

not merely illustrated the principles but also were immediately applicable as standards of reference and an illustration of the applications of a tool.

Largely because of this excellence of exposition, elaborated by Michaelis and others, there followed one of the most remarkable movements in the history of science. Every science having to do with water solutions soon instituted the measurement and control of "hydrogen-ion concentration" by the methods that Sørensen polished and in the terms that he introduced.

At a time when protein solutions were regarded as subject to study only by the unique methods of colloid chemistry Sørensen boldly applied the classical methods that work well in the study of the simple amino acids. Here, however, were problems requiring meticulous regard for detail, and because he had regard for what the problem demanded Sørensen's papers on protein solutions make difficult reading. In them will be found many of the bases of modern work, notably the application of Gibbs's phase rule in determining the homogeneity or heterogeneity of protein preparations, and the characterization of proteins by their isoelectric points and other indices of their properties as amphoterie electrolytes.

The meticulous exactitude that Sørensen displayed in his work on proteins is characteristic of his work as a whole—work that extended to analytical methods on the one hand and to organic synthesis on the other.

Born on a small farm near Slagelse on Sealand, Denmark, Sørensen developed early a penchant for science. He twice won the university's gold medal for outstanding work in science at the University of Copenhagen. After serving as assistant chemist in the Royal Technical College he became director of the chemical division of the Carlsberg Laboratory two years after receiving his doctor's degree in 1899. He became president of the Danish Academy of Sciences and last year was made a foreign associate of our National Academy of Sciences. He had honorary degrees from many universities.

In 1924 Professor Sørensen and his wife, with whom he had then and has since published several papers on proteins, visited America. We who had drawn inspiration from the written word were then impressed anew by this charming couple. Of a retiring disposition Professor Sørensen was every inch the gentleman who commanded respect by the quality of his thought and who won affection by the kindness that shone in every glance and gesture.

WM. MANSFIELD CLARK

THE JOHNS HOPKINS UNIVERSITY
SCHOOL OF MEDICINE

FABIAN FRANKLIN

FABIAN FRANKLIN was born in Eger, Hungary, on January 18, 1853. He obtained his Ph.B. degree from Columbian University (now George Washington Uni-

versity) in 1869 and entered the department of mathematics of the newly established Johns Hopkins University in 1877. He remained at the university as fellow from 1877 to 1879, assistant from 1879 to 1882, associate from 1882 to 1889, associate professor from 1887 to 1892 and professor of mathematics from 1892 to 1895, at which time he resigned his position to enter professionally the field of journalism. He died on January 8, 1939.

Professor Franklin was a very unusual and inspiring teacher. After a lapse of almost half a century former students still remember how clear and satisfying his lectures were. He was never content to expound a theory as it was developed by its author, and his hearers had the distinct impression that the matter being presented had been thoroughly digested by the lecturer and carried the stamp of his individuality and artistic nature. He was most conscientious and painstaking with his students, frequently going to great pains to answer a question whose import the student barely realized. His simple demeanor and dignity of person commanded the instant respect of his students, a respect which was never lost.

In his mathematics itself were reflected the wide interests of his inquiring mind. This was a definite fault of his genius. To leave a mark in mathematics requires an *esprit de suite* which doggedly pursues to the bitter end some path into the unknown. The professional mathematician, on noting a characteristic flash of genius or originality in one of Franklin's short papers, may well wish that he had not been so versatile nor so interested in politics or world affairs; but such wishes are idle. In the short period of some fifteen years before he definitely abandoned mathematics for journalism, he published some thirty papers, most of which appeared in the *American Journal of Mathematics* or the Johns Hopkins University circulars. His earlier work on invariant theory shows clearly the influence of Sylvester, whilst his papers on circular coordinates and on bicircular curves demonstrate his geometrical insight. His elementary proof of a theorem on partitions has become classic.

In 1895, when Franklin was forty-two years old, he retired from his professorship of mathematics at the Johns Hopkins University to become editor of the *Baltimore News*. Later he became associate editor of *The New York Evening Post* and editor of the *Weekly Review*. He was a distinguished writer on economic, social and political subjects. His wife, Christine Ladd-Franklin, known for her work in psychology and logic, died in 1930.

F. D. MURNAGHAN

THE JOHNS HOPKINS UNIVERSITY

EARL E. HOOVER

EARL E. HOOVER, biologist of the New Hampshire State Department of Fish and Game, died at Con-