without sacrifice in real quality. Even the new wing, with its 17 miles of electrical conductors and other equipment to match, was installed at only 60 cents per cubic foot, but of course under more favorable market conditions.

The older portion of the building houses not only the administrative offices, storerooms, central mechanical services, library, etc., of chemistry, but also includes the large laboratories in elementary and advanced inorganic and organic chemistry and biochemistry. The new wing houses quantitative analysis and physical chemistry on two of its floors. The feature of this section is a sub-basement underlying the whole southerly block. This part is subdivided into ten research laboratories, all with complete forced-ventilation service. The subterranean location practically eliminates the considerable day-to-night temperature variation characteristic of California. Like the instructors' private laboratories, these research laboratories are equipped with gas, water, steam, air, vacuum and diversified electrical service. In addition to the conventional single- and 3-phase alternating current, and generator-battery direct current services, a very useful multivoltage, 1 to 220 volt alternating current service is provided at a central transformer. Lights, students' laboratory circuits, etc., are protected by individual circuit breakers instead of fuses. The newer classrooms, offices and corridors are treated with acoustic plaster.

THE NEW ARBORETUM OF CORNELL UNIVERSITY

PROFESSOR RALPH W. CURTIS gives an account in *The Cornell Alumni News* of the beginning of the work on the new arboretum to be constructed at Cornell University. Unlike any other great arboretum or botanic garden, this one will be not only a garden of trees, shrubs and vines brought together for scientific purposes, but in addition will exemplify the principles of landscape design and be a laboratory for the conservation of wild life. None of these three ideas is new in itself, but their combination into one great preserve is a novel enlargement of the arboretum idea. The arboretum will occupy eventually more than five hundred acres of present university property.

The landscape consultant is Nelson Wells, '18, now with the Department of Parks, New York City. The chairman of the university arboretum committee is Conant Van Blarcom, '08, superintendent of Cornell buildings and grounds; the other members are Professors Gilmore D. Clarke, '13, planning; Carl Crandall, '12, civil engineering; Ralph W. Curtis, '01, ornamental horticulture; Ralph S. Hosmer, forestry; Eugene D. Montillon, '07, landscape architecture, and Karl M. Wiegand, '94, botany. Lieutenant R. D. Blanchard of the army is construction officer of the camp, and Charles E. Houghton, of the Finger Lakes State Park Commission project, is project superintendent in charge of the whole arboretum development.

Eight general provisions adopted by the management of the arboretum are announced:

1. The arboretum should contain representatives of all species and varieties of woody plants which will grow in this climate.
2. The arrangement of plants in the arboretum should be such as to give the best landscape effects and also promote to the highest degree their educational value.
3. The wilder areas should be maintained as nearly as possible in their natural condition.
4. Areas needed for special biological purposes may be assigned when this seems desirable. Such areas should be brought into harmony, as far as possible, with the general scheme of the arboretum.
5. Local characteristic trees, shrubs, and vines should be planted generously and quite continuously as the background of the arboretum to give continuity and appropriate setting for the large amount of exotic planting which the arboretum will contain.
6. The planting scheme of the arboretum should be a composite of four superimposed seasonal units so that at all times of the year, in spring, summer, autumn, and winter, there will be interest throughout the entire arboretum.
7. While the planting should be in generic groups, so that any one may find the oaks near each other and the maples, pines, and other groups in the same fashion, the scenic appearance of the arboretum must be maintained by merging the individuals in adjacent groups so that they tie together with the background material and those plantings made for seasonal interest. In this way the arboretum will demonstrate planting design as well as plant materials.
8. Circulation should be by paths and by only such roads as are necessary for accessibility and service. Entrances, in location and number as necessary and desirable, should be established to connect the arboretum with adjoining roads. By this plan, it is hoped that the Cornell Arboretum may become distinctly a plant sanctuary.

A CCC camp of two hundred workers has been transferred to Ithaca to carry on the work.

THE HAYDEN PLANETARIUM OF THE AMERICAN MUSEUM OF NATURAL HISTORY

THE Hayden Planetarium at the American Museum of Natural History will open its doors to the public on October 3, when a group of school children will comprise the audience. It is expected that at least 300,000 children will attend free of charge in the course of each school year. The work is being done by the museum in cooperation with the City School Department.

There will be six public performances a day. One at 11 o'clock in the morning, then again at 2, 3, and 4 o'clock in the afternoon, and two performances at night—one at 8, and one at 9 o'clock and, for the time being at least, five public Sunday showings at the same afternoon and evening hours. Each presentation will last from 35 to 40 minutes, with a lecturer to explain the movements of the stars.

The Hayden Planetarium, made possible through a gift of $150,000 from Charles Hayden and through funds loaned by the R.F.C., is a two-story structure erected at a cost of $650,000. It has a dome-like roof which supports the semispherical projection ceiling in the auditorium on the second floor. The building was designed by Trowbridge and Livingston, and was built by the White Construction Company. The Zeiss Optical Company supplied the instruments for the planetarium.

The officers of the Planetarium Authority, of which F. Trubee Davison is president, are: Daniel E. Pomeroy, *first vice-president;* Cleveland E. Dodge, *second vice-president;* E. Roland Harriman, *treasurer,* and Clarence L. Hary, *secretary.* They are also members of the Executive Committee, together with Junius S. Morgan, H. Rivington Pyne, A. Perry Osborn and Robert Moses.

The administrative officers are: Roy Chapman Andrews, *director;* Dr. Clyde Fisher, *curator;* Wayne M. Faunce, *vice-director* and *executive secretary,* and Frederick H. Smyth, *bursar.*

The planning and building of the Planetarium were aided by an advisory committee made up of the following: A. Cressy Morrison, *chairman;* H. Rivington Pyne, Charles J. Liebman, O. H. Caldwell, John A. Kingsbury, John M. Morehead, John I. Downey, Henry Norris Russell, George Ellery Hale, Samuel Alfred Mitchell, Harlow Shapley, William A. Chadbourne, S. L. Rothafel, Duncan H. Read and Wallace W. Atwood.

Dr. Clyde Fisher, curator of astronomy, will be the active head of the Planetarium, with William H. Barton, Jr., as associate curator. The following assistant curators are on Dr. Fisher's staff: Marian Lockwood, Dorothy A. Bennett, Arthur L. Draper. Charles A. Federer, Jr., will be one of the guest lecturers.

Under the terms entered into with the R.F.C., the cost of building was financed through the issue of $650,000—twenty-year Reconstruction Finance Corporation bonds at 4½ per cent. Under the rules imposed by the federal government all income, except actual operating costs, must be turned over to the R.F.C. It is tentatively proposed to charge 25 cents admission for morning and afternoon performances and 35 cents at night.

SCIENTIFIC NOTES AND NEWS

DR. ALBERT N. JORGENSEN, professor in the School of Education at the University of Buffalo, has been elected president of the Connecticut State College at Storrs.

DR. WILLIAM T. ROOT, JR., professor of educational psychology and head of the department, has been appointed dean of the Graduate School of the University of Pittsburgh. He will continue as head of the work in psychology. Dr. E. R. Weidlein, director of Mellon Institute, has been acting dean of the Graduate School since the resignation of Professor L. P. Sieg to become president of the University of Washington.

DR. CHAIM WEIZMANN, the newly elected president of the World Zionist Organization, director of the Agricultural Experiment Station at Rehoboth in Palestine and president of the Hebrew University at Jerusalem since its inception, has been named chairman of the board of governors of the university. He is succeeded as president by Dr. Judah L. Magnes, who had previously filled the office of chancellor.

WITH the opening of the new college year Professor Stanhope Bayne-Jones, professor of bacteriology in the faculty of medicine, assumes the deanship of the Yale School of Medicine, in succession to Dr. Milton C. Winternitz, who resigned at the end of the college year.

DR. THOMAS S. BAKER, since 1922 president of the Carnegie Institute of Technology, Pittsburgh, Pa., has retired from active service on account of ill health. At a meeting of the Board of Trustees on September 17 the title of emeritus was conferred on him and he was nominated for membership on the board. Until a successor is selected, Dr. Charles Watkins, director of the Margaret Morrison Carnegie College, will continue as acting president. In announcing the retirement of Dr. Baker, Samuel Harden Church, president of the board of trustees, said: "The board has acted upon Dr. Baker's wish for retirement with a most profound regret, all the members feeling what this step would mean as a loss to the educational interests of Pittsburgh and the world at large. During the time that Dr. Baker has occupied the presidency of Carnegie Tech he has deepened the resources of its scholarship and expanded its influence until it is now recognized as one of the world's great engineering schools. Dr. Baker has made Carnegie Tech practically a great reservoir for the advancement of scientific knowledge, particularly in the development of metal-