

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

work so emphatically laid down by Hope-Jones. His book, "Electric Clocks", published in 1931, brought up to date in 1940, and renamed "Electrical Time-keeping", has been reprinted three times and went into a second edition last year.

Just before the Second World War, Hope-Jones's enthusiasm took him, when close on seventy years of age, on a tour round the world, when he visited Australia and the United States, receiving there a John Price Wetherill Medal of the Franklin Institute in recognition of his "discovery, invention or development in Physical Science".

He was a staunch friend of William Willett and supporter of his 'daylight saving'; incidentally, this caused him to originate the six 'pips' time-signal as now broadcast daily from Greenwich. His last love was the rationalization of the calendar, and his efforts to rid us of the troubles resulting from the

varying numbers of days in the month may, it is hoped, yet bring forth fruit.

Frank Hope-Jones was a member of the Institution of Electrical Engineers, a fellow of the Royal Astronomical Society, fellow and gold medallist of the British Horological Institute, and an honorary member of the Horological Society of New York. He leaves a widow and one daughter.

W. H. SHORTT

WE regret to announce the following deaths:

Dr. B. P. Babkin, F.R.S., of McGill University; distinguished for his contributions to physiology, on May 3, aged seventy-three.

Mr. H. G. Maurice, C.B., president of the Zoological Society of London during 1942-48, on May 12, aged seventy-five.

NEWS and VIEWS

Physics at University College, London:

Prof. H. S. W. Massey, F.R.S.

THE transfer of Prof. H. S. W. Massey from the chair of applied mathematics at University College, London, to the Quain chair of physics is a fitting recognition of the width of his interests and achievements. After studies at the University of Melbourne, he went to the Cavendish Laboratory, Cambridge, in 1929, and carried out experimental work on the scattering of electrons in gases. He then interested himself in the theoretical side of this subject and, with N. F. Mott, published in 1933 "The Theory of Atomic Collisions", a text-book of which a second edition, much enlarged through Prof. Massey's researches, has just appeared. Apart from work on this subject he has made numerous contributions to theoretical nuclear physics, to chemical kinetics and to the theory of the upper atmosphere, and published in 1938 a monograph on "Negative Ions". During the War he held, among other positions, that of chief scientist of the Mine Design Department of the Admiralty, and was later in the United States associated with the Manhattan Project. His researches in theoretical physics are distinguished by their practical and useful nature, and by their close connexion with experimental science. In any problems concerned with scattering or collisions, the present-day physicist will look first through Prof. Massey's works if he desires reliable results in a form ready for application. In addition to his scientific work, Prof. Massey has since the War been very active as vice-president of the Atomic Scientists' Association and has spoken frequently, both in London and elsewhere, on the technical and political implications of the utilization of atomic energy.

Mathematics at the University College of North Staffordshire:

Prof. I. N. Sneddon

DR. I. N. SNEDDON, who has been appointed to the chair of mathematics in the University College of North Staffordshire, is thirty years of age. He was educated first at the University of Glasgow, where he graduated B.Sc. in 1940 with honours in mathematics and natural philosophy, going later to Trinity College, Cambridge, of which he was a senior scholar in 1941. During 1942-45 he was employed as a scientific officer by the Ministry of Supply, first at

the Mathematical Laboratory, Cambridge, and later at Fort Halstead, Kent. His work during this period on the properties of materials and the theory of vibrations led to advances of our knowledge of the processes involved in armour penetration and in the design of anti-tank guns. After the War, Dr. Sneddon returned to academic work as a research associate at the H. H. Wills Physical Laboratory, University of Bristol, 1945-46, where he worked with Prof. H. Frohlich on the meson theory of nuclear forces, and collaborated with Prof. N. F. Mott in the writing of "Wave Mechanics" (Oxford University Press, 1948). Since 1946 Dr. Sneddon has been a lecturer in natural philosophy in the University of Glasgow, where his work on theoretical nuclear physics has included the study of the excitation of nuclei by electrons, the energy-levels of heavy nuclei and the creation of mesons in electron-nuclei collisions. Apart from theoretical nuclear physics, Dr. Sneddon's main interest is in the boundary value problems of mathematical physics. For a discussion of the application of integral transforms to the equations of elasticity he was awarded the degree of D.Sc. by Glasgow in 1947. A work on "Fourier Transforms" is in course of publication by the McGraw-Hill Publishing Company. Dr. Sneddon's abilities as a lecturer have been widely appreciated in Glasgow. The width of his interests, both in pure and applied mathematics, makes his new appointment a particularly fortunate one.

Anthropology at the London School of Economics and Political Science:

Prof. I. Schapera

PROF. ISAAC SCHAPERA, who has recently been appointed to a University chair of anthropology at the London School of Economics and Political Science, is a South African social scientist with a strong interest in applied anthropology. Prof. Schapera holds the degrees of M.A. in social anthropology from the University of Cape Town and D.Sc. in anthropology from the University of London, and was a student of both Prof. A. R. Radcliffe-Brown and of the late Prof. B. Malinowski. After holding various lecturing posts, he became professor of social anthropology at Cape Town in 1935 and has held this post until now. He was visiting professor at the University of Chicago in 1948. Prof. Schapera's field research has been carried on mainly in the Bechuana-