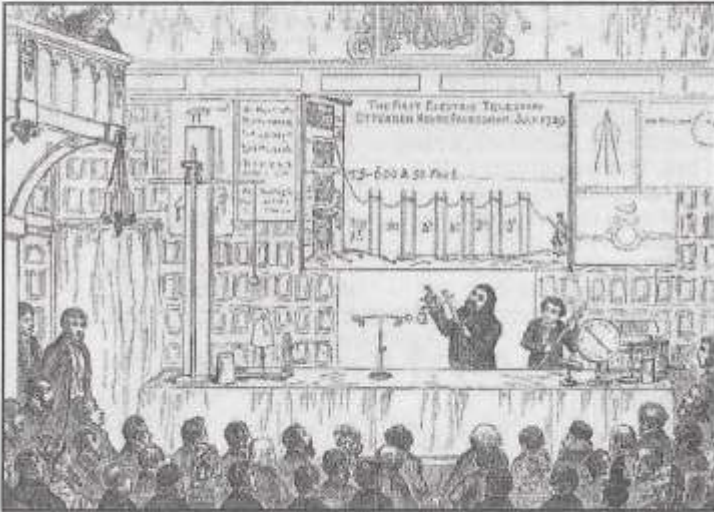




THE WAY WE WERE



LABORATORY: Research took place in the barn of Otterden Place



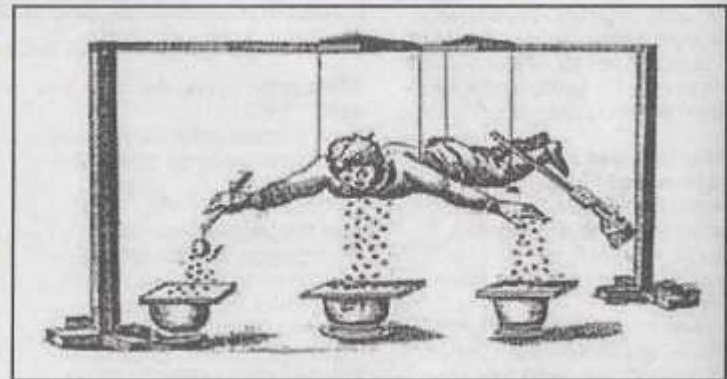
PIONEERING: The first transmission of electricity in 1729



PREMISES: Gray's dyeing business started in Best Lane



SITE: He moved to Stour Street (now Canterbury Cycle centre)



GRAY'S ANATOMY: Experiments with a suspended boy



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GRAY'S ANATOMY: Experiments with a suspended boy

Humble dyer's big discoveries

I WONDER how many readers have heard of the Copley Medal - I certainly hadn't.

It appears it is the oldest science prize in the world, predating the Nobel by 170 years. It is awarded each year by the Royal Society for "outstanding achievements in research in any branch of science".

Past recipients include many who became household names, including Michael Faraday, Charles Darwin, and Albert Einstein. When the medal was first awarded (in 1731) it went to Canterbury-born Stephen Gray for "his new electrical experiments". He was elected fellow of the Royal Society the following year.

Gray was the first investigator to understand the difference between conductors and insulators, and the first to show that electricity can be transmitted over long distances. These advances paved the way for all future developments in telegraphy and the telephone - in short, they changed the world. He also contributed to research on fossils, astronomy, protozoa and optics.

By profession, Stephen Gray was not a career scientist but a humble dyer working at the family business, first in Best Lane and later in Stour Street. The work was demanding and unpleasant. It involved the lifting of heavy bales of fabric, and prolonged contact with

Way We Were



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harsh chemicals used in the various dyes. Throughout his life he complained of pains in his back and hips, but somehow found the energy to engage in his spare time in scientific experiments. He was always short of money, and his research reports show how he had to rely on everyday objects. His work on protozoa started using water but moved on to wine, brandy, vinegar, beer, spittle and urine.

Experiments

His experiments on conduction of electricity relied greatly on silk threads, human hair, feathers, chickens, "gilded ox guts" and a suspended servant boy. Proof that electricity could pass along long conductors relied on experiments carried out in July 1729 at Otterden Place near Lenham, first in the panelled grand gallery and then, to achieve longer lengths of thread, in the barn nearby. Here, they managed to transmit signals over distances of 200 feet and more, and the era of modern communications was born.

The little we know of him, his health, and his whereabouts,

relies heavily on a few entries in parish registers and on Stephen's scientific letters. These show that Stephen was baptised in Canterbury All Saints Church on Boxing Day 1666 (year of the Great Fire of London) and that he never married. We know he spent a few years in Trinity College Cambridge in his early 40s, assisting in astronomical observations. In his 50s he gave up the Canterbury dyeing business and moved to London, where he lived as a pensioner in the Charterhouse charity near the modern Barbican. He died in London in 1736 but the place of his burial is unknown.

For 25 years of his life, Gray was studiously ignored by the Royal Society and in particular by Isaac Newton, its president. The reason seems to have been rather petty on Newton's part - Gray enjoyed a close friendship and working partnership with a younger scientist, Rev John Flamsteed, and Flamsteed had disputes with Newton over astronomical observations. The result was that most of Gray's work was ignored and his papers went unpublished. Now, 300 years later, Gray's mother-city could surely take steps to celebrate the life of this humble but remarkable man - a blue plaque or street name perhaps? ■ For more details see the CHAS website at:

www.canterbury-archaeology.org.uk