

by Hofmeister. The belated introduction of American students to this new field of botany was brought about by Professor Bessey, when in 1881 his "Botany" appeared. This volume not only brought the atmosphere of Sach's *Lehrbuch* to American colleges, but also compelled the development of botanical laboratories. For the first time, all plant groups became available, and cells and tissues became materials for study. The original "Botany" was the first of a long series of texts, and for many years "Bessey's text-books" set the standard for modern work. If Professor Bessey had made no other contribution to American botany than the publication of this book at the psychological moment, he would have made for himself an enduring place in the history of American botany.

The qualities that led him to discover and introduce to American colleges the new botany, also suggest that he was a great teacher. Perhaps no American botanist has left his mark on so many students as did Professor Bessey. He was certainly "apt to teach," and this was shown not merely by his neverfailing enthusiasm for his subject, but also by his stimulating companionship with his students. He lived in his subject and lived with his students, and his "dingy and cramped quarters," as they were called, seemed to cultivate the spirit of camaraderie in the whole department. The students of Professor Bessey are scattered everywhere in responsible positions, and the writer has never met one of them who has failed to pay the warmest tribute of loyal affection to the man who taught him.

Professor Bessey was not merely a great teacher, both through his text-books and in contact with his students, but he was also a public-spirited citizen. He felt that the whole state of Nebraska was entitled to his services, and he gave of his time freely to organizations of all kinds that were seeking to develop the various interests of the state. The plant life of the state, the agricultural possibilities of the state, the teaching of agriculture in the schools, all engaged his attention.

Recognition of Professor Bessey by his colleagues throughout the country came as a matter of course. He was not only a member

of the various national organizations, but he was elected to almost every office to which an American botanist can aspire, culminating in the presidency of the American Association for the Advancement of Science. One of the characteristics of Professor Bessey most frequently remarked among his colleagues was his refusal to speak unkindly of any one. No one ever heard from him the sharp and occasionally envious criticism that too often mars the fine qualities of scientific men. Even in his work as a reviewer, where criticism is invited, he always searched for the pleasant things to say, and left the unpleasant things unsaid. Those of us who knew him best realize that he did not even think of the unpleasant things, but that his kindly nature was always seeing the good in every botanist.

Professor Bessey was a voluminous writer, as a man full of ideas, energy and of the teaching spirit is apt to be, so that it would be impossible to cite his bibliography here; it will doubtless appear in fitting form in some more appropriate connection. The present purpose is simply to express an appreciation of a great teacher of botany by a colleague who has known him intimately throughout almost his entire public career.

JOHN M. COULTER

FRANK OLIN MARVIN

PROFESSOR FRANK OLIN MARVIN, dean of the school of engineering of the University of Kansas, died in San Diego, Calif., on February 6, 1915. Dean Marvin was born in Alfred Center, N. Y., in 1852. He was the son of Dr. James Marvin, for many years professor of mathematics in Alleghany College, and later chancellor of the University of Kansas.

Graduating in 1871 at Alleghany College, Professor Marvin devoted several years to practical engineering work, and was in 1875 appointed instructor in mathematics and physics at the University of Kansas. In 1883 he was appointed professor of civil engineering, and when, in 1891, the university was reorganized and a school of engineering was established he was elected to the position of dean. He was untiring in his labors for the upbuilding of this most important school, from this

time until 1912, when impaired health compelled him to retire from active work, although he was retained on the faculty as advisory dean. Last year he was granted a retiring allowance by the Carnegie Foundation.

It may be truthfully said that Dean Marvin devoted his life to the cause of engineering education. He worked and wrote for its advancement. In 1901 he was elected president of the Society for the Promotion of Engineering Education. He was one of the charter members, and the first president of the Kansas chapter of the Society of the Sigma Xi, one of the earliest chapters of this organization established. He was honored with the presidency of the national organization, and did much to shape the policy and raise the standard of this society.

As an active member of the American Association for the Advancement of Science (vice-president in 1896); of the American Society of Civil Engineers; of the Society on Testing Materials; Kansas Academy of Science; and as advisory member of the Kansas State Board of Health, he took an active part in the work for the encouragement of research and the advancement of scientific knowledge.

His colleagues in the university and the thousands of students who have been under his instruction, feel that a friend has gone. In the words of one of Dean Marvin's former students:

He was further qualified for his work by his culture and refinement. No man was better fitted than Frank Marvin to plant in his boys the desire for the fine things of life. He was a reader, a student, an artist. Through all the busy years of striving and building, of creating great properties, or of humble service in some of the quieter places in life, Frank Marvin's boys look back to the school days of long ago and recall the quiet cultured gentleman who gave them so many ideals and who in his own life so lived these ideals.

The University of Kansas has honored the name of the first dean of its engineering school by naming the new engineering building "Marvin Hall," and the former students and friends are about to place in the building a bronze bust to commemorate his name.

LAWRENCE, KANS.

E. H. S. BAILEY

THE CHEMICAL INDUSTRY IN GREAT BRITAIN

THE position and prospects of the British dye industry were discussed by Dr. W. H. Perkin, Waynflete professor of chemistry, Oxford, in his presidential address delivered on March 25 at the annual general meeting of the Chemical Society, London. Dr. Perkin is the son of the late Sir William Perkin, F.R.S., the discoverer of aniline dyes. "The Position of the Organic Chemical Industry" was the title of the lecture, and Dr. Perkin according to an abstract in the London *Times* at the outset expressed his conviction that the causes of the decadence of the industry in this country were still imperfectly understood. One of the main reasons for our present position was that we, as a nation, and our manufacturers in particular, had failed to understand the extreme complexity of the scientific basis of organic chemical industry. The decadence of the coal-tar industry and its gradual transference to Germany began during the period from 1870 to 1875. It was in 1874 that the works of Perkin and Sons at Greenford Green were sold to the firm of Brooke, Simpson and Spiller, and these works were then much in advance of anything that existed in Germany. One reason for the sale, Dr. Perkin said, was his father's natural dislike to an industrial career, and his desire to devote himself entirely to pure chemistry.

There was, however, a much more weighty consideration. It was recognized that the works could not be carried on successfully in competition with the rising industry in Germany unless a number of first-rate chemists could be obtained and employed in developing the existing processes, and more particularly in the all-important work of making new discoveries. Inquiries were made at many of the British universities in the hope of discovering young men trained in the methods of organic chemistry, but in vain.

The value of the coloring matter consumed in the United Kingdom was £2,000,000 per annum, and these dyes were essential to textile industries representing at least £200,000,000 a year and employing 1½ millions of workers, and