Missions for America

Semper vigilans!

Semper volans!

Publication of the Thames River Composite Squadron
Connecticut Wing
Civil Air Patrol

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Issue 12.28 17 July, 2018

SQUADRON CALENDAR

21 JUL-Celebrate East Lyme
24 JULY, TRCS Meeting
31 July, TRCS Meeting
30 JUN-1 AUG-SAREX Plainfield
04 AUG-Stonington Village Fair
4-5 AUG-CLC Windsor Locks
11-18 AUG-CTWG Encampment
18 AUG-CTWG Commander's Call-Niantic
19 AUG-National Aviation Day-Groton
TBD SEP-SUI
22 SEP-Preston Scarecrow Festival
25 SEP-Fruit Sale Starts
29 SEP-Glider Flights-Springfield, Vt.
06 OCT-Groton Fall Festival
11-12 OCT-UCC
11-14-CTWG/NER Conference
10 NOV-Cadet Ball
25 DEC/01 JAN-No Meetings

MEETINGS

17 July, 2018

Meetings Cancelled-Weather

CADET BURTON SECURES VP PHOTO

submitted by
Lt Michael Kopycienski

After the visit by the Vice President, Cadet Burton had tw0 8 x 10 enlargements made of the photo of the cadets with Vice President Pence.

Cadets and Officers in the photo signed one of the pictures and sent it to the vice presidential office.

The second photo was also forwarded with a request that the Vice President autograph the photograph and return it to the Squadron.

Vice President Pence graciously responded and Cadet Burton has presented the photograph to Squadron Commander Farley for display.

OH DEAR!

DISGRUNTLED READER CANCELS SUBSCRIPTION

The following message was received by the Editor.

Cancel my subscription to The Coastwatcher immediately and return the balance of my fees post haste! I cannot stand idly by while the so called "editor" drags, what used to be a respected aeronautical journal, into the sewer.

Giving so many column inches to a lap dog of the Nazis, see July 11 reference to aviatrix Laura Ingalls, while ignoring the fact that July 11, 2018 is the 125 anniversary of the birth of Edward Anderson Stinson, Jr., famed American pilot and aircraft manufacturer, is beyond the pale! "Eddie" Stinson founded the Stinson Aircraft Company and, at the time of his death in 1932 in an air crash, was the world's most experienced pilot with over 16,000 hours logged.

What next? Praising the despised Walter O'Malley for buying a corporate airplane to help move the Dodgers from Brooklyn to Los Angeles? Support of the Whitehead cult!

My rage and disappointment knows no bounds.

Unfortunately, the unhappy reader failed to include his address so he will continue to receive the Coastwatcher at no additional charge.

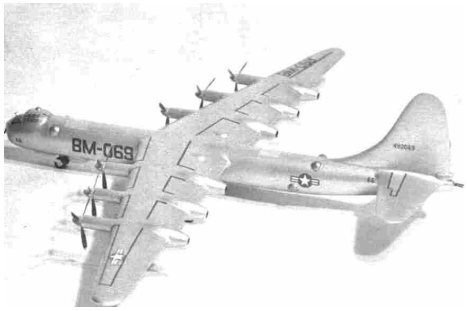
PAPER AIRPLANES

Part Two

Post World War II "Paper" Airplanes

This article is a continuation of a review of United States bomber designs which never left the drawing board, "paper airplanes" which for which metal was never cut. The post war designs reflected the lessons learned by the experiences of the Army Air Force in their pursuit of strategic bombardment. Pressurization and turbine engines provided increases in altitude and speed. Armament was heavier, adding turrets and increasing the caliber of the guns and although not part of this discussion, developing long range escort fighters. Although some radical designs were proposed, successful aircraft often formed the basis of a new design.

The YB-36C was a plan to equip a B-36 airframe with six 4,300 hp R-4360-51 Variable Discharge Turbine (VDT) engines driving tractor propellers. Pratt and Whitney planned to adapt a R-4360 Wasp Major with a turbo supercharger which would take the hot gases from the piston engine and accelerate them providing extra thrust. The 28 cylinder Wasp Major was the largest piston engine to reach production and the VDT concept would raise its horsepower by 20%.



YB-36C

However, technical difficulties involving mechanical and thermodynamic complexities of the complicated design led to the abandonment of the YB-36C concept.

German research on forward swept wings led to Convair's post war jet powered medium bomber concept, the XA-44. The Air Force wanted a light bomber and Convair used the XA-44 concept which was dropped due to the Air Force requirement and Convair's reluctance to build two different aircraft which would essentially compete with each other so the nascent XA-44 design metamorphosed into the XB-53. The design was also tail-less and planned to use three turbo jets. Furthermore, the wing tips were variable incidence control surfaces. The XB-53 carried a lot of baggage in its radical features and ultimately, Convair and the Air Force decided to cease work on the project.

XA-44/XB-53

Boeing's experience with the successful B-29 and the B-50 strategic bombers was followed up by a number of designs in which the company experimented with different power plants. On such project was the YB-50C which used VDT engines. The prototype was cancelled before the aircraft was completed. But Boeing continued with the experiment and followed up with the XB-54A, powered by VDT engines, and physically bigger with wings so long that outriggers were necessary to keep them from striking the ground. The Air Force let a contract for the plane but the development of jet aircraft with superior performance.

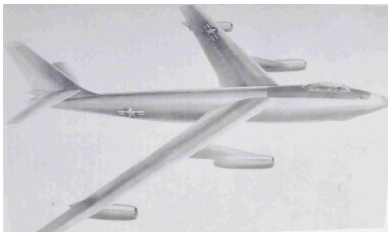
The 1950s were busy years for Boeing's bomber designers. The XB-55 is reminiscent of the highly successful Tupolev Tu-95 Bear, four turbo-prop engines swinging counter-rotating propeller and mounted on a swept wing. The engines were, Boeing style, mounted on stubby pylons. The proposes suite of protective armament consisted of 12 20 mm cannons in three turrets. However, the new pure jets which were coming off the drawing board promised better performance so the XB-55 only reached the blueprint stage.

XB-55

Concurrently, Boeing was designing a new aircraft called the XB-52 which had started with straight wings and six turboprops and evolved to a swept wing version with four turbo-props equipped with pairs of counter-rotating propellers. At some point, the company realized that eight of the new Pratt J57 engines would turn the B-52 into the winning aircraft it is today and plans for the XB-55 were dropped.

The Boeing B-47 Stratojet had entered service and was equipped with six General Electric J-47 turbojets. The were hung in nacelles under the wings, a pair inboard and a single engine outboard. A proposal, the XB-56, was made to replace the six J-47s with four afterburner equipped J-35s which would clean up the design, reduce the engines required, lighten the aircraft and improve performance.

XB-56

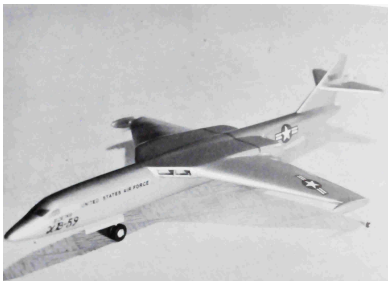


One B-47 was selected for the conversion but no work was ever done. The J-35 had disappointing performance so the Allison J-71s and the Pratt and Whitney J-57 were considered. The Allison turned out to be unsuitable and the new eight engine B-52 had priority on the Pratts.

Interestingly, over 50 years later, plans had been floated to strip the still active B-52 of its engines, currently Pratt TF33s and replace them with four turbofans such as the GE CF6 or the Pratt PW2000. A study revealed that the upgrades to wings, engine pylons, and controls make the plan unfeasible. Consequently, the Air Force is considering using eight of the new compact high-bypass turbofans now available. The decision to install new engines will not be cheap. Around 800 will be needed to outfit the fleet and provide spares.

As interceptor performance increased, the Air Force decided that it needs a high speed strategic bomber. Boeing proposed the XB-59 and five other companies also joined the race. The aircraft featured shoulder mounted wings and would have been powered by four General Electric J73 engines

equipped with afterburners and capable of Mach 2 flight.

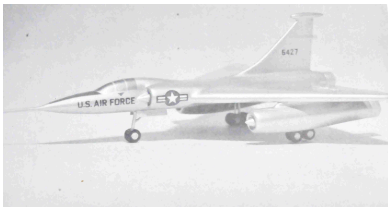


XB-59

However, Convair won the design competition and the B-58 Hustler became the first Mach 2 bomber. Ironically, the development of high altitude anti-aircraft missiles led to the development of low altitude penetration tactics. Alas, supersonic flight was not practical in the the dense air at low altitudes and obviated the Mach 2 performance of the Hustler.

In 1952, the Air Force was looking for a supersonic tactical medium bomber and a Martin design, the XB-68 was declared the winner of a triangular design contest with North American and Douglas.

XB-68



Coastwatcher research seems to indicate that two radically different designs were offered by Martin. One had delta wings and mounted three engines. A second was of more standard configuration with two engines.

As is often the case, the ambitious plans had outrun the available technology and funding and the Air Force cancelled the project. The Douglas B-66 Destroyer, an offshoot of the Navy's A3D Skywarrior was adopted as a subsonic medium bomber.

Some numbers are missing from the sequence from B-1 to B-70 even when one includes the "paper airplanes. The numbers B-61 to B-65 and B-67 were used for pilotless aircraft.

TM-61 was Martin's Matador, a tactical cruise missile. Northrop produced the SM-62 Snark, a jet powered intercontinental cruise missile.

The GAM-63 Rascal was a Bell product, a stand-off cruise missile intended to be launched from a B-47. North American was a ramjet powered supersonic intercontinental cruise missile called the Navaho.

The SM-65 Atlas was the first U.S. intercontinental ballistic missile.

Finally Radioplane developed the GAM-67. Named the Crossbow, it was air launched from a mother ship and could perform electronic counter measures, reconnaissance, or decoy missions. Ground launched it served as a target drone All of these pilotless designs flew and either saw actual service or provided valuable information for future developments.

Aircraft, starting with kites, have been fashioned from many materials, wood, rubber, natural and artificial fabrics, metal, plastic, and composites. But paper has been the starting point, either as a medium to "sketch" out the design or as some with has proposed, cash to pay for the product.

Note on notes: The preceding article's information leaned heavily on *U.S. Bombers* by Lloyd S. Jones, Aero Publishers, Inc., 1974

AEROSPACE CHRONOLOGY

July 18, 2009 – Deceased: British World War I veteran and last surviving founder member of the Royal Air Force, Henry Allingham, age 113.

Allingham joined the Royal Naval Air Service (RNAS) in 1915 and was rated as an Air Mechanic. He served at the Battle of Jutland and on the Western Front.

On April Fool's Day, 1918, the RNAS and the Royal Flying Corps were amalgamated and the

Royal Air Force (RAF) took wing. Allingham's new ratings were Rigger and Aero Mechanic.

Allingham at age 111.

A year later, he was discharged into the RAF Reserve and entered the auto industry. When World War II started, Allingham worked on a number of military projects and assisted in the development of a method to neutralize magnetic mines.

He attributes his longevity to "cigarettes, whisky and wild, wild women – and a good sense of humor."

His funeral was marked by a flypast of five replica WWI aircraft, the playing of the Last Post and the tolling of a bell, 113 times, once for each year of his life.

July 19, 1957 - Nevada's Yucca Flats Nuclear Test Site-A Northrop F-89J Scorpion performs the first and only firing of a live Douglas AIR-2A g\Genie air-to-air rocket equipped with a nuclear warhead. “Close is good enough” is the tactic for shooting down incoming bombers with a Genie armed with a 1.7 kiloton warhead.

Scorpion and Genie

July 20, 1908 – Orville Wright warns Glenn Curtiss that the wing flaps used in the AEA’s June Bug are an infringement of the Wrights’ 1906 patent. The patent battle between the Wrights and Curtiss continues until 1917 when the U.S. Government pressured aircraft manufacturers to enter into a patent pool for the duration of World War I. The legal struggle suffered a natural death in 1918.

AEA Junebug and its triangular wingtip aileron, a source of the patent infringement dispute.

July 21, 1921– Billy Mitchell led a flight of Martin NBS-1 bombers to the former German battleship, Ostfriesland, moored in the Atlantic Ocean off Cape Henry. The unoccupied and undefended battleship *sans* damage control parties sinks buttressing claims by Mitchell that the Army Air Service can assume the role of coast protection for the United States and that the age of the battleship was over.

Ostfriesland Awash

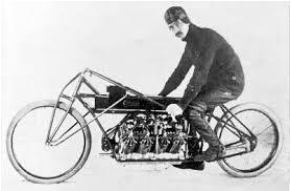
The Navy justifiably protested how the test was conducted. Mitchell was vindicated on December 10th, 1941 when the battleship HMS Prince of Wales and the battle cruiser HMS Repulse were sunk by land based bombers and torpedo planes of the Imperial Japanese Navy off the coast of Malaya.

July 22 1983 – Dick Smith, an Australian entrepreneur and adventurer achieves the first solo circumnavigation of the globe in a helicopter. The 11 month flight started in Fort Worth, Texas where Smith picked up his new Bell Jetranger 206B christened Australian Explorer and headed east.

Smith after weather forced him down near the Potomac River

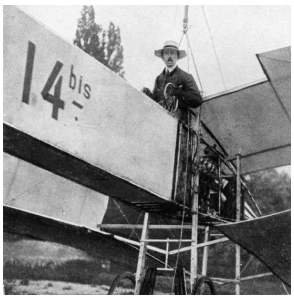
He crossed the Atlantic on 19 August, the 50th anniversary of James Mollison's solo crossing. Continuing east he completed the second stage of the trip in Sydney of October 3rd, 1982. On the last stage, the Soviets denied him permission to refuel in the USSR so he landed on a ship to refuel. The date of completion of his journey, July 22, marks the 50th anniversary of Wiley Post's solo circumnavigation in 1933.

July 23 marks the dates of the deaths of three aviation pioneers. Glenn Curtiss takes his final flight in **1930**. Alberto Santos Dumont, hangs himself in **1932**. Eddie Rickenbacker, our WWI Ace of Aces succumbs in **1973.**



Curtiss on the V-12 motorcycle with which he set the world's land speed record.

Santos-Dumont in the cockpit of one of his most successful aircraft.



Captain Eddy in his WWI mount.

July 24, 1946 – Bernard Lynch becomes the first person to be ejected from an aircraft in a Martin-Baker ejection seat. The test is performed while a Gloster Meteor Mk III cruises at 320 mph.

Lynch Before Launch

July 25, 1909 – Louis Blériot becomes the first pilot to fly a heavier -than-air machine across the English Channel and wins the £1,000 prize offered by London's Daily Mail newspaper. He flies his Blériot Type XI from Calais to Dover in 37 minutes at an average speed of about 45 mph.

Blériot readying for cross-channel flight.

(Credit: National Air and Space Museum)

July 26, 1959 – Marine Lt. Col. William Rankin enters the Guinness *Book of Records*. Cruising at 47,000 feet over North Carolina, his Vought F8U-1 Crusader's engine seizes up and he is forced to eject into a thunderstorm.

Rankin and a model of his Crusader.

Caught in the updrafts, he rides the air currents almost drowning in the heavy rain and becoming sea-sick. Normally, the descent should have taken 11 minutes. Rankin rode the thunderstorm for 40 minutes, the longest parachute descent in history! After a rough landing, he walks to a road and manages to flag down a car and gets to a hospital. After a period of rehabilitation, he regains flight status.

July 27, 1996 – General Dynamics F-111 has a tumultuous start in life when the Secretary of Defense, Robert McNamara demanded a fighter-bomber that would meet standards for both the Air Force and the Navy. After years of political controversy, a Boeing design was selected but the decision was over-ruled by McNamara.

Ultimately, the Navy version was rejected and only the USAF and the Royal Australian Air Force accepted the aircraft which had suffered cost over-runs and numerous refits to solve design shortcomings. Eventually, the F-111 proved itself in service and was a pioneer of the swing-wing design and terrain following radar.

The "F" designation was a canard. The F-111 was not a fighter. The Australians affectionately called it the "Pig." But the F-111 was the only USAF aircraft to serve without a popular name. Upon retirement, after over 30 years of service, the F-111 was christened Aardvark. About time!

July 28, 1945– A B-25D Mitchell named "Old John Feather Merchant" crashed into the 79th floor of the Empire State Building. The crew of three were killed as were 11 people in the building. An elevator operator, Betty Lou Oliver fell 75 stories into the basement when the cables of her elevator were sheared. She entered the Guinness *Book of Records* as surviving the longest elevator fall.

Empire State Building on fire.
(Credit: Bettman Archives)

The second time an aircraft hit a New York skyscraper occurred on May 20th, 1946. A USAAF Beechcraft C-45 Expediter crashed into the north face of 40 Wall Street, a 71 story building. The Beech hit the 58th floor. All five aboard were killed but the incident occurred at 8:10 PM and no civilians were hurt. The fuselage and wing fell but were caught on a 12th floor ledge.


"All the News That's Fit to Print"

PLANE HITS WALL ST. TOWER; 5 IN ARMY CRAFT ARE KILLED; BIG HOLE TORN IN 58TH FLOOR

SCENE OF PLANE CRASH LAST NIGHT

PILOT LOST IN FOG

En Route to Newark From the South—Wac Officer a Victim

FLAMING DEBRIS FALLS

40 Wall Street is now known as the Trump Building.

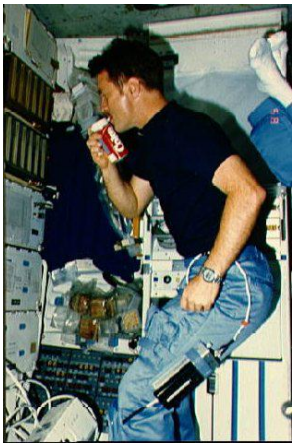
(Credit: Bill Hathorn)

July 29, 1985-Shuttle *Challenger* lifts off from Cape Canaveral. Five minutes and 45 seconds later, main engine number one shuts down due to a malfunctioning high temperature sensor. The crew

aborts the original flight plan to high orbit and shifts to a secondary flight plan placing the *Challenger* in a lower orbit.

Shuttle Abort Panel
"You got to know when to hold them, know when to fold them, know when to walk-away and know when to run."

Coca-Cola and Pepsi corporation executives breath easier. They had financed an experiment to determine whether or not carbonated soft drinks were a viable alternative to the traditional liquid refreshments carried on previous missions. The drinks were dispensed from specially designed cans. The crew deemed the experiment a failure due to the inability to refrigerate the sodas.



Mission Specialist Anthony W. England takes "the pause that refreshes."

In 1995, *Discovery* flew a specially designed dispenser which loaded Coke and Diet Coke into sealed cups and cooling coils attached to the equipment cooled the soda. No joy! Strike Two!
The Coke boys from Georgia were persistent. They came up with an improved dispenser which flew on Endeavour in 1996. The new machine dispensed Coke, Diet Coke, and Powerade. Strike three and out. No burps in space.

July 30, 1958 – First flight of the de Havilland of Canada's DHC-4 Caribou. The Caribou is a short take off and landing cargo plane. The US Army adopted it as a tactical transport, the CV-2, and flew around 150 them in Vietnam. Then the Army made a deal with the Air Force. They surrendered their fleet of Caribous and the Air Force ended all restrictions on Army rotary wing operations. The Air Force re-designated the Caribou as the C-7.

CTNG Caribou at Groton

July 31, 1944– Noted aviation pioneer and author Antoine de Saint-Exupéry goes West. He is flying a Lockheed F-5 Lighting on a photo-reconnaissance mission over the Mediterranean when he disappears. In 2004, the wreckage of his plane is discovered and his identification bracelet is recovered.

The Coastwatcher **will not be published during the week of 24 July. The Editor will be in Bristol, Indiana studying Mennonite culture. The next edition, 12.29, will be published on or about 31 July.**