When the United States entered WW I in April 1917, the small group of Navy and Marine Corps Aviators who had promoted the growth of Naval Aviation was not equipped for combat. The Naval Air establishment had only one air station, a training base at Pensacola, Fla., 54 aircraft (mostly training planes), 48 aviators and students, and 239 enlisted men.

During the 19 months of U.S involvement in the war, however, 39 new naval air stations were established, 27 of them overseas. Thousands of young men became pilots, ground officers, mechanics and technical specialists in the Naval Reserve Flying Corps. From a force of 43 pilots, 193 enlisted men and 54 aircraft, Naval Aviation’s resources expanded by war’s end to 3,049 pilots, 43,452 enlisted troops, over 2,000 aircraft and 15 lighter-than-air craft.

Early in June 1917, the first U.S. military detachment to reach France was an aviation unit led by Lieutenant Kenneth Whiting, a submariner turned aviator who contributed much to early aviation development. This small contingent was followed by others, including the First Yale Unit, a group of students who organized a flying unit in 1916 that later became part of the Naval Reserve. One member of this group was David S. Ingalls, who later became the first ace in Navy history and the only Navy ace in WW I.

U.S. naval aircraft were used primarily for convoy duty, for antisubmarine warfare and to bomb enemy submarine installations. Until American airplanes could be built and shipped to Europe, the aviators used foreign aircraft. Some of these planes were too light to carry machine guns or bombs and the pilots flew with pistols, rifles or shotguns for protection. Hand grenades and even bricks were thrown when nothing else was available.

Development of the long-distance flying boat was an important by-product of the war. Numerous types appeared, from the F-boat for training to the HS, H-12 and H-16 patrol bomber flying boats. All
were designs of the American inventor Glenn Curtiss. The British operating these aircraft in the harsh North Sea environment improved on these models out of necessity. The end result was the F5L which saw considerable operational use in the U.S. Navy for a number of years after the war.

Although the Navy-Curtiss (NC) planes were finished too late to take part in the war, one of them, the NC-4, made a trailblazing transatlantic crossing in May 1919. It was the first time any aircraft had flown across the Atlantic Ocean.

On May 8 of that year, three NC aircraft, dubbed "Nancy Boats" by the press, with Commander John H. Towers in command, took off from NAS Rockaway Beach, N.Y., for Trepassey Bay, Newfoundland. Here, they waited for good weather until May 16 to continue their journey. Of the three, only the NC-4, commanded by Lieutenant Commander Albert C. Read, with pilot Lieutenant Junior Grade Walter Hinton and copilot Lieutenant Elmer F. Stone, USCG, reached its destination in the Azores. The NC-1 and NC-3, hampered by unfavorable weather and navigation difficulties, landed at sea. Cdr. Towers sailed NC-3 into the Azores, but the aircraft was so greatly damaged that it could not continue. NC-1 capsized and sank when taken in tow.

NC-4 continued to Lisbon, achieving the first aerial crossing of the Atlantic on May 27. Read and his crew flew on to Plymouth, England, arriving on May 31 to complete the record flight.

Many aviators were satisfied with the capabilities of the flying boat as the primary means of sea-air power, while others thought aircraft should be able to operate from combatant ships. Still another group promoted the development of lighter-than-air craft.

The Navy's LTA program actually began on June 1, 1915, with an order for one nonrigid airship, later designated DN. In 1919, the Navy Department authorized the acquisition of its first rigid airships, ZR-1 and ZR-2, as well as the establishment of a supporting air station, NAS Lakehurst, N.J.

The years that followed also brought advancements in the flying boat but, as WW I ended, interest was already beginning to swing toward a specially constructed flush-deck carrier. In 1919, Congress authorized the conversion of the collier Jupiter to the carrier Langley, the first of such ships in the U.S. Navy.

At the outbreak of WW I, Naval Aviation was still in its embryonic stages. Young men were drawn to this new call to adventure by recruiting posters such as this. Lt. Kenneth Whiting led the Navy's First Aeronautic Detachment to Europe in May 1917.

Lt. Kenneth Whiting
Naval Aviator #16
An early Curtiss-designed seaplane, the N-9, was the standard Navy trainer of WW I. This one is pictured at NAS Pensacola in 1917. With a 100-hp engine and an empty weight of 1,860 lbs., it was the seaplane version of the Army’s Jenny with larger wings, ailerons, vertical tail and radiator. The Navy procured 510 N-9s in all, 94 from Curtiss, 360 from Burgess, and 5 from the Army. More than 50 were built from spare parts at Pensacola. The first one was delivered in 1916 at a cost of approximately $8,000. NH 90238
This 1918 Curtiss H-16 Navy Flying Boat was designed primarily for antisubmarine patrol. It had two 360-hp Liberty engines, 95-foot wing span, and a crew of four (pilot, assistant pilot, mechanic and radio operator). The H-16 was the first aircraft produced at the Philadelphia Naval Aircraft Factory. USN 1072

The first U.S. Naval Aviators arriving in Europe had no American-built aircraft to fly and used various Allied aircraft instead. Ens. C.H. Hammann, flying an Italian Macchi 5 seaplane, was Naval Aviation's first Medal of Honor winner.
II. Put to the Test (1917-1919)

A major U.S. naval air training base in France during WW I was NAS Moutchic. Here, several HS flying boats, which were the first American-built aircraft to be assembled in France, are beached. USN 1053802

From July 18 to September 24, 1918, while flying with RAF Squadron No. 213, Lt. David S. Ingalls, USNRF, shot down four enemy aircraft and an observation balloon, for which he was awarded the Distinguished Flying Service Cross by the United States and Britain. He was the U.S. Navy’s only ace in WW I.
Photographed on April 27, 1917, the Navy's first nonrigid airship, DN-1, maneuvers on the water at Pensacola, Fla. Due to manufacturing problems and poor engines, it could barely get airborne. AN 8293

The first WW I raid-in-force by the Day Wing of the Northern Bombing Group on October 14, 1918, was conducted by eight planes of Marine Day Squadron 9 over Pittham, Belgium. For extraordinary heroism on this and an earlier raid, 2nd Lt. Ralph Talbot, USMC, and his observer, GySgt. R.G. Robinson, USMC, were awarded Medals of Honor. USN NPC-KV40-48
II. Put to the Test (1917-1919)

The world’s first flight across the Atlantic began from NAS Rockaway, N.Y., on May 8, 1919. Three Navy-Curtiss (NC) flying boats, under the command of Cdr. John H. Towers, departed for Trepassey Bay, Newfoundland, and Lisbon, Portugal, with a planned stop in the Azores. Only one, the NC-4, made it all the way to Plymouth, England, arriving on May 31.
NC-1 and NC-3 landed in heavy seas before reaching the Azores. Both were damaged and unable to continue the flight. In this oil painting by C.E. Ruttan, NC-1 is taken in tow by the steamship Iona. The aircraft later capsized and sank. NC-3, commanded by Towers, drifted within sight of the Azores, started her engines and taxied in under her own power. Neither crew suffered any personnel losses.

Cdrs. H.C. Richardson and G.C. Westervelt and Lt.Cdr. J.C. Hunsaker. The three Naval Constructors who worked with Glenn Curtiss to design the NC-4. Richardson was Naval Aviation's first maintenance officer.
Despite the adverse weather conditions, NC-4 flew on to the Azores.

On May 27, NC-4 arrived in Lisbon, Portugal, where she was greeted by cheers, whistles and sirens. USN 650875
II. Put to the Test (1917-1919)

The triumph of the NC-4 drew international applause. Continuing on to Plymouth, England, the crew was treated to a hero’s welcome. USN 1022025