

ranged a symposium on "Orthogenesis," to be participated in by L. J. Henderson, C. B. Lipman, M. F. Guyer, William Bateson, W. M. Wheeler and H. F. Osborn. This symposium will be given on Friday, possibly beginning in the forenoon.

A. FRANKLIN SHULL, *Secretary*  
UNIVERSITY OF MICHIGAN,  
ANN ARBOR, MICHIGAN

#### SCIENTIFIC NOTES AND NEWS

DR. HARLOW SHAPLEY, formerly of the Mount Wilson Solar Observatory, has been appointed director of the Harvard College Observatory in succession to the late Edward C. Pickering.

DR. JOEL STEBBINS has been appointed director of the Washburn Observatory and professor of astronomy at the University of Wisconsin, beginning on July 1, 1922, to succeed Professor George C. Comstock, who has been director of the observatory since 1889 and has reached the age of retirement. Professor Comstock will carry on his work as director of the observatory during the present academic year, while Dr. Stebbins will act as non-resident professor of astronomy. Dr. Stebbins has been a member of the department of astronomy at the University of Illinois since 1903 and director of the observatory since 1913. Professor Comstock has been a member of the Wisconsin faculty since 1887 and, besides being director of Washburn Observatory for 32 years, was dean of the Wisconsin Graduate School from 1906 to 1920.

DR. EDGAR F. SMITH, provost emeritus of the University of Pennsylvania, has been elected an honorary member of the French Society of Chemical Industry, and also an honorary member of the Chemical, Metallurgical and Mining Society of South Africa.

WILFRID KILIAN, professor of geology in the University of Grenoble in the Dauphiné, France, has been awarded the Gaudry gold medal, the highest distinction of the Société Géologique de France.

At the opening of the annual meeting of the French Society of Chemical Industry on

October 10, the Dumas medal of the society and an illuminated address were presented by M. Dior, minister of commerce, to Sir William J. Pope.

DR. HIKO MATSUMOTO, who until a few weeks ago was studying the Fayûm collection of Proboscidea in the American Museum, recently received the prize of the Imperial Institution of Science and Literature of Japan.

THE French Geological Society met, from September 14 to 20, in Savoie, under the presidency of M. G. Révil and with the assistance of MM. Morel, Le Roux and Kilian. A number of excursions were made.

At its 1921 meeting in New Orleans, the American Pharmaceutical Association awarded the 1921-22 grant from the A.Ph.A. Research Fund to Dr. David I. Macht, of Johns Hopkins University, for pharmacological work on the benzyl compounds found in certain galenicals. The first grant made in 1919 was awarded to Dr. George D. Beal, of the University of Illinois, for work on alkaloidal assays, while the 1920 award was made jointly to Dr. Heber W. Youngken, of the Philadelphia College of Pharmacy and Sciences, for work on aconite varieties and Dr. E. Kremers and Miss Lila Winkelblech, of the school of pharmacy of the University of Wisconsin, for work on derivatives of guaia-col.

DR. KIRTLEY F. MATHER, professor of geology at Denison University, Granville, Ohio, lectured before the Geographical Society of Chicago on October 28. His subject was "Andine trails and jungle streams, the search for oil in Bolivia." Dr. Mather spent the greater part of the year 1920 in exploration along the eastern front of the Andes in the central portion of South America. On his return he resumed his work at Denison University.

PROFESSOR E. J. COHEN, of the University of Utrecht, Holland, was at the Ohio State University for nine days in the early part of October. During this time he delivered three lectures on piezochemistry, two on the

metastability of matter and one on scientific work and education in Holland.

THE Thomas Hawksley lecture of the Institution of Mechanical Engineers for the present year was delivered on November 4, by Dr. H. S. Hele-Shaw, who took as his subject "Power Transmission by Oil."

DR. JULIUS HAHN, the distinguished meteorologist, long professor at the University of Vienna, died on October 13, at the age of eighty-two years.

THE death is announced of Sir William Edward Garforth, known for his pioneer work in connection with safety in coal mines.

A COURSE of lectures and discussions on problems of public health in relation to industrial hygiene will be delivered in the lecture theater of the Royal Institute of Public Health, London, on Wednesdays from October 19 to December 7, 1921.

THE Imperial College of Science and Technology, South Kensington, London, with which the Royal School of Mines is incorporated, is offering two research fellowships of £300 a year each, tenable for one year, and possibly renewable for a second year, to aid in carrying out an investigation connected with mining, mining geology, metallurgy, or the technology of oil, which in the opinion of the committee is of sufficient use or promise.

THE Board of Regents of the University of Michigan has established two fellowships for graduate students in the Museum of Zoology. These will be known as the Edward C. Hinsdale fellowships, and will be supported by a fund bequeathed to the university by the late Genevieve S. Hinsdale, of Detroit.

UNDER the directorship of Professor Frank Schlesinger, the Yale University Observatory has been opened to the public on two nights of each week, and one of the domes and telescopes has been fitted up for this purpose. To make use of these facilities, one must write to the director some weeks in advance, enclosing a self-addressed envelope, indicating the preferred date and stating how many there will be in the party. Tickets will then be forwarded, which are valid for that night.

STEPS toward the expansion of research work at the Pennsylvania State College were taken at the recent conferences held at the college on the occasion of the inauguration of President John M. Thomas. Resolutions calling for the appointment of a general committee to investigate agricultural research at the college and to recommend future work and its support, were adopted at the agricultural conference. Action taken at the conference for state leaders in the mining, metallurgical and ceramic industries approved the fostering of research work in those lines at the college school of mines. It was the recommendation of each conference that sufficient research funds should be provided by the state legislature in the interest of the people of the state.

MEDICAL treatment by specialists for persons of moderate means is now given at fees which cover merely the cost of service, with the opening on November 1 of a model "pay clinic" at Cornell University Medical College. The clinic, the first of its kind to offer general medical service in New York City, is designed to meet the needs of persons unable to pay high specialists' fees, but who, because they are not paupers, are unable to enjoy the advantages of the charity clinics. The pay clinic will occupy three floors in the wing of the college building formerly occupied by the dispensary. It will be open every afternoon from 1.30 until 4 o'clock, except Sundays and holidays. To serve those who can not afford absence from work in the afternoons, evening clinics will also be open on Tuesdays and Fridays until seven o'clock. The clinics will be under the direction of the Cornell medical faculty. Physicians in the pay clinic will be salaried and every effort will be made to preserve the atmosphere of dignity, privacy and consideration for patients, and the same feeling of personal relationship between physician and patient that characterize private practise. The scientific equipment of the college, its laboratories and x-ray facilities will all be used. The rates for treatment will be as follows: Each visit for examination and

treatment, \$1; medicine, laboratory tests, x-ray photographs and other supplies at cost; diagnosis of cases requiring special examinations and study, with group consultation of specialists and diagnosis, \$10; thorough health examination to discover possible defects from diseases and to obtain advice regarding personal hygiene, \$2.50.

THE next meeting of the International Geodetic and Geophysical Union and of its various sections will be at Rome in 1922.

#### UNIVERSITY AND EDUCATIONAL NEWS

UNDER the terms of the will of the late Hiram Francis Mills, A.M. (Hon.) '89, of Hingham, \$200,000 has been left to Harvard University for the study of the origin and cure of cancer. The fund is to be known as the Elizabeth Worcester Mills Fund in honor of Mr. Mills's wife.

ON account of the increased enrollment in psychology courses in Purdue University, two additional instructors and an assistant have been appointed. The new instructors are: H. C. Townley, A.M. (Wisconsin '21), Peter McCoy, A.M. (Columbia '14), and Dorothy Lee, A.B. (Indiana '21). The present enrollment in general and vocational psychology is approximately 500, of whom 345 are men. Changes in the engineering curricula at Purdue make it possible for an engineering student to take two full years of work in psychology.

AT the University of Pennsylvania in the Medical School, Dr. Glen E. Cullen has been made an associate professor of research medicine. Dr. W. A. Jaquette has been made professor of oral surgery and director of the school of dental hygienists, and Dr. Samuel Goldschmidt has been made assistant professor of physiology.

Three associate professors in the Towne Scientific School have been promoted to full professorships in chemistry. They are Dr. John Frazer, Dean of the Towne Scientific School; Dr. Thomas P. McCutcheon and Dr. Hiram S. Lukens. The trustees have also

elected Dr. George A. Piersol emeritus professor of anatomy. Dr. Piersol retired from the professorship of anatomy last spring.

WELTON J. CROOK has resigned as chief metallurgist to the Pacific Coast Steel Co. to accept an appointment as associate professor of metallurgy in Stanford University.

MISS EMMA FRANCIS, who resigned as head of the nutrition laboratory, Battle Creek Sanitarium, last July, has been appointed assistant professor of chemical agriculture in the Experiment Station of Pennsylvania State College.

KENNETH H. DONALDSON has been appointed instructor in ore dressing and mining at the Case School of Applied Science.

PROFESSOR F. E. GUYTON, of the Ohio State University, has been appointed assistant professor of zoology and entomology at the Alabama Polytechnic Institute.

E. EUGENE BARKER has returned from Porto Rico and has accepted a position as associate professor of botany at the University of Georgia.

J. J. O'NEIL has been appointed acting assistant professor of geology at McGill University during the absence of J. A. Bancroft.

#### DISCUSSION AND CORRESPONDENCE AN EXPLANATION OF LIESEGANG'S RINGS

TO THE EDITOR OF SCIENCE: Dr. McGuigan seems to be unaware of much recent work on banded precipitates (SCIENCE, July 22). He has come to the conclusion, generally, that in some way, the chromate is attracted from the regions of the gel adjacent to the precipitate. So far this is in accordance with the theory proposed by myself in 1916 and confirmed by a long series of experiments.<sup>1</sup> But Dr. McGuigan's particular hypothesis will not bear examination in detail. He may be right in supposing the attractive force to be that between the silver and chromate ions. But this is not sufficient to explain why the bands form in gelatin and not in agar. Neither is the assumption tenable that the

<sup>1</sup> *Biochem. J.*, 1916, X., 169; 1917, XI., 14; 1920, XIV., 29, 474.