

The contest will be continued next year, and in addition to the prizes offered to students of high and secondary schools, which will be substantially the same as those awarded this year, six prizes of \$1,000 each will be awarded to students of colleges and universities for the six best essays on the subjects designated:

- "The relation of chemistry to health and disease."
- "The relation of chemistry to the enrichment of life."
- "The relation of chemistry to agriculture or forestry."
- "The relation of chemistry to national defense."
- "The relation of chemistry to the home."
- "The relation of chemistry to the development of an industry or a resource of the United States."

Universities granting scholarships in addition to those provided by Mr. and Mrs. Garvan are the University of Arizona, which gives two scholarships remitting all fees; the University of Iowa, one scholarship; the University of Kentucky and the University of Mississippi, each one. In South Dakota the Northern Normal and Industrial School at Aberdeen offers a prize of \$25 for the best essay submitted in the state. In Texas the Baylor College for Women offers a scholarship worth \$120, and the University of Texas offers a tuition scholarship worth \$120. The University of Utah has contributed a tuition scholarship, and Washington and Lee University in Virginia is offering a tuition scholarship worth \$80. Both the Catholic University of America and Georgetown University will grant four-year tuition scholarships, while the University of Virginia offers a four-year scholarship to the author of the best essay submitted in that state. The University of Florida will award two one-year scholarships remitting registration and laboratory fees; Northwestern University offers one scholarship; the University of Maryland offers a tuition scholarship; St. Louis University, a four-year scholarship, including matriculation fee; and the University of Missouri has established six fellowships for the six prize-winning essays in Missouri.

PSYCHOLOGICAL RESEARCH AT YALE UNIVERSITY

AN important development of the research work in psychology at Yale, the appointment of three men of national distinction, and the gift of funds to carry on the new work are for the first time definitely announced by Yale University.

A group of research specialists will be associated together in an institute devoted to the study of fundamental problems of human behavior, and to the training of personnel for the further pursuit of new studies in the field of teaching, research and of practical application. The initiation of this enterprise is a step of the first importance toward increasing the facilities for psychological research and training.

The need of such research has been increasingly felt in medicine, in industry, in education, in social work, in child welfare and in various public problems. A generous contribution for a period of five years toward this undertaking has been made by the Laura Spelman Rockefeller Memorial.

Roswell Parker Angier, professor of psychology in Yale University, will act as chairman of the group or institute, which will be an integral part of the university. It will be closely associated with the graduate school; its facilities will be available to advanced students who may be candidates for a doctorate or who may wish to engage independently in research.

Arrangements have been concluded for bringing to the institute three leading men of science. Robert M. Yerkes, formerly of the National Research Council, will have charge of the work in the field of comparative psychology with special reference to the primates; Raymond Dodge, formerly professor of psychology in Wesleyan University, in fundamental aspects of normal behavior, and Clark Wissler, of the American Museum of Natural History, in the fields of racial, and particularly primitive, human behavior in its cultural and social aspects.

SCIENTIFIC NOTES AND NEWS

At the meeting of the British Association for the Advancement of Science, held in Toronto from August 6 to 13, general lectures were delivered as follows:

Evening discourses.

SIR THOMAS HOLLAND on "Formation and destruction of mineral deposits."

PROFESSOR D'ARCY W. THOMPSON, of St. Andrews University, on "The shell of a nautilus."

Citizens' lectures.

PROFESSOR A. S. EDDINGTON, of the University of Cambridge, on "Einstein's theory of relativity."

PROFESSOR G. H. F. NUTTALL, of the University of Cambridge, on "Cambridge."

SIR ROBERT ROBERTSON, of the Royal Arsenal, Woolwich, on "Explosives."

Lectures to children.

SIR WILLIAM BRAGG, of the University of London, on "Crystals."

L. H. DUDLEY BUXTON on "The people who live beyond the great wall of China."

PROFESSOR J. H. PRIESTLY, of the University of Leeds, on "Plant waterproofs."

THE annual meeting of the French Association for the Advancement of Science was held in Liège from July 28 to August 2, under the presidency of Professor M. Viala. This is the first time that the asso-

ciation has met outside France. The King of Belgium presided at the opening meeting, when the medal of the association was conferred upon M. Poincaré and Cardinal Mercier.

DR. WARO NAKAHARA, of the Rockefeller Institute for Medical Research, has been awarded the degree of doctor of medical science by the Imperial University of Kyoto, Japan, in recognition of his work on cancer immunity.

THE Royal College of Surgeons of England has awarded its Lister Medal for distinguished contributions to surgical science, with the honorarium of £500, to Sir W. Watson Cheyne, who, in accordance with the conditions of the trust, has undertaken to give an address at the Royal College of Surgeons next year.

THE Cagnola prize (gold medal and 2,500 lire) has been awarded by the Lombardy Academy of Sciences to Dr. E. Greppi, of Milan, for his studies on hemoglobin.

THE Leibniz Silver Medal, for 1924, of the Prussian Academy of Sciences has been awarded to Fraulein Lisa Meitner, professor of physics at the Kaiser Wilhelm Institute in Dahlem, near Berlin, in recognition of her researches on radium.

FOR the year 1924 the American Geographical Society of New York has awarded its three gold medals as follows: The Cullum Geographical Medal to Professor Jovan Cvijić, of Belgrad University, for his contributions to Balkan geography; the Charles P. Daly Medal to Colonel Claude H. Birdseye, who descended the Grand Canyon of the Colorado in the summer of 1923, in charge of a party studying the water-power possibilities of the canyon; the David Livingston Centenary Medal to Commander Frank Wild, well known for his Antarctic work.

MEDALS of the Royal Geographical Society have been awarded as follows: The Founder's Medal to Ahmed Hassanein Bey for his journey in 1923 to Kufra and Darfur; the Patron's Medal to Commander Frank Wild for his long services to Antarctic Exploration. The council have awarded the Victoria Medal to J. F. Hayford, formerly of the United States Coast and Geodetic Survey and now director of the College of Engineering of Northwestern University, for his establishment of the theory of Isostasy; the Murchison Grant to J. H. Reynolds for his work on the 1/Million Map and for the Permanent Committee on Geographical Names; the Back Grant to M. C. Lester for his geographical work in Graham Land; the Cuthbert Peek Grant to F. Kingdon Ward to assist him in his present journey in Tibet; the Gill Memorial to Major A. L. Holt for his surveys in Arabia.

AT the annual general meeting of the Faraday Society, held on July 7, in London, Professor F. G. Donnan was elected to succeed Sir Robert Robertson as president.

PROFESSOR MICHAEL I. PUPIN and Dean George B. Pegram, of the Schools of Mines, Engineering and Chemistry, have been designated to represent Columbia University at the centenary of the Franklin Institute, Philadelphia, September 17 to 19.

PROFESSOR VLADIMIR KARAPETOFF, of the school of electrical engineering at Cornell University, has been nominated on the Socialists' New York State ticket for the office of state engineer and surveyor. Two years ago the late Dr. Steinmetz was the socialist party's nominee for the same office.

D. B. Dow, of the Petroleum Experiment Station of the Bureau of Mines, has been appointed engineer in charge at the new station now being established at the University of Wyoming.

HENRY C. BERGER has resigned from the research staff of the U. S. Bureau of Mines to take the position of research chemist for the Armstrong Cork and Insulation Company, New Jersey.

DR. R. E. M. WHEELER has been appointed director of the National Museum of Wales, in succession to Dr. William Evans Hoyle, who resigned the position recently owing to ill health.

DR. C. V. PIPER, of the United States Department of Agriculture, who has been studying pastures and meadows in Europe, returned in the latter part of July.

THE orator at the University of Chicago, at the convocation on August 20, will be Professor John Merle Coulter, head of the department of botany at the university, whose subject is "The international mission of universities."

A BUST of the late Professor Blanchard, the parasitologist and authority on tropical medicine, has recently been unveiled at his birthplace, Saint-Christophe, in Touraine.

THE Société d'Anthropologie of Paris recently celebrated the centenary of the birth of Paule Broca, who founded the society in 1859.

THE death is announced of Dr. David Lobo, emeritus professor of obstetrics and rector of the Central University of Venezuela, recently president of the National Academy of Medicine.

DR. FILIP POČTA, professor of paleontology and geology at the University of Prague, died recently at the age of sixty-five years.

THE death is also announced of M. Emile Pierard,

of Brussels, president of the Société Belge des Electriciens, and an authority on the subject of electric transmission lines.

THE Commission on Standardization of Biological Stains is at work preparing a book on stains, dealing with their chemistry, synonymy and uses, discussing the characteristics of satisfactory and unsatisfactory stains. At present the chairman of the commission, H. J. Conn, is on leave of absence from the New York Agricultural Experiment Station in order to collect data for this book. It is hoped to have it ready for publication some time during the coming winter.

THE date for the summer meeting of the American Ceramic Society has been set for October 6 and 7, at the Hotel Biltmore, Los Angeles, California. The morning and afternoon sessions will be devoted to the reading of papers and discussions. The dinner meeting will be on Tuesday evening. Railroad excursion rates will be granted with the usual stop-over privileges. For further information communicate with either Mr. Fred B. Ortman, chairman of the Summer Meeting, Tropic Potteries, Inc., Glendale, Calif., or with the general secretary, Lord Hall, Ohio State University, Columbus, Ohio.

ACCORDING to *Chemical and Metallurgical Engineering*, the International Union of Pure and Applied Chemistry has been invited to hold its 1926 meeting in the United States in conjunction with the fiftieth anniversary meeting of the American Chemical Society. Those of the members of the International Union who have been consulted in connection with the proposal say that the only objection is the expense, although it is admitted that many members of that organization would be willing to expend a reasonable amount for the education and experience that would result from it. Officials of the American Chemical Society now are conferring with the railroads to see what special rates may be obtainable for a special train which would convey the visitors, during their stay, to the principal centers of the chemical industry. It is believed such a plan, which would permit of their living on the train, would reduce the expense materially.

AN International Conference on Health Problems in Tropical America was held at Kingston, Jamaica, from July 23 to 31.

THE 1924 session of the Institut International d'Anthropologie will be held this year in Prague, Czechoslovakia, from September 14 to 21. The session will be held under the auspices of the Czechoslovak government and includes excursions to the famous caves and localities of ancient man in Moravia. To facilitate attendance, passport visa for members of the congress will be dispensed with, and a 50 per cent. reduction will be allowed for members

and their families on all the railroads within the Republic. The congress will be devoted to all branches of anthropology and communications may be presented in any of the modern languages.

WE learn from *Nature* that the international Commission on Illumination held its sixth session at Geneva from July 21 to 25, under the presidency of Dr. E. P. Hyde. Twenty-six papers on subjects connected with illumination were presented, and delegates from America, France, Great Britain, Italy, Japan, Poland and Switzerland were present. The papers dealt with photometric nomenclature, primary standards of light, heterochromatic photometry, automobile and industrial lighting and legislation. As a result of the discussions, progress was made on a number of problems in which international agreement and cooperation is desirable.

THE twenty-third Flemish Congress of Natural Science and Medicine was held at Aalst on August 9 and 10.

THE Belgian Society of Hydrology will hold the next congress at Brussels, under the chairmanship of Dr. Modeste Terwagne, from October 15 to 17, 1925.

THE Department of Biology and Public Health at the Massachusetts Institute of Technology, beginning with the next college year, will offer the degree of doctor of public health to properly qualified candidates. The new degree will be placed on the same level as the degrees of doctor of philosophy and doctor of science, requiring, in general, at least three years of graduate work for those possessing the bachelor's degree.

A JAPAN Eugenics Society has been organized under the management of R. Goto. A monthly magazine, of which the English part of the title is *Eugenics*, is being published to spread the knowledge of eugenics in Japan.

THE Bureau of Mines radium laboratory has been set up in Washington after its transfer from Reno. This change in the location of the laboratory was made so that the work could be under the personal supervision of Dr. S. C. Lind, the bureau's chief chemist.

WORK has been begun by the Wisconsin Committee on the Application of Electricity to Agriculture, of which Dean H. L. Russell, of the College of Agriculture, is chairman. The experimental community selected is situated southwest of Ripon, starting near the city limits and extending out about six miles. About fifteen general farmers and two pea vipers will have their farms electrified and studied. Accurate records on the use of all electrical equipment and specially made farm machinery will be kept and the results will be broadcast throughout the state.

It is believed the community will be visited by many thousands of farmers during the course of the experiments, which will be continued for more than a year. The high-voltage power line which will serve the farm electric laboratory is about completed, and within a very short time the farmhouses and barns will be wired for service.

ACCORDING to *Chemical and Metallurgical Engineering*, an appropriation of \$90,000 will be asked of the Congress next December by the Bureau of Mines, for the purpose of establishing a plant in the field for the extraction of oil from shale, on which for several years the bureau has been engaged in laboratory experimentation. The estimate for this appropriation was submitted to the budget bureau several weeks ago and has been approved by General Lord, director of the budget, and by President Coolidge. The appropriation is to cover the construction of the plant, the land necessary for the plant and the securing, by purchase or otherwise, of the necessary shale or shale land.

SECRETARY OF THE INTERIOR WORK has recently taken steps to formulate a committee composed of representatives of the American Bar Association and leading patent bar associations of the country to simplify methods of procedure and expedite the business of the Patent Office. The plan of Secretary Work is to have the committee after its organization make a thorough review of the Patent Office and to submit suggestions for changes in methods that should result in bringing the work of the bureau to a current basis in the near future. Because of a tremendous increase in the patent business during the last few years, the Patent Office has been unable to keep up with the number of applications for patents that have been filed by the public.

ACCORDING to the scientific correspondent of the *London Times*, two Dutch investigators, Professors Paul Frosch and H. Dahmen, have succeeded in isolating the virus of foot-and-mouth disease, the virulent contagious malady of cattle which in recent years has threatened economic disaster to the stock-raising industry. It has long been accepted that the causative agent of this plague must be a living organism capable of surviving outside the body of cattle for a sufficient time to spread by unknown ways. The Dutch professors now have not only isolated the virus, but have been able to make pure cultures of it on solid media. Thus the first stage towards conquest of the disease has been reached. The method they have employed has been the use of the ultra-microscope and the taking of photographs by light-rays beyond the range of visibility.

ON July 1 the metric system became the official standard of measurement in Japan and was so an-

nounced in a recent imperial ordinance, according to advices to the Department of Commerce. The government for some time has been conducting an educational campaign in order to popularize the system and has staged demonstrations in various cities. The law does not contemplate the immediate universal use of metric units, since it is realized that it will require considerable time to overcome the numerous difficulties. The great majority of the Japanese people understand only the native units and are very conservative and prone to stick to old customs and habits. Furthermore, there are very formidable physical and financial difficulties to overcome. The replacement of the present scales used by the Imperial government railways, for example, will mean the purchase of several thousand new scales at an expenditure of possibly 1,000,000 yen.

The Medical Journal and Record states that, at the British Empire Exhibition now being held at Wembley, in London, there is a Tropical Health Department which is intended to give a graphic representation of the various diseases and to explain how they are caused and how they may be prevented. The disease section deals with twenty-seven diseases, and one portion is given over to those which are spread by biting insects. Photographs, pictures, models and specimens are employed to describe each disease, and a brief history and the existing means for fighting it are also given. Among these diseases are included such conditions as malaria and yellow fever. Another group includes those due to intestinal infection such as typhoid fever. Food deficiency diseases are represented by scurvy and beriberi. Much space is devoted to skin diseases, yaws and leprosy. The third section deals with hygiene and the fourth with plant diseases.

ACCORDING to the *Journal* of the American Medical Association the public-health committee of the New York Academy of Medicine has been making a survey in this city as regards the care of convalescent patients. A special report which this body has made on this "neglected phase of medicine" points out that there has been no serious discussion of the kind of care which the various types of convalescent patients require. There has likewise been no thorough consideration of the types of cases which should be cared for jointly, and which would harmonize from an administrative medical point of view. To remedy this the public health committee plans to study the convalescent needs of the city, with a special view to the framing of a community policy and developing medical and administrative standards for the guidance of convalescent homes. It plans to organize a central reference bureau to furnish information and to act as a clearing house, to facilitate a better distribution

of convalescent patients to the existing homes and hospitals, and to assure treatment best suited to each patient. The bureau will be financed by the Sturgis Research Fund and the Burke Foundation. The survey shows that the existing facilities are reasonably sufficient but that they are underutilized.

ACCORDING to *Nature*, arrangements have been made to establish at Oxford in October next the Imperial Forestry Institute, which is intended to serve as an educational and research center for the British Empire. It will be a university institution, with the professor of forestry as its director; but it will be under the control of a board of governors, with a forestry commissioner as chairman. The educational work of the institute will comprise (1) post-graduate training of forest service probationers and other qualified persons, (2) training of research officers in special subjects, and (3) provision of courses for selected officers already serving. The institute will be open to various categories of students, who must as a rule have had previous training at a university in forestry or some allied science. The normal course of study will extend over one academic year, and the subjects dealt with will cover the whole range of forestry.

NEW experimental equipment produced at the Cruft laboratories of Harvard University is being installed in a large DeHaviland plane for the purpose of dispersing fog or clouds. This includes sand boxes on each side of the fuselage, which are connected to batteries. By pulling a lever the electrified sand is released through a nozzle and sprayed over the cloud or fog bank which is to be exterminated.

THE *British Medical Journal* states that the reports on serological investigations presented to the Second International Conference on the standardization of sera and serological tests held at the Pasteur Institute in Paris in November, 1922, have been published in a volume of some 300 pages by the health organization of the League of Nations. The reports deal with the standardization of serums for diphtheria, tetanus, meningitis, pneumonia and dysentery, and with the sero-diagnosis of syphilis.

FOR the preservation of the only two herds of wood bison known to exist in a wild state, the Canadian government has set aside an area of five thousand square miles in the wilderness south of Great Slave Lake. Little has been known of these herds of wild wood bison until a party was sent out by the Canadian government in 1922 to get all available information. It was then learned that the number of bison in the northern herd is at least five hundred with twice as many in the southern herd.

A 26-INCH refracting telescope is to be installed at Johannesburg, South Africa, by Yale University,

according to a report from Consul G. K. Donald to the Secretary of State. Yale's decision on the location of the telescope was largely due to the American Chamber of Commerce at Johannesburg. At its request, the minister of railways granted a 15 per cent. reduction in freight rates from the coast, the commissioner of customs and excise has promised to request from parliament free entry for the telescope and accessories, and the director of the union observatory at Johannesburg, besides affording the facilities of astronomical time service, dark rooms, etc., has promised a free site in its 15-acre reservation.

A FURTHER stage in the development of the Cast Iron Research Association was reached a few days ago, when the association formally took possession of its laboratories. These are situated in Girdford Street, Birmingham, and are equipped for the conduct of chemical analyses and general metallurgical and heat-treatment work. The capacity of the association to deal with its work will be greatly increased, but it is not intended to abandon the policy of having investigations conducted in prominent university laboratories and in the works of members. It is anticipated that the association, which commenced a new financial year on July 1, will incur an expenditure during the year of between £6,000 and £7,000. The research program includes important investigations on erosion- and corrosion-resisting cast irons; moulding sands; graphitization; heat-resisting cast iron; the production of malleable cast iron; cupola practice; cast irons for electrical and magnetic purposes; measurement of melting and pouring temperatures; the fundamental properties of cast iron; standardization of test bars, materials and methods; facing sands and blackings; cast iron to resist abrasive wear, and, jointly with the British Motor and Allied Manufacturers' Research Association, automobile cylinders and pistons.

UNIVERSITY AND EDUCATIONAL NOTES

THE Carnegie Corporation of New York has paid to Samuel H. Church, president of the Carnegie Institute of Pittsburgh, \$8,000,000 provisionally promised four years ago, to be added to the endowment for the educational work of the institute. This makes the total amount given to the Carnegie Institute by Mr. Carnegie and the Carnegie Corporation \$38,000,000.

IN connection with the incorporation of Rush Medical College as a part of the University of Chicago, the medical work on the quadrangles of the university has been organized under the name of the Graduate