

**Index to the Oral History of  
Rear Admiral Albert G. Mumma,  
U.S. Navy (Retired)**

**Accidents**

In the late 1920s Lieutenant Richard Whitehead crashed an O2U on the deck of the aircraft carrier Saratoga (CV-3) when his tailhook caught the barrier wire, 28-29

**Aircraft Carriers**

The effort in the 1950s and 1960s to justify nuclear-powered aircraft carriers, 190-191, 268-269; rejection in the late 1950s of a congressional effort to build an aircraft carrier in a West Coast shipyard, 200-202

**Air Warfare**

The German Air Force used the ME 163 rocket-powered airplane against the Allies in World War II, 107, 116

**Albacore, USS (AGSS-569)**

Experimental test vehicle used in the early 1950s to demonstrate the feasibility of the teardrop-shaped hull as the best hydrodynamic form for a true submarine, 150-151, 172

**Alcohol**

In 1945, in Bremen, Germany, Mumma had to disarm an Army photographer who had gotten drunk and was brandishing a pistol, 111-112

**Alsos Mission**

At the end of World War II, U.S. officers visited France and Germany to ascertain German technical developments during the war, 97, 101-105

See also: Naval Technical Mission Europe

**American Society of Naval Engineers (ASNE)**

Professional society that contributes to the advancement of knowledge in the field, 234-236

**Andrea Doria (Passenger Liner)**

Italian ship that sank in July 1956 off Nantucket after colliding with the Swedish liner Stockholm, 222-224; a longitudinal bulkhead was probably a factor in the sinking, 223-224

**Antisubmarine Warfare**

German U-boats were surprised during World War II by the effectiveness of American airborne radar, 117

### **Arkansas, USS (BB-33)**

Battleship that in the summer of 1923 made a midshipman training cruise to Europe, 7-9

### **Army, U.S.**

In the early years of the 20th century, Morton C. Mumma was one of the top rifle shots in the Army, 1-2; in the early years of the 20th century some Naval Academy graduates went into the Army, 3-4; in 1945, in Bremen, Germany, Mumma had to disarm an Army photographer who had gotten drunk and was brandishing a pistol, 111-112

### **Atomic Energy Commission**

In the first years after the end of World War II controlled all U.S. fissionable material, 127-129, 132

### **Attlee, Clement R.**

Amusing anecdote from 1945 when Attlee replaced Winston Churchill as British Prime Minister, 122-123

### **Backenkohler, Admiral Otto, German Navy**

In 1945 Admiral Otto Backenkohler gave permission for German scientists to talk to Americans about their research work, 115-116

### **Baker, Newton D.**

As Secretary of War during World War I assigned Morton C. Mumma to teach soldiers how to shoot well, 2

### **Barrillon, Engineer General Emile-Georges, French Navy**

In the 1930s did pioneering hydrodynamic work in developing the hull form of the French passenger liner Normandie, 48-49, 92, 157, 159-160

### **Bates, Commander Richard W., USN (USNA, 1915)**

Tough, overbearing individual who served in the late 1930s as commanding officer of the destroyer Clark (DD-361), 68-70, 272; provided shipboard input to a study on destroyer operations, 70-71

### **Bath Iron Works, Bath, Maine**

In the mid-1950s the shipyard's president, John R. Newell, gave back excess profits to the shipbuilding program rather than having them seized by the government, 202; did a fine job for the Navy, 206; launching of the destroyer Hull (DD-945) and keel-laying of the guided missile frigate Dewey (DLG-14) in August 1957, 275-276

### **Battleships**

Work of the David Taylor Model Basin in the early 1940s to correct vibration problems with the propellers in various ships, 79, 81-82, 88-89, 91-92, 152-153, 159-160

### **Bethlehem Steel Company Shipyard, Quincy, Massachusetts**

Construction of such warships as the destroyer Clark (DD-361), aircraft carrier Lexington (CV-2), and battleship Massachusetts (BB-59), 209

### **Blewett, William E., Jr.**

In the 1950s did a fine job of running the Newport News Shipbuilding and Dry Dock Company, 210, 268-269; in 1959 tried to get Mumma to work for his shipyard, 289

### **Bluestone, Dr. Henry**

Naval Academy professor who, in the mid-1930s, provided French language instruction to Mumma to prepare him for postgraduate study in France, 45-46

### **Boatner, Captain Mark J., Jr., USA (USMA, 1918)**

Was stationed in France in the mid-1930s and had a son who later served in the Air Force, 54

### **Boston Naval Shipyard**

In the early 1950s was the lead yard for the conversion of destroyers to radar picket ships, 143-145; in the late 1950s some of the employees tried unsuccessfully to form a veterans' union, 206-208; was not an efficient shipyard, 208

### **Boston (CAG-1)-class Cruisers**

In the 1950s these cruisers were modernized to fire guided missiles, 258-259

### **Bridges, Styles**

U.S. Senator from New Hampshire who was involved in the confirmation process in the mid-1950s when Mumma became Chief of the Bureau of Ships, 182

### **Budgetary Considerations**

In 1939, with modest funding support from the type commander, the crew of the destroyer Clark (DD-361) did a ship's force overhaul at Mare Island Navy Yard, 71-72; in the late 1950s, after steering the nuclear submarine Skipjack (SSN-585), Assistant Secretary of the Navy Wilfred J. McNeil agreed to fund another ship of the class, 189

### **Bureau of Aeronautics**

Rear Admiral James Russell served as chief of the bureau from 1955 to 1957, even though he was an unrestricted line officer, 236, 259-260

### **Bureau of Construction and Repair**

In the late 1930s was squabbling with the Navy's Bureau of Engineering, 76

### **Bureau of Engineering**

In the late 1930s was squabbling with the Navy's Bureau of Construction and Repair, 76

## **Bureau of Navigation**

In the mid-1930s would not ease promotion rules concerning U.S. naval officers serving in Europe, 50-51, 56

## **Bureau of Ordnance**

Rear Admiral William Raborn was given authority within the bureau in the late 1950s as part of the Polaris ballistic missile submarine development program, 213; involved in the conversion in the mid-1950s of the Boston (CAG-1)-class guided missile cruisers, 258-259

## **Bureau of Ships**

In the early 1940s dealt with a number of problems involving shipboard propellers, 79-92; in 1944 sent representatives to Britain to aid the Royal Navy with propeller problems on the aircraft carrier Implacable, 99-101; nuclear power developmental work shortly after World War II, 126-132, 140-141; in the early 1950s did experiments on a high-pressure, high-temperature steam plant tested in the experimental destroyer Timmerman (DD-828), 133-137; in the early 1950s the propellers in the new Mitscher (DL-2)-class destroyers were susceptible to cracking in seawater, 138-139; assessment of Vice Admiral Earle Mills as bureau chief in the late 1940s, 139-140; design in the early 1950s of the Dealey (DE-1006)-class destroyer escorts, 155; design of amphibious warfare ships, 155-156; in 1955 Congress went through the process of confirming Mumma to serve as chief of the bureau, 181-184; the last ship planned for the Skate (SSN-578) class was redesigned with a teardrop hull and became the Skipjack (SSN-585), which performed well on trials, 187-189; in the late 1950s, Under Secretary of the Navy William Franke constituted a board to study the necessity for engineering duty officers, 191-192; Mumma's testimony before Congress and preparations to appear, 193-196; allocation of work among various shipyards, 197-198, 202-203, 230-231; because of Admiral Hyman Rickover's methods, shipbuilding cost overruns increased once Mumma retired in 1959 as bureau chief, 199-200; the effect of the Vinson-Trammell Act, passed by Congress in 1934, was still felt in the 1950s because it allocated a certain proportion of Navy shipbuilding to naval shipyards, 200-201; rejection in the late 1950s of a congressional effort to build an aircraft carrier in a West Coast shipyard, 200-202; bureau employment decreased during Mumma's tenure as chief, 203; involvement in the Polaris ballistic missile submarine program, 211-215; Rear Admiral William Raborn was given authority within the bureau in the late 1950s as part of the Polaris ballistic missile submarine development program, 213; role of the bureau chief as a leader and shaper of the Navy's engineering duty community, 239-242; role on the bureau in the late 1950s in the assignments of engineering duty officers, 246-247; in the 1950s a number of ships built during World War II were converted or substantially upgraded, 257-259; loss of access and authority that resulted from the abolition of the various bureaus in the mid-1960s, 261-262; daily routine in the bureau in the late 1950s, 265; in 1959 a committee chose Mumma's successor as bureau chief, 265-266; in the late 1950s Secretary of the Navy Thomas Gates offered to extend Mumma's tenure as chief of the bureau by four years, 266;

as bureau chief Mumma visited the naval shipyards and other BuShips facilities, 273-274; relationship in the late 1950s with the Ship Characteristics Board, 277-278

**Burke, Admiral Arleigh A., USN (USNA, 1923)**

As Chief of Naval Operations in the latter part of the 1950s provided a strong push for the Polaris ballistic missile submarine program, 212-213; hosted Admiral of the Fleet Lord Louis Mountbatten during his visit to the United States in the late 1950s, 232; assessment of Burke as a fine naval officer, 263-264, 278-280; worked long hours as CNO, 264-265; involved in 1959 in the process to replace Mumma as Chief of the Bureau of Ships, 265-267; interest in the maintenance of the fleet, 275-276; long tenure as CNO, 279; involvement in the 1950s with the Navy Wives' Club, 285-286; sense of humor, 286

**Burris, Captain Harry, USN (USNA, 1924)**

Shortly after World War II was a candidate to lead the U.S. Navy's program to develop nuclear power, but the job went to Captain Hyman Rickover instead, 130-131, 140; health problems and death, 141

**Carney, Admiral Robert B., USN (USNA, 1916)**

In the early 1940s was the commanding officer of the light cruiser Denver (CL-58) when she had a problem with "singing" propellers that was solved at the Philadelphia Navy Yard, 84-85; in 1955 was Chief of Naval Operations when Mumma became Chief of the Bureau of Ships, 85; in 1954 attended the centennial of the founding of the Mare Island Naval Shipyard, 175; listened to Mumma's pitch in the mid-1950s for an improved hydrodynamic shape for submarine hulls, 186-187, 192; replaced as CNO in 1955 in order to get a more youthful individual into the office, 264; was a bright and articulate individual, 279-280

**Casablanca, USS (CVE-55)**

During sea trials in 1943 demonstrated a phenomenon known as "singing" propellers, 86-87

**Casablanca (CVE-55)-class Aircraft Carriers**

From the time they went into service in 1943, the ships of this class had problems with "singing" propellers, 86-87

**Chicago, USS (CA-29)**

Heavy cruiser that in the late 1930s served as flagship for Commander Cruisers Scouting Force, 57-58

**Churchill, Winston**

Amusing anecdote from 1945 when Clement Attlee replaced Churchill as British Prime Minister, 122-123

### **Clark, USS (DD-361)**

Destroyer that was commissioned on the East Coast in the late 1930s and then operated in the Pacific, 58-60, 66-70; in the late 1930s the ship's black messmen were replaced by Filipinos to save on food costs, 59-60; black sailors had limited job opportunities on board the ship, 62-63; quality of the propulsion plant, 64-65; requirement in 1937 that water and oil not be mixed in fuel tanks, 64-65; the ship rolled heavily as a result of not being well ballasted, 65; in 1939 made a long cruise to the East Coast, 67-68; in 1939, with modest funding support from the type commander, the crew did a ship's force overhaul at Mare Island Navy Yard, 71-72; hoods attached to smokestacks to smooth the flow of gases, 253; when Mumma left the ship, the engineers presented a clock to him, 271-272

### **Coal**

In the summers of the mid-1920s Naval Academy midshipmen made training cruises in several coal-burning battleships, 6-9

### **Collisions**

In the early 1930s a collision involving the destroyers Waters (DD-115) and Rathburne (DD-113) resulted in damage to the former, 40-41; the Italian passenger ship Andrea Doria sank in July 1956 off Nantucket after colliding with the Swedish liner Stockholm, 222-224

### **Combs, Lieutenant Thomas S., USN (USNA, 1920)**

In the late 1920s served as landing signal officer on board the aircraft carrier Saratoga (CV-3), 28, 30-31

### **Commercial Ships**

In 1956 ship designer William Francis Gibbs asked Mumma to ride the liner United States to Europe to provide a technical assessment in the event a follow-on liner were to be built, 221-225, 228; in July 1956 the Italian liner Andrea Doria and Swedish liner Stockholm collided off Nantucket, 222-224

### **Computers**

Use of in the 1950s by the David Taylor Model Basin, 164-167; used to calculate actuarial information for survivor benefits, 166

### **Congress**

In 1959 Congress passed a law that retired pay would no longer be based on active duty pay, 51-52; as an engineering specialist, Hyman G. Rickover needed support from Congress to become a four-star admiral, 75, 240; in the late 19th century David W. Taylor sold the idea of a model basin to Congress, 169; in the 1950s Senator Henry M. Jackson was quite interested in nuclear power issues, 176-177; in 1955 went through the process of confirming Mumma to serve as Chief of the Bureau of Ships, 181-184; in the late 1950s questioned the Marine Corps about a large supply on hand of canned hamburgers, 193-194; congressional concerns in the late 1950s about the effect of sewer drainage problems in the city of Olongapo on the adjacent

U.S. naval base at Subic Bay in the Philippines, 194-195; heard testimony on behalf of BuShips programs, 196-197; the effect of the Vinson-Trammell Act, passed by Congress in 1934, was still felt in the 1950s because it allocated a certain proportion of Navy shipbuilding to naval shipyards, 200-201; rejection in the late 1950s of a congressional effort to build an aircraft carrier in a West Coast shipyard, 200-202; in the late 1950s congressmen objected whenever Mumma tried to impose cuts on the New York Naval Shipyard, 203-204; senators from Massachusetts were involved in the late 1950s when a group of employees at the Boston Naval Shipyard tried unsuccessfully to form a veterans' union, 206-208; Representative Thomas Pelly from Washington tried to get advance word when the Puget Sound Naval Shipyard would be getting jobs, 208-209; in the late 1950s supported the Polaris ballistic missile submarine program, 282; Sam Rayburn was an excellent Speaker of the House, 282-283; in the late 1950s Representative F. Edward Hebert raised conflict-of-interest questions with Mumma and other retired flag officers about their civilian employment, 292-294

**Curie, Marie**

Scientist who was interviewed by the Alsos Mission in Paris in 1944 concerning her work on fissionable material, 101-103

**Curtis, Dr. Wesley**

As a consultant, did important research work on propellers in the early 1940s at the David Taylor Model Basin, 79, 92-93, 162

**David Taylor Model Basin, Carderock, Maryland**

Propeller research in the early 1940s, 73, 79-82, 92-94, 161-162; construction of in the late 1930s, 75; installation in 1939 of a water tunnel at Carderock rather than in the experimental station in Annapolis, 92, 162; testing in the early 1950s of a true hydrodynamic design for submarines, 149-151; interaction in the 1950s with the design people in the Bureau of Ships, 156, testing of hull forms, 163-169, 171-172; recalibration of the towing tank, 164; use of computers in the 1950s, 164-167; the work of the Model Basin involved top-notch personnel, 168-169; allocation of funding in the 1950s to support the work of the command, 170-171; testing in the early 1940s of propellers for the Fletcher (DD-445)-class destroyers, 227

**Dealey (DE-1006)-class Destroyer Escorts**

When designed in the early 1950s were not equipped with sufficient power, 155

**Den Hartog, Captain Jacob P., USNR**

MIT professor who took part at the end of World War II in the Alsos Mission to assess German technical developments, 97, 101, 105

**Denver, USS (CL-58)**

Light cruiser that in World War II had a problem with “singing” propellers that was solved at the Philadelphia Navy Yard, 84-85

### **Destroyer Flotilla Two**

Study conducted in the late 1930s on condenser problems in the engineering plants of the ships of Destroyer Flotilla Two on the West Coast, 60-62; in 1939, with modest funding support from the type commander, the crew of the destroyer Clark (DD-361) did a ship's force overhaul at Mare Island Navy Yard, 71-72

### **Destroyers**

Study conducted in the late 1930s on condenser problems in the engineering plants of the ships of Destroyer Flotilla Two on the West Coast, 60-62; at San Diego in the late 1930s ready destroyers maintained steam pressure so they could intercept and board suspicious-looking ships, 66-67; in the early 1950s several naval shipyards converted destroyers to serve as radar pickets, 143-145; impact in the 1950s of large sonar domes on the bows, 156-157; in the 1930s the French designed destroyers that sacrificed firepower and range in order to achieve high speed, 158; sea-keeping characteristics of various classes, 252-253; in the 1950s a number of World War II destroyers were modernized, 257

### **Dewey, USS (DLG-14)**

Guided missile frigate whose keel was laid in 1957 at Bath Iron Works, 275-276

### **Dick, Lieutenant Raymond H., USNR**

Was selected shortly after World War II to be one of the initial participants in the Navy's nuclear power program, 129

### **Disciplinary Problems**

In 1945, in Bremen, Germany, Mumma had to disarm an Army photographer who had gotten drunk and was brandishing a pistol, 111-112

### **Draper, Dr. Stark**

Massachusetts Institute of Technology professor who had a key role in the late 1950s in the development of the guidance system for the Polaris submarine-launched ballistic missile, 213-215

### **Du Mont, Allen**

Consultant who worked with the David Taylor Model Basin in the early 1940s, 79, 160-162

### **Dunford, Lieutenant Commander James M., USN (USNA, 1939)**

Was selected shortly after World War II to be one of the initial participants in the Navy's nuclear power program, 129, 140, 173, 200

### **Durand, William F.**

A graduate of the Naval Academy class of 1880, he later founded several prestigious engineering schools, 77-79; work in the early part of the 20th century in the Navy's model basin, 170

### **Edgerton, Dr. Harold**

As a consultant, did important research work on propellers in the early 1940s at the David Taylor Model Basin, 80-81

### **Education**

In 1935-36 Mumma did postgraduate study in engineering at the Ecole d'Application Génie Maritime school in Paris, 46-49, 55-56; in the late 1800s and early 1900s a number of U.S. naval officers did their postgraduate education in Europe, 46-49; in the 1950s the Chief of the Bureau of Ships monitored the postgraduate education for future members of the engineering duty community, 239-240; John J. McMullen did overseas engineering study in Switzerland, 244-246

### **Eisenhower, General of the Army Dwight D., USA (USMA, 1915)**

As Supreme Allied Commander in Europe in World War II, agreed to ending a technical exchange with the Soviet Union because of violation of agreements concerning access to Gdynia, Poland, 110; as President in the late 1950s rejected a congressional effort to build an aircraft carrier in a West Coast shipyard, 200-202; when he was President his wife visited the naval officers' wives' club, 285-286

### **Electric Boat Company, Groton, Connecticut**

Built fine PT boats for the U.S. Navy in World War II, 96; in the 1950s the Navy was concerned that Electric Boat was the only U.S. civilian shipyard building nuclear submarines, 177-178; construction in the late 1950s of the first Polaris ballistic missile submarines, 211-216

### **Engineering Plants**

See: Propulsion Plants

### **Enlisted Personnel**

The difficult economy during the Depression of the 1930s resulted in high-quality personnel enlisting in the Navy, 33-34, 62-63; when Mumma left the destroyer Clark (DD-361) in the late 1930s, the ship's engineers presented a clock to him, 271-272

### **Enterprise, USS (CVAN-65)**

Justification in the late 1950s for construction of this nuclear-powered aircraft carrier, 189-190, 268-269

### **F-111**

See: TFX

### **Families of Servicemen**

Living conditions for Navy people and their families in the late 1920s and early 1930s in Long Beach, California, 42-43; in that era the Navy provided little support for families, 43; the son of an Army officer stationed in France in the mid-1930s subsequently became an Air Force officer, 54; in the 1950s the naval officers' wives'

club was formed and had a positive effect, 285-287; role of the Navy Relief Society, 286

**Farrin, Rear Admiral James M., Jr., USN (USNA, 1929)**

In World War II, while serving in the Bureau of Ships, observed trials for PT boats, 96; in the late 1950s was involved in the design aspects of the Polaris ballistic missile submarine program, 213, 215; in 1959 was a candidate to succeed Mumma as Chief of the Bureau of Ships, 265

**Fire**

In the late 1920s the captain's gig of the aircraft carrier Saratoga (CV-3) was destroyed as a result of spilled gasoline and a fire when the ship was in Long Beach, 29-30

**Fitzsimmons, Ensign John P., USN (USNA, 1926)**

In the late 1920s was officer of the deck on board the aircraft carrier Saratoga (CV-3) when an O2U crashed on the flight deck, 28-29

**Fletcher (DD-445)-class Destroyers**

Design of the propellers for this class in the early 1940s, 227

**Fog**

In the late 1930s Mumma did a fine job of navigating the destroyer Clark (DD-361) when anchoring in fog in Coronado Roads, California, 68-70

**Food**

Bill of fare that Mumma served in the late 1930s while serving as mess treasurer in the destroyer Clark (DD-361), 59-60; in the late 1930s the Clark's black messmen were replaced by Filipinos to save on food costs, 59-60; in 1944 U.S. officers of the Alsos Mission to Europe carried rations with them, 103; the British had real shortages of food in the period right after the end of World War II, 121-122; in the late 1950s Congress questioned the Marine Corps about a large supply on hand of canned hamburgers, 193-194

**Forrestal, USS (CVA-59)**

During construction in the 1950s the aircraft carrier Saratoga (CVA-60) had different main machinery than her near-sister Forrestal (CVA-59), 210

**France**

In 1935-36 Mumma did postgraduate study in engineering at the Ecole d'Application Génie Maritime school in Paris, 46-50; in the mid-1930s there was a small community of Americans, both military and civilian, in Paris, 54; in the mid-1930s Mumma made a Memorial Day speech about the World War I Battle of Chateau-Thierry, 54-55; in 1944 U.S. officers of the Alsos Mission visited France and Germany to ascertain German technical developments during World War II, 102-104

**Franke, William B.**

As Secretary of the Navy from 1959 to 1961 did not have the technical vision of his predecessor, Thomas Gates, 191, 280; in the late 1950s, as Under Secretary, constituted a board to study the necessity for engineering duty officers, 191-192, 236, 242-243

**French Navy**

The battleship Richelieu, after joining the Allies, was completed at the New York Navy Yard in 1943, 153-154; in the 1930s the French designed destroyers that sacrificed firepower and range in order to achieve high speed, 158

**Gates, Thomas S.**

As Under Secretary of the Navy in 1955 heard Mumma's pitch for an advanced submarine design, 186, 193; as Secretary of the Navy in the late 1950s had a strong involvement in the development of the Polaris ballistic missile submarine program, 212-213; after the Franke Board in the late 1950s recommended doing away with the training of engineering specialists in the Navy, Gates as Secretary opted to retain the status quo, 243; in the late 1950s offered to extend Mumma's tenure as Chief of the Bureau of Ships by four years, 266; served as Secretary of Defense after being Secretary of the Navy, 279; fine understanding of technical issues, 280-281

**Gdynia, Poland**

In 1945 the Soviets violated agreements made at Yalta concerning the occupation of the port of Gdynia, 108-110

**General Dynamics Corporation**

In the 1950s the Navy was concerned that the Electric Boat Division was the only U.S. civilian shipyard building nuclear submarines, 177-178; construction in the late 1950s of the first Polaris ballistic missile submarines, 211-216

**General Electric, Schenectady, New York**

During World War II was involved in a variety of research projects on behalf of the Navy, 98; developmental work on nuclear power plants shortly after World War II, 127-128, 141, 216; in the mid-1950s developed the sodium-cooled nuclear power plant in the submarine Seawolf (SSN-575), 216-217; in the late 1950s tried unsuccessfully to recruit Mumma to work for the company, 288

**German Air Force**

Used the Messerschmitt ME 163 rocket airplane against the Allies in World War II, 107, 116

**German Navy**

In World War II Helmut Walter did experimental work on hydrogen peroxide propulsion plants for submarines, 104, 106, 108, 113-117, 120-121; in 1945 Admiral Otto Backenkohler gave permission for German scientists to talk to Americans about their research work, 115-116; German U-boats were surprised during World War II

by the effectiveness of American airborne radar, 117; some U-boats made voyages to Japan during the war, 117-118; postwar disposition of German assets to the Allies, 123

### **Germany**

During World War II launched V-1 and V-2 rockets against the Allies, 100-101, 106-107; did some developmental work on nuclear weapons in World War II but didn't accomplish much, 104; in 1945, at the end of World War II in Europe, a number of German scientists chose to be captured by Americans rather than Soviets, 108; tour of the defeated country in 1945 by members of the U.S. Naval Technical Mission Europe, 110-113

### **Gibbs, William Francis**

Key figure in the engineering firm of Gibbs & Cox that did design work on the propulsion plants of the new gold-plater destroyers that in the 1930s began entering the U.S. Navy, 64; served in the late 1940s and early 1950s as a consultant on the Navy's experimental destroyer Timmerman (DD-828), which was testing new high-pressure, high-temperature steam propulsion machinery, 134-135; was a curmudgeon in personality, 135, 225-227; in 1956 asked Mumma to ride the liner United States to Europe and give him a technical assessment of the ship, 221-225, 228; had a great interest in high-speed ships, 226-227; some changes to the design of the United States came as a result of Navy requirements, 226, 255, 262

### **Goudschmidt, Dr. Sam**

At the end of World War II took part in the Alsos Mission to France and Germany to assess German technical developments, 97, 101-103

### **Great Britain**

The British had real shortages of food in the period right after the end of World War II, 121-122; amusing anecdote from 1945 when Clement Attlee replaced Winston Churchill as Prime Minister, 122-123

See also: Royal Navy

### **Greber, Lieutenant Charles F., USN (USNA, 1921)**

In the late 1920s was a flight instructor for indoctrination aviation training at North Island Naval Air Station, 25

### **Groves, Major General Leslie R., USA**

In 1944 set up the Alsos Mission, in which U.S. officers visited France and Germany to ascertain German technical developments during World War II, 101; discussions with Bureau of Ships personnel on nuclear power plants, 126-127, in the 1950s worked with computers for Univac, 165

### **Guantanamo Bay, Cuba**

In 1937 was the site of shakedown training for the crew of the recently commissioned destroyer Clark (DD-361), 66; testing in the mid-1950s of missiles fired by Boston (CAG-1)-class cruisers, 258

### **Gunnery-Naval**

Violent effect during the testing of 16-inch guns on board the battleship Iowa (BB-61) in World War II, 253-254

### **Habitability**

Improvements in this area for U.S. warships came after World War II, 229

### **Halsey, Rear Admiral William F., Jr., USN (USNA, 1904)**

In the late 1930s commanded the naval air station at Pensacola, Florida, 66

### **Hebert, F. Edward**

Louisiana Representative to Congress who in the late 1950s raised conflict-of-interest questions with Mumma and other retired flag officers about their civilian employment, 292-294

### **Higgins Industries**

In World War II built PT boats that Mumma considered inferior, 96-97; orders for Higgins boats were not cancelled, despite a Navy recommendation to do so, 97

### **Hillenkoetter, Rear Admiral Roscoe H., USN (USNA, 1920)**

In the early 1930s served as a U.S. military courier in Europe, 50, 52-54; was later first director of the Central Intelligence Agency, 52-53; after World War II commanded the battleship Missouri (BB-63), 53

### **Holloway, Vice Admiral James L., Jr., USN (USNA, 1919)**

In 1955 informed Mumma that he had been selected as the next Chief of the Bureau of Ships, 180

### **Honsinger, Rear Admiral Leroy V., USN (USNA, 1927)**

In the late 1940s served in the hull design section of the Bureau of Ships, 126; in the late 1950s served as Deputy Chief of the Bureau of Ships, 185; in 1959 was a candidate to succeed Mumma as Chief of the Bureau of Ships, 265; later became shipyard commander at Mare Island, 267

### **Hopwood, Admiral Herbert G., USN (USNA, 1920)**

As Commander in Chief Pacific Fleet in the late 1950s, lent his airplane to Mumma to visit various BuShips activities, 273-274

### **Howard, Rear Admiral William E., Jr., USN (USNA, 1928)**

In the late 1950s was the commander of the Boston Naval Shipyard when a group of employees tried unsuccessfully to form a veterans' union, 206-208

### **Huckins Yacht Company**

In World War II built PT boats for the U.S. Navy, 96

### **Hughes, Admiral Charles F., USN (USNA, 1888)**

Used the armored cruiser Seattle as flagship while serving in the mid-1920s as Commander in Chief U.S. Fleet, 16-18

### **Hull, USS (DD-945)**

Destroyer that was christened by Mrs. Mumma at the time of launching in 1957, 276

### **Hunsaker, Dr. Jerome**

After graduating first in the Naval Academy class of 1908, he did important developmental work in aeronautics, 77-78, 169

### **Hurricanes**

In September 1926 a division of U.S. light cruisers ran into an Atlantic hurricane during a voyage to Cuba, 14-16

### **Implacable, HMS (British Aircraft Carrier)**

In 1944 U.S. Navy Bureau of Ships representatives went to Britain to aid the Royal Navy with propeller problems on the Implacable, 99-101

### **Ingalls Shipbuilding, Pascagoula, Mississippi**

In the late 1950s the Bureau of Ships began putting more work here because it was a well-run shipyard, 219

### **Inspections**

In the late 1930s Rear Admiral William Pye, Commander Destroyer Flotilla Two, conducted an annual military inspection of the destroyer Clark (DD-361), 68

### **Intelligence**

Japanese trawlers operated in the vicinity of San Diego in the late 1930s to collect information, 66-67

### **Iowa, USS (BB-61)**

Battleship that was damaged in 1943 when she scraped a rock at Casco Bay, Maine, 83, 254-255; had underwater skegs that impeded turning the ship, 88; in the early 1950s was reactivated from mothballs to take part in the Korean War, 143-144; gunnery trials during World War II, 253-254

### **Iranian Navy**

In the early 1950s the Shah of Iran visited the San Francisco Naval Shipyard to get some ideas for supporting his own navy, 146-147

## **Italy**

In the years after World War II Italy was one of several European countries that built ships under the aegis of the U.S. Marshall Plan, 221; the Italian passenger ship Andrea Doria sank in July 1956 off Nantucket after colliding with the Swedish liner Stockholm, 222-224

## **Jackson, Henry M.**

U.S. Senator who in the 1950s was quite interested in nuclear power issues, 176-177; in 1955 was involved in Mumma's confirmation hearing to become Chief of the Bureau of Ships, 184

## **James, Rear Admiral Ralph K., USN (USNA, 1928)**

In 1959 was selected to succeed Mumma as Chief of the Bureau of Ships, 265, 267

## **Japan**

Japanese trawlers operated in the vicinity of San Diego in the late 1930s to collect information, 66-67; some German U-boats made voyages to Japan during the World War II, 117-118; operation of U.S. Navy ship repair facilities at Yokosuka and Sasebo in the late 1950s, 274-275; the nation prospered in the years following World War II, 275

## **Johnson, Lyndon B.**

U.S. Senator from Texas who was involved in the confirmation process in the mid-1950s when Mumma became Chief of the Bureau of Ships, 183-184

## **Kaiser Shipbuilding Company**

In World War II built Casablanca (CVE-55)-class escort carriers that had problems with "singing" propellers, 86-87

## **Kaplan, Captain Leonard, USN (USNA, 1922)**

Was subject to prejudice while at the Naval Academy because he was Jewish, 247-248; did a fine job as a naval engineer after being commissioned, 248-250

## **Kennedy, John F.**

Was involved as a U.S. Senator in the late 1950s when a group of employees at the Boston Naval Shipyard tried unsuccessfully to form a veterans' union, 206-208

## **Kingdon, Dr. Kenneth**

As technical director of a General Electric laboratory near Schenectady, New York, had a role in the 1940s and 1950s in the development of the Navy's nuclear power program, 141, 216-217

## **Kniskern, Lieutenant Commander Leslie A., USN (USNA, 1922)**

After postgraduate work in naval engineering, worked in the Bureau of Construction and Repair in the 1930s, 57, 157

### **Korean War**

With the advent of the war in the summer of 1950, the San Francisco Naval Shipyard reactivated a number of ships from mothballs, 143-144

### **Labor Unions**

In the late 1950s a group of employees at the Boston Naval Shipyard tried unsuccessfully to form a veterans' union, 206-208

### **Land, Rear Admiral Emory S., USN (USNA, 1902)**

As Chief of the Bureau of Construction and Repair in the mid-1930s, was interested in the engineering achievements in the French passenger liner Normandie, 44-45, 157

### **Lash, Captain Frank H., CHC, USN**

Chaplain who, near the end of World War II, provided Mumma with a Bible verse for a slightly sacrilegious message concerning the Soviets, 110

### **Lee, Rear Admiral Paul F., USN (USNA, 1919)**

In the period shortly after World War II was involved in the Bureau of Ships efforts to develop nuclear power plants for ships, 126-127, 129; work with the experimental destroyer Timmerman (DD-828), 133-135

### **Lee, Lieutenant Commander Willis A. Jr., USN (USNA, 1908)**

Top-flight marksman who won medals at the 1920 Olympics as a member of the U.S. rifle team, 10-11

### **Leggett, Rear Admiral Wilson Durward, Jr., USN (USNA, 1921)**

As Chief of the Bureau of Ships in the mid-1950s decided to have the Mare Island Naval Shipyard build nuclear-powered ships, 174; in 1955 completed his tenure as bureau chief and retired, 181-182

### **Lexington, USS (CV-2)**

Aircraft carrier that in the 1920s had a rivalry with her sister ship Saratoga (CV-3), 25-26, 32-35, 209-210, 278-279; the ship's overhang snapped off light poles in the late 1920s when she went through the Panama Canal, 33; in January 1929 took part in a fleet problem that involved an attack on the Panama Canal, 34-35; in 1929-30 provided electrical power to the city of Tacoma, Washington, 36-37

### **Libbey, Lieutenant Commander Miles A., Jr., USN (USNA, 1939)**

Was selected shortly after World War II to be one of the initial participants in the Navy's nuclear power program, 129

### **London, England**

U.S. Bureau of Ships representatives were present in London in 1944 when German V-1 rockets rained down on the city, 100-101; the British had real shortages of food in the period right after the end of World War II, 121-122

### **Long Beach, California**

In the late 1920s Lieutenant Richard Whitehead crashed an O2U on the deck of the aircraft carrier Saratoga (CV-3) when trying to land with the ship anchored at Long Beach, 28-29; local living conditions for Navy people and their families in the late 1920s and early 1930s, 42-43

### **ME 163**

German rocket-powered airplane that was used against the Allies in World War II, 107, 116

### **Manseau, Rear Admiral Bernard E., USN (USNA, 1922)**

In the late 1940s commanded the San Francisco Naval Shipyard, 143, 147-148; from 1950 to 1952 commanded the Mare Island Naval Shipyard, 148; in the mid-1950s served as Deputy Chief of the Bureau of Ships, 182, 184; suffered a heart attack and in 1957 retired from active duty, 185

### **Mare Island Navy Yard, Vallejo, California**

In 1939, with modest funding support from the type commander, the crew of the destroyer Clark (DD-361) did a ship's force overhaul at Mare Island, 71-72; in the early 1950s was involved in the conversion of destroyers to radar picket ships, 143-145; in the mid-1950s began preparing to build nuclear-powered submarines, 174-177; in 1954 the shipyard celebrated its centennial, 174-175; elements that made Mare Island a fine location for a shipyard, 174-175; involvement with the local community, 179; had a fine set of quarters for the shipyard commander, 178-180

### **Marine Corps, U.S.**

In the early 1950s, during the Korean War, the San Francisco Naval Shipyard activated and overhauled amphibian vehicles for the Marine Corps, 147; in the 1950s influenced the design of amphibious warfare ships, 155-156; in the late 1950s Congress questioned the Marine Corps about a large supply on hand of canned hamburgers, 193-194

### **Marksmanship**

In the early years of the 20th century, Morton C. Mumma was one of the top rifle shots in the Army, 1-2, 9-10; his sons followed his example, 10; Navy teams did well in the early 1920s in national and international shooting matches, 10-13, 21-22

### **Marshall Plan**

As part of the European recovery program in the years after World War II, the United States supported shipbuilding in various overseas shipyards, 221

### **McCracken, Lieutenant Commander Alan R., USN (USNA, 1922)**

In the late 1930s served as executive officer of the destroyer Clark (DD-361) until he had to leave because of eye problems, 59, 67-68, 70-71

**McCrea, Captain John L., USN (USNA, 1915)**

Was commanding officer of the battleship Iowa (BB-61) in 1943 when she ripped a gash in her bottom at Casco Bay, Maine, 254-255

**McKee, Rear Admiral Andrew I., USN (Ret.), (USNA, 1917)**

Retired naval officer who worked for Electric Boat in the late 1950s as the Polaris ballistic missile submarines were being developed, 215

**McLean, Captain Ridley, USN (USNA, 1894)**

Was a tough taskmaster in the early 1920s while commanding the battleship Arkansas (BB-33), 8-9

**McMullen, Commander John J., USN (USNA, 1940)**

Top-notch naval engineer who received specialized training in Switzerland, later left the service in 1954 and founded his own company, 244-246

**McNamara, Robert S.**

As Secretary of Defense in the 1960s, instituted total package procurement, which involved buying all ships of a given class from one defense contractor, 197-198, 250

**McNeil, Wilfred J.**

In the late 1950s, as Assistant Secretary of the Navy, he steered the nuclear submarine Skipjack (SSN-585) and then agreed to fund another ship of the class, 189

**Medical Problems**

In the 1950s Rear Admiral Bernard Manseau, Deputy Chief of the Bureau of Ships, retired after suffering a heart attack, 184-185

**Memphis, USS (Armored Cruiser)**

In August 1916 was washed ashore at Santo Domingo by a tidal wave, 16, 18

**Mills, Vice Admiral Earle W., USN (USNA, 1918)**

In the late 1930s served as the staff engineer for Commander Destroyer Flotilla Two and directed a study of condenser problems in ships of the flotilla, 60-62 in 1939, with modest funding support from Mills as the type commander's engineer, the crew of the destroyer Clark (DD-361) did a ship's force overhaul at Mare Island Navy Yard, 71-72; around 1940 advised Mumma to transfer from the unrestricted line and become an engineering duty specialist, 73-75, 236; rode the battleship Iowa (BB-61) in 1943 at Casco Bay, Maine, 83; in 1942 cautioned Mumma against speaking about nuclear power plants, 98-99, 128; in 1944 went to Britain to aid the Royal Navy on propeller problems, 99-101; in 1944 selected Bureau of Ships representatives for the Alsos Mission to Europe, 101; involvement shortly after World War II in the Navy's effort to develop shipboard nuclear power plants, 126, 129-132; in the late 1940s steered Mumma into a shipyard job to aid his professional development, 133; in the late 1940s urged testing new high-pressure, high-temperature steam propulsion equipment, 133-134; assessment of as Chief of the Bureau of Ships in the late 1940s,

139-140; involved during World War II in keeping naval engineers informed on new developments, 242

### **Missiles**

Development in the late 1950s of Polaris for use in submarines, 211-214; conversion in the mid-1950s of the Boston (CAG-1)-class cruisers to fire guided missiles, 258-259

### **Mitscher (DL-2)-class Destroyers**

In the early 1950s the propellers in this new class of destroyers were susceptible to cracking in seawater, 138-139

### **Model Basin, Washington, D.C.**

Birthplace early in the 20th century of the National Advisory Committee for Aeronautics, 76; had a valuable wind tunnel for aeronautical testing, 76-78, 170

See also: David Taylor Model Basin, Carderock, Maryland

### **Moffett, Rear Admiral William A., USN (USNA, 1890)**

Contributed a great deal to the development of naval aviation in the early years of the 20th century, 77

### **Moorer, Rear Admiral Thomas H., USN (USNA, 1933)**

In the late 1950s participated in the Franke Board study on the necessity for having engineering specialists in the Navy, 242

### **Moreell, Lieutenant Commander Ben, CEC, USN**

In the early 1930s went to France for postgraduate study in civil engineering, 46

### **Morgan, Captain Armand M., USN (USNA, 1924)**

As a midshipman in the early 1920s, did well in marksmanship, 10; finished first in his class at the Naval Academy, 118-119; at the end of World War II helped in evaluating German submarine development progress, 119; views concerning having multiple propellers on submarines, 119-120, 151-152; shortly after World War II became involved in the program to develop nuclear power for ships, 128; was supportive of Mumma as Chief of the Bureau of Ships, 181; involved in the 1950s in the introduction of nuclear submarines with teardrop-shaped hulls, 189

### **Motor Torpedo Boats**

See: PT Boats

### **Mountbatten, Admiral of the Fleet, Lord Louis, Royal Navy**

In 1956 hosted Mumma during a visit to Britain, 231-232; later visited naval facilities in the United States and reorganized the Royal Navy as a result, 232-233; assessed as a charming, charismatic individual, 233-234

**Mumma, Rear Admiral Albert G., USN (USNA, 1926)**

Parents of, 1-5, 9-10, 13, 17, 19-20; interest in the Naval Academy, 1, 3-4; siblings, 2-4, 10-13, 19-21; interest in engineering, 4-5; from 1922 to 1926 was a Naval Academy midshipman, 4-14; as a midshipman and junior officer was a member of marksmanship teams, 11-12, 21-22; duty in cruisers shortly after his 1926 graduation from the Naval Academy, 14-19; in late 1926 met his future wife, Carmen Braley, in Iowa and married her in October 1927, 19-21; service from 1927 to 1931 in the aircraft carrier Saratoga (CV-3), 23-37; in the late 1920s underwent aviation indoctrination training, 25-26; from 1931 to 1932 served in the destroyer Waters (DD-115), 37-44; children of, 43-44, 46-48, 145, 149, 237, 294; in 1932-34 attended Postgraduate School in Annapolis, 44-46; in 1934-36 did postgraduate study in France, 46-56, 157-158; duty in the late 1930s in the crew of the destroyer Clark (DD-361), 58-73, 270-272; served in 1939-43 at the David Taylor Model Basin in Carderock, Maryland and subsequently in the Bureau of Ships, 73-100, 253-257; around 1940 decided to transfer from the unrestricted line and become an engineering specialist, 73-75; in the early 1950s commanded the David Taylor Model Basin, 78; in 1944-45 was part of the Alsos Mission and Naval Technical Mission to ascertain German progress during World War II in technical development, 101-126; service following World War II in the ship design section of the Bureau of Ships and involvement with the origins of the Navy's nuclear power program, 126-142; served from 1949 to 1951 as production officer of the San Francisco Naval Shipyard, 143-149; in the early 1950s commanded the David Taylor Model Basin in Carderock, Maryland, 149-156, 162-172; in 1954-55 commanded the Mare Island Naval Shipyard, 174-180; served from 1955 to 1959 as Chief of the Bureau of Ships, 180-252, 257-270, 273-284; post-Navy work for the Worthington Corporation, 287-294; activities following his 1971 retirement from Worthington, 295-297

**Mumma, Carmen Braley**

In late 1926 met her future husband, Albert Mumma, in Iowa and married him in October 1927, 19-21; learned to fire a pistol, 22; family life in Long Beach in the late 1920s and early 1930s, 42-43; in the mid-1930s went with her husband and children to spend a year in France, 46-48; contributions over many years to her husband's naval career, 237-238, 287; in 1957 served as sponsor during the launching of the destroyer Hull (DD-945) at Bath Iron Works, 276; in the 1950s served as first president of the naval officers' wives' club, 285-286; enjoyed good health while living in New Hampshire in the late 1980s, 296

**Mumma, Major Harlan, USA (USMA, 1916)**

In 1937, while stationed in Panama, rode the destroyer Clark (DD-361) through the canal, 66; knew Dwight Eisenhower as a cadet, 285

**Mumma, Colonel Morton C., USA (Ret.) (USMA, 1900)**

Career Army officer who served in the Philippines around 1910 and later served in the ROTC unit at the University of Iowa, 1-3, 5; was one of the top rifle shots in the

Army, 1-2, 10-11; attended the 1926 Army-Navy football game at Chicago with his family, 19-20; served as a football official, 20

**Mumma, Commander Morton C., Jr., USN (USNA, 1925)**

Around 1918, as a youngster, had his first airplane ride, 2; originally planned to attend the Military Academy at West Point, but in 1921 he took an appointment to the Naval Academy instead, 3; naval duties after he was commissioned, 4; was a top-flight marksman who was involved in shooting matches as a midshipman and junior officer, 11-13, 21; served as executive director of the National Rifle Association, 13; in 1937 was in command of a submarine based in Panama, 66

**Mumma, Colonel Morton C. III, USAF (Ret.) (USMA, 1948)**

In the 1980s served as executive director of the National Rifle Association, 12-13

**NC-4 Flying Boat**

The aircraft that made the first transatlantic flight in 1919 was developed at the Navy Model Basin in Washington, D.C., 76-77

**National Advisory Committee for Aeronautics**

Was founded early in the 20th century at the Navy Model Basin in Washington, D.C., 76, 170

**Nautilus, USS (SSN-571)**

In the mid-1950s Mumma pushed for submarines with a more hydrodynamically advanced hull form than that in the Nautilus, 186-188; deliberate melt-down of a prototype nuclear reactor in the early 1950s at Arco, Idaho, 211-212; early tests in 1955 went well, 216

**Naval Academy, Annapolis, Maryland**

In the early years of the 20th century some Naval Academy graduates went into the Army, 3-4; the class of 1926 was the first to get aviation training, 4-6, 9, 25; summer training cruises in the mid-1920s, 6-9; in the 1920s the academy football was regularly beaten by the one from West Point, 14; classic Army-Navy football game in 1926 ended in a 21-21 tie, 19-20

**Naval Technical Mission Europe**

Near the end of World War II, U.S. naval officers toured France and Germany to ascertain German technical progress during the war, 104, 106-107, 110-121, 124; postwar disposition of German assets to the Allies, 123

**Navigation**

In the late 1930s Mumma did a fine job of navigating the destroyer Clark (DD-361) when anchoring in fog in Coronado Roads, California, 68-70

**Navy Relief Society**

In the late 1950s provided effective help to the families of enlisted men, 286-287

**Naymark, Lieutenant Commander Sherman, USN (USNA, 1941)**

Was selected shortly after World War II to be one of the initial participants in the Navy's nuclear power program, 132, 140

**Newell, John R.**

In the mid-1950s, as president of Bath Iron Works, gave back excess profits to the shipbuilding program rather than having them seized by the government, 202; did a fine job for the Navy, 206

**New Jersey, USS (BB-62)**

Had underwater skegs that impeded turning the ship, 88; in 1943 went on sea trials, 89, 91

**Newport News Shipbuilding and Dry Dock Company**

In the 1950s did a fine job of aircraft carrier construction, but Mumma was reluctant to have the yard build submarines because it had so much other business, 205; work in the 1950s on the construction of the aircraft carrier Forrestal (CVA-59), 210; construction in the late 1950s and early 1960s of the nuclear-powered aircraft carrier Enterprise (CVAN-65), 268-269

**New York Navy Yard/Naval Shipyard**

After joining the Allies, the former French battleship Richelieu was completed in 1943 at the New York yard, 153-154; in the late 1950s congressmen objected whenever Mumma tried to impose cuts on this yard, 203-204

**New York Shipbuilding Corporation, Camden, New York**

Shipyard that got into submarine construction in the 1950s but later ran into problems and went out of business, 178, 205, 217; aircraft carrier work, 205

**Niedermair, John C.**

Civilian ship designer who worked for many years in the Bureau of Construction and Repair and later the Bureau of Ships, 156-157, 159

**Norfolk Naval Shipyard, Portsmouth, Virginia**

Repair and design work in the 1940s and 1950s, 218-219

**Normandie (French Passenger Ship)**

Thanks to the skilled design of the ship, she was able to achieve high speeds in the 1930s during transatlantic crossings, 45, 48-49, 157-158; experienced severe vibration problems that led to several propeller modifications, 49-50, 79; Mumma reported on the ship in 1936 when he returned to the United States, 56

### **North Carolina (BB-55)-class Battleships**

Design of in the mid-1930s, 50, 157-158; inclusion of skegs near the propellers, 81-82, 153; inquiries made by Captain Hyman Rickover on the propeller situation, 176

### **Nuclear Power**

In 1942 Rear Admiral Earle Mills cautioned Mumma against speaking about nuclear power plants, 98-99; after World War II the U.S. Navy moved toward nuclear power for submarines rather than continuing German work on hydrogen peroxide, 120-121; developmental efforts by the Bureau of Ships in the period shortly after World War II, 126-132; in the mid-1950s the Mare Island Naval Shipyard began preparing to build nuclear-powered submarines, 174; justification in the late 1950s for a nuclear-powered aircraft carrier and nuclear-powered escorts, 189-190, 268-270; deliberate melt-down of a prototype nuclear reactor in the early 1950s at Arco, Idaho, 211-212; tests of the submarine Nautilus (SSN-571) in 1955 went well, 216, 216; sodium-cooled plant in the submarine Seawolf (SSN-575), 216-217

### **Nuclear Weapons**

U.S. developmental work in World War II as part of the Manhattan Project, 98-99, 126; concern in 1944 over what the Germans might have accomplished, which proved to be not much, 101, 104; in the period right after World War II, U.S. fissionable material was allocated to nuclear weapons rather than nuclear power applications, 127-128

### **O2U Corsair**

In the late 1920s Lieutenant Richard Whitehead crashed an O2U on the deck of the aircraft carrier Saratoga (CV-3) when his tailhook caught the barrier wire, 28-29

### **Oak Ridge National Laboratory, Oak Ridge, Tennessee**

Site of training shortly after World War II for the early participants in the Navy's nuclear power program, 128-130, 132

### **Oil Fuel**

Requirement in the destroyer Clark (DD-361) in 1937 that water and oil not be mixed in fuel tanks, 64-65

### **Olmsted, Midshipman Jerauld L., USN (USNA, 1922)**

Stood first in his class at the Naval Academy after a rivalry with Midshipman Leonard Kaplan, 247-248

### **Olongapo, Philippines**

Congressional concerns in the late 1950s about the effect of sewer drainage problems in the city of Olongapo on the adjacent U.S. naval base at Subic Bay, 194-195

### **Olsen, Rear Admiral Clarence E., USN (USNA, 1921)**

Served in 1944-45 as a U.S. Navy representative during international negotiations at Yalta in the Crimea, 108-110

### **PT Boats**

Evaluation of the designs developed by various companies in the World War II era, 96-97

### **Pace, Frank, Jr.**

Was a General Dynamics official in the mid-1950s when Electric Boat was the only civilian shipyard building nuclear submarines, 177-178, 211

### **Panama Canal**

In the late 1920s the deck overhang of the aircraft carrier Lexington (CV-2) snapped off light poles when she went through the canal, 33; in January 1929 the aircraft carriers Saratoga (CV-3) and Lexington participated in a fleet problem that involved an attack on the canal, 34-35; in 1937 the recently commissioned destroyer Clark (DD-361) transited the canal en route to West Coast duty, 66

### **Paris, France**

Served in 1944 as headquarters for the Alsos Mission, in which U.S. officers visited France and Germany to ascertain German technical developments during World War II, 102-103

### **Pasch, Colonel Boris, USA**

At the end of World War II took part in the Alsos Mission to France and Germany to assess German technical developments, 102

### **Pate, General Randolph M., USMC**

Commandant who provided a ready answer in the late 1950s when Congress questioned the Marine Corps about a large supply on hand of canned hamburgers, 193-194

### **Pay and Allowances**

In the 1920s naval officers could receive flight pay but midshipmen could not, 9; in the early 1930s, during the Depression, naval personnel took a pay cut, 43-44; in 1959 Congress passed a law that retired pay would no longer be based on active duty pay, 51-52

### **Pelly, Thomas**

Congressional representative from Washington state who tried to get advance word in the late 1950s when the Puget Sound Naval Shipyard would be getting jobs, 208-209

### **Philadelphia Navy Yard**

In the early 1940s solved a problem with “singing” propellers on the light cruiser Denver (CL-58), 84-85; had a shop that could machine large-diameter propellers,

86-87; in the early 1940s did a fine job on the construction of the battleship New Jersey (BB-62), 89

### **Philippine Islands**

Congressional concerns in the late 1950s about the effect of sewer drainage problems in the city of Olongapo on the adjacent U.S. naval base at Subic Bay, 194-195; repair problem with a U.S. destroyer in the late 1950s, 274

### **Poland**

In 1945 the Soviets violated agreements made at Yalta concerning the occupation of the port of Gdynia, 108-110

### **Polaris Program**

In the late 1950s Electric Boat Company built the first submarines to be armed with Polaris missiles, 211; development of the missile, 212-214; congressional support, 282

### **Pratt, Albert**

Assistant Secretary of the Navy who in 1955 accompanied Mumma during his congressional hearings to become Chief of the Bureau of Ships, 183-184

### **Promotion of Officers**

In the mid-1930s U.S. naval officers serving in Europe had trouble getting promoted because examination facilities weren't available, 50-51, 56; as an engineering specialist, Hyman G. Rickover needed congressional support to become a four-star admiral, 75, 283-284

### **Propellers**

In the mid-1930s the French passenger liner Normandie experienced severe vibration problems that led to several propeller modifications, 49-50, 79; propeller research in the early 1940s at the David Taylor Model Basin, 73, 79-80, 159-160; work in the early 1940s to correct vibration problems with the propellers in various battleships, 79, 81-82, 88-89, 91-92, 152-153, 255-256; problems in World War II with "singing" propellers on various types of ships, 83-87; quieting submarine propellers, 93-96; in 1944 U.S. Navy Bureau of Ships representatives went to Britain to aid the Royal Navy with propeller problems on the aircraft carrier Implacable, 99-101; pros and cons of submarines having only one propeller rather than two, 119-120, 150-152; in the early 1950s the propellers in the new Mitscher (DL-2)-class destroyers were susceptible to cracking in seawater, 138-139; propeller shafts on the former French battleship Richelieu, which was completed in 1943 at the New York Navy Yard, 153-154; design and testing of the propellers for the Fletcher (DD-445)-class destroyers in the early 1940s, 227

### **Propulsion Plants**

As fleet flagship in the 1920s, the armored cruiser Seattle had a quadruple-expansion steam plant, 22; in 1928 the aircraft carrier Saratoga (CV-3), which had an electric-

drive system, averaged 33 knots during a speed run off Southern California, 23; fuel consumption in the Saratoga, 26; in the mid-1930s the French passenger liner Normandie experienced severe vibration problems that led to several propeller modifications, 49-50, 79; study conducted in the late 1930s on condenser problems in the engineering plants of the ships of Destroyer Flotilla Two on the West Coast, 60-62; quality of the plant in the destroyer Clark (DD-361), commissioned in 1936, 64-65; requirement in the Clark that water and oil not be mixed in fuel tanks, 64-65 in 1939, with modest funding support from the type commander, the crew of the destroyer Clark (DD-361) did a ship's force overhaul at Mare Island Navy Yard, 71-72; propeller research in the early 1940s at the David Taylor Model Basin, 73, 79-81; work during the early 1940s in correcting vibration problems in battleships, 79, 81-82, 88-89, 91-92, 152-153, 157-160; problems in World War II with "singing" propellers on various types of ships, 83-87; quieting submarine propellers, 93-96; in 1942 Rear Admiral Earle Mills cautioned Mumma against speaking about nuclear power plants, 98-99; in 1944 U.S. Navy Bureau of Ships representatives went to Britain to aid the Royal Navy with propeller problems on the aircraft carrier Implacable, 99-101; in World War II Hellmuth Walter worked on a hydrogen peroxide propulsion plant for German submarines, 104, 106, 108, 113-117, 120-121; pros and cons of submarines having only one propeller rather than two, 119-120, 150-152; nuclear power developmental efforts by the Bureau of Ships in the period shortly after World War II, 126-132, 140-141; in the early 1950s the Bureau of Ships did experiments on a high-pressure, high-temperature steam plant tested in the experimental destroyer Timmerman (DD-828), 133-137; in the early 1950s the propellers in the new Mitscher (DL-2)-class destroyers were susceptible to cracking in seawater, 138-139; propeller shafts on the former French battleship Richelieu, which was completed in 1943 at the New York Navy Yard, 153-154; when the Dealey (DE-1006)-class destroyer escorts were designed in the early 1950s, they were not equipped with enough power, 155; submarines achieved much greater propulsive efficiency when they had teardrop-shaped hulls such as those in the Skipjack (SSN-585) class, 186-188; justification in the late 1950s for a nuclear-powered aircraft carrier and nuclear-powered escorts, 189-190, 268-270; during construction in the 1950s the aircraft carrier Saratoga (CVA-60) had different main machinery than her near-sister Forrestal (CVA-59), 210; deliberate melt-down of a prototype nuclear reactor in the early 1950s at Arco, Idaho, 211-212; tests of the submarine Nautilus (SSN-571) in 1955 went well, 216; sodium-cooled plant in the submarine Seawolf (SSN-575), 216-217

#### **Puget Sound Navy Yard, Bremerton, Washington**

In the late 1950s Representative Thomas Pelly from Washington tried to get advance word when the shipyard would be getting jobs, 208-209

#### **Pye, Rear Admiral William S., USN (USNA, 1901)**

In the late 1930s served as Commander Destroyers Battle Force and Commander Destroyer Flotilla Two, 60, 68, 70

**Raborn, Vice Admiral William F., Jr., USN (USNA, 1928)**

In the mid-1950s commanded the aircraft carrier Bennington (CVA-20) and later ran the Polaris program, 180, 212; given authority within BuShips and BuOrd to run Polaris development, 213-215

**Racial Issues**

In the late 1930s the destroyer Clark (DD-361) replaced black messmen with Filipinos to save on food costs, 59-60; blacks had limited job opportunities on board the Clark, 62-63

**Radar**

German U-boats were surprised during World War II by the effectiveness of American airborne radar, 117

**Radford, Admiral Arthur W., USN (Ret.) (USNA, 1916)**

In the early 1920s provided aviation orientation for Naval Academy midshipmen, 5; in the late 1950s, following his retirement from the Navy, served on the board of the Worthington Corporation, 288-290

**Ramsey, Hobart C.**

In 1959, as chairman of the Worthington Corporation, recruited Mumma for a post-Navy job, 289-290

**Ranger, USS (CVA-61)**

Aircraft carrier that was visited by Mumma and other flag officers in the late 1950s during her sea trials, 251-252

**Rathburne, USS (DD-113)**

In the early 1930s collided with the destroyer Waters (DD-115) and damaged the other ship, 40-41

**Rayburn, Samuel T.**

Texas Democrat who was an excellent Speaker of the House in the 1950s, 282-283

**Read, Commander Albert C., USN (USNA, 1907)**

In 1919 commanded the crew of the NC-4 flying boat that flew the Atlantic, later executive officer of the aircraft carrier Saratoga (CV-3), 76-78

**Richelieu**

Former French battleship that was completed at the New York Navy Yard in 1943, after joining the Allies, 153-154

**Richmond, USS (CL-9)**

Light cruiser that in September 1926 ran into an Atlantic hurricane during a voyage to Cuba with sister ships, 14-16

**Rickover, Admiral Hyman G., USN (Ret.) (USNA, 1922)**

In the early 1950s, as an engineering specialist, he needed congressional support to become a four-star admiral, 75, 283-284; favored multiple propellers for nuclear submarines, 120; post-World War II involvement in the development of nuclear power for ships, 128-132, 140, 142; during World War II was involved with the Navy's shipboard electrical requirements, 130, 176; got rid of promising young subordinates, 173-174; recommended Mumma in the mid-1950s to serve as Chief of the Bureau of Ships, 176; had no role in the design of the Skipjack (SSN-585)-class submarine, 188; was stretched by the work in the late 1950s to develop nuclear-powered surface ships, 190-191; because of Rickover's methods, shipbuilding cost overruns increased once Mumma retired in 1959 after being Chief of the Bureau of Ships, 199-200; deliberate melt-down of a prototype nuclear reactor in the early 1950s at Arco, Idaho, 211-212; asked the Bureau of Ships to announce the need in the late 1950s to put a different engine in submarine Seawolf (SSN-575), 217; once he got into the nuclear power program, he was not a broad-gauged flag officer, 240, 249; claimed to be a victim of anti-Semitism within the Navy, 247-249; conflicts with defense contractors, 263; in 1958 attended the keel-laying for the nuclear-powered aircraft carrier Enterprise (CVAN-65), 269

**Robinson, Rear Admiral Samuel M., USN (USNA, 1903)**

As Chief of the Bureau of Engineering in the mid-1930s, was interested in the engineering achievements in the French passenger liner Normandie, 44-45, 157

**Roddis, Lieutenant Commander Louis H., USN (USNA, 1939)**

Was selected shortly after World War II as one of the initial participants in the Navy's nuclear power program, 129, 140, 200; consultant work in the 1980s, 173-174

**Roop, Commander Wendell P., USN**

In the early 1940s was involved with propeller research at the David Taylor Model Basin, 80-81; at the end of World War II took part in the Alsos Mission to France and Germany to assess German technical developments, 97, 101, 105

**Roosevelt, President Franklin D.**

In World War II decreed that there be no interference by the Navy in the construction of escort aircraft carriers by shipbuilder Henry J. Kaiser, 86

**Royal Marines**

Contributed manpower to the Naval Technical Mission Europe that was gathering information in Germany at the end of World War II, 113

**Royal Navy**

When Mumma returned to the United States in 1936 after postgraduate study in France he reported on the armor arrangement in the British battleships Nelson and Rodney, 56, 157-158; in 1944 U.S. Navy Bureau of Ships representatives went to Britain to aid the Royal Navy with propeller problems on the aircraft carrier

Implacable, 99-101; had representatives at the 1945 international conference at Yalta in the Crimea, 109-110; did some developmental work after World War II on hydrogen peroxide propulsion for submarines, 120-121; role of the Royal Corps of Naval Constructors, 192; Mumma told his British counterparts about U.S. shipbuilding practices during a 1956 visit to the United Kingdom, 231-232; Admiral of the Fleet Lord Louis Mountbatten reorganized the Admiralty structure after a visit to the United States, 232-233

**Russell, Rear Admiral James S., USN (USNA, 1926)**

Served as Chief of the Bureau of Aeronautics from 1955 to 1957, even though he was an unrestricted line officer, 236, 259-260; while serving as a naval aviator in World War II had an interesting dinner with the Aleut Indians, 260-261

**Sadler, Captain Frank H., USN (USNA, 1903)**

As commanding officer of the Navy's Postgraduate School in the early 1930s suggested that Mumma take a year of education in France, 44-45

**Saltonstall, Leverett**

Was involved as a U.S. Senator in the late 1950s when a group of employees at the Boston Naval Shipyard tried unsuccessfully to form a veterans' union, 206-208

**San Diego, California**

In the late 1930s ready destroyers maintained steam pressure so they could intercept and board suspicious-looking ships in the area, 66-67; in the late 1930s Mumma did a fine job of navigating the destroyer Clark (DD-361) when anchoring in fog in Coronado Roads, California, 68-70

**San Francisco Naval Shipyard (Hunters Point)**

In the early 1950s was involved in destroyer conversions, major combatant overhauls, and reactivation of mothballed ships, 143-145; roles of various officers in the command structure, 146; visit in the early 1950s from the Shah of Iran, who was interested in developing a shipyard for his nation, 146-147; workforce increased during the Korean War, 147-148; activated and overhauled amphibian vehicles for the Marine Corps, 147; concerns of civilian shipyard workers, 148-149

**Santo Domingo**

In August 1916 the armored cruiser Memphis was washed ashore at Santo Domingo by a tidal wave, and the hulk remained there for years afterward, 16, 18; in 1927 was visited by the Commander in Chief U.S. Fleet in his flagship, the armored cruiser Seattle, 18-19

**Saratoga, USS (CV-3)**

Aircraft carrier that in 1928 averaged 33 knots during a speed run off Southern California, 23; after going into commission in 1927 had a succession of fine commanding officers, 24; rivalry with her sister ship Lexington (CV-2), 25-26, 30, 32-35, 209-210, 278-279; fuel consumption, 26; ballast tanks on the port side

compensated for the extra weight of the island and guns to starboard, 26-27; the ship was able to turn in a tight circle, 27; incident in which Lieutenant Richard Whitehead crashed an O2U on deck because his tailhook caught barrier, 28-29; the captain's gig was destroyed as a result of spilled gasoline and a fire when the ship was in Long Beach, 29-30; high-quality enlisted men in the ship's crew, 33-34; in January 1929 took part in a fleet problem that involved an attack on the Panama Canal, 34-35; work at the Puget Sound Navy Yard, 35-36

**Saratoga, USS (CVA-60)**

Aircraft carrier that was commissioned in 1956 with an improved propulsion plant over that in her sister ship Forrestal (CVA-59), 137-138, 210

**Saunders, Captain Harold E., USN (USNA, 1912)**

Made a substantial contribution to the design and construction of the David Taylor Model Basin, Carderock, Maryland, which opened shortly before World War II, 75-76, 79; great academic achievement as a Naval Academy midshipman, 76; made contributions in the area of propeller research, 80; belief in the value of skegs near the propellers of battleships, 159

**Schade, Captain Henry A., USN (USNA, 1923)**

In the early 1930s went to Germany for postgraduate work in engineering, 46; at the end of World War II took part in the Alsos Mission to France and Germany to assess German technical developments, 97, 101, 104-105; in 1944 went to Britain to help the Royal Navy solve vibration problems in the aircraft carrier Implacable, 99-101

**Scotland**

In 1944 representatives of the U.S. Navy's Bureau of Ships went to the Royal Navy dockyard at Rosyth to ride on sea trials of the British aircraft carrier Implacable, 99-101

**Sears, Captain Hayden A., USA (USMA, 1920)**

In the early 1930s served as a U.S. military courier in Europe, 52-53

**Seattle, USS (Armored Cruiser)**

In 1927 visited Santo Domingo, 16, 18-19; other operations in the mid-1920s as flagship of the U.S. Fleet, 17-18, 22-23; in 1927 transferred fleet flag to the battleship Texas (BB-35) and was decommissioned, 21; quadruple-expansion steam propulsion plant, 22

**Seawolf, USS (SSN-575)**

Nuclear submarine built in the mid-1950s with a reactor cooled by liquid sodium, 216-217

## **Sequoia**

Secretary of the Navy's yacht that was used in the late 1950s for conferences of industry leaders to be involved in the Polaris ballistic missile submarine program, 213-214

## **Shipbuilding**

As Secretary of Defense in the 1960s, Robert S. McNamara instituted total package procurement, which involved buying all ships of a given class from one defense contractor, 197-198; in the late 1950s BuShips allocated work among various shipyards, 197-198; the effect of the Vinson-Trammell Act, passed by Congress in 1934, was still felt in the 1950s because it required a certain proportion of Navy shipbuilding be done in naval shipyards, 200-201; in the years after World War II several European shipyards built ships under the aegis of the U.S. Marshall Plan, 221; role of the Navy supervisor of shipbuilding in commercial shipyards, 247, 249

## **Ship Characteristics Board**

Influence in the 1950s on the design of U.S. Navy ships, 155-156, 276-278; justification in the late 1950s for the construction of a nuclear-powered aircraft carrier, 189-190

## **Ship Design**

Work in the 1930s on the French passenger liner Normandie, 45, 48-50; design in the 1930s of the U.S. North Carolina (BB-55)-class battleships, 50, 81-82, 152-153; pros and cons of submarines having only one propeller rather than two, 119-120, 150-152; in the early 1950s the David Taylor Model Basin tested a true hydrodynamic design for submarines, 149-151; design in the early 1950s of the Dealey (DE-1006)-class destroyer escorts, 155; design of amphibious warfare ships, 155-156; in the 1930s the French designed destroyers that sacrificed firepower and range in order to achieve high speed, 158; Mumma's push in the mid-1950s for nuclear submarines to have an advanced hull design, 186; during construction in the 1950s the aircraft carrier Saratoga (CVA-60) had different main machinery than her near-sister Forrestal (CVA-59), 210; use of the Skipjack (SSN-585)-class hull in the late 1950s as the basis for the first Polaris ballistic missile submarines, 211, 214; a longitudinal bulkhead was probably the cause of the capsizing and loss of the Italian passenger liner Andrea Doria in 1956 following a collision, 222-224; some changes to the design of the U.S. passenger liner United States, which was completed in the early 1950s, came as a result of Navy requirements, 226, 255, 262; following World War II the U.S. Navy put an increased emphasis on habitability in its warships, 229; design work in the late 1950s within the Bureau of Ships, 252-253

## **Skate (SSN-578)-class Submarines**

In the mid-1950s Mumma pushed for a more hydrodynamically advanced hull form than that in the Skate class, 186-187; the last ship planned for the class was redesigned and became the first of the Skipjack (SSN-585) class, 187-188

### **Skipjack, USS (SSN-585)**

The last ship planned for the Skate (SSN-578) class was redesigned and became the Skipjack, 187-188; performed well on trials, 188-189 in the late 1950s, after steering the Skipjack, Assistant Secretary of the Navy Wilfred J. McNeil agreed to fund another ship of the class, 189

### **Skipjack (SSN-585)-class Submarines**

Had efficient propellers without vibration problems, 87; construction of the Scamp (SSN-588) at the Mare Island Naval Shipyard, 176; the last ship planned for the Skate (SSN-578) class was redesigned and became the first of the Skipjack (SSN-585) class, 187-188; use of the Skipjack-class hull in the late 1950s as the basis for the first Polaris ballistic missile submarines, 211, 214

### **Smith, Margaret Chase**

U.S. Senator from Maine who was involved in the confirmation process in the mid-1950s when Mumma became Chief of the Bureau of Ships, 182-183; concern about the Portsmouth Naval Shipyard in Kittery, Maine, 196

### **Society of Naval Architects and Marine Engineers (SNAME)**

Professional society that contributes to the advancement of knowledge in the field, 234-236

### **Solberg, Commander Thorwald A., USN (USNA, 1916)**

In the late 1930s served as head of design in the Bureau of Engineering, 57, 81

### **Sonar**

Impact in the 1950s of large sonar domes on the bows of destroyers, 156-157

### **South Dakota (BB-57)-class Battleships**

Inclusion of skegs near the propellers to enhance water flow, 81, 153

### **Soviet Union**

In 1945, at the end of World War II in Europe, a number of German scientists chose to be captured by Americans rather than Soviets, 108; violations of the 1945 Yalta agreement concerning occupation of Gdynia, Poland, 108-110

### **Stark, Admiral Harold R., USN (USNA, 1903)**

As Commander U.S. Naval Forces Europe in World War II, recommended ending a technical exchange with the Soviet Union because of violation of agreements concerning access to Gdynia, Poland, 110

### **Stockholm (Passenger Liner)**

Swedish ship that was damaged in July 1956 off Nantucket by colliding with the Italian liner Andrea Doria, 222-224

### **Subic Bay, Philippines**

Congressional concerns in the late 1950s about the effect of sewer drainage problems in the city of Olongapo on the adjacent U.S. naval base at Subic Bay, 194-195

### **Submarines**

Developmental work in the early 1940s to quiet the propellers on submarines, 93-96; in World War II Hellmuth Walter worked on a hydrogen peroxide propulsion plant for German submarines, 104, 106, 108, 113-117, 120-121; pros and cons of having only one propeller rather than two, 119-120, 150-152; nuclear power developmental efforts by the Bureau of Ships in the period shortly after World War II, 126-132, 140-142; testing in the early 1950s of a true hydrodynamic design for submarines, 149-151; the last ship planned for the Skate (SSN-578) class was redesigned with a teardrop hull and became the Skipjack, which performed well on trials, 187-189; development in the late 1950s of the Polaris ballistic missile submarines, 211-215

### **Symington, W. Stuart**

U.S. Senator from Missouri who was involved in the confirmation process in the mid-1950s when Mumma became Chief of the Bureau of Ships, 183-184

### **TFX**

Controversial multi-service fighter plane that Robert McNamara tried to inflict on the Navy in the 1960s during his tenure as Secretary of Defense, 198-199

### **Tacoma, Washington**

In the winter of 1929-30 the city was supplied with electrical power by the aircraft carrier Lexington (CV-2), 36-37

### **Taylor, Rear Admiral David W., USN (USNA, 1885)**

Skilled naval constructor who developed the bulbous bow for ships, 48, 157; in the late 1880s did his postgraduate education in Europe, 49; produced a superior academic record as a Naval Academy midshipman, 75-76; involved in the design of the NC-4 aircraft, 76-77, 169-170; in the late 19th century sold the idea of a model basin to Congress, 169-170

### **Thebaud, Vice Admiral Leo H., USN (Ret.) (USNA, 1913)**

In the mid-1930s, as a commander, served as U.S. naval attaché in Paris, 47; author of a book on leadership, 58; in the late 1930s served as commanding officer of the destroyer Clark (DD-361), 58-59, 68; in 1959 invited Mumma to use his home following his retirement from the Navy, 289-290

### **Thomas, Charles S.**

As Secretary of the Navy in 1954, attended the centennial celebration at the Mare Island Naval Shipyard, 175; in 1955 heard Mumma's pitch for an advanced submarine design, 186; assessment of as SecNav, 193; didn't have a ready answer in the late 1950s when Congress questioned the Marine Corps about a large supply on hand of canned hamburgers, 193-194; involved in preventing construction of an

aircraft carrier on the West Coast, 201-202; minimal experience in naval matters before becoming Secretary, 280

**Timmerman, USS (DD-828)**

Destroyer that in the early 1950s was used as an experimental ship to test new high-temperature, high-pressure steam propulsion equipment, 133-137

**Todd Shipyards**

Did a good job for the Navy in the late 1950s, later got overextended, 230, 251

**Tomlinson, Lieutenant Daniel W. IV, USN (USNA, 1918)**

Colorful aviator who served in the late 1920s in the air group of the aircraft carrier Saratoga (CV-3), 28, 31-32; spectacular landing on a street in Coronado, 32

**Training**

Naval Academy midshipmen made summer training cruises to Europe in the mid-1920s, 6-9; in 1926 members of that year's Naval Academy graduating class were given indoctrinal flight training, 25-26; Lieutenant Commander C. Julian Wheeler, skipper of the destroyer Waters (DD-115) from 1931 to 1934, did an excellent job of teaching his junior officers, 38-39; shakedown at Guantanamo in 1937 for the crew of the recently commissioned destroyer Clark (DD-361), 66

**Turnbaugh, Lieutenant Commander Marshall E., USN (USNA, 1939)**

Was selected shortly after World War II to be one of the initial participants in the Navy's nuclear power program, 132, 140

**Uniforms**

When members of the U.S. Naval Technical Mission Europe were traveling in 1945 they wore Army uniforms, 112

**Unions**

See: Labor Unions

**United States, SS (Passenger Liner)**

In 1956 William Francis Gibbs asked Mumma to ride this liner to Europe and give him a technical assessment of the ship, 221-225, 228; some changes to the design came as a result of Navy requirements, 226, 255, 262

**V-1 Rockets**

U.S. Bureau of Ships representatives were present in London in 1944 when these German weapons rained down on the city, 100-101; launching mechanism, 106

**V-2 Rockets**

Built by the Germans in World War II, 106-107

**Vinson, Carl**

Georgia congressman who had considerable impact as chairman of the House Armed Services Committee in the late 1950s, 196-197

**Vinson-Trammell Act**

The effect of this 1934 act of Congress was still felt in the 1950s because it allocated a certain proportion of Navy shipbuilding to naval shipyards, 200-201

**Von Braun, Wernher**

German rocket scientist who developed V-1 and V-2 weapons during World War II, 106-107; chose to be captured by Americans rather than Soviets, 108

**Wallin, Rear Admiral Homer N., USN (USNA, 1917)**

As Chief of the Bureau of Ships in the early 1950s was criticized for not supporting Hyman Rickover for selection to flag rank, 283-284

**Walter, Hellmuth**

German scientist who worked during World War II on a hydrogen peroxide propulsion plant for submarines, 104, 106, 108, 113-117, 120-121; worked on the ME 163 rocket airplane during the war, 107, 116; chose to be captured by Americans rather than Soviets, 108; in the 1950s worked in the United States for the Worthington Corporation, 288-291

**War Games**

In January 1929 the aircraft carriers Saratoga (CV-3) and Lexington (CV-2) participated in a fleet problem that involved an attack on the Panama Canal, 34-35

**Washington, SS (U.S. Passenger Liner)**

The flagship of the United States Lines, in 1934 this ship took Mumma and his family to France, 46-47

**Washington, USS (BB-56)**

When she went into commission in 1941 she had problems with severe propeller vibrations, 81-82, 160-161; sea trials, 90-91, 160-161; inquiries made by Captain Hyman Rickover on the propeller situation, 176

**Wasp, USS (CV-7)**

Aircraft carrier that went into service in 1940 and ran sea trials off Rockland, Maine, 91

**Waters, USS (DD-115)**

The ship's design limited her ability to operate in rough seas, 37-38; voyage to Hawaii in 1932 for maneuvers, 38, 40-41; Lieutenant Commander C. Julian Wheeler, the skipper from 1931 to 1934, was an excellent teacher, 38-39; suffered damage during a collision with the destroyer Rathburne (DD-113), 40-41; the ship was in

pretty good material commission even though she had been out of service for a while, 41-42

### **Weather**

In September 1926 a division of U.S. light cruisers ran into an Atlantic hurricane during a voyage to Cuba, 14-16; in August 1916 the armored cruiser Memphis was washed ashore at Santo Domingo by a tidal wave, 16, 18; in the late 1930s Mumma did a fine job of navigating the destroyer Clark (DD-361) when anchoring in fog in Coronado Roads, California, 68-70; unusual phenomenon of very large waves, 168

### **Westinghouse Corporation**

In the period shortly after World War II was involved in developmental work for the Navy's nuclear power program, 132

### **Wheeler, Lieutenant Commander C. Julian, USN (USNA, 1916)**

In the early 1930s was a fine teacher and leader while commanding the destroyer Waters (DD-115) during operations in the Pacific, 38-39

### **Whitehead, Lieutenant Richard F., USN**

In the late 1920s crashed an O2U on the deck of the aircraft carrier Saratoga (CV-3) when his tailhook caught the barrier wire, 28-29

### **Whiting, Commander Kenneth, USN (USNA, 1905)**

In the late 1920s served as the first executive officer of the aircraft carrier Saratoga (CV-3), 24, 31

### **Wilson, Charles E.**

Was Secretary of Defense in the mid-1950s when various issues arose, 193, 201-202

### **Withington, Rear Admiral Frederic S., USN USNA, 1923)**

As Chief of the Bureau of Ordnance in the mid-1950s agreed to give Rear Admiral William Raborn status within the bureau as part of the Polaris ballistic missile submarine development program, 213; involvement in conversion of guided missile cruisers, 258; in the late 1950s served as Commander U.S. Naval Forces Japan, 274

### **World War I**

As Secretary of War during World War I, Newton D. Baker assigned Morton C. Mumma to teach soldiers how to shoot well, 2; in the mid-1930s Mumma made a Memorial Day speech about the World War I Battle of Chateau-Thierry, 54-55

### **Worthington Corporation**

Mumma worked for the corporation in a variety of capacities following his 1959 retirement from the Navy, 287-294

**Yalta, Crimea**

In 1945 the Soviets violated agreements made at Yalta concerning the occupation of the port of Gdynia, 108-110

**Yarnell, Captain Harry E., USN (USNA, 1897)**

Fine officer who was first skipper when the aircraft carrier Saratoga (CV-3) went into commission in 1927, 24



