an even more comprehensive basis—will be conducted, are indicated by some of its practical achievements already accomplished, such as the serum treatment of epidemic meningitis; the discovery of the cause and mode of infection of infantile paralysis, the surgery of blood vessels through which blood transfusion has become a daily life-saving expedient; the safer method of administering anesthetics by intratracheal insufflation; the skin or luetic reaction and the cultivation of the parasite of rabies.

The scope of the work of the institute will be indicated by a list of the several special scientific departments which it maintains. It includes pathology, bacteriology, protozoology, biological chemistry, physiology and pharmacology, experimental biology, and animal pathology, besides the special hospital.

BEQUESTS OF MRS. MORRIS K. JESUP

MRS. MORRIS K. JESUP, who died on June 17, bequeathed $5,000,000 to the American Museum of Natural History and made other bequests to public institutions amounting to $3,450,000. In providing in her will for the American Museum of Natural History, Mrs. Jesup said:

> I give and bequeath to the American Museum of Natural History of the city of New York four million dollars ($4,000,000) as a permanent fund to be known as "The Morris K. Jesup Fund," the income, and only the income, to be used in the purchase of specimens and collections and the expenses incident to and incurred in assisting scientific research and investigation and publication regarding the same, which the trustees of the museum shall regard as in its interests.

In a codicil, added to her will three years after the will was drawn, an additional $1,000,000 is given to the museum. Morris K. Jesup, who died on January 22, 1908, became president of the museum in 1882, and devoted a large part of his time and energy to its interests. In his lifetime Mr. Jesup gave more than $1,000,000 to the museum, and under his will it inherited an additional $1,000,000.

Other public bequests made by Mrs. Jesup include the following:

Syrian Protestant College	$400,000
Yale University	300,000
Union Theological Seminary	300,000
Young Men's Christian Association	250,000
New York State Woman's Hospital	150,000
Williams College	150,000
Metropolitan Museum of Art	100,000
Presbyterian Hospital	100,000
Hampton Institute	50,000
Tuskegee Institute	50,000
Northfield School	25,000
Mount Hermon School	25,000
New York Zoological Society	25,000
New York Botanical Gardens	25,000
Memorial Hospital for Cancer	10,000
St. Luke's Hospital	10,000
Cooper Union	10,000

SCIENTIFIC NOTES AND NEWS

THE American Medical Association at its meeting at Atlantic City elected officers for the meeting to be held next year at San Francisco as follows: President, Dr. William L. Rodman, of Philadelphia; first vice-president, Dr. D. S. Fairchild, of Iowa; second vice-president, Dr. Wisner R. Townsend, of New York; third vice-president, Dr. Alice Hamilton, of Chicago; fourth vice-president, Dr. William Edgar Darnall, of Atlantic City; secretary, Dr. Alexander R. Craig, of Chicago, reelected; treasurer, Dr. William Allen Pusey, of Chicago.

AT the opening meeting of the American Medical Association, its gold medal was conferred on Surgeon General William Crawford Gorgas.

WESTERN RESERVE UNIVERSITY has conferred its doctorate of laws on Dr. Simon Flexner, director of the laboratories of the Rockefeller Institute for Medical Research.

AMONG the degrees conferred by Harvard University at its commencement exercises were the master of science on Dr. Milton J. Rosenau, professor of preventive medicine in the Harvard Medical School, and the degree of doctor of science on Dr. W. C. Sabine, professor of physics and dean of the graduate school.

DR. WILLIAM L. DUDLEY, dean of the medical department and director of the chemical

laboratories of Vanderbilt University, Nashville, Tenn., had conferred upon him the degree of LL.D., by the University of Cincinnati, at its recent commencement.

Miss Ellen Churchill Semple, of Louisville, Ky., author of works on anthropogeography, has received the Cullom Medal of the American Geographical Society.

The University of Paris has approved the nomination of Professor James Rowland Angell, head of the department of psychology, and dean of the faculties of arts, literature and science in the University of Chicago, as lecturer at the Sorbonne in 1915.

A Martin Kellogg fellowship in the University of California has been awarded to Mr. C. E. Adams, government astronomer of New Zealand, who will carry on research work at the Lick Observatory.

Norman R. Blatherwick, Ph.D. (Yale), has been appointed assistant chemist at the Montefiore Home in New York City.

Mr. C. M. Means, electrical engineer, Pittsburgh, Pa., has been appointed consulting electrical engineer with the U. S. Bureau of Mines.

Professor H. Hergesell, of Strassburg, has been appointed director of the Royal Prussian Aeronautical Observatory at Lindenberg, near Berlin.

Dr. Edward A. Spitzka has resigned as professor of anatomy at Jefferson Medical College. He plans to take up the practise in New York City of his father, the late Dr. Charles Edward Spitzka, who died last January.

Professor J. Miller Thomson, F.R.S., is retiring at the end of this session from his position as vice-principal of King's College, London, and head of the chemical department of the college, after a service of forty-three years.

The Museum of Zoology, University of Michigan, will have a field party in the Davis Mountains, Texas, during July and August. The members of the party, Miss Crystal Thompson, of the museum, and Miss Myra M. Sampson, Smith College, will study the ecological distribution of the reptiles, amphibians and certain groups of invertebrates, principally the butterflies, molluscs and crustaceans.

Dr. Frederick W. True, assistant director of the Smithsonian Institution, known for his contributions to zoology, especially of the Cetacea, died on June 25 in Washington at the age of fifty-five years.

Dr. George Dean, professor of pathology in the University of Aberdeen, died on May 30 at the age of fifty years.

Professor Hugo Kronecker, of Bern, distinguished for his contributions to physiology, died on June 6, at the age of seventy-five years.

Professor Adolph Lieben, emeritus professor of general and pharmaceutical chemistry in the University of Vienna, died on June 6, aged seventy-eight years.

The International Congress of Anatomy will hold its next meeting at Amsterdam in August, 1915.

The interest of Lady Huggins, the widow of the late Sir William Huggins, in the higher education of women in science as developed in the United States has been shown by her gift to Whitin Observatory of Wellesley College of certain of her more personal astronomical possessions. The gift includes two stained glass windows once in Tulse Hill Observatory House, a beautifully wrought Arabian astrolabe, pocket sun dials of the eighteenth century, several exquisite portable instruments especially made for Lady Huggins, and a grating ruled and presented to Sir William Huggins by Rutherford, of New York, and used in his earlier work. There are also interesting pictures, drawings and books. These are properly placed in the Whitin Observatory to form a Huggins memorial collection. The astronomers from Harvard College Observatory and the Astronomical Laboratory were present at the formal presentation and Professor E. C. Pickering made an address.

The Smith-Lever bill, an act to "provide for cooperative agricultural extension work between the agricultural colleges in the several states receiving the benefits of an Act of Congress approved July 2, 1862, and of acts

supplementary thereto," has been passed by Congress and approved by the President. The act makes available for the next nine fiscal years an aggregate sum of $23,120,000 of federal funds to be expended in instruction and practical demonstrations in agriculture and home economics. To obtain this total the states must appropriate for like purposes a total of $18,800,000. Thereafter the government is to appropriate $4,580,000 annually, and the states to take their full quota must appropriate $4,100,000 annually. The purposes for which the funds are to be expended are defined by the act as follows: "That cooperative agricultural extension work shall consist of the giving of instruction and practical demonstrations in agriculture and home economics to persons not attending or resident in said colleges in the several communities, and imparting to such persons information in such subjects through field demonstrations, publications and otherwise; and this work shall be carried on in such manner as may be mutually agreed upon by the Secretary of Agriculture and the state agricultural college or colleges receiving the benefits of this act." Beginning with the year 1914–15 the act appropriates $10,000 to each state as a basic fund for each fiscal year. The act then appropriates additional federal moneys to be distributed among the states according to the percentage that the rural population of each state bears to the total population of that state. To share in the additional funds the state must duplicate the money received from the government in appropriations for the same purpose. According to the *Cornell Alumni News* from which the above is taken the amounts available to the College of Agriculture at Cornell, based on the percentage of rural population in New York State, will begin next year with the basic $10,000 granted each year, and will increase annually according to the following table: 1915–16, $33,443; 1916–17, $52,979; 1917–18, $72,515; 1918–19, $92,051; 1919–20, $111,587; 1920–21, $131,123; 1921–22, $150,659; 1922–23 and thereafter, $170,195.

A SOUTHERN GEOGRAPHIC SOCIETY has been established at Knoxville, Tenn., for the purpose of stimulating the interest of its members and of the public in the study and appreciation of the science of geography. It is planned to hold monthly meetings, on the second Friday evening, from October to May, inclusive, at which addresses or lectures will be given in which will be presented the results of studies, travels and researches pertaining to the science of geography, and related subjects. From time to time excursions will be conducted by the society for the study of features of geographic interest. One of the features in the plans of the society is that of a field school of geography and nature study, which it is proposed to conduct in connection with the Summer School of the South. Beginning with the summer of 1915 it is proposed to conduct at a suitable place in the mountains for a period of four to six weeks, a camp school for the study of geography and related subjects, including plants, animals, physiography, geology, forestry, etc. From day to day excursions will be made under competent instructors for the study of the flora, the fauna and the physical features of the region.

AFTER making investigations and collecting data for the last 12 years, the Ohio State Archeological and Historical Society has published an Archeological Atlas of Ohio which is the first book of this kind to be published by any state. Dr. William C. Mills, the curator of the museum of the society which is located on the campus of The Ohio State University, is the author of the book. A map of each county of the state, showing the mounds, village sites, rock shelters and other interesting archeological matter is the chief feature of the new book. Opposite each map is a description of the county. Other maps show the early Indian trails and towns, and the principal mounds and other earthworks of the entire state. The frontispiece is a photograph of the Serpent mound located in Adams county. Other photographs are included of the various forts, Indian trails and mounds which are described by the author.

IN a report on the Museum-Gates Expedition which investigated the culture of the ancient pueblos of the upper Gila River region

of New Mexico and Arizona, Dr. Walter Hough, of the U. S. National Museum, states that among thousands of interesting and valuable objects pertaining to the lives of the early inhabitants, many dried vegetables, fruits, and other perishable articles were found, as well as a desiccated turkey. In a cave which formed the rear chamber of a row of ruined stone abodes, on the banks of the Tularosa River, a tributary of the San Francisco River, the explorers found much material representative of the domestic life of the ancient dwellers. Upon excavation, this cave room yielded its treasures in sections as it were, different depths offering distinctly marked periods of occupation. Among the objects of importance was a brush made of grass stems bound in a round bundle, similar to those in use by the Pueblo Indians of to-day. During the habitation of this cave four burials had been made at different times, shown by the different levels from which the digging had been begun. In one corner near a rock mass some small bows and arrows, and other offerings were unearthed, indicating the location of an ancient shrine. From the rubbish and débris the remains of several mammals and birds were identified; among them, deer, pronghorn, bison, woodchuck, mice, rats, muskrats, rabbits, lynx, fox, skunk, bear, a hawk, an adult turkey, chicks and eggs, and many feathers of other birds, all of which occupied the cave at one time or another, or were killed and stored there by the early Indians. From early historical reports, it has been understood that the Pueblos raised turkeys, but the discovery of this desiccated adult and chicks proves conclusively that turkeys were kept in captivity, probably for their feathers, which were used in the manufacture of native garments. Ears and scattered grains of corn of a smooth and short grain, in yellow corn, blue and carmine but much faded with aging, were also found, as well as the remains and seeds of gourds, squashes, beans, other vegetables and fruits and nuts. In the Tularosa cave there was pottery of a rude form, while from several large open-air pueblos examples of a very fine finish and ornamentation were collected. The designs on the bowls commonly consist of four elements based on the world quarters, the bottom usually being circular and blank. Other designs are of combined hatched and solid color, or of a checkered variety. Many small collections of pottery were found in caves and springs where they had been deposited as offerings.

According to Ernest F. Burchard, of the U. S. Geological Survey, the total quantity of Portland, natural and puzzolan cement produced in the United States last year was the greatest in the history of the cement industry, amounting to 92,949,102 barrels, valued at $93,001,169, compared with 83,351,191 barrels, valued at $67,461,513, in 1912. The total production of Portland cement in 1913 as reported to the Geological Survey was 92,097,131 barrels, valued at $92,557,617; the production for 1912 was 82,438,096 barrels, valued at $67,016,028. The quantity of Portland cement produced, 92,097,131 barrels, is equivalent to 15,623,620 long tons. Compared with the production of pig iron for 1913, which was 30,966,301 long tons, the Portland cement production is nearly 50.5 per cent. of the quantity of pig iron. Of the 113 producing plants in the United States in 1913, 23 were in the state of Pennsylvania, whose output was 28,701,845 barrels of Portland cement, the largest quantity produced by any one state. The second greatest production came from Indiana, with 10,872,574 barrels, and California was third, with 6,159,182 barrels. The natural cement produced in the United States in 1913 amounted to 744,658 barrels of 265 pounds each, valued at $345,889, compared with an output of 821,231 barrels, valued at $367,222, in 1912, a decrease in 1913 of 76,573 barrels and of $21,333 in value. Puzzolan cement was manufactured in 1913 at three plants in the United States, in Alabama, Ohio and Pennsylvania. The output of puzzolan and Collos cements in 1913 was 107,313 barrels, valued at $97,663, compared with 91,864 barrels, valued at $77,363 in 1912, an increase in quantity of 15,449 barrels and in value of $20,300. The United States has a comparatively small export trade in cement. In 1913 the

total quantity exported was only 2,964,358 barrels, most of which was Portland cement, valued at $4,270,666, compared with 4,215,232 barrels, valued at $6,160,341, in 1912.

UNIVERSITY AND EDUCATIONAL NEWS

THE gift of $400,000 to the Yale Medical School, recently announced, is from members of the Lauder family, of Pittsburgh, Pa., and Greenwich, Conn., to be known as the Anna M. R. Lauder Fund, in memory of the late Mrs. George Lauder. The chair of public health is to be endowed from the gift.

MR. RICHARD BEATTY MELLON, of Pittsburgh, has endowed a fellowship in internal medicine in the school of medicine, University of Pittsburgh. The fellow will be a resident of a Pittsburgh hospital and will work directly under the professor of medicine, Dr. James D. Heard. In addition, Mr. Mellon has provided funds for the purchase and maintenance of an electro-cardiograph apparatus.

OUTLINES of a graduate course in aeronautical engineering leading to the master of arts degree have been issued by the Massachusetts Institute of Technology. The aerodynamical laboratory on the new site has already been described. It contains a wind tunnel of sixteen square feet section which can be furnished with currents up to nearly forty miles an hour. Special forms of apparatus have been provided including an aerodynamic balance, a duplicate of that in the National Physical Laboratory at Teddington, England. A full battery of other needed instruments of precision has been installed in the laboratory. The courses will be under the general direction of Professor Cecil H. Peabody, head of the department of naval architecture and marine engineering, and will be conducted by Assistant Naval Constructor, Jerome C. Hunsaker, U. S. N., who is detailed for the service by the secretary of the navy. Courses in dynamics of rigid bodies and theoretical fluid dynamics will be given by Professor E. B. Wilson, Ph.D., professor of mathematics; in explosion motors by Joseph C. Riley, S.B., associate professor of heat engineering; while special lecturers will deliver courses in wireless telegraphy and meteorology.

NEW appointments and promotions in the Johns Hopkins University are as follows: In the Philosophical Faculty—Alexander G. Christie, M.E., associate professor of mechanical Engineering; Joseph C. W. Frazer, Ph.D., now associate, to be associate professor of chemistry; E. Emmet Reid, Ph.D., associate professor of organic chemistry; William B. Rouwenhoven, Dr.-Ing., instructor in electrical engineering; Walter F. Shenton, Ph.D., instructor in mathematics; Frank A. Ferguson, A.B., assistant in physics. In the Medical Faculty, in addition to the appointment of Theodore C. Janeway, M.D., professor of medicine, Herman O. Mosenthal, M.D., associate professor of medicine, Leonard G. Rowntree, M.D., now associate professor of experimental therapeutics, to be associate professor of medicine, Edwards A. Park, M.D., now associate, to be associate professor of pediatrics, Charles M. Campbell, M.D., now associate, to be associate professor of psychiatry, Hans Lieb, M.D., lecturer in pharmacology, Eli K. Marshall, Jr., Ph.D., now associate in physiological chemistry, to be associate in pharmacology, Benjamin B. Turner, Ph.D., now assistant, to be associate in pharmacology, George J. Heuber, M.D., now assistant, to be associate in surgery, Karl M. Wilson, M.D., now instructor, to be associate in clinical obstetrics, Roy D. McClure, M.D., now assistant, to be instructor in surgery, David M. Davis, M.D., now assistant in pathology, to be instructor in urology.

IN the department of anatomy, school of medicine, University of Pittsburgh, Dr. Ralph Edward Sheldon, associate professor of anatomy, for the last three years in charge of the department, has been made professor of anatomy and head of the department. Dr. Davenport Hooker, instructor in anatomy, Yale Medical School, has been appointed assistant professor of histology and neurology.

DR. WINIFRED J. ROBINSON, assistant professor of botany at Vassar College, has resigned this position to accept that of dean of