of the Royal Institution, said that the portrait was one which the institution might well be proud to possess; it reminded them very warmly and intimately of a man whom they all respected and loved.

Sir William Bragg said that he was proud and grateful that his portrait should be given with such expressions of good will. The institution was an unofficial body, not connected with any government or municipal establishment. It worked on its own and its successes had been due to the devotion of its members, who had always helped it within their powers. In the past 10 years he had always found a prompt response made by any member approached with a request on behalf of the Royal Institution for lectures or other services. He had never had an unfavorable response and hoped he never would. The institution was held in astonishing affection by the country at large. Its members were a friendly body, and in this lay their strength. They were trying to draw together, by personal contact if possible, all those interested in the advance of knowledge. That they had been able in the last three years to pull themselves out of difficulties and rebuild their home was the result of real friendship all around.

THE AMERICAN ACADEMY OF ARTS AND SCIENCES

AT the annual meeting of the American Academy of Arts and Sciences held in Boston on May 10, the following officers were elected:

President, George H. Parker; Vice-president for Class I, Harry M. Goodwin; Vice-president for Class II, Walter B. Cannon; Vice-president for Class III, Edwin F. Gay; Vice-president for Class IV, Arthur S. Pease; Corresponding Secretary, Tenney L. Davis; Recording Secretary, Walter E. Clark; Treasurer, Ingersoll Bowditch; Librarian, Alfred C. Lane; Editor, Herbert V. Neal.

Fellows of the academy elected in the natural and exact sciences are:

CLASS I

Section 1—Mathematics and Astronomy Jesse Douglas, Cambridge. Marshall Harvey Stone, New Haven, Connecticut.

Section 3—Chemistry

Louis Frederick Fieser, Waltham. George Bogdan Kistiakowsky, Cambridge. Henry Weeden Underwood, Cambridge.

Section 4—*Technology and Engineering* Harold Kilbrith Barrows, Winchester. Arthur Edwin Norton, Cambridge. Frank Edward Winsor, West Newton.

CLASS II

Section 1—Geology and Meteorology Charles Franklin Brooks, Milton Frank Morton Carpenter, Cambridge.

Section 3—Zoology and Physiology Philip Bard, Cambridge Alden Benjamin Dawson, Cambridge Frank Rattray Lillie, Chicago, Illinois. Jeffries Wyman, Jr., Chestnut Hill

Section 4—Medicine and Surgery Reginald Fitz, Brookline Edgar Erskine Hume, Washington, D. C. George Burgess Magrath, Boston. George Cheever Shattuck, Brookline. Soma Weiss, Cambridge.

Among these elected in Class IV are:

Section 1—Theology, Philosophy and Psychology Gordon Willard Allport, Cambridge. Howard Crosby Warren, Princeton. Frederic Lyman Wells, Newton Highlands.

Section 2—History, Archeology and Anthropology Edward Sapir, New Haven

Foreign members were elected as follows:

Section of Chemistry Jaroslav Heyrovsky, Prague. Fritz Paneth, Königsberg.

Section of Zoology and Physiology Hans Spemann, Freiburg i. B.

Section of Theology, Philosophy and Psychology George Elias Müller, Göttingen.

Section of History, Archeology and Anthropology Sir Arthur Keith, London.

SCIENTIFIC NOTES AND NEWS

THE Rumford Medal of the American Academy of Arts and Sciences has been awarded to Dr. Harlow Shapley, director of the Harvard College Observatory, for "researches on the luminosity of stars and galaxies."

PROFESSOR S. A. MITCHELL, director of the Leander McCormick Observatory of the University of Virginia, has been elected a foreign associate of the Royal Astronomical Society. IT is proposed to name a Colorado mountain peak after Dr. William Trelease, emeritus professor of botany of the University of Illinois, formerly head of the Henry Shaw School of Botany at Washington University, St. Louis, and director of the Missouri Botanical Garden.

PROFESSOR ALBERT EINSTEIN will deliver the first Gibson Memorial Lecture at the University of GlasSIR CHARLES S. SHERRINGTON, Waynflete professor of physiology, University of Oxford, will deliver the Bede Lecture on May 24, on "Mechanism and the Brain."

THE Linacre Lecture was delivered at the University of Cambridge by Professor E. Mellanby on May 6 on "The Nervous System within the Pale of Nutrition."

PROFESSOR H. H. PLASKETT, who was associate and professor of astrophysics at Harvard University from 1928 until 1932, when he was elected to the Savilian professorship of astronomy at the University of Oxford, delivered his inaugural address on April 28 on "The Place of Observation in Astronomy."

THE Italian Eugenics Society recently elected Dr. Jon Alfred Mjøen, Vinderen Laboratorium, a corresponding member. Dr. Mjøen also recently was elected a corresponding member of the Berlin Society for Anthropology and Ethnology.

THE Daniel Guggenheim Medal "for notable achievement in the advancement of aeronautics" for 1933 has been awarded to Commander Jerome Clarke Hunsaker, vice-president of the Goodyear-Zeppelin Corporation of Akron, Ohio. The formal presentation of the medal will probably take place at a meeting of the Society of Automotive Engineers in Chicago in August. Previous Guggenheim medalists have included Orville Wright, Ludwig Prandtl, of Germany, Frederick William Lanchester and Juan de la Cierva of England.

THE Canadian Institute of Mining and Metallurgy has awarded the first platinum medal established for award by any scientific society to John James Denny, of Kingston, in recognition of his contribution to the art of concentrating gold and silver ores. The gift is that of the International Nickel Company of Canada, Limited, in commemoration of the fiftieth anniversary of the discovery of the nickel deposits in the Sudbury district. It was designed by Dr. R. Tait McKenzie, research professor of physical education at the University of Pennsylvania.

THE Colwyn Gold Medal of the British Institution of the Rubber Industry was presented on the occasion of the fourteenth annual dinner, held in London on April 28, to W. H. Paull in recognition of his services to the pneumatic tire industry.

FOUR appointments have been made by Yale University and the Bernice Pauahi Bishop Museum of Hawaii, in their joint program of scientific investigation within the Pacific Ocean area. Dr. Peter H.

Buck has been reappointed Bishop Museum professor of anthropology at Yale, and Professor Samuel J. Record, of the Yale School of Forestry, has been selected as the representative of the university to go to Honolulu to consult with the director and trustees of the museum in regard to further collaboration between the two institutions. Arthur C. Smith, associate curator of the New York Botanical Garden, and Laura M. Thompson, of Berkeley, California, have been appointed Bishop Museum research fellows for 1933-34.

DR. C. L. BUTLER, who has been a member of Mellon Institute since 1926, has been appointed senior fellow in pure research in the department of research in pure chemistry.

DR. GEORGE B. RAY, associate professor of physiology in the School of Medicine of Western Reserve University, has been appointed professor of physiology and pharmacology at the Long Island College of Medicine. He succeeds Dr. John C. Cardwell, who retired last June.

CAROL Y. MASON has been appointed assistant professor of geology at Milwaukee-Downer College.

DR. K. G. EMELÉUS, lecturer in physics at the University of Belfast, who is at present in the United States as holder of a Rockefeller fellowship, has been appointed to the chair of experimental physics in succession to Professor W. B. Morton.

THE Committee on Scientific Research of the American Medical Association has made a grant to Dr. Robert Hegner, professor of protozoology in the Johns Hopkins School of Hygiene and Public Health, for the purpose of studying the relation of starch to infections with intestinal protozoa.

PROFESSORS C. J. JOUBERT and M. S. du Toit, of Stellenbosch University in the Union of South Africa, arrived recently at the Citrus Experiment Station of the University of California, at Riverside, and are making an extended study and research in connection with agricultural problems affecting South Africa. Professor Joubert is making a study of the methods of biological control of insect pests, especially in connection with California's control of the mealy bug situation. Professor du Toit is studying methods of reclamation of alkali lands.

DR. KURT LEWIN, acting professor of psychology at Stanford University, sailed recently for Japan. He will travel through Japan and Russia, lecturing at the universities of Tokyo and Moscow. He planned to arrive early in May in Germany, where he will continue his work. Professor Lewin was formerly connected with the Institute of Psychology at the University of Berlin. DR. THOMAS BARBOUR, professor of zoology and director of the University Museum at Harvard University, made the principal address at the public opening of Maryland Hall, University of Richmond, on April 28. Maryland Hall completes the group of science buildings at that university.

PROFESSOR CHARLES E. SPEARMAN, of the University of London, lectured before the Society of the Sigma Xi at Northwestern University on May 5, on "Current Psychologies."

AT a joint meeting at Washington University of the Academy of Science of St. Louis and the St. Louis Anthropological Society on April 26, Dr. Albert Ernest Jenks, professor of anthropology at the University of Minnesota, delivered an illustrated address on "Minnesota's Glacial-Age Man."

PROFESSOR ELIOT R. CLARK, of the University of Pennsylvania, delivered an address to the faculty and students of the School of Medicine, George Washington University, on April 29, on "The Spontaneous Activity of Capillaries."

DR. L. A. WOLFANGER, of Columbia University, recently gave a series of lectures at Northwestern University on the characteristics, interpretation and economic significance of soils.

DR. JAMES EWING, Cornell University Medical College, and director of the Memorial Hospital, New York, will deliver the second Frank Billings Lecture of the Thomas Lewis Gilmer Foundation of the Institute of Medicine of Chicago, on May 26. His subject will be "The Depression: Its Effects on Medicine, Research and Practice."

AT the suggestion of Dr. Max Henius, of Chicago, the Danish Government has appointed a committee of the most distinguished scientific men in Denmark to plan and prepare for the Museum of Science and Industry of Chicago a comprehensive series of exhibits to show the evolution of Danish science from the days of Tycho Brahe. The chairman of the committee is Frederik V. Petersen, under-secretary of state, and the vice-chairman is the Danish Ambassador to the United States, Otto Wadsted. Other members include Professor Niels Bohr; Benny Dessau; Dr. Martin Knudsen, professor of physics in the University of Copenhagen; Dr. August Krogh, professor of physiology in the University of Copenhagen; Dr. Svend Lomholt, director of the Finsen Laboratories; Dr. T. Madsen, director of the State Serum Institute; P. M. Michelsen, chairman of the Danish Arts and Crafts Society; Professor A. W. Moerkeberg, director of the Royal Danish Agricultural College; Professor N. E. Noerlund, president of the Royal Danish Science Association; Director Charles H. Olesen,

chairman of the Society for the Development of Danish Industries; Professor Valdemar Poulsen, inventor of the radio telephone and other radio devices; Professor S. P. L. Soerensen, director of the Carlsberg Laboratory, and Dr. E. Buch Andersen, professor of physics in Aarhus University.

FORMAL installation of a new chapter of Sigma Xi was made on April 25, in the University of California at Los Angeles. Fifty charter members, principally faculty and teaching assistants, make up the initial roster of the new chapter. Following the official dinner held in Kerckhoff Hall, the charter members and many prominent guests from outside institutions listened to the formal addresses of the delegates charged with the installation. Professor Chas. J. Chamberlain, of the University of Chicago, and Dr. J. A. Anderson, astronomer and president of the Mt. Wilson-California Institute Chapter, officiated. Officers elected included Dr. Samuel J. Barnett, chairman; Dr. E. K. Soper, secretary, and Dr. Hosmer W. Stone, treasurer. Pending establishment of the longdelayed graduate school in the Los Angeles division of the state university, membership in Sigma Xi will be confined largely to the university staff. Political developments in state legislative circles, however, are said to promise an early recognition of graduate study on the southern campus.

THE tenth annual initiation meeting of the University of Virginia Chapter of Sigma Xi was held on May 2. The meeting was addressed by President Joseph S. Ames, of the Johns Hopkins University, who spoke on "Recent Applications of Science in Aviation." The ninth annual award of the President and Visitors' Research Prize of \$100 was made to Dr. Carl C. Speidel, of the school of anatomy, Department of Medicine, for a paper entitled, "Studies of Living Nerves; the Movements of Individual Sheath Cells and Nerve Sprouts Correlated with the Process of Myelin-sheath Formation in Amphibian Larvae." The Andrew J. Fleming Prize of \$50 for the best paper in biology by a graduate student was awarded to Mr. Chauncey McL. Gilbert.

THE fourth annual New York State Public Reforestation Conference was held on May 12 and 13 in Binghamton, N. Y., under the auspices of the New York State College of Forestry at Syracuse and the Binghamton Chamber of Commerce. Among the speakers on the program were Lithgow Osborne, Conservation Commissioner, Albany, New York; Seth Gordon, president, American Game Association, Washington, D. C.; Congressman John D. Clark, coauthor of the Clark-McNary act, an important forestry measure; Dean Samuel N. Spring, of the New York State College of Forestry, and William G. Howard, director of the Department of Lands and Forests in New York.

THE Mexican Society of Geography and Statistics recently celebrated its hundredth anniversary with special ceremonies, attended by President Rodriguez, cabinet ministers and members of the diplomatic corps. The celebration, which consisted of two addresses and several orchestra numbers, marked the centenary of the issuance of a decree by President Valentin Gomez Farias in 1833, establishing the "National Institute of Geography," an organization which later became the Mexican Society of Geography and Statistics.

THE annual meeting of the British Medical Association will be held for the first time in Dublin next summer under the presidency of Dr. T. G. Moorhead, Regius professor of physic in Trinity College. The annual representative meeting will begin on July 21 and will be continued on the following three week days in the Hall of the Royal Dublin Society, where Professor Moorhead will deliver his presidential address on July 25. The clinical and scientific work is being divided among sixteen sections, which meet on the mornings of Wednesday, Thursday and Friday in Trinity College and University College.

THE fourth International Congress of Radiology will be held in Zurich, under the presidency of Professor H. R. Schinz, from July 24 to 31, 1934. Membership of the congress is confined to members of radiological societies and those introduced by such societies. The thirty-two countries which were represented at the third congress in Paris have been invited by the organizing committee to appoint delegates to the international committee and to nominate a speaker to report on the organization of the cancer campaign in his country at the opening session. At the general meetings the following subjects will be treated: x-ray diagnosis of bone tumors, vasography, the development of pulmonary tuberculosis as seen radiologically, radiation treatment of uterus-carcinoma, radiation treatment of malignant tumors of the mouth and pharynx, radiation genetics, mitogenetic radiation (mitogenetische strahlung), structure analysis, identical physical measurement of the dose in x-ray and radium treatment, hard gamma-rays, cosmic radiation, earth-radiation, shortwave therapy (kurzwellentherapie). In addition the sections for x-ray diagnosis, radiotherapy, radiobiology, radiophysics and technic, electrology and heliotherapy will hold discussions and every member of the congress is entitled to present a communication. During the congress an exhibition of apparatus, photographical accessories, chemical products and scientific books will be on view. All radiological societies are requested to send as soon as possible a list of their members to the

general secretary, Dr. H. E. Walther, Gloriastrasse 14, Zurich.

THE award of five Strathcona Fellowships for the investigation of transportation problems has been announced by Yale University. All five men have had previous railroad experience, two of them being third generation railroad men. The recipients of the fellowships are: Robert A. Emerson, Morden, Manitoba; Stevenson Milne Gossage, Montreal; Thomas M. C. Martin, Warsaw, Wisconsin; Palmer E. Savage, Montreal, and Lyell R. Shellenbarger, Hopkins, Minnesota. The Strathcona fellowships were made possible by the bequest of Lord Strathcona, born Donald Alexander Smith, who came to Canada with the Hudson Bay Company and who is identified with the pioneer days of the railroad on this continent. He served in the Dominion House of Commons, became High Commissioner of Canada in 1896, and was raised to the peerage in 1897. In addition to the fellowships, Lord Strathcona's will provided for two professorships at Yale devoted to the study of transportation, and for the erection of Strathcona Hall with its collocation of offices, classrooms and a special working library for students and instructors making transportation their major interest. The Strathcona professorship of mechanical engineering is held by Professor Samuel W. Dudley, and the Strathcona professorship of engineering mechanics, by Professor Charles J. Tilden.

THE first specimens to be received of the new radium and silver ores of Great Bear Lake, Canada, by the Academy of Natural Sciences of Philadelphia, have been placed on exhibition. This discovery of pitchblende, the principal ore of radium, was made on the eastern shores of Great Bear Lake, just below the Arctic Circle, by Gilbert LaBine in 1930. Associated with the pitchblende was much silver. The glaciated surface of one vein of silver was so wide as to rival the famous "silver pavement" of Cobalt, Ontario. So remote is the district that airplanes are the chief method of reaching it and it then is accessible only during a few months of the year. Several tons of pitchblende already have been produced, and are being reduced to radium at a plant just erected at Port Hope on Lake Ontario. A new and efficient process has been developed by the Canadian Bureau of Mines, which greatly cuts down the time needed to recover the radium. Supplementing the exhibit are a large mass of silver from the Eldorado Gold Mines, at LaBine Point, Great Bear Lake; gold from Nova Scotia; labradorite from Labrador; asbestos from Quebec; fluorite from Ontario; and specimens of blue sodalite and nickel ore obtained on a recent expedition to Canada by the Academy of Natural Sciences.