

German American History

ENGINEERS OF DISTINCTION - PART II

Other mining engineers of note were FREDERICK ANTON EJLERS; MAX BOEHMER; ALBERT ARENTS, inventor of the lead-mine machinery; C. W. KJRCHHOFF; F. AUGUSTUS HEINZE, founder of the Amalgamated Copper Company, C. de KALB, HERMAN GMELIN, and others, who as consulting engineers or presidents of mining corporations rank high in their profession and are known throughout the Union.

HERMAN SCHÜSSELE constructed the great waterworks of San Francisco. His monograph on "The water supply of San Francisco before, during and after the earthquake of April 18, 1906," is a valuable contribution to technical literature.

The greatest achievements in engineering, however, have been accomplished in America by German bridge-builders. The names of ALBERT FINK, ADOLF BONZANO, HEINRICH FLAD, JOHANN AUGUST ROEBLING, WASHINGTON ROEBLING, KONRAD SCHNEIDER, GUSTAV LINDENTHAL, EDUARD HEMBERLE and PAUL WOLFEL are inseparably connected with the history of engineering in America. Several of these men were refugees of 1848, as for instance ALBERT FINK. Born 1827 at Lauterbach, he had been trained at the polytechnic school of Darmstadt. In 1849 he emigrated to America and entered the service of the Baltimore & Ohio Railroad, for which he constructed many viaducts and iron bridges, among them the great iron bridge over the Ohio River at Louisville. In the construction of these bridges he employed an invention of his own, a system of girders allowing of a length of span theretofore unknown. The greatest of these girders are found in the Ohio River Bridge at Louisville, which has a total length of 5,310 feet. Of its 27 spans the largest measure 340 and 360 feet. Several of the viaducts, constructed by Fink, especially those over the ravines of Cheat Mountain, were considered the most marvelous of their kind.

HEINRICH FLAD, born in 1824 in Baden, had studied engineering at the university in Munich. He participated as colonel of a battalion of engineers in the revolution of 1848. In 1849 he arrived in America and was for a number of years very successful in constructing of western railroads.

A contemporary of Fink and Flad was ADOLF BONZANO, born 1830 in Wurtemberg. As chief engineer and vice-president of the Phoenix Bridge Company he made the designs for many railroad-bridges. The most interesting of his works was a viaduct across the valley of the Kinzua River in Pennsylvania, which is 1800 feet wide and 270 feet deep and was completed in only 8 months.

A complete revolution in bridge-building was brought about by JOHANN AUGUST ROEBLING, whose great achievements have been mentioned in another chapter.

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