

Scrivenor was educated at the King's School, Canterbury, and Hertford College, Oxford, and after a few years as a geologist with the Geological Survey of Great Britain he was appointed Government geologist, Federated Malay States, in 1903, on contract for three years. Actually he remained there for a total of twenty-eight years until his retirement in 1931 at the age of fifty-five. He very soon established a reputation as a sound geologist and as a very tough person who was prepared to tackle any journey, no matter how difficult the conditions, and who had a most scrupulous idea of his obligations to his employer, the Malayan Government. He was said indeed to have asked Government to reduce his salary because he thought he was being overpaid. The actual facts of this unusual affair were that 'J. B.' had fallen in love with his work and with the country, and, being afraid that Government did not intend to take him on permanently, he did his utmost to ensure that it should do so by offering to serve on permanent and pensionable terms at a salary less than his initial salary on contract. His offer was accepted. He married, and returned with his bride to resume his happy life of hard work in the tropics. In 1912, he enlarged his one-man department by engaging another geologist, to be followed shortly by a chemist, and in June 1914, by another geologist, the present writer.

Apart from his geology, Scrivenor was a very keen Volunteer. For two years of the First World War he was content to serve in Malaya as a sergeant in the Volunteers, after which, although he was now a middle-aged man with a wife and four children, he returned to the United Kingdom to join the Army, and he served in France as a signals officer in the Royal Engineers. He loved his life during this period as much as any other in his very busy career, and after the War he published a small book containing an account of his experiences. The copy which he later deposited in the library of the Kinta Club at Batu Gajah was much read by his many friends. He contributed many papers to various geological journals, and during his last few years as Director of Geological Survey, Federated Malay States, he wrote two important books, "The Geology of Malayan Ore Deposits" and "The Geology of Malaya", which give a most useful and readable account of Malayan geology as known at that time. During his final years in Malaya, he also published a reconnaissance geological map of the Peninsula, the culminating result of his own jungle work and of that of his colleagues.

After retirement, Scrivenor lived in Bedford and served for some time on the town council; but he also continued his researches in geology, and indeed he had just returned from Cornwall when he died. He was a most loyal and generous friend, and he leaves behind him many who owe him much.

E. S. WILLBOURN

Mr. J. W. Williamson

THE death on March 16 of Mr. J. W. Williamson, at the age of eighty-one, will be felt as a sad loss by his many friends. He had an unusually varied career. Being forced for financial reasons to abandon medical studies at the University of Edinburgh, he was for many years a schoolmaster. At the age of forty, however, he was able to spend two years at the then Royal College of Science, and obtained an honours B.Sc. degree. He then resumed schoolmastering, but

shortly before the First World War accepted a post as secretary to the Corporation of the Sons of the Clergy. In 1919 he became the first secretary to the Scientific Instruments Research Association. He remained in this post until he retired in 1936, and the present standing of the Association is due in no small measure to his efforts.

His work with the Association confirmed in Mr. Williamson a long-felt interest in the applications of science to industry, the importance of which was not so fully realized twenty-five years ago as it is to-day. He was given the opportunity of studying detailed applications in respect of two particular industries, namely, oil and railways. In 1927, at the request of the late Lord Cadman (then chairman of the Anglo-Persian Oil Company), he visited that Company's station in Persia, and, as a result, wrote "In a Persian Oil Field". A later visit to Persia, in 1938, provided him with the material for a second book concerning the company, but publication was delayed by the War. His lucid account of technological processes created such a favourable impression that he was invited by the late Lord Stamp to write a similar volume about the L.M.S. Railway. This, "A British Railway Behind the Scenes", was published in 1933. He wrote another book on railways, though in a more popular vein, called "Railways To-day", a second edition of which he was able to prepare just before his death. Another result of his interest in applied science was his connexion with the administration of the Imperial College of Science and Technology, on the governing board of which he was a representative. His assistance in the constitutional reorganisation of the College was of considerable value.

During his service with the Scientific Instrument Research Association, Mr. Williamson was called to the Bar as a member of Gray's Inn. His legal knowledge proved of great help in his work for both the Association and the Imperial College, and he published a number of papers on legal aspects of science.

In 1920 he married Helen Lee (*née* Chambers), a research botanist; she died in 1934, and he turned even more to their many friends, in whose company they had always delighted. With his varied experience Mr. Williamson combined great personal charm and a gift of imparting happiness to all who knew him.

C. A. CLEMMOW

Mr. F. Hope-Jones

THE death of Frank Hope-Jones on April 3 has taken from us an enthusiast; to everything in which he became interested during his long life of eighty-three years he applied an unbounded enthusiasm which did much to help on the project in hand.

Hope-Jones's primary interest was the application of electricity to horology, and the successful functioning of many hundreds of impulse or step-by-step propelled time installations is largely due to the application of the principles laid down and continuously championed by him, the first and foremost of which was the transmission of energy through the surfaces of the electric contact.

The free-pendulum clocks which his firm produced and installed at the Royal Observatory, Greenwich, and supplied to many other observatories scattered all over the world would probably never have come into existence had it not been for the foundation