ber from 1912 to 1923. Probably his most outstanding achievement for education was his conception and initiation of the School of Chemical Engineering Practice of the Massachusetts Institute of Technology. According to the plan of this course, a carefully selected group of graduate students spends six months at three field stations, located at Bangor, Maine; Buffalo, New York; and Boston, Massachusetts. Six different manufacturing companies open their plants for the instruction of students who devote their attention chiefly to the application of theory to practice and to quantitative measurement of the efficiency of the so-called "Unit-operations" carried on at these plants. Dr. Little's long association with the Institute culminated in the provisions of his will, which directed that his controlling interest in Arthur D. Little, Inc., be held in trust for the benefit of the Massachusetts Institute of Technology. Thus the company which absorbed his chief efforts for almost half a century will be continued, in part by the cooperation of his alma mater.

A portrait of Dr. Little is not completed by an account of his business and scientific activities. He had the pleasure of being a member of the Century Club and the Chemists' Club of New York; the Country Club of Brookline, Massachusetts; the Examiner, St. Botolph and Union Clubs of Boston. His interest in literature was recognized by membership in the Odd Volumes Club of Boston and in the Thursday Evening Club. Through the pages of "The Handwriting on the Wall," his convictions on the value of scientific research to industry reached a wide public. The early volume with Roger B. Griffin on "The Chemistry of Paper Making" is known to all who are interested in the manufacture of paper. In 1931 he was awarded the Perkin Medal as "The American Chemist who has most distinguished himself for his services to applied chemistry."

During the world war Dr. Little was a consultant to the Chemical Warfare Service of the Signal Corps. He was in charge of airplane dopes, acetone production, etc., and he invented the "sucked-on" gas filter which was adopted as part of the standard equipment of the United States Army. Other public services included the chairmanship of the Advisory Committee of the National Exposition of Chemical Industries, membership in the Division of Engineering and Industrial Research of the National Research Council. He served, also, as a member of the Advisory Board of the Superpower Survey of the U. S. Geological Survey.

In the midst of heavy demands on his time and energies, Dr. Little had the ability to find room for life's amenities. Younger chemists found him ready to discuss their problems with them. He made them feel that their difficulties were his. He took pains to become personally acquainted with all members of the research staff. The pleasant atmosphere of the lunch room, on the second floor of the laboratory building, often became the background for informal conversations. The museum, directly connected with Dr. Little's office, contains exhibits of the earliest and latest work of the laboratories. Here one can see an expression of Dr. Little's own artistic temperament contrasted with present-day modernistic tendencies in advertising. Examples of such early developments as researches on textile fibers and the manufacture of paper from southern woods still bear witness to Dr. Little's personal work. Here, also, are representative samples from his collection of water-marked papers and the famous silk purse from the sow's ear. In his home Little had a collection of small-size pieces of Chinese porcelains.

On January 22, 1901, he married Henrietta Rogers Anthony, of Boston. They made their home in Brookline, Massachusetts, but spent part of the summer at Northeast Harbor, Maine, and the winter season found them in Florida.

Dr. Little died at his summer home on August 1, 1935. He is survived by Mrs. Little, by a brother, Edward H. Little, of Newtonville, Massachusetts, and by a nephew, Royal Little, of Providence, Rhode Island.

AVERY A. ASHDOWN

RECENT DEATHS

DR. FREDERICK LESLIE RANSOME, professor of economic geology at the California Institute of Technology, for many years geologist in the U. S. Geological Survey, died at Pasadena on October 6 at the age of sixty-seven years.

DR. WILLIAM E. GEYER, professor emeritus of physics at the Stevens Institute of Technology, last surviving member of the original faculty of 1870, died on October 8 at the age of eighty-seven years.

DR. EUGENE WESLEY SHAW, formerly of the U. S. Geological Survey, later chief geologist to the Iraq Petroleum Company, died on October 7 at the age of fifty-four years.

THE death is announced of Dr. Samuel Cox Hooker, research organic chemist, formerly a director and one of the chief technicians of the American Sugar Refining Company, at the age of seventy-one years.

PENNOCK MARSHALL WAY, vice-president and general manager of the Arthur H. Thomas Company, Philadelphia, died on October 4. Mr. Way was a member of the American Chemical Society and of the American Association for the Advancement of Science.

PROFESSOR SIR JOHN CUNNINGHAM MCLENNAN, emeritus professor of physics at the University of

Toronto, died of a heart attack in the Paris-Boulogne train on October 9. He was sixty-eight years old.

SIR FREDERICK CONWAY DWYER, formerly president of the College of Surgeons of Ireland and operating surgeon to the King George V Military Hospital, died on October 10. He was seventy-five years old.

SCIENTIFIC EVENTS

THE ANNUAL INSPECTION OF THE BRITISH NATIONAL PHYSICAL LABORATORY

AT the annual inspection by the General Board of the British National Physical Laboratory at Teddington, a large gathering of scientific men was received by Sir F. Gowland Hopkins, chairman of the board, Lord Rayleigh, chairman of the executive committee, and Sir Joseph Petavel, director of the laboratory.

The London *Times* gives the following account of some of the more important exhibits:

In the oppressive heat many of the guests would have liked to turn the Alfred Yarrow tank into a swimming bath, but instead they were shown how the laboratory hopes to reduce the pitching and heaving of ships. As in all scientific problems, the first step is to gain knowledge of the conditions under which pitching and heaving take place. A model of a twin-screw cross-channel steamer was driven by its own screws through the rough water created in the tank by a motor-driven wave-maker. The power required to propel the model, and the revolutions and thrust of the model screws, were automatically inscribed on apparatus installed in the hull, together with the pitching and heaving motions to which it was subjected. Research into the effects produced by changes in hull form upon the behavior of such craft has already produced ideas which should lead to the reduction of pitching and heaving, and therewith of seasickness.

Another piece of apparatus demonstrated in the William Froude Laboratory was the Lithgow Propeller Tunnel. When a ship propeller rotates in water there is a serious erosion or destructive action on that side of the blades which is under reduced pressure. Little is known of the cause of this action, and through the generosity of Sir James Lithgow a propeller tunnel has recently been built for its study. The tunnel consists essentially of a large hoop of steel tube through which water circulates at known speed, and in which the pressure can be greatly reduced. A model propeller is rotated in the stream of water, and its action is observed through a window. The thrust and torque on the propeller and the number of revolutions are automatically recorded.

The physics department showed apparatus, nicknamed the "clucking hen," for finding lost radium. Despite all care needles containing radium are occasionally lost after operations in hospitals, and may be whisked away immediately to the incinerator, after which they become exceedingly difficult to trace. The new apparatus constructed by the laboratory includes a loud-speaker which makes a "clucking" noise when in the neighborhood of radium, and as it approaches more closely to the radium the louder and more frequent do the "clucks" become. The investigator proceeds in his search, getting "warmer" until the radium is located.

The physics department also gave a demonstration of the nuisance which may be caused to the occupants of a flat by people walking over the floor above them; it was shown how the noise might be greatly reduced by the placing on top of the ordinary floor of a floating floor consisting of concrete slabs resting on rubber pads.

The Ministry of Transport requires the red rear reflectors of cyclists to meet a standard laid down. The laboratory carries out tests of specimen reflectors to ensure that they comply with the regulations, and the test was demonstrated. About four specimens in five submitted fail to meet the test.

The aerodynamics department showed why aeroplanes should have smooth surfaces, and the new wind tunnel, in which speeds of 650 miles an hour can be simulated, was shown working.

CHEMISTRY AT THE BROOKLYN COLLEGE

AFTER almost a year of intensive preliminary planning, construction on the permanent home of Brooklyn College was officially begun on October 2, when Mayor La Guardia turned the first spadeful of earth at the site at Bedford Avenue and Avenue H in Flatbush. Funds for housing this newest member of New York's system of municipal colleges have been provided by the Federal Public Works Administration and by the city, and will suffice to erect at present four of the principal units of the plant: the Academic Building, the Science Building, the Gymnasium and the Power Plant. The total cost of the project will be $5,500,000.

The work of the department of chemistry will be carried on in the Science Building, in a section extending vertically through the six stories. Provision has been made for two thousand students enrolled in the eighteen or more courses offered. Lectures and recitations for all classes will be held in three fully equipped lecture rooms, with a total capacity of six hundred, and a number of small recitation rooms; while laboratory work will be conducted in small rooms designed to accommodate sections of twenty students in organic chemistry and twenty-four in other subjects. The largest courses, those in general chemistry, will require nine laboratory rooms. Four laboratories have been assigned to qualitative analysis, and four to organic chemistry, and additional rooms for upper-class work in quantitative analysis, in biochemistry and in physical chemistry. Connected with the various laboratories will be accessory balance