

AIR FORCE MUSEUM



Editor's note: The following piece was written early last year from information supplied by the Air Force Museum. It was submitted to and checked by the Museum staff for accuracy. As stated below in the article, the mission of the Museum at that time was to preserve items of historic interest in the field of military aviation. In view of the WWI veteran's reunion held there in June 1961 that interest extended to personal photo albums, mementos, and documents, many of which were donated to the Museum by the attending Air Service men. From the personal experiences of A.A.H.S. Members who have conducted research in the library of the Museum, it is known that it contained hundreds of cubic feet of records of Air Corps and Air Service aircraft as well as Naval, commercial and foreign aircraft records not particularly pertinent to the aircraft on display, but of tremendous historical import.

At this time it has become evident that a change in policy has been effected there. This is discussed in the current Editorial by Pres. George Hardie. It is well to now examine what was the Air Force Museum policy on 21 April 1961 versus what it is now in the Spring of 1962.

The Air Force Museum, fittingly situated within sight of the "Birthplace of Aviation", is at Wright-Patterson Air Force Base in Fairborn, Ohio. It is on ground over which the Wright Brothers made many of their test flights after their return from Kitty Hawk. Because of this location it might be considered as a direct heir to both McCook Field and Wright Field, where so many of the advances in aviation had their inception and initial tests. It now contains thousands of items of interesting equipment and materials relating to aviation.

The Museum was first organized in 1923 and located at old McCook Field, the Aircraft Engineering base established during World War I. The original mission of the Museum was to provide for the collection, preservation and display of the aircraft and accessories used during that War. The exhibits were all moved to Wright Field nearby when that base replaced McCook Field in 1927. A special building was constructed to house the Museum and opened to the public in 1936. During WWII, all the exhibits and equipment were packed and stored as the Field was closed to the public and the space was needed for office use.

The numerous changes and rapid progress made during World War II, and the evident need to preserve the new types of equipment, revived interest in an air museum.

Consequently a large wartime engine-overhaul shop was made available. At present, the Museum has approximately 175,000 square feet of space available for display and for storage. Several special exhibit areas have been completed and others are now in the planning stage.

The immediate function of the Museum is to make available for display and use items of historic interest in the field of military aviation. The ultimate purpose is the education and inspiration of our military personnel, and the maintenance of a source of information for the general public. The exhibits furnish an authentic, first-hand story covering the changes in aeronautical sciences during the last half-century, from the days of the wire, wood and fabric planes to the atomic, jet age.

In addition to full size aircraft on display, both indoors and outdoors, the exhibits include such items as Wright-model engines to modern jet engines, propellers, instruments, armament, radio and radar, experimental and test equipment, wind tunnels, cut-aways, scale models, and operating models of aircraft and equipment. Captured German and Japanese airplanes, accessories, and paintings are among the WWII additions.

A library, comprising some 500,000 documents, is frequently used to identify and authenticate items as they are acquired by the Museum. The files contain many items of data concerning aircraft, men and famous flights related to the history of the United States Air Force.

The equipment and the documents belonging to the Museum have frequently proven of value in connection with patent infringement suits brought against the United States Government. The continued demands upon the Museum's resources mean that its staff must constantly locate additional materials, not only to meet the widespread requirements for display purposes, but also to fill in existing gaps in the illustrated history of flight. For this reason the Museum welcomes information concerning equipment which might be of value.

An interesting item recently added is the German WWI airplane insignia. It was presented to the Museum by Mr. L. A. Barr of Chicago and is believed to be the only one in existence from any of the 26 enemy aircraft shot down over France during 1918 by Capt. Eddie Rickenbacker. This historically priceless insignia was brought to this country late in 1918 to help promote the sale of War Bonds.

The Museum has now become the largest military aircraft museum in the world. A master plan for its development has been prepared and work has commenced to bring the new design into being.



W.W.I PHOTO PAGE

While past pages of this feature of the JOURNAL have often featured a related series of aircraft, this is the first time that all eight pictures have been devoted to a single model. It has been done this time to supplement the excellent drawing that Paul Matt prepared on the Curtiss HA seaplane fighter for the Winter, 1961, JOURNAL. (Vol. 6, No. 4, pp 259-260).

Photo No. 1 Side view of prototype Model HA with 4-blade propeller, clear doped wings, and pigmented fuselage and tail surfaces. Note the uneven rudder stripes and the absence of wing markings. Curtiss photo.

Photo No. 2 Matching view of the prototype rebuilt as A-4110, with 2-blade prop, full armament mountings, and the standard naval coloring of all-over light gray. That is a rope or a hoisting sling on top of the fuselage behind the rear cockpit. U.S. Navy photo.

Photo No. 3 Direct front view of A-4110 showing unique feature of dihedral on top wing and negative dihedral (sometimes called "cathedral") on the lower wing. U.S. Navy photo.

Photo No. 4 A-4110 afloat, again with 2-blade prop. Upper wing attaches directly to top of fuselage, lower

By PETER M. BOWERS - Curtiss Model HA

wing to lower longerons. U.S. Navy photo.

Photo No. 5 A-4110 fitted with unique 3-blade wooden propeller, a rarity during WW-I because of hub strength problems. U.S. Navy photo.

Photo No. 6 The second prototype, A-4111, with revised wings, no dihedral in either panel, and with a conventional center-section above the fuselage. Also a different style of 3-blade prop than that used on A-4110 in Photo No. 5. U.S. Navy photo.

Photo No. 7 Short-wing HA landplane built for U.S. Army, which was then operating the Air Mail service. Similar to Navy A-4110 except for decreased dihedral on upper wing, none on lower, and a change of upper wing-to-fuselage attachment featuring short center-section struts. Wing wiring completely revised because of no central float structure to tie to and only a single wing bay. Forward cockpit replaced by mail compartment. Curtiss photo.

Photo No. 8 Same mailplane as Photo No. 7 but fitted with longer wings similar to Navy A-4111. A significant addition is a set of steel tube wing tip skids as used on Jenny and DH-4. Curtiss photo.

W.W.II PHOTO PAGE

By GERALD H. BALZER - Flying Boats by Consolidated

Long a front runner in the design and manufacture of long range patrol flying boats, Consolidated took a major step forward in 1933 with the introduction of the XP3Y-1. Gone from the flying boat concept was the maze of struts, wires, braces, and fixed float systems that were characteristic of this class of aircraft.

No. 1. XP3Y-1 - Ordered on 28 October 1933, the XP3Y-1 featured a stressed skin, pylon mounted wing, integral fuel tanks, retractable wing tip floats, and constant speed propellers. Defensive firepower consisted of four .30 cal. gun emplacements; one in the bow, through sliding batches in the aft fuselage in the bottom of the hull aft of the second step.

No. 2. PBV-1 - Produced between 1935 and 1937 the PBV-1 was the first production series of the PBV. Powered by two P & W R1830-64 engines of 900 H.P. (each), it demonstrated a top speed of 177 mph at 8,000 feet altitude. The PBV-2,3,4, and 5 were basically the same as the PBV-1.

No. 3. XPBY-5A - Modified from the 1st production PBV-4, the XPBY-5A introduced the amphibious version of the series. Tests with this tricycle retractable undercarriage were eminently successful and resulted in the modification of 33 PBV-5's to this configuration.

No. 4. PBV-5A - Depicted here is the production version of the PBV-5A which graphically portrays the revised rudder outline of the basic PBV-5 and the blister gun emplacements inaugurated on the PBV-4.

No. 5. XPB2Y-1 - This design was, in essence, an enlarged refinement of the basic PBV formula. Originally with a single vertical fin the XPB2Y-1 Coronado evolved to a twin rudder configuration of circular outlines. First flown in December 1937, the XPB2Y-1 was powered by four P & W R1830-72 engines.

No. 6. PB2Y-2 - The PB2Y-2, the first production version, was similar to the XPB2Y-1 except for the redesigned bow, cockpit enclosure, and the fin and rudder outline. Engines were the P & W R1830-78. Other versions, all quite similar were the PB2Y-3, -3R, -4, and -5.

No. 7. Model 31 - Best performing of the war-time Consolidated flying boats, the Model 31 featured a double deck hull and retractable floats that faired with the lower surface of the wing.

No. 8. XP4Y-1 - Reworked from the Model 31 aircraft, the XP4Y-1 was powered by two Wright R3350-8 Cyclones of 2300 H.P. Top speed was 247 mph at 13,600 feet altitude. The production P4Y-1's were cancelled when their engine supply was diverted to B-29 production.

AIR FORCE MUSEUM (Cont'd.)

Its unique feature is the method of presentation of artifacts on display. Rather than being left to wander aimlessly among a multitude of exhibits, the visitor will view the many indoor displays from an elevated ramp. The ramp will be constructed in such a manner that it will course through the areas, giving the visitor the best possible views and perspectives of the various items, and in chronological order according to the periods in which they had their major role.

The first area the visitor enters is entitled "Fantasy of Flight", followed in order by the "Wright Brothers Era", "Warriors With Wings" (WWI), "Patience and Progress" (devoted to the years 1919-1940), "The Second World War", "Our Independent Air Force in Action" (being the story of the Berlin Airlift/Korean War period), and the last theme, "Aerospace". This theme covers the period 1954 to the present and portrays the last frontier to be conquered.. It will be illustrated by such exhibits as the X-1B supersonic research rocket

airplane, the F-104A and the IM-99 "Bomarc". There will be a specially designed "Cosmorama" to depict in curved-wall display man's past achievements and future hopes in rocketry and space travel.

An impressive "Medal of Honor Court" will be constructed as a lasting tribute to those men of the Air Force who have been awarded the Nation's highest decoration. Finally, there will be areas for display of various types of art work related to the history of the Air Force, much of it created by American artists.

In consonance with the indoor exhibits, the outdoor display of aircraft includes representative types. A nearly complete list of all of the aircraft on display at the Museum was given by Members Frank L. Greene and Gene Sommerich in the A.A.H.S. JOURNAL, Volume 2, pages 197 and 198. In Volume 3, Gene made some additions to the list, Page 11. Since that time (early 1958), several of the aircraft have been retired from exhibit. Following is the current list

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