

Herman Pfauter Responds



Hi Michael: What a surprise to see me in such illustrious company in your fine magazine! A great picture—though I regret not having removed my sunglasses...

You said it very nicely—the Pfauter company indeed had influenced the gear industry in the U.S.A. more than its relatively small size would have warranted.

At the AGMA convention there were quite a few who had been associated in one way or another with Pfauter, and it was wonderful to see them all again. I am proud to have been a small part of this special fraternity, but I am still disappointed today that a majority of the Pfauter owners, in 1997, decided to sell the company my grandfather had founded in 1900. That is all history now—but at least the company is still in existence and doing well in its original post-World War II location.

One little correction: I did drive a school bus in California while pursuing graduate work at the University of California in Santa Barbara. But it was not a psychedelic bus, but a regular 79-passenger Crown Coach! (I am sure glad you didn't mention my 1965 bus trip to a nudist convention in the Sierra Nevada foothills—but then, I was only their driver...)

Thanks again for your “reflections.” I hope our paths will cross

again—long before another 15 years will have passed. If you are ever in California, let me know, and we will get together again, especially since the time in Tucson was so short!

Kind regards,
Herman Pfauter

(Editors' note: Herman Pfauter spoke at the 2010 AGMA annual convention about his grandfather, Robert Hermann Pfauter, who founded the Pfauter Machine Tool Company in 1900. A summary of his presentation follows below.)

Robert Hermann Pfauter, Inventor And Entrepreneur by Herman Pfauter

My grandfather, Robert Hermann Pfauter, one of the pioneers of the machine tool industry in Saxony, was born January 30, 1854, in the village of Goeltschen, near Leipzig. The farm where he grew up doesn't exist anymore today. The entire village was destroyed not by war but by open-pit mining.

I never knew my grandfather. He died suddenly and unexpectedly at his desk, October 14, 1914.

I was born June 2, 1935 in Chemnitz, the first son of his second son, Michael, born 1899, also in Chemnitz.

As the oldest grandson of Robert

Hermann Pfauter, I “inherited” a collection of interesting documents that allowed me to get better acquainted with my grandfather.

Robert Hermann Pfauter (RHP) was in many ways an exceptional personality. I was especially impressed by his strength, his courage and his unflinching belief in his abilities. He possessed a brilliant technical mind and great business acumen—a rather rare combination, then as now...

Studying his documents, I also learned that he was a man of vision. Many of his thoughts and ideas were implemented later by his successors.

While growing up on a farm in the midst of the industrial revolution, he developed at an early age a deep interest in all things technical. After apprenticing as a mechanic, he studied engineering. Upon graduating, he worked for several machinery builders, advancing rapidly through the ranks and finally becoming the technical director of the knitting machine works of Biernatzki & Co. in Chemnitz.

Sundays and evenings he spent working on his project of a “Universal Hobbing Machine.” A first prototype was constructed by Biernatzki, but their owners were not interested in pursuing the further development of his machine. After a protracted struggle with the German Patent Office, he finally received the German patent #112082 in July 1900 for a “method and machine for generating helical gears by means of hobbing.”

Not quite six months later, my grandfather founded the Hermann Pfauter Company on Christmas Eve, December 24, 1900, based on his invention.

continued

The Gear: An Industry Perspective

In this exhibition, the masters at Overton Chicago Gear show their full range of capabilities. Here, they reveal the full spectrum of custom works created for the marine, off-shore, locomotive, mining, wind energy, transportation and construction industries. Using the latest technologies, processes and equipment, the artists are known for the ability to continually meet the most demanding quality standards.



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determined to try again. My grandmother Clara, who by this time had born three sons, supported him in his determination—even though he had several offers from leading machine builders to join them as technical director.

In cooperation with a large machine tool distributor, a new beginning was made. This relationship proved very profitable and endured for over 20 years. Several key employees had stayed with RHP, and others returned. By 1903, he had 14 hourly employees and one salaried office manager on the payroll.

Several moves into larger quarters finally led to the purchase of an industrial lot in a Chemnitz suburb, and in 1906, a new factory was built and occupied. At that time, the company employed 65.

By 1913, total employment had increased to 310, and 2,000 machines had been built and delivered, many of them to the United States.

The original factory building is still standing today and is protected as a historical industrial site.

Also in 1913, my grandfather and grandmother sailed from Bremen to New York, aboard the German steamer Prinzessin Cecilie—after his first trip in early 1909 had led to profitable orders and many new experiences.

He was not only the inventor, designer and salesman of his machines; he could also operate, service and repair them!

While I have not found much information on this second trip, I have letters he sent back home from his earlier trip. They are dated January 28 to February 26, 1909 and were mailed from New York, Boston, Cleveland, Chicago, Buffalo and other cities. He visited cus-

tomers, dealers and competitors.

He was excited by what he saw, and his letters contained detailed instructions for the factory in Chemnitz to follow. For example, he noticed the castings were cleaned, primed and painted before being machined. He was very impressed in general by the “great American machine tool industry” and the quality of their products. He noted that “they work slowly, but well organized,” after a visit to the Acme Company in Cleveland.

But he also made some critical observations. For example, when visiting Gould and Eberhardt in New Jersey—a competitor—he noticed a violation of his patent. But he concluded that he was not concerned because “they did not know about the differential.” And he mused about the effects of a possible U.S. embargo of machine tool imports to protect the domestic industry.

“We must ultimately build our machines in America” was his conclusion...

I am sure RHP would have traveled again to America if his untimely death a year and a half later—at age 60—would not have intervened. But his sons did, among them my father. One of my uncles sadly fell to his death in 1928, in Yosemite Park, in California.

But it was my good fortune, after immigrating to America in 1959, to be able to assist in realizing one of my grandfather’s visions: building Pfauter hobbing machines in the United States of America—almost 60 years later—by establishing the American Pfauter Corporation in Chicago, on July 28, 1971. ☀

His invention was indeed revolutionary. In his patent application, he had claimed that the method invented by him “could be considered as not being able to be improved further.”

Gears were produced in those days by indexing the gear blank and cutting one gear after the other with a milling cutter. Often this method was not sufficiently accurate due to indexing errors and a lack of high precision cutters.

RHP did not invent the hobbing machine. His great contribution to the advancement of the “art” of cutting gears was the integration of a differential in the gear train between the workpiece and the cutter. Workpiece and cutter are continuously engaged during the generating process, thus avoiding the shortcomings of the indexing method.

His new “Universal Hobbing Machine” could also cut helical gears.

Today all universal hobbing machines are still based on this principle of his invention—even though the differential consists no longer of gears but of electronic components.

The first years of the new company were accompanied by extreme hardships and difficulties. Lack of capital forced RHP to accept a partner, a wealthy coal merchant. When the difficult economic situation around the turn of the century produced only meager returns, the partner pulled his investment, and the firm collapsed.

But RHP was not a man to give up easily. Even after his bank went bankrupt and he lost the rest of his savings, he was