second chief of the Philippine Mining Bureau in Manila. As Colonel Burrett, the first chief, was a lawyer and officer in the U. S. Volunteers, Mr. McCaskey was the first technical man to take over the work relinquished by the Spaniards, Abella y Caseriego and Centeno. Although a mining engineer, McCaskey had a keen interest in, and appreciation of, geological investigations in their relations to mining. This writer acknowledges with especial gratitude the debt he owes to his first chief in that difficult field when as a youngster he first faced the unusual task of unraveling the problems of Malayan geology.

In addition to his technical knowledge, Mr. McCaskey was possessed of true culture, gentleness of spirit, which even the most hard-boiled prospector appreciated. Although the son of a famous general of the U. S. forces in the Philippine Islands, McCaskey was essentially a man of peace and scholarly inclinations. These qualities early endeared him to the Filipinos, still chafing under the unavoidable irritations attendant upon the régime of the "Days of the Empire." He and others like him did a tremendous lot in making easy the difficult transition to civil government.

Although Mr. McCaskey's own published writings in the Philippine field were not numerous his great contribution was in making the work of his men as easy and effective as possible under pioneering conditions. He was always more than generous in giving full credit to others.

In spite of the disability which forced him to leave his Philippine labors in 1906, he rendered many years of effective service to the U. S. Geological Survey in Washington.

It was with keen sorrow that this "Old Timer" received word of the passing in southern Oregon of his former "Jefe de Minas," a very fine gentleman.

WARREN D. SMITH

UNIVERSITY OF OREGON

RECENT DEATHS

THE death at the age of seventy years has been announced of Dr. Charles Hamilton Ashton, professor of mathematics at the University of Kansas since 1903.

DR. ALFRED A. TITSWORTH, since 1886 a member of the faculty of Rutgers University, for forty-two years as professor of mathematics, died on August 15 at the age of eighty-three years.

DR. RICHARD OLDING BEARD, professor emeritus of physiology at the University of Minnesota, died on August 14. He was seventy-nine years old.

DR. FLORENCE FENWICK died on July 11 at the age of forty-two years. She received her doctor's degree at the University of Michigan in 1922 and was research fellow at Yale University from 1923 to 1928, since which time she has been physical chemist in the Research Laboratory of the U. S. Steel Corporation.

A CORRESPONDENT writes: "Dr. Julia Trueman Colpitts, associate professor of mathematics at Iowa State College, died at Southampton on August 8. She was returning from a visit to Europe, during which she had attended the International Congress of Mathematicians. Miss Colpitts was born at Pointe de Bute, N. B., received degrees at Mt. Allison University and Cornell University, and also studied at Columbia University and the University of Chicago. She had been a member of the faculty of Iowa State College since 1900. A member of Sigma Xi, Phi Kappa Phi and Sigma Delta Epsilon, Miss Colpitts had been national president of the latter organizaion. She had also been chairman of the Iowa Section of the Mathematical Association of America."

THE sudden death is announced of Dr. Frederick John Freshwater Shaw, director of the Imperial Institute of Agricultural Research, Government of India.

SCIENTIFIC EVENTS

A RADIO RESEARCH BOARD FOR INDIA

IT is stated in *Current Science,* edited at Bangalore, India, by Professor C. R. Narayan Rao, that, at the invitation of Professor S. K. Mitra, a number of distinguished investigators, including representatives of radio research workers from Australia and Canada, met recently in London to consider the question of forming a Radio Research Board for India. Professor Mitra, who was in England to acquaint himself with the latest developments in radio research, in the course of his speech emphasized the need for a coordinate organization with adequate funds at its disposal for conducting radio investigation in India. He said: "There are men available for such work in the universities, men who by their training are particularly gifted for such type of work. But without the cooperation of government departments, like the Air Ministry, the Meteorological and the Postal Departments, the universities, where alone such work is now being carried on, can not successfully conduct such investigations. The nature of the most helpful cooperation that is necessary is best exemplified by the British Radio Research Board, which maintains a close touch between the various government departments and the universities." Professor E. V. Appleton, King's College, London, supported the need for a board of the type envisaged by Professor Mitra. Sir Frank E. Smith mentioned that various problems such

as that associated with the field strength of received signals at different times of the day and at different seasons of the year with different wave-lengths and with different transmitting aerials, are of a local nature, which can be solved by work in the country desiring the information. If the research board is founded in India, it will be of help, not only to India, but to the international research work now being conducted in Great Britain and other countries. The British Radio Research Board will be glad to cooperate with any research organization which might be established in India. Professor A. S. Eve (Canada) and Professor T. H. Laby (Australia) also emphasized the need for the formation of such a board to bring engineers and physicists together in solving both theoretical and practical problems.

SALE OF NEWTONIANA

IT is reported in *Nature* that as a result of the sale of the Newton Papers, and other articles of interest in connection with Sir Isaac Newton, by Messrs. Sotheby and Company, on July 13 and 14, two gifts of scientific importance have now been made possible, and are worthy of record.

That portion of the papers which deal with Newton's work as warden, and afterwards master, of the Royal Mint, is bound in three folio volumes and contains 529 pieces. These were sold for £1,400 to Mr. Gabriel Wells, who placed them at the disposal of Lord Wakefield at cost, on the understanding that they would be presented to the nation. Lord Wakefield has presented them to the Royal Mint, where they will be available for inspection.

The very valuable and unique collection of Newtoniana already in the possession of the Royal Society has been enhanced by a gift from Sir Robert Hadfield which he purchased at the same sale. The gift comprises the following letters: four from Edmund Halley to Newton: four from Edmund Halley to Thomas Molyneux; two from Fontenelle to Newton; one from Philip Naudé to Newton; and one from Brook Taylor to Newton.

A portrait of Sir Isaac Newton, painted in 1702 by Sir Godfrey Kneller (the most famous of the Newton portraits), has been purchased by the trustees of the National Portrait Gallery (with a contribution of half from the National Art-Collections Fund) from Messrs. Rosenbach, of New York. The portrait was actually sold at the same sale for £800, but through the generosity of Dr. Philip Rosenbach was resold to the trustees of the gallery at cost price.

Among the many other items of interest in connection with Newton disposed of at the sale were the following: nine letters to Newton from Edmund Halley, containing the history of the publication of the "Principia" (£310); a notebook in Newton's own handwriting, giving an interesting and amusing list of expenses, and, at the other end, various problems in geometry and conic sections (£180); an autographed draft of about 1,000 words of a very important statement on the invention of the calculus (£210).

THE SCHOOL OF ENGINEERING PRACTICE OF THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

THE appointment of new directors at the three field stations of the School of Chemical Engineering Practice of the Massachusetts Institute of Technology has been announced by Professor Walter G. Whitman, head of the department of chemical engineering. The appointments come as a result of the resignations of Professor Frederick W. Adams, director of the Boston Station; Charles M. Cooper, of the Bangor Station, and Robert L. Hershey, of the Buffalo Station, who have accepted industrial positions. Professor Adams has been appointed senior incumbent in a multiple fellowship established by the Pittsburgh Plate Glass Company at the Mellon Institute. He will direct the research activities of a group working on problems in the glass industry. Professors Cooper and Hershey have joined the staff of E. I. du Pont de Nemours and Company.

Directors of the stations have been appointed as follows: The Boston Station, Dr. Robert C. Gunness, a graduate of the Massachusetts State College in 1932; the Bangor Station, Howard S. Gardner, Jr., Massachusetts Institute of Technology, '31, chemical engineer of the Eastman Kodak Company; the Buffalo Station, Dr. John E. Eberhardt, C.E., Cincinnati, '33, assistant director of the station from 1934 to 1935, this year instructor in the department of chemical engineering at the Massachusetts Institute.

The assistant directors at the three stations will be Henry J. Ogorzaly, of Yonkers, N. Y., at the Boston Station; Roy P. Whitney, of Milo, Maine, at the Bangor Station, and George A. Akin, of Princeton, Ky., and Charles W. Smith, of Abington, Mass., at the Buffalo Station. All are graduates of the School of Chemical Engineering Practice.

THE LEVERHULME SCHOLARSHIPS IN GREAT BRITAIN

THE Advisory Committee on the awards for 1936 of Leverhulme Research Fellowships and grants in aid of research has made twenty-one nominations to fellowships and ten grants in aid of research, tenable for varying periods up to two years.

The names of the fellows in the sciences and the subjects of the researches are as follows:

MRS. A. ARBER, M.A., Camb., D.Sc., Lond., fellow of