now in universal clinical use. In Morris's "Human Anatomy" he was asked to write the section on "Musculature," a tribute to his anatomical knowledge. All his scientific work has been accurate, authoritative and of permanent value.

As an educator Dr. Bardeen was not only a classroom teacher of power, but he closely studied educational problems from a social point of view. The student, the physician and the public always formed a trilogy of which he was keenly conscious. Each must be kept in balance and its right preserved. The right of the student was to be well taught; the right of the physician was to be independent and to have scientific medical help at hand; the right of the public was always to have the best possible medical care. Some such philosophy was at the bottom of all his writings and educational policies. His idea of a "preceptorship" for senior students depended on such principles. The student was not only profiting from an extensive clinical experience, but he was also serving as a stimulus to his preceptor. The Medical School was thus extending its teaching sphere to all parts of the state. The patient must ultimately benefit in this general uplift.

Dr. Bardeen's contributions to medical pedagogy have been notable. He introduced the use of the x-ray in teaching anatomy. His report made to the American Medical Association on the teaching of his science had a wide following all over the United States and Canada. His papers on the buildings and equipment of medical schools brought together much useful material.

Dr. Bardeen was a member and often an officer of many national scientific societies, among which were the American Medical Association, the American Association for the Advancement of Science, Society for Experimental Medicine and Biology, Society of American Zoologists, Society of Naturalists, Society of American Anatomists, Radiological Society of North America and the Wisconsin Academy of Science. In 1916 he served as president of the Association of American Medical Colleges. In 1920 he was honored by election to the presidency of the State Medical Society. In 1929 he participated in the White House Conference on Child Health and Protection and wrote the section on "Human Types." He also served for several years in the National Research Council.

Even with advancing years and constantly increasing administrative duties Dr. Bardeen never let his interest flag in medical problems. He was recently called upon to administer the Bowman Cancer Fund, and in preparation for this he visited the principal eastern research centers. Those who accompanied him never ceased to marvel at the many friends he found, the quiet direct manner with which he secured valuable information and the understanding he developed of the many aspects of the cancer problem.

With all his duties, Dr. Bardeen found time for local social undertakings. He served as president of the Madison General Hospital Association, and under his leadership the west wing of that institution was built. He was one of those largely responsible for the establishment of the University Club and he was for a time its president.

Dr. Bardeen was twice happily married. Three sons and a daughter survive the first marriage and his widow and a daughter the second. Although not interested in the usual routine of society, Dr. Bardeen was never happier than when entertaining a group of friends in his home. His conversational powers and his broad interests made him the most agreeable of hosts.

Dr. Bardeen's scientific studies, his plans for medical education and his development of a well-rounded successful medical school are his permanent contributions to the university and the state.

WALTER J. MEEK

CHARLES LOOMIS DANA

DR. CHARLES LOOMIS DANA, born in Woodstock, Vt., in 1852, died at Harmon-on-Hudson, on December 12, 1935, aged eighty-three years. He was one of the earliest and most distinguished neurologists in America, and had been profesor of nervous diseases at Cornell Medical College since 1899. He graduated from Dartmouth in 1872 and in medicine from Columbia in 1877. In later life he received the honorary degree of doctor of laws from his alma mater and also from the University of Edinburgh. He published a "Textbook of Nervous Diseases" in 1892. He naturally became president of the New York Neurological Society early in his career, and subsequently president of the American Neurological Association.

It is not often that a specialist is so outstanding in his profession as a whole that he would be singled out as a leader in medicine, but the Academy of Medicine of New York has twice in its long life elected a neurologist as its president—Dr. Dana in 1914–16 and Dr. Sachs more recently. Dr. Dana made many valuable scientific contributions to the progress of neurology. He was an unusually clear thinker and expositor of his ideas and a most excellent teacher. He was indefatigable as a student in his own field, and an accomplished scholar in areas outside of medicine, in history and literature. His intimates found him a kindly, genial, loyal friend, ready to help those in need of help and to further innumerable enterprises for the public good. He was always sincere, sometimes austere, but ever evinced a delightful sense of humor.

He will always be remembered by his professional friends and pupils, by his fellow-neurologists, and especially by that group of physicians with hobbies, known as the Charaka Club, of which he was one of the founders and in which lifelong friendships are begotten and ties made that are only severable by death.

In the published volumes of the Charaka Club, the following contributions by Dr. Dana will give an idea of his activities outside of his special field of neurology and so fix in the minds of his friends the catholicity of his interests: Vol. I, "The Cult of Aesculapius" and "The Evil Spoken of Physicians"; II, "The Medicine of Horace"; III, "When Apollo Strikes the Lyre"; IV, "The Costume of the Ancient Greek Physician"; V, "Military and Civil Surgery Among the Ancient Romans" and "Eminent Physicians: a Statistical Study"; VI, "Ursinus, the Father of Opotherapy" and "Sonnet to Clio (as Muse of Historical Medicine)."

FREDERICK PETERSON

RECENT DEATHS

PROFESSOR ALBERT SPEAR HITCHCOCK, principal botanist in charge of agrostology in the Bureau of Plant Industry, died suddenly of heart failure on December 16. He was returning from Europe, where he had spent four months in studying grass collections. He was seventy years old.

DR. E. HERSHEY SNEATH, for thirty-four years a member of the faculty of Yale University and since 1912 until his retirement in 1923 professor of the philosophy of religion and religious education, died on December 20 at the age of seventy-eight years.

PETER Z. CAVERHILL, chief forester of British Columbia for the past fifteen years and connected with forestry work in Canada since 1912, died suddenly on December 8 at the age of fifty-one years.

SIR RICHARD GLAZEBROOK, director of the National Physical Laboratory at Teddington, England, from 1899 to 1919, and chairman of the Aeronautic Research Committee from 1908 to 1933, died on December 16. He was eighty-one years old.

Nature reports the death on November 30 of J. D. Cormack, regius professor of civil and mechanical engineering in the University of Glasgow, aged sixty-five years, and of Professor J. E. A. Steggall, emeritus professor of mathematics at University College, Dundee, in the University of St. Andrews, on November 26, aged eighty years.

MEMORIALS

ACCORDING to *Nature*, a representative Oxford gathering met in the Divinity School on November 20 to do honor to the memory of Robert Hooke, of Christ Church, who was born three hundred years ago. Dr. R. T. Gunther, reader in the history of science, presided. The warden of New College gave an address on the earliest "Oxford Movement," that resulted in the formation of the Royal Society and, in particular, on the activities in science and art of Hooke and Christopher Wren in London during the reign of Charles II. Accounts were read of Hooke's activities in geology and other subjects. The dean of Christ Church recalled some of the admirable qualities which Hooke showed as a man. He afterwards opened an exhibition devoted to Hooke's work, arranged by Dr. Gunther in one of the rooms of the Old Ashmolean Building. Professor F. Soddy had had prepared many models to illustrate different modern applications of Hooke's joint.

THE *Journal* of the American Medical Association reports that physicians from nineteen countries met recently at Poppi (Arezzo province) to honor the memory of Dr. Francesco Folli, who was the first to employ blood transfusion. Born at Poppi in 1624, this physician, in his publications "Recreatio physica" (1665) and "Dialogo sulla cultura delle vite" (1670) explained his idea of transfusing the blood of young and healthy persons to old or sick persons and described the instruments needed for the intervention. The commemorative address was delivered by Professor Pazzini, of the University of Rome.

SCIENTIFIC EVENTS

SYMBOLS AND ABBREVIATIONS USED IN ENGINEERING AND SCIENCE

A NEW dictionary of letter symbols and abbreviations, the "language" of engineers and scientists, will be undertaken by a committee of the American Standards Association, it has just been announced.

Rapid coinage of new words and terms, and the adoption of many foreign words and phrases in the various fields of engineering and the sciences, demands a new compilation of standard usage, according to the committee.

In spite of their great ramification, engineering and science are becoming more and more integrated and those working in one field find that lack of abbreviations or confusion in their use restricts and hampers their work.

The Committee on Symbols and Abbreviations has been reorganized and will begin at once the intricate