

except a registration fee of two dollars for those desiring university credit. The probable expense for the two months, excluding railway fare, will be about fifty dollars.

CHARLES E. BESSEY.

THE UNIVERSITY OF NEBRASKA.

THE NATIONAL BUREAU OF STANDARDS.

THE bill establishing a National Bureau of Standards which, as we have already noted, was passed by Congress at the end of the session is as follows :

Be it enacted, etc., That the Office of Standard Weights and Measures shall hereafter be known as the National Bureau of Standards.

SECTION 2. That the functions of the bureau shall consist in the custody of the standards ; the comparison of the standards used in scientific investigations, engineering, manufacturing, commerce, and educational institutions with the standards adopted or recognized by the government ; the construction, when necessary, of standards, their multiples and subdivisions ; the testing and calibration of standard-measuring apparatus ; the solution of problems which arise in connection with standards ; the determination of physical constants and the properties of materials, when such data are of great importance to scientific or manufacturing interests and are not to be obtained of sufficient accuracy elsewhere.

SEC. 3. That the bureau shall exercise its functions for the Government of the United States ; for any State or municipal government within the United States ; or for any scientific society, educational institution, firm, corporation, or individual within the United States engaged in manufacturing or other pursuits requiring the use of standards or standard measuring instruments. All requests for the services of the bureau shall be made in accordance with the rules and regulations herein established.

SEC. 4. That the officers and employees of the bureau shall consist of a director, at an annual salary of \$5,000 ; 1 physicist, at an annual salary of \$3,500 ; 1 chemist, at an annual salary of \$3,500 ; 2 assistant physicists or chemists, each at an annual salary of \$2,200 ; 1 laboratory assistant, at an annual salary of \$1,400 ; 1 laboratory assistant, at an annual salary of \$1,200 ; 1 secretary, at an annual salary of \$2,000 ; 1 clerk, at an annual salary of \$1,200 ; 1 messenger, at an annual salary of \$720 ; 1 engineer, at an annual salary of \$1,500 ; 1 mechanic, at an annual salary of \$1,400 ; 1 watchman, at an annual salary of \$720 ; and 1 laborer, at an annual salary of \$600.

SEC. 5. That the director shall be appointed by the

President, by and with the advice and consent of the Senate. He shall have the general supervision of the bureau, its equipment, and the exercise of its functions. He shall make an annual report to the Secretary of the Treasury, including an abstract of the work done during the year and a financial statement. He may issue, when necessary, bulletins for public distribution, containing such information as may be of value to the public or facilitate the bureau in the exercise of its functions.

SEC. 6. That the officers and employees provided for by this Act, except the director, shall be appointed by the Secretary of the Treasury, at such time as the respective services may become necessary.

SEC. 7. That the following sums of money are hereby appropriated : For the payment of salaries provided for by this act, the sum of \$27,140, or so much thereof as may be necessary ; toward the erection of a suitable laboratory, of fireproof construction, for the use and occupation of said bureau, including all permanent fixtures, such as plumbing, piping, wiring, heating, lighting and ventilation, the entire cost of which shall not exceed the sum of \$250,000, \$100,000 ; for equipment of said laboratory, the sum of \$10,000 ; for a site for said laboratory, to be approved by the visiting committee hereinafter provided for and purchased by the Secretary of the Treasury, the sum of \$25,000, or so much thereof as may be necessary ; for the payment of the general expenses of said bureau, including books and periodicals, furniture, office expenses, stationery and printing, heating and lighting, expenses of the visiting committee, and contingencies of all kinds, the sum of \$5,000, or so much thereof as may be necessary, to be expended under the supervision of the Secretary of the Treasury.

SEC. 8. That for all comparisons, calibrations, tests, or investigations, except those performed for the Government of the United States or State governments within the United States, a reasonable fee shall be charged, according to a schedule submitted by the director and approved by the Secretary of the Treasury.

SEC. 9. That the Secretary of the Treasury shall, from time to time, make regulations regarding the payment of fees, the limits of tolerance to be attained in standards submitted for verification, the sealing of standards, the disbursement and receipt of moneys, and such other matters as he may deem necessary for carrying this act into effect.

SEC. 10. That there shall be a visiting committee of five members, to be appointed by the Secretary of the Treasury, to consist of men prominent in the various interests involved, and not in the employ of the Government. This committee shall visit the bureau at least once a year, and report to the Secre-

tary of the Treasury upon the efficiency of its scientific work and the condition of its equipment. The members of this committee shall serve without compensation, but shall be paid the actual expenses incurred in attending its meetings. The period of service of the members of the original committee shall be so arranged that one member shall retire each year, and the appointments thereafter to be for a period of five years. Appointments made to fill vacancies occurring other than in the regular manner are to be made for the remainder of the period in which the vacancy exists.

SCIENTIFIC NOTES AND NEWS.

MR. J. J. H. TEALL, F.R.S., has been appointed director general of the Geological Survey of Great Britain and Ireland, in succession to Sir Archibald Geikie, who retired on February 28th. Sir Archibald has been in the service of the Survey for forty-six years and has reached the age limit.

At a meeting of the Canadian Mining Institute held at Montreal on March 6th, it was unanimously decided to recommend the appointment of Professor Frank D. Adams, as director of the Geological Survey of Canada in succession to the late Dr. Geo. M. Dawson.

A COMMITTEE has been formed to erect at Heidelberg a monument in memory of three of its great scientific men, Bunsen, Kirchhoff and von Helmholtz.

PROFESSOR J. J. THOMSON, Cavendish professor of physics at Cambridge University, has been elected a member of the Athenæum Club under the provision which empowers the annual election of nine persons of distinguished eminence.

DR. M. I. PUPIN, professor of electro-mechanics, at Columbia University, and Dr. R. Mark Wenley, professor of philosophy at the University of Michigan, will represent their universities at the Ninth Jubilee of the University of Glasgow, which takes place in June.

MR. PERCY WILSON, of the New York Botanical Garden, is accompanying Professor Todd's expedition to the Dutch East Indies to observe the total solar eclipse. He will make collections for the Garden.

MR. JARED G. SMITH, of the U. S. Department of Agriculture, left Washington on March

15th for Honolulu, to assume the directorship of the Agricultural Experiment Station.

THE Division of Forestry of the U. S. Department of Agriculture has selected from its working force two trained lumbermen with some knowledge of forestry to be sent to the Philippine Islands in compliance with a cable request of the Taft Philippine Commission. The persons selected for this work are Mr. Grant Bruce, formerly a State forester in New York, and Mr. Edward Hamilton. Both these men are expert lumbermen with some training in forestry, and have been selected in view of their special fitness for the Philippine work. A bureau of forestry was established in the Philippines in April, 1900, with Capt. George P. Ahern, Ninth United States Infantry, in charge.

At a meeting of the American Academy of Arts and Sciences on March 13th, the following fellows were elected:

Resident Fellows:

ALEXANDER WILMER DUFF, of Worcester, Physics.
THEODORE LYMAN, of Brookline, Physics.

LEWIS JEROME JOHNSON, of Cambridge, Technology and Engineering.

HENRY LLOYD SMYTH, of Cambridge, Technology and Engineering.

FRANK SHIPLEY COLLINS, of Malden, Botany.

EPHRAIM EMERTON, of Cambridge, Political Economy and History.

FRANK WILLIAM TAUSSIG, of Cambridge, Political Economy and History.

Associate Fellows:

ELIAKIM HASTINGS MOORE, of Chicago, Mathematics and Astronomy.

GEORGE ELLERY HALE, of Williams Bay, Physics.

EDWARD LEAMINGTON NICHOLS, of Ithaca, physics, in place of the late William Augustus Rogers.

CYRUS GUERNSEY PRINGLE, of Charlotte, Vermont, Botany, in place of the late George Clinton Swallow.

FRANKLIN PAINE MALL, of Baltimore, Zoology and Physiology, in place of the late Alfred Stillé.

HENRY FAIRFIELD OSBORN, of New York, Zoology and Physiology, in the place of the late Othniel Charles Marsh.

CHARLES OTIS WHITMAN, of Chicago, Zoology and Physics.

WILLIAM STEWART HALSTED, of Baltimore, Medicine and Surgery, in place of the late William Alexander Hammond.