



The AMA History Project Presents: Biography of CHARLES BREBECK



Written by AMA Staff (11/2009); Reformatted by JS (12/2009)

The following is from the January 2010 issue of Model Aviation magazine. Brebeck was inducted into the 2009 Model Aviation Hall of Fame.

Charles Brebeck began his career with rebuilding auto and truck rear axles and brakes as the Interstate Bearing Company. The business prospered and Charles expanded into supplying other parts. One day, his son brought home a friend's model car engine to see if Charles could fix it.

Charles had been looking for something he could manufacture and sell without being a middleman, and model engines became this product. Charles studied the engine his son brought home and, based on his knowledge of two-stroke motorcycle engines and his own technical abilities, he designed his own.

In 1938, Charles formed the Herkimer Tool and Model Company to manufacture his engines. A year later, he obtained a patent for improvements to engine design to minimize heat distortion and facilitate economical manufacture.

Charles Brebeck's engines were known as OK Engines. Between 1939 and 1949, thousands of OK engines were produced. The initial product was a .60 displacement engine, which was soon followed by a 1.2 twin version for military target drone application, .49s, various .29s, the Bantam .19, and the Brown CO2.

Charles held a patent for a method to fabricate a model engine crankshaft using a cooling jig to prevent welding heat from softening and distorting the assembly. He also received two patents for sine bars, one which facilitated bevel-gear manufacture and was widely used during World War II.

In 1949, K&B took the modeling world by storm with the Infant .020. In the summer of 1949, Herkimer came out with the OK Cub, the first real mass-produced .049. Later in the year, Charles introduced the Anderson Baby Spitfire .045. The OK Engine business blossomed and by the end of 1949, there were OK Cubs in .0049, .074, and .099 displacements. Charles was making engines for any slot required because modelers were becoming enamored with smaller models.

In August of 1950, Charles introduced the OK Power Kit, an OK Cub (.049) that was sold disassembled. All parts were fully machined and it only required screwdriver-and-wrench assembly, but a boy could brag, "I built my own engine!" Later in the year, Charles introduced the .039.

Recognizing the growing need for glow plugs, he arranged to use the Shereshaw and Swanson plugs in all of his engines and market them under the OK name.

Realizing American fliers wanted to compete in FAI competition, Charles designed and introduced the OK Cub .14 (2.5cc) in 1952.

Diesels and smaller displacements were popular in postwar Europe and the United Kingdom. Charles introduced his first diesels in 1cc (.06) and 2.5cc (.149) displacements.

Charles Brebeck was a talented designer, but also a successful businessman. Many great products have suffered because of quality and supply problems, or because no one knew about them. Such was not the case with Charles.

His chosen business was to supply modelers with affordable and reliable engines. In 1952, Herkimer was making more than 1000 engines a day. He advertised in *Air Trails*, *Model Airplane News*, *Flying Models*, *Boy's Life*, *Popular Science*, and *Science & Mechanics* because he wanted prospective modelers to know about his product.

By the end of 1953, Herkimer had sold more than a million engines, had 700 distributors, and was carried by 4400 dealers.

Charles had a deal with Jim Walker to use the new Cub .049X exclusively in the *Firebaby*. When the ready-to-fly business started, he supplied engines to Comet for the *Sabre 44* and subsequent models. Charles added .049 and .075 diesels, a couple of .049 variations, a .19, newly designed .29 and .35, and a tiny .024. The Herkimer OK line was one of the most complete in existence.

A large number of companies recommended OK Cubs for powering their models. You probably never saw Scientific kit plans that didn't show a Cub in the nose. Walter Musciano, Paul Plecan, and Paul Del Gato designs generally showed an OK Cub for power.

Charles passed away in April of 1963. His Hall of Fame sponsor, William Mohrbacher, wrote: "There is no doubt that without Charles Brebeck's designs and marketing, thousands of modelers may never have entered our hobby."

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