and laboratory types. Also the photometric testing of incandescent and arc lamps, and such experimental and research work as may be involved in developing methods of testing.

(*c*) Radiation, pyrometry and phytometry. The study of thermal radiation and the determination of high temperatures and luminous intensities by radiation measurements; also the investigation of various standards of light.

(*d*) Mechanics, hydraulics and engineering, especially as applied to the study and testing of gas and water meters, pressure gauges and the various instruments for measuring high and low pressures, anemometers, engine indicators, speed counters and other engineering instruments..... 30

Total 100

Applicants must show that they have been graduated from colleges or technical schools or that they have attained an equivalent education. A preliminary rating will be made of the first subject as shown by the application and accompanying vouchers, and those competitors who fail to attain at least 70 per cent. on this portion of the examination will not be given a rating on the thesis under the second subject nor the examination test under the third subject. From the eligibles resulting from this examination it is expected that certification will be made to fill four vacancies in the position of assistant physicist in the National Bureau of Standards, two at a salary of $2,200, one at $1,800, and one at $1,600 per annum, and to other similar vacancies as they may occur.

On April 21, 1903, there will be an examination for the position of scientific assistant, the subjects and weights being:

1. College course with bachelor's degree (including a certified statement in detail of courses of study pursued and standing in each) 40
2. Post-graduate course or special qualifications (including a certified statement in detail of courses of study pursued and standing in each)..... 30
3. Thesis, or other literature (on a scientific subject bearing upon the work the applicant desires to pursue)..... 30

Total 100

Applicants who comply with the preliminary requirements may be examined in one or more of the following subjects. Each of these subjects, however, is rated independently and constitutes a distinct examination in itself: Agricultural statistics; agrostology; chemistry, agricultural; chemistry, analytical, methods for the detection of food adulteration; chemistry, analytical, official methods, except food adulteration; chemistry, analytical, qualitative and quantitative, including analytical chemistry used in connection with important industries; economic botany; entomology; forestry; horticulture (candidates in this subject should state their qualifications for service in Porto Rico and Hawaii); library science; physiology and nutrition of man; plant bacteriology; plant breeding; plant pathology; plant physiology; pomology; rural engineering, especially as applied to irrigation and drainage; seed testing.

From the eligibles resulting from this examination it is expected that certification will be made to the position of scientific assistant in the Department of Agriculture and to other similar vacancies as they may occur.

THE DESERT BOTANICAL LABORATORY.

THE Desert Botanical Laboratory of the Carnegie Institution will be located at Tucson. Mr. Frederick V. Coville and Dr. D. T. MacDougal, the advisory board of the laboratory, after a trip in January and February through the deserts of Texas, New Mexico, Arizona, California, Chihuahua and Sonora, reported in favor of locating the laboratory at Tucson, and the executive committee of the Carnegie Institution has approved the selection. The actual site of the building is on the shoulder of a mountain two miles west of the city of Tucson. This mountain and the adjoining mesas bear a splendid representation of such characteristic desert forms as *Cereus giganteus, Fouquiera, Opuntia, Echinocactus, Covillea* and *Parkinsonia.*

The officers of the University of Arizona and of the Arizona Agricultural Experiment Station have taken a lively interest in the project and the Tucson Chamber of Commerce expressed its appreciation of the importance of the enterprise by donating the site, installing a water supply, electric connections and rendering other valuable assistance.

Plans for building have been approved and construction will be begun as soon as the site is prepared. It is expected that the laboratory will be ready for operation about September 1, at which time Dr. W. A. Cannon, the resident investigator, will take up his duties.

THE U. S. NATIONAL MUSEUM.

THE last Congress appropriated $3,500,000 for a new building with granite fronts for the U. S. National Museum. This will be placed on the mall to the north of the Smithsonian Institution and at a suitable distance from it. Tentative plans for such a building were submitted to Congress in response to a resolution passed at the previous session, but the fortunate change from brick and terra-cotta will necessarily lead to some alterations, particularly in the design for the exterior. The general arrangement of the halls and the amount of floor space will, however, remain practically the same as in the provisional plans. These contemplate a rectangular building, about 480 feet front and 350 feet deep, surrounding two open courts, and about 80 feet high including the basement. The building will afford about 400,000 square feet of floor space, or nearly nine and a half acres, and is designed for four floors, the first and second to be used for exhibition purposes, the basement and upper floor to be for the arrangement of the reserve, or study series, for workrooms and other necessary museum purposes. A special effort will be made to have the offices of the museum staff not only near the study series, but as near as possible to their respective exhibition halls, while the lighting of the exhibition halls will be mainly from the sides, in order to avoid dark corners and reflection.

The construction of the new museum is to be in charge of Mr. Bernard R. Green, who had the supervision of the new building for the Library of Congress. The sum of $250,000 was appropriated for the first year. The preparation of working plans will be proceeded with at once, and it is hoped that contracts for the work may be made early in July so that the building may be commenced as soon as possible.

THE APPROPRIATION FOR THE U. S. DEPARTMENT OF AGRICULTURE.

THE appropriation for the current expenses of the United States Department of Agriculture provided by the recent session of Congress covers a total of practically six million dollars—$5,978,100, to be exact. This is an increase of $769,140 (including an emergency appropriation for foot-and-mouth disease) over the appropriation for the present year. During the past five years the amount of the appropriation for the department has increased over two and one quarter million dollars.

The increased funds are for the most part to enable an extension of the work of the department along its present lines rather than to take up new special features. Nearly every bureau and division receives additional funds, but the wording of the appropriation act mentions very few new undertakings. Indeed, the wording is now so comprehensive as to render this unnecessary, and makes the legitimate field of the department cover practically all science as applied to agricultural investigation and practice. One new bureau is recognized—the Bureau of Statistics, which is raised from the grade of division. The scientific staff of the Weather Bureau is increased somewhat, an assistant chief being added, among others, and the bureau is authorized to erect five observatories and to establish cable communication between Block Island and Narragansett Pier, with terminal buildings and equipment at each place. The Bureau of Animal Industry receives an increase of $100,000 for its meat and other inspection work, and an emergency appropriation of $500,000 is placed at the disposal of