

New Workshop Courses

The workshop is pleased to welcome back Sid Lines and John Ward, once again, for a selection of popular one day courses.

Saturday 3rd June 2023

Tool Sharpening Course

Time 10AM - 4PM (To be confirmed)

Number of places available: 8

Cost: 40 pounds per person

Tutor: Sid Lines

Saturday 10th June 2023

Making and Restoring Old Threads and Screws

Time 10AM - 4PM (To be confirmed)

Number of places available: 6-8

Cost: 40 pounds per person

Tutor: Sid Lines

Saturday 22nd July 2023

Clock Case Construction, Repair and Renovation

This three-hour course would look at traditional clock case construction and the woods that they were made of. This would be followed by repair and finishing techniques. There would be an opportunity for participants to bring along a case for appraisal and the best way to repair it.

Number of places available: 6-8

Cost: 35 pounds per person

Tutor: John Ward



South London Branch British Horological Institute

Newsletter No. 5301 June 2023

*Meetings are held on the 1st Thursday of each month
At The White Hart Barn (Godstone Village Hall)
Godstone Surrey RH9 8DU at 7.30 p.m. for 8 p.m.*

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ISSUE

NEXT MEETING

LAST
MONTH'S
MEETING

VISIT TO
UPTON HALL

LATHE
FOR SALE

NEW
WORKSHOP
COURSES

Free advertising

www.slbbhi.co.uk

"The less one has to do, the less time one finds to do it in."

Lord Chesterfield

NEXT MEETING

Mike Wilson

Making early style watch cases, from the 17th to 18th century.

Mike is a self-taught horologist and hails from the Cheltenham Branch area.

Since retiring in 2000, he has concentrated on Horology, Silversmithing and Enamelling. One of the things he excels in, is making early watch cases. He will bring along various examples of watches in the cases he has made, to illustrate the methods he uses to make his cases, plus he tells me various other things.

Mike was an athlete at school before serving an apprenticeship at the De Havilland Aircraft Company at Hatfield, from 1954 to 1960. Excelling in his exams it was found he had a leaning towards small items, so was diverted from aircraft onto the missile site to make the guidance systems. He was given his own small machine shop.

Continued

Serving his national service with the RAF, keeping up running which he loved, he was servicing ground to air missiles. Back in civvy street he joined a small company as a development engineer making aircraft instruments and industrial hydraulics.

In his own words "I was very fortunate to have worked on Concord throughout its life, plus most of the nuclear submarines and all the formula one teams".

LAST MONTH'S MEETING

WEST DEAN STUDENTS

The process of repairing an escape wheel on which the tips of the teeth had become so bent that it would not function was described at the May meeting of the South London Branch by J C Li, a student at West Dean College of Arts and Conservation.

Mr Li, who is studying for an MA in Conservation studies (clocks and related objects), and was one of a number of students from the college who, with course head Malcolm Archer, FBHI, attended the branch meeting, said the problem arose on an 1830s English chronometer carriage clock by Arnold and Dent.

The clock was fitted with a spring détente escapement – a mechanism was originally developed for precision timekeeping in marine chronometers.



The problem with the Escapement was that the tips of the teeth were bent to the point where it would not lock properly.

The fit of the tooth-straightening rig, under magnification – picture courtesy West Dean College

A Visit to The British Horological Institute at Upton Hall

What is Upton Hall? It is the headquarters of the BHI.

This is a large country house, with its own history, in its own grounds. It has one of the largest horological libraries in the world, the 6 pips equipment, the speaking telephone machine, electrical room, antique and modern clocks and watches, turret clocks, working models, Scott of the Antarctic explorers watch and loads, loads more.

The visit has been arranged for Friday 11th August by a 53 seater coach with a toilet!

The basic arrangements are pick up at both Godstone and Caterham, stopping once on the way up to Upton. The hall will be entirely opened up for us to first examine both the clock and watch workshops and then a tour of the exhibits which may have to be done by myself if staff are not available.

Lunch cannot be all together, due to numbers, so it will be selected by you to eat at the pub, cafe or cater for yourself on a picnic basis, in the grounds if the weather is kind to us or the staff room if not! We would expect to depart between 3 - 4 with one stop on the way back.

It is a full day out, suited to most people, horological or not. It is open to all members, partners, family, friends or anyone interested. It is £30 per head. I need the names, email, mobile and money to secure a place. As the organisation is through myself, it is cheques or cash to me please along with any questions you have. Ron Rose, ronalderose@btinternet.com, 07980 175181

For sale.

Schaublin 70 lathe and stand.

This lathe is still for sale full details and comprehensive pictures in last month's newsletter

MEETING HELD ON THE 2nd OF MARCH.

The report on Emily Ackermans talk to follow in next month's newsletter.

Earlier,. At the start of the evening, student Emily Matthews, who is in the second year of her Foundation course, told course head Malcolm Archer that she had already obtained a BA in fine arts degree at the University of Kent at Canterbury before applying to West Dean. After studying fine art she had moved on to kinetic art – and applied to West Dean after her mother, who was aware of her interest in clocks and clockwork, drew her attention to the college and the courses it ran. She had now worked on a long case clock and a carriage clock, and was also working on a musical table clock as well, she said, adding that in the last half of her second year she would be doing a large negotiated project. The most challenging part of the work, she said, was the fine detailed work, when one had to be extremely careful, because of the risks that something would break. But she also really enjoyed working with smaller things, such as carriage clocks.

Mr Archer told the branch that West Dean had expanded considerably since it opened in 1971.

Until only a couple of years ago it had had room for only eight or nine students on clock courses, but because of growing demand had grown so it could now take 12. There was now a new and larger workshop, which had space for 11 students and, in the centre, a teaching bench with an overhead camera and a microscope camera, so it was easier for a fairly large group of students to gather around the tutor and see what was going on. “Teaching at West Dean is and has been very practical-based – learning by seeing it done,” Mr Archer said. “A lot of time is spent in that central workshop watching me or my colleagues doing something around that central area.” the old workshop had now been converted to hold a number of machines, including a Myford lathe and a milling machine.” The first two years of the courses was the foundation years – the entry level, he said. “The first year is about making tools, using equipment, building up hand skills, building up theory, and it culminates in the construction of a simple clock – all students make a clock at the end of the year – a three-wheel train wall clock,” Mr Archer said.

He also gave examples of some of the interesting projects – alongside the normal work at the college – on which students had opportunities to work, including a Regulator clock and a very small carriage clock.

“Initially we thought of making a new wheel for it, but I thought it would be worth trying to straighten the ends of the teeth back. They were already delicate, so there was a risk of breaking tips off, but I thought it would be worth a shot,” Mr Li said

He made a little rig which was filed to be an exact match for the back of the teeth so that they could then be gently tapped back so that they were straightened.

(Mr Li has written a detailed explanation of the process in a blog on the West Dean website, at: [Blog | Straight edge conservation: A chronometer escape wheel | West Dean College of Arts and Conservation](#))

Another part of his MA course involved a thesis project, for which he was investigating the use of epilane, the generic name for a surface agent which prevents oil from spreading by reducing the surface tension of the treated material, in clockwork in the field of conservation.

This involved treating pallets with epilane and having them running for a few months to see if there was any noticeable difference in oil creep or wear.

Mr Li showed branch members a test piece, the top half of which had been treated with epilane while the bottom half had not.

“Epilane is basically just an oleophilic oil-repelling coating which can be used on steel and other metals and is supposed to help keep oil safe, and is commonly used in modern watches on the escapement,” he said.

“The same amount of oil has been deposited on to the two surfaces. On the top part, the surface tension is such that it keeps the oil concentrated in one spot, while at the bottom, the untreated, regular, surface, the oil spreads out, and could potentially cause issues in clockwork.”

An advantage at West Dean was that, as it was a conservation college, students had access to machines and equipment which would not be available in a normal workshop, he said.

This meant he was able, as part of his project, to study whether epilane was reversible – could be cleaned off as if it had never been on a specific surface before. The question of whether it could be applied and cleaned off in a safe way was a major concern in conservation.

First-year foundation student Dan Batty said he had previously studied at furniture college, adding: “But that was a means to an end, to get to West Dean to do clocks. Clocks was always the end goal.”

At the beginning of his first year at West Dean he had made a small set of tools, all of which would be useful in making the three-wheel train weight-driven clock he had to make as part of the course, and which he had brought with him.

“This is a simple three-wheel train weight-driven 50-hour wall clock. I had been aiming to make mine in the style of a late 17th Century with a single hand,” he said.

Everything on the clock was made and machined by hand, he said, to develop the hand skills he was learning. He had also had to make a fly-cutter to cut the teeth on the escape wheel – “which was an interesting experience.”

Mr Batty went on: “The dial was one of the more interesting parts of making the clock.

“I laid it out by hand – that was by eyeball,” so there were very few measurements there – it was what looked right.

“There are various things there that you would not necessarily notice which, in terms of maths, might not be correct – but if you measure things so that they were symmetrical it would look wrong.”

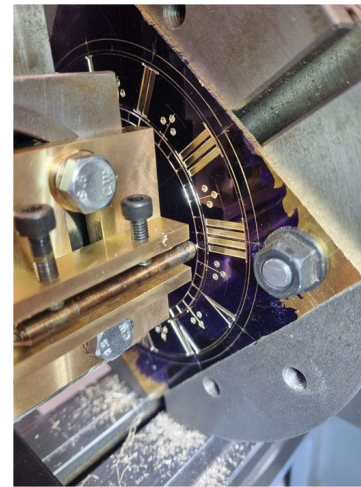
He then mounted the brass plate on which the dial was drawn out on to a face plate, and made an engraving tool and a tool-holder, using the pointed end of the engraving tool to produce the thin lines and the thick end of it produce the thick strokes on the numerals.

He then matted the centre of the dial, which he silvered, he said, adding that he believed the look was appropriate for a clock of the late seventeen-hundreds.

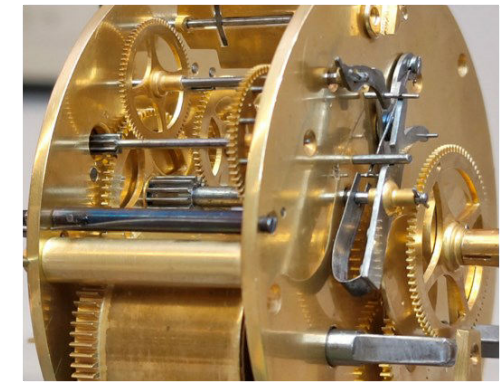
Dan Purvey, who is in the second year of his Foundation degree, produced a French drum movement he was servicing – and asked branch members if they could help him solve the mystery of the unusual strike movement.

The movement was a French drum movement with a going train, striking train and a half-hour strike.

“Some of the keen-eyed among you will notice there is something a little unique about this movement, particularly on the front plate,” he said.



Engraving the dial of Mr Batty's clock picture courtesy West Dean College



French drum movement – note the steel parts of the strike mechanism. Picture courtesy West Dean Col-

The movement had removable barrels, which was not overly common in French drum movements.

It also bore a marking saying the patent was not authorised by the government, which led him to believe that the striking mechanism on the clock was a prototype of some type, but which had not been taken further.

He had been unable to find an official name for the strike movement, which, he said, was “very simple, minimalist” and consisted of only three components.

“We have a counter-lever, a gathering pallet, and a setting spring and lifting piece as well.”

One thing to notice was that the fly went back a bit before a striking. The strike train, he said, had to reverse ever so slightly so as to push the gathering pallet down and unlock it before running.

“I have done a little bit of research and I am struggling to find much information about where this comes from. I cannot find any official patent for it,” Mr Purvey said. “If anyone does, by any chance, have any information on this, or can point me in the right direction – although this is not some sort of piece for my course, it is an interest I have come across and had the pleasure of observing and working on – I would be pleased to hear it.”