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TRANSACTIONS
OF THE
AMERICAN SOCIETY
OF
CIVIL ENGINEERS

(INSTITUTED 1852)

VOL. LXVIII

SEPTEMBER, 1910

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RAILROAD

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This Volume and the succeeding Volume of Transactions (Vol. LXIX) will contain all the Papers descriptive of the New York Extension of the Pennsylvania Railroad. A general index covering both Volumes will be issued in Vol. LXIX.

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MEMOIRS OF DECEASED MEMBERS.

JOHN FISKE BARNARD, M. Am. Soc. C. E. ¹

¹ Memoir prepared by W. K. Barnard, Assoc. M. Am. Soc. C. E.

DIED FEBRUARY 6TH, 1910.

John Fiske Barnard was born in Worcester, Mass., on April 23d. 1829. He was graduated from the Bridgewater Normal School, and from Rensselaer Polytechnic Institute.

In November, 1850, Mr. Barnard entered the railway service. He held various engineering and operating positions with the Grand Trunk Railway and its subsidiary lines in Lower Canada, and served as Chief Engineer of the Grand Trunk South of the St. Lawrence River for the last three years of his connection with that road.

In May, 1869, he went to the Missouri Valley Railroad as Superintendent and Chief Engineer. During the same year he was appointed Chief Engineer of the Kansas City-St. Joseph and Council Bluffs Railroad, and remained with this road and the Hannibal and St. Joseph Railroad (both now a part of the Burlington Missouri Lines), as Chief Engineer, General Superintendent, and General Manager, until 1886. During this time Mr. Barnard was also President of the Atchison Union Depot Company and the St. Joseph Union Stock Yards Company, Secretary and Treasurer of the St. Joseph Depot Company, and Director in various railroad companies.

In 1886, Mr. Barnard was appointed President and General Manager of the Ohio and Mississippi Railway, which

position he occupied until 1892. From that time until 1893, he was engaged on several reports of projected railroads and appraisals of industrial and railroad properties.

From 1893 to 1898, Mr. Barnard was Receiver of the Omaha and St. Louis (now Wabash) Railway, during part of which time he was also President of the Alton Bridge Company, and Receiver of the St. Clair-Madison and St. Louis Belt Line.

In the spring of 1905 he moved to Los Angeles, Cal., where he lived until February 6th, 1910, when, after an illness of several months, he died at his home at the age of 81 years.

Mr. Barnard was elected a Member of the American Society of Civil Engineers on September 1st, 1880. He was also a Member of the American Geographical Society.

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ROBERT L. ENGLE, M. Am. Soc. C. E. ²

² Memoir prepared by O. E. Selby, Jun. Am. Soc. C. E.

DIED OCTOBER 16TH, 1909.

Robert L. Engle was born on December 5th, 1846. He was a product of the time when opportunities for technical training were few, so that his engineering education was gained largely by contact with actual work. He began his professional career after the Civil War, in which he served for two years in the One Hundred and Forty-eighth Indiana Volunteer Infantry.

The first construction work of any note on which Mr. Engle was engaged was the building of the Ohio and Mississippi Railroad, now a part of the Baltimore and Ohio System, extending from Cincinnati to St. Louis. Later, and up to 1878, he was connected with the construction of the Cincinnati Southern Railway, Cincinnati's municipally owned railway, as Division Engineer, at Ray Springs, Tenn. This work included several tunnels and other heavy work in the mountain territory.

After the completion of the Cincinnati Southern, Mr. Engle went West, and was engaged in the construction of the Santa Fé Railroad at Trinidad, Colo., in the capacity of Assistant Chief Engineer. Under his direction the Royal Gorge Hanging Bridge was built, and much other interesting work was carried out. Mr. Engle's forte was location, and in the mountainous regions of the West he found ample exercise for this faculty. From Trinidad he moved to Santa Fé, N. Mex. His name is borne by Engle, N. Mex., now a thriving Western town.

While still in the West, Mr. Engle was connected with the Mexican Central Railroad, at Chihuahua, Mexico, on construction work, and with the Denver and Rio Grande Railroad. It is thus seen that he played a part in much of the important pioneer railroad development of the mountain region of the West.

In 1885, Mr. Engle began work on the location and construction of the Chicago, Burlington, and Northern Railroad, now part of the Burlington System, being located at St. Paul, Minn., as Assistant Chief Engineer of that portion of the line north of La Crosse, Wis. Later, his jurisdiction included the whole line. During 1887 and a part of 1888, he had charge of the construction of the Illinois Valley and Northern Railroad, as Chief Engineer, at La Salle, Ill. In the latter part of 1888 he conducted surveys for coal branch lines connecting with the Chesapeake and Ohio Railway, in the mountains of West Virginia.

Beginning in September, 1889, Mr. Engle was Resident Engineer on the construction of the Louisville and Jeffersonville Bridge over the Ohio River. During his term of service the substructure, involving several deep pneumatic foundations, was built, and parts of the approaches were erected. During his stay at Louisville Mr. Engle was selected as Arbitrator in a matter of disputed classification between the company and the contractor for the Pike's Peak Rack Railroad, and effected a satisfactory settlement. Among other things his later service included location work on the Tennessee Central Railroad, in 1892; location and construction work for the Missouri, Kansas and Texas Railroad, in Arkansas; and construction work on the Tidewater Railroad, now the Virginian Railway, at Princeton, W. Va. At the time of his death he was employed as Engineer for the contracting firm of Carpenter and Boxley, at Johnson City, Tenn.

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With the death of Robert L. Engle, the Profession loses one of those sturdy, self-made engineers, to whom the country is largely indebted for pushing railroad construction overland and through the West. In character, rugged like the mountains with which he was associated, he was still the gentlest of souls to those associated with him in subordinate capacities. The writer knew him as Chief and friend for many years, and cannot recall

any departures from the lines of the highest dignity, rectitude, good habits, and good nature.

Mr. Engle was a Member of the Engineers' Club of Cincinnati from the time of its organization. He maintained his home in Cincinnati for twenty-one years, while his engagements kept him at various other places.

On February 20th, 1879, Mr. Engle married Miss Sallie McQueety, of Cincinnati, and is survived by her and their son and two daughters. His family and social relations were most happy, although his enforced absences from home kept him from much of the social contact which his qualities deserved.

Mr. Engle was elected a Member of the American Society of Civil Engineers on September 7th, 1881.

CHARLES HERBERT DEANS, Assoc. M. Am. Soc. C. E. ³

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³ Memoir prepared by Emil Diebitsch and Edwin S. Jarrett, Members, Am. Soc. C. E.

DIED MARCH 7TH, 1909.

Charles Herbert Deans was born in Chester, Delaware County, Pa., on November 30th, 1863, and died at his home in Phoenixville, Pa., on March 7th, 1909.

His father, Charles Woodbury Deans, was prominent in educational work, and was active in the early organization and in the popularization of the Common School System of the State of Pennsylvania.

On his father's side Mr. Deans was descended from the Deans and Sterling families, who, immediately following the War of the Revolution, emigrated from Connecticut to Susquehanna and Wyoming Counties, Pennsylvania. His mother was Priscilla Lyons Williams, of Chester, Delaware County, Pa., who was descended from the Lyons family of New Jersey and the Williams and Pennell families of Pennsylvania.

From both his father and his mother Mr. Deans inherited a taste and aptitude for study. His youthful environment was among books and in an atmosphere which naturally encouraged the desire he early formed to fit himself for a professional life.

His education was begun in private schools, but later he attended the public schools, and was graduated from the High School at Phoenixville, Pa., in 1881. He spent the next four years in practical work, learning business methods, becoming an excellent and accurate accountant, and familiarizing himself, in the works of the Phoenix Iron Company, with mill and shop methods and practice, and the metallurgy of iron and steel.

In 1885, Mr. Deans entered Lehigh University, well prepared in his studies, with a mind ripe for the absorption of further knowledge, and a temperament for enjoying to the utmost the four years of University life before him. He was a good student, standing well up in the first quarter of his class. He was elected a member of Theta Delta Chi Fraternity, was one of the Editors and Assistant Business Manager of the college Annual in his Junior year, and Business Manager of the Engineering Journal in his Senior year. He was graduated in 1889 with the degree of C. E.

As a boy Mr. Deans was fond of games and all healthy outdoor sports. He was a lover of Nature and of animals, fond of fishing and hunting, and was never happier than when roaming the beautiful woods and mountains of his native State. With such tastes it was natural to find him, in his college days, a participator in, and an enthusiastic supporter of, athletic games.

Not only in athletics, but in all things pertaining to Lehigh University, Mr. Deans was a most loyal and enthusiastic son of his Alma Mater, both at college and after he had gone out into the world. He thoroughly appreciated the benefits derived from his technical training, and was so eager that others should share them, that early in his business career he advanced sufficient funds to two ambitious young men to carry them through Lehigh.

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Immediately after graduation Mr. Deans entered the employ of SooySmith and Company, the well-known foundation engineers and contractors. He rapidly advanced to positions of responsibility with this company, and, in 1895, became its Vice-President and Chief Executive Officer. When, a year or two later, Charles SooySmith, M. Am. Soc. C. E., retired from active business, Mr. Deans organized, from the SooySmith and Company staff, the Engineering Contract Company, of which he became President. Pressure of business seriously undermining his health, he was forced to give up temporarily all work in 1900, and to spend the next two years in the mountains of Northern Pennsylvania. On regaining his health, he associated himself with the

firm of John Monks and Son, of New York City, and, at the time of his death, he was Second Vice-President of that company.

While under his executive charge, both SooySmith and Company and the Engineering Contract Company, constructed a number of the most important bridge foundations in the United States, and the former firm first successfully introduced pneumatic work in the foundations of the modern high office buildings of New York City, notably the Manhattan Life, Washington Life, Standard Oil, and Empire Buildings on Lower Broadway. At the time of his death, Mr. Deans was in full charge of the building of the piers of the reconstructed Baltimore and Ohio bridge over the Susquehanna River, at Havre de Grace, Md.

In the early years of his connection with SooySmith and Company, Mr. Deans was employed on work in the field, rising from subordinate positions to that of Superintendent in responsible charge of work. During this period he acquired an intimate and practical knowledge of foundation construction, and his subsequent career gave evidence of the value of this training. Being thus well-equipped, Mr. Deans soon became notable as a business engineer. His judgment on all substructure engineering problems was quick and keen, his thorough technical knowledge being supplemented by his penetrating practical sense. His business ability was of a high order, and his efficiency was largely increased by his industry and methodical habits. As a negotiator, he was in the first rank. His quick appreciation of the essentials in business transactions, his fertile resource in the most complicated financial dealings, his patience and persistence in the face of discouragement or delay, and his inflexible determination when once his decisions were reached, were qualities which placed him in the highest rank as a contracting engineer. To those with whom he came in close contact, Mr. Deans will always be remembered as exemplifying the ideal combination of technical training with business efficiency.

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He lightened the seriousness of his business transactions with a quick sense of fun, a fondness for a good story, and an infectious good humor. His genuine interest in the work of his associates and his unfeigned delight in their success won him many friendships which lasted throughout his life and which now keep his memory warm in the hearts of those who were fortunate enough to know him intimately. Strong of will, keen and clear-sighted in business transactions, loyal to his friends and to the interests entrusted to him, he was, above all, a genial, honorable, many-sided man, who loved his fellow men.

Mr. Deans leaves a mother, Mrs. Charles W. Deans, of Phoenixville, Pa., a brother, John Sterling Deans, M. Am. Soc. C. E., Chief Engineer of the Phoenix Bridge Company, and two sisters, Mrs. R. Barclay Calley, of Seattle, Wash., and Mrs. Elmer E. Keiser, of Tacony, Pa.

In 1893, Mr. Deans married Miss Helen Arnold of West Chester, Pa., who, with two sons, Charles Woodbury, aged 15, and Malcolm Arnold, aged 13, survives him.

Mr. Deans was elected a Junior of the American Society of Civil Engineers, on December 3d, 1890, and an Associate Member on May 6th, 1896.

WILLIAM MEIER, Assoc. M. Am. Soc. C. E. ⁴

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⁴ Memoir prepared by William A. Theodorsen and E. James Fucik, Associate Members, Am. Soc. C. E.

DIED FEBRUARY 14TH, 1910.

William Meier, the son of the Reverend Jacob L. and Mary Meier, was born in Muscatine, Iowa, on April 10th, 1878, the family moving to Chicago, Ill., in the same year.

Mr. Meier received his education in the public schools of Chicago and at the University of Illinois, from which he was graduated in 1901, with the degree of B. S. in Civil Engineering.

After his graduation, Mr. Meier was engaged with various firms, principally in bridge and structural work. For a time he was with William M. Hughes, M. Am. Soc. C. E., and in January, 1905, he entered the service of the Scherzer Rolling Lift Bridge Company, as Assistant in the Chicago office; and later was appointed Assistant Engineer and Eastern Representative, with headquarters in New York City. At the time of his death, Mr. Meier was employed in the Bridge Department of the Chicago and North Western Railway.

On February 14th, 1910, in diving from a spring-board, in the natatorium of the Young Men's Christian Association, he struck his head against the side or bottom of the tank. When his body was taken from the water,

life was extinct, and all efforts at resuscitation were futile.

Mr. Meier took great interest in all that pertained to his profession.

He was elected an Associate Member of the American Society of Civil Engineers, on June 1st, 1909. He was also a Member of the Western Society of Engineers.

*** END OF THE PROJECT GUTENBERG EBOOK TRANSACTIONS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS, VOL. LXVIII, SEPT. 1910, START/END PAPERS ***

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