

FREDERICK W. GARRY

1921–1993

BY EDWARD E. HOOD, JR.

MY FRIEND AND COLLEAGUE FRED GARRY, who died on February 10, 1993, taught Ted Williams—among scores of others—how to fly, after he himself mastered the art by flying Corsairs and making carrier landings as a marine pilot in World War II.

That was a typical sequence in Fred's long, colorful, and illustrious career. He would achieve a hands-on mastery of the difficult, and then use the experience gained to teach others.

He once recalled a childhood day when—while sitting in an ice cream parlor and listening to the radio news of the Lindberg flight—he looked up at the ceiling fan and envisioned it as a propeller. He said he knew then, vaguely but surely, that he wanted to be a part of aviation. He never forgot that moment or lost the insight it gave him into the importance and evanescence of childhood dreams, and why it is so important that they be nourished and encouraged to eventual fruition. His dream blossomed into a reality of aviation, jet engines, and a lifetime of engineering challenges successfully met.

For someone with a mind of great breadth and complexity, who achieved a perfect 4.0 grade average year after year and innumerable scholastic prizes, Fred was a long-time apostle of simplicity in engineering. A few years ago he told a gathering of department chairmen from forty of the nation's top universities that their "greatest challenge" was to inculcate the importance of "greater simplicity of design" into their students.

At a time when complexity and sophistication were often seen as hallmarks of engineering excellence, Fred understood that simplicity was the key to productivity, and that productivity was the key to America's retention of its embattled status as a world leader in manufacturing. Capable of the most theoretical of explorations, he preferred to fill the role of what his boss, Jack Welch of General Electric (GE), once referred to as a "combat engineer": a hands-on grappler with problems who always saw the marketplace, and sometimes the battlefield, as the ultimate judge of designs.

Fred's career began with General Electric in 1951, and his work quickly centered on a project of urgent national importance—improving the performance of the J-73 jet engine, which at the time had a significant weight and power disadvantage vis-a-vis the Soviet-built MiG in Korean War combat. He made significant contributions to the design of the J-73's after burner and to its jet nozzle development, which restored the advantage to the U.S. Sabre Jet.

Moving up quickly in the engine business, he never removed his hands from the metal. His wife, Betsy, recalls sending him off to work at the Lynn engine works in a brand new and barely affordable suit only to have him return in the evening with it covered with grease, and utterly ruined, after Fred became curious about some component of a jet engine and decided to climb inside it. On another occasion Fred, who had as a marine become accustomed to eating whatever was put in front of him without comment, called her to ask what she was having for dinner that evening. He announced his relief when she mentioned hamburgers because he had spent his entire day firing dead chickens into a jet engine on full power to test its tolerance of bird strikes, and had temporarily lost his appetite for fowl.

After several design assignments of increasing responsibility, Fred became design manager of the J-93 Mach 3.0 power plant and then general manager of military engine engineering for small engines.

GE elected Fred vice-president and general manager of the Technical Division and then, in 1970, head of the Military Engine Division.

Throughout these heavily technical assignments, Fred grew a reputation as a brilliant hands-on engineer, an excellent manager, and a perpetually accessible leader. He played a significant role in the development of the J-79, T-700, CF-700, CF6 and CFM56 power plants, and became one of the "strong men" in GE's Aircraft Engines business—which the company actually contemplated exiting in the 1950s and is now the world leader. Fred was elected to GE's Propulsion Hall of Fame in 1989 and joined a very select group of jet engine pioneers, including "Herman the German"—Gerhard Neuman—who worked with Fred for twenty years. Neuman still remembers the incredible sense of humor Fred had in the darkest hours of seemingly intractable technical problems, a cheerful confidence that Neuman said "made us all winners."

In 1974 Fred left GE to assume the position of president of Rohr Industries and turned that company, by leadership and engineering savvy, into a first-rate manufacturing operation. In 1976 he was named chairman and chief executive officer of Rohr.

But the size and variety of GE always beckoned to Fred, and he returned to the company in 1980. In 1981 he assumed the position of vice-president of corporate engineering, moving easily from medical diagnostic imaging to locomotives to factory automation to appliances—wherever engineering challenges surfaced—and adding a hands-on engineering feel that made seemingly impossible problems evaporate. He was one corporate asset always in demand, always welcome.

Throughout his career Fred shared himself generously with the community. He was a member of the board of managers of his alma mater, the Rose-Hulman Institute of Technology in Terre Haute, Indiana, as well as vice-chairman of the Board of Trustees of Clarkson University in Potsdam, New York. He was a member of the Advisory Committee of the College of Engineering of the University of California, Davis, and a member of the Board of Overseers of the University of California, San Diego. He served three years as a member of the advisory committee to the engineering directorate of the National Science Foundation and was a long-time—and very active—member of the National Academy of Engineering.

Fred was awarded a commendation by President Gerald Ford for his service to minorities in southern California. He loved to work with young people. While courtly and old-fashioned in many ways toward women, he was a tenacious advocate of expanding opportunities for females in the profession of engineering, and he moved that cause forward at each of the academic institutions with which he was connected.

Fred was a gregarious and friendly fellow. He preferred the employee cafeteria at GE to the officers' dining room and often settled down with his tray at random tables to begin an animated conversation often on engineering or manufacturing, but not always. People who ate lunch with him and talked about movies, which he thoroughly enjoyed, would sometimes get a letter from him in a day or two with his views on the best films of all time by category, neatly ranked. He enjoyed thinking and talking about just about everything regardless of how abstract or romantic, but he always kept one eye on how things worked in the real world.

His beloved wife, the former Honey Griswold, recalls that on the day he proposed, Fred presented her with a ring and a new name, "Betsy." Despite the romance of the moment, his practical side, as usual, showed through. In looking forward to the many decades of marriage that stretched ahead, he had decided that he did not want the rest of the men of the world to address his wife as "Honey." She is Betsy to this day.

Engineering was his other love, and he was one of its "strong men" as well. In 1990 a lifetime of achievement and excellence in the profession earned him a ceremony at the White House and the award by President Bush of the National Medal of Technology "For the design, manufacture and commercialization of high-performance jet engines that lead the world in performance, efficiency, life-cycle cost, and minimal environmental impact; and for his leadership in establishing a technical information exchange and manufacturing alliances assuring the United States global leadership in both commercial and military aircraft engines."

That is an accurate description of one of Fred's many achievements, but it is the humanity, breadth, and accessibility of the man that remain in the hearts and memories of his many friends.

