



Rochester Avionic Archives Newsletter

From the Curator

This year is already proving to be busy in outreach from the museum. The website seems to have become a resource for people wanting spares and repairs. We have a man researching holographic displays visiting and then we hope to have a meeting with Liz and Barrie Walker. Liz is the great, great niece of one of the Short Brothers and they are engaged on a quest to bring together the numerous and countless threads of their story into one coherent SHORT story and present that to the people of Kent in particular and the world.

We have been involved in the photos for a BAE Systems item on Head Up Displays and helping the company with a big media day. One of the pictures is shown below

Over and above all this the work continues and just as an aside we are about to redo all the Catalogue numbers.

Finally as if that was not enough we have acquired two new areas which will allow us to spread the collection out and at last have a dedicated audio/visual room

Chris Bartlett

Curator



Your Curator with the oldest Head Up Display in the collection; a Buccaneer HUD made in about 1961



A picture of the replica Elliot Mk II Instrument Board for the cockpit of a BE2a full-scale model at Montrose Air Station in Scotland.



This is grandly called the RAA Annexe. It is an area in the Main Hanger and has lots of shelving in an air conditioned environment. We are slowly moving the Head Up Displays here as it will keep the optics cleaner. The old wooden Plan Chest contains drawings of the site dating back to WWII and Ann is doing a really boring job of cataloguing all these drawings so that we and the site Facilities Team can access them more readily. The Plan Chest is itself an historic item being over 70 years old.

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This is our new Audio/Visual room. It contains the archive of films, videos, DVDs and CDs and 35mm slides. The equipment to show these various formats have also been taken to this room and we have obtained a few comfortable chairs. Now we can show a film or a DVD without disturbing everyone else!

'START' Gyro wins Engineering Oscar

The 'START' Solid State Gyroscope, described a couple of issues ago after it received a Special Commendation in The Prince of Wales Award, has been awarded first place in its class in The Archimedes Awards 1992.

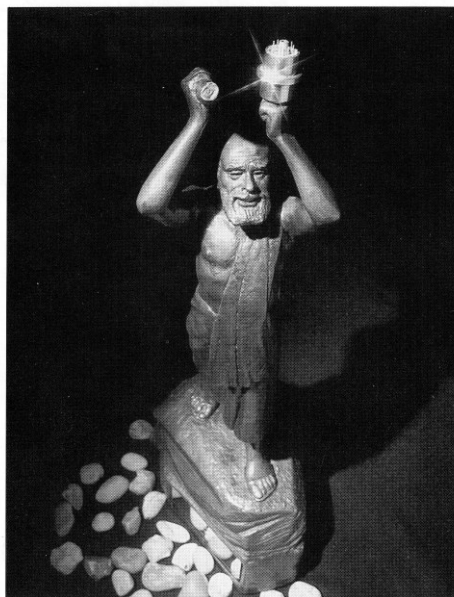
These awards, for Innovation in Engineering Design, are now in their eleventh year. They are rated as Oscars of British engineering design, bringing recognition and publicity to companies and their products; past winners have included large names such as Rolls-Royce, and small consulting teams. Entries are judged on creativity and marketability, and the category for START is 'New or Redesigned Product'. Sponsored by Autodesk Ltd., the class is judged by the readership of the technical magazine *Eureka* by postal ballot, from the three finalists chosen by a panel of distinguished engineers.

'We've cracked it!'

Remember Archimedes? This ancient Greek mathematician is said to have taken a

bath and discovered the principle concerned with equal displacement by weight of a body in water. On realising his discovery, he rose excitedly from the bath

with a triumphant cry of 'Eureka' - 'I have it!' Today's version is 'We've cracked it!'



In Newsletter 16 I asked for information about our statuette of Archimedes. Well now we know thanks to Martin Redfern for perusing an old Company newspaper of Christmas 1992. The original still does not appear to have a plaque on it but he is holding aloft a START Gyro which appears to have just been placed on Archimedes fist as there is no evidence of any fixing.



This is essentially blotting paper dipped in a solution of sodium sulphate to which a few drops of phenolphthalein has been added. The paper is dampened before use, and then the test wires are applied to it a short distance apart. The paper touched by the negative pole becomes red. This was described in a book of 1902 but the actual date is unknown



These two pictures are from the Paris Air Show in 1975. Who are the people and what was the beer mug for?



The Rochester site but not as we know it!

This is another plan for a redevelopment of the Rochester site. Would we really have been wandering through that idyllic landscape?



On a recent visit to Oxford I was able to visit the Museum of the History of Science. Ron Bristow arranged for the original Elliott Collection to be held there. Although this collection was not on display Ron has also donated his items from his private collection and these pictures are of the display nicely presented in the front lobby area. Well worth a visit.



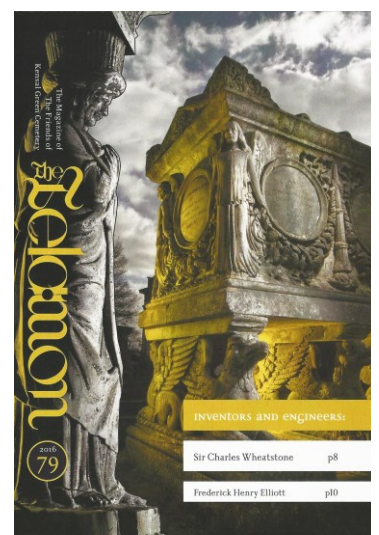
Elliott items at Oxford

The Friends of Kensal Green Cemetery

We have just received a copy of *The Telamon* magazine from the Friends of Kensal Green Cemetery. Edition 79 is the first in a newly launched version and contains the story of William Elliott which we provided. Readers of Newsletter 16 will recall how excited we were to find the grave of William Elliott. Both this grave and that of his brother Charles are in poor condition a sad situation for the founders of such a great engineering company.

The magazine also has an article about Charles Wheatstone and indeed there are many other famous engineers buried there such as Isambard Kingdom Brunel (1806-1859) and his son Sir Marc Isambard Brunel (1769-1849). Another well known name is the mathematician Charles Babbage.

The *Telamon* is an ancient Greek song (5th century BC)



The Elliott Differential Analyser 1947

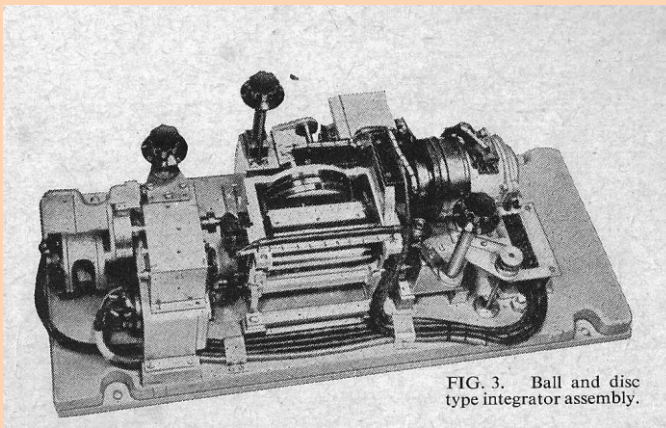
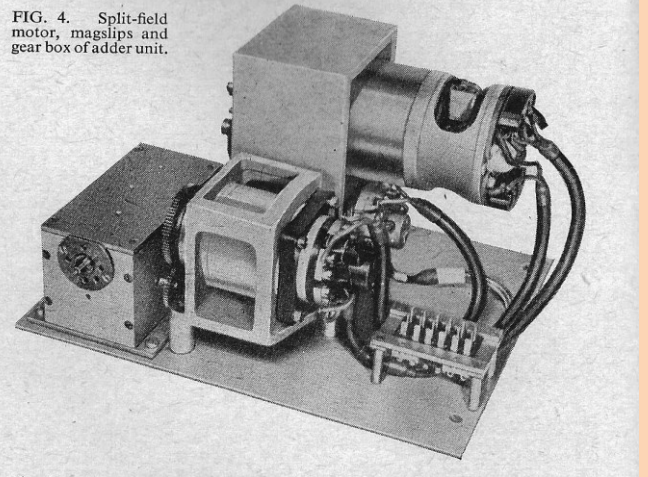


FIG. 3. Ball and disc type integrator assembly.

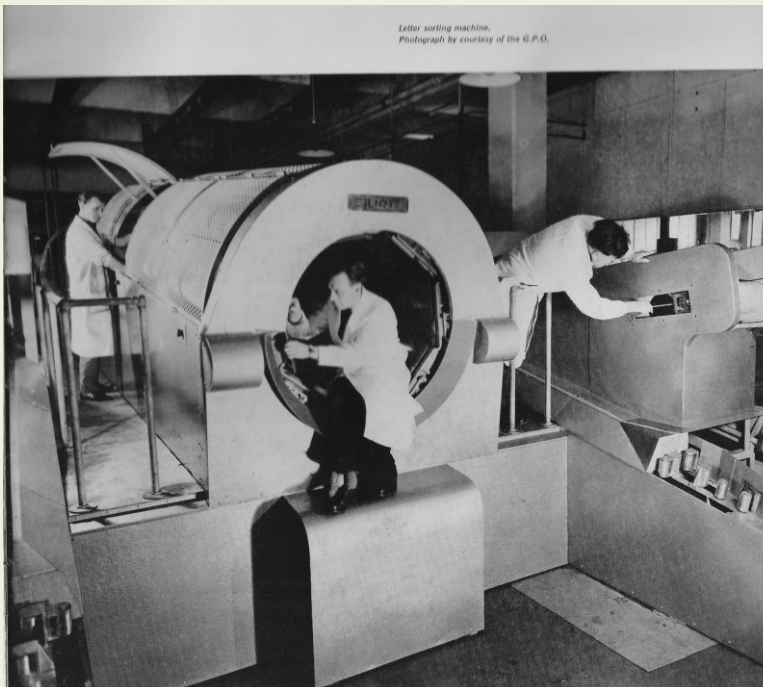
FIG. 4. Split-field motor, magslips and gear box of adder unit.



The first machine for the solution of differential equations was made in 1925. Such machines depend on a component capable of performing, mechanically, a continuous evaluation of integrals. Elliott Bros started to make such a machine in 1947 which was subsequently installed in the new Research Lab at Borehamwood. The machine was exhibited at the 1951 Festival of Britain in the Dome of Discovery. The Elliott machine has a number of mechanically independent units connected by servo-links with electrical connections through a central cross-connection panel. The servo-amplifiers, their power packs and the cross-connection panels, on which the problems are set up, are housed in three cabinets. It was recognised that accuracy and the size of the problem that could be handled were sacrificed to robustness, flexibility and speed.

The Elliott journal September 1951 Vol One Number two.

Airport Works in 1961



Letter sorting machine.
Photograph by courtesy of the G.P.O.



The Sheet Metal and Panel Division at Rochester occupied the main Hanger floor. A wide variety of sheet metal work and panel construction was carried out. The picture on the left shows a postal sorting machine and that above shows one of the fleet of delivery vans.

Elliotts made instruments for control of flow, pressure and temperature for local places such as Northfleet Power Station and there was a large export market.

In 1961 the Airport Works was one of the largest factories in the Elliott Automation Group with fifteen of the sixty companies and divisions located here. The payroll was nearly 3000 and the factory had more than 400,000 square feet of working space. The Towers were being built and would add another 450,000 square feet to the floor area and add 2000 more people to the site.