SIR GOLDSWORTHY GURNEY
1793-1875

Born at Treator, near Padstow, on the 14th February, the fourth son of a family of six. His grandfather, Gregory, had married an heiress allowing the family to have comfortable and gentle lives.

His early life is not well known although he was educated at Truro Grammar School. It is known that he met Richard Trevithick the Cornish engineer and inventor of steam locomotives.

After school he took up studying medicine with a Dr. Avery at Wadebridge and was very successful in his studies to the point that he took over the practice in 1813.

When aged 21 years he married Elizabeth Symons, a farmer's daughter, from Cann Orchard, Launcells, near Stratton, north Cornwall. His wife was 10 years older than him. In January 1815 they had their first child, Anna Jane, born at Wadebridge. She was devoted to her father and remained with him for almost all of his life.

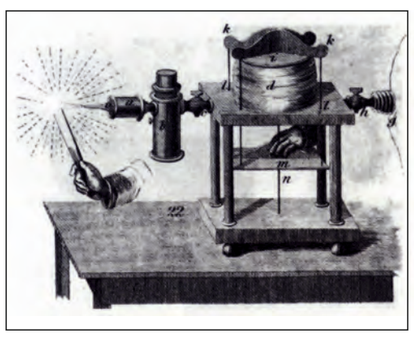
Despite being a successful doctor, Goldsworthy had an enquiring mind and developed an interest in science, putting his ideas into writing.

By 1820 he and his family moved to London, the provincial life was not for him. Being in London was like a breath of fresh air, the capital city at the end of the Napoleonic Wars, vibrant and with the future King, George IV, planning his coronation for 1821. The age of elegance with George Bryan 'Beau' Brummel and the impressive Pavilion at Brighton.

Notable engineers like Richard Trevithick and George Stephenson were proving that steam traction was possible and practical. This appealed to Gurney and he became involved in many aspects of the scientific aspect whilst still practising as a surgeon.

As a result of mixing with leading academics in 1822 he was appointed as a lecturer in chemistry and natural philosophy. 1822 was significant for personal reasons, his father died in March and during that summer his wife gave birth at Launcells to their son Goldsworthy John.

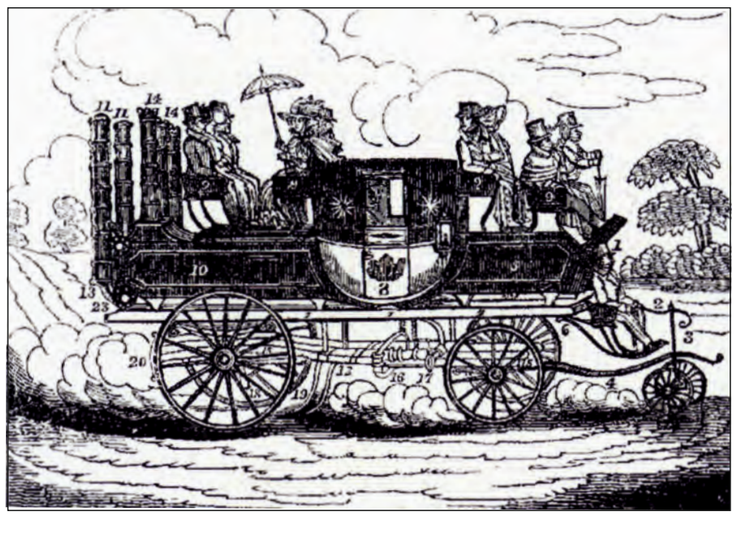
Gurney continued to lecture with an important series on the elements of chemical science which were eventually published. The use of steam power for carriages was one topic. His first invention soon followed; the oxy-hydrogen blowpipe. This was the method by which 'limelights' were used for lighting.



In 1823 he received the Isis Gold Medal from the Royal Society of Arts for this invention.

Between 1825 and 1832 Gurney developed a steam carriage, that is a carriage powered by a steam engine instead of four horses, with the driver steering the coach by means of a tiller bar connected to two pilot wheels at the front. The boiler was positioned under the rear seats of the coach with the stoking of the engine being undertaken by the guard.

He gave up his medical practice and became an engineer, establishing the 'Gurney Steam Carriage Coach Company'. His connections with the higher social sections of London ensured that he had backing for this enterprise.



The Company was to manufacture steam carriages and also to licence the use of the Gurney patent steam carriage on the long distance mail coach routes.

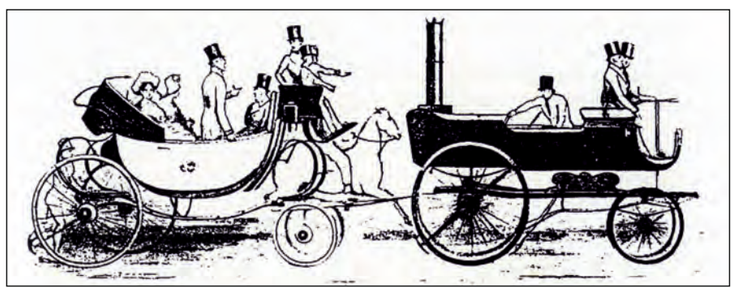
Realising the public concern of travelling on top of a steam boiler with the likely danger of an explosion he developed a propulsion unit which, when attached, pulled or 'dragged' the separate coach. These became known as 'Gurney Drags' running on the road and not rails.

Between 1829 and 1831 Gurney's development of the Steam Drag was a series of successes and pitfalls:

• 1829 - To test the Steam Drag a return trip between London and Bath was carried out. It was a difficult trip beset with problems including reduced power, equipment failure and a collision with a Royal Mail coach, also after being mobbed in Melksham were forced to abandon the Drag. The return trip was 4 days later, proving that steam engines could maintain speeds of about 15mph.

• August 1829 - A demonstration for the Prime Minister, The Duke of Wellington, went well and orders flooded in.

• 1st October 1829 - A major development: the famous 'Rainhill' engine trials on the Liverpool and Manchester Railway. Stephenson's 'Rocket' was by far the best engine and the Government backed this railway with a loan of £100,000.



• 21st February 1831 - Steam Drag service form Cheltenham to Gloucester commenced. It was cheap and very popular with the public but not with the owners of horse-drawn coaches who complained bitterly to the authorities.

• 23rd June 1831 - This service was abandoned due to the Cheltenham Road Trustees ordering the placement of large stones on the road to stop the steam service. Additional Turnpike fees were being made excessive, conditions that Gurney had no control over.

• Spring 1832 - Gurney auctioned everything. Total losses were £232,000 equivalent to £6.6million today.

Meanwhile in 1830 he had negotiated to build a house in the sand hills at Bude, on the estate of Sir Thomas Acland. The lease was for 90 years. He built his country house in a castle style allegedly on a raft of concrete to prove you could build on sand. The construction took 2 years and became a refuge when his steam enterprises collapsed.

His castle was adjacent to the canal and harbour belonging to the Bude Harbour & Canal Company which was started in 1819.

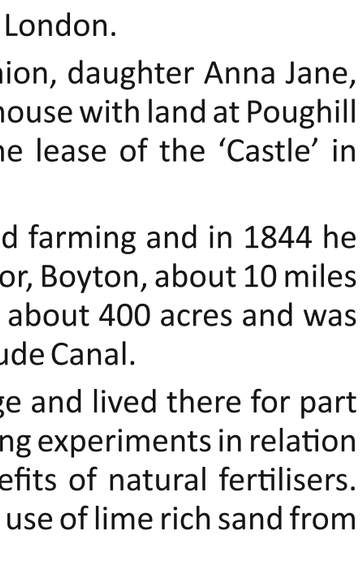
The canal was using inclined planes mainly to cope with hills of the hinterland and a lack of a major water supply. The main purpose of the canal was to import the lime rich sand inland for use as a soil improver and fertiliser. No doubt this would have been of interest to Gurney's scientific outlook.

Drawn by Sir Thomas Acland

When Gurney enclosed his 'castle' with a boundary wall he inadvertently enclosed/built on a section of nearby land owned by the Bude Harbour & Canal Company. As a result he was required to pay 2s 6d per year to acknowledge the Company's rights. BHCC marked the area at the front wall, near the then entranceway, with a boundary stone.

In 1999 when excavations were being undertaken for the creation of the art installation 'Bude Light' the boundary stone was recovered and given to Bude Town Council. It is now kept in the Barge Workshop at Helebridge, Marhamchurch where BSTC has various artefacts of interest.

Interestingly his castle in the sand had been designed so that it could be lit from just one point. He created the 'Bude Light'. This was an intensive light source created by cleverly introducing oxygen into the interior of the flame, this light was then reflected to all parts of the castle by a series of mirrors. The 'Bude Light' was a much further development of his oxy-hydrogen blow pipe developed in 1823.



In 1839 he was invited to improve the lighting in the House of Commons. Three Bude Lights were installed replacing 280 candles and were used for sixty years until replaced by electricity. This system was also used for the lighting of Trafalgar Square and Pall Mall.

Gurney's first wife had died in 1837 and was buried at St. Martin-in-the-Fields, London.

With his constant companion, daughter Anna Jane, he bought 'Reeds' a small house with land at Poughill near Bude. He gave up the lease of the 'Castle' in 1850.

Gurney's interests included farming and in 1844 he purchased Hornacott Manor, Boyton, about 10 miles from Bude. It consisted of about 400 acres and was adjacent a section of the Bude Canal.

He built Woodleigh Cottage and lived there for part of the year whilst conducting experiments in relation to agriculture on the benefits of natural fertilisers. This probably included the use of lime rich sand from Bude.

In 1854 his interest in the agricultural world led him to marry Jane Betty, a farmer's daughter from Sheepwash, Devon. She was aged 24 and he was by now 61 years old. They were married in St. Martin-in-the-Fields, London. Their marriage did not last long, possibly due to the friction with his daughter Anna Jane, now 39 years old. He did not divorce his wife but took her out of his will.

August 1863 saw Gurney knighted by Queen Victoria for services to science. Just three months later he suffered a stroke which left him partially paralysed. He gave up his Government connections, sold Hornacott and moved to Poughill, living in 'Reeds' with his devoted daughter for a further 12 years.

He died on 28th February 1875 and was buried at St. Swithins, Launcells, near Bude.

His daughter did several things to ensure he was remembered:

I) an inscribed cover stone on his grave

ii) donated £500 in 1880 towards the building of Truro Cathedral as a memorial to her father

iii) In 1889 a chiming clock for Poughill church

iv) a stained glass window in St. Margaret's, Westminster (destroyed during WW2) with the inscription "To the Glory of God and in memory of Sir Goldsworthy Gurney, born Feb 14th 1793 - died Feb 28th 1875.

Sir Goldsworthy Gurney is frequently referred to as 'Bude's Forgotten Genius' but considering the extent of his enquiring scientific mind perhaps it might be more appropriate to call him 'Cornwall's Forgotten Genius'.

Based on the booklet 'Bude's Forgotten Genius - Sir Goldsworthy Gurney 1793-1875' by B. Dudley-Stamp and information researched from records kept at the Archive Centre, The Castle, Bude.