

taking his F.R.C.S. (England), he had a great desire to travel, the tropics especially having an attraction for him, and he joined the West African Medical Service in 1897. He served as a medical officer with the Ashanti Field Force in 1900, and was with the British troops that were besieged in Kumasi, who, after some time, gallantly broke through the native hordes and regained the coast. Dr. Chalmers attended to the sick and wounded with great energy and devotion and was mentioned in despatches by the commanding officer, and received the medal with a clasp. In 1901 he accepted a post under the Ceylon Government as registrar of the Ceylon Medical College. Here his capabilities as administrator and organiser were brought into full play. He soon developed this institution into an excellent medical school, the licence of which is now recognised by the General Medical Council.

While in Ceylon Dr. Chalmers first turned his attention to the tropical diseases that came under his notice, and never spared himself in working among the resident Europeans and natives who came to him. Resigning his position in Ceylon in 1902, so that he might devote more time to the study of tropical diseases and parasitology, he returned to England. It was then that he conceived the idea of writing a much-needed manual on tropical medicine; and in collaboration with his colleague, Dr. Castellani, in Ceylon, he began the work which will remain a monument to his memory. The preparation of "The Manual of Tropical Medicine," which has now reached its third edition, cost him a great amount of time and labour. He was an ardent worker in many fields, and carried on research not only in pathology and bacteriology, but also in parasitology, especially in connection with diseases of the tropics. His work on the Mycetoma will always be connected with his name.

From 1912 Dr. Chalmers devoted more than a year to the study of the cause of pellagra, and in company with Dr. Sambon visited Italy and Rumania. On his return he carried on researches in this country, with the result that cases of pellagra, a disease unknown to be endemic in Great Britain, were found in Hertfordshire and Scotland. Later he visited Egypt and travelled up the Nile with the same object, and accumulated much valuable data in connection with the study of pellagra and other diseases such as endemic hæmaturia.

On his return to England Dr. Chalmers gave some time to the study of the history of medicine, and became an enthusiastic lover of ancient literature—especially that dealing with the medical art. After some time he felt again the call of the East, and often expressed a wish to return there. In 1913 he accepted a post as director of the Wellcome Research Laboratories at Khartum, which he filled with conspicuous success. He became a member of the Central Sanitary Board, and also of the Sleeping Sickness Commission of the Sudan.

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Dr. Chalmers continued there until a short time ago, when he left the Sudan, accompanied by his wife, with the object of returning home *via* India, Japan, and America, and when in Calcutta was unfortunately seized with his fatal illness.

PROF. L. T. O'SHEA.

LUCIUS TRANT O'SHEA, professor of applied chemistry in the University of Sheffield, who died suddenly from cerebral hæmorrhage on April 18 at sixty-two years of age, was educated at the Grammar School and at Owens College, Manchester, and went to Sheffield in 1880 as assistant lecturer and demonstrator in chemistry at Firth College. In 1890 he became lecturer in mining chemistry, and in 1905 professor of applied chemistry, in the university. For the past twenty years he had specialised in the study of explosives as applied to mining operations, and of the coking of coal in retort ovens. He also did much work on the safety of coal mines, particularly with regard to the effect of the gases given off by the coal and of coal dust on explosions in mines. He was a fellow of the Chemical Society, a member of the Society of Chemical Industry, and hon. secretary of the Institute of Mining Engineers.

Prof. O'Shea published "A Contribution to the History of the Constitution of Bleaching Powder," and "The Retention of Lead by Filter Paper," about the time of the lead-poisoning epidemic in Sheffield more than thirty years ago, and some years later, with Dr. W. M. Hicks, he produced electro-iron of almost perfect purity, which the present writer had the privilege of using for experiments when helping to lay the foundations of theoretical steel metallurgy, for which pure iron was required as a basis for study. He also published "A Note on the Woolwich Testing Station," "A Testing Station for Mining Explosives," and "The Safety of High Explosives, with Special Reference to Methods of Testing."

In 1901 Prof. O'Shea went out to the South African War in command of a detachment of the 1st West Yorks Royal Engineer Volunteers, remained until the declaration of peace, and was given the Queen's medal with five clasps. In 1914 he was made O.C. of the O.T.C., Sheffield University, with the rank of captain in the unattached Territorial Force, and he was an energetic and inspiring leader.

Prof. O'Shea was not able to devote a large proportion of his time to research, but he will be greatly missed for the painstaking work he did in the training of students in chemistry as applied to mining and to the coking of coal, and in the general preparation of fuel for industry.

A. McW.

A MAN who had great influence in the applications of science to the use and convenience of man has passed away in MR. THEODORE N. VAIL, well known to many in England, as well as in

his homeland across the Atlantic. Mr. Vail's life-work was the development of the "Bell" telephone system in the United States, and it is to his personal initiative that the enormous growth of the American Telephone and Telegraph Co., of which he was for many years the president, is largely due. He was a rare combination of the business man, quick to see opportunities and far-seeing in his policy, and the patient, scientific worker. It is not too much to say that the success of the American telephone system, culminating in the achievement of speech from New York to San Francisco, is mainly due to the unremitting attention that he gave to the organisation and prosecution of research, and the technical laboratories that he initiated are the finest in any industrial undertaking. It is pleasant to think that, unlike many workers on parallel lines, Mr. Vail lived to behold the fruit of his labours.

THE death is announced, at the age of eighty years, of DR. JOHN A. BRASHEAR, the founder of the well-known American firm of makers of astronomical and physical instruments. In his youth, while working as a machinist, Dr. Brashear devoted himself to the study of astronomy, and made his first telescope while pursuing this hobby after his working hours. With this instrument he made many observations, as a result of which he contributed articles to the daily Press on comets, etc. These attracted the attention of Mr. William Shaw, whose offer to build and equip for him a good shop for the production of astronomical instruments was accepted. This ultimately developed into the works of the John A. Brashear Co. at Pittsburgh, which turns out instruments that are used in observatories all over the world. Dr. Brashear received the honorary doctorate from Pittsburgh and other universities, and from 1901 to 1904 was acting chancellor of the Western University of Pennsylvania, now the University of Pittsburgh. He was a member of many American and foreign scientific societies, and was a recognised authority on solar phenomena, lunar craters, and other subjects.

MR. JAMES METCALFE, who died on April 12, was born in 1847, and was locomotive superintendent of the Manchester and Milford Railway from 1867 to 1880. He was afterwards managing director of the Patent Exhaust Steam Injector Co., whose injectors are extensively used in locomotives. Mr. Metcalfe was elected a member of the Institution of Mechanical Engineers in 1906.

THE death is announced of MR. FRANK EDWARD PRIEST as having taken place on April 14. Mr. Priest was born in 1860, and was chiefly interested in railways, waterworks, and road and sewerage works. He took a great interest in aeronautics, and at the time of his death he was chairman of Messrs. A. V. Roe and Co., Ltd. He was elected a member of the Institution of Civil Engineers in 1896.

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Notes.

FURTHER news from Capt. Roald Amundsen fails to explain his movements. According to the *Times* of April 23, a message has been received in Norway from the wireless station on the Anadir to the effect that the expedition will arrive at Nome, Alaska, at the end of July. Nome is the port Amundsen reached on his accomplishment of the North-West Passage in the *Gjoa* in 1905. Possibly his ambitions include the North-West Passage before starting on his North Polar journey. These two difficult journeys, in addition to the discovery of the South Pole and the not improbable attainment of the North Pole, would be a remarkable record for one man. A start on the polar drift from Bering Strait or Point Barrow entails a longer route than Amundsen had originally intended, so that he may be calling at Nome for extra stores. News of the arrival of Amundsen himself at Anadir needs confirmation.

Now that political and social conditions are more favourable in the Near East, a certain recrudescence of archæological activity is evident. The recent discoveries of M. Hatzidakis at Mallia, in Crete, have been followed by a further discovery west of Candia. M. Xanthoudides has excavated a Cretan palace, which appears to date for the most part from the end of the Middle Minoan period to the end of the first Late Minoan period. The most important discovery made in the palace was a series of colossal bronze double-axes, measuring several feet in length in some cases. No such axes of this size have yet been found on Cretan sites, and their purpose is for the present obscure. Another excavation by M. Xanthoudides near Candia brought to light some pottery of Early Minoan date of a peculiar type. Similar pottery has been found only at one other site in Crete, and it does not appear to be typically Cretan. In shape the vases found resemble the so-called Minyan ware. In technique they have no parallel in Cretan wares. The detailed publication of both these excavations will be awaited with the greatest interest.

APPLICATIONS for grants in aid of scientific investigations bearing on agriculture are receivable by the Ministry of Agriculture and Fisheries not later than May 15. They must be made upon Form A.230/1, copies of which are obtainable upon application to the General Secretary, Ministry of Agriculture and Fisheries, 72 Victoria Street, S.W.1.

THE Minister of Health has appointed a Committee to consider and advise on the legislative and administrative measures to be taken for the effective control of the quality and authenticity of such therapeutic substances offered for sale to the public as cannot be tested adequately by direct chemical means. The members of the Committee are:—Sir Mackenzie Chalmers (chairman), Dr. H. H. Dale, Dr. G. F. McCleary, Mr. A. B. MacLachlan, and Dr. C. J. Martin. The secretary is Dr. E. W. Adams, of the Ministry of Health.

THE following have been elected officers and council of the Society of Antiquaries of London: *President*: