

In an effort to put the motion pictures identified in the previous pages into some sort of an historical context, below is a chronology of the events and achievements of U.S. Army and Navy aviation, from 1917 through 1918. I hope you find it of value in putting the word pictures contained in preceding chapters into perspective.

## 1917

**6 January:** A board of Army and Navy officers recommended to the Secretaries of the War and Navy Departments that an airship of the Zeppelin type be designed and constructed under the direction of the Chief Constructor of the Navy with funds provided equally by the Army and the Navy. It was also suggested that a board of three Army and three Navy officers be created to insure effective inter-service cooperation in the implementation of the work.

**8 January:** A Benet-Mercie Machine Rifle, Caliber .30, U.S. Model of 1909, was installed in a flexible mount in the Burgess-Dunne AH-10, and fired at altitudes of 100 and 200 feet above Pensacola, FL. Both the gun and the aircraft operated satisfactorily during the test.

**10 January:** The first production order for aerial photographic equipment was initiated when the Naval Observatory issued requisitions for 20 "aero" cameras and accessories to the Eastman Kodak Company.

**15 January:** The USS *Seattle* arrived at Culebra, PR, with an aviation detachment and aircraft on board, for fleet exercises in the Southern Drill Grounds. From this date until 23 March, her air detachment operated from ship and temporary shore bases, performing scouting and other missions in conjunction with fleet operations.

**2 February:** The National Advisory Committee for Aeronautics (NACA) recommended to President Wilson, for transmittal to Congress for approval, that the Government acquire the basic aeronautical patents.

**4 February:** The Secretary of the Navy directed procurement of 16 non-rigid Class B airships. Contracts were issued subsequently to the Connecticut Aircraft Corporation, the Goodyear Tire & Rubber Company and the B. F. Goodrich Company.

**5 February:** The Chief of Naval Operations recommended that, in view of the urgent military necessity, eight aeronautic coastal patrol stations be established.

**10 February:** The National Advisory Committee for Aeronautics (NACA) established a patent subcommittee. This need arose because of threatened infringement law-suits

brought by the holders of basic aeronautic patents. This in turn caused prohibitive prices for aircraft and the general demoralization of the entire industry.

**13 February:** At Pensacola, FL, Captain Francis T. Evans, USMC, performed the first loop with a seaplane, an N-9 floatplane, at 3,000 feet, and then forced it into a spin and successfully recovered. For this contribution to the science of aviation, he was later awarded the Distinguished Flying Cross.

**13 February:** The Aircraft Manufacturer's Association was formed with Frank H. Russell as the president.

**19 February:** Lieutenant Colonel John B. Bennet became Chief of the Aviation Section of the Signal Corps, replacing Lieutenant Colonel George O. Squire, who became the Chief Signal Officer.

**8 March:** Naval Act carried appropriation of \$1 million for purchase of basic aeronautical patents by the Federal Government.

**12 March:** The first inter-service agreement regarding the development of aeronautic resources and the operations of aircraft was submitted by a board of Army and Navy officers and approved by the Secretaries of the War and Navy Departments. The agreement recognized a general division of aeronautical functions along lines traditional to the services, but stressed the importance of joint development, organization, and operation. It also set the basic principles whereby joint effort could be achieved in these areas.

**13 March:** The Navy Bureau of Construction and Repair directed that all seaplanes be finished in an opaque yellow color over all.

**24 March:** The First Yale Unit of 29 men enlisted in the Naval Reserve Flying Force and four days later left college to begin war training at West Palm Beach, FL, was the first of several college groups to join up as a unit for war service. Among this Yale Unit were four destined to hold such high positions in the military departments as Assistant Secretary of War held by F. Trubee Davison; Assistant Secretary of the Navy for Air held by David S. Ingalls; Under Secretary of the Navy and Assistant Secretary of the Navy for Air held by Artemus L. Gates; and Secretary of Defense held by Robert A. Lovett.

**6 April:** President Woodrow Wilson signed a congressional Declaration of War against Germany, by which the United States entered World War I. The combined strength of Naval and Marine Corps aviation was: 48 officers and 239 enlisted men, 54 airplanes, 1 airship, 3 balloons, and 1 air station. The Aviation Section of the Signal Corps consisted of 35 pilots, 1,987 enlisted men, and 55 training airplanes.

**6 April:** The Secretary of the Navy, by approval of the recommendation of the Board on Flying Equipment, established standard flight clothing for the Naval Flying Service, and authorized its issuance as Title B equipage. Clothing consisted of a tan sheepskin long coat, short coat and trousers, moleskin hood, goggles, black leather gloves, soft leather boots, waders, brogans and life belts.

**7 April:** By Executive Order, the president directed that the Coast Guard be transferred from the Treasury Department to operate as a part of the Navy until further orders.

**12 April:** Bréguet Br.14 bombers are introduced into service with French squadrons on the Western Front.

**14 April:** The Naval Consulting Board recommended that \$50,000 be apportioned to carry on experimental work on aerial torpedoes in the form of automatically controlled planes or aerial machines carrying high explosives. Thus began what resulted in the N-9 “flying bomb,” considered the Navy’s first guided-missile.

**18 April:** In Seattle, William E. Boeing’s Pacific Aero Products Company becomes the Boeing Airplane Company.

**20 April:** The Navy’s first airship, DN-1, made its first flight at Pensacola, FL. Its performance was unsatisfactory on several counts and, after only two more flights; it was grounded and never flown again.

**26 April:** The catapult installed on USS *Huntington* was given its first dead load tests at Mare Island Navy Yard, San Francisco Bay, CA.

**27 April:** The Marine Aeronautic Company, Advance Base Force, was organized at Marine Barracks, Philadelphia Navy Yard, PA, by the transfer of personnel from the Marine Aviation Section at Pensacola, FL, from other Marine Corps units and from the Marine Corps Reserve Flying Corps. Captain Alfred A. Cunningham was in command.

**30 April:** Major William C. Mitchell became the first Army officer to fly over enemy lines in World War I, less than a month after the United States entered the war. He flew as an observer in a French aircraft.

**1 May:** An expansion of the training program was approved which called for assignment of new classes every three months and the establishment of a course of 18 months duration to qualify officers as pilots of either seaplanes or dirigibles.

**4 May:** The Commandant of the First Naval District was directed to assume control of

the Naval Militia station at Squantum, MA, for use in air training. On the same date, arrangements were completed to take over the Naval Militia station at Bay Shore, NY. These were two of several actions taken immediately after declaration of war to expand the flight training program while stations of a more permanent nature were being built.

**5 May:** The Secretary of War agreed to a proposal by the Secretary of the Navy that a joint board be established for the purpose of standardizing the design and specifications of aircraft. The board, subsequently established, was originally titled “Joint Technical Board on Aircraft, except Zeppelins.”

**5 May:** NAS Pensacola reported on a test in which a Berthier machine gun, synchronized to fire through the propeller, was fired from a Curtiss R-3 while taxiing on water and standing on the beach.

**7 May:** First aerial bombing of London by German bombers at night.

**12 May:** Captain W.A. Robertson established new American altitude record of 17,230 feet over North Island Flying School, San Diego, CA.

**15 May:** The Secretary of the Navy established an “order of precedence for work” involved in the preparation for war, which placed “aircraft and their equipment” ninth on a list of twenty major fields of material procurement.

**15 May:** Fast and well-armed Spad 13 single-seat fighters entered service with French squadrons on the Western Front.

**16 May:** President Woodrow Wilson established an Aircraft Production Board to supervise the manufacture of U.S. aircraft and parts for the nation’s participation in World War I.

**16 May:** The Aircraft Production Board was established by resolution of the Council of National Defense as a subsidiary agency to act in an advisory capacity on questions of aircraft production and procurement. Membership included a representative from each service: the Navy’s was Rear Admiral David W. Taylor. Reconstitution of the Board by Act of Congress on October 1, 1917, transferred its control to the War and Navy Departments, enlarged its membership for greater service representation, and changed its title to Aircraft Board.

**17 May:** Aircraft machine gun procurement: The Chief of Naval Operations requested purchase of 50 aircraft machine guns synchronized to fire through propellers and 50 for all-around fire.

**17 May:** Captain Noble E. Irwin was ordered to the Material Branch to relieve Lieutenant John H. Towers as Officer-in-Charge of the aviation desk in the Office of the Chief of Naval Operations. Lieutenant Towers, who remained as an assistant to Irwin, was given additional duty orders to the Bureau of Navigation as Supervisor, Naval Reserve Flying Corps.

**17 May:** The Navy awarded a contract to the Curtiss Exhibition Company to train 20 men of the Naval Reserve Flying Force as aviators at the company field at Newport News, VA.

**18 May:** Experimental self-sealing fuel tanks, consisting of double walled galvanized iron containing layers of felt, gum rubber and an Ivory soap-whiting paste, were demonstrated to representatives of the Army and Navy by the Bureau of Standards.

**19 May:** A distinguishing insignia for all U.S. Government aircraft was described in a general order. The insignia called for a red disc within a white star on a blue circular field to be displayed on the wings and for red, white and blue vertical bands on the rudder, with the blue forward.

**19 May:** The Secretary of the Navy directed that the building (bureau) number of each aircraft be placed in figures three inches high at the top of the white vertical band on each side of the rudder. As a result of this order, the practice of assigning numbers to aircraft was discontinued and the bureau became the sole means of identifying a particular aircraft.

**19 May:** The Chief of Naval Operations requested that two small seaplanes and one pilot be detailed for duty for radio experimentation duties at Pensacola, FL.

**19 May:** The U.S. Government agreed to send an Army division to France.

**20 May:** An airplane sank a submarine for the first time when a British flying boat destroyed German submarine U-36 in the North Sea.

**23 May:** The initial production program to equip the Navy with the aircraft necessary for war was recommended by the Joint Technical Board on Aircraft, to consist of 300 school machines, 200 service seaplanes, 100 speed scouts and 100 large seaplanes. The N-9 and R-6 were listed as the most satisfactory for school and service seaplanes, but the remaining two types were not sufficiently developed to permit a selection.

**24 May:** French Premier Alexandre Ribot requested American aid, in the form of 5,000 pilots, 4,500 aircraft and 50,000 mechanics.

**26 May:** Major Townsend F. Dodd became the first aviation officer on the staff of Major

General John J. Pershing, commander of the American Expeditionary Forces (A.E.F.).

**28 May:** USS *Huntington* arrived at Pensacola, from Mare Island, CA. She was used in various aeronautic experiments involving the operation of seaplanes and kite balloons from her deck until 1 August 1917.

**29 May:** The Navy awarded a contract to the Goodyear Tire & Rubber Company of Akron, OH, to train 20 men as LTA pilots.

**30 May:** The Navy's first successful dirigible, the B-1, landed in a meadow 10 miles from Akron, OH, completing an overnight test flight from Chicago, IL. The B-1 was manufactured at Akron by Goodyear, assembled in Chicago, and piloted on this flight by Goodyear pilot, Ralph H. Upson.

**2 June:** Aviation Section became the Airplane Division of the Army Signal Corps, and Major B. D. Foulois was appointed officer-in-charge on July 23.

**4 June:** The construction of five prototype models of 8- and 12-cylinder Liberty motors was authorized by the Aircraft Production Board and the Joint Technical Board on Aircraft. The design of these engines, based on conservative engineering practices especially adapted to mass production techniques, had been worked out in a room at a Washington, D.C., hotel by J.G. Vincent of the Packard Motor Car Company and E.J. Hall of the Hall-Scott Motor Car Company.

**5 June:** The first U.S. military unit sent to France in World War I, the First Aeronautic Detachment, arrived in Pauillac, France, aboard *Jupiter*. The Detachment, consisting of seven officers and 122 enlisted men, including the element aboard *Neptune* which arrived at St. Nazaire on 8 June, was commanded by Lieutenant Kenneth Whiting. Offloading was completed by 10 June.

**11 June:** All aviation personnel and aircraft were transferred from the USS *Seattle* as she made ready for convoy duty at the Brooklyn Navy Yard, NY. Her raised catapult, while left on board, was lowered and secured to the deck where it would not interfere with normal operations at sea.

**14 June:** The establishment of patrol stations along the Atlantic coast was implemented as the first contract for base construction was let. The contract covered the Montauk, Rockaway and Bay Shore, NY, sites.

**16 June:** 93 civilian mechanics sailed for England to study the British and French aviation industries.

**17 June:** The Aeronautical Mission, Aircraft Production Board, led by Major Raynal C. Bolling (the Bolling Mission), sailed for Europe. It was charged with determining the types of aircraft the U.S. should build and with surveying British, French, and Italian aircraft manufacturing techniques.

**22 June:** Enlisted men of the First Aeronautic Detachment began preliminary flight training in Caudron landplanes under French instructors at the Military Aviation School, Tours, France. At about the same time, 50 men of the Detachment were sent to St. Raphael, France, for training as mechanics.

**22 June:** Change No. 11 in uniform regulations was the first to make special provision for aviators. It provided for a summer service flying uniform of Marine Corps khaki in the same pattern and design as service whites. It was to be worn when on immediate active duty with aircraft. The order also provided for a working dress uniform made as a coverall from canvas, khaki or moleskin of the same color as the flying uniform.

**26 June:** Prompted by the entry of the U.S. into the war, the German Army Air Service unveiled its “Amerika-programm”, which provided for the creation of 40 new fighter squadrons and the expansion of aircraft manufacturing output from 1,000 to 2,000 aircraft per month.

**30 June:** Lieutenant Colonel William “Billy” Mitchell replaced Major T.F. Dodd as Aviation Officer of the A.E.F.

**3 July:** The A.E.F. began arriving in France.

**4 July:** The first 8-cylinder Liberty motor arrived in Washington, D.C., for testing by the Bureau of Standards, having been assembled at the Packard Motor Car Company from parts made by manufacturers in plants scattered from Philadelphia, to Berkeley, CA. Design, manufacture, and assembly of this motor required less than six weeks.

**7 July:** Lieutenant Kenneth Whiting, commanding the First Aeronautic Detachment, cabled the Secretary of the Navy reporting the results of his negotiations with the French in regard to training and establishment of air stations and requested departmental approval. Under the terms of the agreement, the first of several concerned with the expansion of Naval Aviation overseas, the French agreed to train personnel of the Detachment at existing French Army Aviation Schools (pilots at Tours, France, and mechanics at St. Raphael, France), and to start construction of three patrol stations for American use, located at Dunkirk, France, the mouth of the Loire River (Le Croisic, France), and the mouth of the Gironde (St. Trojan, France), and a training station at Lake Lancau (Moutchic, France).

**9 July:** A group of 24 potential Naval Aviators under Ensign Frederick S. Allen as Officer-in-Charge, reported at the University of Toronto for the start of flight training under the Canadian Royal Flying Corps (RFC). This training was arranged by an agreement with the Army and the RFC that 25 men from the Navy would be included in the contingent of 100 Americans for which the Government of Canada had agreed to provide flight training.

**10 July:** A plan for training student officers of the Naval Reserve Flying Corps was circulated for comment. It proposed a program in three parts: (1) a Ground School for indoctrination into the Navy and study of subjects related to aircraft and flight, (2) a Preliminary Flight School for flight training through 5 to 10 hours of solo, and (3) a Completing Flight School for advanced flight training and qualification as a Naval Aviator and a commission as Ensign, USNRF. This plan was implemented without the benefit of a formal directive by the establishment of the Ground School in the same month and the later division of flight training into elementary and advanced courses.

**23 July:** Ground instruction for prospective pilots and for aviation ground officers began at the Massachusetts Institute of Technology (MIT) with a class of 43 students comprising the Naval Air Detachment under command of Lieutenant Edward H. McKitterick. In this, and in similar programs later established at the University of Washington, Seattle, WA, and the Dunwoody Institute, Minneapolis, MN, large numbers of officers were indoctrinated and introduced to the fundamentals of aviation.

**23 July:** Major B.D. Foulois takes command of Signal Corps' Airplane Division.

**24 July:** A large obstacle to the effective expansion of aircraft production was removed by formation of the Manufacturer's Aircraft Association to handle the business of a Cross Licensing Agreement by which member companies had full access to all patents held by other members at fixed low rates.

**24 July:** Congress appropriated \$640 million for Army aviation and authorized the Aviation Section to expand to 9,989 officers and 87,083 enlisted men. No earlier appropriation had come close to this amount.

**26 July:** The Army-Navy Airship Board endorsed a proposal by the Bureau of Mines for the experimental production of helium and recommended the allotment of \$100,000 to construct a small plant for the purpose. This action initiated helium production in the U.S.

**27 July:** An act of Congress authorized the president to take possession of North Island, San Diego, CA, for use by the Army and Navy in establishing permanent aviation stations and aviation schools. The arrival of Lieutenant Earl W. Spencer on 8 November, under

orders to establish and command a station for the purpose of training pilots and mechanics and conducting coastal patrols, marked the beginning of the present NAS North Island.

**27 July:** Secretary of the Navy authorized construction of the Naval Aircraft Factory at the Navy Yard, Philadelphia, PA, for the purposes of constructing aircraft, undertaking aeronautical developments, and providing aircraft construction cost data.

**27 July:** A British Airco (De Havilland) DH-4 aircraft arrived in the U.S. to serve as a model for the first American-built aircraft equipped with the U.S.-made Liberty 12-cylinder engine.

**8 August:** The Secretary of the Navy approved overseas construction plans for one training and three coastal patrol stations in France for naval air units. This plan was expanded and ultimately provided 27 operational locations in France, England, Ireland and Italy.

**10 August:** Ground was broken for the new Naval Aircraft Factory at the Philadelphia Navy Yard.

**13 August:** The 1st Aero Squadron, commanded by Major Ralph Royce, sailed for France.

**14 August:** In an experiment initiated through the impetus of Rear Admiral Bradley A. Fiske, and conducted by Lieutenant Edward O. McDonnell at Huntington Bay, NY, a dummy torpedo was launched from a seaplane, but struck the water at an unfavorable angle and ricocheted, nearly striking the plane. This event marked the beginning of serious Navy interest in launching torpedoes from aircraft.

**15 August:** The Bureau of Construction and Repair authorized the Curtiss Company to paint the wings of naval aircraft with “English-Khaki-Gray-Enamel.” All aircraft manufacturers were to use either opaque yellow or clear varnish on floats and hulls. These, the initial variations to the color scheme, that had been established the preceding March, were followed by so many other exceptions that no real standard existed for the next six months. The trend, however, was to use an opaque yellow finish for school machines and to use a khaki finish, similar to that used on British aircraft, for service machines.

**21 August:** First airplane powered by Liberty engine successfully flown, the L.W.F. Engineering Co.’s “Model F” biplane.

**25 August:** The NC flying boat development was initiated by Chief Constructor David W. Taylor in a memo which outlined certain general requirements of an airplane needed in war and directed his staff to investigate the subject further. In part, Taylor stated: “The