



National Gallery

John Canton, M.A. F.R.S

(1718-1772)



Blue Plaque to commemorate John Canton – unveiled 22nd May 1997, in the Shambles, Stroud



John Canton was born in Middle Street, Stroud, the son of a broadloom weaver, also named John and Esther (née Davis) in July 1718.

Stroud's 19th century historian, Paul Hawkins Fisher, records some notes about him in 'Recollections of Stroud'- *'He attended the Red Boys School in the Market House in the Shambles in Stroud, a charity school, at a young age and excelled in mathematics'*,

Taught by a Mr Davis, John Canton became very proficient at arithmetic, and mathematics, including geometry and the rudiments of astronomy.

He left school, aged 9, on his father's insistence that he must work and train as a broadloom weaver.

John Canton's Sundial

Despite his father's insistence that he became a weaver, young John continued to study, absorbing any scientific or mathematical information he could find, often by candlelight late in the evenings.

During this period he calculated the latitude of Stroud – the first time this had been done.

Several years later, while still in his mid-teens, he designed and carved a stone sundial at 53, Middle Street, Stroud – the family home. His father was reputedly pleased!



The sundial was close to the roadside

The sundial attracted the attention of local gentry...

and introduced young Mr. Canton to their acquaintance, which was followed by the offer of the use of their libraries. In the library of one of these gentlemen, he found Martin's Philosophical Grammar, which was the first book that gave him a taste for Natural Philosophy. In the possession of another gentleman, a few miles from Stroud, he first saw a pair of globes; an object that afforded him uncommon pleasure, from the great ease with which he could solve those problems he had hitherto been accustomed to compute. The dial was

One of those most impressed with John Canton's interests was Dr Henry Miles, a native of Stroud, and non-conformist minister of a chapel in Tooting, London. He vainly tried to persuade John Canton Snr that his son should go to London to meet people of the scientific community and expand his knowledge.

Finally in 1835, when John was 17, his father agreed that he could go and stay with Dr Miles at his home in London. Dr Miles was himself interested in Natural Philosophy and was able to introduce the young John Canton to the enquiring minds of the time.

John Canton's achievements

- Canton was an exceptionally gifted experimental scientist
- He was elected to the Royal Society, and received its Copley medal twice, in 1751 (for work on magnetism) and 1764 (for work on the compressibility of water)
- He was a pioneer investigator of atmospheric electricity, inventing a pith ball detector to demonstrate the charge on clouds overhead
- Letters he received from Thomas Bayes formed the basis of an important theorem used today in statistics
- He invented 'Canton's Phosphor', a strongly phosphorescent compound produced from sulphur and calcined oyster shells, and proposed (correctly) that the luminescence of sea water was due to decaying organic matter.
- In 2004 a replica of some of John Canton's apparatus was on display next to one of Galileo's telescopes in the Science Museum in Florence

And what of the sundial that changed John Canton's life?

The only record of the Sundial comes from our Stroud historian

Paul Hawkins Fisher in 1871:

About the year 1815 it was removed by the late Mr. Stephen Price, an ingenious machine-maker and engineer of Acre-edge, and placed on the south angle of one of his large and busy workshops, where it stood until they were taken down in 1865. The dial is now in the possession of Mr. Canton's great-grandson, Mr. Edwin Canton, an eminent surgeon of London.