

LOUIS B. MARKS, illuminating engineer of New York City, died on November 22 at the age of seventy years.

DR. EARLE KENNETH STRACHAN, associate professor of chemistry at Brown University, died on November 21 at the age of fifty-three years.

DR. E. E. FREE, consulting chemist and physicist, editor of "The Week's Science," died on November 24 at the age of fifty-six years.

DR. HENRY CLINTON FALL, of Tyngsboro, Mass., the entomologist, died on November 14 in his seventy-seventh year.

DR. EDWARD PALMER POULTON, physician at Guy's Hospital, London; the elder son of Sir Edward Poulton, Hope professor of zoology at the University of Oxford from 1893 to 1933, died on October 18 at the age of fifty-six years.

MEMORIAL services for Dr. Jacob Goodale Lipman, dean of the College of Agriculture of Rutgers University and director of the New Jersey Agricultural Experiment Station, who died on April 19, were held on November 23 at Temple Emanu-El, New York. The services were sponsored by institutions, including Columbia and Rutgers Universities and the U. S. Department of Agriculture. The speakers included Dr. Henry G. Knight, head of the Bureau of Chemistry and Soils of the Department of Agriculture; Dr. Gabriel Davidson, general manager of the Jewish Agricultural Society; Professor O. S. Morgan, of the department of agriculture of Columbia University; Dr. Carl R. Woodward, secretary of Rutgers University; Dr. Harold B. Allen, of the National Farm School, and Dr. Arthur D. Goldhaft, of the Baron de Hirsch Agricultural School Alumni Association.

## SCIENTIFIC NOTES AND NEWS

ROYAL Medals of the Royal Society, London, which is at present conducting its work at Trinity College, Cambridge, have been awarded for the current year as follows: To Dr. P. A. M. Dirac, professor of mathematics at the University of Cambridge, for the leading part he has taken in the development of the new quantum mechanics, and to Professor David Keilin, Quick professor of biology at the University of Cambridge, for his contributions to biochemistry and entomology; in particular for his demonstration of the part played by cytochrome in the oxidation reduction mechanisms of the living cell; and for his studies of the higher Diptera.

SIR ARTHUR SMITH WOODWARD, until his retirement in 1924 keeper of the Geological Department of the British Museum of Natural History, has been awarded the Hayden Memorial Geological Medal of the Academy of Natural Sciences of Philadelphia. The medal, which is awarded every three years, was given in recognition of "notable contributions in the field of vertebrate and invertebrate paleontology."

THE Anthony F. Lucas Gold Medal for 1940 of the American Institute of Mining and Metallurgical Engineers has been awarded to Dr. Everette Lee DeGolyer, consulting petroleum geologist of Dallas, Texas, in recognition of "distinguished achievement in improving the technique and practice of finding and producing petroleum" and as "one of the first to visualize the possibilities of the application of geophysics to oil prospecting."

THE German Goethe Medal for art and science has been awarded to Dr. Franz Fischer, director of the Kaiser Wilhelm Institute for Research on Coal, situated at Mülheim in the Ruhr.

At the recent meeting of the Acoustical Society of America at Iowa City, a luncheon was given in honor of Dr. Carl E. Seashore, research professor of psychology at the State University of Iowa, and of Dr. George W. Stewart, professor of physics and head of the department, in recognition of their contributions to acoustics. On the same evening former students and friends of Professor Seashore gave a musical soirée in recognition of his contributions to the science of music, and presented a bronze bust, which was accepted by President Gilmore as a gift to the university.

A LUNCHEON was given in New York on November 22 by the American Association of University Women in honor of Dr. Katharine B. Blodgett, research physicist in the laboratories of the General Electric Company at Schenectady, N. Y.; Dean Virginia Gildersleeve, of Barnard College; Dr. Harry David Gideonse, president of Brooklyn College, and William E. Haskell, Jr., assistant to the president of *The New York Herald-Tribune*.

DR. CHARLES F. BOLDUAN, director of the Bureau of Health Education of the Health Department, New York City, was the guest of more than a hundred co-workers on November 22 at a surprise party in the Health Building to celebrate the thirty-fifth anniversary of his work for public health.

THE degree of doctor of science has been conferred by the University of London on Dr. Niels Bohr, director of the Institute of Theoretical Physics at the University of Copenhagen, and on Sir Robert Robinson, professor of chemistry at the University of Oxford. Because of the war and the absence of the university from London, it will not be possible this year to confer honorary degrees at the Senate House

on Foundation Day. By the authority of the Senate the chancellor has therefore conferred the degrees, *honoris causa, in absentia*.

DR. ROBERT DOERR, professor of hygiene in the faculty of medicine of the University of Basle, has been made a doctor *honoris causa* in natural science in recognition of his work on ultra-virus diseases, especially psittacosis, and the relations between herpetic virus and encephalitis.

DR. WILLIAM B. PORTER, professor of medicine at the Medical College of Virginia, Richmond, has been elected president of the American Clinical and Climatological Association.

PROFESSOR ALPHEUS W. SMITH, chairman of the department of physics of the Ohio State University, has been appointed dean of the Graduate School. Dr. Smith succeeds Dr. George F. Arps, who died on September 16. He will act as dean of the school until a permanent appointment is made.

DR. LAWRENCE F. MARTIN, associate chemist in the Bureau of Chemistry and Soils of the U. S. Department of Agriculture, has been appointed senior chemical engineer in the Chemical Engineering and Development Division of the Southern Regional Research Laboratory at New Orleans.

DR. C. LALOR BURDICK, since 1928 assistant chemical director in the Ammonia Department and technical investigator in the Development Department of the E. I. du Pont de Nemours and Company, has been appointed assistant to the president, succeeding Henry B. du Pont, who was recently advanced to the position of vice-president and member of the executive committee. In 1935 Dr. Burdick organized the Lalor Foundation for the support of purely scientific research.

THE University of Michigan has granted leave of absence for the second semester to Dr. Bradley M. Davis, professor of botany; to Dr. George Y. Rainich, professor of mathematics; to Dr. Ralph A. Sawyer, professor of physics, and to Dr. William P. Wood, professor of chemical and metallurgical engineering.

THE Council of the Royal Horticultural Society, London, has appointed Sir Daniel Hall, from 1902 to 1912 director of the Rothamsted Experimental Station, editor of the society's journal and publications and keeper of the library, in place of the late E. A. Bunyard.

DR. K. K. DARROW, of the Bell Telephone Laboratories, addressed the Ohio Physics Club on November 4 at Findlay College, Ohio. He spoke on "The Fission of Uranium."

DR. E. M. K. GEILING, professor of pharmacology at the University of Chicago, gave the third annual

Rockwood lecture of the College of Medicine of the State University of Iowa on November 14. His subject was "The Comparative Anatomy and Pharmacology of the Pituitary Gland."

DR. S. ALFRED MITCHELL, director of the Leander McCormick Observatory of the University of Virginia, recently gave an illustrated lecture before the West Virginia chapter of Sigma Xi, entitled "With an Astronomer to the South Seas."

DR. FREDERICK S. GOUCHER, of the Bell Telephone Laboratories, will give a lecture demonstration entitled "The Microphone and Research," in the Auditorium of the Museum of Science and Industry, Chicago, on the evening of December 1 before a joint meeting of the American Physical Society and the Physics Club of Chicago.

DR. B. HOLLY BROADBENT, director of the Bolton Foundation, affiliated with the School of Medicine of Western Reserve University, delivered the fourth Frank Billings lecture of the Thomas Lewis Gilmer Foundation of the Institute of Medicine of Chicago, on November 24. His subject was "Clinical Significance of a Roentgenographic Method of Measurement of Disturbances of Facial Growth."

By the will of the late Murry Guggenheim, who died on November 15, the sum of \$5,000,000 is bequeathed to the Murry and Leonie Guggenheim Foundation. The foundation, which Mr. and Mrs. Guggenheim incorporated in 1929, built and maintains a dental clinic. It has for its purpose "the promotion, through charitable and benevolent activities, of the well-being of mankind throughout the world." By the will funds are provided for the Dental Clinic to enable it to erect and operate "a fully equipped dental clinic which affords charitable and benevolent assistance to the children of Greater New York through the practical application of dentistry and oral hygiene." Mr. Guggenheim named the Guaranty Trust Company of New York a trustee of the fund. He expressed the wish that Dr. S. S. Goldwater, Commissioner of Hospitals, whose "outstanding ability contributed in such large measure to the establishment of the Murry and Leonie Guggenheim Clinic," would consent to act in a consulting capacity in connection with the construction and equipment of any clinics that may be established.

AMONG recent gifts to Columbia University amounting to \$87,760, the largest contribution, \$29,100, came from an anonymous donor for a study of respiratory physiology to be carried on for three years. The William J. Matheson Foundation gave \$12,450 for research in the departments of bacteriology and neurology; the W. K. Kellogg Foundation contributed \$10,000 for the study of rheumatic fever, and Philip

Morris and Company presented \$7,000 for research in the department of pharmacology. The department of psychology received from anonymous donors the sum of \$4,000 for a salary.

ACCORDING to *The British Medical Journal*, Professor H. C. Souja-Aranjo, member of the Brazilian Academy of Medicine and vice-president of the International Leprosy Commission, has founded two prizes at the academy, each of the value of \$2,000—namely, the Kadrowsky Prize for the best work on the bacteriology of leprosy, and the Lieras Acosta Prize for the best work on the immunology of leprosy.

THE trustees of Western Reserve University and of the Brush Foundation have entered into an agreement by which the work on human growth, development and sex initiated by the late Dr. T. Wingate Todd for the Brush Foundation and other foundations as well as future studies sponsored by the Brush Foundation will be conducted through the School of Medicine. Dr. William W. Greulich, research associate in anatomy and physical anthropology at Yale University School of Medicine, has been appointed director of the foundation and professor of physical anthropology and anatomy in the department of anatomy in the medical school.

At the third International Congress of Neurology held at Copenhagen from August 21 to 25, which was attended by about five hundred neurologists from all countries, it was decided that the next congress should be held in Paris in 1942 or 1943.

THE autumn meeting of the American Society of Agricultural Engineers will be held from December 4 to 8 at the Stevens Hotel, Chicago, under the presidency of K. J. T. Ekblaw.

THE annual dinner of the New York Academy of Sciences and affiliated societies will be given on Wednesday, December 13, at the Hotel Astor at 7:00 P.M.

MORE than sixty professional psychologists and psychiatrists from eastern Massachusetts recently attended a discussion meeting at the President's House, Tufts College, as guests of the following psychologists and psychiatrists connected with the college: Douglas A. Thom, professor of psychiatry; Abraham Myerson, professor of neurology; A. Warren Stearns, professor of psychiatry; Herbert Barry, lecturer in psychology; Leonard Carmichael, president of the college; John L. Kennedy, assistant professor of psychology; Leonard C. Mead, instructor in psychology; Edwin A. Shaw, professor of education; John P. Tilton, assistant professor of education; Nils Y. Wessell, assistant professor of psychology; and Robert A. Young, instructor in education. Among those who spoke briefly on the topic of the relationship between psychiatry and psychology were: C. Macfie Campbell, professor of psychiatry at the Harvard Medical School; Truman Lee Kelley, professor in the Graduate School of Education at Harvard; Edwin G. Boring, professor of psychology at Harvard; Gordon Allport, professor of psychology at Harvard; Ross A. McFarland, of the Fatigue Laboratory of the Harvard Business School; Edna Heidbreder, professor of psychology at Wellesley College; David Shakow, clinical psychologist at the Worcester State Hospital; Vernon Jones, head of the department of psychology at Clark University; Hudson Hoagland, head of the department of biology at Clark University; and E. Stanley Abbott, psychiatrist and psychologist of Boston.

## DISCUSSION

### A DOZEN MATHEMATICAL ERRORS IN THE "ENCYCLOPAEDIA BRITANNICA"

IN the preface to the "Encyclopaedia Britannica" (1938) it is stated that "three thousand five hundred scholars, scientists, experts, and men of affairs" cooperated in the production of this work. It is to be expected that some errors appear in a work which had so many contributors and which covers such a wide field of knowledge, notwithstanding the emphasis on accuracy and the great claims made along this line. Some of these errors relate to details which interest only the specialists, but there are others which are of wider interest and affect adversely the users of this highly respected and widely distributed work of reference. The latter include the fundamental laws known as the associative law and the commutative

law of mathematics. Contrary to common usage these appear in the plural in the articles devoted thereto in the encyclopedia in question. While this is somewhat striking it is not the worst feature thereof, even if it is at first disconcerting.

Under the entry "associative laws," for instance, it is stated that they are "two laws relating to numbers, one with respect to addition and the other with respect to multiplication." The same sentence appears under the entry "commutative laws." In fact, there is only one law in each of the two cited cases. It is the same law when it is used in addition as when it is used in the multiplication of numbers, and it has a large number of other applications. For instance, in the second edition of Webster's "New International Dictionary" under the entry "associative law," it is said to be a fundamental law of group theory when the elements