Obituary.

DR. FRANK CLOWES.

DR. FRANK CLOWES, emeritus professor of chemistry, University College, Nottingham, who passed away on December 18, 1923, was a man of many parts. He was educated at the City of London School, and afterwards studied at the Royal College of Science, Dublin, the Royal School of Mines, London, and the University of Würzburg. After leaving College he became research assistant to the late Prof. Edward Frankland. He then became science master in Ashby-under-Lyme and at Queenwood College. During this time he published his first work on "Qualitative Analysis," which is still a standard text-book.

In 1881 Dr. Clowes was appointed as the first professor of chemistry at University College, Nottingham, a position which he held for sixteen years. For a considerable portion of this time the writer of this notice had the privilege of working with him. He practically founded the school of chemistry at Nottingham. From a small beginning it gradually grew until it became one of the most vigorous departments of the College and is now recognised as a centre for advanced work and research.

During his tenure of office at Nottingham, Dr. Clowes founded the East Midland section of the Society of Chemical Industry, and so linked up the chemical industries of the town and neighbourhood with the College. He instituted technical classes, notably in connexion with dyeing and bleaching, soap manufacture, brewing, and the coal industry. In connexion with the latter industry he published a work entitled "The Detection of Inflammable Gases," embodying a considerable amount of research and investigation on the presence of explosive gases, and the causes of explosion, in coal mines. He also published a number of papers in the journals of various scientific societies. He maintained his early interest in analytical chemistry, and, in conjunction with another, he published several text-books on this subject.

In 1897 Dr. Clowes was appointed chief chemist to the London County Council, and retired from this appointment in 1913 on reaching the age limit of sixty-five. During this time the chemical staff was increased and the work reorganised. The experiments on the biological treatment of sewage initiated by his predecessor, Mr. W. J. Dibdin, were continued and extended in various directions. Useful work was also done on the bacteriology of sewage, the bacterial content of sea-water, and the effect of the dissolved salts in sea-water on the solubility of oxygen.

Other work undertaken by Dr. Clowes and his staff dealt with the ventilation of the London tube-railways, and the examination of the London water-supply, the latter work being done prior to the institution of the Metropolitan Water Board. A considerable amount of work was done in connexion with the many enactments and departmental committees on gas-supply.

Probably the most important investigation on gas-supply was that undertaken conjointly with Mr. J. H. Coste (the present chemist), which led to the epoch-making introduction of a calorific standard for gas. In spite of his busy professional life, Dr. Clowes found time to investigate various problems of, and publish papers on, industrial chemistry.

Dr. Clowes was a valued member of many scientific societies. He served as president of the Society of Chemical Industry, vice-president of the Institute of Chemistry, member of the senate of the University of London, and in many other high positions in the scientific world. He was especially interested in the Society of Chemical Industry and the Institute of Chemistry, and he largely helped to increase their usefulness and power.

Those of us that knew Dr. Clowes intimately feel that we have lost in him a friend of uniform kindness, and a man possessing in a high degree the qualities of sound insight, integrity, and steadfastness of purpose.

J. B. COLEMAN.

MR. WILLIAM MORFITT.

MR. WILLIAM MORFITT of Goole, who died on December 28 at the age of ninety-two, retired forty years ago from his business as a baker and took a small cottage on the Holderness Coast at Atwick, near Hornsea, where he passed the remainder of his long life, accompanied by his two sons. Besides devoting attention to gardening, Mr. Morfitt discovered a fine pair of antlers of the red deer in the peat near his house, which gave him an interest in antiquarian matters; and the father and two sons have spent much of their time during the past forty years in scouring the cliffs and fields for geological and archaeological specimens. In this way they have gathered together a large collection of derived fossils from the beach, remains of red deer and other mammals from the peat, implements of the Stone Age, and a number of examples of pottery of the Bronze Age and of Roman and later dates.

The collection was exhibited in a shed adjoining the cottage, which was always a welcome resort for visitors to the village, to whom the objects were described by Messrs. Morfitt. Teeth and portions of tusks of mammoth particularly were sought for, and according to the Press reports the weight of these alone is more than 700 pounds. Sir William Boyd Dawkins, the late Canon Greenwell, the late J. R. Mortimer, and other well-known antiquaries visited the "Museum" at Atwick, and were in regular correspondence with Mr. William Morfitt. It was one of the sons who produced the harpoons which some authorities consider to represent the Maglemose culture, the authenticity of which was challenged at the Hull Meeting of the British Association.

WE regret to announce the following deaths:

Prof. H. J. Hamburger, professor of physiology, histology, and physiological chemistry in the University of Groningen since 1901, aged sixty-four.

Dr. F. Omori, professor of seismology in the Tokyo Imperial University and president of the Japanese Imperial Earthquake Investigation Committee, on November 8, aged fifty-five.

Mr. W. M. Pybus, a well-known north of England ornithologist, on January 4, aged seventy-two.

Sir John Tweedy, past president of the Royal College of Surgeons, a distinguished ophthalmic surgeon, on January 4, aged seventy-four.