OBITUARY

ALEXANDER ZIWET

(FEBRUARY 8, 1853–NOVEMBER 18, 1928)

A SAGE albeit pessimistic prophet of old time observed that the earth "giveth much mould whereof earthen vessels are made, but little dust that gold cometh of." In the passing of Alexander Ziwet the world has lost—as a scholar and a man—one of its rarest golden products. Yet he leaves a memorial more vivid than any inadequate words chiseled on stone or bronze or recorded on written or printed page, a memorial "graven . . . in the hearts of men" who had the privilege of knowing him as a friend and teacher. A lover of the accumulated wisdom and beauty of the ages, of the aristocrats of achievement in thinking and acting since the beginning of recorded time, he cultivated the mind without loss of interest in the problems of the present, though standing silently aloof from those who count "our life a pastime and our time here a market for gain." A grand seigneur in the realm of the mind, he, nevertheless, felt a warm sympathy for the poor and the oppressed, reserving scorn solely for cheapness and pretense. No one better realized Huxley's ideal of education: "the instruction of the intellect in the laws of nature . . . not only things and their forces, but men and their ways; and the fashioning of the affections and the will into an earnest and loving desire to move in harmony with those laws." Studiously he sought "the wisdom we have inherited." Feeling that he did "not know the world" until he knew "the men who had possessed it and tried its wares" before he was "given his brief run upon it," he steeped himself in the lore of bygone generations. However, "he read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider." More than most, although too modest to be consciously aware of it, he lived up to Carlyle's maxim that "no man can hope to do anything worth doing and that has the temper of eternity in it without strenuous effort."

While the life of a scholar is prevailingly one of mental and spiritual adventure, the early career of Alexander Ziwet was more varied than falls to the lot of the majority. He was born in Breslau, Germany, of a Polish father and a German mother, both of aristocratic lineage. Indeed, through his paternal ancestry he was connected with noble historic names. Beginning his education under private tutors on his father's estate, at the age of twelve he was sent to the gymnasium of Glogau in German Silesia, where he graduated in 1870. His father having died the previous year, he joined his mother and sisters who had removed to Warsaw. There he learned Russian and perfected Polish and entered the university. In 1873 he transferred to the University of Moscow, where he remained until 1874, when he departed to study engineering in Germany. Owing to reverses in the family fortunes consequent upon his father's death he was thrown largely upon his own resources and seems to have worked for a time in an architect's office. Later he entered the Polytechnic School at Karlsruhe, from which he was graduated in 1880 with the degree of Civil Engineer. Meanwhile he had served the required year in the army and had passed his examination for a commission in the reserve artillery corps.

Influenced to some degree, at least, by the advice of his friend and fellow-student, Mr. Arthur E. Keifer, Alexander Ziwet came to Detroit in the autumn of 1880, and after two years in the Lake Survey and upwards of five years in the computing division of the U. S. Coast and Geodetic Survey, he was appointed instructor in mathematics at the University of Michigan in 1888. He worked his way up slowly through the various grades until he became a professor of full rank in 1905, a recognition long overdue. This was not because of failure to appreciate his vast and accurate learning or his sympathetic and stimulating teaching. Advancement was far from rapid in those days, and a man of his modest and delicate instincts was not one to push his own claims. For several years he was head of the department of mathematics, and for a briefer period head of the department of modern languages in the college of engineering. He had offered his resignation more than once before it was accepted in 1925, when he became professor emeritus. In 1927 the university very fittingly conferred upon him the honorary degree of doctor of science.

Prominently connected with the development of mathematics in the United States, he was a member of the editorial board of the *Bulletin* from 1892 to 1920, and served as vice-president of the American Mathematical Society during 1903. He was vice-president and chairman of Section A of the American Association for the Advancement of Science during 1905. His retiring address on "The Relation of Mechanics to Physics" was published in SCIENCE, on January 12, 1906. He was also a member of the executive council which organized the Mathematical Association of America in 1916. To his colleagues and to serious students Professor Ziwet gave most generously of his time and thought. He was one of the founders of the University of Michigan Mathe-

matical Club, and was exceedingly active in promoting the general scholarly interests of the university, being president as well as one of the influential members of the University of Michigan Research Club. In addition to various translations his published work was considerable and was characterized by wide knowledge and individual interpretation.

As he once casually told me he was brought up a devout Roman Catholic. Though he subsequently broke off all association with the church he retained a sentiment which led him on occasion to rebuke, in his somewhat excitable manner, any one who, from ignorance or prejudice, spoke disparagingly of the ancient institution. This sentiment may have been accentuated by the fact that a favorite sister, two years his senior, became a nun. Until her death about four years ago she was prominent in educational work in Prague. His service in the German army developed in him an enduring hatred of militarism—a hatred which extended to all forms of despotic government. During the World War he cherished a real if somewhat reticent sympathy for the German and Russian people: nevertheless he gave freely to the Red Cross and even, I believe, to the Y. M. C. A.

His command of languages was exceptional. Not only was he well grounded in Greek and Latin but he had some acquaintance, at least, with Sanskrit and Hebrew. Seemingly he spoke German, French, English, Polish and even Russian with equal fluency; in addition, he read Italian and Spanish with ease. Indeed, when any in his immediate circle had difficulties with a letter in a foreign tongue it was to him that they naturally turned; moreover, he was an unfailing resource for the pronunciation of unusual European names. His instinct for helpfulness was extreme. When questions came up in general conversations in which he happened to be present, on the rare occasions when he was unable to throw light upon an obscure point, he would within a short interval proffer the requisite information graciously though unobtrusively. The last instance I recall had to do with the Lemnians in art. He read widely not only in his own field of mathematics and mechanics but in history, particularly in memoirs and biography. Long before he gave his large and carefully selected technical library to the university—it is said to have totaled upwards of 5,000 volumes including 400 works in mechanics, some of them exceedingly rare—it had become his custom to hand over to the library all sorts of books of a general character after he had read them. His literary appetite was insatiable. The writer recollects calling on him one hot summer evening to find him deep in Roger Bacon's "Opus Majus." For his years of devoted service on the library committee the university owes him a further incalculable debt.

He was one of the founders of the Apostles Club (1900), a name derived from a chance comment of the late Sarah Caswell Angell anent the original number of twelve. Although a generation the senior of the other oldest members and although he usually had little to say, he was such a courteous and interested listener that he constituted a most harmonious element in an organization composed largely of younger bachelors on the faculty. Until recent years on request he would linger a bit for a hand of skat or a rubber of bridge, until failing health obliged him to discontinue the practice. He would start off shortly after meals in his abrupt fashion, though always glad of company on his walk to his rooms. Sometimes he talked freely; at other times he trudged on in friendly silence. He not only contributed generously to the customary Apostolic wedding gift but also gave a beautiful individual present; yet to my knowledge he never attended a wedding. His private charities were as unostentatious as they were extensive, and among his effects were found various notes, aggregating a not inconsiderable sum, from borrowers who he must have realized would very likely never repay him.

He was exceedingly fond of young children, and many parents will recall his frequent Sunday calls, his jolly rompings with their sons and daughters when they were small. In spite of his intense application to his studies he was for many years a faithful attendant at concerts and took tickets long after he ceased regularly to attend. At one period he made an occasional trip abroad. But his travels grew less and less frequent. At length if he journeyed to Chicago or even to New Orleans for a meeting he would customarily remain for no more than a single day's session. Until middle life he was a skater of exceptional skill, and for a while rode horseback with a little group of colleagues. He even tried golf, though without conspicuous success.

Advancing years and failing eyesight led to the inevitable relinquishment of all diversions, until his only recreations were walking to and from his meals at the Apostles Club and infrequent Sunday afternoon calls on a few old friends, preferably those with young children. During his last years his sight was so defective that he could scarcely recognize a familiar face a few feet away, and he could read only with the help of the strongest magnifying glass. While woefully hampered in his sole remaining means of occupying his leisure, he maintained his serenity with stoic courage, and followed with unflagging

interest the latest developments in his subject, thanks to the devoted care of Miss Josephine Pattison, at whose home his last years were spent. One of the noble living he has now joined the great society of the noble dead. "Wisdom raineth down skill and knowledge of understanding, and exalteth to honor them that hold her fast." None could have been held in higher honor by those who knew his qualities, and so we leave him.

ARTHUR LYON CROSS,
Chairman of Senate Memorial Committee
UNIVERSITY OF MICHIGAN

SCIENTIFIC EVENTS

INDUSTRIAL STANDARDIZATION

A COOPERATIVE agreement between the American Standards Association and the U. S. Bureau of Standards, which will encourage national standardization activities in all industries, was ratified on July 9 by Dr. George K. Burgess, director of the bureau, and by the board of directors of the American Standards Association at the first meeting of the board.

The invitation extended to the American Standards Association to join with the national standardizing bodies of fourteen European countries in the International Standards Association, which has its headquarters at Baden, Switzerland, was considered. It was decided, however, that this matter should be held over for consideration at the next meeting of the board, to permit further study of the methods by which the American Standards Association could cooperate with the foreign bodies.

It was also decided to launch an extensive national campaign to finance industrial standardization activities on a basis merited by the tremendous savings which these activities are securing for American industry. A finance committee, consisting of Bancroft Gherardi, *chairman*, Quincy Bent and Howard Coonley, was appointed to head this effort.

The meeting was the first held by the board since its appointment, which followed the recent reorganization of the association. Its members are: W. J. Serrill, president of the American Standards Association, who is also chairman; Cloyd M. Chapman, vice-president of the American Standards Association; C. E. Skinner, past-president of the American Standards Association; Quincy Bent, vice-president of the Bethlehem Steel Company; Dr. George K. Burgess, director of the Bureau of Standards; C. L. Collens, president of the Reliance Electric and Engineering Company; Howard Coonley, president of the Walworth Company; L. A. Downs, president of the Illinois Central Railroad; Bancroft Gherardi, vice-president of the American Telephone and Telegraph Company; F. E. Moskovics, president of the Improved Products Corporation; M. S. Sloan, president of the New York Edison and affiliated companies; R. J. Sullivan, vice-president of the Travelers Insurance Company.

Under the terms of the agreement with the Bureau of Standards, the primary effort of the bureau will be to serve those industrial groups which have no satisfactory standardization facilities of their own. It plans to help these groups to formulate temporary standards designed to meet immediate requirements. The American Standards Association will work primarily with those bodies having standardization facilities and will bring together such groups for the formulation of "American Standards," which represent a true national consensus of approval. Where feasible, temporary standards prepared with the aid of the Bureau of Standards will also be brought before the American Standards Association for advancement to the rank of "American Standards."

The American Standards Association is a national federation of forty government, technical and trade associations and includes the U. S. Department of Commerce, of which the Bureau of Standards is a division, in its membership.

RETIRING ALLOWANCES OF HARVARD UNIVERSITY

THOSE 162 officers of professorial rank in Harvard University whose pensions from the Carnegie Foundation were recently reduced and twenty-four other officers of similar rank who are entitled to university pensions are offered the chance to benefit by a new plan voted by the Harvard Corporation for annuities on retirement.

The vote of the corporation is in line with the Harvard pension system already in operation, but it contains the added feature of provision for the widow of a professor at a rate equal to half the annuity paid to him during his lifetime. The plan is optional. The date for instituting the plan is September 1, 1929.

On May 1, 1929, the Carnegie Foundation announced a reduction in the amount of the annuities to be paid in the future by the Carnegie Foundation. For those becoming 65 years old in 1932 and thereafter, a maximum annuity of $1,000 was allowed at the age of seventy. Subsequently the trustees of the Carnegie Corporation of New York voted to increase by the amount of $500 the annuity to all pensionables who reach the age of sixty-five in 1931 or thereafter; the annuity provided was to be for the life of the annuitant only, unless the annuitant preferred to receive a correspondingly smaller annuity during his lifetime with provision for his widow should she survive him.