

X-rays," "A New Form of Wehnelt Interrupter," and other papers; Mr. H. R. Nettleton, for a thesis entitled "On the Absolute Measurement of the Thomson Effect," and other papers. *D.Sc. (Engineering)*: Mr. Herbert Moss, the Imperial College—Royal College of Science, for a thesis entitled "Air Consumption and B.H.P. of Aero-Engines."

MR. H. G. WELLS has accepted the invitation of the Labour Party of the University of London to offer himself as the candidate of the Party at the election for a representative of the University in the House of Commons to be held after the retirement of Sir Philip Magnus at the end of the present session of Parliament. Mr. Wells occupies such a distinguished position in the world of literature and among leaders of thought to-day that his early work in science and education is often overlooked. He was a student at the Royal College of Science, South Kensington, in 1884-87, and was the first president of the Old Students' Association of the College. He took his B.Sc. degree with honours in zoology in 1890, and his first book was a "Text-book of Zoology," written particularly for London University students while he was a teacher of the subject. He is a fellow of the College of Preceptors, and for a short time edited the *Educational Times*. Throughout his career he has been a steadfast supporter of scientific methods in schools and government, and in his books has pleaded the cause of scientific education and research with eloquence and conviction. It is not too much to say that no graduate of the University of London possesses such a rare combination of brilliant literary power and scientific thought or has used these gifts with greater effect than has Mr. Wells in his many and various works.

It is announced in *Science* that by the will of Seymour Coman, of Chicago, the University of Chicago is made trustee of his residuary estate, about 29,000*l.*, the net income from which is to be used for scientific research with special reference to preventive medicine and the cause, prevention and cure of diseases. The bequest is to be known as the Seymour Coman Research Fund. By the will of Alexander D. Thomson, of Duluth, Minnesota, the sum of 20,000*l.* is bequeathed to the University of Minnesota for use in the medical department. It is also stated that Wake Forest College School of Medicine, North Carolina, is entitled to receive the principal of a trust fund, amounting to 275,000*l.*, which was created in 1892 by Jabez A. Bostwick, a director of the Standard Oil Company.

A SUMMER course in the Austrian Tirol of unusually wide interest is being organised by the directors of Leplay House, 65 Belgrave Road, Westminster, S.W.1. The course will be of the nature of a civic and rustic survey, and for this purpose the party will be divided into groups each of which will take one particular aspect of the work. Mr. H. J. E. Peake, president-elect of the Anthropological Section of the British Association for the Advancement of Science, has undertaken to direct the group studying the anthropological aspects; Dr. M. Hardy will organise a survey of plant life and agriculture, while other sections will deal with the geology, physiography, history and sociology of the district. Group meetings and gatherings of the whole party will frequently be held for the purpose of discussing and comparing results, which when assembled and collated should provide a valuable record of natural conditions and life in the Tirol. The tour will commence on August 4 and will last four weeks, although it is possible to arrange for a shorter course of two weeks.

## Calendar of Industrial Pioneers.

**July 31, 1884.** Charles Manby died.—The eldest son of Aaron Manby, one of the pioneers of iron ship-building, Charles Manby was engineer of the first iron steamer which crossed the English Channel, and after gaining experience in his father's gas and iron works in France returned to England, and from 1839 to 1856 rendered valuable services to the engineering world as secretary to the Institution of Civil Engineers.

**August 2, 1910.** Oscar Guttman died.—Hungarian by birth, Guttman became editor of an Austrian mining journal, practised on the continent as a chemical engineer, and eventually settled in England, where he erected several works for the manufacture of explosives. He wrote and lectured on explosives, on which he was a recognised authority, and was elected a vice-president of the Institute of Chemistry.

**August 3, 1792.** Sir Richard Arkwright died.—Born at Preston, December 23, 1732, four years before Watt, Arkwright was responsible with Watt for the great industrial developments in England in the latter part of the eighteenth century which enabled this country to withstand the tremendous drain on her resources due to the Napoleonic wars. Starting life as a barber, Arkwright became a hair merchant, and about 1767 gave himself up to inventions in cotton spinning. Two years later he patented his "spinning frame," "the first adequate example of those beautiful and intricate mechanical contrivances which have transformed the whole character of the manufacturing industry." He is also regarded as the founder of our factory system.

**August 3, 1880.** Mungo Ponton died.—A Writer to the Signet and a founder of the National Bank of Scotland, Ponton through ill-health retired from business and devoted himself to science. In 1839 he made the important discovery that the action of the sun renders bichromate of mercury insoluble.

**August 3, 1906.** Sir Alexander Moncrieff died.—Educated at the universities of Edinburgh and Aberdeen, Moncrieff became an officer in the Forfarshire Militia and saw active service in the Crimean war. He afterwards became known as the inventor of the Moncrieff disappearing gun-carriage and the hydro-pneumatic system of recoil.

**August 4, 1921.** Samuel Alfred Varley died.—A member of a famous family of electricians and one of the pioneers of the dynamo, Varley made numerous experiments on submarine telegraph cables. In 1866 he made a self-exciting dynamo with soft iron magnets, and ten years later patented the compound-wound dynamo.

**August 5, 1729.** Thomas Newcomen died.—A native of Dartmouth and born in 1663, Newcomen is believed to have been a blacksmith. He became associated with Thomas Savery in his attempts to use steam for pumping, but it was Newcomen's own great invention of the atmospheric steam-engine which furnished the model for pumping engines during the eighteenth century. His first engine appears to have been erected at Dudley Castle in 1712. Newcomen died in London and was buried in Bunhill Fields.

**August 5, 1876.** James Freeburn died.—Freeburn enlisted in the artillery in 1825 when seventeen years of age, and rose to the rank of sergeant-major. Turning his attention to the exploding of shell he brought out a series of metal and wood fuses for time or percussion which, after various improvements, were adopted. Freeburn after thirty years' service was retired with the rank of honorary captain.

E. C. S.