of thermodynamics (which he tried to simplify in his system of 'energetics'), and was the first to emphasize the importance of the little-known publications of Gibbs and the value of the phase rule. These aspects of physical chemistry led him to under-estimate the importance of the atomic theory, but he recognized its significance after the work of Perrin on fine suspensions, and the discovery of radioactivity, had given it what he regarded as an experimental foundation. His own work on catalysis had led him to formulate the main features of the phenomenon in a manner which emphasized the observed facts and minimized the unverified (or unverifiable) and unnecessary hypothetical interpretation of them. This method of approach was typical of his outlook.

In his time, Ostwald was an international authority and his influence was comparable with that of Berzelius in an earlier generation. Many chemists, before adopting or using new theories, waited first to see what Ostwald would say about them and to what form he would reshape them to suit chemical requirements. His books, especially the smaller "Outlines of General Chemistry" and its many translations, were a powerful stimulus to the study of the newer physical chemistry, and his influence can be traced to-day in many directions, although its origin may not be adequately recognized. He was pre-eminently a clarifier and systematizer of knowledge, and an indefatigable defender and exponent of the newer physical chemistry based on the theories of solutions and electrolytic dissociation. His insistence that physical chemistry is a study equal in rank to any other branch of chemistry was necessary and important. Whole branches of chemistry now taught as commonplaces won their way into the science only after prolonged battles against either determined opposition or studied indifference. In maintaining their claims, Ostwald was much to the fore.

Ostwald was a man of many interests, in literature, music and art as well as in science. He devoted much time to the development of a colour scale and of an international language. He was greatly interested in the history of science and founded the "Klassiker" series. He believed that a historical approach had a disciplinary value. His many pupils venerated him and his influence in physical chemistry was fruitful and beneficial in many ways. It can be said with truth that physical chemistry owes very much, both directly and indirectly, to the research and teaching of Ostwald.

OBITUARY

Prof. F. H. Rein

THE death of Prof. F. H. Rein occurred at the age of fifty-six on May 14, at Göttingen, where he had occupied the chair of physiology from 1931 until 1953. He had recently resigned on his appointment as director of the Max-Planck Institute for Medical Research in Heidelberg, but had not actually taken up his new post.

Rein's scientific work consisted mainly in the application of ingenious physical and mechanical principles to physiological problems, and among the results of this work were the 'Thermostromuhr' and the 'Stoffwechselschreiber'. The 'Thermostromuhr' has since been criticized, and certain of its limitations have been shown; but in Rein's hands it made possible the investigation of many problems of the circulation as shown by the long series of publications from his Institute. It was a tragedy that Rein reached the peak of his ability when the position in Germany was becoming unfavourable for scientific work, and when international scientific relations were becoming difficult and finally impossible. When he gave a series of lectures in London in 1937 on the relation between metabolism and blood flow, he greatly appreciated the contact with English workers and was deeply concerned with the increasing difficulty of getting more interchange between Great Britain and Germany. The complete separation of the two countries during 1939–45 was followed by a great increase in the growing tendency in Britain to look to the United States rather than to the Continent for scientific exchange. This combination of circumstances has made Rein's work less widely known and appreciated in Britain. In addition to his numerous original papers he wrote a "Text Book of Physiology" which reached ten editions and is widely used in Germany. He was also senior author of the Physiology Section of the Fiat Reviews of German Science during 1939–46.

In his private life Rein was undemonstrative and somewhat reserved; but he inspired an intense loyalty in his younger colleagues, a number of whom now occupy chairs of physiology in Germany and elsewhere. Beneath his reserve he was extremely friendly, and he and his wife entertained the workers and visitors at his Institute with a kindly hospitality. His services to the University at Göttingen were great. He was responsible for the new Institute of Physiology which was completed in 1938. After the War he acted as rector of the University at a very difficult period, and he did much for the rehabilitation of the University. He was also one of the founders of the Fridtjof Nansen House in Göttingen, which was a centre for international student activities.

D. H. SMYTH

NEWS and VIEWS

Royal Aeronautical Society: Medal Awards

THE following Medals have been awarded by the Royal Aeronautical Society and will be presented at a meeting at the Royal Institution, London, on September 14: *Society's Gold Medal*, which is the highest honour that the Society can confer, to Mr. E. F. Relf, for his outstanding contribution to aeronautical science over a period of many years; *Society's Silver Medal*, to Mr. H. Grinsted, for his outstanding work in aeronautical engineering; *Society's Bronze Medal*, to Mr. L. Boddington, for his work on the development of naval aircraft; *British Gold Medal for Aeronautics*, to Mr. R. E. Bishop, for his outstanding contribution to aircraft design; *British Silver Medal for Aeronautics*, to Mr. J. E. Gordon, for his excellent work in the sphere of aircraft structural plastics; *Wakefield Gold Medal*, to Mr. F. W. Meredith, for his work in the design of automatic pilots and aircraft instruments; *Simms Gold Medal*, to Major P. L. Teed, for his paper on "Fatigue of Aircraft Materials with Special Reference to Micro-Structure"; *George Taylor (of Australia) Gold Medal*, to Group Captain E. A. Whitely, for his paper on "The Spacing of Aircraft under High Density Approach Conditions".