

as a member of its Board of Managers. The medal is awarded for distinguished contributions in the field of railway engineering. This year it will be presented to Ralph Budd, president, Chicago, Burlington and Quincy Railroad Company, Chicago, Illinois, "In consideration of his engineering ability, vision and courage in carrying out railroad construction in difficult mountainous terrain in the Northwestern part of our country, and of his other contributions in the field of railway engineering."

The Louis E. Levy Medal, founded in 1923 by the family of Louis E. Levy, Philadelphia, a member of the Committee on Science and the Arts of the Franklin Institute at the time of his death, who had previously served the institute as a member of the Board of Managers for twelve years and a vice-president for three years, is awarded "to the author of a paper of especial merit, published in the *Journal* of the Franklin Institute, preference being given to one describing the author's experimental and theoretical researches in a subject of fundamental importance." It will be given to Kalman John DeJuhasz, associate professor of engineering research, Pennsylvania State College, "For his article entitled 'Graphical Analysis of Surges in Mechanical Springs,' which appeared in the October and November, 1938, issues of the *Journal* of the Franklin Institute."

The Howard N. Potts Medal, founded, by will, in 1906, by Howard N. Potts, a life member of the institute and a member of the Bar in Philadelphia, is awarded for "distinguished work in science or the arts; important development of previous basic discoveries; inventions or products of superior excellence or utilizing important principles." It will be awarded to Newcomb K. Chaney, Ph.D., director of research, United Gas Improvement Company, Philadelphia, Pa., "In consideration of his original and successful work in the hitherto uncharted field of carbon activation," and to H. Jermain Creighton, Sc.D., professor of chemistry, Swarthmore College, Swarthmore, Pa., "In consideration of his distinguished work in developing a process for the electrolytic reduction of simple sugars on a large scale."

The Elliott Cresson Medal, founded in 1848 by Elliott Cresson, of Philadelphia, Pa., a philanthropist and successful merchant who lived from 1796-1854, is awarded for recognition of distinguished contributions in the realm of physical science. It will be awarded to George Ashley Campbell, Ph.D., Upper Montclair, N. J., retired research engineer, American Telephone and Telegraph Company, "In consideration of his lifelong study of the theory of electric circuits, resulting in notable contributions to the science that underlies telephony and to inventions of fundamental importance in the art." To John R. Carson, Sc.D., research mathematician, Bell Telephone Laboratories, Inc., New York, New York, "In consideration of outstanding contributions to the art of electrical communication," and to Charles Vernon Boys, F.R.S., LL.D., London, England, "In recognition of the scientific achievements of Sir Charles Vernon Boys, which have furnished scientists with new and remarkably precise methods for making measurements in gravitation, in sound, in heat, in radiation, in current and static electricity so refined as to

render possible the weighing of the earth, the determination of the radiant energy coming to us from the stars, the photography of the speeding bullet and the immobilization, even, of the lightning flash itself."

Certificate of Merit, presented jointly to Percy Russell, D.D.S., Wilmington, Delaware, and E. Burke Wilford, president, Pennsylvania Aircraft Syndicate, Philadelphia, Pa., "In consideration of the development and application of a simple means of regulating and controlling the speed of small electric motors."

The presentation of the medals and certificates will be made at 3:30 P.M., on the afternoon of Wednesday, May 17, in Franklin Hall, at formal exercises presided over by Philip C. Staples, president of the Franklin Institute. At this session Dr. Hubble will read an original paper on "The Motion of the Stellar System Among the Nebulae." Mrs. Albert Sauveur will be present to accept the award of the Franklin Medal to Dr. Sauveur.

At 7:30 P.M., on the evening of the same day, a subscription dinner in honor of the medalists will be held in Franklin Hall.

MEDALS OF THE NATIONAL ACADEMY OF SCIENCES

PRESENTATION of the medals of the National Academy of Sciences was made at the annual dinner of the academy on April 25. These were as follows:

Agassiz Medal for Oceanography, awarded to Harald Ulrik Sverdrup, of the Scripps Institution of Oceanography of the University of California, La Jolla, for his personal oceanographic explorations in Arctic regions and his numerous contributions to physical oceanography and the interrelations between the sea and the atmosphere. The presentation address was made by Dr. T. Wayland Vaughan, emeritus professor of oceanography of the University of California and emeritus director of the Scripps Institution, who was chairman of the committee at the time the award was recommended to the academy.

Daniel Giraud Elliot Medal for 1933 and Accompanying Honorarium of \$200, awarded to Richard Swann Lull, of the Peabody Museum of Natural History, Yale University, in recognition of his work entitled: "A Revision of the Ceratopsia or Horned Dinosaurs," published in the *Memoirs* of the Peabody Museum of Natural History. The presentation address was made by Dr. William Berryman Scott, emeritus professor of paleontology of Princeton University.

Daniel Giraud Elliot Medal for 1934 and Accompanying Honorarium of \$200, awarded to Theophilus Shickel Painter, of the University of Texas, in recognition of his work on the chromosomes of the salivary glands in *Drosophila* in relation to the problems of mutation and genetics, published in *Genetics* and the *Journal of Heredity* in 1934. The presentation address was made by Dr. Ross G. Harrison, of Yale University, chairman of the committee on the Daniel Giraud Elliot Fund.

The John J. Carty Medal and Award for the Advance-

ment of Science, consisting of a gold medal, bronze replica, certificate and \$3,000 in cash, awarded to Sir William Bragg, of the Royal Institution, London. Sir William is distinguished by his fundamental work in x-ray crystal analysis. He has shown how to reveal the constitution of crystalline forms and accurately measure them, and his studies have given birth to a new tool which is bringing to light important facts regarding such complex structures as the larger organic molecules. Dr. Frank B. Jewett, chairman of the Committee on the Carty Fund, stated the reasons for the award, and Dr. A. H. Compton, of the University of Chicago, spoke on Sir William's work.

ELECTIONS OF THE NATIONAL ACADEMY OF SCIENCES

At the annual meeting of the National Academy of Sciences, held in Washington on April 24, 25 and 26, Dr. Frank B. Jewett, president of the Bell Telephone Laboratories, was elected president for a term of four years, to succeed Dr. Frank R. Lillie, emeritus professor of zoology of the University of Chicago, who will retire on June 30.

New members of the academy were elected as follows:

Gregory Breit, professor of physics, University of Wisconsin.

Detlev Wulf Bronk, Johnson professor of biophysics and director of the Johnson Foundation, University of Pennsylvania.

William Bosworth Castle, associate professor of medicine, Harvard Medical School, director of the Thorndike Memorial Laboratory, Boston City Hospital.

Frederick Gardner Cottrell, president, Research Associates, Incorporated, Washington, D. C., consulting chemist, Bureau of Chemistry and Soils.

Frederick Parker Gay, professor of pathology and bacteriology, College of Physicians and Surgeons, Columbia University.

Albert Baird Hastings, Hamilton Kuhn professor of biochemistry, Harvard University.

Vladimir Nikolaevich Ipatieff, research director of the Universal Oil Products Company, professor of chemistry, Northwestern University.

Merkel Henry Jacobs, professor of general physiology, University of Pennsylvania.

Zay Jeffries, General Electric Company, Cleveland, Ohio.

Donald Forsha Jones, geneticist, Connecticut Agricultural Experiment Station, New Haven.

George Bogdan Kistiakowsky, professor of chemistry, Harvard University.

Warren Judson Mead, professor and head of the department of geology, Massachusetts Institute of Technology.

Oscar Riddle, investigator, department of genetics, Station for Experimental Evolution, Carnegie Institution, Cold Spring Harbor, N. Y.

Adolph Hans Schultz, associate professor of physical anthropology, School of Medicine, the Johns Hopkins University.

Philip Edward Smith, professor of anatomy, College of Physicians and Surgeons, Columbia University.

Foreign associates elected were:

Sir Joseph Barcroft, professor of physiology, the University of Cambridge.

Sir William Bragg, director, the Royal Institution of Great Britain and Fullerian professor of chemistry and director of the Faraday Research Laboratory.

Dr. F. A. Vening Meinesz, professor of geodesy and cartography, the University of Utrecht.

Dr. Frederick E. Wright, of the Geophysical Laboratory, Carnegie Institution of Washington, was re-elected home secretary for a term of four years, and Dr. Charles August Kraus, professor of chemistry at Brown University, and Dr. Alfred Newton Richards, professor of pharmacology at the University of Pennsylvania, were elected members of the council to succeed Dr. Simon Flexner, director emeritus of the Rockefeller Institute for Medical Research, and Dr. J. B. Whitehead, director of the school of engineering of the Johns Hopkins University.

SCIENTIFIC NOTES AND NEWS

THE John L. Lewis Prize of the American Philosophical Society has been conferred on Dr. Henry Norris Russell, professor of astronomy and director of the observatory at Princeton University, "in appreciation of his contribution on 'stellar energy,' at the society's symposium on astrophysics in February." The presentation was made by Dr. Harlow Shapley, director of the Harvard College Observatory, at the annual dinner of the society on April 22. Dr. Roland S. Morris, formerly United States Ambassador to Japan and president of the society, presided. The speakers included Dr. Vannevar Bush, president of the Carnegie Institution of Washington; Dr. Victor G. Heiser, of the International Leprosy Commission, and

Professor Jesse S. Reeves, of the University of Michigan.

At the closing session of the meeting in Washington of the American Geophysical Union, Dr. William Bowie was made the first recipient of a newly established Bowie Medal, named in his honor, "for distinguished attainment and outstanding contribution to the advancement of cooperative research in fundamental geophysics." Dr. Bowie joined the U. S. Coast and Geodetic Survey in 1895 and from 1909 until his retirement in 1936 was chief of the Division of Geodesy.

THE British Society of Antiquaries, London, will