



**The Arts Society Sussex
West Dean College FdA Historic Craft Practices - Clocks
Spring term report for Stephen Loader
2018**

Tutor Report

All practical work continues to demonstrate extremely high level of applied skills with the ability to learn quickly and apply techniques fluently. This has been clearly evident in the two clocks completed.

A clear and methodical approach to mechanical problems is always put into practice, the long term implications of interventions are always carefully considered. Techniques used are, without exception, well planned, sophisticated and imaginative with exceptional attention to detail. Confident use of tools and machinery has been evident throughout.

A high level of personal initiative has continued since the beginning of the programme.

Stephen has continued to produce work to an exceptionally high standard and is pushing himself to build up his historical knowledge to compliment his already advanced ability to apply skills in an appropriate manner on historical objects.

Malcolm Archer, Clocks Subject Tutor

Student Report

So far this year I have completed the treatment of two longcase clock movements. Before any work is carried out, we are shown how to make initial reports of the clocks condition and produce a treatment proposal. This is given to the client to ensure they are happy with the proposed treatment. This process has taught me some of the professional standards which are important to use in professional practice. The first clock I worked on had been neglected for many years, as a result it had a number of damaged and missing parts.

One of the issues, were a number of missing teeth from the wheels (gears) and significant wear to its pinions (small steel gears). Where one of the wheels was missing six teeth in a row, I carefully cut a dovetail shape and fitted a new piece of metal brass. I then cut the new teeth into this material, see figure 1.

This clock was also missing its driving weight and a pendulum. For their reconstruction, I was able to collaborate with the metals department in order to cast these new items. This is just one example of where studying at West Dean College has helped me by enabling me to also learn from other departments within the college.

Studying here hasn't just taught me clock making, but broadened my mind to a deeper and more professional approach to treating historic objects. For example, the first clock had a wheel and pinion fixed together which were significantly damaged and worn, I was then involved in a discussion to come up with a method which will be both practical and sympathetic to the object. In this case it was realised a large amount of intervention would have been required, as a result I instead created a



Figure 1 Cutting some replacement teeth

copy which is now used within the clock. This meant that the original could be preserved without intervening with it. I then made a bracket which ensures the original is kept with the clock. The bracket was designed so that no intervention such as new holes were needed to mount it on the clock. It is very useful to go through this type of thought process and then put it into practice, figures 2 and 3.



Figure 2 New wheel and pinion with its original.

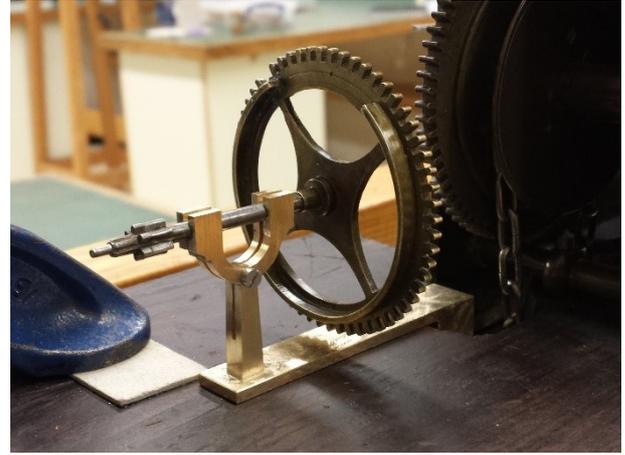


Figure 3 The original wheel and pinion sympathetically kept with the clock.

My current project, only recently started, is a clock which is missing what is known as a pull quarte mechanism. It dates from the 1750s when lighting in the home was limited, as a result it was difficult to see the time on a clock dial. This clock would have had a mechanism which would sound the hours and quarters on a series of bells when a chord is pulled. This project will be a large challenge to work out the missing mechanism, draw it out and recreate it. It will teach me many skills which will be valuable in the future.



Figure 4 Using a lathe machine to make a replacement gear.



My plans for the future are to eventually set up self-employed. I would particularly like to work on marine chronometers and design and make new clocks. I intend to work a number of years for a Clockmaker to gain the further valuable experience and knowledge required before setting up a business. As part of the course, I have been required to produce a business plan and a website for our potential future business, and have also had exposure to other existing businesses. This has begun to help equip myself for the future setting up of my own business.

The funding has enabled me to study at West Dean College and gain this broad range of teaching and experience which I otherwise would not have had exposure to and I am so grateful.

During the holiday periods, I have spent some time gaining work experience with a well-established clock and watchmakers. This has provided me with an insight into the day to day environment of employment in Horology. I have attended a number of external lectures to broaden my learning and to network with clock and watchmakers. I gave a short presentation to prospective students during an Open Day at West Dean College to give them an insight into life as a student here and I am also due to give a presentation to a model engineering society and a horological society about my studies at West Dean.