

would have no motive to pursue." This spirit, clearly shown in the early cotton industry, is now to be revived for the common benefit.

The woolen and worsted manufacturers of Great Britain are also drafting the constitution of a research association, and the Irish flax spinners and weavers are about to do likewise. Research associations will be established by the Scottish shale oil industry and the photographic manufacturers, while various other British industries are looking in the same direction. Thus a national movement for research, directly resulting from the war, has already made marked headway. The research councils in various parts of the British Empire, actuated by the same spirit, are rapidly extending the advantages which an appreciation of the national importance of research will afford.

The National Research Council, aided and supported by the Engineering Foundation, is just entering upon an extensive campaign for the promotion of industrial research. In addition to a strong active committee, comprising the heads of leading industrial laboratories and others prominently identified with scientific methods of developing American industries, an advisory committee has been formed to back the movement. This already comprises the following gentlemen: Honorable Elihu Root; Mr. Theodore N. Vail, president of the American Telephone and Telegraph Company; Dr. Henry S. Pritchett, president of the Carnegie Foundation for the Advancement of Teaching; Mr. Edwin Wilbur Rice, Jr., president of the General Electric Company; Mr. George Eastman, president of the Eastman Kodak Company; Mr. Pierre S. duPont, president of the E. I. duPont de Nemours Powder Company; Mr. A. W. Mellon, founder of the Mellon Institute for Industrial Research; Judge E. H. Gary, president of the United States Steel Corporation; Mr. Cleveland H. Dodge, of the Phelps-Dodge Corporation, and Mr. Ambrose Swasey, of The Warner and Swasey Company.

We are indeed fortunate to have the aid of men whose experience and standing are so

certain to command public recognition of the claims of scientific and industrial research.

Science is in the air, keen competition is in prospect, and the industries are more favorably inclined than ever before to the widespread use of research methods. Their greatest leaders, moreover, are unanimous in their appreciation of the necessity of promoting research for the sake of advancing knowledge, as well as for immediate commercial advantages. Only thus can the most fundamental and unexpected advances be rendered possible, and continued progress in all directions assured.

GEORGE SCHRADER MATHERS

CAPTAIN GEORGE SCHRADER MATHERS, M.C.; U. S. Army, a member of the staff of the McCormick Institute for Infectious Diseases, Chicago, died October 5, 1918, at the age of thirty-one.

Captain Mathers took his college work in the University of Texas and the University of Chicago, and received his medical degree from Rush Medical College in affiliation with the University of Chicago in 1913. Having served one year and one half as interne in the Cook County Hospital he began work in the McCormick Institute under a grant from the Fenger Memorial Fund, but before long he became associated fully with the institute. During the three and one half years of this association he accomplished much fruitful work and published important papers on lobar pneumonia, epidemic poliomyelitis, acute respiratory infections in man and in the horse, and on epidemic meningitis. He demonstrated that a streptococcus-like microorganism occurs apparently constantly in the central nervous system in persons that have died from epidemic poliomyelitis. Early last spring he was commissioned as first lieutenant and placed in charge of the laboratory of the embarkation hospital at Camp Stuart. In May he was promoted to captain, and given charge of the laboratory of the base hospital at Camp Meade. He gave himself completely to his work. In the course of his duties and while intensely

engaged in a study of the bacteriology of influenza he was stricken and died with pneumonia in a few days.

Captain Mathers was a fine, lofty-minded, lovable young man, of rare enthusiasm for work, and a remarkable efficiency. He had committed himself to research and his early death is a great loss to medicine.

LUDVIG HEKTOEN

ARTEMAS MARTIN

DR. ARTEMAS MARTIN, of the U. S. Coast and Geodetic Survey, died on November 7, 1918, after an illness of two weeks, in the eight-fourth year of his life. He was born on a farm in Steuben County, New York, on August 3, 1835. Four winters in the schools of Venango County, Pennsylvania, comprised all his schooling. Wood-chopping, oil-well drilling and farming—with four winters as a district teacher—made up his work until the age of fifty. The little leisure afforded by such work was devoted to the study of mathematics.

Early in life he began contributing problems and solutions to various magazines. In 1877, while engaged in market gardening for a livelihood, he began the editing and publishing of the *Mathematical Visitor* and in 1882 he followed this up with the *Mathematical Magazine*. Not only did he do the editing and publishing of these magazines, but for financial reasons was compelled to do the type setting also. That he did this well is evidenced by the character of the mathematical typography of his journals.

Aside from articles in his own magazines, he contributed a large number of papers to various mathematical journals here and abroad. His writings dealt chiefly with properties of triangles, logarithms, properties of numbers, diophantine analysis, probability and elliptic integrals. He was an authority on early mathematical text-books and collaborated with Dr. Greenwood in the "Notes on the History of American Text-Books on Arithmetic."

Dr. Martin's mathematical abilities received

wide recognition. In 1877, Yale conferred upon him the honorary degree of A.M., Rutgers honored him with a Ph.D., in 1882, and in 1885 Hillsdale made him an LL.D. Numerous learned societies, both here and abroad, honored him with membership.

In 1885, Dr. Martin was appointed librarian of the U. S. Coast and Geodetic Survey, where his wide knowledge of mathematics made him of great service. In 1898 he was made computer in the Division of Tides, which place he held until his death.

Personally, he was a man of very prepossessing appearance. Of simple tastes and exhibiting few of the limitations of the pioneer period through which he passed the first fifty years of his life, he exemplified most of its robust virtues. Fond of home life and children he denied himself marriage that he might care for his parents and sisters. Traveling scarcely at all, he was well known to American mathematicians of the previous generation who found him an agreeable and companionable man.

Dr. Martin's memory is to be fittingly perpetuated in the Artemas Martin Library of the American University at Washington, D. C. This library, consisting principally of mathematical works, and given by Dr. Martin to the American University shortly before his death, was considered one of the finest private collections in America. At the same university there is also to be an Artemas Martin Lectureship in mathematics and physics, endowed by Dr. Martin.

SCIENTIFIC EVENTS

THE BEQUESTS OF MRS. SAGE

THE will of Mrs. Margaret Olivia Sage, disposes of an estate estimated at \$50,000,000, of which more than \$40,000,000 is to be distributed among charitable, educational and religious institutions. It is said that since the death of her husband, Mrs. Sage had given between \$35,000,000 and \$40,000,000 to various institutions and charities, using part of the principal, as well as the income, of the Sage estate in these benefactions.