= Albert G. Mumma =

Albert G. Mumma (2 June 1906 ? 15 July 1997) was a rear admiral in the United States Navy who played a pivotal role in the development of nuclear propulsion for warships . During World War II , he served in France and Germany with the Alsos Mission .

A 1926 graduate of the United States Naval Academy , Mumma served on a number of warships . He studied marine engineering at the L 'École Nationale Supérieure de Maritime in Paris , where he learned the latest techniques of maritime construction . During World War II he served at the David Taylor Model Basin , where he investigated problems of propeller design . In January 1943 , he took over the Propeller desk at the Bureau of Ships . He joined the Alsos Mission in 1944 , and in the last days of the war was part of a 75 @-@ man task force that captured the city of Kiel , including the whole garrison of 150 @,@ 000 men .

After the war he returned to the Bureau of Ships , where he was involved with the development of nuclear propulsion . Mumma was promoted to rear admiral in 1954 , and assumed command of the Mare Island Naval Shipyard . He became responsible for celebrating its 100th anniversary . However , his most important task was converting the shipyard over to the construction of nuclear submarines . In 1955 he became Chief of the Bureau of Ships , where he championed the adoption of the teardrop hull , and oversaw the design of nuclear submarines , cruisers and aircraft carriers .

= = Early life = =

Albert Girard Mumma was born in Findlay , Ohio on 2 June 1906 . His father was a U.S. Army officer , Morton C. Mumma , who had graduated from the United States Military Academy at West Point with the class of 1900 . He would eventually retire with the rank of lieutenant colonel in 1928 , and be advanced to colonel on the retired list in 1930 . The family lived on a series of Army posts in the United States and overseas . After going on board the destroyer USS Barry in the Philippines when he was nine years old , Mumma decided to become a naval officer . He graduated from Iowa City High School in 1922 .

Albert entered the United States Naval Academy at Annapolis , Maryland in July 1922 with an appointment from Iowa Congressman Harry E. Hull . His two brothers also graduated from Annapolis . His older brother , Morton C. Mumma , Jr . , graduated with the class of 1925 , served with submarines and PT boats during World War II , and eventually rose to the rank of rear admiral . His younger brother George graduated with the class of 1934 , but resigned later that year , and later became a major in the Army during World War II . In addition , his nephew , Morton C. Mumma III , graduated with the class of 1948 , and joined the Air Force , from which he retired as a colonel in 1978 .

Mumma 's class at Annapolis was the first for which the traditional midshipmen 's cruises were replaced with aviator training for half the class , but Mumma was in the half that still went on the cruises . He sailed to Europe on the battleships USS Arkansas and USS Wyoming , and sailed from Annapolis to Bremerton , Washington , and back in the battleship USS New York . He undertook aviation training immediately after graduation . He graduated 18th out of 456 in the class of 1926 , and received an award for having the highest standing in engineering and aeronautics . He was commissioned as an ensign on graduation on 3 June 1926 , and after he finished his aviation training , he reported to the cruiser USS Richmond . This took him down to Guantanamo Bay , where he joined the crew of the cruiser USS Seattle . Returning to Iowa City for Thanksgiving , he had a blind date with Carmen Braley , whom he took to the Army @-@ Navy Game in Chicago . They became engaged in July 1925 , and were married on 1 October 1927 . They had three sons : Albert Girard Mumma , Jr . , John Stanton Mumma and David Braley Mumma .

His next assignment was to the aircraft carrier USS Saratoga , which was being fitted out . He was sent for flight training , but washed out due to having less than perfect eyesight . He was promoted to the rank of lieutenant (junior grade) on 3 June 1929 . After four years with Saratoga , he was assigned to the destroyer USS Waters as its gunnery officer . He left the Waters in 1932 to attend the Naval Postgraduate School , which was then located at Annapolis . In 1934 , he was offered an

opportunity to complete his studies in Paris , although he had not studied French at the Academy . He enrolled in French at the University of Nancy in July . Immersing in the language , Mumma and his family spoke French only . He studied marine engineering at the L 'École Nationale Supérieure de Maritime in Paris . Instead of just becoming a maritime engineer , he learned the latest techniques of maritime construction . Before leaving Europe , he was informed that he had been selected for promotion to lieutenant , but he still had to pass the examinations . He reported to his next ship , which was the cruiser USS Chicago , as assistant engineer , at Long Beach , California , where he took his examinations , and was promoted on 29 June 1936 . After less than a year , he was sent to the new destroyer USS Clark on the request of its skipper , Commander Hewlett Thebaud .

= = World War II = =

In 1939 , Mumma was posted to the David Taylor Model Basin , where he was promoted to lieutenant commander on 26 June 1940 and commander on 15 August 1942 . There he conducted research into the design of propellers and drive shafts . He examined a problem with the skegs on the keels of the North Carolina and South Dakota @-@ class battleships with harmonic vibrations , which was resolved with re @-@ designed propellers . Similar problems with " singing " propellers affected the Casablanca @-@ class escort carriers . In January 1943 , he took over the Propeller desk at the Bureau of Ships , with the rank of captain from 1 August 1943 . Propeller design was a critical part of all ships , and special propellers were designed and tested for PT boats and submarines . In early 1944 , he visited Britain to look at problems with vibration in the new Implacable @-@ class aircraft carriers . Once again , the solution lay in propeller design .

On returning to the United States , he met with Major General Leslie R. Groves , Jr . , the director of the Manhattan Project . Mumma became one of four naval officers assigned to the Alsos Mission , the others being Jacob Pieter Den Hartog , Wendell Roop and Henry A. " Packy " Schade . The naval section of Alsos would investigate German naval technologies , but the main objective of the Alsos Mission was to learn all it could about the German nuclear energy project . All members of the mission had ultra secret security clearances , but none had been involved with the development of the atomic bomb .

The naval section of Alsos flew into Paris soon after it had been liberated in August 1944 . They went down to Bordeaux to inspect the captured German destroyer Z39 . After the Alsos Mission became convinced that the Germans had not developed an atomic bomb , the naval section became the Naval Technical Mission Europe . They were particularly interested in the work of Dr Hellmuth Walter in the development of submarines and rockets . Most of the targets that they were interested in lay in the British sector , so they worked closely with their English allies . In the last days of the war , the Naval Technical Mission was part of a 75 @-@ man task force , most of whom were from 30 Assault Unit , that made a dash for Kiel , entering the city far in advance of the Allied advance . The whole garrison of the city , some 150 @,@ 000 men , surrendered to the task force . They drove to Admiral Karl Dönitz 's headquarters in Flensburg , where they saw but did not speak with him , as Dönitz was on his way to surrender . They spoke instead to Admiral Otto Backenköhler , and persuaded him to sign a release for German scientists , so men like Walter could freely discuss their work with the Allies . From April to December 1945 , Mumma also served as assistant naval attaché .

= = Post war = =

Mumma arrived back in the United States in December 1945 , and returned to the Bureau of Ships . The Bureau 's immediate post war priority was to develop nuclear propulsion for ships . With the Chief of the Bureau , Rear Admiral Earle W. Mills , and Captain Paul F. Lee , he went to see Groves and Brigadier General Kenneth Nichols , the commander of the Manhattan District , who were willing to help , but would not offer any fissionable material . The Navy decided to proceed with the design of a nuclear @-@ powered ship . They visited Oak Ridge , and attended lectures of nuclear physics

from George Gamow and Lawrence R. Hafstad . Mumma selected four outstanding young officers and a physicist , Everett Blizzard , to go to Oak Ridge and learn about reactor design . Mills decided that a senior officer should be sent as well , and added Hyman Rickover to the group , something that Mumma warned Mills that he would regret .

In 1949 , Mumma became Production Officer at the San Francisco Naval Shipyard . With the outbreak of the Korean War in 1950 , the shipyard became very busy , as ships such as the Iowa @-@ class battleships were retrieved from being laid up , refurbished and recommissioned . In 1951 , he became commander of the David Taylor Model basin . He supervised the conversion of the submarine USS Albacore to incorporate a teardrop hull , and successfully pressed for a single screw design against entrenched prejudice .

Mumma was promoted to rear admiral in 1954 , and assumed command of the Mare Island Naval Shipyard . He became responsible for celebrating the 100th anniversary of its founding by David Farragut in 1854 . However , his most important task was converting the shipyard over to the construction of nuclear submarines . This involved extensive retraining of the shipyard 's personnel . His tour of command was a short one , for in 1955 he became Chief of the Bureau of Ships . Disappointed with the performance of the USS Nautilus and the Skate @-@ class submarines , he pushed for the adoption of the single screw and teardrop hull . The result was the Skipjack @-@ class submarine . The George Washington @-@ class submarines that followed were a development of the Skipjack with Polaris missiles . He also oversaw the design of the USS Enterprise , the first nuclear @-@ powered aircraft carrier , and its escorts USS Long Beach and USS Bainbridge .

= = Later life = =

Mumma retired from the Navy in 1959 and took a job as Vice President of Engineering at Worthington Corporation . He was elected to the board of directors in 1962 , and became Executive Vice President in 1964 , President in April 1967 , and Chairman of the Board in November 1967 . He retired at the age of 65 in July 1971 . That year President Richard Nixon appointed him to head the American Shipbuilding Commission , which was charged with reporting on ways of improving shipbuilding in the United States . In retirement , he held a number of directorships , on the boards of companies including Prudential Insurance , New Jersey Manufacturers Insurance , the First State Bank , United Hospitals of Newark , Coyful and Esser , C. R. Bard , the Newark Chamber of Commerce , and the New Jersey Chamber of Commerce . He was a member of the National Research Council , and served as President of the American Society of Naval Engineers and the Society of Naval Architects and Marine Engineers , which awarded him its Admiral Jerry Land Gold Medal , and was a trustee of the Webb Institute of Naval Architecture , Drew University and Saint Barnabas Hospital . He was awarded an honorary Doctor of Engineering degree by the Newark College of Engineering , and was created a Grand Officer of the Order of Orange @-@ Nassau by the Queen of the Netherlands .

He died in Gladwyne , Pennsylvania , on 15 July 1997 , and was interred at the United States Naval Academy Cemetery .