Charles F. Kettering (1876-1958) is considered one of the leading inventors of his time. Founder of Dayton Engineering Laboratories Company (DELCO), he invented dozens of important devices but is best known for his contributions to the automobile industry, most notably his improved ignition system and the first electric self-starter. Nevertheless, many of his ideas extended beyond this industry and found application in railroad diesel locomotives, in aviation and in medicine research.

Born in an Ohio farmhouse, Kettering became a teacher in a country school soon after graduating high school then worked as a foreman on a telephone line crew. After severe eye problems forced him twice to drop out, Kettering finally graduated from Ohio State University in 1904 as a mechanical engineer in electrical engineering. After graduation, Kettering joined the invention staff of the National Cash Register Company (NCR). His major contributions there were the O.K. credit approval system for department stores, a low-cost printing register, an electric motor for cash registers and an accounting machine that could both add and subtract. In 1909, Kettering set up (with Edward A. Deeds) the Dayton Engineering Laboratories Company (DELCO), which changed the automobile industry in a fundamental way. Working in Deeds' barn, Kettering and the "barn gang" invented the electric automobile self-starter first incorporated in the 1912 Cadillac. Replacing the old and dangerous hand cranks that required a great deal of physical strength, the first starter brought about the spectacular growth of the US auto industry and allowed women drivers to be less dependent on men. During the DELCO years, "Boss Ket", as he was nicknamed by the "barn gang", also developed the ignition and lighting system for automobiles and the engine-driven generator, named DELCO, that upgraded life in hundreds of thousands of rural farms. In 1916, DELCO was sold to the General Motors
Corporation (GM) and Kettering became the head of research and later the vice president of GM. He stayed there until his retirement in 1947. Under his supervision, the GM research lab developed a flexible lightweight diesel engine and the diesel locomotive, Freon for refrigerators and air conditioners, four-wheel brakes, safety glass and quick drying paint for automobiles, among other devices.

Kettering's research contributed to various fields. His study of the phenomenon of "knock" in gasoline engines that led in 1923 to the Tetraethyl lead contributed to aviation. He also pioneered development of high compression engines and improved fuels that increased aircraft engine horsepower and flight safety. His medical research resulted in a device for the treatment of venereal disease as well as an incubator for premature infants. He was also a pioneer in the application of magnetism to medical diagnostic techniques. Along with Alfred Sloan, Kettering established the Sloan-Kettering Institute for Cancer Research (1945). Kettering's belief in practical education, a combination of theoretical knowledge with experience, yielded the Flint Institute of Technology (1919) and General Motors Institute (1926) - now Kettering University. Holder of numerous patents, Kettering received many honors and honorary doctorates for his ideas.

Bibliography:

http://www.nationalaviation.org/enshrinee/kettering.html