

and finally as administrative head, he was associated with the laboratory first called the Chemistry Department, University Museum, Oxford, then the Old Chemistry Department, and later the Inorganic Chemistry Laboratory. He went up to Oxford from Giggleswick School as exhibitor at Merton College, and obtained a first class in chemistry in the Final Honours School of 1903. The head of the Department, Prof. Odling, appointed him to the small body of demonstrators whose duties were to lecture and to teach, but with no encouragement or example towards research. Lambert, however, as an undergraduate had received a taste of the new physical chemical methods of measurement which had just been introduced from Ostwald's Laboratory in Germany into the undergraduate course at the Daubeny Laboratory belonging to Magdalen College. Single-handed he began to prepare himself for original work, which in those days was concentrated on the development of techniques for achieving the highest accuracy of physical measurements on chemical substances. Everything needed to be done the hard way. By intensive and methodical late-night practice, Lambert made himself equal to a professional in glass-blowing, and highly skilled in the laboratory arts of apparatus construction. Having no technical assistance, he made his own vacuum pumps, traps, manometers, internal heating devices, and often his own taps (all, in early days, of soda glass). This manipulative skill culminated in the construction of a quartz microbalance for the measurement of gaseous densities (*Phil. Trans. Roy. Soc.*, 1950), whereby the atomic weights of carbon and nitrogen were determined with an accuracy of 5 parts in 10^6 .

His first published work related to the rusting of iron, and involved lengthy experiments on the preparation of highly purified water, oxygen and iron, from which he concluded that the rusting process was essentially of an electrolytic nature, a view which was only to find general acceptance many years later. After the First World War, he took up the study of adsorption of gases with a long series of carefully planned experiments on the palladium-hydrogen system and on the equilibria of vapours and gases with ferric-oxide and silica gels. This work brought out the difficulties of the subject associated with hysteresis effects. A paper published in 1939 showed how, by the most careful attention to detail, chemical methods of gas analysis could be brought to an accuracy of 0.02 per cent on a total volume of only 10 c.c. During all this work he was continually perfecting matters of technique and

methods of achieving the highest purity of the gases used; particular reference may be made to his preparation of pure nitrogen. The elaborate care he constantly took meant that his output of publications was not large; his involvement in the planning and technique of measurement often seemed to exceed his interest in the significance of the results. His sound instruction in method, however, was invaluable to students who worked under his supervision.

Dr. Lambert is perhaps best known for his initiative in the First World War towards the production of respirators. Immediately after the first gas attack, the Army set up a defence organization under Col. Horrocks, assisted by Col. Harrison and Major Sadd, and early trials were made of respirators of impregnated cloth of Balaclava helmet shape. As early as June 1915 Lambert, while on leave from the Royal Engineers, himself constructed a box-type respirator with soda-lime-permanganate granules as absorbing agent. He took this to the War Office, and his principle was quickly recognized as superior to all other proposals. In the following year box-respirators with Lambert's granules, together with charcoal, were issued to the troops, and continued in use throughout the War. This contribution was recognized later by a substantial monetary award from a War Inventions Board of scientists and by an O.B.E. from the Government.

As soon as the First World War was over, Lambert returned to Oxford and was elected Fellow of Merton College. Additional responsibilities came easily to him. Besides carrying a full load of tutorial teaching, laboratory demonstration and research, he was called on to act as mediator and peace-maker in disagreements during the early part of Prof. Soddy's tenure of the chair. When Soddy retired he effectively administered the Inorganic Chemical Laboratory until his own retirement in 1947. He was active in all affairs and committees relating to chemistry at Oxford, and served helpfully as a member of the University Chest during the Second World War.

Lambert possessed the virtues of a true Yorkshireman: cheerfulness, sociability, self-reliance, moderation, appreciation of honest, hard work, and wise judgment of men and things. He enjoyed playing cricket when young, and bowls and golf in later years. His marriage to Sylvia Dewe in 1908 was a happy one; she survives him. His daughter, Peggy, is married to Group Captain Peter Broad, and his son, James Dewe Lambert, is Fellow of Trinity College and University lecturer in chemistry at Oxford.

E. J. BOWEN

NEWS and VIEWS

The University of Strathclyde

It has recently been announced that the Royal College of Science and Technology, Glasgow, has received its charter as the fifth university in Scotland. This important development in university education in Scotland was described by Dr. S. C. Curran, principal of the College, in *Nature* of August 31, p. 843. It has now been announced that the new name of the Royal College is to be University of Strathclyde. Lord Todd, professor of organic chemistry in the University of Cambridge, has been elected the first chancellor. Dr. Curran is to be the first principal and vice-chancellor. The University of Strathclyde will naturally devote itself to the advancement of learning mainly through the fundamental and applied sciences. Unlike the other four universities in Scotland it will not have a Rector.

U.S. Air Force Office of Scientific Research :

Dr. W. J. Price

DR. WILLIAM J. PRICE, former chief scientist of the Aerospace Research Laboratories, Wright-Patterson Air Force Base, Ohio, has been appointed executive director

of the U.S. Air Force Office of Scientific Research, Washington. The Air Force Office of Scientific Research is responsible for the administration of grant and contract awards to industry, universities and other institutions whose proposals for research projects have been selected by the Air Force for support. Dr. Price was chief of the Modern Physics Research Branch at the Aerospace Research Laboratories prior to becoming chief scientist there in 1959. Since receiving his Doctorate in Physics from Rensselaer Polytechnic Institute in 1948, he has worked almost continuously for the Government. During 1949-54 he was associate professor of physics at the Air Force Institute of Technology (AFIT). In February 1954 he was appointed head of the Department of Physics there. He held this post until 1957, when he went to the Aerospace Research Laboratories as chief of the Modern Physics Research Branch.

The Finance of Education

THE report of a conference on the finance of education, organized by the 1963 Campaign for Education, and