

where he was associated with General Percy Molesworth Sykes, who speaks highly of his abilities and achievement in dealing with Eastern peoples in his "History of Persia". In 1920 he retired, having received the orders of the Star of India, St. Michael and St. George, and the British Empire. In 1922 he was created K.C.I.E. In 1923 he accepted an heraldic appointment in Scotland. He resigned the office of Albany Herald in 1935 on the ground of ill-health.

As an oriental scholar, Sir Walseley Haig will be remembered chiefly for his contributions to Indian history and for his detailed knowledge of Moslem rule. As a translator his version of Badaoni's history, one of the chief sources for Akbar's reign, is the

standard of reference. He also translated the *Burhan-i-Maasir* of Tabatabai, the principal source for the Nizam Shahi dynasty of Ahmadnagar. On his return to England, Sir Walseley was appointed professor of Arabic, Persian and Hindustani at Trinity College, Dublin, and later was lecturer in Persian in the School of Oriental Studies, London. He was also joint editor of the "Cambridge History of India", the third and fourth volumes, covering the whole Moslem period, being allotted to him. The third volume was largely his own work; but owing to a breakdown in health, after he had planned the fourth volume and prepared voluminous notes, the completion of the volume fell to Sir Richard Burn.

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## News and Views

### Prof. J. J. Abel, For. Mem. R.S.

PROF. JOHN JACOB ABEL, who has just been elected a foreign member of the Royal Society, is the doyen of American pharmacologists. He is one of the best known and widely beloved personalities in medical science, in his own and other countries. After graduation, he worked under C. Ludwig in Leipzig and O. Schmiedeberg in Strassburg. Returning to the United States, he became professor of pharmacology at Ann Arbor, Michigan, migrated from there in 1893 to be the first professor of pharmacology at the Johns Hopkins Medical School, Baltimore, and held this chair with great distinction for nearly forty years. Prof. Abel's direct contributions to science have been chiefly on the chemical side of pharmacology. He was the first to bring to practical completion the isolation of epinephrine (adrenaline); later he discovered the same substance in the skin glands of a South American toad, from which he also isolated the toxic principle 'bufagin'; and he was the first to crystallize insulin. Among many other achievements, he devised methods for studying the diffusible constituents of the living blood, and the reconstitution of its plasma after hæmorrhage. Even in his retirement he is actively engaged in new and important researches on tetanus toxin. Throughout medical science in the United States his influence has been spread by his pupils, inspired by the example of a long life of selfless devotion to the pursuit of knowledge.

### Prof. N. E. Nørland, For. Mem. R.S.

AN unusually wide circle among men of science, including mathematicians, astronomers and geodesists, will approve and appreciate the election of Prof. N. E. Nørland to the foreign membership of the Royal Society. Prof. Nørland has since 1923 been the director of the Danish Geodetic Institute, an office always previously held (as in the case of the Ordnance Survey in Great Britain) by a military officer. In

recent years, he has undertaken a new first-order triangulation of Denmark, and in Greenland also he has instituted a new triangulation which will extend up to 76° N.—a most valuable contribution to the determination of the figure of the earth. In mathematics, his works include memoirs on the theory of difference equations in the complex domain; on divergent series; and on continued fractions. In astronomy, at the University Observatory of Copenhagen, he has worked especially on the errors which affect the meridian observations of fixed stars, and has also made an important study of the double star  $\xi$  Ursæ Majoris, concluding from a very slight perturbation in its orbital motions that it is a triple star, the observable pair having an invisible satellite. Prof. Nørland has held many distinguished offices in his own country, and has played a prominent part in the international organization of science; he has presided over the Baltic Geodetic Commission, the International Time Commission, and the International Council of Scientific Unions. He is a foreign member of the Academies of Science in Paris, Rome (Lincei) and Stockholm, and an associate of the Royal Astronomical Society.

### Prof. René Leriche

THE Lister Medal for 1939, which is awarded in recognition of distinguished contributions to surgical science, has been awarded to Prof. René Leriche, professor of clinical surgery in the University of Strasbourg, and he will deliver the Lister Memorial Lecture in 1939 at the Royal College of Surgeons of England. Prof. Leriche, who was born on October 12, 1879, received his medical education at Lyons, taking his degree in 1906. In 1906-9 he was chief of the surgical clinic of the Lyons hospitals, and then became full surgeon. In 1920 he became lecturer in experimental surgery at Lyons, and has also held there the professorship of external pathology. In 1924 he was appointed to the chair of clinical surgery



in the University of Strasbourg which he now holds. He was made an honorary fellow of the Royal College of Surgeons of England in 1937. Prof. Leriche is chiefly interested in the surgery of the stomach, bones, joints, the sympathetic system, and diseases of arteries. This is the sixth occasion of the award, which is made by a Committee representative of the Royal Society, the Royal College of Surgeons of England, the Royal College of Surgeons in Ireland, the University of Edinburgh, and the University of Glasgow.

#### Dr. D. T. A. Townend

DR. D. T. A. TOWNEND has been appointed Livesey professor of coal gas and fuel industries in the University of Leeds. After nearly four years of war service, Dr. Townend entered the East London (now the Queen Mary) College, London. He graduated in 1920 and then proceeded to the Department of Chemical Technology at the Imperial College of Science, London, for post-graduate study and research under Prof. W. A. Bone. He has since collaborated with Prof. Bone more particularly in investigating gaseous explosions at high initial pressures. Dr. Townend was awarded successively a Salters' research fellowship and a Rockefeller international research fellowship. He has been largely concerned in the equipment and organization of the High Pressure Laboratories at the Imperial College. Dr. Townend, who is a recognized teacher in the University of London, is an authority on combustion and high-pressure problems and has published many books and articles both independently and in collaboration with his colleagues at South Kensington.

#### U.S. National Academy of Sciences: New Members

AT the annual meeting of the U.S. National Academy of Sciences held on April 25-27, the following were elected foreign members: Prof. Alfred Fowler, emeritus professor of astrophysics, Imperial College of Science and Technology, London; Prof. Pierre Janet, professor of psychology, Collège de France, Paris; Dr. S. P. L. Sorensen, director of the chemical division of the Carlsberg Laboratory, Copenhagen; and Prof. D. M. S. Watson, Jodrell professor of zoology and comparative anatomy, University College, London. The following members were also elected: Prof. M. H. Stone, professor of mathematics, Harvard University; J. A. Fleming, Department of Terrestrial Magnetism, Carnegie Institution of Washington; Dr. C. D. Anderson, California Institute of Technology; Prof. G. W. Stewart, professor of physics, University of Iowa; Prof. Theodor von Kármán, director of the Daniel Guggenheim Laboratory, California Institute of Technology; Prof. W. K. Lewis, professor of chemical engineering, Massachusetts Institute of Technology; Prof. C. S. Marvel, professor of organic chemistry, University of Illinois; Prof. W. H. Rodebush, professor of physical chemistry, University of Illinois; Prof. W. H. Bucher, professor of geology, University of Cincinnati; Prof. L. J. Stadler, professor of field crops, University of Missouri; Prof. T. S. Painter, professor of zoology, University of Texas; Prof. W. de Berniere MacNider, professor of

pharmacology, University of North Carolina; Prof. E. Adelberg Doisy, professor of biochemistry, St. Louis University; Prof. S. B. Wolbach, professor of pathological anatomy, Harvard University; Prof. L. L. Thurstone, professor of psychology, University of Chicago.

#### Metal-Mining Enterprise

SIR WARINGTON SMYTH was the first professor of mining at the Royal School of Mines, and his forty years of service coincide with one of the most momentous changes in the history of the world, namely, the growth of industry on a metallic foundation. Prof. S. J. Truscott showed, in his Warington Smyth Memorial Lecture delivered on May 5 (Pp. 38 + 2 plates. London: Macmillan and Co., Ltd. 1s. net) how to-day everything civilized man enjoys depends on metals; without them rapid transport, modern housing, preservation of foodstuffs, etc., are impossible. Metals are durable as contrasted with vegetable and animal products, which are used once, whereas metals can be and are refabricated. The annual production of fresh supplies of metal merely augments the amount already in use, an amount greater in value than the total of all other commodities utilized by man. Metals, with the exception of gold, are not found to any extent as native metal and have to be extracted from highly complex ores. The enterprise of the miner has made many valuable discoveries such as the Bessemer process for ferrous metallurgy, the McArthur cyanide process for precious metallurgy and the flotation process for the base metals, and probably the same enterprise will find a cheap method of producing the light metals such as aluminium and magnesium. Further enterprise has rendered available vast sources of minerals which would otherwise have remained valueless, and in addition has shifted the centre of production of certain metals, for example, copper, from one continent to another. As the result of the exploitation of these processes combined with similar advances in engineering technique, one part of gold in 200,000 is being won at a profit, and one hundred million tons of base metal minerals are being treated by the flotation process per annum.

#### Mining Engineering as a Profession

IN his presidential address delivered on May 19 to the Institution of Mining and Metallurgy, Dr. C. B. Kingston discussed "Mining Engineering as a Profession". He said that mining is essentially a man's job and offers a splendid career to the keen ambitious man who is not seeking security first but likes a spice of adventure and finds satisfaction in a constructive occupation that makes some definite contribution to the world's welfare. The training of a modern mining engineer should be based on a sound general education, as not only must he be a technician but also in addition a man of affairs, a competent negotiator and preferably a linguist. The technique of mining is difficult to define, as it is all-embracing in its requirements, but briefly it can be described as the application of all the applied sciences to finding, winning and subsequent preparation for the market of a mineral deposit. The increasing importance



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