Calendar of Scientific Pioneers.

March 3, 1702. Robert Hooke died.—One of the earliest and most vigorous members of the Royal Society, Hooke was Gresham professor of astronomy. He constructed the first Gregorian telescope, first applied a spiral spring for the regulation of watches, pointed out the real nature of combustion, and proposed to measure the force of gravity by means of a pendulum. He died in the old Gresham College, and is buried in St. Helen's Church, Bishopsgate.

March 3, 1808. Johann Christian Fabricius died.—Professor of natural history at Copenhagen and then at Kiel, Fabricius by his writings exercised great influence on the development of entomology.

March 3, 1879. William Kingdon Clifford died.—A brilliant mathematician and thinker, Clifford died at the age of thirty-three while occupying the chair of applied mathematics in University College, London.

March 5, 1827. Pierre Simon, Marquis de Laplace died.—The son of a poor farmer of Normandy, Laplace went to Paris at the age of eighteen. There he was befriended by D'Alembert, and speedily rose to a high position among the group of distinguished men of science who adorned France during the Revolutionary period. An astronomer, physicist, and mathematician, his "Mécanique Céleste," published in five volumes between 1799 and 1825, is regarded as one of the noblest monuments of human genius. His tomb is in the Père Lachaise Cemetery, near that of Molière's.

March 5, 1827. Alessandro Volta died.—Born in Como in 1745, Volta was for twenty-five years professor of natural philosophy at Pavia. His invention of the voltaic pile was made in 1799, and the following year he communicated his discovery through Sir Joseph Banks to the Royal Society. So great was the interest raised by Volta's invention that Napoleon called him to Paris in order to see the experiments. At the Centenary Exhibition at Como in 1899 Volta's books and papers and much of the apparatus he left were destroyed by fire.

March 5, 1866. William Whewell died.—A man of encyclopædic knowledge, Whewell was for many years Master of Trinity College, Cambridge. He wrote much on scientific subjects, and made important additions to the theory of tides.

March 6, 1908. William Edward Wilson died.—After accompanying Huggins on an eclipse expedition to Oran, Wilson set up an observatory at Danamona, Westmeath. He carried out notable investigations on the temperature of the sun.

March 7, 1904. Ferdinand André Fouqué died.—A professor of the Collège de France, Fouqué was one of the earliest workers in the field of the microscopic examination of rocks and minerals, of which Sorby was the great pioneer.

March 9, 1851. Hans Christian Oersted died.—Twenty years after Volta's invention of the voltaic pile, Oersted, then professor of natural philosophy at Copenhagen, made the observation that a wire uniting the ends of a voltaic battery affected a magnet in its vicinity. Following up this discovery, in 1820 he published his tract, "Experiments on the Effects of Opposing Electricity upon the Magnetic Needle," the effect of which was described by Forbes as instantaneous and wonderful. The ideas of Oersted were seized upon by Ampère, Arago, Davy, Seebeck, and Faraday, and in their hands led to rapid development of the science of electromagnetism, of which Oersted is rightly regarded as one of the founders.

E. C. S

Societies and Academies.

LONDON.

Royal Society, February 17.—Prof. C. S. Sherrington, president, in the chair.—Dr. C. **Chree**: A comparison of magnetic declination changes at British observatories. A comparison is made of mean monthly, daily, and hourly values at different stations, and of the relative amplitudes of the oscillatory movements which frequently occur even on comparatively quiet days. Use is made of magnetic curves from Eskdalemuir, Stonyhurst, Falmouth, and Kew observatories.—Prof. H. M. **Macdonald**: The transmission of electric waves around the earth's surface.—Prof. T. H. **Havelock**: The stability of fluid motion. The object is to illustrate the use of the criterion, introduced by Reynolds and modified by Orr, as a measure of the degree of stability of various fluid motions under different boundary conditions. Cases examined are the flow of a stream with a free surface, and the flow between fixed planes under different fields of force and boundary conditions of no slip or no tangential stress or constant normal pressure due to the disturbance from the steady state.—Prof. W. H. **Young**: The transformation of integrals.—Dr. J. L. **Haughton** and Kathleen E. **Bingham**: The constitution of the alloys of aluminium, copper, and zinc containing high percentages of zinc. The constitution of aluminium-copper-zinc alloys containing not more than 15 per cent. of aluminium and 10 per cent. of copper is discussed. The investigation has been carried out by the study of the heat absorptions and evolutions which take place in heating and cooling alloys between temperatures at which they are liquid and ordinary temperatures; by the measurement of electrical resistance at various temperatures; and by microscopic study of specimens which have been annealed for prolonged periods and quenched, or very slowly cooled and quenched. From the results obtained a model has been constructed to represent the constitution at temperatures above 250° C. The diagram advanced by Rosenhain and Archbutt has been used as one face of the ternary prism, the other binary system face being somewhat modified from Tafel's diagram.

Geological Society, February 2.—Mr. R. D. Oldham, president, in the chair.—H. **Bolton**: A new species of Blattoid (Archimylacris) from the Keele group (Stephanian) of Shropshire. The author describes the basal portion of a new type of Blattoid wing found by Mr. John Pringle in core-material of purple marly shale from a borehole for water. The wing belongs to the genus Archimylacris, and is closely allied to *A. Lerichei*, Pruvost, and *A. Dessaillyi*, Leriche, from the upper beds of the Westphalian of Liévin, Northern France.—C. E. **Tilley**: The granite-gneisses of Southern Eyre Peninsula (South Australia) and their associated amphibolites. Southern Eyre Peninsula is underlain by a complex series of pre-Cambrian rocks subject to prolonged erosion, but now in part covered by weathered products and recent æolian sediments. The fundamental platform of the eastern half of the peninsula consists of granite-gneisses, amphibolites, and hornblende-schists, embraced within the Flinders series. The petrography of the rocks is described and the significance of their mineralogical constitution discussed. The gneissic structure is a primary gneissic banding arising from flow-movements in a heterogeneous magma. The amphibolites are considered as representing more basic and earlier igneous intrusions, probably of the same igneous cycle and connected with the one great orogenic epoch, which have become thermally metamorphosed. Inter-