the town of Interior in a northwesterly direction to and over Big Foot Pass and through the region known as The Pinnacles, thence in a westerly direction to Sage Creek.

The bill also provides that only recognized scientific and educational institutions, upon permit from the Secretary of the Interior, shall be allowed to conduct expeditions within the monument area for the advancement of geological and zoological science.

The topography of the South Dakota Bad Lands is so unique, varied and interesting, and the fame of the region as a large field for scientific exploration of the geological past is so extensive, the committee feels that its scenic and educational features should be preserved for the use and enjoyment of the people.

The White River Bad Lands consist of the most important bad-land area of the world, several of the most interesting parts of which are included in the proposed bill. They lie generally in southwestern South Dakota, the most scenic part being in Pennington and Jackson Counties, and cover an area of about 1,000 square miles. A prominent arm, known as Pine Ridge, extends through northwestern Nebraska into eastern Wyoming. From Pennington County the Bad Lands extend northward for miles and miles in the form of lesser ranges, isolated mounds, buttes and offshoots.

The chief topographical features of the area embraced in the bill are The Pinnacles and the Great Wall. Viewing the former from the tableland, the spectator beholds a vast area of rutted ravines, high ridges, hills and cliffs of grayish white soil with varied stratas of coloring, extending as far as the eye can reach. The contour is so rugged that considerable of this region has never been surveyed. The fantastic outlines of these formations are constantly being changed by erosion.

In this region abound vast beds of fossil remains. Geologic formations, peculiar to this locality, appear in great variety. The whole area is a vast storehouse of the biological past, and for three quarters of a century it has been the scene of operations for scientific expeditions from all parts of the world. Specimens of these fossil remains repose in the world's principal museums.

THE WORLD'S ENGINEERING CONGRESS

THIRTY-TWO New York engineers and scientific men, with their families, will sail on the special ship reserved for the American delegation to the forthcoming World's Engineering Congress at Tokio, according to an announcement made by Dr. Elmer A. Sperry, chairman of the American committee. The entire New York party, which is scheduled to sail from San Francisco on October 11, will number sixty-four, and it is expected that this group will be augmented by further requests for passage on the ship.

The New York engineers, most of whom will be accompanied by their families, include: Edward Dean Adams, C. M. Keys, L. A. Osborne, Allen Hazen, J. V. W. Reynders, Robert Ridgway, Dr. Frank B. Jewett, George W. Fuller, Farley Osgood, George W. Gibbs, Dr. H. Foster Bain, Calvin W. Rice, Maurice Holland, E. De Golyer, F. L. Hutchinson, R. H. Colvin, H. de Berkeley Parsons, B. E. Eldred, Lawrence Addicks, Alfred D. Flinn, H. W. Harding, Daniel T. Turner, George T. Orrok, Dr. D. S. Jacobus, Ernest Hartford, William A. McDonald, Bert Emery, Colonel A. S. Dwight, Professor James W. Roe, Lacey H. Morrison, Magnus W. Alexander and Ernest Behrend.

The party is to arrive at Tokio via Honolulu on October 28, the day before the opening of the congress. The itinerary of many of the members of the New York delegation includes a world cruise following the meeting, although it is expected that many will take advantage of the invitation of officials of the congress to visit Japan's great industrial centers and to tour the empire's recreation and scenic centers.

PRESIDENT HOOVER ON EDUCATION AND PUBLIC HEALTH

IN his inaugural address on March 4 President Hoover said:

> Although education is primarily a responsibility of the states and local communities, and rightly so, yet the nation as a whole is vitally concerned in its development everywhere to the highest standards and to complete universality.
>
> Self-government can succeed only through an instructed electorate. Our objective is not simply to overcome illiteracy. The nation has marched far beyond that. The more complex the problems of the nation become, the greater is the need for more and more advanced instruction. Moreover, as our numbers increase and as our life expands with science and invention, we must discover more and more leaders for every walk of life.
>
> We can not hope to succeed in directing this increasingly complex civilization unless we can draw all the talent of leadership from the whole people. One civilization after another has been wrecked upon the attempt to secure sufficient leadership from a single group or class.
>
> If we would prevent the growth of class distinctions and would constantly refresh our leadership with the ideals of our people, we must draw constantly from the general mass. The full opportunity for every boy or girl to rise through the selective processes of education can alone secure to us this leadership.
>
> In public health the discoveries of science have opened a new era. Many sections of our country and many groups of our citizens suffer from diseases the eradication

of which are mere matters of administration and moderate expenditure.

Public health service should be as fully organized and as universally incorporated into our governmental system as is public education. The returns are a thousandfold in economic benefits and infinitely more in reduction of suffering and promotion of human happiness.

SCIENTIFIC NOTES AND NEWS

THE degree of doctor of science has been conferred by the University of Oxford on Dr. Oswald Veblen, professor of mathematics at Princeton University, now lecturing at Oxford.

THE Nichols medal of the New York section of the American Chemical Society, awarded to Dr. William Lloyd Evans in recognition of his achievements in studying the sugar molecule, was presented to him at a meeting of the section on March 1. Dr. R. R. Renshaw presided. Dr. Evans read a paper on the mechanism of carbohydrate oxidation.

DR. JOHN J. ABEL, of the Johns Hopkins University, Dr. John H. Finley, of the New York *Times*, the Honorable John W. Davis, and Dr. Charles H. Herty, of the Chemical Foundation, will be the speakers on the occasion of the presentation by the American Institute of Chemists to Mr. and Mrs. Francis P. Garvan of the medal for outstanding service to the science and profession of chemistry in America. The presentation will be made on May 4.

DR. J. A. V. BUTLER, lecturer in physical chemistry in the University of Edinburgh, has been awarded the Meldola medal of the Institute of Chemistry for his work on the modern theory of conducting solutions.

THE Council of the British Institution of Electrical Engineers has made the eighth award of the Faraday medal to Signor Guido Semenza, of Milan.

THE first Colwyn gold medal has been awarded by the council of the Institution of the Rubber Industry of Great Britain to G. Stafford Whitby, professor of organic chemistry at McGill University. The medal was instituted by Lord Colwyn in 1928 to be awarded for conspicuous services of a scientific or technical character having an important bearing on the improvement or development of rubber manufacture or production. The medal is to be presented to Professor Whitby in the spring, when he expects to visit England.

THE New Year's Honors List of Great Britain includes a peerage for Sir Berkeley Moynihan, president of the Royal College of Surgeons. Dr. John A. Fleming, professor emeritus of electrical engineering in the University of London, has received knighthood.

NOTES in SCIENCE have stated that the Edison medal of the American Institute of Electrical Engineers had been awarded to Dr. Frank B. Jewett and also to Dr. W. D. Coolidge. This medal was presented this year to Dr. Jewett and last year to Dr. Coolidge.

AN exchange has been arranged between Princeton University and the Lowell Observatory at Flagstaff, Arizona, according to which Dr. Carl Lampland will work at Princeton while Dr. Raymond S. Dugan will work at Flagstaff.

DR. L. L. WOODRUFF, professor of protozoology in Yale University, is in residence at Washington as chairman of the Division of Biology and Agriculture of the National Research Council.

DR. H. W. TYLER, head of the department of mathematics at the Massachusetts Institute of Technology, is on leave of absence in Washington, D. C., in order to establish there a permanent office of the American Association of University Professors, of which he has acted as secretary for many years. Professor Tyler was reelected secretary at the recent New York meeting.

DR. SAM LENHER, a former fellow of the International Education Board and recently National Research Fellow in Chemistry, has joined the staff of the experimental station of E. I. du Pont de Nemours and Company, Wilmington, Del.

DR. GEORGE F. REDDISH, formerly senior bacteriologist in the food, drug and insecticide administration of the U. S. Department of Agriculture, is now with the Lambert Pharmacal Company, St. Louis, as chief bacteriologist. Dr. Reddish assumed his new work on February 1.

DR. W. A. MORGAN, formerly state chemist with the Georgia Department of Agriculture, has accepted a position with Lazote, Inc., and is at present at the Experimental Station, Wilmington, Delaware.

AT a special meeting of the board of trustees of the American Museum of Natural History on February 21, Mr. George T. Bowdoin, of the Bankers Trust Company, was elected to fill the vacancy on the executive committee created by the recent death of Ogden L. Mills.

HERBERT P. WHITLOCK, curator of minerals and gems at the American Museum of Natural History, New York, has been appointed honorary curator of mineralogy at the Wadsworth Atheneum and Morgan Memorial, Hartford, Conn.

HAROLD J. COOK, of Agate, Nebraska, has been made active curator of the department of paleontology