

THE U. S. COAST AND GEODETIC SURVEY AND THE AMERICAN ENGINEERING COUNCIL

THE American Engineering Council has announced that it will actively oppose legislation in Congress to transfer the geodetic work of the United States Coast Guard and Geodetic Survey from the Department of Commerce to the Department of the Interior.

The council acted upon a report of its president, Arthur W. Berresford, who made an investigation of the situation, coming to the conclusion that there is little advantage and much potential disadvantage in the proposal. He states that:

The Geodetic Survey is a division of the government activities, insignificant in numbers and cost (forty-five employees and \$112,800 appropriation), but of major importance in performance and possibilities.

Its ambition is the ultimate of exactness in its field, and therein its members may fairly be classed with those scientists who, in the fields of chemistry, electricity, light and other divisions of physical research, are striving to add to the world's store of exact knowledge. Really precise work can be done only by men whose ambition it is, and who glory in the accomplishment achieved at the expense of painstaking in a degree which, to the average man, would be utter drudgery and a thing to be shirked.

The Geodetic Survey is made up of such men. They are located where the necessity for such work as they do is understood and where it is of major importance, and where continuous and adequate recognition is given.

It is no criticism of the Geological Survey to say that these are not its standards. They should not be. Their work, from the surveyor's viewpoint, calls for no such accuracy.

It is the opinion of Mr. Berresford that while the work of both is based upon surveying, there is no actual relation between the work of the Geological and Geodetic Surveys. The work of both surveys can be coordinated when necessary, but the fact that both are land surveys is no reason for combining them. The work of the Geodetic Survey is only about 60 per cent. completed and the present force must be retained.

SCIENTIFIC NOTES AND NEWS

JOHN MERLE COULTER, professor of botany in the University of Chicago, died on December 24 in his seventy-eighth year. Since his retirement, Dr. Coulter has been botanical adviser to the Boyce Thompson Institute at Yonkers, N. Y.

HENRY B. FINE, professor of mathematics and dean of the departments of science at Princeton University, died on December 21, at the age of seventy years.

Professor Fine suffered injuries from an automobile while riding a bicycle.

DR. IRVING LANGMUIR, assistant director of the General Electric Research Laboratory at Schenectady, has been elected president of the American Chemical Society.

DR. MAX PLANCK, professor of physics at the University of Berlin, has celebrated his seventieth birthday. To commemorate this occasion his friends and colleagues have founded a gold medal to be awarded for distinguished work in theoretical physics.

DR. E. D. ADRIAN, lecturer on physiology at Cambridge, has been appointed one of the Foulerton professors of the Royal Society in succession to the late Professor Starling.

THE Pennsylvania Society of New York has conferred its gold medal on Dr. William W. Keen, of Philadelphia.

PROFESSOR ARTHUR H. COMPTON, of the University of Chicago, has been awarded the gold medal of the Radiological Society of North America for his studies of the nature of X-rays, the work which won him the Nobel prize.

THE Perkin Medal meeting of the Society of Chemical Industry, the American Chemical Society, the Société de Chimie Industrielle and the American Electrochemical Society will be held on January 4, when the medal will be presented to Mr. Eugene C. Sullivan. An informal dinner, at 7 P. M., will precede the meeting, after which the following program will be presented in Rumford Hall of the Chemists' Club at 8:15 P. M. "Early Days of the Medallist," Alfred H. White; "Accomplishments of the Medallist," Dr. Arthur L. Day; Presentation of Perkin Medal, Dr. William H. Nichols; Acceptance speech, Eugene C. Sullivan.

AT the annual meeting of the New York Academy of Sciences the A. Cressy Morrison prize of \$500 was awarded to B. P. Gerasimovic, of the Harvard College Observatory, and Donald H. Menzel, of the Lick Observatory, for a thesis on "Subatomic Energy and Stellar Radiation." A second prize of \$250 was awarded to Herbert Ruckes for a paper on "Truss and Arch Analogies in Chelonian Osteology."

THE honorary degree of doctor of science was conferred on Dr. James W. McBain, professor of chemistry in Stanford University, by the University of Bristol this summer when he was in England. Professor McBain had been on the faculty of that university for twenty years, during the last seven of

which he held the Leverhulme chair of physical chemistry.

BELOIT COLLEGE conferred the degree of doctor of science on Roy Chapman Andrews, who graduated from the college in the class of 1906, on the occasion of the convocation exercises on December 18 in recognition of his explorations in Asia.

THE New Zealand Institute has awarded its Hector medal and prize for 1928 to Professor D. M. Y. Sommerville, of Victoria University College, Wellington, for his mathematical work as a whole and for his investigations in non-euclidean geometry.

THE title of doctor of natural history has been conferred on Boris III, King of Bulgaria, by the University of Sofia, in recognition of his work on the fauna and flora of the country. The king's palace is said to house one of the finest museums in the Balkan states.

LORD RAYLEIGH has been appointed a trustee of the Beit Memorial Fellowships for Medical Research in succession to the late Lord Haldane, who died on August 19 last.

SIR FREDERIC STUPART, director of the Meteorological Service of Canada, whose headquarters are in Toronto, will retire on January 1 after forty years' service.

DR. L. L. VAN SLYKE, who recently retired from his position as chief in research in the division of chemistry of the New York Agricultural Experiment Station at Geneva, New York, will spend the coming year in Honolulu.

DR. GREGORY BREIT, mathematical physicist of the department of terrestrial magnetism of the Carnegie Institution, has been assigned to carry out work for a year in atomic physics in various laboratories and universities of Europe.

BECAUSE of the pressure of his present executive duties, Dean Theodore J. Bradley, of the Massachusetts College of Pharmacy, is compelled to relinquish the chairmanship of the Pharmaceutical Syllabus Committee, after many years of service in the position. Professor John G. Beard, of the University of North Carolina, has been unanimously elected as the new chairman of the committee and immediate steps will be taken to proceed with the preparation of a fourth edition of the syllabus.

DR. LOUISE STANLEY, chief of the Bureau of Home Economics of the U. S. Department of Agriculture, known for her scientific investigations in nutrition, has been appointed an official representative of the Department of Agriculture on the American Standards Association.

LEON B. REYNOLDS, professor of hydraulics and sanitary engineering at Stanford University, was elected president of the California Sewage Works Association, at a recent joint meeting of the association and the League of California Municipalities. Professor Reynolds was a delegate to the latter from the city of Palo Alto.

At the recent anniversary meeting of the Royal Society Sir Ernest Rutherford delivered the presidential address, discussing the present state of experimental knowledge in regard to the possibilities of producing very high-frequency radiation of the X-ray type.

DR. HERMANN JOSEPH MULLER, of the department of zoology, of the University of Texas, lectured before the Franklin Institute, Philadelphia, on December 19, on "The Enigma of the Gene and of its Mutation."

DR. CHARLES H. HERTY addressed the West Virginia Alpha Chapter of Phi Beta Kappa, West Virginia University, on December 5.

DR. E. M. CHAMOT, professor of chemical microscopy at Cornell University, recently lectured before the Northeastern section of the American Chemical Society on "The Advantages of Microscopy to the Chemist."

PROFESSOR HARLAN TRUE STETSON, of the astronomical laboratory of Harvard University, gave an illustrated lecture on "Sunspots and Correlated Phenomena" before the Brown Chapter of the Society of Sigma Xi on the evening of December 19. The lecture was given at the physical laboratory in Wilson Hall, Brown University, and was open to the public.

PROFESSOR F. D'HERELLE, of Yale University School of Medicine, gave a Mayo Foundation lecture at Rochester on November 15, on "The Phenomenon of Recovery."

FRANZ X. SHAFFER, director of the Museum of Natural History of Vienna, will lecture at the summer session of the University of California in 1929. His subjects are geology and paleontology.

DR. ALBERT BRACHET, of the University of Brussels, visiting professor for the Commission for Relief in Belgium Educational Foundation, known for his work on heredity and embryology, delivered a series of three lectures at the University of California on December 17, 18 and 19.

THE University of Chicago has announced that Dr. Heinrich Poll, professor of anatomy at the University of Hamburg, Germany, lectured at the Albert Merritt Billings Hospital, December 20, at 4:30 P. M.,

on "Adrenalin, Insulin and Sex Hormones from the Viewpoint of their Interrelationship."

FRANK SARGENT HOFFMAN, Archibald Spencer professor emeritus of philosophy at Union College, where for thirty-three years he was a professor, died on December 21, at the age of seventy-six years.

SIR HECTOR CLARE CAMERON, emeritus professor of clinical surgery in the University of Glasgow, died on November 22, aged eighty-six years.

THE annual general meeting of the American Philosophical Society will be held on April 18, 19 and 20, 1929, beginning at 2 P. M., on Thursday, April 18.

At the recent meeting in New York City of the Middle Atlantic Fisheries Association, W. F. Morgan, Jr., was reelected president and Sol Broome was reelected secretary. Frank B. Coates was elected vice-president and Jerome L. Stewart, treasurer. The convention was concluded with a dinner at which Commissioner O'Malley and Deputy-Commissioner Lewis Radcliffe were guests of honor.

Nature reports that delegates from forty nations recently attended in Paris an International Conference for the Limitation of Exhibitions, when a convention was signed agreeing to limit the number of general long-period exhibitions which are officially recognized to once in ten years at the least in the same country and once in two years at least in all countries. Special exhibitions confined to one trade or industry are limited less strictly. The convention does not apply to any exhibitions which do not seek official recognition or to sample fairs such as that of Lyons or the British Industries Fair. Great Britain was represented by Sir Edward Crowe, the new Comptroller-General of the Department of Overseas Trade; Mr. J. R. Cahill, of the British Embassy, and Lieutenant-Colonel Cole, of the Department of Overseas Trade. The delegates were accompanied by Mr. Guy Locock, of the F. B. I.; Mr. R. B. Dunwood, of the Association of British Chambers of Commerce, and by Mr. L. A. de L. Meredith, of the Department of Overseas Trade.

THE first Congress of the Pan-American Medical Association opened at Havana on December 22. It is hoped that the congress will promote good-will and a better understanding between English and Spanish-speaking medical men. Five days of business sessions and two of sightseeing and entertainment have been planned by the Cuban organizing committee. All meetings and conferences are being held at the Havana Academy of Sciences. A special campaign is being made to bring the leading physicians of the interior to Havana for the week's congress. Special excursion trains are to be run on the opening and closing

days of the conference. Among the speakers will be Drs. Edward Hume, director of the New York Post-graduate Medical School and Hospital; J. J. Valentine, Gardner R. Ridlow, W. E. Weeks, president of the Society of Tropical Medicine; J. Eastman Sheehan, and Harold S. Vaughan, Samuel J. Kopensky and Lee M. Hurd, all of New York, and Dr. William J. Mayo, of Rochester, Minn.

THE International Congress of Tropical Medicine and Hygiene, arranged by the Egyptian government in connection with the centenary celebrations of the Faculty of Medicine at Cairo, met in Cairo on December 15. Sectional meetings were held in connection with the following subjects: Anatomy and anthropology, physiology, pathology, bacteriology, pharmacology, parasitology, forensic medicine, pharmacy and dentistry. Meetings, including operations and demonstrations, will take place in connection with: Surgery, medicine (tropical diseases), gynecology, ophthalmology, radiology, ear, nose and throat diseases, children's diseases, skin and venereal diseases. The work of the congress was carried on in the following sections: Tropical medicine (including diseases of children), tropical surgery (including gynecology), tropical ophthalmology, tropical hygiene and sanitation, parasitology, pathology and bacteriology. Papers and addresses were read in Arabic, English, French, German and Italian. During the congress the foundation-stone of the new hospital and medical school to be built in Cairo was laid by King Fuad on the northern part of Roda Island, in the Nile. The president of the Royal College of Surgeons, Sir Berkeley Moynihan, presented the diploma of honorary fellowship to Dr. Aly Bey Ibrahim at the congress.

THE ninety-seventh annual meeting of the British Medical Association will be held in the latter part of July, 1929, in Manchester, under the presidency of Dr. Arthur Burgess, professor of clinical surgery in the Victoria University of Manchester. The clinical and scientific work of the meeting will be divided among nineteen sections.

WE learn from *Nature* that it has been decided that the eighty-eighth annual general meeting and the anniversary dinner of the Chemical Society shall be held in Leeds on Thursday, March 21. It is the desire of the council to make this a special occasion for a general gathering of chemists and those associated with chemistry in the north of England, and in order that these meetings may be representative of all branches of chemistry and chemical industry, the local sections of the Society of Public Analysts, the Institute of Chemistry, the Society of Chemical Industry, the Society of Dyers and Colourists, and the Coke Oven

Managers' Association are cooperating. The annual general meeting will be held in the University of Leeds on Thursday, March 21, and the anniversary dinner will take place in the Town Hall, Leeds, the same evening. The Railway Clearing House has granted facilities by which those attending the meetings will be able to travel from all parts of Great Britain to Leeds at the reduced rate of an ordinary fare and one third for the double journey.

THE Metropolitan Life Insurance Company has appropriated \$10,000 for the study of influenza. The study will be conducted by the company's influenza commission, of which Dr. M. J. Rosenau, professor of preventive medicine and hygiene in the Harvard Medical School, is chairman. The commission was formed originally to help combat the influenza epidemic of 1918 to 1919.

UNIVERSITY AND EDUCATIONAL NOTES

A GIFT of \$500,000 has been made to Washington University for an institute for research and study of eye, ear and nose diseases as a memorial to Oscar Johnson, one of the founders of the International Shoe Company. The institute will be under the direction of Dr. Harvey J. Howard, formerly director of the eye department of the Rockefeller Medical School in Peking. Teaching will be directed by Dr. Lee Wallace Dean, formerly dean of the medical school at the University of Iowa.

DR. JACOB GOULD SCHURMAN, American Ambassador to Germany, presented to Heidelberg University on December 18 a gift of more than \$500,000 from friends of the university in the United States. Dr. Schurman was made an honorary citizen of Heidelberg, where a half century ago he entered the university as a student.

TRUSTEES of the Rockefeller Foundation have placed \$170,000 at the disposal of the University of Utrecht to establish a school of physiology.

THERE has been completed and occupied at Iowa State College a new building for dairy industries, which with its equipment cost \$500,000. It was formally dedicated on November 14.

HUGH M. HENTON, formerly assistant professor of metallurgy and mining at the Washington State College, has become associate professor of metallurgy at the Alaska Agricultural College and School of Mines.

DR. WERNER GERLACH, of Hamburg, has been called to a professorship of pathology in the University of Halle.

DR. OSCAR B. MUENCH has accepted the position of head of the department of chemistry and physics of New Mexico Normal University, East Las Vegas, New Mexico.

PROFESSOR POETZL, of Prague, has succeeded Professor Wagner-Jauregg as head of the psychiatric clinic at Vienna.

DISCUSSION AND CORRESPONDENCE PYREX GLASS AS A RADIUM CONTAINER

RECENTLY Dr. L. F. Curtis described in *Nature* (Vol. 120, p. 406, 1927) his experience at the Bureau of Standards in using pyrex glass to store a solution of radium salt containing 140 milligrams of the element. After a year and a half of use he found a network of fine cracks developed in the glass container above the water-line, which were therefore attributed to the effect of alpha ray bombardment. The flask was otherwise intact and had remained gas tight.

Having just previously prepared in this laboratory a system in pyrex glass for the collection of radon (emanation) from a solution of chloride containing 265 milligrams of radium element, it was decided to attempt to employ pyrex for one year—with all due safeguards in case of its failure.

The experiment, which has been completed without accident, confirms Dr. Curtis's results in every respect. The object of the present note is to give some additional details which may be significant in interpreting the effect

Not only was a longitudinal system of fine closely spaced cracks developed in the upper part of the 250 cc flask in the area extending for an inch below the neck, but larger cracks less frequently spaced extended longitudinally downward exactly to the water-line (the flask was half filled) which were crossed by large transverse cracks extending almost continuously around the flask. Just below the neck (one half inch in diameter) and also near its top where it was constricted to connect with quarter inch tubing leading to the purification system, spiral cracks had formed, passing several times around the tube with regular spacing of about 1 mm.

From inspection of the system, the writer concluded that the cracking was probably due to the gradual relief of preexisting strains in the glass, by a process of expansion under alpha radiation. The expansion may have been caused or assisted by chemical action produced in the glass by alpha rays, such as the decomposition of water. On the other hand, ordinary soda-lime glass which also contains water does not crack, and presumably, therefore, does not contain strains to the same degree. It should be mentioned that there is some evidence of incipient sealing on the