

**Organisation:** The Royal Cornwall Polytechnic Society Trading as The Poly

**Title of the Object:** The Poly Dip Needle Compass



**Description of the object and story:** The Royal Cornwall Polytechnic Society (The Poly) is a Falmouth based charity, promoting engagement in the arts, sciences, and Cornish history ([www.thepoly.org](http://www.thepoly.org)). Its roots are in technological innovation. It holds significant collections of heritage archives.

For 160 years the Poly has possessed a rare magnetic dip needle, designed by Chairman Robert Were Fox, geologist, natural philosopher, inventor.

As a Quaker, a 'dissenter,' Fox had been excluded from the scientific elites of London and the universities. His genius caused Cornwall to be recognised for scientific progress. Fox and his faith were honoured by a previously inaccessible world.

During the 1830s/40s, ships went missing at an alarming rate, largely due to unreliable compass readings caused by variations in terrestrial magnetism. As magnetic north wandered with Earth's rotation, compasses required adjusting to true north, for which the dip needle was specifically designed.

The government launched the Magnetic Crusade, a survey of the Earth's magnetic properties. Ships were sent around the world to perform measurements in the largest state-funded scientific venture in history. The unique Fox needle was at the heart of this project.



Due to its reliability, it was used in Arctic exploration, leading to unprecedented contact with the Inuit. Previously considered 'savages', they became recognised as vital, highly skilled guides in their hostile environment.

The needle remained in the Poly's archive until 2020 when Dr Edward Gillin found it, amazingly, to be in full working order. Edward took it on world-wide sea voyages and found its readings were as accurate as ever.