

## University and Educational Intelligence.

CAMBRIDGE.—Dr. Ernest Clarke has been elected to an honorary fellowship at Downing College. Mr. V. B. Wigglesworth, Gonville and Caius College, has been awarded the Raymond Horton-Smith Prize for a thesis, "Studies on Ketosis, with special Reference to the Relation between Alkalosis and Ketosis." *Proxime accessit*, Dr A. E. Roche, Magdalene College, with a thesis on "Pyelography; its History, Technique, Uses, and Dangers." D. Barber, Trinity College, has been awarded the Adam Smith Prize for an essay on "The International Aspect of Wages." Miss A. McC. Bidder, Newnham College, has been nominated to the University table at the Zoological station at Naples for three months from Feb. 15, 1928.

The managers of the Arnold Gerstenberg studentship in philosophy have issued an interesting list from which candidates may select an essay subject: they are, "The ultimate data of physics, philosophical aspects of the theory of relativity, the philosophical bearings of the quantum theory, technical explanation and the problems of biology, heredity, and memory, Gestalt-psychology, and the logical basis of induction."

N. Feather, H. J. J. Braddick, and N. A. de Bruyne have been elected to Coutts Trotter studentships at Trinity College.

OXFORD.—Sir Archibald Garrod has tendered his resignation of the office of Regius professor of medicine as from Dec. 31 next. Sir Archibald succeeded Sir William Osler in 1920.

The Busdett-Coutts Scholarship for geology has been awarded to Mr. Partick Murray Threipland, of Christ Church.

Mr. John Mason has been elected to a Fereday fellowship at St. John's College, under the obligation of pursuing a special course of research in natural science. Mr. Mason has been engaged in research work on chemical bacteriology under Dr. Ashley Cooper at Birmingham.

A research fellowship in natural science and a lectureship in chemistry are being offered at Exeter College. The elections will be made on Dec. 12.

THE following appointments have been made at the London School of Hygiene and Tropical Medicine: Mr. Reginald Lovell, research assistant in comparative pathology; Mrs. M. M. Smith, demonstrator in bacteriology; Miss H. M. Woods, assistant lecturer in epidemiology and vital statistics.

THE following free public lectures have been arranged for by the Armourers and Brasiers' Company: "X-rays and Metals," by Dr. G. Shearer, at the Royal School of Mines, at 5.15 on Nov. 8, 15, and 22; "The Deformation of Metals," by Prof. C. H. Desch, at the Chelsea Polytechnic, at 8 on Nov. 30, Dec. 7 and 14.

MR. GEORGE FLETCHER, who since 1904 has been assistant secretary of the Technical Instruction Branch of the Department of Education, Dublin, has just retired from that post. He has rendered valuable service to educational science throughout his career, and takes with him the best wishes of many friends both in England and in Ireland.

THE North of Scotland College of Agriculture announces in its prospectus for 1927-28 university degree courses in agriculture, national diploma courses in agriculture and in dairying, a special farmers' course (one winter), and a planters' certificate course (two winters and one summer). The last-mentioned is designed as a preparation for service on estates in tropical and sub-tropical countries. Research is being carried on by members of the college staff in soils and drainage and in bee diseases.

## Calendar of Discovery and Invention.

November 7, 1631.—The first observed transit of Mercury took place on Nov. 7, 1631. It had been predicted by Kepler and was observed at Paris by Gassendi, who admitted the solar light into a dark chamber through a small aperture in a window.

November 7, 1807.—In a letter of this date, Helmholtz, writing to the oculist Graefe, described the ophthalmoscope. Of the discovery Lummer wrote: "He wondered at the glare of the cat's eyes in the darkness, and studied this curious phenomenon until he learned how the light enters the eyes and is returned from the retina in such a way that it may be observed. Thus he became the inventor of the ophthalmoscope . . . and thus all our technical industries profit by the original research of investigators who are not inspired by dreams of wealth, but who must think and work in order to satisfy their inquiring natures."

November 8, 1887.—The invention of the gramophone was due to Emile Berliner and was patented by him on Nov. 8, 1887. The essential difference between the gramophone and phonograph is that in the former the engraving tool vibrates from side to side, while in the phonograph Edison employed the 'hill and dale' method. Berliner was born in Hanover in 1857, but emigrated to the United States in 1870 and played a conspicuous part in the development of the telephone.

November 8, 1907.—The art of telegraphing pictures with the aid of selenium cells was developed by Prof. Korn, of Berlin, in 1904, and on Nov. 8, 1907, he transmitted photographs electrically between Paris and London.

November 10, 1619.—Descartes in 1617, at the age of twenty-one, joined the army of Prince Maurice of Orange, and the following year, at the commencement of the Thirty Years' War, volunteered for service in the Army of Bavaria. However, he continued his mathematical studies and was afterwards accustomed to date the first ideas of his new philosophy and of his analytical geometry from three dreams which he experienced on the night of Nov. 10, 1619, when bivouacked at Neuberg on the Danube. He regarded this as the critical day of his life, and one which determined his whole future.

November 10, 1845.—Leverrier's investigations leading to the discovery of Neptune were contained in three memoirs communicated to the Paris Academy of Sciences on Nov. 10, 1845, June 1, 1846, and Aug. 31, 1846, respectively. In the first he proved the inadequacy of all known disturbances to account for the vagaries of Uranus; in the second he demonstrated that the observed effects must be due to an exterior planet; and in the third he assigned the orbit of the disturbing body, and announced its visibility as an object with a sensible disc about as bright as a star of the eighth magnitude.

November 11, 1572.—It was on Nov. 11, 1572, that Tycho Brahe discovered in Cassiopeia a new star of great brilliance. At first refusing to believe his own eyes, he got others to confirm what he saw, and continued to observe the star until the end of January 1573. He made accurate observations of its distance from the nine principal stars in Cassiopeia, and proved that it had no measurable parallax. His researches on this object were the occasion of his first appearance as an author.

November 12, 1906.—Three years after the Wright brothers had flown in America, success was achieved in Europe by the Brazilian, Santos Dumont, who first flew on Aug. 22, 1906, and also on Nov. 12, 1906, at Bagatelle, travelled a distance of 100 metres. E. C. S.