

members only by invitation. Invitations will be sent to the leading psychologists of the world and it is hoped that psychological societies in foreign countries will cooperate in the arrangements.

The officers of the congress are:

President: J. McKeen Cattell, New York.

Vice-president: James R. Angell, Yale University.

Secretary: Edwin G. Boring, Harvard University.

Foreign Secretary: Herbert S. Langfeld, Princeton University.

Executive Secretary: Walter S. Hunter, Clark University.

Treasurer: R. S. Woodworth, Columbia University.

Chairman of the Program Committee: Raymond Dodge, Yale University.

Additional Members of the National Committee: John E. Anderson, University of Minnesota; Madison Bentley, University of Illinois; E. A. Bott, University of Toronto; Harvey A. Carr, University of Chicago; Knight Dunlap, The Johns Hopkins University; Samuel W. Fernberger, University of Pennsylvania; William McDougall, Duke University; W. B. Pillsbury, University of Michigan; Carl E. Seashore, University of Iowa; Lewis M. Terman, Stanford University; Edward L. Thorndike, Teachers College, Columbia University; Howard C. Warren, Princeton University; Margaret F. Washburn, Vassar College; Robert M. Yerkes, Yale University.

SCIENTIFIC NOTES AND NEWS

DR. CHARLES GREELEY ABBOT has been appointed secretary of the Smithsonian Institution to fill the vacancy caused by the death of Dr. Charles D. Walcott. Dr. Abbot was appointed assistant director of the institution in 1928, and during the past year has been acting director.

THE Perkin medal will be presented to Dr. Irving Langmuir, of the General Electric Co., on January 13 at a joint meeting of the Society of Chemical Industry, Société de Chimie Industrielle, American Chemical Society and American Electrochemical Society. Addresses will be made by Dr. E. Hendrick, Dr. W. R. Whitney, Wm. H. Nichols and Dr. Langmuir.

DR. SIMON FLEXNER, director of the laboratories of the Rockefeller Institute for Medical Research, has been elected an honorary member of the Medical Society of Berlin.

DR. HIDEYO NOGUCHI, of the Rockefeller Institute, has been elected to membership in the Kaiserlich Leopold Deutsche Akademie der Naturforscher, of Halle.

DR. MAX WOLF, director of Heidelberg Observatory, distinguished especially for his originality and activity in observational astronomy, was elected an honorary member of the American Astronomical Society at its thirty-ninth meeting in New Haven. The constitution of the society permits the election of only one honor-

ary member at each annual meeting. There are but five other living honorary members and the last election was made in 1924.

DR. CHARLES D. MARX, professor emeritus of civil engineering at Stanford University, has been elected an honorary member of the American Society of Civil Engineers.

LLOYD E. JACKSON and George H. Johnson, senior industrial fellows of Mellon Institute of Industrial Research, University of Pittsburgh, have been elected to honorary membership in the National Association of Dyers and Cleaners.

THE Journal of the Washington Academy of Sciences notes that on the occasion of his seventieth birthday, August 13, 1927, the honorary degree of doctor of natural sciences was conferred upon H. Pittier by the University of Lausanne, Switzerland, "to distinguish the merits of his work concerning the natural history of Canton de Vaud (Switzerland) and Latin America and to acknowledge his efforts in the promotion of colonial agriculture."

THE court of the University of Wales will confer the honorary degree of LL.D. upon Sir Thomas Lewis, F.R.S., for his distinguished scientific work in medicine, particularly in cardiology; upon Sir Robert Philip, president of the British Medical Association, for his distinguished services to the science and profession of medicine, and upon Dr. H. B. Brackenbury, chairman of the council of the British Medical Association, for his distinguished services to the profession of medicine.

PROFESSOR CALMETTE, subdirector of the Pasteur Institute, has been elected a member of the French Academy of Sciences.

PROFESSOR F. MARES, head of the department of physiology of the medical faculty at Prague, recently celebrated his seventieth birthday and is shortly to retire.

THE title of emeritus professor of pathology in the University of London has been conferred on Sir Frederick Andrewes, who retired from the university professorship of pathology, tenable at St. Bartholomew's Hospital Medical College, last July.

DR. RUDOLPH MATAS, who recently retired from the professorship of surgery at Tulane University Medical School, has been made professor emeritus.

DR. ANSON HAYES, who is leaving Iowa State College at the end of the present quarter to become chief chemist of the American Rolling Mills Company, was the guest at a dinner in his honor given by the members of the chemistry faculty on December 19.

MEMBERS of the staff of the U. S. Bureau of Dairy Industry gave a dinner in Washington on December

16 in honor of Dr. C. W. Larson, chief of the bureau, who resigned on January 1 to become director of the National Dairy Council with headquarters at Chicago.

DR. FRANK BILLINGS has been elected president of the McCormick Institute for Infectious Diseases, and Dr. James B. Herrick, vice-president. Dr. Ludvig Hektoen is secretary. During the coming year the principal subject for research at the institute will be infantile paralysis.

DR. JAMES G. NEEDHAM, professor of entomology at Cornell University, is chairman of the local committee of the fourth International Congress of Entomology which meets in Ithaca from August 12 to 18, 1928, under the presidency of Dr. L. O. Howard.

DR. FRED H. ALBEE, professor of orthopedic surgery at the New York Postgraduate Medical School, has been elected president of the Pan-American Medical Association for the ensuing year and will soon begin a tour of the Latin-American countries in which the association operates.

DR. EDWARD RAY WEIDLEIN, director of the Mellon Institute of Industrial Research, University of Pittsburgh, was reelected president of the American Institute of Chemical Engineers at the recent St. Louis meeting.

At the eighteenth annual meeting of the National Committee for Mental Hygiene, New York, on November 10, Dr. Charles P. Emerson, dean of the Indiana University School of Medicine, Indianapolis, was elected president; Drs. Bernard Sachs, New York, and William L. Russell, White Plains, were among the vice-presidents elected, and Dr. William H. Welch, Baltimore, continues as honorary president.

DR. C. R. BALL, senior agronomist in charge of the office of cereal crops and diseases of the U. S. Bureau of Plant Industry, has been elected by the American Society of Agronomy as agronomic adviser to the National Research Council.

At the annual meeting of the Asociacion de Tecnicos Azucarera de Cuba, H. J. B. Scharnberg was elected vice-president of engineering.

THE council of the Museums and Art Galleries Association of Great Britain has elected Sir Francis G. Ogilvie, chairman of the Geological Survey Board, president for 1927-28, in succession to Mr. J. A. Charlton Deas.

DR. A. A. L. RUTGERS, director of agriculture, industry and commerce in the Netherlands East Indies, has been appointed governor of Surinam (Dutch Guiana).

SIR DAWSON WILLIAMS, who will shortly complete his

thirtieth year as editor of the *British Medical Journal*, and who before his appointment to that post in 1898, had for seventeen years been connected with the editorial department, has resigned. Dr. N. G. Horner, who has been assistant editor for the past eleven years, will succeed Sir Dawson Williams as editor.

DR. HUGH POTTER BAKER, who was formerly dean of the College of Forestry at Syracuse University, has been appointed head of a new department of the U. S. Chamber of Commerce which will work with trade organizations.

DR. FRANK E. RICE has resigned as chairman of the department of chemistry at the North Carolina State College to join the Evaporated Milk Association.

B. J. NICHOLS, who has been studying under Professor Svedberg at Upsala under a Swedish-American Fellowship, has returned to this country. He has accepted a position with E. I. du Pont de Nemours & Company in their Wilmington laboratory, where he will be engaged in research in colloids.

PROFESSOR ELIAS T. CLARK, of the forestry department at the University of Washington, is being relieved of some of his work at the university to enable him to serve as supervising logging engineer for several timber companies in the state. The courses Professor Clark is giving at the university at present will remain under his direction.

PROFESSOR JEROME J. MORGAN, assistant professor of chemical engineering in Columbia University, plans to spend the spring months in Europe, leaving in January. He will travel through France, Italy, Germany, England, etc., studying the state of the gas industry and other developments in chemical engineering.

DR. ANGELO GALLARDO, Argentinian foreign minister, who formerly held the chair of zoology at the University of Buenos Aires, has arrived in Berlin as the guest of the German government.

DR. ALFRED ADLER, Vienna, will return to New York to give a series of lectures on psychology from February 14 to March 22.

THE address of the retiring president of the Philosophical Society of Washington, Commander James P. Ault, on "Ocean Surveys—Problems and Developments," was delivered at a meeting of the society held in the Cosmos Club on January 7.

DR. WILLIAM A. WHITE, of Washington, delivered his presidential address to the American Psychoanalytical Society at the Waldorf Hotel on December 27.

DR. HANS ZINSSER, professor of bacteriology and immunology in the Harvard Medical School, addressed

the New York Academy of Medicine, January 5, on "The Significance of Bacterial Allergy in Infectious Diseases."

DR. J. A. DETLEFSEN, of the University of Pennsylvania, delivered a lecture to the Academy of Stomatology of the Philadelphia County Medical Society on November 30 and to the New York Society of Orthodontists on December 14 on "Hereditary Constitution *vs.* External Conditions in Dental Problems." The data were based on his studies of the dentures of identical twins.

DR. WILLIAM J. MAYO, of the Mayo Clinic, Rochester, Minn., will read a paper on splenomegaly and Dr. Alexis Carrel, of the Rockefeller Institute for Medical Research, will show one of his new films dealing with some phases of his researches at the next meeting of the Johns Hopkins Medical Society which will be held in the auditorium of the School of Hygiene and Public Health on January 16.

DR. HERBERT MAULE RICHARDS, professor of botany at Barnard College, Columbia University, died on January 9, aged fifty-six years.

DR. WILLIS L. MOORE, professor of meteorology at George Washington University and formerly chief of the U. S. Weather Bureau, died on December 18, aged seventy-one years.

DR. J. HOMER WRIGHT, assistant professor of pathology at the Harvard Medical School, died on January 3, aged sixty-two years.

DR. F. S. LUTHER, president emeritus of Trinity College, and formerly professor of mathematics, died on January 4, aged seventy-eight years.

DR. EDWARD V. D'INVILLIERS, consulting geologist and mining engineer of Philadelphia, died on January 4, aged seventy years.

FEDERAL and state corn borer research programs for 1928 were discussed by agriculturists concerned with the corn borer situation at a conference held at the U. S. Department of Agriculture on January 3. The conference was attended by deans of agricultural colleges, directors of experiment stations and other scientists from 14 states. The program of the department was outlined. The work contemplated falls into six general groups, including: entomology, agricultural engineering, agronomy, animal husbandry, chemistry and soils and agricultural economics.

THE annual meeting of the Northeastern Bird Banding Association will be held on January 19, at the University Club, Boston. A field day is planned at Scituate and Cohasset on January 20.

THE first annual dinner of the Ringer Society was held on December 10 at Jules Restaurant, London,

with Dr. Henry Ellis, in the chair. A large company of guests were present. The president delivered the Ringer oration. The society is named after Sydney Ringer, one of the first clinicians to realize the value of physiology and biochemistry applied to practical medicine, and known by his perfusion experiments with the fluid bearing his name.

THE juvenile Christmas lectures at the Royal Institution were delivered by Professor E. N. da C. Andrade on "Engines," commencing on December 29. The general courses of lectures before Easter will begin on Tuesday, January 17, when P. R. Coursey will deliver the first of two lectures on the development of dielectrics for electrical condensers. On Tuesday afternoons there will be six lectures by Professor Julian S. Huxley on the behavior of animals. On Thursday afternoons at the same hour there will be three lectures by Sir William Bragg on Faraday's notebooks; two by Dr. J. J. Fox on optics and chemistry, and two by Group Capt. M. Flack on the physiological aspects of flying. Sir Ernest Rutherford will deliver four lectures on the transformation of matter on Saturday afternoons at three o'clock. The Friday evening meetings will start on January 20, when the discourse will be delivered by Sir William Bragg on photo-electricity. Succeeding discourses will include one (on March 2) on the psychology of the sick, by Sir Farquhar Buzzard, the new Regius professor of medicine at Oxford, and another by the daughter of his predecessor, Miss D. A. E. Garrod, on prehistoric cave art. The discourse on February 3 will be by Professor E. C. C. Baly on photosynthesis, and that on February 17 by the Rev. Dr. E. M. Walker on the university, its ideals and its problems. Other lectures will be given by Professor B. Melvil Jones, Professor E. A. Milne, Sir Ernest Rutherford and others.

COLONEL WILLIAM COOPER PROCTER, president of the Procter and Gamble Company, has announced a gift of \$2,500,000 to the Children's Hospital in Cincinnati, to be used to construct a building to house research work in connection with the hospital and to endow a clinic. The proposed research building, which is expected to cost from \$300,000 to \$500,000, will accommodate an out-patient clinic, laboratory facilities for research, class rooms and living quarters for research fellows. The endowment will provide an income for the employment of fellows, who will be appointed by the board of trustees of the hospital. The endowment also will provide a budget for clinical investigations, laboratory work, social service studies, child welfare investigations and psychological studies.

PLANS for using an endowment given to Battle Creek College by Mrs. Mary F. Henderson, of Washington, as the basis for a nation-wide race betterment movement were announced by Dr. John H. Kellogg at the close of the Third Race Betterment Conference at Battle Creek, Mich. Mrs. Henderson has given to the institution an endowment of \$200,000 and a 4,000-acre farm in Missouri in the interest of race betterment. It is planned to make the college a race betterment institution.

THE grass herbarium of the U. S. National Museum has received from the Institut Botanique, Montpellier, France, through Professor J. Daveau, conservator, a valuable package containing duplicates or fragments of specimens of Paspalum. Among them are a good series of Salzmänn's collections of Paspalum from Bahia, Brazil, some of Husnot's from Martinique and other early collections not before represented in the grass herbarium.

THE sum of £100 is being offered by the Royal Society for the Protection of Birds for an invention of a portable apparatus for the detection of small quantities of carbon monoxide in mines, to supersede the use of canaries and small wild birds now forming part of the equipment of rescue brigades. All competing essays should be received by March 31.

THE *Nation's Health*, which for a few years has been published in Chicago, has been transferred with its contracts, lists, good-will and other assets to the American Public Health Association to be published with the *American Journal of Public Health*.

UNIVERSITY AND EDUCATIONAL NOTES

THE Carnegie Corporation of New York appropriated \$2,000,000 and paid more than \$4,000,000 on previous grants for the fiscal year ended on September 30, 1927, in support of colleges, universities and other educational organizations, according to the report of its president, Dr. Frederick P. Keppel, which was recently made public. Of the appropriations \$831,500 went for educational studies. "Only \$84,000" was appropriated for libraries, chiefly for the maintenance of library schools. Other grants included \$97,600 for adult education, \$150,000 for the Carnegie Endowment for International Peace and \$500,000 in encouragement of the fine arts.

ON November 8 the city of Cincinnati, by a majority of 31,000, voted for \$1,425,000 for its municipal university, the University of Cincinnati. Out of these funds will be constructed an addition to the power

plant, library and recitation hall and a new building for the college of education.

DUKE UNIVERSITY has received from Mr. C. C. Dula, president of the Liggett and Myers Tobacco Company, \$200,000 to be added to the university's endowment fund.

AN engineering building, which will be erected at a cost of between \$250,000 and \$500,000, has been donated to Drexel Institute by Cyrus H. K. Curtis, of Philadelphia.

DR. F. A. WOLL has been promoted to be full professor and head of the department of hygiene in the College of the City of New York.

DR. R. F. RUTTAN, director of the department of chemistry at McGill University, and Dr. A. B. MacCallum, head of the department of biochemistry, have resigned. Dr. J. B. Collip, professor of biochemistry at the University of Alberta, has been appointed to succeed Dr. MacCallum.

M. VILLEMIN has been named professor of anatomy at the University of Bordeaux to succeed M. Picqué.

DISCUSSION AND CORRESPONDENCE ON THE MECHANISM OF ORIENTATION OF ATOMS IN MAGNETIC AND ELECTRIC FIELDS

WHEN atoms possessing magnetic or electric moments are subjected to a field they are supposed to take up definite quantized directions with respect to the field. Experimental confirmation of this view has been made for the magnetic case in the experiments of Gerlach and Stern, but the mechanism by which the orientation takes place presents serious difficulties which may be briefly summarized as follows. In the absence of collisions and radiation the field, of course, can produce only a precession of the atom about the direction of the field. The experiments of Gerlach and Stern, however, show that the atom comes to equilibrium with its moment in definite quantized directions relative to the field and it does this in a time which is less than 10^{-4} sec. Since no collisions are taking place in the beam the only possible method by which the atom can change its energy to become oriented is by the emission or absorption of radiation. But unless the probability of a transition from a non-quantum to a quantum state is very much greater than between two quantum states this process should take something like 10^{10} sec. according to a calculation by Einstein and Ehrenfest.¹

¹ Einstein and Ehrenfest, *Zeit. für Physik*, 11, 31, 1922.