News and Views

Nature of the Nerve Impulse

THE intimate nature of the nervous impulse has long been a subject for speculation by physiologists and psychologists. Simple models to explain the mode of transmission of an impulse along a nerve, like the electrical one of the marine telegraphic cable or like the chemical one of a train of gun-powder, have proved to be totally inadequate to explain the various phenomena observed in nerve. Until recently, the relative unfatiguability of nerve favoured a simple physical and non-chemical hypothesis. Modern refinements in technique, however, have shown that nerve during activity utilises chemical energy and produces heat. It is only in the last few years that the two phases of heat production in nerve have been analysed, and an account from the leading investigator in this field, Prof. A. V. Hill, appears in the special supplement to this week's issue of NATURE. Prof. Hill favours an electrochemical theory of a self-propagating wave of disturbance to explain the various forms of behaviour exhibited by an impulse in its passage along a nerve. Interesting experiments on the ionic distribution of potassium ions lend convincing support to the theory. The supplement will also be found to give a useful summing-up of the present position reached by investigators in this branch of nerve physiology.

Sir Charles Peers, C.B.E.

SIR CHARLES PEERS, Chief Inspector of Ancient Monuments and president of the Society of Antiquaries, has been awarded the Royal gold medal of the Royal Institute of British Architects for his services to architecture. The presentation took place at the Institute on April 3. Sir Charles Peers has now held office as Chief Inspector of Ancient Monuments for twenty years. It is largely owing to his zeal in carrying out his duties and the breadth of his practical knowledge in archæological matters that, not only have a large number of our antiquities been preserved from vandalism, but also the co-operation of the Office of Works, of which he is an officer, has been sought readily and with confidence by those who are interested either as owners, as archæologists, or as members of the public in the future as well as the past of ancient monuments. At the same time, the powers and duties of his office and his department, which were anything but adequate at the time of his appointment, have been enlarged by successive Acts of Parliament, until, with notable reservations to which attention has been directed with emphasis recently, such monuments are now within a measurable distance of a reasonable assurance of safety.

Trevithick Centenary Exhibition

IN connexion with the celebration of the centenary of the death of the great Cornish engineer and inventor Richard Trevithick, the 'father' of the steam locomotive, a memorial exhibition has been arranged in the main gallery of the Science Museum, South Kensington. Trevithick was an inventor of astonishing fertility but his main contribution to engineering progress was his invention of the high-pressure non-condensing steam engine and its application to both road and rail locomotives. His outstanding patent was taken out in 1802, and engines were made all over England to his designs. Of these engines two excellent specimens are shown, one with a cast iron boiler, made in 1805, and another made in 1811 with a wrought iron boiler. Unfortunately, nothing remains of his several locomotives, but various documents and drawings are exhibited and there are also some of the cast iron rails from Penydarran, South Wales, on which his first locomotive ran. This engine, the first rail locomotive in the world, is known to have drawn five wagons with a load of ten tons in 1804, and four years later Trevithick exhibited a locomotive, afterwards named *Catch-me-who-can*, "in the fields adjoining the Bedford Nursery near Tottenham Court Road", London. The next locomotive of importance was that constructed by Matthew Murray for John Blenkinsop at Leeds in 1811, but the original drawings for this were supplied by Trevithick, who received a royalty on the engine. The exhibition also includes Linnell's portrait of Trevithick painted in 1816, Burnard's bust and many interesting letters and documents.

Memorial to Thomas Tompion

ON Saturday, April 1, a plaque in memory of Thomas Tompion, the clockmaker, was unveiled in St. Mary's Church, Northill, Bedfordshire, where he was born in 1639, and simultaneously a wreath was laid on his tomb in Westminster Abbey, where he was buried in 1713. The plaque is the gift of the Clockmakers' Company and was unveiled by the Master, Mr. B. Kettle, the address at the service being delivered by the Archdeacon of St. Albans, the Ven. A. H. Parnell. At the ceremony at the Abbey, Sir Francis Newbolt, the Deputy Master of the Clockmakers' Company, said Tompion was honoured by the Company as one of its greatest Masters. So great was his mechanical genius and incessant industry that he was appointed clockmaker to the Royal Observatory at Greenwich at its foundation. He was a brilliant craftsman and made practical the theoretical inventions of others. He left English watches and clocks the finest in the world and the admiration of his brother artists. The grave Tompion lies in, it may be remarked, also contains the remains of his famous pupil and successor, George Graham, who died in 1751. The slab now to be seen in the Abbey, on which Graham's remarkable skill is referred to, was removed in 1838 and a small lozenge-shaped stone substituted. Thanks, however, to Dean Stanley, the original was replaced in 1866.

Centenary of Maurice Loewy

ON April 15 occurs the centenary of the birth of the distinguished astronomer, Maurice Loewy, who, from 1896 until 1907, held the directorship of the