

highest bidder. There are only two surviving legatees, both over ninety years of age, so it may be expected that this area known the world over will be disposed of before many more years pass by. Only a purchase, either by appropriation of Congress for the specific purpose, or privately, for donation to the United States, will enable the creation of this area as a national park. It is estimated that about \$1,000,000 would be necessary for its acquisition. Bills have been introduced in Congress proposing its purchase at this figure, but as Congress apparently hesitates to establish a precedent by the appropriation of federal funds for the purchase of lands for national park purposes, it is doubtful whether it can be persuaded to favorably consider the acquisition of even the Mammoth Cave by this means. In my opinion, the only prospect is that when this estate is offered for sale at public auction some public-spirited organization or citizen may acquire it and donate it to the United States.

National parks, however, must continue to constitute areas containing scenery of supreme and distinctive quality, or some natural features so extraordinary or unique as to be of national interest and importance as distinguished from merely local interest. The National Park System as now constituted must not be lowered in standard, dignity and prestige by the inclusion of areas which express in less than the highest terms the particular class or kind of exhibit which they represent; distinguished examples of particular forms of world architecture, such, for instance, as the Grand Canyon of the Colorado, as exemplifying the highest accomplishment of steam erosion, or the Sequoia as presenting the highest form of accomplishment in natural tree growth, the wonderful *Sequoia gigantea*, or the Yellowstone as containing the greatest geyser basins of the world, or the rugged portions of the Lafayette National Park as exhibiting the oldest rock formation in America and the luxuriance of its deciduous forests.

NATIONAL RESEARCH FELLOWSHIPS IN PHYSICS, CHEMISTRY AND MATHEMATICS

THE Rockefeller Foundation at a recent meeting (December 5) pledged to the National Research Council the sum of \$625,000 for the maintenance by it, through the five-year period July 1, 1925–June 30, 1930, of a series of national research fellowships in physics, chemistry and mathematics. In addition the International Education Board has agreed to give special financial assistance in the case of fellows appointed to work abroad.

The council is already administering, with the financial support of the foundation, a first five-year series of such fellowships in physics and chemistry, the last appointments in which will expire June 30, 1925. The marked success of this series has led to the pledge by the foundation to support a second series in which fellowships in mathematics will be included as well as fellowships in physics and chemistry.

The National Research Council is also now administering, with the financial support of the Rockefeller Foundation, a similar series of research fellowships in the biological sciences and, with the support of the Rockefeller Foundation and General Education Board, a similar series in the medical sciences. Altogether the foundation and General Education Board have pledged or appropriated a total sum of \$2,000,000 to the council for the maintenance of four five-year series of national research fellowships. The council is convinced that these high grade fellowships, available for young men and women of proved research capacity as evidenced not only by graduate work of sufficient extent and character to win the doctor's degree, but to reveal unusual ability in research work, can do much for the advancement of American scientific investigation.

VERNON KELLOGG,
Permanent Secretary

NATIONAL RESEARCH COUNCIL,
WASHINGTON, D. C.

DINNER IN HONOR OF DR. BOHR

ON November 24, a group of Washington scientific men tendered a dinner to Dr. Niels Bohr, who has delivered a series of lectures on the atom in various cities of the United States.

According to the report in *Industrial and Engineering Chemistry*, Dr. Arthur L. Day, of the Geophysical Laboratory, acted as toastmaster, and F. C. Brown, of the Bureau of Standards, extended greetings to Dr. Bohr, who then spoke briefly on the great possibilities just ahead in the field of science due to recent discoveries, likening the present to the time of Newton which preceded great things in the scientific world.

Dr. Bohr was followed by P. D. Foote, who, to emphasize the size and great numbers of atoms, pointed out that if the molecules in a tumbler of water could all be labeled for later identification and the water were then mixed with all the water in the world, including the moisture in the atmosphere, and if after thorough mixing the tumbler were again filled, it would contain two thousand of the original molecules. Further, on the day of the dinner German paper marks were quoted at about sixty cents per trillion, and yet one paper mark would buy three billion gold atoms or sixteen thousand atoms of radium.

C. G. Abbot discussed the atomic theory as applied to the spectrum of the stars and F. G. Cottrell stressed the necessity of understanding the latest atomic and molecular theories in order to make real progress in the fixation of nitrogen, and said that the work of Dr. Bohr had set the pace. C. F. Marvin remarked that the study of the weather had not been reduced to such a fine point that atomic and molecu-

lar theories were thus far of direct applicability but it is recognized that the electrical condition of the atmosphere plays a great part and in studies of the future the theories now being developed in physics and chemistry will undoubtedly be extremely useful.

Preceding the dinner Dr. Bohr took part in a colloquium at the Bureau of Standards.

THE ENGINEERS' TESTIMONIAL DINNER TO DEAN COOLEY

DEAN MORTIMER E. COOLEY, of the Colleges of Engineering and Architecture of the University of Michigan, was the recipient of a tribute such as come to few at the Engineers' dinner, which was given in his honor at the Hotel Statler in Detroit on November 23. It was a personal recognition, full of enthusiasm and honest sentiment, on the part of his friends, his former students and his confrères, everywhere. The speakers were:

Call to Order by Chairman, Alex Dow, M.Eng. (*Hon.*) '11, past president, Det. Eng. Soc.

Introduction of Toastmaster, Mr. Walter S. Russel, '75e, M.Eng. (*Hon.*) '10.

MORTIMER ELWYN COOLEY:

At his Boyhood Home, Robert F. Thompson, '92l, LL.M. '93, Judge 7th District, New York Supreme Court.

"As Cadet and Ensign," Ira N. Holis, President Worcester Polytechnic Inst., Mem. A. S. M. E.

"As professor of mechanical engineering," Ernest B. Perry, '89e, Mech.E. '96, Manager Industrial Works, Bay City, Michigan, Mem. A. S. M. E.

"In the service of his country," Hon. Edwin Denby, '96l, Secretary of the Navy, Represented by Admiral John K. Robinson, U. S. N.

"On the Yosemite," Granger Whitney, Williamsburg, Mich. Apple grower.

"As dean of engineering and architecture," Marion L. Burton, President.

"In the engineering profession," F. Paul Anderson, dean of engineering, University of Kentucky.

"In the Federated American Engineering Societies," Philip N. Moore, past president, A. I. M. & M. E., vice-president, Federated American Engineering Societies.

"As a companion," Hon. Chase S. Osborn, LL.D. (*Hon.*) '11, ex-governor of Michigan.

Dean Cooley did not speak but he held a reception after the dinner at which every one of the 550 engineers present extended their personal congratulations.

THE MEDALISTS OF THE ROYAL SOCIETY

At the anniversary meeting of the Royal Society held on November 30, the report of the council was presented and the president, Sir Charles Sherrington, delivered his address. Those to whom medals were presented and their qualifications were as follows:

Royal Medal. Professor Charles James Martin.—Professor Martin is distinguished for contributions both to physiology and to pathology. Investigating snake venoms, he differentiated two groups in virtue of their action, one nervous, the other, so to say, humoral. His work on heat-regulation in monotremes threw light on the evolution of the thermotaxis of warm-blooded animals. More recently his researches have lain in the colloidal chemistry of proteins, and in protein-metabolism. As director of the Lister Institute he has contributed to many investigations, in addition to those actually issued in his name. Thus he has been intimately associated with the inquiry into the influence of accessory food factors of diet in the prevention and remedying of "deficiency" diseases, such as scurvy and rickets, an inquiry the success of which may be regarded as one of the recent triumphs of preventive medicine.

Royal Medal. Sir William Napier Shaw.—In the great advances made during the last twenty-five years in the science of meteorology, Sir Napier Shaw has been amongst the foremost pioneers. During his twenty years' administration at the Meteorological Office, that office saw three marked steps forward: two of these were changes in its quarters; the third and greatest was the change in outlook of the work of the office, whereby it assumed, under Sir Napier Shaw's stimulating influence, the character of a scientific institution for the interpretation of meteorological phenomena. With the assistance of his scientific staff, he has developed the physical and dynamical aspects of the subject, and has done much to concentrate attention upon the thermodynamics of meteorology, wherein the motions of the water-laden air are interpreted as the action of a thermodynamic engine. His contributions to knowledge of the air and its ways have been largely responsible for changing the basis of meteorology from one of empiricism to one of science.

Copley Medal. Professor Horace Lamb.—For forty years Professor Lamb has been recognized as one of the most prominent and successful workers in applied mathematics in Great Britain. He is the foremost authority on hydrodynamics, not only in Great Britain but the world over. Professor Lamb's scientific activity, originally centering around the subject of hydrodynamics, has radiated thence into most branches of physical science and he may be regarded as the outstanding representative to-day of the school founded by Stokes, Kelvin, Clerk Maxwell and Rayleigh. In recent years he has made important contributions to seismology, the theory of tides, and other branches of geophysics. Specially perhaps should be mentioned the assistance he has given of recent years to the Aeronautical Research Committee. Mathematical questions involved in the flow of air round aircraft, in the action of propellers, and the stresses