

upon protoplasm as the "medium of vital manifestation" rather than the physical basis of life and thus establish a better foundation upon which to build the

social and personal progress of human beings. Humanity has been admonished to seek life rather than things.

## OBITUARY

### HENRY TITUS KOENIG

1891-1934

BORN, Pittsburgh, Pa., July 14, 1891, son of George F. and Barbara Dinkle Koenig. Graduated from Tarentum High School in 1908. Obtained B.S. degree in chemistry, University of Pittsburgh, June, 1912. From 1912 to 1914 associated with fellow classmate, the late Glenn Donald Kammer, and with the late Dr. Charles H. Viol, in laboratory of Standard Chemical Company, Pittsburgh, in pioneer work on radium recovery from carnotite ore from Colorado, resulting in a method for profitable radium recovery from this ore. In 1914-15, studied under Professor George H. Hulett at Princeton; while there, with Dr. Willy A. Schlesinger, established experimental laboratory of radioactivity. The two incorporated the Schlesinger Radium Company, which began operating in 1915. In this laboratory, in Denver, Koenig developed luminous materials which were employed by the U. S. Government during the World War. In 1919, Koenig, while on leave of absence, spent six months with Professor Herman Schlundt in the University of Missouri. He continued as chief chemist for the Schlesinger Radium Company until 1921. While there, he developed methods for increasing the radium recovery from 50 per cent. of the content of the ore to 88 per cent., thus obtaining about one gram of radium from 200 tons of handpicked ore. Then the rich ore from Katanga in the Belgian Congo was announced. Koenig was called by the Union Miniere of Oolen in Brussels, Belgium, to apply his recovery methods to the richer ore. At the same time he installed apparatus for the recovery of radium emanation, or radon. The Belgian development cut the price of radium in half and the American industry ceased. After the Belgian development, he spent about three months with Madame Curie and frequently visited Professor Aartz in Holland. In 1923, he returned to America, when his interest shifted from radium to vanadium, and in the service of the U. S. Vanadium Company in Colorado, he developed the chloride-bisulfate roasting process for vanadium recovery. He patented the process, which was commercially successful. During 1923-24, his process for forced precipitation of potassium yielded phosphorus-free ferro-vanadium. Following this, he spent four months with Professor Colin G. Fink of Columbia, and then joined Harry Payne Whitney at the Hudson Bay Mining and Milling Company. As chief chem-

ist, he developed methods for treatment of complex sulfide ores containing gold, silver, copper and zinc and was co-patentee of the process. During this association, which lasted until 1931, plant construction involving almost twenty million dollars developed. In the fall of 1931, he opened consulting laboratories in Denver, Colorado, which he continued until his death, May 20, 1934.

Koenig made the same sacrifice as his fellow pioneers who had entered the radium recovery field—succumbed to the insidious effects of radium when only 43 years of age. He is deserving of the highest tribute for his pioneer venture into an unknown and dangerous field, and for his valuable contributions there and the other developments cited.

He is survived by his mother; a sister, Mrs. George H. Spacke, of Denver; another sister, Mrs. Louise von Warren, of San Diego, California; and a brother, Walter J. Koenig, technical director of the Sloane-Blabon Corporation of Philadelphia.

ALEXANDER SILVERMAN

### RECENT DEATHS

DR. NATHANIEL LORD BRITTON, for thirty-three years, until his retirement as director emeritus in 1930, director-in-chief of the New York Botanical Garden, previously professor of botany at Columbia University, died on June 25. He was seventy-five years old.

JOHN MERTON ALDRICH, associate curator of insects in the National Museum, died in Washington, D. C., on May 27, at the age of sixty-eight years.

PROFESSOR LEONARD P. DICKINSON, head of the department of electrical engineering at the University of Vermont, died on June 3 at the age of sixty years. Before going to Vermont fourteen years ago, he had served on the faculty of Lafayette College, of Rhode Island State College and of Robert College, Constantinople.

PROFESSOR RICHARD THORNTON FISHER, director of the Harvard Forest at Petersham, Massachusetts, died suddenly on June 9, at the age of fifty-eight years.

DR. HARRIET W. BIGELOW, head of the department of astronomy at Smith College, died at Soerabaja, Java, on June 29. Miss Bigelow was sixty-four years old.

DR. JAKOB JOHANNES SEDERHOLM, director of the