

## News and Views

## Christ's Hospital and Samuel Pepys

REFERENCE was made in the article on Pepys in *NATURE* of February 18 to his association with the Royal Mathematical School of Christ's Hospital, and the circumstances attending the foundation of the School are worth recalling. The project for a naval seminary, communicated to Charles II for his approval, was backed, in the first instance, by Sir Robert Clayton, Sir Jonas Moore, and Sir Christopher Wren; afterwards they were materially assisted by Pepys. Sir Jonas Moore was Surveyor General of the Ordnance and he solicited the favour of the Duke of York, then Lord High Admiral. A royal charter was granted and the School was opened in 1673 for forty boys. Little was done, however, by King Charles towards its maintenance, and the foundation suffered many vicissitudes. Pepys offered various objections from time to time to what he deemed inefficient methods of administration and teaching, and when, in 1698, he was appointed vice-president, he turned his attention to the re-modelling of the Mathematical School. The following is an extract from a letter of Pepys to the governors, dated May 4, 1694:—" . . . when, in the yeare 1676 a shipp of the King's (with another of certain private adventurers) design'd upon an Expedition for Discovery of a passage by the N.E. to China; wherein his then majesty had reason to expect many unusual occurrences, and therefore fit for a Child of this Foundation to share in the first advantage of: He was pleased to communicate his pleasure in it to the Hospital. In which, provision was made for the child's being not only well instructed in his service during the voyage . . . but returned at the end of it; as he accordingly was, and by us afterwards bound apprentice to a Merchant Man, Bartholomew Clement, Master of the *Ffortune*, trading to Virginia". In April 1699, Pepys was presented with the freedom of the City of London "in acknowledgment of the great zeal and concern for the interest of Christ's Hospital which he hath manifested on all occasions".

## The Marquis of Worcester at Vauxhall

AMONG those pioneers of the use of steam for pumping who have found a place in engineering history is Edward Somerset, second Marquis of Worcester (1601-67), whose life was written in 1865 by the civil engineer, Henry Direks (1806-73). The Marquis lived in troubled times but all his life was interested in mechanics, and in 1663 published his "Century of Inventions", containing notes in vague and mysterious language on inventions to be tried and perfected. Quite early in life, with the German master mechanic, Caspar Kaltoff, he became connected with the Ordnance Factory founded by Charles I at Vauxhall and on this site later in life he proposed to found a college for training artisans, and erected his famous 'water commanding engine', which attracted considerable attention. The interest surrounding the projects and achievements of the Marquis led Mr. W. H. Thorpe to attempt to deter-

mine the exact site of the works at Vauxhall and in a paper read to the Newcomen Society on February 15, he gave an account of his researches and their results. The position of the property was, he said, indicated by a petition dated 1666 presented to Charles II by the Marquis, and the details of the property are described in a report made by the Surveyor General to the Duchy of Cornwall. Further evidence was obtained from Rocque's large-scale "Survey of London" made in 1739-45. For a description of the apparatus for pumping erected at Vauxhall, we are indebted to two foreigners who saw it, but neither of them refers to the use of steam. One of the notes in the "Century", however, refers to "an admirable and most forcible way to drive up water by fire", and it is this that gives the Marquis of Worcester his place among pioneers of the steam engine.

## Industry and Electrical Research

THE twelfth annual report of the British Electrical and Allied Industries Association (E.R.A.) presented at the annual luncheon on February 15 is satisfactory and interesting. A period of depression in commerce often means greater activity in development. The report shows that there are seventy-seven committees actively engaged in advising and directing research on problems of urgent importance to industry. An incidental advantage is the benefit that accrues to individuals who share in the constant exchange of views which takes place at these specialist committee meetings. At the start, the organisation was almost entirely based on the sections of the industry connected with manufacturing. Its activities have now widened very much and there are very few electro-technical problems outside its sphere. The Association was never designed to relieve manufacturing works of the necessity of solving their own specific problems. The report proves that many of the subjects considered interest several branches of the industry. The financial statement shows that the main contributions, so far as money is concerned, now come from the electric supply companies, railway groups, etc. Although the actual income for last year was greater than the preceding year, yet the Association has adopted a conservative policy, maintaining its organisation intact, expediting the completion of researches and advancing the plans for new work. Many members of the permanent staff have been engaged solely in scientific investigations and the reports they have published have been useful to the industry.

MATERIAL progress has been made during the year towards ascertaining the real properties of dielectrics, as distinct from empirical measurements of their behaviour under given conditions. Numerous commercial problems are under investigation, as, for example, the study of radio condensers in co-operation with the British Broadcasting Corporation. Improved efficiencies in steam generating plant have been