

basis for all tidal predictions at those ports. In addition to these activities, he became the general secretary of the Society from 1881 to 1887, in which year he was elected president. He was also a member of the Cape Meteorological Commission.

When the staff of the Royal Observatory was reorganised in 1897, Mr. Finlay was appointed the chief assistant, but owing to ill-health he was obliged to retire on pension the following year. He spent several years in England, where he completely regained his health, and upon his return to South Africa he took up the work of teaching, a task for which he was eminently suited. When Prof. Williams, of the Rhodes University, Grahamstown, left South Africa to take part in the War, Mr. Finlay took his place as professor of mathematics and surveying, and he remained there at work after Prof. Williams had returned, to within a few days of his death.

LÉON MAQUENNE.

LÉON MAQUENNE, whose death is announced, was born in 1853, and will be remembered as one of those able experimenters and clear-sighted research workers who made notable discoveries in the domain of organic chemistry when the science was still in its infancy and before any really definite views as to the structure of carbon compounds, especially those of natural origin, had been developed. His most noteworthy contributions deal with the structure of the sugar alcohols, important naturally occurring substances which, for many years, resisted the attack of the chemists of his time, and his first achievement in this field was the determination of the constitution of inositol, a compound which occurs widely in both the animal and vegetable kingdoms. He was able to show that this sugar alcohol was hexahydroxycyclohexane, and thus not only established the structure of the first member of an important new series, but also indicated the close relationship which exists between substances produced in the organism and benzene.

Maquenne was also successful in determining the constitution of perseitol, a seven carbon sugar alcohol which occurs in the leaves of *Laurus Persea*, but his most outstanding work in this connexion was probably the isolation of the dextro form of erythritol by the reduction of *l*-threose, a discovery which was shortly afterwards supplemented by the preparation of *d*-erythritol by his pupil Gabriel Bertrand, who isolated it by the action of the "sorbose bacterium" (*bacterium xylinum*) on natural erythritol. The two enantiomorphs were then united to form the *racemic* modification which was found to be identical with the compound which Griner had synthesised in 1893 from divinyl. The natural form of erythritol is the *meso* modification, but both the *meso* and *racemic* stereoisomers were prepared by Griner in his synthesis.

Of special importance also is the work carried out by Maquenne on starch, which is embodied in a series of papers published during 1904 and 1905. One outcome of this investigation was the discovery, made with Eugene Roux, that crude starch is a mixture of amylose and amylopectine.

During recent years Maquenne turned his attention more particularly to biochemical problems, and he was able to elaborate many important and delicate methods

of analysis. His great range of knowledge led him, however, to carry out researches over a wide field, and to him, amongst other things, is due the preparation of pure acetylene from barium carbide, as well as the method of eliminating nitrogen from the air by means of metallic magnesium, which was ultimately used by Rayleigh and Ramsay in the preparation of argon.

ALL who are concerned in the world of shipping and in the electrical industry will learn with regret of the death on March 17, a few hours before his forty-sixth birthday, of Mr. W. W. Bradfield, general manager of the Marconi International Marine Communication Co., Ltd. Practical radio telegraphy, particularly in connexion with shipping, owes much to Mr. Bradfield, whose connexion with the Marconi Company dates from September 3, 1897, when he entered what was then known as the Wireless Telegraph and Signal Company, Ltd. As electrical assistant to Senatore Marconi, in the earliest days of commercial wireless, Mr. Bradfield took part in experimental work on Salisbury Plain, and assisted in the erection of the wireless station at the Needles, Isle of Wight. In the year 1899 he installed the first wireless apparatus on British battleships, and a little later took charge of the demonstrations to the United States Government on board the U.S. battleship *Massachusetts*, while in 1901 he undertook similar demonstrations before the French Government, when communication was established between the French Riviera and Corsica. In the same year he supervised the erection of the famous stations at Siasconset (Nantucket Island) and the Nantucket Lightship. From 1902 until 1908 Mr. Bradfield was chief engineer to the Marconi Wireless Telegraph Company of America, and during this time he took part in the first International Radio-Telegraphic Conference, held in Berlin in 1906.

SIR WILLIAM PECK had occupied the post of City Astronomer of Edinburgh, in charge of the Calton Hill Observatory, since 1889, when the erection of the new Royal Observatory on Blackford Hill set the older building, with most of its instruments, at liberty. He was of an active and inventive mind, and interested in all mechanical pursuits, besides astronomy. He constructed many of his own instruments. He was, in addition, a popular lecturer of considerable power and attraction, and was the author of a popular "Handbook and Atlas of Astronomy" and other works. The City Observatory was devoted chiefly to showing the heavens to visitors—a service much appreciated by the citizens. For this purpose a six-inch photovisual telescope, presented to the observatory, was of good service. In pursuance of the science, Sir William Peck visited Spain for the eclipse of 1905, and Egypt in 1908. He received the honour of knighthood in 1917. He died on March 7, after a long illness, aged sixty-three years.

WE regret to announce the following deaths:

Prof. A. Dendy, F.R.S., professor of zoology in the University of London (King's College), on March 24, aged fifty-nine.

Mr. H. E. Jones, president in 1917 of the Institution of Civil Engineers, on March 24, aged eighty-two.