

his native village, Idvor, in Hungary, to see his parents. On the way he stayed at Lucerne and was lucky enough to climb to the top of Titlis without accident. When he returned to Cambridge he entered King's College and studied mathematics under Routh. The present writer remembers seeing him there, and was impressed by his striking but un-English appearance. Although he enjoyed Routh's lectures tremendously, Pupin had gone to Cambridge to study physics, and in his interesting autobiography entitled "From Immigrant to Inventor", published in 1923, he says that he thought Prof. J. J. Thomson was too young to teach him much, and he was suspicious of Lord Rayleigh because of his title. Later on, he had the greatest admiration for them both.

After a two months holiday at Corrie in the Isle of Arran, where he read Faraday's "Experimental Researches", Pupin went to the University of Berlin and studied under Helmholtz and Kirchhoff, obtaining a Ph.D. degree. On his return to New York he was appointed to a teaching post at Columbia University, was afterwards appointed adjunct professor of mechanics, and then professor of electro-mechanics in 1901.

In 1896 Pupin discovered secondary X-ray radiation and invented in the same year means for short exposure X-ray photography, by interposing a fluorescent screen before the photographic plate. He invented also improvements in multiplex telegraphy and in methods of tuning for electrical resonance. His most important invention was in connexion with long-distance telephone communication. By means of inductance coils placed at pre-determined intervals of the transmitting line, he greatly extended its range. In almost every country in the world 'Pupin coils' are used, and the enormously rapid development of long-distance telephony during this century has been due mainly to the use of these coils. His first paper on the subject was published in the *Journal of the American Institution of Electrical Engineers* of March 22, 1899.

Although an American citizen, Pupin will long be remembered by thousands of his former countrymen in Serbia—now Yugoslavia. He founded the Serbian House in New York, and fathered and cared for thousands of poor immigrants. He gave princely contributions to the Serbian Red Cross, to refugee funds and to many others, and his ample fortune, made mainly from his tele-communication inventions, was sorely diminished. At Columbia University he was much esteemed and held in affection by the students. He was a member of the executive committee of the National Research Council, a fellow of many scientific societies and an honorary doctor of Columbia and Johns Hopkins Universities.

A. R.

PROF. H. A. GILES

WE regret to record the death on February 13 of Prof. H. A. Giles, formerly professor of Chinese in the University of Cambridge. Herbert Allen Giles was born on December 8, 1845, the son of Dr. John Allen Giles, well-known to many generations of students of the classics as a translator. He was

educated at Charterhouse and in 1867 joined the consular service in China, being appointed to Tientsin after a probationary year at Peking. He retired from the service in 1893, returning to England, and in 1897 was appointed professor of Chinese at Cambridge. He held this chair until 1932 when he retired, having done much to foster the study of the Chinese language in the University, and secured its recognition in the 'Little go' in place of Latin or Greek for natives of Asia.

Giles laid the foundations of his scholarship in Chinese during his probationary year in Peking. Within a few years of his appointment to Tientsin, his knowledge of China had progressed so far as to enable him to write with authority on many sides of Chinese life and culture in the *Celestial Empire*. He had also begun work on his monumental Chinese-English dictionary. This indeed was to prove his *magnum opus*. It appeared in parts and in this form was completed in 1892. A new edition, revised and enlarged, appeared in 1912. It won him world-wide recognition as the first European authority on the Chinese language, and in 1911 was awarded the Prix St. Julien of the French Academy. Its pre-eminence in scholarship, however, should not be allowed to obscure the fact that Giles's knowledge of every side of Chinese life and culture was profound. Nowhere, perhaps, does this come out more clearly than in Giles's lighter works, and his "Strange Stories from a Chinese Studio" and "Quips from a Chinese Jest Book", no less informative than they are amusing, with their instructive notes and comments, might well serve as an introduction to most aspects of the many-sided Chinese mentality.

From 1870 onward, Giles was busily engaged, in such leisure as his consular duties afforded, in studying and in writing on the life, art, religion, language and history of the Chinese people. A long list of substantial and authoritative works stands to his credit, of which the best known, next to his dictionary, is "A Chinese Biographical Dictionary". His achievement was recognised by many honours, among which may be mentioned the Order of Chia Ho, conferred by the Chinese Government, the award of the triennial gold medal of the Royal Asiatic Society and honorary degrees from the Universities of Oxford and Aberdeen.

WE regret to announce the following deaths :

Prof. J. J. R. Macleod, F.R.S., regius professor of physiology in the University of Aberdeen, formerly professor of physiology in the University of Toronto, on March 16, aged fifty-eight years.

Prof. B. M. Wilson, professor of mathematics in University College, Dundee, formerly lecturer in pure mathematics in the University of Liverpool, on March 18, aged thirty-eight years.

Major-Gen. Sir Richard M. Ruck, of the Royal Engineers, known for his scientific work in submarine mining, chairman of Council of the Royal Aeronautical Society from 1912 until 1919, on March 18, aged eighty-three years.