

The house of delegates will convene at 10 A. M., on Monday, May 16. Meetings of the fifteen scientific sections of the association will be held May 18 to 20. Experts in various branches of medicine will also hold diagnostic clinics for the delegates. The president-elect of the association to be installed in office is Dr. Jabez W. Jackson, of Kansas City, who takes the place of Dr. Wendell C. Phillips.

Memorial services in honor of famous men of the medical profession are to be held on the afternoon of May 16, when wreaths will be placed on statues of Benjamin Rush, Samuel Gross and William Crawford Long; on busts of W. C. Gorgas and Walter Reed, and on a painting of John S. Billings.

Following is a list of the meeting places of the various sections of the association:

*House of Delegates:* Auditorium of the Medical Society of the District of Columbia, 1718 M Street, N. W.

*General Meeting:* Arcadia Auditorium, Fourteenth Street and Park Road.

*Practice of Medicine:* Ballroom, Mayflower Hotel, Connecticut Avenue and De Sales Street, N. W.

*Surgery, General and Abdominal:* Memorial Continental Hall, D. A. R., 300 Seventeenth Street.

*Obstetrics, Gynecology and Abdominal Surgery:* Memorial Continental Hall, D. A. R., 300 Seventeenth Street.

*Ophthalmology:* Hall of Nations, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

*Laryngology, Otology and Rhinology:* Hall of Nations, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

*Diseases of Children:* Ballroom, Mayflower Hotel, Connecticut Avenue and De Sales Street, N. W.

*Pharmacology and Therapeutics:* Hall, Willard Hotel, Pennsylvania Avenue and Fourteenth Street, N. W.

*Pathology and Physiology:* Hall, Willard Hotel, Pennsylvania Avenue and Fourteenth Street, N. W.

*Nervous and Mental Diseases:* Hall, Hotel Raleigh, Twelfth Street and Pennsylvania Avenue, N. W.

*Dermatology and Syphilology:* Rose Room, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

*Preventive and Industrial Medicine and Public Health:* Upper Hall, Concordia Church, 1920 G Street, N. W.

*Urology:* Rose Room, Washington Hotel, Fifteenth Street and Pennsylvania Avenue, N. W.

*Orthopedic Surgery:* Hall, Hotel Raleigh, Twelfth Street and Pennsylvania Avenue, N. W.

*Gastro-Enterology and Proctology:* Upper Hall, Concordia Church, 1920 G Street, N. W.

*Radiology:* Lower Hall, Concordia Church, 1920 G Street, N. W.

*General Headquarters, Scientific Exhibit, Registration Bureau, Technical Exhibit, Motion Picture Theater, Information Bureau and Branch Postoffice:* Washington Auditorium, New York Avenue, Twentieth and E streets.

The scientific exhibit will be on the main floor and stage of the Washington Auditorium; in the same building will also be housed the Technical Exhibits;

the Motion Picture Theater will also be located in the spacious gallery of the auditorium. In case of all exhibits, personal demonstrations will be given.

## SCIENTIFIC NOTES AND NEWS

DR. CARL H. EIGENMANN, professor of zoology and dean of the graduate school of the University of Indiana, died on April 24, aged sixty-four years.

DR. F. C. BROWN, assistant director of the U. S. Bureau of Standards, has accepted the directorship of the recently established Museums of the Peaceful Arts, New York City.

PROFESSOR G. D. BIRKHOFF, of Harvard University, has been elected an honorary member of the Edinburgh Mathematical Society.

DR. RUDOLPH MATAS, professor of surgery in Tulane University, has been elected an honorary fellow of the Royal College of Surgeons of England.

PROFESSOR FREDERICK P. GAY, of Columbia University, has been elected an associate member of the Belgian Society of Biology.

MME. CURIE, co-discoverer of radium, has been elected a member of the Academy of Cracow, Poland. Mme. Curie is the first woman to be elected a member, the rules having been especially modified to make this possible.

SIR JAMES BERRY, president of the Royal Society of Medicine, and Sir Frederick Keeble, formerly Sherardian professor of botany, University of Oxford, and distinguished by his work in pure and applied botany, have been elected members of the Athenæum Club for "distinguished eminence in science."

PROFESSOR JULES BORDET, director of the Pasteur Institute at Brussels, has been nominated a corresponding member of the Royal Academy of Spain.

A PORTRAIT of Professor Hobart Amory Hare, painted by Wm. Thomson, was presented to the Jefferson Medical College on May 26, by the class of 1927. Portraits of Professors Thomas McCrae and Albert P. Brubaker, by the same artist, were presented to the college in 1925 and in 1926 by the respective graduating classes.

DR. WILLIAM H. WELCH, professor of medical history at the Johns Hopkins University, presided at a luncheon, given in Baltimore on April 19, by the League of Nations Non-partisan Association.

DR. JOSEPH S. AMES, professor of physics in the Johns Hopkins University, has been named chairman

of the National Advisory Committee for Aeronautics. Dr. Ames was appointed one of twelve original members of the committee by President Wilson in 1915 and has since served continuously.

DR. ANSON MARSTON, dean of the college of engineering at the Iowa State College, has been named one of three experts who will conduct a survey of drainage work in the Everglades, Florida, and make recommendations for future operations there.

DR. GEORGE H. MONKS has resigned as president of the Boston Medical Library, and John W. Barton has been elected to that position. Dr. Monks has been president since 1919.

DR. C. MONTAGUE COOKE, JR., has been appointed chairman of the directing committee which has recently been organized in Honolulu to make an entomological survey of the countries bordering on the Pacific.

THE following officers were elected by the American Society for Experimental Pathology at the recent Rochester meeting: *President*, Dr. David Marine, Montefiore Hospital, New York City; *vice-president*, Dr. E. B. Krumbhaar, University of Pennsylvania Medical School; *secretary*, Carl V. Weller, Ann Arbor, Michigan.

DR. ALVALYN E. WOODWARD, associate professor of biology at the University of Maine, has been appointed to a position in cancer research at the University of Michigan.

DR. HARRY A. CHEPLIN, associate professor of bacteriology in Syracuse University, has joined the staff of the Mulford Biological Laboratories.

HUGH C. SAMPSON, formerly director of agriculture, Madras, has been appointed economic botanist at the Royal Botanic Gardens, Kew. This appointment has been made possible by a grant of £4,000 for five years from the Empire Marketing Board, through the Ministry of Agriculture and Fisheries.

PROFESSOR R. G. HOSKINS, professor of physiology at the Ohio State University, has been granted leave of absence and has been appointed research associate in physiology at the Harvard Medical School from April 1 to September 1, 1927.

DR. A. M. BANTA, of the Station for Experimental Evolution, Carnegie Institution of Washington, is spending the spring quarter in the department of animal biology of the University of Minnesota, where he is delivering a course of lectures on genetics and eugenics.

DR. DONALD L. AUGUSTINE, assistant professor of helminthology in the department of comparative pathology in the Harvard Medical School, sailed on

April 13 for Europe, where he will spend several weeks visiting centers of tropical medicine. Dr. Augustine will arrive early in June in Cairo, Egypt, to make a three months' investigation on certain essential problems concerning ancylostomiasis and other helminthic conditions to be carried out under the auspices of the International Health Board, Rockefeller Foundation, in the laboratories of the Cairo Medical School. Mr. Edward G. McGavran, a third-year student in the Harvard Medical School, will assist in this investigation.

DR. M. H. JACOBS, professor of physiology, University of Pennsylvania, will deliver the seventh Harvey Society lecture at the New York Academy of Medicine on Saturday evening, May 7. His subject will be "The Exchange of Materials between the Erythrocyte and its Surroundings."

DR. RUSSELL L. CECIL, New York, will give the twelfth Mellon lecture, under the auspices of the Society for Biological Research of the University of Pittsburgh School of Medicine, on May 12, on "The Specific Therapy of Pneumococcus Pneumonia."

A SPECIAL meeting of the King County Medical Society, Washington, was held on March 31; the guest of honor was Dr. J. J. R. Macleod, of the University of Toronto Faculty of Medicine, whose subject was "Some Recent Researches on the Ductless Glands."

DR. EDWIN B. FROST, director of the Yerkes Observatory, delivered an address entitled "Beyond the Milky Way," at Washington and Lee University, on the evening of April 4.

DR. FRANCIS G. BENEDICT, director of the Nutrition Laboratory of the Carnegie Institution of Washington, Boston, lectured on "Recent Studies in Human and Animal Metabolism" at Wellesley College on the evening of April 14, and at Teachers College, Columbia University, on the afternoon of April 22.

DR. TADASU SAIKI, director of the Imperial Government Institute for Nutrition, Tokyo, Japan, lectured on April 22 and 23 at Stanford University Medical School on "Modern Currents in the Studies of Nutrition" and "Practical Application of Studies in Nutrition." The lectures are given under the Morris Herzstein Lectureship on diseases of the Pacific Basin, including tropical diseases.

DR. FREDERICK W. HODGE, ethnologist of the Museum of the American Indian, New York City, was the principal speaker at a joint meeting of the Washington Academy of Sciences and the Anthropological Society of Washington, on April 21, when he gave an address on "The Zuni Indians of New Mexico."

AMONG the six busts to be unveiled in the hall of fame at New York University on May 5, at 3:15

o'clock, is one of John James Audubon, the ornithologist. The bust, executed by A. Sterling Calder, was presented by the American Geographic Society, the Museum of the American Indian, The Hispanic Society of America, The Numismatic Society and the American Academy of Arts and Letters. The principal speaker will be Dr. Frank M. Chapman, of the American Museum of Natural History.

PRINCETON UNIVERSITY has established a professorship in memory of Charles A. Young, who was professor of astronomy at the university from 1887 to 1908. Professor Henry Norris Russell, director of the Princeton observatory, has been made the first incumbent.

THE United States Civil Service Commission announces a competitive examination for junior chemical engineer, applications for which must be on file not later than May 14. The examination is to fill vacancies in various branches of the service throughout the United States at an entrance salary of \$1,830 a year.

At the recent meeting of the American Chemical Society in Richmond announcement was made of the appointment of Professor Neil E. Gordon, of the University of Maryland, and Professor B. S. Hopkins, of the University of Illinois, as members of the board of directors of the Institute of Chemistry, the first session of which is to be held at the Pennsylvania State College this summer. Professor S. W. Parr, of the University of Illinois, has been chosen a member of the executive committee of the society. New sections of the society have been authorized in Porto Rico and in Ada, Ohio.

The spring meeting of the Indiana Academy of Science will be held at New Harmony, Indiana, on Thursday, Friday and Saturday, May 12, 13 and 14. This meeting celebrates the beginning of scientific work in Indiana. Say, Maclure, Troost and several other scientists came to New Harmony in 1826 and during the years immediately following laid the foundation for the research which was carried on here during the following half-century. The program for this meeting will include a discussion on the history of New Harmony by an authority on Indiana history and a talk on local points of interest and traditions by a citizen of New Harmony. These talks will be followed by a tour of the city and vicinity.

THE Second British Empire Mining Conference takes place in Canada this year. The meetings will begin at Montreal, on August 22. Some 500 members from overseas and from various units of the Empire have

already agreed to attend, besides local members from all the provinces in British America. Sectional gatherings, excursions and meetings will be held in Halifax, Quebec, Montreal, Ottawa, Toronto, Winnipeg, Edmonton and Victoria (Vancouver Island). The first conference took place in 1923 at Wembley Park, and proved a great success. Sir Robert Horn is president of the conference for 1927.

THE fourth International Congress of Theoretical and Applied Limnology is to be held at Rome in September, 1927. The exact dates and details of the program are to be published later. It is proposed to organize limnological excursions around Rome and the regions of central and northern Italy and Naples, while a limnological exhibition will be held in Rome and a fishery exhibition in Como.

THE John and Mary R. Markle Foundation has been incorporated with an initial fund of \$3,000,000, given by John Markle, retired coal operator. The purposes of the foundation include: creation and maintenance of medical research centers, hospitals, charitable institutions and educational agencies, study of disease and development of methods of eradication, support to libraries and assistance to destitute individuals.

DR. WALTER B. JAMES, who was, at the time of his death on April 6, president of the Long Island Biological Association, which maintains the Biological Laboratory at Cold Spring Harbor, has bequeathed \$5,000 to the association, the income to be used for its purposes.

A DENTAL clinic, identical in character with that at Rochester, N. Y., will be constructed in London as a result of a gift of £300,000 by George Eastman, of Rochester, head of the Eastman Kodak Company. The clinic will be associated with the Royal Free Hospital in Gray's Inn Road in a building adjoining the hospital.

YALE UNIVERSITY, New Haven, announces that it is prepared to found a biochemical institute, where physicians, chemists, biologists and physicists may combine their effort in attacking biochemical problems. The necessary funds have not, however, been secured. The Sterling laboratory of chemistry at Yale is now taking the first step to manufacture a new sulphur constituent of the blood, thus far known as "constituent X," in sufficient quantities for thorough biologic and clinical experiments.

AN anonymous donor has put the sum of 100,000 francs at the disposal of the Société de Neurologie of Paris to be awarded to the discoverer in the course of the next two years of a cure for disseminated sclerosis. Candidates must be members of the Société de Neurologie or at least of French nationality.

AN anonymous donor has given the directors of the Chicago Municipal Tuberculosis Sanitarium \$1,000 to be awarded to some physician, scientist or laboratory worker of Chicago who develops during the year the most useful discovery for the prevention or cure of tuberculosis.

THE Zoological Society of San Diego has completed a zoological hospital and research institute. This building is especially designed and fully equipped for all types of biological research. The purposes of the building are as follows: (a) To serve as a hospital for the animals in the local zoological garden. (b) To serve as a place where animal diseases can be systematically studied. (c) To afford to students of biology a laboratory, where they can pursue their studies with unusual opportunities. The building provides accommodation for thirty research workers. Laboratory and equipment will be supplied these men without charge, and they will be at liberty to follow any type of work in which they are interested. This building was sponsored by a group of progressive physicians. It is ideally located, and the only one of its kind in this part of the country. It is hoped that in time it will develop into an important center of scientific investigation.

A NEW Field Museum expedition to the Alaska Peninsula will leave Seattle on May 1 to collect a group of Kodiak bears and other specimens of the territory. Alexander H. Revell, Chicago merchant, will finance the enterprise, to be known as the Alexander H. Revell Field Museum expedition to Alaska of 1927. Robert W. Tansill, another Chicago business man and big-game hunter, will be in charge of the party.

SIGMA XI FELLOWSHIPS for 1927-28 will be awarded early in June. These fellowships are available for workers in all fields of science. There are no restrictions as to the university or the country in which the holder is permitted to work. Applications should be made before May 20 to Dean Edward Ellery, Union College, Schenectady, N. Y.

THE College of Mines of the University of Washington offers five fellowships for research in coal and non-metallies in cooperative work with the United States Bureau of Mines. The fellowships are open to graduates of universities and technical colleges who are properly qualified to undertake research investigation. The value of each fellowship is \$720 to the holder, for twelve months beginning July 1. Fellowship holders pay tuition and laboratory fees, but are reimbursed for the amounts so expended; they register as graduate students and become candidates for the degree of master of science in the proper subject, unless an equivalent degree has previously been earned. The purpose of these fellowships is to

undertake the solution of various problems being studied by the United States Bureau of Mines that are of especial importance to the State of Washington, the Pacific Northwest and Alaska. The investigations consist principally of laboratory work directed largely by the bureau's technologists.

UNDERGRADUATE students of the Sheffield Scientific School of Yale University have founded the *Yale Scientific Magazine*, which will be devoted to the scientific and engineering research work and news of the school. The publication will appear quarterly, its organization plan having been approved by the Yale Corporation and by the faculty of the Sheffield Scientific School. Its editors will be undergraduates, who will be assisted by a faculty adviser and supervised by an advisory board composed of men of national reputation in various fields of science.

ACCORDING to the *Journal* of the American Medical Association the Rockefeller Foundation has granted the request of the public health service of Haiti to award scholarships to a number of young physicians to enable them to do postgraduate work in some large medical centers of the United States and Canada. About eight fellows had been appointed up to March 24. The object is to improve the teaching facilities of the National Medical School.

AN exhibition has been opened to the public at the Science Museum, South Kensington, London, which affords some indication of the assistance given to British metal industries by the British Non-Ferrous Metals Research Association, which, with the cooperation of the industry through membership of the association, carries on research work and maintains an information service. According to the *Electrical World* the exhibition is concerned chiefly with eight of the association's researches, chosen from among eighteen major investigations at present in progress. Those selected are typical of the character and wide range of the work which is being done, and the exhibits have been set out to give some idea of the scope of each piece of work and the progress which has so far been made. They include the effect of impurities on the properties of copper, gases in copper castings, the jointing of metals, die casting alloys and "wiped" plumbers' joints.

FORMAL steps are being taken to establish, within the Stanford University campus territory, one of the finest botanical gardens in the world. The board of trustees has given its consent to the appropriation of 1,000 acres of ground for development whenever sufficient funds have been obtained to assure the success of the project. The gardens will be a preserve for plant and animal life, a place where experiments

in plant development which require generations of effort can be carried on, an exhibition garden, a training school for gardeners, a public park and an experimental laboratory for both professors and students. One million dollars will be necessary before a start can be made, according to Comptroller A. E. Roth. The ultimate development of the garden would require an endowment of from \$6,000,000 to \$10,000,000. The project is being advanced at present by a group of scientists and others under the organization name of Pacific Botanical Gardens, whose executive committee includes Comptroller A. E. Roth and Professor G. J. Peirce, of Stanford; Professor E. B. Babcock and Comptroller Robert Sproul, of the University of California; Dr. H. M. Hall, of the Carnegie Corporation; George C. Roeding, of Fresno, and Milton B. Drury, secretary of the Save-the-Redwoods League.

ANNOUNCEMENT is made of a gift of \$200,000 by Mr. J. P. Morgan to the Neurological Institute, New York, for the establishment of a fund for research and treatment of encephalitis. The fund will be administered through the new hospital of the institute to be erected as part of the Columbia-Presbyterian medical center in New York City. A complete floor will be equipped, including a ward of forty-eight beds, for the treatment of the disease.

### UNIVERSITY AND EDUCATIONAL NOTES

THE General Education Board has appropriated \$750,000 towards the sum of \$1,500,000 required by Yale University for the construction of a new surgical laboratory and the extension of the pathological laboratory.

MR. AND MRS. JOHN ROBERTS have given to the University of Chicago \$1,000,000 for the construction and endowment of a hospital for children.

HARVARD UNIVERSITY will get the bulk of the estate of Dr. Charles A. Brackett, long oral pathologist in its dental schools, amounting to nearly half a million dollars.

PRESIDENT EDWARD M. LEWIS, of the Massachusetts Agricultural College, has been elected president of the University of New Hampshire, to succeed Dr. Rudolph D. Hetzel, who recently resigned to become president of the Pennsylvania State College.

ROGER LOWELL PUTNAM was named by the late Guy Lowell his successor as trustee of the Lowell Observatory, in accordance with the provisions of the will of Percival Lowell, who founded the observatory at Flagstaff, in 1894, and there, until his death in 1916, pursued the study of astronomy—with particular re-

gard to the planets. Mr. Putnam is a nephew of the noted astronomer.

THE department of pathology of the University of Pennsylvania has been reorganized under the chairmanship of Dr. E. L. Opie, who is, however, to continue his work at the Phipps Institute. Dr. E. B. Krumbhaar has resigned his position as director of laboratories at the Philadelphia General Hospital to follow Dr. Allen J. Smith as professor of pathology, and Dr. Herbert Fox has been appointed professor of comparative pathology. Dr. Baldwin Lucké has been promoted to an associate professorship.

DR. ELMER FUNKHOUSER, instructor in pathology at the medical school of Indiana University, has been promoted to be an associate.

At the University of Bristol Dr. William Edward Garner, of University College, London, has been appointed professor of physical chemistry in succession to Professor J. W. McBain. In the department of physics Dr. J. E. Lennard Jones, reader in mathematical physics, has been promoted to the professorship of theoretical physics.

PROFESSOR HANS WINTERSTEN has succeeded Professor Karle Hürthle in the chair of physiology at Rostock.

### DISCUSSION AND CORRESPONDENCE PRESSURE DECOMPOSITION AS A SOURCE OF SOLAR ENERGY

IN a recent paper<sup>1</sup> Bridgman points out that if atoms are subjected to extremely high pressures, the superstructure of quantum orbits may give way, freeing the kinetic energy of the orbital electrons which would then become available as heat. Bridgman asks, "Has this been considered as a source of stellar energy?" I have made the following computations.

The kinetic energy of an electron in its orbit, including the relativity correction, which becomes appreciable for K-electrons in elements of high atomic numbers, is given by

$$E_{kin} = c^2 m_0 \left[ \frac{1}{\sqrt{1 - \frac{\alpha^2}{n^2} Z^2}} - 1 \right] \quad (1)$$

where  $c$  is the velocity of light,  $m_0$  the statical mass of an electron,  $Z$  the atomic number and  $n$  the azimuthal quantum number.  $\alpha$  is the so-called constant of fine structure, equal to  $\frac{2\pi e^2}{ch}$ ,  $e$  being the charge on the electron and  $h$  Planck's constant. Numerically,

$$\alpha = 7.29 \times 10^{-3} \text{ and } \alpha^2 = 5.31 \times 10^{-5}$$

<sup>1</sup> *Phys. Rev.* 29, 188, 1927.