

Dr. Foster Lindsey Brooks

Born: September 4, 1908, Union Township, Carrollton, Ohio

Died: January 3, 1998, Kent, Ohio

Foster Lindsey Brooks was born to Thomas and Bronta Herron Brooks on a farm in Union Township located on what is now called Emerald Road. He attended the one room Fawcett School on Rt. 332 (Scio Rd.) from grades one through seven, passed over the eighth grade and graduated from Carrollton High School in 1925. His aunt, Lena Mikesell Brooks, (Mrs. Ferd C.) was his teacher for all seven grades at Fawcett School.

He received his bachelor of arts degree from Mt. Union College in 1929 and a doctor of philosophy degree from Ohio State University in 1934. From 1933 to 1935 he was a teacher of mathematics and physics at Carrollton High School.

In 1935, Dr. Brooks joined the faculty of Kent State University where he taught mathematics, physics and photography until his retirement in 1974. During the summers he frequently served as visiting professor of mathematics at North Texas State College, Denton, Texas.

On leave of absence from Kent State from 1942 to 1945, Dr. Brooks was a member of Operations Research Group (Navy), originally under Columbia University Division Of War Research and later a part of the Office Of Scientific Research and Development. As a member of this group, Dr. Brooks did anti-submarine work in Washington, Newfoundland, England, French Morocco and Gibraltar. It was from Columbia University that Dr. Brooks received the University's World War II Medal for his "PARTICIPATION IN THE WORK OF THE DIVISION OF WAR RESEARCH". Some of his work included the invention of submarine detecting devices such as German and Japanese language decoders, large metal detectors fitted to U.S. airplanes to assist in identifying German U boats and then radioing the information to the U.S. fleet as well as cameras and fast film to aid bombardiers and machine gunners in hitting their targets.

In January 1945, he was transferred to pro-submarine work in the Pacific, becoming director of the Submarine Operations Research Group attached to a staff of commander submarines of the Pacific fleet at Pearl Harbor, Hawaii.

In 1947, he was presented with the Presidential Certificate of Merit, the nation's highest civilian award "FOR RESEARCH DONE DURING THE WAR". Specifically, Dr. Brooks lead the team of scientists that developed the guidance system for the first nuclear submarine (Nautilus), which was launched at Groton Connecticut in 1954. They also developed the guidance system for the first nuclear torpedo, which, thankfully, never had to be used. (From this research came the first transistor and from that came the "computer chip". Also, the nuclear kitchen became the household kitchen for the future and the radar oven became the microwave oven of today.)

Again on leave from Kent State in 1948-49 as a member of the staff of the Research and Development Board, Dr. Brooks helped to organize and later was one of the original members of the Weapons Systems Evaluation group of the Office of The Secretary of Defense. At the request of President Truman, he continued to serve as an advisor until 1952. Part of his duties necessitated his travel to military and scientific

establishments in diverse places such as England, Puerto Rico, New Mexico, Arizona, California, Alabama and Florida, some of which are now familiar for their missile and space activities.

Excerpted from the September 10, 1959 edition of THE CARROLL JOURNAL when Foster was inducted into it's Hall of Fame, the November 21, 1947 edition of the Ravenna-Kent THE DAILY COURIER-TRIBUNE, war correspondence and many personal conversations.

ON A PERSONAL NOTE

Never one to waste time or energy, Foster took advantage of his travels to include Ireland as often as possible. His purpose in doing so was to visit and study the birthplaces of our family's ancestors, the result of which is a comprehensive genealogy that may be found at The Carroll County Genealogical Society via computer and hardcopy.

In addition to his work and study of the family genealogy, Foster had another passion and that was classical music. He taught himself to play five instruments very well. They were piano, saxophone, clarinet, flute and recorder. He also sang tenor in his church choir. He loved going to the opera and concerts and kept EVERY program from EVERY opera and concert which...along with the genealogy... I inherited.

Foster's father, my uncle, died of tuberculosis at age forty-four and my father became his surrogate father. We were twenty-eight years apart in age but during the last ten years of his life we became close. I was a professional musician and Foster and his musical companion, Rosalyn Cameron, attended many of my concerts, which became wonderful family gatherings.

Prepared (by request) for the Carroll County Historical Society on December 3, 2003, by Gilbert M. Brooks, son of Ferd C. and Lena Mikesell Brooks and first cousin of Foster.

A BRIEF SYNOPSIS OF SOME OF THE MILITARY CHALLENGES THAT FACED AMERICA'S NAVY AND AIRFORCE DURING WORLD WAR II

Before the Department of Defense was established in 1948 all military forces were summarily coordinated through the Pentagon and the office of the President of the United States. Each branch of the military services employed extremely intelligent civilians, not only from the U.S. but from other countries as well, to evaluate our military challenges and assist in the development of strategies and weapons to meet those challenges.

In the early 1940's Doctor Foster L. Brooks, who was teaching advanced math, science and photography at Kent State University, was invited by the Pentagon to become a member of a civilian team to break the German and Japanese transmitting codes. (Early on the U.S. was anticipating war with Japan) The Deutsche Unter Vasser Boots (translated means "German Under Water Boats" ((submarines)) which then was shortened to "U Boats" were annihilating our naval fleet in the Pacific Theater. The first challenge was to break the German transmitting code in order that our navy could anticipate the next attack. To accomplish this task the team had to construct a "decoder". (I have the first and second decoder models in my possession.) Although these decoders were helpful they were crude and needed further refinement. In the meantime another way had to be found to locate the U Boats and warn our fleet. Our fleet was equipped with both radar and sonar that could identify objects above and below but could not accurately identify objects on either side or fore and aft.

At this point the team developed a giant and powerful metal detector shaped in the form of a very large disc that was fitted onto the under belly of airplanes. Since U Boats could only safely submerge to a depth of about 400 feet and the U.S. Submarines could submerge to about 900 feet, the metal detectors could easily detect the U Boats and radio their position to our fleet which then could either take evasive or attack positions. In circa 1944-45 a German U Boat was sunk...the code transmitting and receiving equipment, along with the code itself, was recovered by the U.S. Navy and the war with Germany in the Pacific Theater was basically over.

But...the land bombing and air wars were still going on. The U.S. bomber squadrons needed to be more accurate in hitting their targets. Another team was formed which also included Foster and its task was to develop both a high intensity camera and film to be mounted in the bombers in order that pictures could be taken to improve bombing accuracy. The air force fighter planes also needed a camera and fast film to follow their machine gun tracer bullets in order to improve their accuracy in shooting down enemy planes. The bomber camera and film were intensely upgraded and installed in our fighters. Both of these challenges were met and also proved to be critical in winning the war with Japan. And the U.S. had a new weapon and the key word was ATOMIC! The U.S. also had a new potential enemy and that was Russia who was in the process of developing an ATOMIC submarine!

Already, in the mid 1940's, it was determined and understood that we were in an atomic age and that submarine warfare was going to have to be an important prime attack and defense strategy. But to have stealth, a submarine must be able to stay under

water INDEFINITELY and UNDETECTABLE!!! The race was on. It's now 1947. The first atomic submarine to go under the ice covered North Pole undetected would have world dominance.

President Truman and the Pentagon acted. A Defense Department was established in 1948 with Admiral Forrestall as its head. Admiral Rickover and his team had already developed the first atomic engine and plans were being made to build the first atomic powered submarine AND torpedo! The man selected by both President Truman and Admiral Forrestall to lead the team that would develop the guidance systems for the submarine and the torpedo was Dr. Foster Brooks. Foster was given an office next to Admiral Forrestall and was given the authority to hire the best "minds" from across the world. He hired some great ones. (In the process, a German scientist invented the transistor and before the U.S. Nautilus atomic submarine was launched in 1954, the transistors were combined together and the final result was the COMPUTER CHIP!

The Nautilus was the first submarine to navigate under water indefinitely and also be undetectable. After almost fifty years, Russian as well as efforts from other countries to build a competitive atomic submarine has yet to be realized.

In 1950 President Truman requested Foster to assemble a "Defense Committee consisting of the best people he could find from across the world". The purpose...to ascertain and if necessary continually monitor the atomic attack possibilities of every major nation. Foster assembled the "Defense Committee" and chaired it through President Truman's term at which time Foster requested that he be able to return to teaching at Kent State University.

In 1947 President Truman requested that Foster come to Washington to receive the CERTIFICATE OF MERIT, then the Nation's highest award granted to civilians. Foster who always was a very humble person declined the invitation because he thought he was unworthy to receive it and that every "Team Member" with whom he worked should share in the receiving of this award. Not to be outdone, President Truman and the Admiralty arranged to give Foster a parade and present the award at Mt. Union College in Alliance, OH where Foster received his under graduate degree.

The pictures enclosed were taken at that ceremony. Foster is easy to spot; He is the one that looks like he would like to be anywhere else but there.

Researched and prepared by Gilbert M. Brooks, first cousin of Foster from his war correspondence which I inherited and after numerous enjoyable conversations. The reason that much of the detail found in this document is not included in the accompanying newspaper articles is due to the fact that it was "Classified" for more than twenty-five years. When I inherited these files I had to request permission from the Defense Department to share their content. Foster was free to tell me about his military work during the last two years of his life.