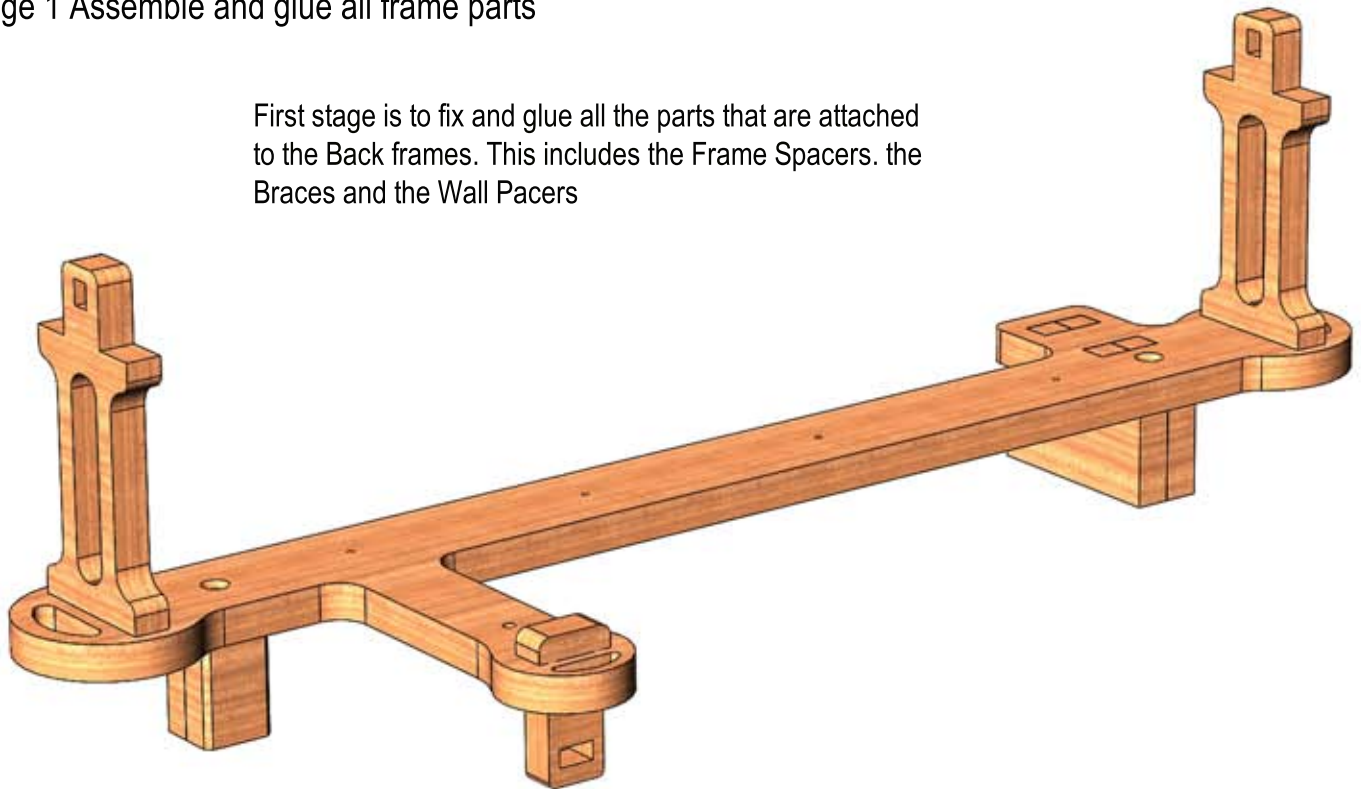


# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

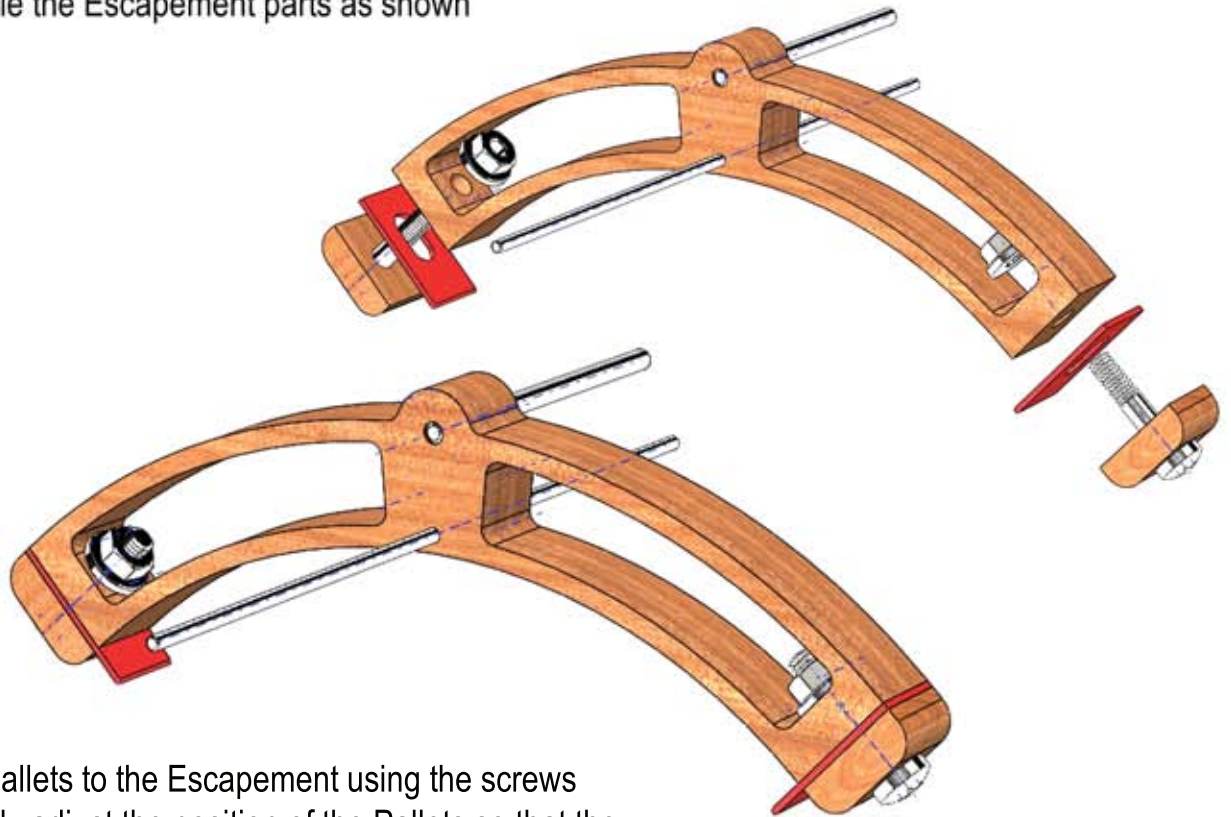
## Assembly Sequence

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



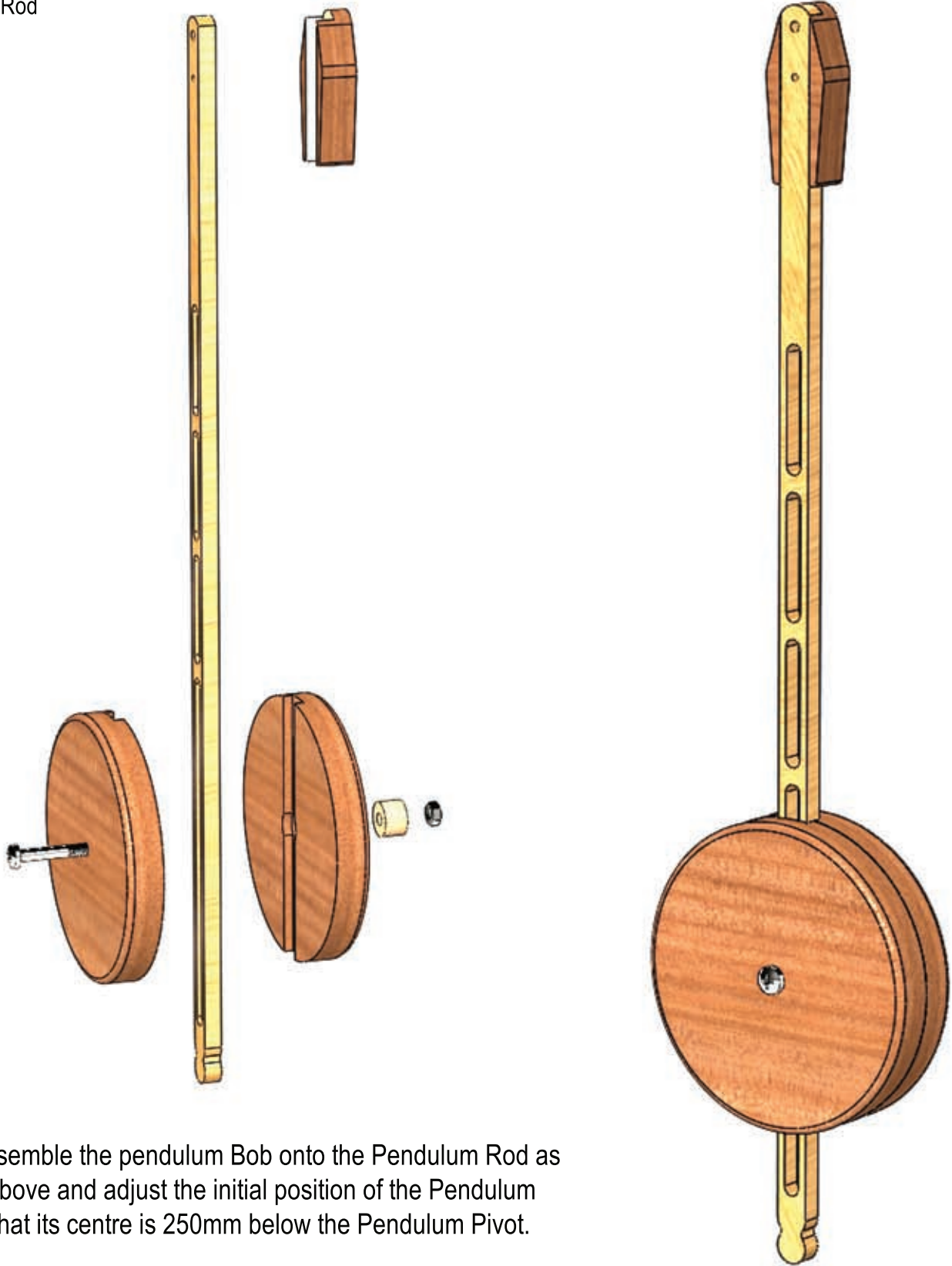
Assemble the Pallets to the Escapement using the screws and bolts, Initially adjust the position of the Pallets so that the top edge lines up with the top of the Escapement. Now fit the Pendulum Pin and the Pendulum Pivot as shown. The Pendulum Pivot ( the bottom pin shown above ) is not pushed in all the way at this stage.

# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

## Assembly Sequence

### Stage 3 Assemble The Pendulum parts

First step is to glue The Pendulum Head to the top of the Pendulum Rod



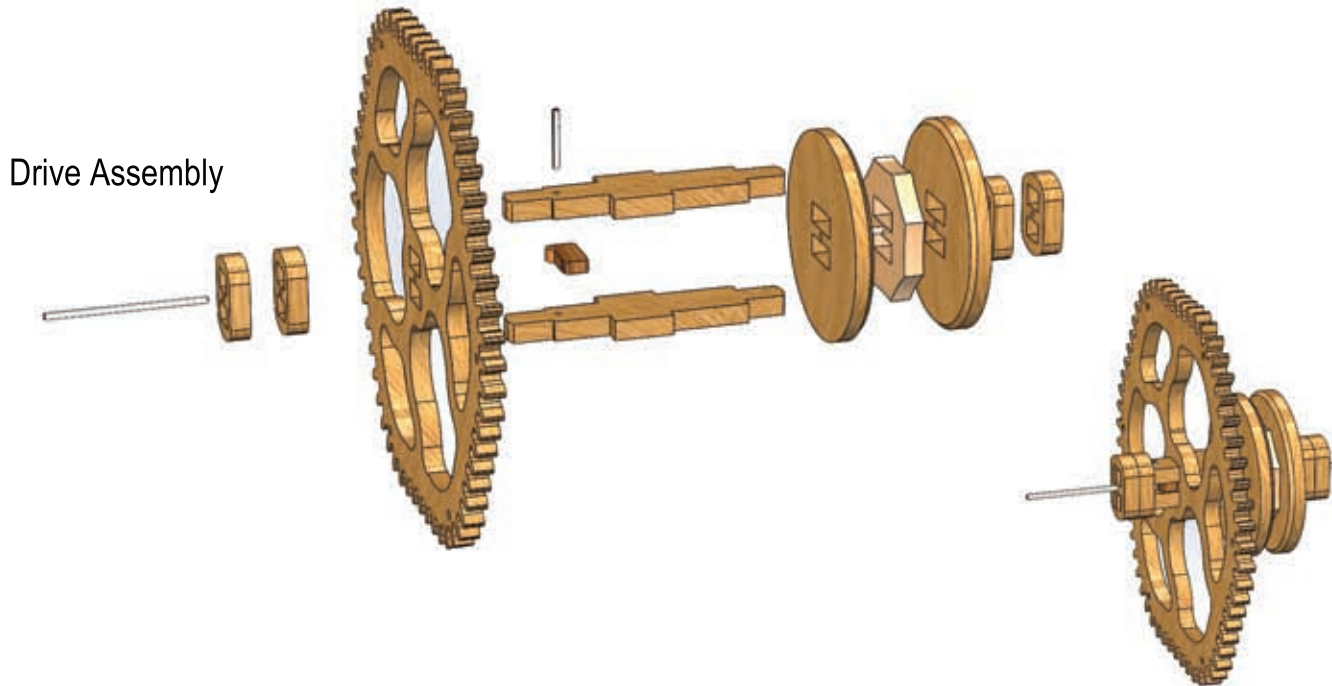
Then assemble the pendulum Bob onto the Pendulum Rod as shown above and adjust the initial position of the Pendulum Bob so that its centre is 250mm below the Pendulum Pivot.

# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

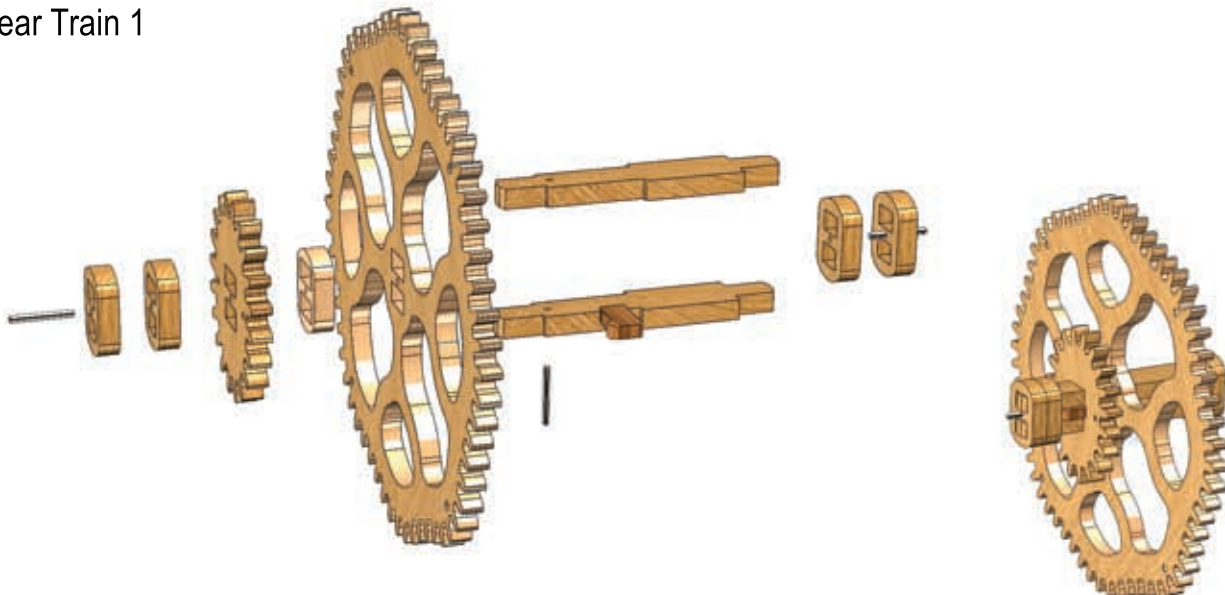
## Assembly Sequence

Stage 4 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 hold in place with a Locking Pin and the small Wedge. The Shaft Disks and the Pivot pins are fitted next and glued in place if necessary.



Gear Train 1



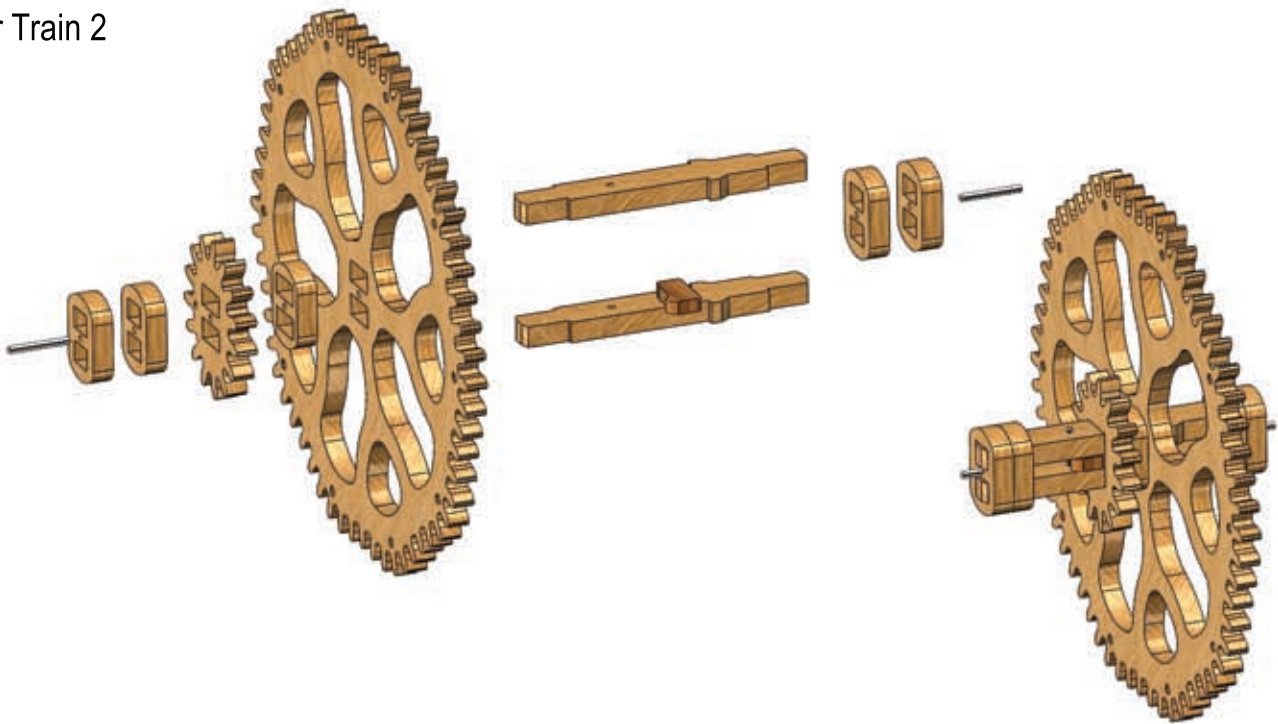
Slide the Gears and their Spacers onto the 2 side bars first and secure using the Pin and the Wedge. The Shaft Disks and the Pivot pins are fitted next and glued in place if necessary.



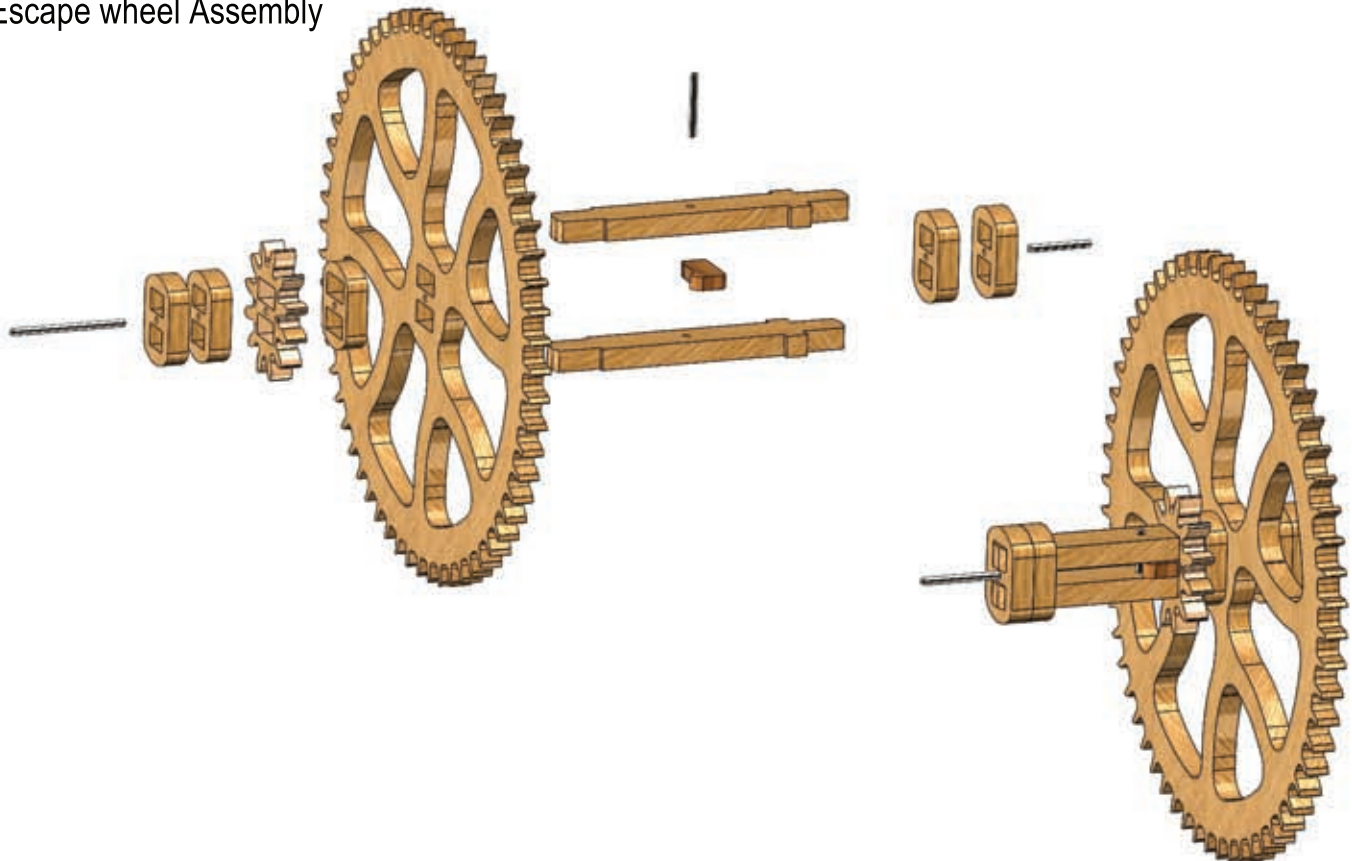
# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

## Assembly Sequence

Gear Train 2



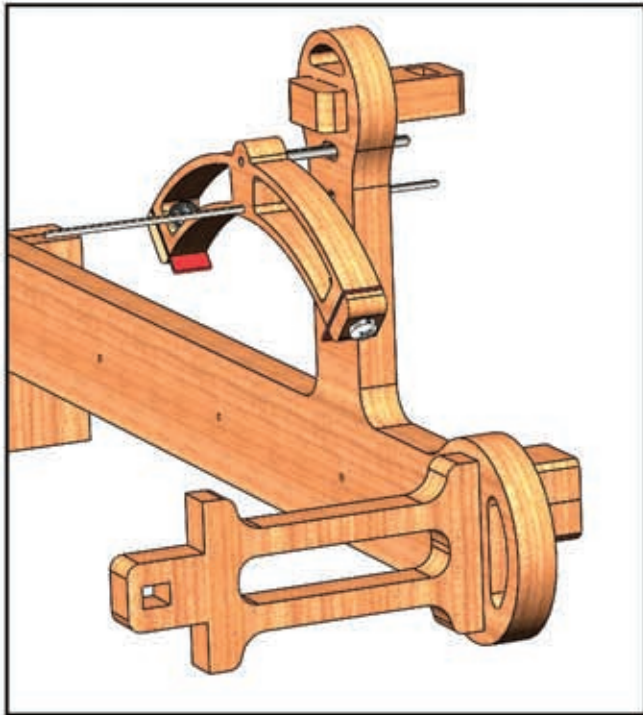
Escape wheel Assembly



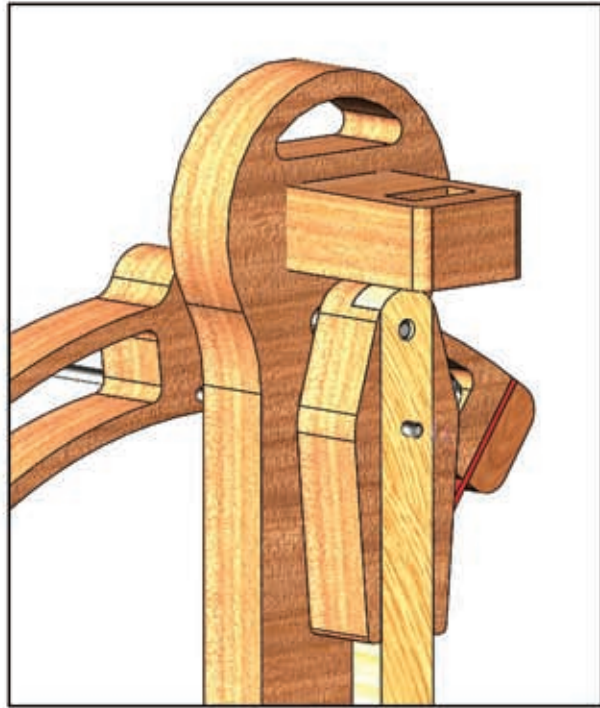
# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

## Assembly Sequence

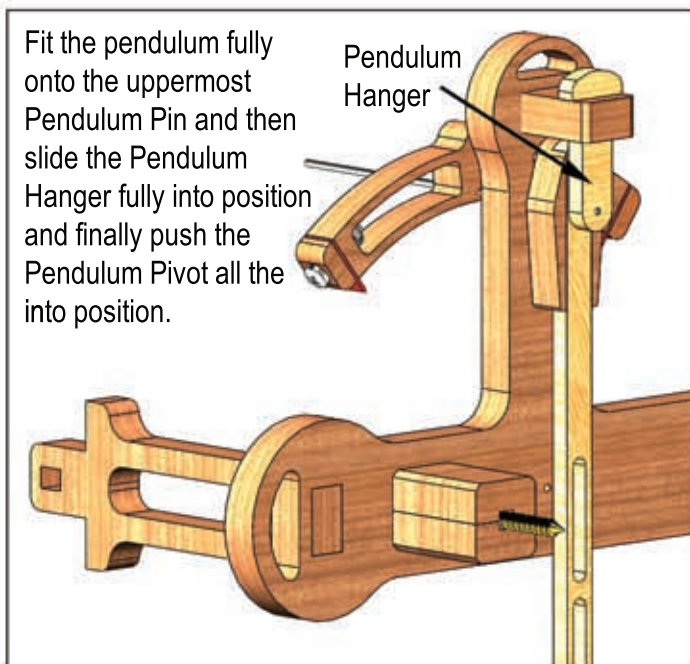
### Stage 5 Assemble the Escapement and the Pendulum



Fit the Escapement into place as shown above

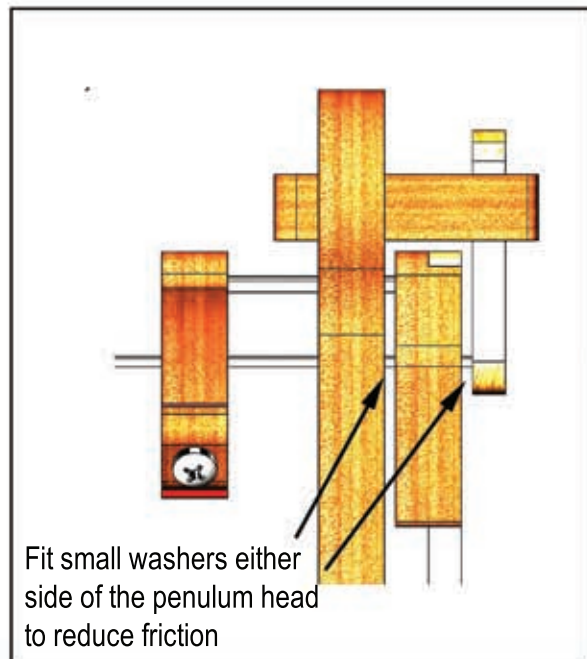


Don't push the pivot pin all the way through until you have slid the Pendulum Hanger into place.



Fit the pendulum fully onto the uppermost Pendulum Pin and then slide the Pendulum Hanger fully into position and finally push the Pendulum Pivot all the way into position.

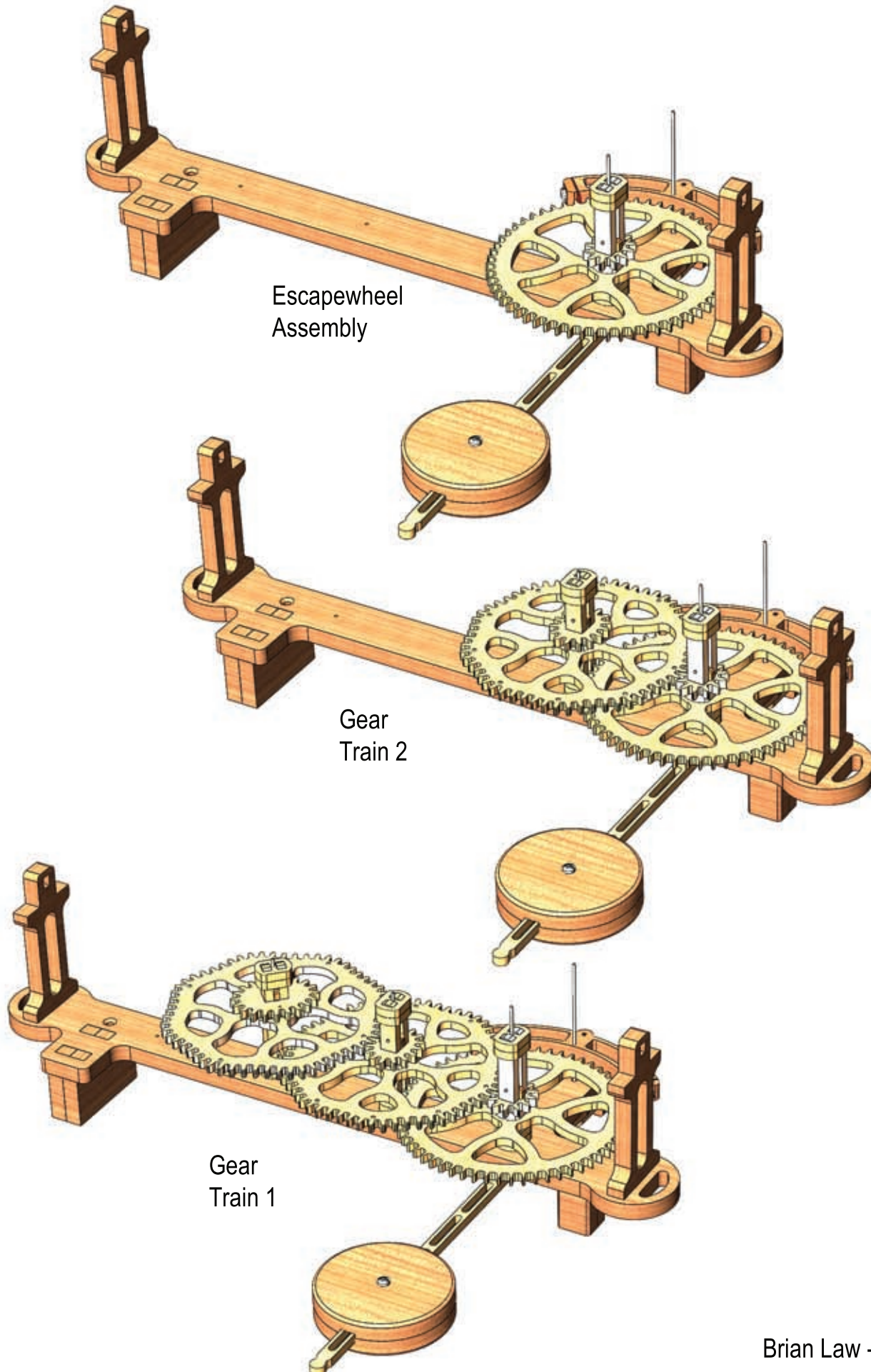
Pendulum Hanger



Fit small washers either side of the penulum head to reduce friction

# Brian Law's Wooden Clock 31 - Beginners Clock No. 3 Assembly Sequence

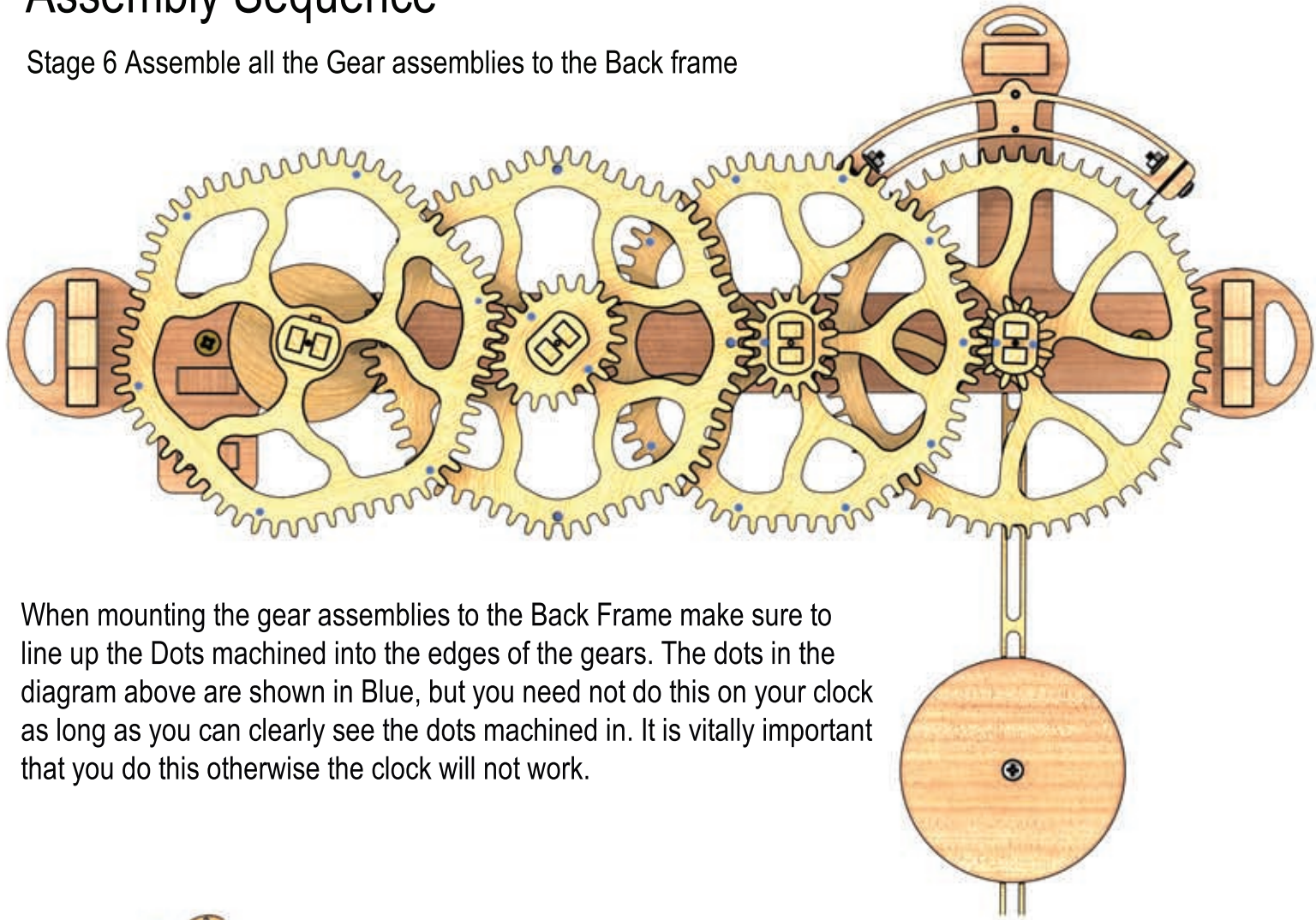
Stage 6 Assemble all the Gear assemblies to the Back frame



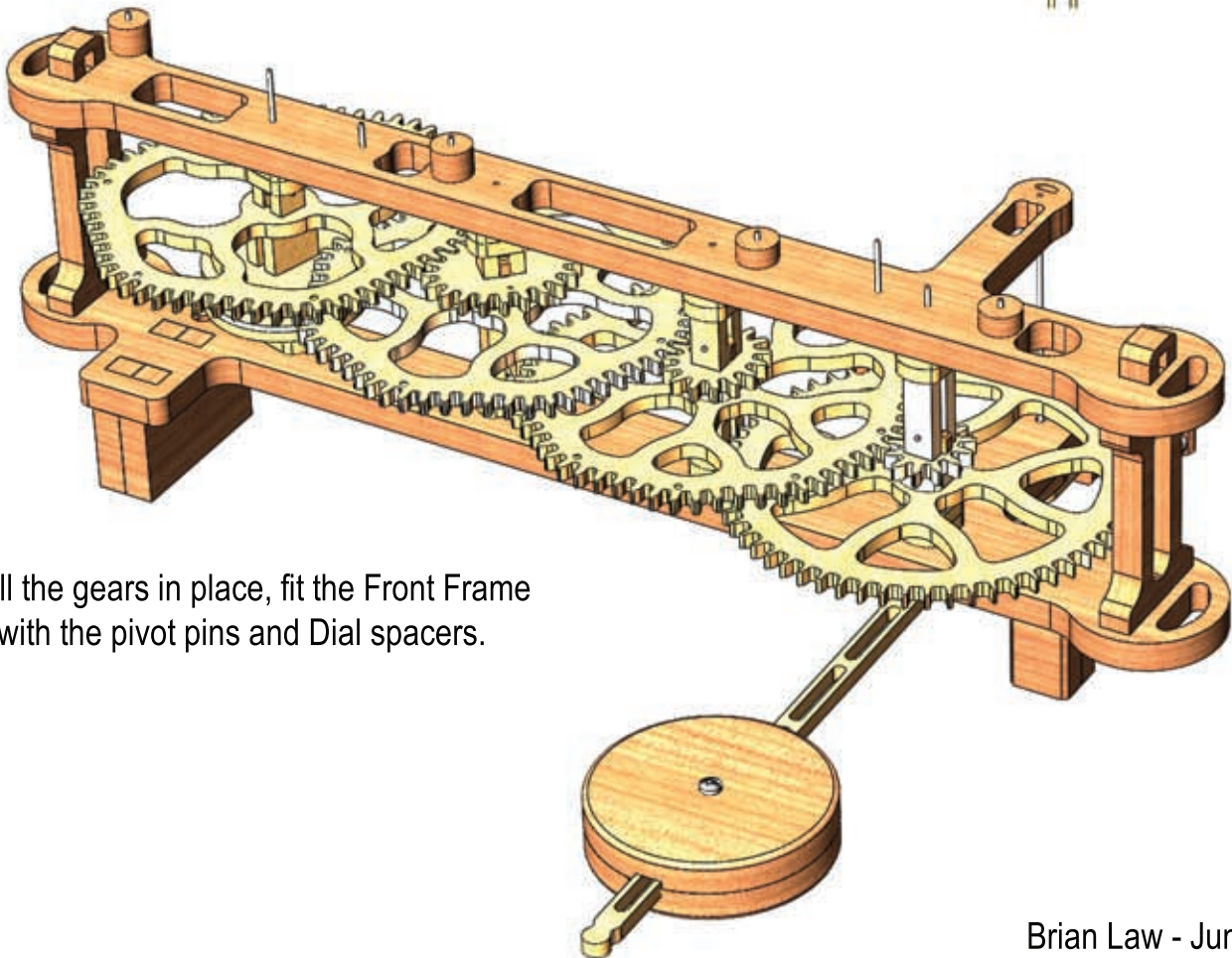


# Brian Law's Wooden Clock 31 - Beginners Clock No. 3 Assembly Sequence

Stage 6 Assemble all the Gear assemblies to the Back frame



When mounting the gear assemblies to the Back Frame make sure to line up the Dots machined into the edges of the gears. The dots in the diagram above are shown in Blue, but you need not do this on your clock as long as you can clearly see the dots machined in. It is vitally important that you do this otherwise the clock will not work.



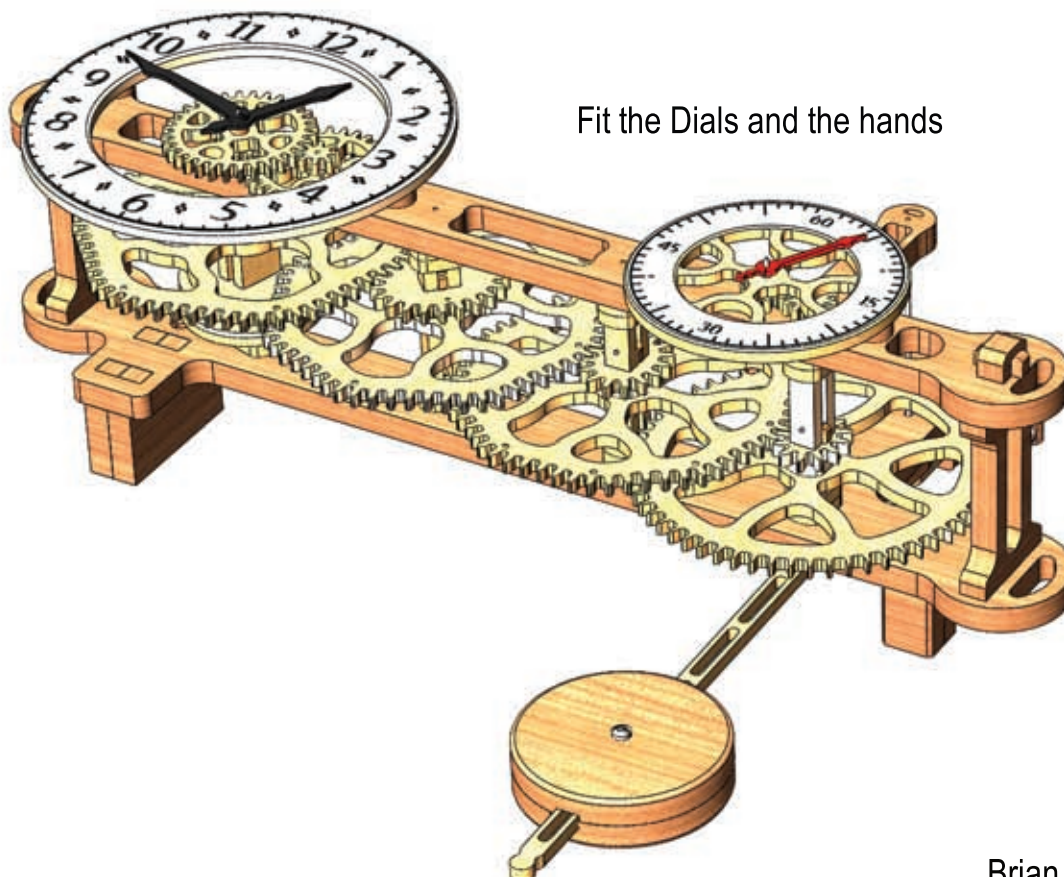
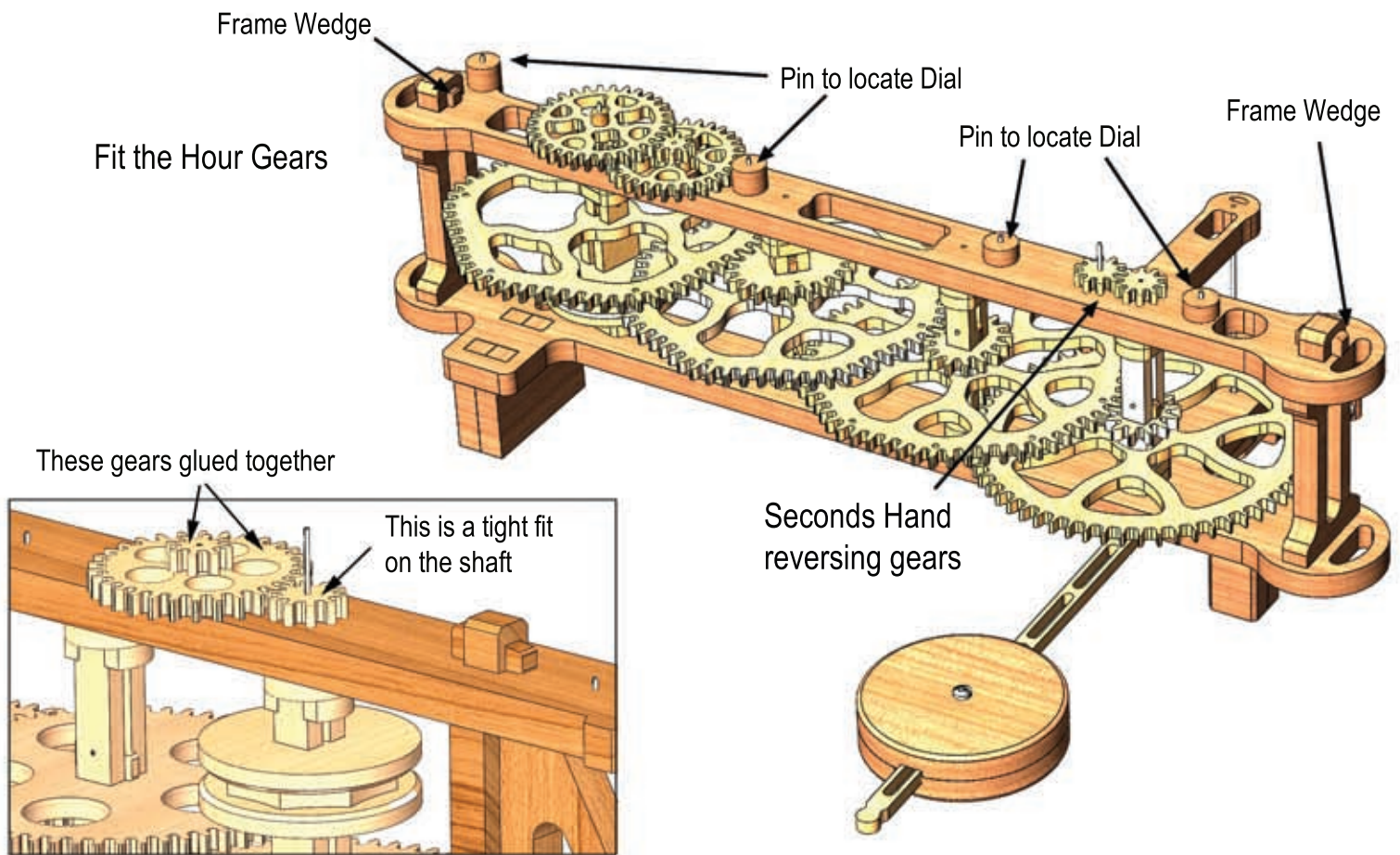
With all the gears in place, fit the Front Frame along with the pivot pins and Dial spacers.



# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

## Assembly Sequence

### Stage 7 Fit Front Frame with Wedges, Pivots, Dials and Hands





# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

## Assembly Sequence

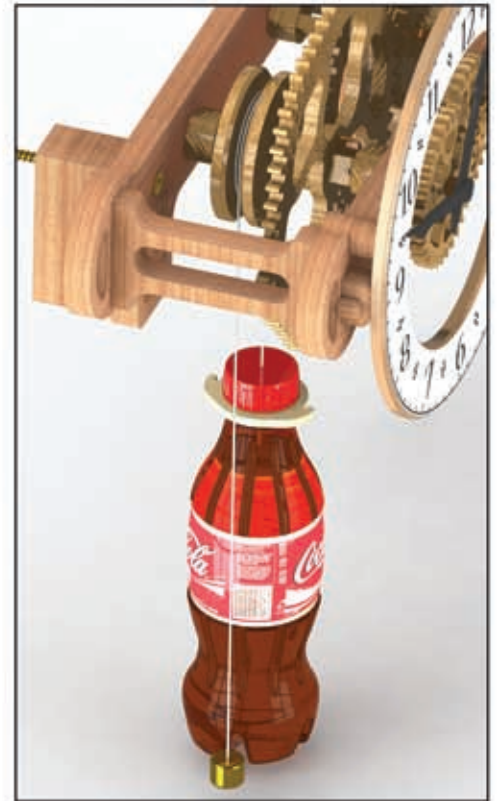
### Stage 8 Mount Clock to the wall and hang the weights around the drum

For the weight and the Counter weight you can use any convenient item, I have chosen to use a 20 ounce 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 prototype runs on around 28 ounces. To get 28ozs into a 20ozs bottle I cheated a little and added some Ø9 ball bearings to the bottle. The counter weight only needs to be around an 2 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)

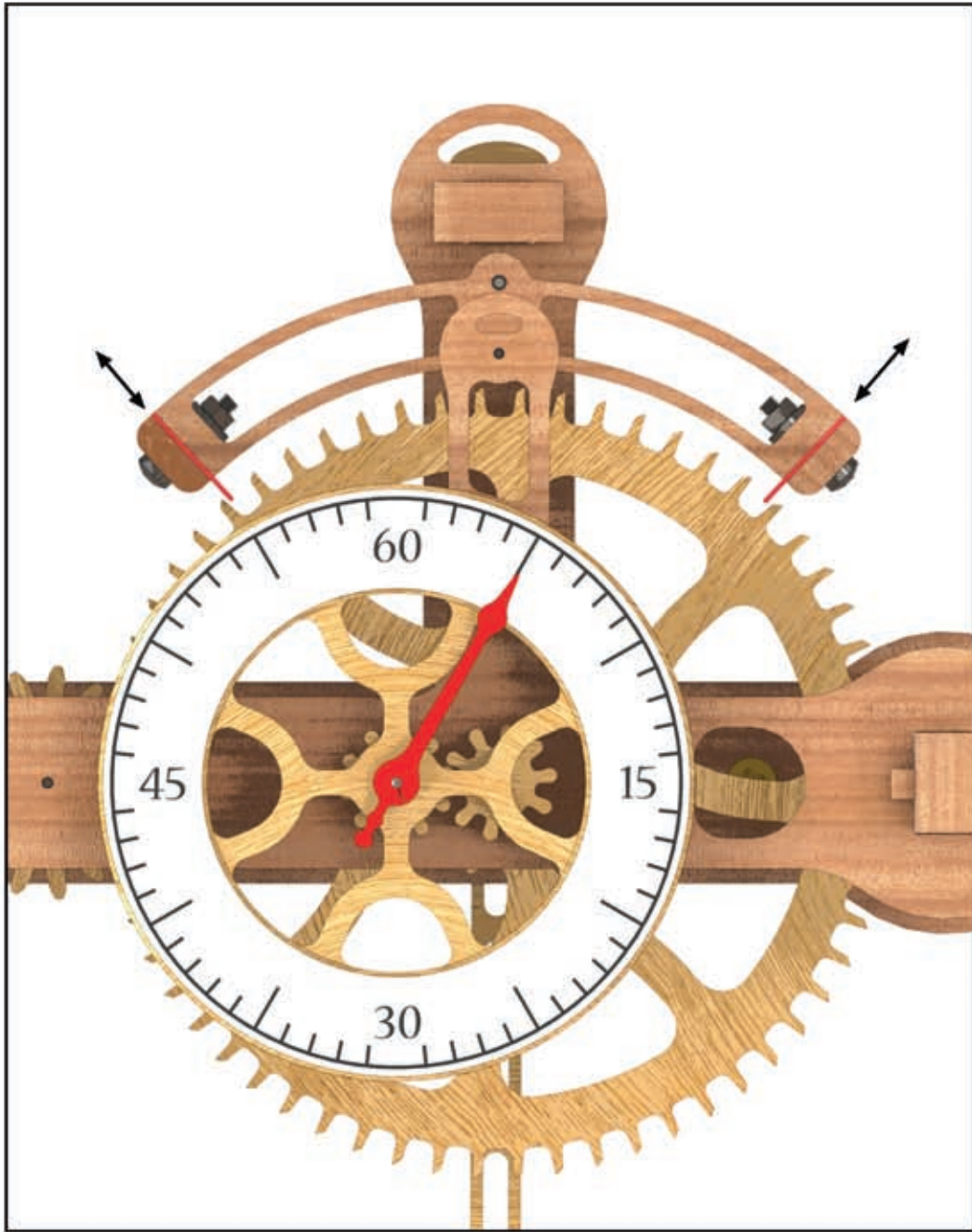
When the clock is fully assembled and mounted on the wall it should start to run under the power of the main weight, just give the Pendulum a small push.

To wind the clock, 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's Wooden Clock 31 - Beginners Clock No. 3 Assembly Sequence

## Stage 9 Adjust the escapement



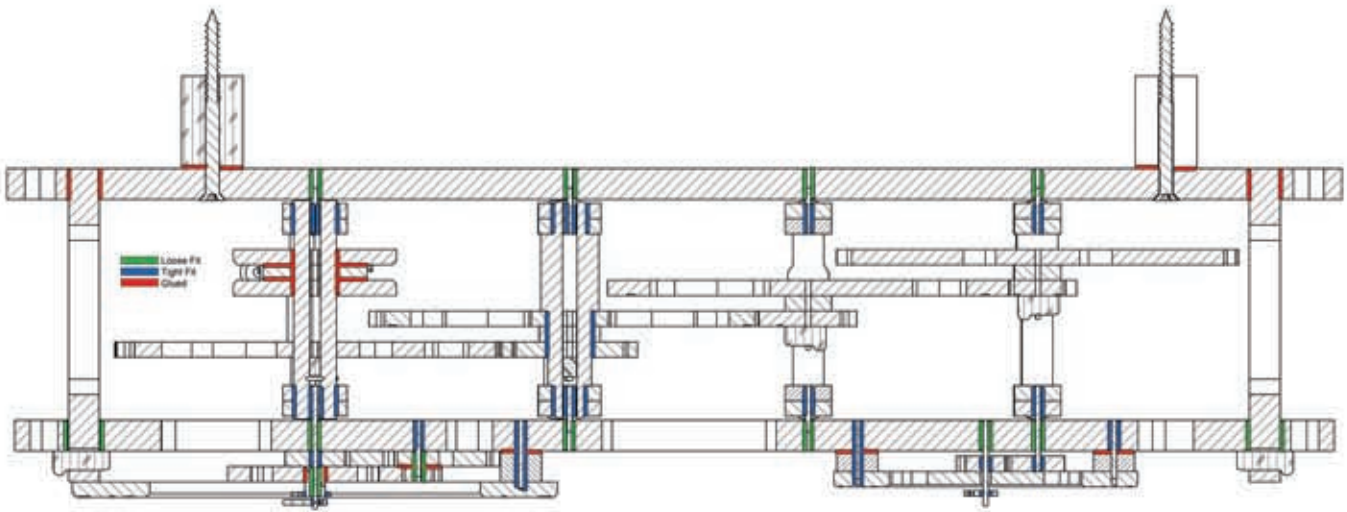
Once the clock is assembled and running, you will need to check that the escapement is working correctly. The initial set up as shown and if that were to be running, you would here a nice even Tick-Tock. If your clock is not running evenly you will need to adjust the Pallets by moving them in or out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



# Brian Law's Wooden Clock 31 - Beginners Clock No. 3

## Assembly Sequence

Typical fits required at all shafts.



The section shown here is taken through the centre of the clock and shows all the shafts and the type of fits required. The clock is shown viewed from 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 pivots 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 Pendulum Head to the Pendulum Rod and the two sides of the drum to the centre section.