

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