

relating to the geologic conditions in the Canal Zone and, especially, in the Culebra Cut. A report by him on the causes of the landslides and other failures in the sides of the cut, and of means for their prevention, submitted to the Secretary of War, was, in summary form, included in the President's message to Congress. Hayes's recommendation, which led to the appointment of a geologist to serve regularly with the Canal Commission, was a wise provision and it would appear to be no fault of these geologists that some of the subsequent disasters were not averted.

In 1901, Hayes began the study of the problems of oil and gas geology, his first investigations being in the Coastal Plain of Texas and Louisiana. Largely as a result of this work, and the growing appreciation of the enormous value of the study of geologic structure in the search for oil and gas, Hayes's services were persistently sought by private interests engaged in the development of oil pools. Finally, in recognition of his ability in oil geology and his success in the Geological Survey as organizer and administrator, he was irresistibly solicited to become vice-president and manager of the "Compania Mexicana de Petroleo 'El Aguila,'" a position which, in October, 1911, he resigned from the survey to accept and which he held until the time of his death. In the new service, he recruited a staff of young geologists, with which he was able, with most brilliant economic results, to accomplish, in effect, a geological reconnaissance of about one half of the Province of Vera Cruz, before the abandonment by the United States of Tampico and Vera Cruz, combined with illness and other circumstances, made it necessary for him to leave Mexico and his work unfinished. From this illness he never recovered.

During his career of twenty-four years in the U. S. Geological Survey, Hayes's geologic work, whether as assistant or as chief geologist, was comprehensive, original, efficient and constructive. He examined in detail and mapped the geology of sixteen quadrangles in the southern Appalachian region, for nine of which the results were published in folios of the Geologic Atlas. He made examinations of

non-metalliferous deposits, iron ores, and features of geologic importance in many parts of the country. He was the author, alone or in conjunction with other geologists, of seven papers, published in the annual reports, and of thirteen in bulletins of the Geological Survey. A large number of papers were printed in the publications of various learned and professional societies of which he was a hard-working, helpful and productive member. In 1908 the honorary degree of LL.D. was conferred on him by Oberlin.

It was a privilege to be associated with Hayes. With a master mind, he was genial, philosophical and stimulating. With a penetrative insight of men and things, he sympathetically encouraged, steadied, strengthened and put on a higher level the work of his assistants, while to his colleagues he gave friendly criticism, wise counsel, and unstinted and unselfish assistance.

DAVID WHITE

#### A SCHOOL OF NURSING AND HEALTH AT THE UNIVERSITY OF CINCINNATI

THE University of Cincinnati has taken over the school of nursing and health of the Cincinnati General Hospital and has put it under the immediate direction of the dean and faculty of its college of medicine. The university has already been given control of the laboratories of the hospital and, through its medical faculty, of doing all the medical, surgical and research work at the hospital. Appreciating the service rendered to the people of Cincinnati by the medical faculty, the city authorities requested the university to undertake the direction of the school of nursing and health also. The university will thus be responsible for all of the educational and scientific work of the entire hospital and its various branches. When the new medical college building is completed, as it is expected it will be early next year, the work of the medical college, the pathologic institute and the school of nursing and health will be assembled in one place, as they already are in one organization.

Nursing will become a skilled and learned

profession to a degree far beyond its present attainment. The advance of modern scientific methods of treating the ills of mankind has already forced the issue upon medical training. That inadequate preparation of nurses and exploitation of them by so-called training schools will be eliminated is an inevitable next step. A nurse should have a liberal, broad education in language, history and the social and physical sciences; and she, like the physician and dentist, should keep up with developments in her own and allied professions. Carried out in this way nursing becomes a dignified calling demanding for success a comprehensive university training.

The school of nursing and health is to be made a high-grade institution, not only for training nurses, but for preparing women to do sanitary and social work in both town and country. It will have three kinds of courses and students.

1. A three-year course for nurses, including systematic instruction and cooperative work in the hospital. This course will lead to a diploma in nursing.

2. A five-year course leading to a degree, including two years of study in the fundamental sciences in the university. This is planned to train a higher class of institutional officers, teachers and sanitarians.

3. Special courses for graduate nurses from other hospitals and schools.

The usual preparation demanded of all incoming students will be required for admission to the first two courses. A certificate from a recognized hospital or school will admit to the special courses.

The staff of instructors has been selected, which will be aided by the professors in the medical college. The director of the school is Miss Laura Logan, a graduate of Acadia College and of Columbia University and formerly of the Mt. Sinai Hospital, New York City. Fourteen instructors constitute the present faculty of the school, not including the members of the medical and other university faculties who give the instruction in chemistry, biology, anatomy, physiology, economics, sociology and general subjects. A noteworthy feature is the appointment of a trained psycholo-

gist to give instruction in a subject recognized more and more as invaluable to the physician and nurse.

More and more the university is offering opportunities for the higher education of women, following the educational policy of President Dabney. In 1905 the college for teachers was launched, and in 1914 the school of household arts was made a department of the university. The school of nursing and health is therefore a consistent development.

#### **PRACTICAL WORK FOR STUDENTS OF THE NEW YORK STATE COLLEGE OF FORESTRY**

THE forty-three juniors of the State College of Forestry at Syracuse, who have five months between their junior and senior years for practical work, are scattered literally to the four corners of the continent in all fields of forestry work. It is the policy of the college of forestry to give its students the maximum amount of sound, practical training in their four-year course. Too often college students waste their summer vacations. At the end of the freshman year the boys are helped to get into practical work with lumber companies, landscape concerns and wherever there are openings for hard work with experience. The entire sophomore summer of three months is spent in camp on Cranberry Lake. This camp is as much a part of the four-year course as the mathematics or chemistry taught in the college. The junior year then closes on May 1 and the senior year does not open until October 1, giving the juniors five months for practical work along forestry lines. Many of the boys in the college of forestry are earning their own way and this period of five months not only gives them opportunity for securing a lot of valuable experience but it means sufficient funds for carrying them through their final year in college.

Practically every one of the juniors in the college of forestry is working during this summer vacation in some phase of forestry. Eight of them are with the United States Forest Service on national forests, both in the east and the west. These fellows will be engaged on look-out work to detect forest fires, in the