

Biographical Record

Peter Anthony CUMMINS (1917 – 1997)

Represented the Truro Diocesan Guild on the Central Council from 1982 to 1983, from 1993 to 1995 and attended 4 Council meetings

Peter Cummins was born in Great Ouseburn, York on 10 April 1917 but spent his early years at Plymouth. He first married at the age of 22, but the marriage didn't last. He married twice more, finding true and lasting happiness with Evelyn, who he married in 1972. He had no children.

Peter's father had previously served in the Royal Navy, and during World War 2 Peter became a Naval Volunteer Reserve Officer with the rank of Lieutenant. He was seconded to Bomb Disposal, and with his technical knowledge made a significant contribution to the safe recovery and disposal of German magnetic mines. He faced dangerous assignments, and was decorated with the King's Commendation for Brave Conduct in one incident. Shortly before midnight in October 1940, aged 23, he was faced with what closely resembled a magnetic mine lying between the high and low water marks of the River Ogmore near Porthcawl. He noticed that the primer release had not operated, but that the retaining pin was missing. With characteristic resourcefulness he put a pencil in the hole, thus enabling the safe recovery of what turned out to be the first acoustic mine discovered, so that it could be disassembled in order to develop countermeasures against it. Peter helped make safe many delayed action land mines in places like Coventry and Liverpool, saving many hundreds if not thousands of lives, but he never got full recognition for this. With his dry sense of humour he said that he found it very difficult to get life insurance during this time!

Peter was a Chartered Electrical Engineer, as well as being a brilliant mechanical engineer. He was fascinated by electronics, particularly radio control. After the war, he worked at Vickers with Barnes Wallis who was developing the concept of a swing wing aircraft, and who following the terrible death toll of aircrews in the Dambusters raid was keen not to endanger the lives of test pilots. His designs were extensively tested using a 1/3 scale model, controlled by radio with equipment that Peter developed. Peter also built what he reckoned was the first aircraft simulator, and with it taught himself to fly the plane before ever it took to the air. Peter also worked on a computerised stability system for a very low resistance torpedo.

Peter left the Defence world and applied his knowledge and talent in the construction industry. High-rise buildings were springing up in the fifties and sixties, and Peter saw the need for scaffolding lifts on building sites. He quickly designed and patented a fail-safe control system, based on modern technology, and founded the ACE lift control systems company to manufacture it.

In the 1970s he had a heart pacemaker fitted, and his doctors advised him to leave London and slow down, so he and Evelyn moved to Camelford in Cornwall. He still remained active, and built a huge workshop in his garden, complete with milling machines, lathes, and an electronics assembly area – and an intercom to the kitchen so Evelyn could call him for supper. In June 1996 he suffered a stroke, and died 8 months later on 24 February 1997.

Peter took up ringing in his late 50s after moving to Devon. Evelyn joined the Womens' Institute, and when the bells at Lanteglos-by-Camelford were in danger of falling silent, Peter encouraged her to learn to ring. He later went to see what it was about, and he too learnt to ring in 1975. The ability to progress locally was very limited, and Peter realised that there must be a ringing community beyond the village. Through a newsagent he discovered *The Ringing World*, which led him to books on ringing. When he obtained a copy of the CC Tutors' Handbook he realised that between them he and Evelyn suffered from all but two of the 41 common handling faults listed.

The ringing simulator was Peter's major contribution to ringing. In 1977 he began to build machine that could ring changes, mainly as a technical exercise. His Mk 1 machine could ring an extent of Plain Bob Minor, but he realised that the design was not extendable, and designed Mk 2, which worked in a different way and could ring any method on eight. That was followed by a Mk 3, which rang 12, and several more

versions over the years, each incorporating improvements and refinements of the design. His early machines used discrete logic but later ones used microprocessors, for which he taught himself to write software in machine code. The Mk 1 generated sound with solenoid operated hammers striking tuned clock chime rods, but later units synthesised the bell sounds electronically, and the final units used the digitised sound of real bells. The Mk 2 specified the method with plugs in a panel corresponding to where bells swapped, whereas in later units the place notation was entered numerically.

Having satisfied his engineering curiosity by building a machine to ring changes, he went on to think how it could be used as a teaching aid. He set the machine so that he could 'ring' two bells by pressing buttons, and taught himself to ring the basic positions for change ringing in hand. He quickly realised that button pressing didn't simulate the real action of ringing handbells, so he converted two old handbells by fitting switches to the clapper mechanism, that he could connect to the machine.

He then devised a sensor that could detect the movement of a bell wheel, enabling him to ring a tied bell with the simulator. He built a dummy bell in the attic of his bungalow, so he could practise at home. Evelyn was concerned about the untidiness of a bell rope passing through the bedroom, so he offered to house it in a drain pipe disguised as a Doric column (though it's not known whether he ever did). He installed a simulator at Tavistock with sensors connected to all eight bells, so they could all be rung with no sound outside the tower.

Peter supplied many simulators to other people, all beautifully made to the highest professional standards and craftsmanship. Many of his machines are preserved in the Bell Foundry Museum.

To a large extent, Peter's ringing was self taught, and in the early stages not very good, but he improved. He rang extensively with the simulator, which enabled him to learn new methods very rapidly because he could practise them at home. No doubt this helped him to achieve a peal total of 149, which is remarkable for someone learning to ring so late in life. His first peal was in 3 Doubles methods, at North Petherwin, Cornwall on 7 April 1979, and he went on to ring peals in up to 20 Surprise Minor methods and at least 8 Surprise Major, as well as ringing many quarter peals.

Practising extensively with the simulator allowed Peter to develop very good striking, but it had a downside because he didn't develop the ability to adapt to ringing at different speeds, and he had minimal ropesight. He found it difficult to keep right if the ringing was rough. He could ring excellent peals of eight spliced with a competent band on suitable bells, but outside his comfort zone he could struggle even to ring rounds.

Peter was a strong supporter of method ringing in North Cornwall, and was a tireless teacher in his own tower, where he was tower captain. He was a member of the Devon Guild and of the Truro Diocesan Guild, which he served as a member of the its Standing Committee and as Deanery Steward of the Northern District. In 1985 he was elected to the College Youths. He and his simulators were well known at many ringing courses around the country, particularly at Hereford.

Peter had many other talents. He built radio-controlled cars, boats and model planes, and when in 1947 he joined the International Radio Control Model Society, he repeatedly won competitions with his radical designs and close attention to manufacturing detail. He was organist at both Lanteglos and Advent. He spoke German and Russian, and had a collection of technical books written in German.

Peter had a keen brain. and was dedicated to perfection, but his modesty and sense of humour tended to underplay his talents and achievements. He was very generous with his time and knowledge, and will be remembered by many with whom he shared his ideas and enthusiasm. The machines that Peter built helped both him and many others to develop their method ringing and listening skills in a way that would have been much harder without them, but his real legacy is that his vision inspired others to go on and develop the concept of the ringing simulator, using the more advanced technology that later became available.

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