

MEMORIAL OF WASHINGTON A. ROEBLING*

ALEXANDER H. PHILLIPS, *Princeton University.*

All mineralogists learned with sorrow and regret of the death of Colonel Washington A. Roebling at his residence in Trenton, New Jersey, on the afternoon of July 21, 1926, in his ninetieth year.

Colonel Roebling was born at Saxonburg, Pennsylvania, on May 26, 1837. His father, John A. Roebling, a civil engineer and graduate of the Royal Polytechnic School of Berlin, emigrated to the United States in 1831. He settled near Pittsburgh, Pennsylvania, and established the Roebling family in America.



WASHINGTON A. ROEBLING,
1837—1926

Colonel Washington A. Roebling graduated from the Rensselaer Polytechnic Institute at Troy, New York, as a civil engineer in the class of 1857; and he has long been considered by that institution one of its most eminent alumni. After graduation, he joined his father in the construction of the various noted suspension bridges of this country, as the Niagara Falls bridge, the Allegheny bridge at Pitts-

burgh, the Ohio River bridge at Cincinnati, all of which led up to the building of the East River bridge at New York.

Colonel Roebling served his country during the entire length of the Civil War, enlisting as a private the day after the attack on Fort Sumter, and being present as a colonel at the surrender of Lee at Appomattox on April 9, 1865.

His talent as an engineer and bridge builder was soon recognized, and early in his military career he was assigned to various engineering duties. He constructed the suspension bridges across the Rappahannock and across the Shenandoah River at Harpers Ferry.

At the close of the war he again joined his father, who had conceived and was working on the plans for the Brooklyn Bridge.

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Unfortunately, his father was not destined to see it completed, as he met his death through an accident in locating the Brooklyn tower of the bridge. Here the Colonel took up the work of his father, and labored faithfully for fourteen years in building a monument both to his father and himself, which stands as a testimonial to plans well conceived, accurately designed, and faithfully executed in their construction. It is seldom that the success of the son adds luster to the career of an already renowned father, but this is true of Washington A. Roebling.

Early in the construction of the foundations of the bridge, through his conscientious care, he exposed himself many hours at a time to high air pressure of the caissons. He contracted caisson fever or "bends"; and so serious was the attack that he was not only forced to give up active supervision of the work, but his life was thought to be in grave danger. It was during this period of enforced inactivity more than fifty years ago that this versatile man laid the foundation of his remarkable collection of minerals. To alleviate his suffering from the then little understood ailment, he was kept in a dark room; and for amusement and diversion he studied, by the light of a candle, his then small collection. Throughout the remainder of his life, though he had many interests other than that of his business, there is no doubt that his greatest pleasure was derived from his minerals, and his happiest hours were those which he could spare from a busy life in showing them to his friends.

Colonel Roebling collected minerals, as he did everything else, with that meticulous attention to detail which led him to study each individual specimen and to verify the correctness of its identification and locality. He knew his collection so thoroughly (and there were more than 16,000 specimens) that he could describe instantly the specimens representing any species in his collection. He read the literature, noted carefully the descriptions of new species, and corresponded at once for specimens of the type locality; and when a species was represented by but few specimens, he followed the wanderings of each, and always persisted in the chase until the desired object was obtained. His joy was so keen on such occasions that he often said that he would never leave his collection to a museum, as he must have many specimens that others desired and he disliked depriving others of the pleasure that he always experienced after such a successful chase of a particularly fine specimen.

He would always ask a visitor what mineral he was interested in, or what mineral he wished to see, with that quiet touch of pride which is a pardonable companion of a conscious knowledge of completeness. However rare the mineral, the Colonel could go directly to the proper drawer and produce a specimen. He has often remarked that he had a specimen of every known mineral and variety; then he would always add "with few exceptions." The Roebling collection was never catalogued, nor was a specimen ever numbered to connect it with its label. For this reason he seemed to be very particular in the handling of his specimens, as he had the constant fear of getting the labels misplaced. Very often the history of a specimen would be found neatly folded in the tray, with the opinion of noted mineralogists in regard to it, together with notes by the Colonel, often written in a humorous strain, in that fine and perfect script. The Colonel's quiet humor was always the delight of his friends, and this is reflected all through the collection. Here and there a tray will be empty, with a note "This specimen has been loaned now for two years. Time it was returned." These remarks were not always complimentary, but he would record a joke on himself with equal fairness. He loved each specimen, as his collection in his later years was his enjoyment, his pleasure, his complete interest, his life. Near the end, when his sight was failing, he remarked: "My life is over, as I can no longer see my minerals." He was always willing to sacrifice specimens for research or analysis; and many were the calls for rare minerals or type specimens, and it was indeed seldom that he failed to deliver the material.

He was a charter member of the Mineralogical Society of America, and served as its Vice-President in 1924. In February last, conscious of his failing health and realizing the financial handicap under which the *MINERALOGIST* was being published, he generously donated \$45,000 towards an endowment fund, accompanied by the following brief and characteristically modest note:

This gift is unconditional. I wish, however, that the whole, or part of it, be devoted to the publication of the monthly magazine, *THE AMERICAN MINERALOGIST*, which has been conducted on too narrow a margin.

The science of mineralogy has lost a patron and all mineralogists a friend; and those whose privilege it has been to visit him in his own home, to experience his gracious hospitality, to look upon

that kindly face, and could who appreciate that humorous twinkle in his eyes, know how great that loss really is.

MEMORIAL OF FREDERICK ALEXANDER CANFIELD*

CHARLES PALACHE, *Harvard University.*

The death of Mr. Canfield leaves an irreparable gap in the ranks of American mineralogists. Although not a large contributor to the literature of the science, he was one of the most active and discriminating collectors of his period. To quote his own words, the collector "takes a scientific or an aesthetic pleasure in accumulating new, strange and interesting objects, which may be studied with profit or arranged to please the eye." In both respects he satisfied his definition. He was himself a keen student of the characters of minerals and his interest in their correct and scientific determination led him to take counsel with many of the active workers in the science and thereby repeatedly brought to light new and important mineralogical facts. Those whose privilege it was to see him in his home and with his minerals cannot easily forget the keenness of his delight in his treasures. And his accurate observations made in many lands, together with his remarkable memory for events and specimens, made his conversation replete with interest to the mineral lover.



FREDERICK A. CANFIELD,
1849—1926

Mr. Canfield lived all his life in an environment favorable to the growth of a love of minerals. He was born on April 7, 1849, in the Canfield Homestead at Ferromonte near Dover, New Jersey, where he lived all his life. He died at Morristown, New Jersey, on July 3, 1926. At Ferromonte his father, Frederick Canfield, had gathered together a choice collection of the minerals of the Franklin zinc mines and the son preserved these always in the

* Memorial read at the seventh annual meeting of the *Mineralogical Society of America*, Madison, Wisconsin, December 27, 1926.