in that he presented the subject-matter with a feeling of freshness and clarity. For mathematics was to Professor Green a live and growing science; he constantly emphasized the theoretical and practical phases, showing their parallel with the philosophical aspect. One of his favorite and constant admonitions to students on giving an examination was that the purpose of a test was to see what we could do "under pressure." He introduced a number of new courses to Stanford, one of which particularly interested him, namely, statistical mathematics.

His broad and catholic interest in life and its problems manifested itself in his interest in economic, social and political problems. So well was he posted on various issues that during political periods he was constantly sought by his colleagues and by organizations for advice and elucidation of the problems. His was the habit of clear thinking. Although he was never robust in health, he loved outdoor life and during his early days at Stanford, like David Starr Jordan, he was a leader in mountain walking with his students. For many years during the summer period he directed a camp in the Yosemite Valley, later becoming director of the Yosemite Park and Curry Company.

Professor Green was a fellow of the American Association for the Advancement of Science, member of the American Mathematical Society, Mathematical Association of America, American Economic League, Academy of Political and Social Science, American Political Science Association, California Academy of Science, American Museum of Natural History, and American Association of University Professors.

Thus closed an active and full life, devoted to state, church and university.

On August 11, 1886, he had married Miss Emma Edwards, of Knightstown, Indiana, who in addition to two daughters and one son survives him.

FREDERICK E. BRASCH

EVERHART PERCY HARDING

ON October 10, 1932, Professor Harding died at his home in Minneapolis after an illness of more than two years. Before his retirement, owing to ill health, in September, 1931, he was the only remaining member of the staff of chemistry of the University of Minnesota whose service antedated the foundation in 1904 of the school of chemistry as an independent faculty. His connection with the university as a student and as a staff member extended over more than forty years.

Professor Harding was born on August 15, 1870, at Waseca, Minnesota, where he had his early education. He entered the University of Minnesota in 1890 and maintained a high record of scholarship during his entire career, achieving election to Phi Beta Kappa and later to Sigma Xi. At the same time, he set an all-time record for athletic prowess, especially in football. Participation in intercollegiate athletics was at that time not limited to three years, so that his career as an athlete was continued through the entire period of his undergraduate and graduate years. He took the bachelor's degree in 1894 and was awarded a scholarship, which enabled him to take the M.S. degree in 1895.

After serving as instructor in chemistry from 1896 to 1899, he pursued further studies in chemistry under Professor Curtius at the University of Heidelberg, where he was granted the Ph.D. degree in 1901. From 1905 until his retirement, he was successively assistant professor and associate professor of chemistry. He also took a prominent and responsible part in the management and supervision of intercollegiate athletics.

During the decade prior to his death, Professor Harding was in charge of technological chemistry, a division of the school of chemistry which comprised instruction and research in chemical technology, particularly of foods and fuels. It was in these fields that most of his researches were made, although some of his earlier work was devoted to pure organic chemistry. His interest in fuels led him to investigate extensively the presence and distribution of sulfur in oil shales for the determination of which he developed methods of unusual accuracy.

Professor Harding was frequently called on for public service and acted as consultant for industries of the state, particularly in connection with city gas supplies. Early in his career, he rendered valuable aid in the introduction of the sugar beet industry into Minnesota.

In all his relations, Professor Harding was characterized by his spirit of loyalty and by the strictest conscientiousness in the performance of all duties. He was equally devoted to his students and to research, which he carried on until his health failed. He was a member of Phi Beta Kappa, Sigma Xi, Phi Lambda Upsilon honor societies, of Alpha Chi Sigma and Phi Delta Theta fraternities and of numerous professional and scientific societies.

He is survived by his widow and three children.

S. C. LIND

RECENT DEATHS

DR. ELIAKIM HASTINGS MOORE, professor emeritus of mathematics at the University of Chicago, died on December 30. He was seventy years old.

DR. JOHN J. CARTY, vice-president and chief engi-

neer of the American Telephone and Telegraph Company, retired, died on December 27 at the age of seventy-one years.

DR. EDWIN CHAPIN STARKS, who recently retired as associate professor of zoology at Stanford University, died on December 30 at the age of sixty-five years.

DR. THEODOR HOLM, known for his work on Arctic botany and on plant anatomy, died in Washington, D. C., on December 26 at the age of seventy-eight years.

DR. GEORGE FETTEROLF, professor of otolaryngology at the University of Pennsylvania, died on December 29 at the age of sixty-three years.

LEON R. STREETER, chief in research, in charge of the chemical work on fungicides and insecticides of the division of chemistry, New York State Agricultural Experiment Station, died on December 26, aged thirty-eight years.

DR. WILLIAM A. LAFIELD, professor of radiology at Yale University, committed suicide on December 26. He was fifty-two years old.

DR. ERNEST HOWE, consulting mining geologist, an editor of the *American Journal of Science,* died on December 18. Dr. Howe was fifty-seven years old.

FRANK W. SKINNER, consulting engineer of New York City, died on December 26 at the age of seventy-four years.

DR. ALLAN DOUGLAS RISTEEN, director of technical research and editor of safety publications for the Travelers Insurance Company of Hartford, Connecticut, died on December 30 at the age os sixty-six years.

JOHN H. STEVENS, chemical expert for the Celluloid Corporation of Newark, New Jersey, died on December 4. He was seventy-nine years old.

W. H. FRY, of the Division of Soils of the U. S. Department of Agriculture, died suddenly at the age of forty-four years on December 28.

SIMON WILLIAM DYKSHORN, assistant at the experimental laboratories of the Carnegie Institution of Washington at Cold Spring Harbor, while hunting for scientific purposes, shot himself fatally on December 25. He was twenty-seven years old.

DR. GEORGES HARET, head of the radiology department at Lariboisière Hospital, Paris, died on December 20, as a result of x-ray burns incurred in the course of his work. He was fifty-eight years old.

MEMORIALS

THE centenary of the birth of Julius von Sachs, the German botanist who founded plant physiology as a modern experimental science, was celebrated during the Atlantic City meeting of the American Association for the Advancement of Science. The memorial program on December 28 was led by Professor D. H. Campbell, of Stanford University, representing the Botanical Society of America; Professor Rodney H. True, of the University of Pennsylvania, representing the American Society of Plant Physiologists, and Professor C. E. Allen, of the University of Wisconsin, representing the botanical section of the American Association for the Advancement of Science.

THE Johns Hopkins University Institute of the History of Medicine commemorated on December 20 the three hundredth anniversary of the birth of Antony Van Leeuwenhoek, 1632–1723. Dr. William H. Welch, formerly director of the institute, gave an illustrated lecture on Van Leeuwenhoek and his work. A film, made especially in Holland to commemorate the tercentenary, was shown. There was also an exhibit of illustrative books, documents and instruments.

To commemorate the bicentenary of the birth of Sir Richard Arkwright, inventor of the yarn spinning frame, the Newcomen Society arranged a public lecture which was delivered on December 14 by Mr. Frank Nasmith.

THE University of Manchester has received from Mrs. R. W. Williamson a portrait in oils of her father-in-law, the late Professor W. C. Williamson, who was in charge of the teaching of zoology, botany and geology in Owens College from 1851 until 1892.

SCIENTIFIC EVENTS

THE YEAR AT THE FIELD MUSEUM OF NATURAL HISTORY

DESPITE enforced economies, due to reduction of its income from endowment and other sources because of the depression, Stephen C. Simms, director of the Field Museum of Natural History, reports that the museum maintained full service to the public during 1932, and its educational benefits were extended to a greater number of persons than in any previous year of its history.

While extra-mural activities such as scientific expeditions were curtailed, the museum carried on a full program of installing new exhibits and making general improvements, presenting free courses of illustrated lectures on science and travel for the general public, maintaining manifold educational activities for school children both at the museum and by extension work in the schools of Chicago, and issuing scientific publications.

A total of more than 1,800,000 persons have visited