

# Three Musketeers - ZSB

Walter Chrysler called the trio of talented engineers he brought to Willys-Overland from Studebaker Motors the “Three Musketeers.” In time, they would become the heart of the early Chrysler Corporation. At Chrysler, the powerful Engineering Department would dominate the direction of the Company, and the Three Musketeers would dominate the Engineering Department.

## *Frederick Morrell Zeder (1886-1951)*

Fred Zeder grew up in Bay City, Michigan, and had ties to the railroad industry much like Walter Chrysler. At age 12, he worked as a railroad call boy, who had the job of waking up train crews at the hotels and boarding houses where they stayed. He also worked as a car checker, who would examine railroad car axles to make sure they were lubricated properly. Zeder labored for about a year as a machinist apprentice in the Bay City Industrial Works, which manufactured heavy-duty railroad cranes, and then worked as a machinist for the Michigan Central Railroad in the Motive Power Division. After finishing public high school in Bay City, however, he took a different course than Chrysler. Zeder enrolled in the College of Engineering at the University of Michigan in 1905 and earned a bachelor of science degree in mechanical engineering four years later.

With degree in hand, Zeder entered the apprentice program at the Allis-Chalmers Company in Milwaukee with fellow engineer Carl Breer. After becoming an erecting engineer at Allis-Chalmers in 1910, Zeder went to work for the Everitt-Metzger-Flanders Company (EMF), a small Detroit automobile manufacturer, and ran its engineering labs. The Studebaker Corporation, then a builder of wagons, bought EMF in 1912 in order to produce cars and named Zeder chief engineer in 1914. In an effort to upgrade Studebaker engineering, he hired Carl Breer and Owen Skelton in 1916 and created the partnership that continued for the rest of their working lives.

Fred Zeder and his team joined Walter Chrysler at Willys-Overland in July 1920, operated as the independent consulting firm of Zeder, Skelton and Breer (ZSB) Engineering starting in December 1921 and then rejoined Walter Chrysler at Maxwell Motor Corporation in June 1923. Zeder managed Maxwell engineering and, after the formation of the Chrysler Corporation in June 1925, became vice-president of engineering. He became a company director in 1927 and served as vice-chairman of the

board from 1935 to 1951. Zeder was in charge of engineering at Chrysler until his death in 1951. He was a dynamic, forceful, enthusiastic and sincere man, with an outgoing, even occasionally flamboyant personality. A brilliant automotive engineer and natural-born salesman, Fred Zeder was the leader of the Zeder-Skelton-Breer triumvirate.

*Owen R. Skelton (1886-1969)*

Owen Skelton grew up in Edgerton, Ohio, in the northwest part of the state and briefly worked as an apprentice in his father's harness and saddle shop. He earned a degree in mechanical engineering from Ohio State University and took a job as a draftsman for the Pope-Toledo Company, a medium-sized automobile maker in Toledo, Ohio. He remained at Pope-Toledo from 1905 to 1907 and became an expert on axles and transmissions. Skelton then worked for Packard Motor Company in Detroit from 1907 to 1916 in the firm's design drafting department. When he joined Zeder at Studebaker in 1916, Skelton was made responsible for redesigning the company's transmissions and rear axles.

When he came to Maxwell in June 1923, Skelton took the title of executive engineer, which he held there and at Chrysler Corporation for the rest of his career. Named a director in 1937, he remained on the board until 1954, although he retired from active management in 1951. Skelton was the "inside man," who organized and coordinated the work of the other engineers to bring their designs to completion. A quiet, modest and shy man, Skelton — unlike Zeder and Breer — did little writing or public speaking and thus remains more of an enigma than the others in the trio.

*Carl Breer (1883-1970)*

Carl Breer worked as a youngster in his father's blacksmith and carriage shop while growing up in Los Angeles. At age 17, he designed and built a steam-powered automobile. After a year at the Throop Polytechnic Institute (later California Institute of Technology) in Pasadena, Breer enrolled in Stanford University's engineering school in September 1905. Following graduation in 1909 with a degree in mechanical engineering, Breer entered the Allis-Chalmers apprentice program in Milwaukee along with Fred Zeder. He returned to the west coast in 1911 and became factory superintendent for the Moreland Motor Truck Company. In 1914, Carl Breer organized his own business, the Home Electric Auto Works. But he had sold his interest in the company by the time Fred

Zeder asked him to establish a research division at Studebaker.

Breer had the title of research director at Chrysler from 1925 to 1949, served as a director from 1937 to 1953 and, although he retired from active management in 1949, worked as a consultant for Chrysler for another four years. His career at Chrysler focused on “applied” research directed at solving problems. A frequent speaker at engineering meetings, he wrote extensively for the automotive press and for engineering journals. He dressed impeccably and remained physically fit throughout his adult life. Carl Breer was the most cerebral of the ZSB trio, a thoughtful, idealistic and intellectual man who at times appeared a dreamer.