

Contemporary Birthdays.

- August 20, 1860. Sir William Henry Ellis, G.B.E.
 August 21, 1866. Sir Gerald P. Lenox-Conyngham, F.R.S.
 August 21, 1858. Mr. Charles T. Heycock, F.R.S.
 August 23, 1875. Prof. W. H. Eccles, F.R.S.
 August 25, 1851. Sir John A. F. Aspinall.
 August 25, 1844. Sir Thomas Muir, F.R.S.
 August 26, 1863. Mr. Edward Heawood.
 August 26, 1873. Prof. William A. Osborne.
 August 26, 1860. Sir Thomas Ranken Lyle, F.R.S.

Sir WILLIAM ELLIS is president of the Institution of Civil Engineers, and a past president of the Iron and Steel Institute. He was master cutler of Sheffield from 1914 until 1917.

Sir GERALD LENOX-CONYNGHAM, reader in geodesy in the University of Cambridge, was educated at Edinburgh Academy, afterwards entering the Royal Engineers branch of the army. He was superintendent of the Trigonometrical Survey of India from 1912 until 1921. Sir Gerald is a member of the National Committee for Geodesy and Geophysics of the International Research Council.

Mr. HEYCOCK, mathematician and metallurgist, is a fellow of, and lecturer in natural science in, King's College, Cambridge. He was president of Section B (Chemistry) at the Cardiff meeting of the British Association in 1920. Mr. Heycock was awarded the Royal Society's Davy medal in that year on the ground of his researches in physical chemistry, more especially on the composition and constitution of alloys. While his work added to theoretical conceptions, it proved of importance also to industrial metallurgy.

Prof. ECCLES was born at Ulverston, Lancashire. He was the last dean and professor of applied physics in the City and Guilds of London Technical College, which was recently closed. Lately president of the Radio Society of Great Britain, he was, last month, elected president of the Institution of Electrical Engineers.

Sir JOHN ASPINALL was born at Liverpool. He was chief mechanical engineer of the Lancashire and Yorkshire Railway from 1886 until 1899. In 1919 he was appointed consulting mechanical engineer to the Ministry of Transport. Sir John is a past president of the Institution of Mechanical Engineers and of the Institution of Civil Engineers.

Sir THOMAS MUIR, for a long period—1892 until 1915—superintendent-general of education in Cape Colony, was born in Scotland. A graduate of the University of Glasgow, he was, early in his career, assistant professor of mathematics there. In 1883 the Royal Society of Edinburgh awarded him the Keith gold medal for his researches into the theory of determinants and allied questions. The unusual course was taken of allotting the medal again in 1897 for continued work in the same field, and once more in 1916 to mark the completion of the series down to 1915, all the memoirs having been published by the Society. Sir Thomas remains faithful to residence in Cape Colony.

Mr. EDWARD HEAWOOD is known to a wide circle as the accomplished librarian of the Royal Geographical Society, a post he has filled since 1901. Born at Newport, Shropshire, he was educated at Queen Elizabeth's Grammar School, Ipswich, graduating at Gonville and Caius College, Cambridge.

Sir THOMAS LYLE was born at Coleraine, Ireland. He graduated at the University of Dublin. From 1889 until 1915 Sir Thomas was professor of natural philosophy in the University of Melbourne.

NO. 2964, VOL. 118]

Societies and Academies.

ROME.

Royal Academy of the Lincei, June 3.—Leonida Tonelli: The quadrature of surfaces.—A. Bemporad: The astrographic catalogue of Catania.—Ferruccio Zambonini: The presence in the products of the present-day activity of Vesuvius of a caesiferous variety of potassium fluoborate. For a crystalline sublimate from Vesuvius, consisting of potassium and caesium fluoborates in isomorphous mixture, the name 'avogadrite' is proposed.—Luisa Pelosi: Certain geometrical maxima and minima.—Mauro Picone: The singularity of harmonic functions.—Oscar Zariski: The impossibility of resolving parametrically by radicals an algebraic equation $f(xy)=0$ of the genus $p>6$ with general moduli.—Umberto Crudeli: Models of the helium atom.—R. Mazet: Oscillations of a liquid in connected vessels.—Vasco Ronchi: The limit of resolution of spectroscopic apparatus. The expression 'resolving power' of a prism, grating, etc., is shown to be inaccurate, since such apparatus is characterised only by dispersion. The resolution depends on the means by which it is examined and, when diffraction images are observed, is only one-half as great as when interference images are employed.—Mario Picotti: The results of the physico-chemical researches carried out on the Royal Italian cruiser *Marsigli* in the Straits of Messina. Observations on the temperature and salinity of the water are described.—Fausta Bertolini: Conformation of the stomach of the Teleostei in relation to the nutrition.—M. Sella: The migration of the tunny studied by means of fish-hooks.

SYDNEY.

Royal Society of New South Wales, June 2.—M. S. Benjamin: A note on the rate of decomposition of commercial calcium cyanide. Decomposition was effected in a large closed glass container, and the percentage of hydrocyanic acid evolved was determined. The curves obtained indicate that carbon dioxide considerably accelerates the rate of change and factors other than the cyanogen content of the material affect the efficiency of a given dose of the material in practical fumigation.—G. Harker and R. K. Newman: Reactions depending upon the vapour at the interface of two immiscible liquids. The reaction between amyl acetate and acidulated water has been studied. The hydrolytic effect of liquid amyl acetate and of the mixed saturated vapour of amyl acetate and water at 100°, upon a surface of given area of dilute mineral acid, revealed a close agreement in the rate of hydrolysis. Taken in conjunction with the results previously obtained for benzyl chloride, it is therefore evident that at the interface of the two liquids the mixed saturated vapours of both liquids must be present. This is in agreement with the view of Van der Waals that there exists a continuous transition from the liquid to the vapour state at the boundary of any liquid.—A. R. Penfold: Notes on the essential oils from some cultivated Eucalypts. The specimens were grown from seed at Ashfield, near Sydney. The trees examined varied from three to eight years of age, and consisted of *E. Australiana*, *E. Macarthurii*, *E. citriodora* and *E. radiata (numerosa)*. The *E. Australiana* was grown from seed collected at Wyndham, N.S.W., a place which yielded oils possessing a *lævo*-rotation of about -3.6 and containing phellandrene in small quantity, and as it would not meet the requirements of the various pharmacopœias the district had to be abandoned. The oils obtained from material grown