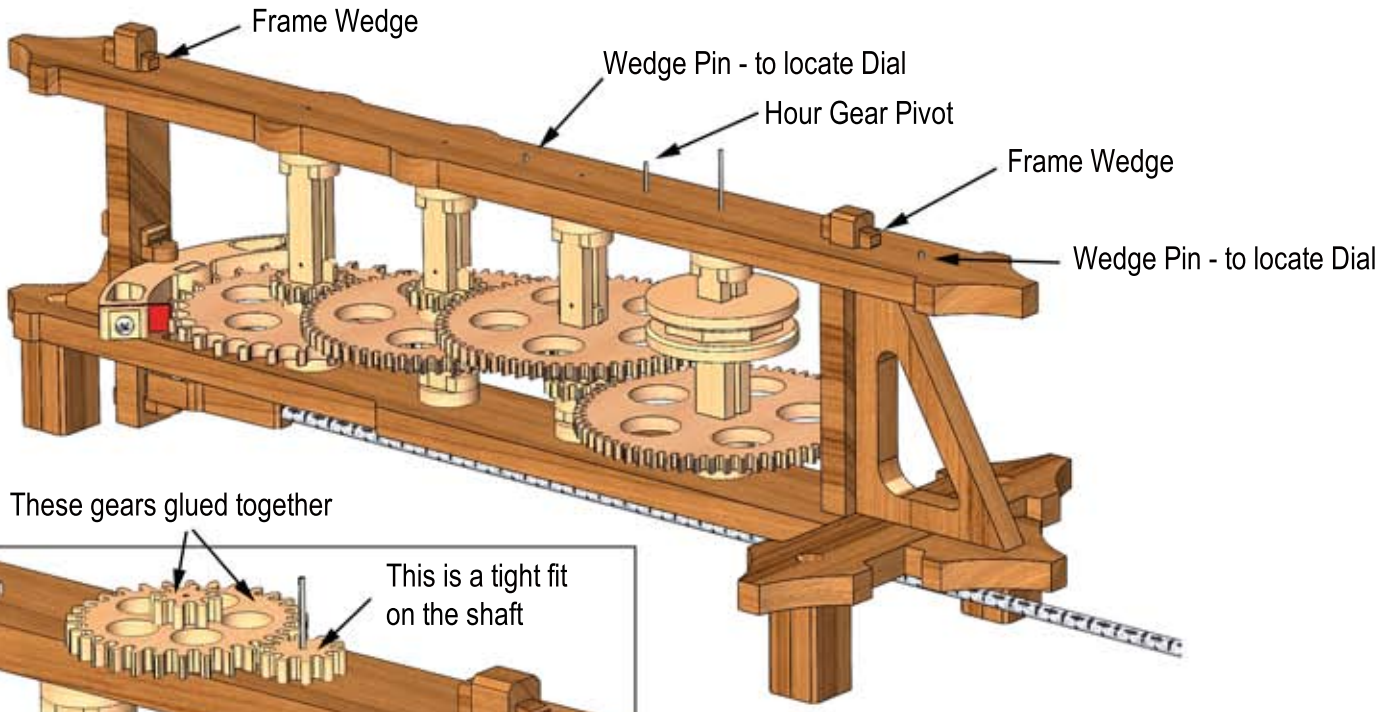
Stage 5 Fit the Gear Trains into the Back frame

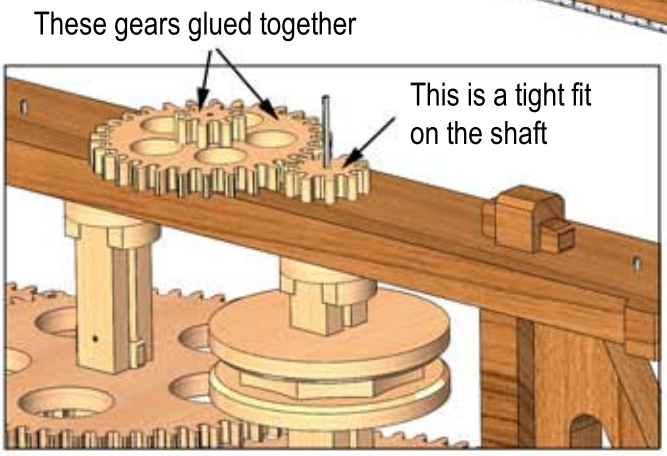


Brian Law - October 2016

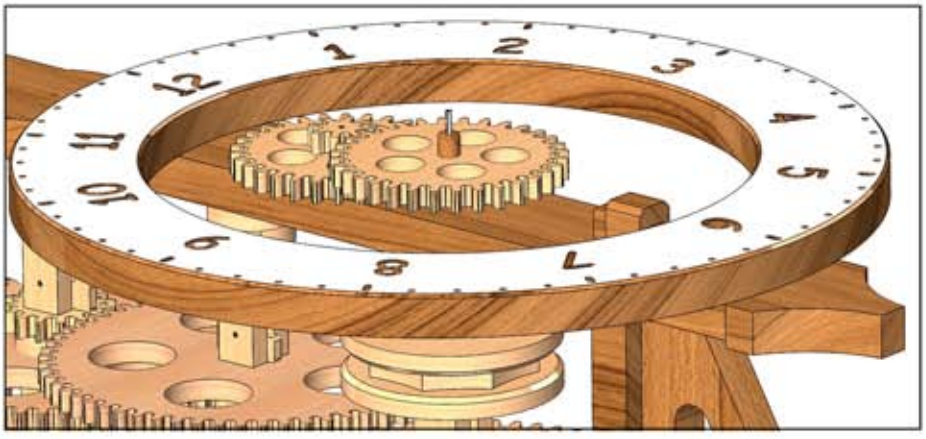
Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Stage 6 Fit Front Frame with Wedges and Pivots

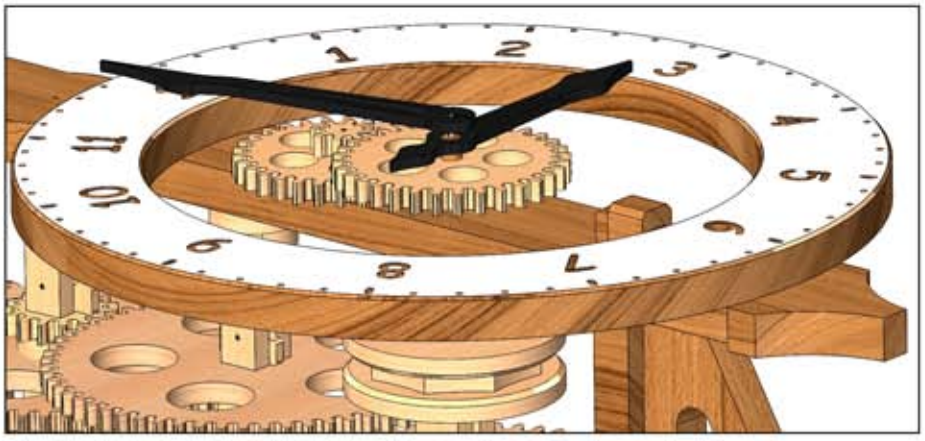




Fit the Hour Gears



Fit the Dial and the 32 tooth gear with Bush



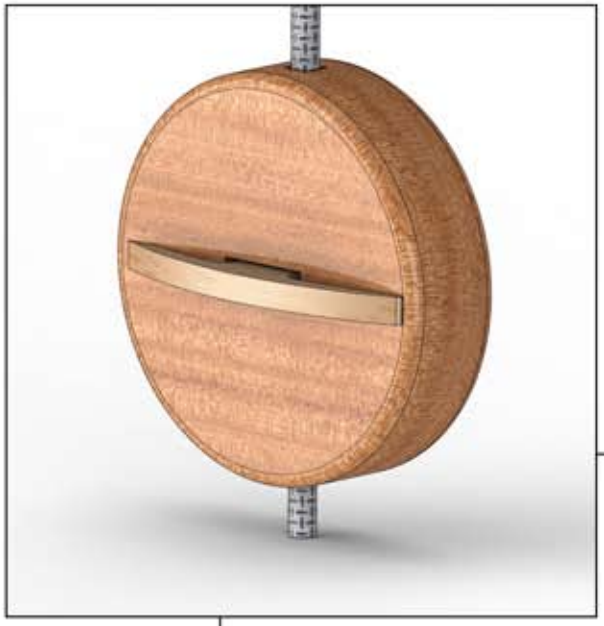
Fit the Hands

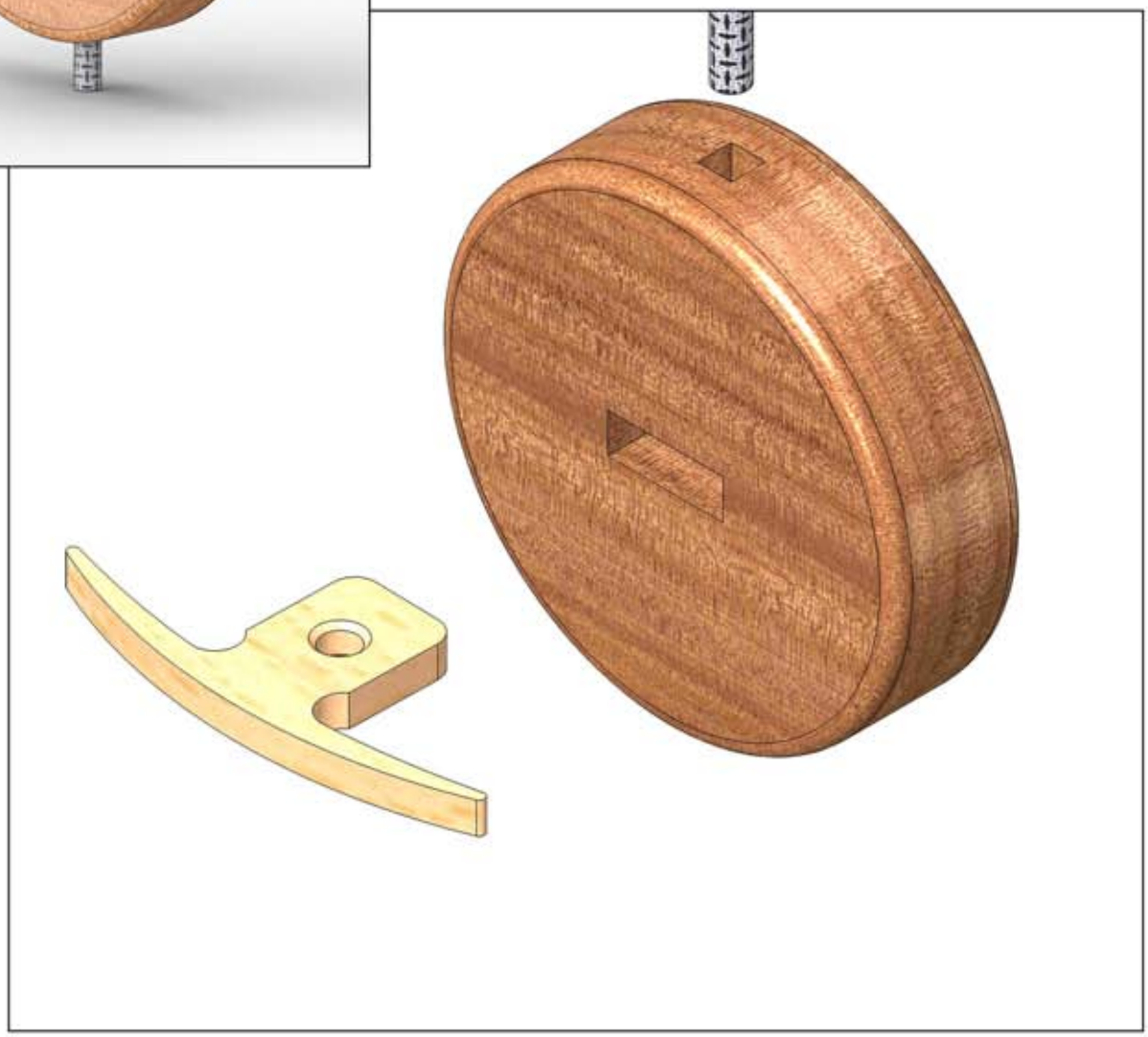
Brian Law - October 2016

Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Stage 7 Assemble Pendulum Bob

Fit the Pendulum lock into the centre of the pendulum Bob, and slide onto the Pendulum Rod. You have to press the pendulum lock so it can line up with the rod before it will slip on. Chamfering the hole in the Pendulum lock will help this. The position of the Pendulum Bob can be adjusted by pressing the pendulum lock and sliding the Bob up, to speed up the clock and sliding down to slow it down.

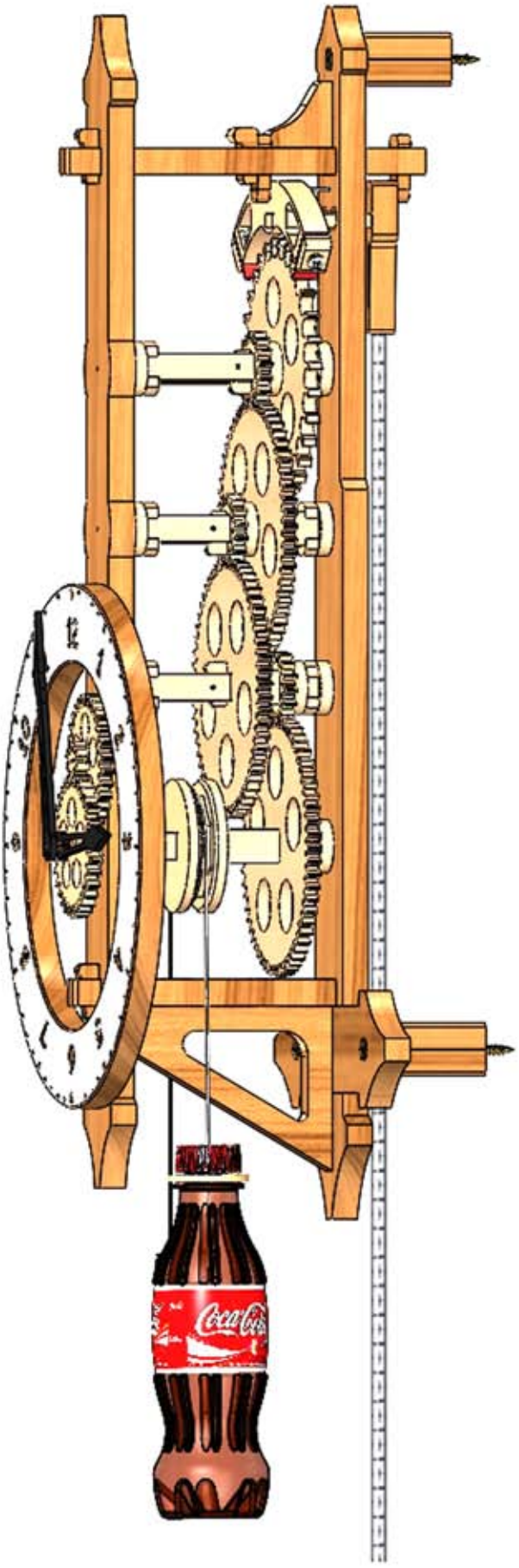




Brian Law - October 2016

Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Stage 8 Mount Clock to the wall and hang the weights around the drum



For the weight and the Counter weight you can use any convenient item, I have chosen to use a 20 ounze Coke bottle filled either with the original coke or with water. You need to adjust the weight by adding or taking out some of the liquid but my prototye runs on around 14 ounzes. The counter weight only needs to be around an 1 ounce and can be turned brass as I have shown or a couple of nuts, it is there to keep the cord taut and to stop the main weight slipping.

The Cord is Ø2 mm (or equivalent) and is attached to the bottle with a Bowline Knot wrapped around the Bottle Hanger shown in the files.

The main weight is attached to the cord hanging on the Right hand side of the Drum and is wrapped around the Drum anti-clockwise one and a half times (1.5 turns)

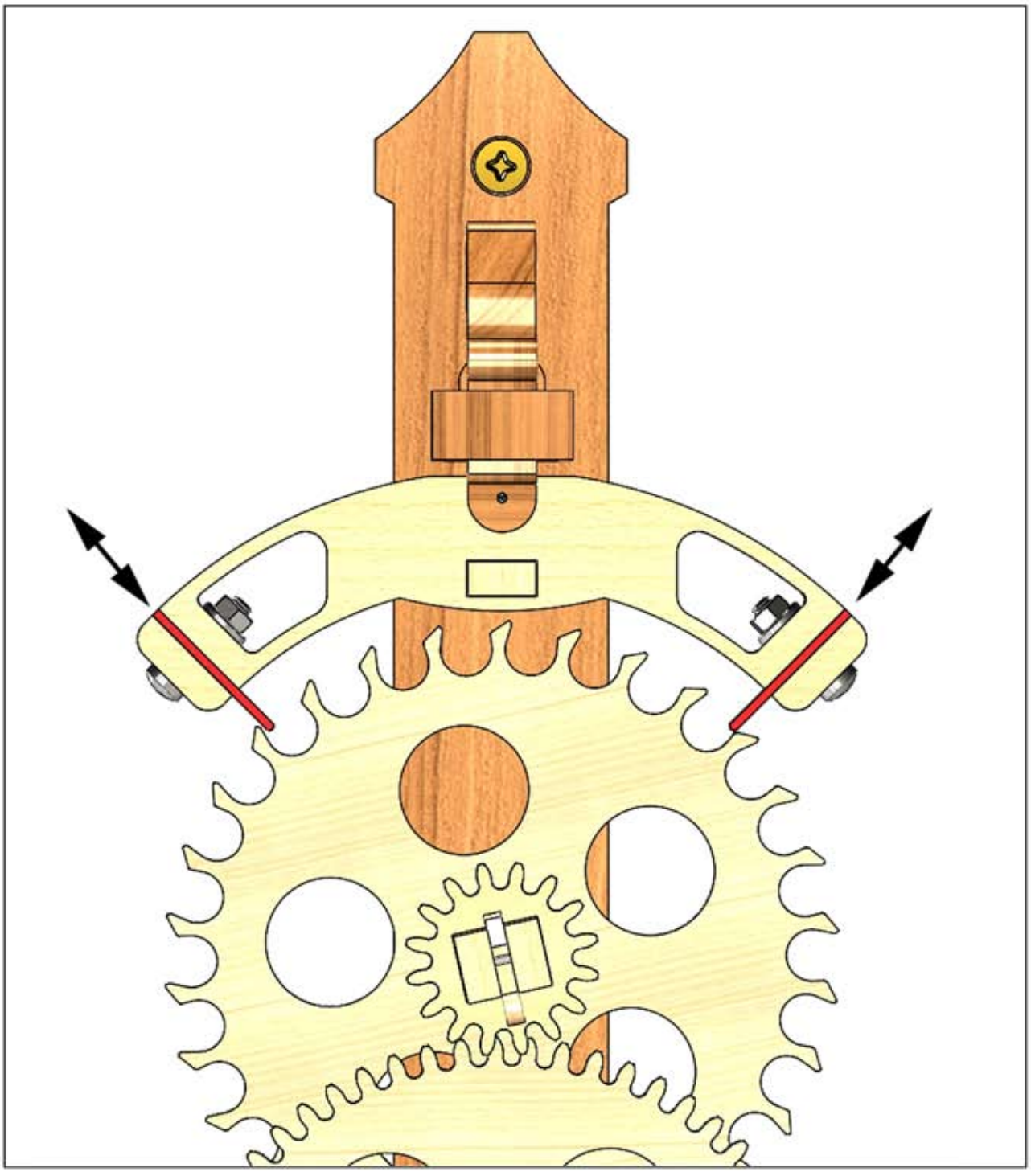
Wrap the small weight cord around its drum only a couple of times and let it hang to the floor. Now when the clock is fully assembled and mounted on the wall it should start to run under the power of the main weight. When the weight reaches the floor rewind by pulling down on the other cord.

To wind the clock and with the counter weight to the left, I hold that cord in my left hand, and the main weight cord in my right hand both near the top. Slightly lift both cords and slide cords up and down a bit to unlock them from the drum, then with the left hand pushed to the back and the right hand pulled to the front, gradually pull down on the counter weight whilst slightly supporting the main weight, shuffle hands up and down to repeat this until you complete the wind.

Brian Law - October 2016

Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

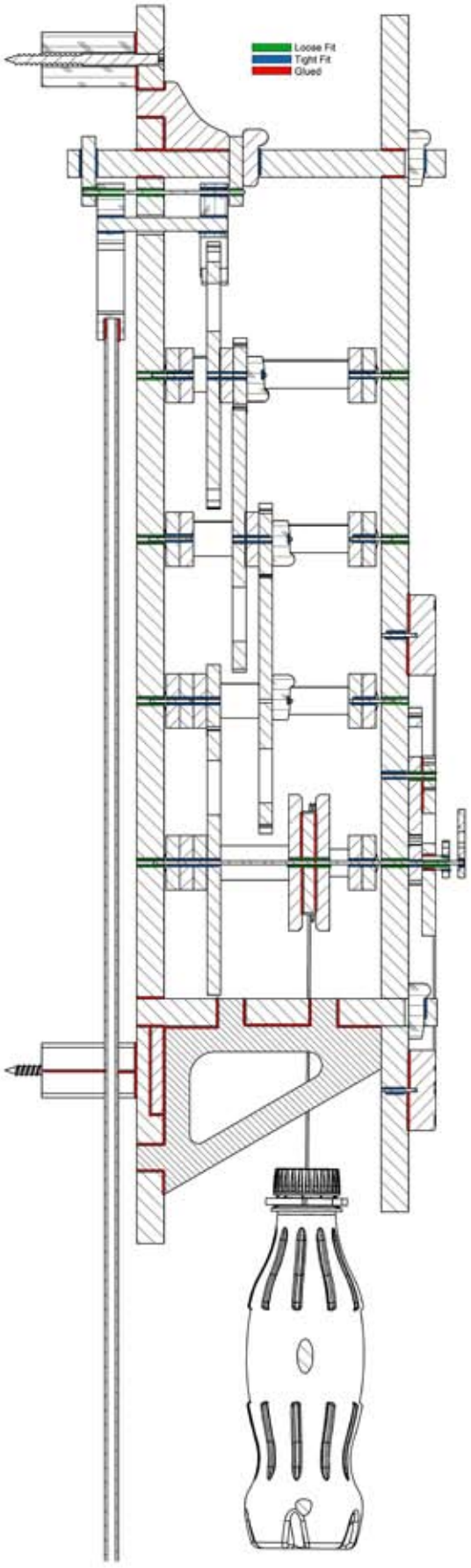
Stage 9 Adjust the escapement



Once the clock is assembled and running, you will need to check that the escapement is worling correctly. The initial set up as shown and if that were to be running you would here a nice even Tick-Tock. If your clock is not running evenly you will need to adjust the pallets by moving them in or out in very small amounts, one at a time until you get that even regular beat.

Brian Law's Wooden Clock 25 - Beginners Clock Assembly Sequence

Typical fits required at all shafts.



The section shown above is taken through the centre of the clock and shows all the shafts and the type of fits required. The clock is shown laying down horizontally with the back frame at the bottom and the front frame at the top.
Each of the joints is shown in a colour to indicate the type of fit required, Green for a loose fit, Blue for a tight fit and Red for items needed to be glued. It is best to glue all of the parts for the Back frame together for a start.
Next assemble the Gear shafts making sure that the parts are a tight fit on the side plates, if there is any looseness here then it is best to glue these together as well. All the shafts should be a loose fit in the holes in the front and back frames, if not then you will need to open the holes out slightly.
The only other places you will need to glue are the Carbon fibre rod into the pendulum head and the two sides of the drum to the centre section.

Brian Law - October 2016