

1955 CHRONOLOGY

National Safety Council names 39 U. S. airlines as winner of its aviation safety award for completing operations during 1954 without a passenger or crew fatality.

French SO 9,000 Trident prototype tops 850 mph in level flight using only two of its three rockets.

June 17

Joint Chiefs of Staff considering whether USAF should expand its role of providing airlift for the Army.

Senate restores \$15-million to CAB's subsidy fund, previously reduced to \$40-million by the House.

Thorsten V. Kalijarvi, Deputy Assistant Secretary of State, admits disagreement over air routes given by U. S. to Germany in unsigned Civil Air agreement.

Gordon Bain, executive vice president of Slick Airways, says new-type turboprop equipment, perhaps turbojet, may lower ton mile cost of carrying airfreight to 3c or less as compared to present 6½c.

June 20

GE's 1,500-pound-thrust J79, designed for Lockheed F-104 and Convair B-58, reportedly being flown in B-45 test bed.

President Eisenhower approves CAB's recommendation certifying Seaboard & Western Airlines to operate scheduled all-cargo service across Atlantic for five years.

Panagra and National Airlines sign interchange agreement.

Major General Kenner F. Hertford, chief of Army research and development, reveals that Army has invested nearly \$16-million in two experimental convertiplanes, McDonnell XV-1 and Bell XV-3.

Convair-San Diego's new \$3.5-million "blow-down" wind tunnel to be able to test aircraft and missile models up to speeds of Mach 5, is designed for speeds beyond that range and will provide test runs ranging from 50 to 90 seconds.

New criterion for determining whether unclassified information should be revealed by Pentagon based on whether it would make "constructive" contribution to Defense Department's mission and whether it will be "useful."

Frederick B. Rentschler, chairman of United Aircraft Corp., says U. S. has not lost lead in airpower to Russia nor in jet engine development to the British.

Hoover Commission reports effective fiscal management in Defense Department is far from being realized and estimates improved procedures would result in estimated savings of \$4-billion annually.

Douglas Aircraft Co. to start fleet deliveries on F4D-1 turbojet shipboard fighter the latter part of the year.

H. Leslie Hoffman, president of Hoffman Electronics Corp., elected president of reorganized board of directors of Radio-Electronics-Television Manufacturers Assn.

June 21

William M. Allen, president of Boeing Airplane Co., offers rebuttal to charges that aircraft industry is not truly competitive and that profits are too high.

Navy and Chance Vought Aircraft, Inc., release details about supersonic XF8U1.

June 22

Harold L. (Pete) Pearson elected president of Air Transport Association.

Air Force to step up output of McDonnell F-101 and Lockheed F-104.

Northrop Aircraft reports production streamlining and learning curve benefits have reduced cost of Air Force F-89 Scorpion to \$19 a pound.

Boeing Airplane Co. test pilots fly second turboprop-equipped Strato-freighter on maiden flight.

Benson Aircraft Corp., Raleigh-Durham Airport, Raleigh, N. C., to market one-place helicopter, Model B-4 Sky Scooter, with 60 mph cruising speed.

June 23

General Benjamin W. Chidlaw, USAF-Ret., joins Thompson Products, Inc., as vice president and consultant on aircraft.

Senate Commerce Committee votes unanimous authorization for vastly increased Federal Airport Aid program.

Rep. Carl Hinshaw (R-Calif.) urges Government to "cease permitting Mexican air commerce entry into the United States" unless that country quits "shilly-shallying" and agrees to a "just and equitable over-all air route agreement".

C. R. Smith, president of American Airlines, reports AA will not order longer range turboprop transport but will be in market for Douglas DC-8 or other jet transport.

Approximately 120 USAF field grade officers from every major command conclude two-week course at Massachusetts Institute of Technology on "Noise Problems in Aviation."

USAF estimates cost of operating each 30-plane Boeing B-52 wing at \$39.3-million a year.

Australian Department of Civil Aviation orders compulsory use of Distance Measuring Equipment by all domestic airlines engaged in regular transport operations.

Ian Mikardo, British Labor Member of Parliament, presses for inquiry into production of British aircraft.

European Association of Independent Airlines formally created. President is Air Commodore Griffith J. Powell.

June 24

U. S. Court of Appeals, District of Columbia, reverses order of CAB denying North American Airlines' application to engage in air transportation under name North American Airlines and to cease and desist from using that name or any combination of the word "American."

Senate subcommittee to begin hearings again on matter of a second airport to relieve congestion at Washington National Airport.

Robert E. Gross, Lockheed Aircraft Corp. president, says new approach to aircraft development may be answer to shortage of engineers.

Four-place Morane Saulnier 760 twin-jet executive transport to cost about \$300,000 if and when Beech Aircraft Corp. decides to build it.

June 27

First flight of first Electra turboprop of Lockheed Aircraft Corp. planned for October, 1957. First delivery scheduled for August, 1958.

Defense Secretary Charles E. Wilson signs new directive establishing military policy governing development and application of gas turbine engines.

The AIRCRAFT YEAR BOOK

Cargo rates between U. S. and Europe to be cut an average of 20 percent as result of unanimous decision by IATA traffic conference.

Quarter-billion-dollar airport aid program approved unanimously by Senate.

National Aeronautical Corp. unveils new Simplexer Model VC-27.

Pan American World Airways announces \$2-million purchase of C-Band equipment from Radio Corp. of America.

Dwight P. Joyce, chairman and president of the Glidden Company, charges that aviation manufacturers and distributors have "lost sight of the fundamental activity that makes their business possible—the promotion of civilian flying in all its aspects."

June 29

Special Presidential Commission reports that federal aid to airports should be increased and recommends continuation of present federal-state-local cost sharing arrangements.

Sen. Henry J. Jackson asks Defense Secretary Charles E. Wilson for answers to series of questions regarding comparative U.S.-Soviet air strength and expresses fear of rapid progress Russia is making in field of air power.

Air Secretary Talbott, in semi-annual report to President Eisenhower, calls Boeing B-52 heavy bomber the best in the world.

USAF creates new Air Force Aircraft Engines Logistics Planning Board in attempt to make better forecasts of spare engine requirements.

Fairchild Engine Division to shut down Mincola, L. I., plant in July upon completion of \$40-million contract with Atomic Energy Commission.

June 30

Orders totaling at least \$300-million may be placed within near future for Douglas Aircraft Co.'s DC-8 jet transport.

Boeing Airplane Co. received \$15-million follow-on order for KC-135 jet tanker aircraft, special tools, training items, data and tests.

Andre A. Priestler, vice president of Pan American World Airways, elected chairman of technical committee of International Air Transport Association.

Aircraft locals of International Association of Machinists-AFL expected to demand 10 percent increase in all wages, 15 percent swing differential and company-paid health and welfare programs in contract negotiations.

Air Force issues letter of intent to Bell Aircraft Corp.'s Fort Worth division, calling for production of nearly \$1.5-million worth of helicopters.

Stockholders of both companies approve merger of General Dynamics Corp. with Stromberg-Carlson Co., Rochester, N. Y.

JULY

July 1

David S. Teeple, former aide to AEC Chairman Strauss, charges more "laxity and negligence" in the nuclear-powered aircraft program than in the development of the hydrogen bomb.

Cessna revives L-19 instrument trainer production under \$1-million USAF contract.

Crosley Division of Avco Mfg. Co. receives \$5.4-million contract for MD-1 fire control systems.

July 5

Piasecki Helicopter Corp. announces plan to build 19-passenger version of military H-21 helicopter for commercial transport market.

USAF marks two milestones—acceptance of first Boeing B-52 bomber and delivery of first production model of Convair F-102A supersonic interceptor.

July 6

National Airlines announces a \$95-million fleet and facilities expansion program, featuring turboprop and turbojet aircraft.

Moscow May-day fly-by discloses several new-type Russian helicopters, turboprop and turbojet aircraft.

CAB orders North American Airlines group to cease unlawful operations immediately and terminate all air service by Sept. 1.

The Navy lists Cessna, Fairchild, Hiller and North American as winners of contracts for design studies for new high-performance observation plane for Army and Marine Corps.

July 8

Controversial bilateral air transport agreement between U. S. and Germany signed.

U. S. contracts for three Italian Aerfer light-weight fighter prototypes at cost of \$2.3-million.

Piasecki Aircraft Corp., new company formed by Frank N. Piasecki, chartered.

July 11

Harry F. Vickers, founder of Vickers, Inc., elected vice chairman; Kenneth R. Herman named president.

Administration urges lowering annual federal aid to airports to \$42-million, balks at four-year authorization principle.

Republic Aviation and union agree on company-paid pension plan.

Senator Smathers describes air transport agreement with Germany as "unjustified giveaway" by State Department.

July 12

Allison Division of GM awarded \$50-million Air Force contract for production of T56 turboprop engines.

Frank N. Piasecki announces his new firm to concentrate in field of vertical lift aircraft for military services.

The Exceptional Services Award, highest USAF civilian honor, presented to Lawrence D. Bell at dinner marking Bell Aircraft's 20th anniversary.

July 13

House Appropriations Committee cuts deeply into AF 1956 building program, knocks out funds for Air Academy and new ARDC headquarters.

Lockheed Aircraft market researchers expect air travel to jump to 72-million revenue passenger miles by 1965.

July 14

Air Force gives Boeing Airplane Company green light to build commercial jet transport.

Sen. George A. Smathers named to head new inquiry into international air route agreements, including Lufthansa pact.

Convair Division of General Dynamics awarded \$5.4-million to modify and modernize RB-36 aircraft.

July 15

Lockheed's XF-104 reported to have exceeded Mach 2 speed.

1955 CHRONOLOGY

South African Air Force places \$10-million contract with Canadair for 34 Sabre 6 fighters powered by Orenda 14.

W. R. Grace & Co. accuses Pan American World Airways of reducing Pan-American-Grace Airways from an airline to a "mere pipeline."

MATS reports over 1,000 hours of flight testing on two Convair YC-131C turboprop transports.

July 18

Senate begins inquiry into business connections of Air Force Secretary Talbott.

Air Force and CAA endorse legislation to provide flight training for ROTC cadets.

July 19

Don R. Berlin denies report that his company, Piasecki Helicopter Corp., will not be competitive with Piasecki Aircraft Corp., headed by Frank N. Piasecki.

July 20

Canadian Government places first pre-production order for a guided missile, an air-to-air weapon.

House Armed Services Committee approves legislation providing for flight training for AF ROTC cadets.

Bell Aircraft receives additional Navy contract for four-place HUL-1 utility helicopters.

North American makes delivery of first F-100C fighter-bombers to Foster AF Base.

July 21

Fairchild Aircraft Division announces plans for a light jet transport with a cruising speed of 560 mph to meet executive transport requirements.

White House accepts resignation of Roger Lewis as Assistant Secretary of the Air Force for materiel and nominates Dudley C. Sharp as successor.

Northrop Aircraft plans El Paso, Texas, plant for development of guided missiles.

American Airlines asks CAB for new service rights to Pittsburgh, Philadelphia and Cleveland.

Captain E. V. Rickenbacker predicts transport speeds of 120 mph and fares within reach of all in the foreseeable future.

Prototypes of a new device known as Aerial Delivery System delivered to the Air Force for tests.

July 22

Air Force Secretary Talbott offers to sever connection with New York engineering firm.

CAB counsel urges seven-year renewal of certificates for Slick Airways and Flying Tiger Lines, cargo carriers.

Dr. Theodore Theodrosen appointed director of scientific research for Republic Aviation Corp.

Ernest L. Jones, co-founder of Early Birds and aviation historian, dies.

July 25

Engine, engine parts, modification and repair contracts totaling \$82.5-million have been awarded by the Air Force, Commerce Department reports.

Avro Aircraft's CF-100 all-weather fighter to be powered by P&W J75 pending availability of Orenda PS-13.

Rep. Hale Boggs requests sweeping probe of regulation of civil aviation.

First of C-121C Super Constellation transports for Air Force rolls off Lockheed assembly line.

Port of New York Authority reports 60 percent of 240,000 air passengers using its airports travel on business, 25 percent on vacation and 15 percent on other types of personal missions.

July 26

Defense Secretary Wilson gives USAF go-ahead to speed production of McDonnell F-101 and Lockheed F-104 supersonic fighters.

Avco Manufacturing Corp. announces its XT-53 turbine engine will power Army's Bell XH-40 utility helicopter.

First jet engine overhauled by a civilian base — Southwest Airmotive — accepted by the Air Force.

American Airlines, testifying in Slick-Tigers renewal case, reports every expectation of CAB in its all-cargo experiment has proved false.

Rear Admiral Apollo Soucek, chief of Navy Bureau of Aeronautics, dies.

July 27

Capital Airlines becomes first U. S. carrier to place turboprop transports in operation on its routes.

Lieutenant General Laurence C. Craigie, former USAF deputy chief of staff, joins Hydro-Aire, Inc., as vice president.

CAB Chairman Rizley admits bureau more liberal in route concessions to Germany than normal in such cases.

July 28

Engines on a Boeing B-47B become first on a multi-engine plane to pass 1,000 flying hours without major overhaul, AF and General Electric announce.

CAB rules fare differential between DC-4 and DC6B service not warranted.

CAA established instrument approach procedures for aircraft equipped with DME.

July 29

Convair receives USAF order for 10 Model 340 cargo-personnel aircraft.

Gordon Dean, former chairman of Atomic Energy Commission, elected a senior vice president of General Dynamics Corp.

Congress passes and sends to White House a foreign aid bill which reduces military assistance by \$420-million.

E. W. Hudlow, chief of CAA's general safety division, dies.

AUGUST

Aug. 1

White House announces that U. S. plans to launch a small unmanned satellite about the size of a basketball sometime after July, 1957. Satellite will circle earth at altitudes between 200 and 300 miles.

CAB orders Capital Airlines to produce manufacturer's specifications for its Viscount aircraft.

Atomic Energy Commission reports that aircraft nuclear propulsion program has been accelerated, with construction of test area at Arco, Idaho.

Safe Flight Instrument Corp. demonstrates automatic power control system, providing maximum lift for low speed maneuvers.

Aug. 2

Allison Division of General Motors given \$53-million Air Force contract for T56 turbo-prop engines.

The AIRCRAFT YEAR BOOK

Fairchild Aircraft Division awarded \$12-million AMC Contract for C-123B aircraft.

General Electric forms a special defense projects department, with George F. Metcalf as general manager.

Chance Vought begins delivery of KDU-1, target drone version of Regulus missile, to the Navy.

Earle A. Ryder retires after 30 years of service with Pratt & Whitney Aircraft.

Aug. 3

Harold E. Talbott, Secretary of the Air Force, resigns.

Senate confirms appointment of Dudley C. Sharp as Assistant Secretary of the Air Force.

Pan American-Grace Airways DC-7B sets new record of 20 hours 2 minutes elapsed time between Buenos Aires and New York, averaging 329 mph.

Senate Interstate and Foreign Commerce Committee asks Commerce Department to plan for construction of a second Washington, D. C., airport.

Aug. 4

Boeing Airplane Company applies to CAA for approved type certificate for its 707 turbojet transport.

Defense Department allots \$11.3-million to NATO for lightweight fighter aircraft.

Alfred S. Koch, CAA director of safety, resigns after 25 years of service.

President Eisenhower signs \$232-million airport aid authorization bill, providing \$60.5-million for fiscal 1956 airport projects.

USAF takes delivery of first Aero Commander and assigns it to White House for use by President Eisenhower.

Aug. 5

Grover Loening, aeronautical designer, awarded Air Force's exceptional civilian service award.

Plans for a \$1-million hotel-motel at Chicago's Midway airport announced by Airways Hotels, Inc.

Aug. 8

Glenn L. Martin Co. reports that design techniques and components are at hand to create a multi-stage rocket required to launch planned satellite.

General Edward M. Powers resigns as vice president-engineering of Curtiss-Wright Corp.

Ralph S. Damon, president of TWA, named recipient of American Society of Mechanical Engineers' Spirit of St. Louis medal for meritorious service in the field of aeronautics.

Aug. 9

Convair-Fort Worth and union agree on one-year contract granting wage increases from six to eight cents an hour to 10,000 employees.

Royal Aircraft Corp. announced production and marketing of five-place Royal Gull amphibian to begin this month.

Douglas Aircraft Company and ARDC develop improved downward ejecting seat for supersonic X-3 experimental aircraft.

Aug. 10

Douglas reports its turbojet DC-8 will be economically superior to such late-type piston-powered aircraft as the DC-7.

Convair announced receipt of a multi-million dollar USAF production contract for F-102A supersonic delta wing interceptors and TF-102A trainers.

Aug. 11

National Airlines becomes first U. S. carrier to announce a firm order for Douglas DC-8 jets, reporting planes will cost \$4.6-million apiece.

Six western railroads take exception to CAB recommendation for additional airline service in the Denver area.

First production Helio Courier, 4-place, stall-proof plane, delivered.

Aug. 15

General Nathan F. Twining, Air Force Chief of Staff, indicates that USAF may go beyond authorized 137-wing goal.

Varig becomes first Brazilian airline to operate into New York, flying Super Constellations once a week.

British aircraft companies reported engaged in development work and design studies on nuclear-powered aircraft.

Aug. 16

TWA proposes a new low one-way fare of \$80 on its transcontinental route, asks CAB for approval.

Willie Ley, rocket expert, reports that Convair's Atlas, intercontinental missile, could be used to launch the first earth satellite.

The 61-day strike at Westinghouse Electric's Kansas City gas turbine plant settled.

Donald A. Quarles sworn in as Secretary of the Air Force, succeeding Harold E. Talbott.

Convair's Fort Worth plant sponsors research program to determine ultrasonic effects of jet noise on various aircraft materials.

Aug. 17

Harold R. Harris, former president of Northwest Airlines, joins Aviation Financial Services, Inc.

Gill Robb Wilson, editor and publisher of Flying Magazine, elected president of the Air Force Association.

Sabena, Belgian airline, seeks to become first western carrier to serve Russia.

Aug. 18

General Edwin W. Rawlings, head of Air Materiel Command, reports that Phase I development contracts for a successor to the Boeing B-52 long-range bomber are being prepared.

Boeing-Seattle receives \$10.6-million contract for B-52 production facilities.

American Airlines and United Air Lines announce plans to establish an \$80 transcontinental coach fare similar to that posted by TWA.

Twelve Republic F-84s fly 5,118 miles non-stop from England to Texas in 10 hours 48 minutes, using in-flight refueling.

Aug. 19

W. A. Patterson, president of United Air Lines, suggests that U. S. and foreign air carriers pool orders for jet transports with one U. S. manufacturer.

Senate Interior Committee staff report criticizes Air Force for "vacillation" in encouraging use of titanium in military aircraft.

Air Navigation Development Board releases first details of controversial TACAN navigation system developed for Navy.

Aug. 22

Lieutenant General Thomas S. Power, head of ARDC, reports AF policy of letting Phase I contracts for advanced aircraft to companies with background in that type of work will not freeze out other firms in field.

1955 CHRONOLOGY

Bell Aircraft Corp. signs agreement with Nuclear Science & Engineering Corp. for advice and assistance.

Five aviation companies among 81 firms given access permits to restricted atomic data.

USAF Air Research and Development Command announces plans for construction of \$1-million electronic testing and flight simulation laboratory at Wright-Patterson Air Development Center.

Aug. 23

New USAF regulation establishing guided missile policy declares reluctance to depart from development practices and planning for manned aircraft may prevent maximum progress in integrating missiles into Air Force.

The Air Materiel Command has spent more than \$10-billion for the third successive year in logistics support of the Air Force, AMC reports.

Lieutenant General Bryant L. Boatner, soon to retire as Deputy Chief of Staff of the Air Force, receives Distinguished Service Medal.

Aug. 24

The Port of New York Authority has asked the New York Department of Marine and Aviation to issue a permit for a \$50,000 temporary heliport on the West 36th Street waterfront.

Toronto Globe & Mail reports that the USAF Air Research and Development Command is backing Avro Aircraft's Project Y "flying saucer".

North American's F-100C establishes a new official world speed record over a measured course at Palmdale, Calif., exceeding 800 mph with Colonel Horace A. Haines at controls.

Hans Seebohm, West German transport minister, claims Soviet Union building better jet fighters than the U. S.

Aug. 25

Hoover Commission task force report criticizes U. S. Offshore Procurement program for plans to buy British fighter aircraft on grounds such planes would be obsolescent before delivery.

North American Airlines asks U. S. Court of Appeals to set aside CAB order calling for revocation of its letters of registration.

Bell Aircraft's XV-3 convertiplane, second of two prototypes ordered by Air Force, makes first flight at Fort Worth.

Aug. 26

The Handley Page Herald, DC-3 replacement, makes first flight powered by four Alvis Leonides engines.

New York city rejects Port of New York Authority request for permit to build temporary heliport on grounds of safety.

Aug. 29

Beech Aircraft Corp. announced as winner of Navy competition for a new type pilotless, remote-controlled target plane, the XKDB-1.

ARDC announces development of a miniature emergency radio, weighing 15 ounces, for use by fighter pilots in survival equipment.

Rolls-Royce Conway by-pass engine passes official type test at 13,000 lbs. thrust.

Aug. 30

Air Force lets \$5-million contract to Convair to prepare for production of F-102B interceptor powered by P&W J75 engine.

The Glenn L. Martin Co. creates a new research laboratory to explore frontiers of knowl-

edge, including space travel and ways of overcoming gravity.

William H. Martin named Director of Research and Development for the Army.

U.S.S. Forrestal, first of Navy's supercarriers, makes its first trial run at Newport News, Va.

The Mooney Mark 20, four-place, single-engine plane, receives its CAA type certificate.

Lieutenant Colonel John P. Stapp, USAF medical officer, receives AF's Cheney Award for his rocket-propelled sled experiments.

Aug. 31

The Defense Department spent \$8.7-billion for aircraft and related equipment in the 1954-1955 fiscal year, W. J. McNeil, Assistant Secretary of Defense, reports.

SEPTEMBER

Sept. 6

Admiral Robert B. Carney, retired chief of naval operations, elected a director of Fairchild Engine & Airplane Corp.

CAB ends moratorium on route expansions by granting route extensions and lifting route restrictions in New York-Chicago Service Case decisions.

The de Havilland Gyron engine reported rated at 15,000 pounds thrust.

Sept. 7

Air Force Secretary Quarles advocates procurement program designed to give industry opportunity to provide needed equipment without costly crash expansions or sharp cutbacks.

Aero Design & Engineering reveals supercharged version of Aero Commander with top speed of 260 mph.

Sept. 8

Pentagon confirms Administration effort to slash \$1,750,000 from spending in current fiscal year. Sen. Chavez, chairman of Defense Appropriations subcommittee, attacks proposed cut as dangerous to national security.

British claim new altitude record for Class C aircraft after Canberra climbs to 65,876 feet.

Sept. 9

TWA, United and American get go-ahead from CAB on new low round-trip transcontinental coach fare (\$160).

Sept. 12

NACA reports speed gains up to 25 percent have been attained by use of "area rule" concept in fuselage design, reveals its use in Grumman F11F-1 and Convair F-102A.

Domestic airlines, by major vote in Air Traffic Conference, decide to eliminate no-show penalty on air coach passengers.

Lockheed Aircraft Corp. delivers its 7,000th jet aircraft.

Federal Telecommunication Laboratories gives first public demonstration of military and private TACAN equipment.

Sept. 13

Navy announces that all jet fighters will be equipped with in-flight refueling capability.

Robert W. Prescott, president of Flying Tiger Line, predicts air freight carriers will cut rates in half and increase volume ten-fold in next ten years.

Gerardus Post Herriek, father of the convertiplane and president of Vertoplane Development Corp., dies.

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Sept. 14

ARDC reveals rubber tubing stretched along leading edge of wing can cut landing distance one-third and take-off distance one-fifth on F-84F jet fighter.

Thompson Products, Inc., enters atomic energy field, establishing central staff to exploit new developments.

Sept. 15

Westinghouse Electric Corp., whose J40 and J46 engine contracts were eliminated by Navy, announces major objective is re-entry into the jet engine field.

Frye Corp. of Fort Worth announces plans to develop and produce transport Model F-1 as a replacement for DC-3.

CAA begins investigation of Ozark Air Lines complaint that Arthur Godfrey flew too close to one of its aircraft at Chicago Midway airport.

Sept. 16

Royal Gull amphibian becomes first foreign aircraft built to U. S. standards to receive type certificate.

Sept. 19

Captain Scott Flower of Pan American World Airways becomes first airline pilot to fly Boeing 707 jet transport.

Port of New York Authority presses fight for downtown heliport, supported by officials of industry and military.

Sept. 21

Comptroller General rules that Air Force did not have adequate authority when it leased telephone company services in development of the SAGE early-warning air defense systems.

NACA announces its \$4.5-million research reactor to be on site of Plum Brook Ordnance Works near Sandusky, Ohio.

Sept. 22

North American Aviation receives first USAF order for small number of F-107 Fighters.

Sept. 23

Great Britain announces that U. S.-built commercial aircraft exported to the UK in 1956 will have to meet a list of special conditions similar to those imposed by CAA on Vickers Viscount turboprops.

David H. McCulloch, pioneer naval aviator and pilot of NC-3 which attempted to fly Atlantic in 1919, dies.

OCTOBER

Oct. 4

Lockheed Aircraft Corp. receives follow-on contract for C-130A Hercules turboprop transport, extending production into 1958.

U. S. Court of Appeals affirms lower court finding in favor of North American Aviation, Inc., in its "name" suit against North American Airlines.

Piasecki Helicopter Corp. recommends that stockholders approve company change in name to Vertiplane Corporation.

Oct. 5

Convair's first TF-102A, combat proficiency trainer for the F-102A all-weather jet interceptor, rolls out of San Diego plant.

Piasecki Aircraft Corp. establishes headquarters at Philadelphia International Airport.

Flying Tiger Line begins 11-hour direct transcontinental air freight service between New York and Los Angeles.

Oct. 6

Ralph L. Bell, Boeing sales manager, reports the 707 jet transport will have a direct operating cost below that of conventional 4-engine transports at ranges of 500 miles or more.

Pan American World Airways asks CAB to approve free helicopter shuttle service for LaGuardia and Newark passengers scheduled to depart from Idlewild Airport.

Oct. 7

The nation's airline subsidy bill for the current fiscal year will total only \$48.5-million, according to revised CAB estimate.

The Glenn L. Martin Company awarded prime contract for a major part of earth satellite project sponsored by Army-Navy-Air Force. General Electric will provide the rocket engine.

Hamlin B. Johnston re-elected president of Aircoach Transport Association for third year.

Oct. 10

Lufthansa German Airlines carries 50,000 passengers and 250 tons of freight in first six months of operations.

Mooney Aircraft, Inc., delivers first Mark 20 aircraft.

Henry Boggess of Sinclair Refining Co. re-elected president of National Business Aircraft Association.

Oct. 11

Boeing's 707 jet transport flies 3,038-mile triangular course non-stop at average speed of 550 mph.

International Air Transport Association votes 10 percent increase in many first class fares, effective April 1, 1956.

Defense Secretary Wilson vetoes Army plan to procure jet aircraft on its own.

Oct. 12

Canadair, Ltd., confirms report it is making intensive study of pros and cons of a joint design for long-range turbo-prop transport with Bristol of England and Convair.

CAA Administrator Fred B. Lee receives citation from National Business Aircraft Association for outstanding contribution to aviation.

Fred M. Glass, former director of aviation for the Port of New York Authority, elected senior vice president of Empire State Building Corp.

Oct. 13

Air Force Secretary Quarles declares no intention to halt or delay achievement of 137 wings, despite reports of budget cuts.

Convair enlists aid of seven major companies as subcontractors for B-58 delta-wing supersonic AF bomber.

Oct. 14

Pan American World Airways becomes first U. S. carrier to place definite order for American-built jet transports, ordering 20 Boeing 707s and 25 Douglas DC-8s.

C. A. Moore of Mississippi elected president of National Association of State Aviation Officials.

Oct. 17

NACA disclosed existence of a new research aircraft, the Bell X-1E.

Congressional hearing on effects of automation hears witness urge long-range factual study into social and economic aspects of automation.

William A. Coulter, former president of Western Air Lines, dies in New York.

1955 CHRONOLOGY

Oct. 18

Boeing Airplane Company announces it will deliver an X-type 707 jet transport to Pan American in the summer of 1958.

Increased wing area and related modifications place Lockheed Electra in 3,000-mile range category.

Martin and Convair awarded high priority contracts for development of nuclear powered seaplanes.

Boeing 707 prototype flies from Seattle to Andrews AFB, Md., in 3 hours 58 minutes, averaging 592 mph; makes westbound return at 570 mph.

Oct. 19

Defense Secretary Wilson lays down general guidelines of a program designed to save an estimated \$500-million in military expenditures in fiscal years 1956 and 1957.

Sir Roy H. Dobson, board chairman of Avro-Canada, named chairman of Canadian Car & Foundry Co.

Navy A4D lightweight bomber sets new 500-kilometer closed course speed record of 695.163 mph at Edwards AFB.

Oct. 20

Frederick B. Rentschler, board chairman of United Aircraft Corp., raps foreign propaganda designed to prove U. S. is lagging behind in gas turbine development.

Sabena and New York Airways place orders for Sikorsky S-58, 12-passenger helicopters.

House Military Operations subcommittee requests Westinghouse and McDonnell Aircraft Corp. to supply witnesses prepared to testify at hearings into Navy's procurement of J40 powered F3H aircraft.

Oct. 21

Publication of Methodist Board of Temperance intensifies campaign against serving of alcoholic beverages in aircraft, urges followers to boycott lines serving drinks.

Plans for an accelerated five-year airways program to cost \$500-million prepared by CAA and sent to Secretary of Commerce for approval.

Oct. 24

General Maxwell D. Taylor, Army Chief of Staff, and Lieutenant General James M. Gavin, chief of Army research and development, demand more air transportability for ground forces.

De Havilland Aircraft Company reports tests of Comet 2 completely successful.

Sperry Gyroscope Co. announced development of a miniature, fail-safe electronic flight control system for helicopters.

Oct. 25

Flight engineers call a strike against United Air Lines, which begins use of pilot-engineers as third men in cockpits.

Slick Airways shaves 1 hour 7 minutes off nightly westbound transcontinental schedule.

CAA evaluation report cites deficiencies in TACAN, reporting it too complex for civilian use.

Oct. 26

A \$175-million order for 30 Douglas DC-8 jet transports placed by United Air Lines. Deliveries to begin in May, 1959.

Air Force places new \$25-million order for Lockheed T-33 jet trainers.

Chief of Navy's Bureau of Aeronautics tells Congressional investigating committee the F3H-J40 Demon program was beneficial despite fact planes had to be permanently grounded.

Oct. 27

CAA receives formal application from Douglas Aircraft Co. for certification of two models of its DC-8, one for domestic and the other for overwater flights.

Air Secretary Quarles makes first official announcement that USAF is sponsoring development of Avro-Canada's "flying saucer" aircraft.

ALPA denies charge by George Meany, ALF president, that it is guilty of collusion in the United Air Lines flight engineers' dispute.

Pentagon discloses that new electronics and communications equipment worth \$1.1-billion ordered during the year ending June 30.

Oct. 28

CAB amends its New York-Chicago case decision to add restrictions to route awards to TWA and Capital Air Lines.

Congressional committee closes inquiry into Navy's F3H-J40 Demon procurement program, reporting no evidence of fraud.

Major General Kingston E. Tibbets named Air Materiel Command comptroller.

Sikorsky Aircraft dedicates new \$18-million plant at Stratford, Conn.

Oct. 31

American Airlines announces its 1959 turbojet transports will make possible 4½-hour coast-to-coast schedule.

All American Engineering Co. announces idea for a flying submarine equipped with water skis, says design would not differ from standard swept-wing jet fighter plane.

NOVEMBER

Nov. 1

Secretary of State Dulles announces bilateral air transport agreement between U. S. and Soviet Union proposed at Big Four meeting in Geneva.

C. R. Smith disclosed that American Airlines expects to place an order for 20 turbojet transports, but is undecided on Boeing 707 or Douglas DC-8.

Prototype of SAAB-35 supersonic fighter makes first flight in Sweden.

Eastern Air Lines complete arrangements with Equitable Life Assurance Society for 20-year \$90-million loan to finance equipment expansion program.

McDonnell Aircraft delivers first RF-101 prototype to USAF.

Nov. 2

Admiral Ardleigh A. Burke, Chief of Naval Operations, discloses that the Fairchild Petrel, air-to-underwater missile, is entering operational stage.

CAA's five-year airways plan, estimated to cost \$500-million, referred to Nav Panel of Air Coordinating Committee.

Jack Frye announces that the new Frye F-1 transport, replacement for DC-3, probably will have 165 mph cruising speed.

Nov. 3

United Air Lines retains crime-lab explosives expert to assist in determining cause of DC-6B accident which claimed 44 lives.

The AIRCRAFT YEAR BOOK

Report of study by a Joint Legislative Committee on Carrier Taxation indicates that New York state may be planning heavier taxation on airlines.

Navy awards contract for fifth Forrestal-class aircraft carrier to New York Shipbuilding Corp. First of the Navy's new T2V-1 jet trainers for carrier operations rolls off assembly line.

Nov. 4

Air Traffic Conference turns down proposal that domestic airlines adopt code of practice covering serving of alcoholic beverages aloft, takes no action on no-show penalty plan.

Dr. Theodore von Karman, senior scientific adviser on aeronautics to NATO, named a director of Gruen Precision Laboratories, Inc.

Nov. 7

Investigators uncover evidence of bomb-type explosion in cargo pit of United Air Lines DC-6 which crashed in Colorado.

William H. Martin, director of the Army's research and development, announces the Army will increase spending for guided missiles research and development in current fiscal year.

Air Coordinating Committee Use Panel recommends that Detroit-Wayne Major Airport be developed as major air terminal serving Detroit and that air carriers transfer operations there from Willow Run.

Arthur F. Kelly, vice president of Western Air Lines, elected president of Air Traffic Conference.

Lieutenant Colonel Dean Ivan Lamb, holder of FAI pilot license No. 116 and a pioneer air mail pilot, dies.

Nov. 8

Air Secretary Quarles declares U. S. is ahead of Soviet Union in development of intercontinental missiles.

J. Russell Wiggins, executive editor of the Washington Post & Times Herald, tells House Government Information Subcommittee that a philosophy of secrecy pervades defense establishment.

National Airlines claims it will be first air carrier to offer jet transport service on east coast routes after it takes delivery of DC-8 in May of 1959.

Nov. 9

American Airlines placed \$135-million order for 30 Boeing 707 jet transports, with first delivery scheduled for March, 1959.

House subcommittee begins check of reports that Navy air reservists have refused to fly Grumman F9F-7 Cougar jets.

Nov. 10

The Air Force assigned responsibility for development of medium-range missiles, as well as long-range projects.

Canadair, Ltd., builds an experimental "wasp waist" F-86 Sabrejet for Canadian Air Force.

Nov. 11

William B. Davis, CAA deputy administrator in Region 3, named acting director of the Office of Aviation Safety.

Defense Department halts further contracts for long lead-time machine tools and other production equipment by military services.

CAB Bureau of Safety Regulation announces plan to undertake study of IFR and night flying regulations for non-carrier aviation.

Nov. 15

Convair and Aero-jet General Corp. file suit in Los Angeles for recovery of taxes imposed by the county on material in their plants destined for delivery to the government.

By unanimous action, the American Federation of Labor expels the Air Line Pilots Association for its refusal to honor picket lines set up against United Air Lines by striking AFL-flight engineers.

John Gilbert Graham, charged by the FBI with sabotaging a United Air Lines DC-6 which crashed in Colorado, arraigned.

Nov. 17

KLM Royal Dutch Airlines becomes first foreign airline to buy American jet transports, placing order for eight Douglas DC-8s.

The British government decides to abandon the Vickers 1000 jet transport.

W. P. Thayer, vice president of Chance Vought Aircraft, declares the "survival barrier" of getting pilots out of high speed aircraft is a problem more in need of solution than the "thermal barrier" problem.

Nov. 18

France's Fouga company confirms that it has licensed Messerschmitt to manufacture the Fouga 170R Magister jet trainer in Germany.

French Air Force takes delivery of 40 Republic F-84F Thunderstreak jets.

Nov. 21

National Airlines drops option to buy 12 Vickers Viscount turboprop transports, indicates Lockheed Electra may be purchased.

Piper Aircraft announces that its first all-metal, low-wing, single-engine aircraft is in mock-up stage and that production is planned for 1957.

Nov. 22

First powered flight of the Bell X-2 rocket plane, designed to explore thermal barriers at more than 2,000 mph.

Ryan Aeronautical receives New Air Force contract which will assure production of Q-2A Firebee remote-controlled pilotless jet target drone missiles well into 1956.

Nov. 24

President Eisenhower appoints Dr. Clifford C. Furnas Assistant Secretary of Defense for Research and Development.

Nov. 29

McDonnell Aircraft awards Emerson Electric Mfg. Co. \$37-million subcontract to engineer and manufacture nose assemblies for the supersonic F-101B Voodoo all-weather interceptor, expected to fly in about one year.

Nov. 30

President Eisenhower reappoints Ross Rizley as Chairman and Joseph P. Adams as Vice Chairman of the CAB for 1956.

DECEMBER

Dec. 1

Bell Aircraft Corp. names Kurt R. Stehling, rocket research engineer, director of rocket powerplant development for the Vanguard earth satellite project.

President Eisenhower renominates Lieutenant General James H. Doolittle (Ret.), and Detlev W. Bronk for new five-year terms on the National Advisory Committee for Aeronautics.

1955 CHRONOLOGY

Defense Secretary Wilson sets up joint committee on aviation pathology to study role of disease as a factor in aircraft accidents.

Braniff Airways announces \$30-million order for five Boeing 707 jet transports to be powered by Pratt & Whitney engines of "advanced design over the J57".

Dec. 4

Glenn L. Martin dies in Baltimore at the age of 69.

Dec. 6

Fairchild Aircraft announces receipt of multi-million-dollar subcontract to produce parts for the Boeing B-52 intercontinental jet bomber.

Dec. 7

Fletcher Aviation Corp. awarded \$13-million contract by Air Materiel Command for jettisonable wing tanks for Air Force B-47s.

Martin XP6M-1 (Seamaster) prototype crashes while on routine test flight near Point Lookout, Md.

Dec. 8

Chance Vought Aircraft receives its first production order from the Navy for \$100-million worth of F8U-1 supersonic day fighters.

Northrop Aircraft announces production of "Sky Screen," a new optomechanical device de-

signed to increase many times the number of unidentified aircraft that can be tracked by a single radar operator.

Radio Corp. of America announces development of a new transistorized plug-in aircraft interphone system that weighs less than 15 oz.

Dec. 13

Charles J. Lowen, Jr., sworn in as Civil Aeronautics Administrator, succeeding Fred B. Lee.

The Navy and Glenn L. Martin Co. announces award of contract to Aerojet-General Corp. to design and build the second-stage rocket propulsion system for the Project Vanguard vehicle which will launch the U. S. earth-circling satellite into space.

Dec. 17

Dr. Hugh L. Dryden, Director of the National Advisory Committee for Aeronautics, receives the Wright Brothers Memorial Trophy for 1955.

Richard Travis Whitcomb awarded the Collier Trophy Award for the "greatest achievement in aviation in 1954."

The Frank C. Brewer Trophy awarded to Willis C. Brown "for contributing most to the development of air youth in the field of education and training."

Dec. 18

AIRCRAFT YEAR BOOK GOES TO PRESS.

A CHRONOLOGY of U. S. AVIATION

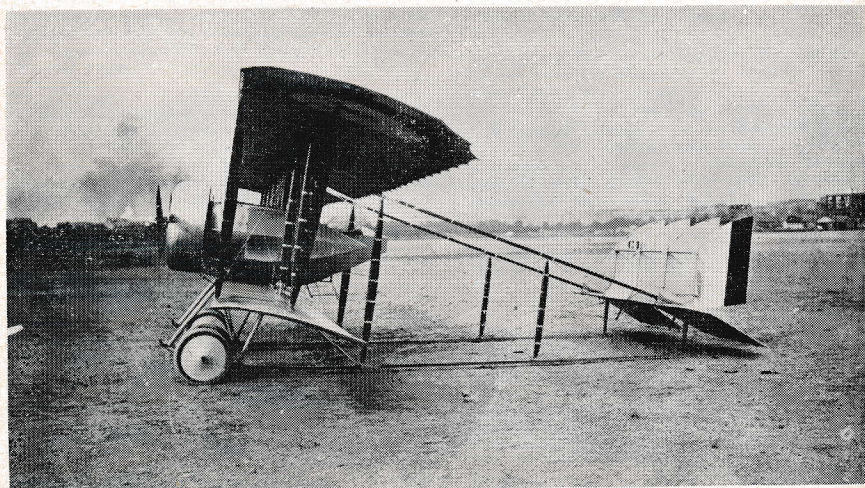
The following chronology was compiled and edited by the late Ernest J. Jones, (Lt. Col., ret.).

Although this chronology has been expanded considerably over previous editions, it still represents only brief excerpts from Colonel Jones' vast store of air data. Space has forced us to deal only with the highlights.

We are deeply indebted to Colonel Jones for his thorough knowledge of aeronautics in this country and the generosity with which he shared it.

We also wish to thank the National Air Museum, Smithsonian Institute for providing the photographs used in this section.

Caudron, French Bomber used by American Expeditionary Forces in World War I



A CHRONOLOGY OF U. S. AVIATION

United States Chronology

1784, Jan. 16—Airborne troops proposed by Benjamin Franklin in reporting on the first balloon ascents.

1784, July 17—First U. S. balloon flight in Peter Carnes' captive balloon, Baltimore, Md.

1784, Nov. 30—First ascent by an American abroad, by Dr. John Jefferies, physician, with French aeronaut Blanchard, at London. On Jan. 7, 1785, they make the first Channel crossing by air.

1793, Jan. 9—Balloon flight by Jean Pierre Blanchard from Philadelphia, Pa., to Woodbury, N. J. (Letter from George Washington carried on this flight.)

1837, Sept. 18—First parachute demonstration in America when John Wise drops animals from a balloon at Philadelphia.

1838, Aug. 11—John Wise safely lands with his parachuted balloon at Easton, Pa.

1840, Sept. 8—Col. John H. Sherburne urges Secretary of War to use night balloons to locate Seminoles.

1842, Oct. 22—John Wise proposes to capture Vera Cruz by air.

1844, Oct. 16—America's first air patent to Muzio Muzzi on direction of balloons.

1845, Sept. 18—Rufus Porter proposes steam airship line, New York-California, to carry gold-seekers at \$100 a trip. Stock sales unsatisfactory. His 1849 booklet illustrates a jet-propeller passenger rocket.

1859, July 1—World record balloon trip, 809 miles, St. Louis to Henderson, N. Y., by John Wise and three companions.

1859, Aug. 16—Airmail carried by John Wise in balloon flight from Lafayette to Crawfordsville, Ind.

1860, Aug. 21—Capt. E. B. Hunt, Corps of Engineers, U.S.A., advocates balloon telegraphy.

1860, Oct. 13—Successful aerial photos taken by William Black from a balloon, Boston, Mass.

1861, June 10—Military flight by James Allen, First Rhode Island State Militia, in balloon over Washington, D. C.

1861, June 18—Balloon telegraph demonstrated by T. S. C. Lowe. (Message to Abraham Lincoln.)

1861, June 22-24—Military reconnaissance by T. S. C. Lowe and Army officers from balloon using telegraph, over Arlington and Falls Church, Va. Military air observation continues into 1863.

1861, Aug 3—Civilian aeronaut La Mountain inaugurates aircraft carrier operations with his war balloon. Lowe follows.

1861, Sept. 24—Air artillery adjustment from Lowe's Army balloon near Washington.

1861, Nov. 7—Helicopter proposed for Union Army. After experiments, a machine is partly built before Appomattox ends the project.

1862, Mar. 9—War helicopter bomber designed and urged by William C. Powers of Mobile, Ala.

1866, May 25—Solomon Andrews' airship maneuvers over New York with 4 passengers.

1873, Oct. 7—Unsuccessful trans-Atlantic flight by W. H. Donaldson, Alfred Ford and George A. Lunt in balloon, *Graphic*, from Brooklyn, N. Y., to New Canaan, Conn.

1877—Prof. William H. Pickering, Harvard

University, begins experiments with model helicopters. In 1903 a rabbit is sent aloft.

1880—Thomas A. Edison conducts helicopter experiments for James Gordon Bennett.

1883, Mar. 17—First of a series of glider flights by John Joseph Montgomery, Otay, Cal.

1885, Jan. 7—Russell Thayer, C. E., a graduate of West Point, urges on Secretary of War Robert T. Lincoln a compressed-air airship of his design. No action.

1887, Jan. 30—Thomas E. Baldwin makes his first parachute jump at San Francisco.

1886, July—W. E. Irish, publisher of *Aeronautical World*, proposes balloon radio.

1887—American altitude record made by aeronaut Moore and Prof. H. A. Hazen of U. S. Signal Service, at St. Louis; 15,400 feet, in balloon of St. Louis *Post Dispatch*.

1890, July 31—During the month, L. Gathmann, of Chicago, explodes a shell at high altitude in attempt to produce rain.

1890, Oct. 1—President Harrison approves legislation creating the Weather Bureau and re-establishing the Signal Corps which is charged with collection and transmission of information, among other duties. Military aeronautics is then considered as among such means, and Army aeronautics is revived.

1892, Oct. 10—Balloon section is being organized with each telegraph train by Chief Signal Officer, General A. W. Greely, who anticipates military airships and airplanes.

1892, Nov. 5—Wingless aerial torpedo suggested by Prof. A. F. Zahm.

1893, Aug. 1-4—International Conference on Aerial Navigation held at Chicago; Octave Chanute, Chairman; Dr. A. F. Zahm, Secretary.

1893, Oct. 9—The Chief Signal Officer, General Greely reports the purchase of a La-chambre balloon for the Signal Corps balloon section. First ascents since the war are made at the Chicago exposition from Oct. 31, 1893.

1896, Apr. 29—First American wind tunnel begins operation at M.I.T.

1896, May 6—Steam-powered airplane model flown by Samuel Langley, Washington, D. C.

1898, Apr. 29—War and Navy Departments examine Langley's work, approve, and Board of Ordnance and Fortification makes two allotments of \$25,000 each to build his airplane.

1898, Dec. 22—The Secretary of War approves a Fort Myer site for barracks, officer quarters, administration building and a balloon house to concentrate Signal Corps schools at one point.

1901, Sept. 1—Simon Newcomb, Ph.D., LL.D., writes in *McClures* for September: "The first successful flyer will be the handiwork of a watchmaker and will carry nothing heavier than an insect."

In December, Rear Admiral Melville, USN says in the *North American Review*: "A calm survey . . . leads the engineer to pronounce all confident prophecies at this time for future success as wholly unwarranted, if not absurd."

1902, Sept. 15—A. Leo Stevens sails his airship *Pegasus* over Manhattan Beach in a race with Edward C. Boyce in the latter's *Santos Dumont* airship.

1903, Mar. 23—Orville and Wilbur Wright

apply for patent on their flying machine. (Patent issued May 22, 1906.)

1903, Dec. 8—Samuel Langley's flying machine, piloted by Charles Manly, plunges in the Potomac and is wrecked on its second test, Washington, D. C.

1903, Dec. 17—First sustained controllable flight of powered heavier-than-air machine by Orville and Wilbur Wright, Kitty Hawk, N. C.

1904, Aug. 3—Circuit flight in airship (Curtiss motor) by Capt. Thomas S. Baldwin at Oakland, Cal.

1904, Wright brothers make 104 flights, covering 20 miles. British representative visits the Wrights in November.

1905, Jan. 18—Wright brothers open negotiations with U. S. War Department for disposition of their invention. Correspondence is had through 1907.

1905, Apr. 29—Daniel Maloney begins series of glides with Montgomery glider, taking off from captive balloon. Later killed.

1905, Aug. 5—Charles K. Hamilton begins series of kite flights, towed by cars and boats.

1905, Sept. 26-Oct. 5—Wright brothers make 55 flights, the longest being 24 miles in 38 min. 3 sec. Frank S. Lahm, in France, obtains report on Wrights' flying from Ohio relative. French remain skeptical. In October the French government is negotiating along with British.

1905—Lt. Frank P. Lahm becomes first Army balloon pilot.

1906, Jan. 13-20—First indoor aero exposition, New York.

1906, Mar.—French and British visit Wright brothers at Dayton.

1906, Sept. 30—First Bennett international balloon race won by Lt. F. P. Lahm—Paris to England.

1906, Dec. 1-8—Second indoor air exhibition of Aero Club of America.

1907, June 8—Building devoted exclusively to aeronautics dedicated at Jamestown (Va.) Exposition.

1907, Aug. 1—Aeronautical Division established, Army Office of Chief Signal Officer.

1907, Sept. 2—Walter Wellman airship *America* fails in polar attempt.

1907, Sept. 30—Ornithopter of H. C. Gammeter, multigraph inventor, lifts temporarily.

1907, Oct. 1—Aerial Experiment Association formed by Dr. A. Graham Bell, F. W. Baldwin, J. A. D. McCurdy, Glenn H. Curtiss and Thomas E. Selfridge.

1907, Oct. 3—Record altitude of 23,110 feet by U. S.—Weather Bureau meteorological kite.

1907, Oct. 18—Air bombing prohibition signed at second Hague conference.

1907, Oct. 21—Second Bennett international balloon race, St. Louis, won by Oscar Erbsloh of Germany. Airship races are held Oct. 22-23.

1907, Oct. 28-29—International Aeronautic Congress held in New York.

1907, Oct. 28—Admiral C. M. Chester urges anti-submarine airships and shipboard airplanes at International Aeronautic Congress.

1907, Dec. 6—Seven-minute towed flight from motor boat tug in Dr. Bell's kite, flown by Lt. T. E. Selfridge.

1907, Dec. 16—Chief Signal Officer advertises for airship bids, resulting in purchase of Baldwin airship.

1907, Dec. 23—Chief Signal Officer advertises for airplane bids, after visit of Wrights.

1908, Feb. 10—First Army plane contract signed by Signal Corps with Wright Brothers. (Other contracts signed with A. M. Herring and J. F. Scott.)

1908, Mar. 12—First Aerial Experiment Association's plane, *Red Wing*, flown by F. W. Baldwin. Later, three other machines fly.

1908, May 6-18—Wright brothers renew flying preliminary to delivery of Army airplane. Charles Furnas is first airplane passenger.

1908, May 13—Balloon radio reception demonstrated by Signal Corps.

1908, May 31—G. H. Curtiss Manufacturing Company announces planes for sale.

1908, June 10—Aeronautical Society formed in New York and Morris Park Airfield shortly obtained—first of kind in U.S.

1908, June 20—Anthony radio-controlled airship model demonstrated.

1908, July 4—*Scientific American* Trophy awarded Glenn H. Curtiss for first public flight of one kilometer circuit in his biplane, *June Bug*, Hammondsport, N. Y.

1908, July 17—First air ordinance passed by Kissimmee, Fla., with registration and regulation.

1908, Aug. 8—Demonstration flights under French syndicate control begin near LeMans, France, by Wilbur Wright, continuing through December, making a number of astounding records. Training of students follows.

1908, July 31-Aug. 8—Henri Farman of France makes first exhibition airplane flights in U.S.

1908, Aug. 22—First Army Baldwin airship accepted.

1908, Sept. 17—First plane fatality, killing Signal Corps Lt. Thomas E. Selfridge and severely injuring Orville Wright, in delivery of first Army airplane, Fort Myer, Va.

1908, Dec. 28—Matthew B. Sellers makes several flights with 7 hp quadroplane.

1909, Jan. 22—Commercial airplane, built by Glenn Curtiss, sold to Aeronautic Society of New York.

1909, April 16-28—Wilbur Wright delivers an airplane in Italy and teaches pupils.

1909, June 10—President Taft presents Aero Club of America medal to Wright brothers. Congressional medal presented at a celebration at Dayton, June 17-18.

1909, June 26—Glenn H. Curtiss demonstrates at the Aeronautical Society's meet, Morris Park, New York, the machine ordered Jan. 22. Further flights are made at the Society's meet July 5, before removal of the machine to Mineola and the instruction of member Charles F. Willard.

1909, July 17—Curtiss flies 52 mins. in longest U.S. flight except Wrights and wins *Scientific American* trophy for second time. On this success in the Mineola flights the Aero Club of America names him as America's entry in the Bennett international race.

1909, Aug. 22-29—Glenn H. Curtiss wins first Bennett international airplane race and other events of first International Flying meet, Rheims, France. Speed: 45.7 mph.

1909, Aug. 25—First Army airfield leased at College Park, Md.

1909, Aug. 28—After instruction by Glenn H. Curtiss and subsequent practice in the machine contracted by the Aeronautical Society, Charles F. Willard gives his first exhibition at

A CHRONOLOGY OF U. S. AVIATION

Searsborough Beach, Toronto—America's first exhibition pilot. His exhibitions continue over several years.

1909, Sept. 7-Oct. 15—At Berlin, Orville Wright makes flights under German contract, with more records.

1909, Sept. 30—Inception of Wright-Curtiss patent litigation.

1909, Sept. 30—Emile Berliner describes a proposed guided missile.

1909, Oct. 3—At Zurich, Switzerland, E. W. Mix wins the Bennett International balloon race the second time for America.

1909, Oct. 4—Wilbur Wright makes sensational flight, Governors Island to Grant's Tomb and return. Glenn H. Curtiss makes a short flight Sept. 29 and Oct. 3.

1909, Oct. 7—Glenn H. Curtiss flies his first exhibition at St. Louis. Chicago is next. The same month, Charles K. Hamilton and Otto Brodie learn to fly, followed by others. An exhibition company is formed and Curtiss returns to his development work.

1909, Oct. 8-Nov. 5—First Army aviators taught to fly by Wilbur Wright, College Park, Md.; Lt. Frank P. Lahm, Lt. Frederic E. Humphreys, and Lt. B. D. Foulois.

1909, Nov. 27—Anti-aircraft firings begin at Sandy Hook by Ordnance Department.

1909, Nov. 22—The Wright Co. formed with \$1,000,000 capital. In 1914, Orville Wright buys the company back. On Oct. 13, 1915, a syndicate buys the company and adds the Simplex Co. In 1916 it becomes the Wright-Martin Co.

1910, Jan. 10-20—First flying meet held at Los Angeles; Louis Paulhan, of France, the star performer.

1910, May 29—Record flight from Albany to New York by Glenn Curtiss, 142.50 mi. in 2 hr., 50 min.

1910, Mar. 25—Wright patent condemnation urged by William M. Page, attorney for C. F. Bishop, president, Aero Club of America.

1910, June 13—Charles K. Hamilton flies New York-Philadelphia and return for N. Y. Times and Philadelphia *Public Ledger* and \$10,000 prize—149.5 miles in flying time 3 hr. 27 min.; elapsed time, 6 hr. 57 min.

1910, June 13-18—First show of Wright exhibition team, Indianapolis, Ind. where Walter Brookings is star and makes new records. Exhibitions by single pilots or groups continue about the country until the Wright exhibition business is discontinued in Nov. 1911.

1910, June 30—Dummy bomb demonstration made by Glenn H. Curtiss to Army and Navy officers.

1910, Aug. 4—Plane-ground radio demonstrated by E. N. Pickerill.

1910, Aug. 8—Tricycle landing gear installed by Lt. B. D. Foulois on Army Wright at San Antonio.

1910, Aug. 27—Air-land plane radio used by J. A. D. McCurdy, Sheepshead Bay, N. Y.

1910, Sept. 2—First American woman pilot solos: Blanche Stuart Scott. First exhibition at Fort Wayne, Oct. 22.

1910, Oct. 8-10—Former President Theodore Roosevelt is flown at St. Louis exhibition by Arch Hoxsey.

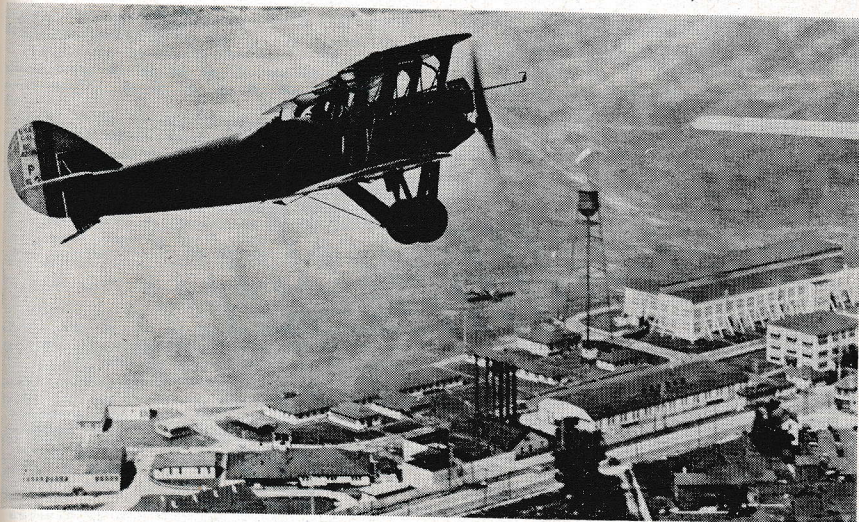
1910, Oct. 14-16—Wellman airship, *America*, abandons trans-Atlantic trip after some 800 miles.

1910, Oct. 22-31—Second Bennett international airplane race won by C. G. White (Bleriot) at 61 mph during Belmont Park meet where numerous records are made.

1910, Nov. 14—First battleship takeoff by Eugene Ely from U.S.S. *Birmingham* in Hampton Roads, Va.

1910—Night flights by Walter R. Brookings

Packard Le Pere, World Altitude Flight, Dayton, Ohio, 1920



The AIRCRAFT YEAR BOOK

(Montgomery, Ala., Apr. 18) and Charles Hamilton (Camp Dickenson, Nashville, Tenn., June 21-26).

1911, Jan. 7—Didier Masson flies Los Angeles-San Bernardino to deliver *Times* newspapers. Mail and papers delivered Feb. 17 by Fred J. Wiseman.

1911, Jan. 7-25—Dive bombing, aerial photography, airplane radio demonstrated by Army officers in San Francisco meet.

1911, Jan. 27-28—Lieut. T. G. Ellyson, U.S.N., is first U.S. naval aviator when he takes his Curtiss off at San Diego during Curtiss exhibitions.

1911, Jan. 30—J. A. D. McCurdy attempts Key West-Havana flight but lands in water ten miles short and is rescued by Navy destroyer. In 1913 Domingo Rosillo makes the entire distance.

1911, Feb. 17—Curtiss flies tractor seaplane from North Island to cruiser *Pennsylvania*. Plane hoisted on board and return flight later made.

1911, Mar. 3—Lt. B. D. Foulois and P. O. Parmalee fly record cross-country Laredo-Eagle Pass, Tex., 106 mi. in 2 hr. 10 min. in Wright plane loaned Army by R. J. Collier. Messages dropped en route, radio received and sent.

1911, Mar. 13—Capt. W. Irving Chambers, U.S.N., is assigned the Bureau of Navigation to devote exclusive efforts to naval aeronautics.

1911, Mar. 31—About this date Missouri National Guard Signal Corps establishes air section and members taught flight and ballooning.

1911, May 8—First Navy airplane ordered, Curtiss Triad, amphibian. By July the three 1911 planes of the Navy are delivered—Curtiss A-1, A-2; Wright B-1.

1911, May 13—Lieuts. H. H. (Hap) Arnold and Thomas DeWitt (Tommy) Milling complete flying training at Wright School; 7th and 8th Army pilots.

1911, June 7—Lieut. John P. Kelley, Med. Res. Corps, assigned Army School at College Park—first U. S. air medical officer.

1911, June 8—Connecticut state air regulation is first state air law.

1911, June 21—Short-lived Aeronautical Manufacturers Ass'n. incorporated; Ernest L. Jones, president.

1911, June 30-July 11—Boston-Washington flown by Harry N. Atwood. Charles K. Hamilton flies with him most of way—longest continuous air journey to this date.

1911, July 1—Third Bennett plane race won for U. S. by Charles T. Weyman (Nieuport-Gnome 100) at 78 mph.

1911, July 31—During the month, Frank E. Boland begins flying his tailless, allegedly non-infringing airplane.

1911, Aug. 5—Lincoln Beachy wins over Eugene Ely and Hugh Robinson in New York-Philadelphia race for Gimbél \$5000 purse. Elapsed time: 1 hr. 50 min. 18 sec.; one stop for fuel.

1911, Aug. 14-25—Harry N. Atwood flies St. Louis-New York, 1155 miles by route; longest cross-country flight to this date.

1911, Aug. 20—World altitude record set at 11,642 ft. by Lincoln Beachy in Curtiss biplane.

1911, Sept. 4—Earle L. Ovington (Bleriot-Gnome 70) wins over Lieut. T. D. Milling (Burgess-Wright-Wright 30) in 160-mile tri-state

race during Boston meet, in 3 hr. 6 min. 22 sec.

1911, Sept. 7—Lt. T. G. Ellyson, U.S.N., demonstrates shipboard launching by taking off from aerial cable at Hammondspoint, N. Y.

1911, Sept. 17-Nov. 5 — Transcontinental flight by Calbraith P. Rodgers from New York to Pasadena, Calif.—3,390 mi., 49 days.

1911, Sept. 23-30—Earle L. Ovington appointed Airmail Pilot No. 1, flying mail from Nassau Boulevard to Mineola, L. I., N. Y.

1911, Sept. 30—Lt. H. H. Arnold is "stunt man" for the lead in pioneer air movies at Nassau Boulevard meet where Army pilots compete.

1911, Oct. 9—Demonstration of Tarbox automatic pilot made before officers at College Park. Other similar inventions follow.

1911, Oct. 10—Bombsighting and dropping device demonstrated by Riley Scott, College Park, Md.

1911, Oct. 19-Feb. 12, 1912—Eastbound transcontinental flight of Robert G. Fowler (Wright B), Los Angeles-Pablo Beach, Fla., 2520 mi. in 116 days.

1911, Oct. 24—Orville Wright makes soaring record of 9 min. 45 sec. at Kitty Hawk.

1912, Feb. 12—Frank T. Coffyn takes automatic movie aerals over New York harbor.

1912, Feb. 17—First pilot physical exam published by U. S. Army.

1912, Mar. 1—Attached type parachute jump by Bert Berry from Benoist pusher plane, St. Louis.

1912, Apr. 16—First U. S. licensed woman pilot, Harriet Quimby, flies English Channel. (Killed at Boston Aviation Meet, July 1.)

1912, May 24—Paul Peck makes American duration record of 4 hr. 23 min. 5 sec. in biplane with Berliner Gyro engine.

1912, May 30—Death of Wilbur Wright by typhoid.

1912, June 7-8—Machine gun fired from Wright biplane by Capt. Charles DeForest Chandler, College Park, Md.

1912, July 2—Vaniman airchop *Akron* crashes off Atlantic City in renewed trans-Atlantic attempt.

1912, July 31—Plane launched from sea wall by catapult, Navy Lt. T. G. Ellyson in Curtiss AH-3.

1912, Aug. 12—First Army tractor plane, Burgess, received; flown by Lts. H. H. Arnold and Roy C. Kirtland from Marblehead, Mass.

1912, Oct. 6—In night flight, Lt. J. H. Towers, U.S.N., (Curtiss A-2) makes world seaplane duration record, 6 hr. 10 min. 35 sec. at Annapolis; American record for any plane.

1912, Oct. 8—First Navy physical exam for pilots published by Bureau of Medicine and Surgery.

1912, Oct. 9—First competition for Mackay Trophy won by Lt. H. H. Arnold.

1912, Nov. 5-13—First U. S. airplane artillery adjustment, Ft. Riley, Kans., Lt. H. H. Arnold and observer Lt. Follett Bradley.

1912, Nov. 6-Dec. 15—Antony Jannus (Benoist seaplane Roberts 2-cycle 100 hp) flies Omaha-New Orleans, with mail and merchandise, carrying passengers at stops en route—1835 mi., flying time: 31 hr. 43 min.

1913, Jan. 13-Mar. 31—Air parcel post flight, Boston-New York, by Harry M. Jones (Wright B).

1913, Feb. 11—James Hay bill in Congress

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inaugurates the project of a separate air service.
1913, Feb. 13—Langley Field Aerodynamical Laboratory project inaugurated.

1913, Apr. 27—First cross-Isthmus flight by Robert C. Fowler and cameraman R. A. Duhem, Panama-Cristobal. Publication of story and pictures results in arrest.

1913, May 10—Didier Masson and bomber Dean attack Mexican federal gunboats in Guaymas Bay. A number of other Americans fly for Villa in this and subsequent years.

1913, May 28—Lt. T. D. Milling and Lt. W. C. Sherman make 2-man duration and distance record of 4 hr. 22 min. and 220 miles (Burgess tractor-Renault 70), Texas City-San Antonio.

1913, May 30—About this date is instituted M.I.T.'s aerodynamics course under Asst. Naval Constructor Jerome C. Hunsaker.

1913, June 20—First Naval aviator killed when Ensign W. D. Billingsley is thrown from seaplane.

1913, July 19—Sky writing initiated by Milton J. Bryant over Seattle.

1913, Oct. 12—Eighth Bennett International balloon race won for U. S. for fourth time at Paris by R. H. Upson and R. A. D. Preston, landing in England.

1913, Nov. 27—First exhibition loop by Lincoln Beachy in Curtiss biplane, Coronado, Cal.

1913, Dec. 4—Tactical Air Unit, First Aero Squadron, set up as provisional organization, San Diego, Cal.

1913, Dec. 12—Wright pilot Oscar Brindley reports at San Diego as Army's first civilian instructor. Scores of others subsequently employed through 1918.

1913, Dec. 31—Orville Wright demonstrates automatic pilot; awarded Collier Trophy.

1914, Jan. 1—First scheduled airline begins operations with Benoist flying boat between St. Petersburg and Tampa, Fla.; Tony Jannus, pilot.

1914, Jan. 31—During the month first U. S. Navy air station established at Pensacola, following temporary camps at San Diego and Annapolis, 1911-1912.

1914, Feb. 17—Seaplanes and flying boats classed as "vessels" by the Department of Commerce and the license No. 1 is issued to Antony Jannus.

1914, Feb. 24—Army Board condemns all pusher type airplanes.

1914, Apr. 15—Electric self starter fitted to Anzani 200-hp engine of Collier flying boat.

1914, June 23—Curtiss' Wanamaker trans-Atlantic flying boat tested. With outbreak of World War I the project is abandoned.

1914, July 2—Lawrence Sperry wins French War Dept. prize for "stable airplane" flown by early automatic pilot over Seine River in Paris.

1914, July 18—Aviation Section of Signal Corps created by Congress, authorizing 60 officers and students and 260 enlisted men.

1914, Dec. 1-16 — Two-way plane-ground radio demonstrated by Lt. H. A. Dargue and Lt. J. O. Mauborgne, Manila, P. I.

1915, Mar. 3—National Advisory Committee for Aeronautics established by Congress.

1915, May 14—Contract let for first Navy airship D-1 to Connecticut Aircraft Co. In July is contracted a floating airship shed.

1915, June 22—Wisconsin State Forester.



**Witteman-Lewis XNBL-1,
Barling Bomber, 1923**

E. M. Griffith, flown by Jack Vilas, in first air forest patrol.

1915, Sept. 17—Joseph Dolgos of Philadelphia demonstrates air incendiary bombs.

1916, Feb. 9—Cpl. A. D. Smith (Martin S. Hall Scott 125) makes world seaplane duration record of 8 hr. 42 min.

1916, Feb. 12—Invitation for bids on air-mail issued by Post Office in Massachusetts and Alaska.

1916, Mar. 15—First Aero Squadron, under command of Capt. B. D. Foulis, begins operations at Columbus, N. M., with Gen. Pershing's Punitive Expedition.

1916, Apr. 5—The Governors Island Training Corps organized by Philip A. Carroll.

1916, Apr. 14—A power-driven turret is proposed without result by Col. F. P. Cobham.

1916, June 3—National Defense Act increases strength of Aviation S. C. from 60 to 148 officers over 5-year period. President may fix increase of enlisted men from old figure of 260.

1916, June 18—U. S. aviator H. Clyde Balsley shot down. (Member of Lafayette Escadrille, flying for France.)

1916, Aug. 29—First U. S. Coast Guard Aviation Division organized.

1916, Oct. 2—Allocation airship development to Army or Navy raised by Chief Signal Officer. Rigid later assigned Navy.

1916, Nov. 2—Chicago-New York commercial airmail line asked by Glenn Muffly. Sponsored by New York Times, Victor Carlstrom flies mail demonstration, Nov. 2-3.

1916, Nov. 14—More than 60 civilians are to Curtiss contract school at Newport News, Va., beginning this date and before Apr. 6, 1917. Others are sent to Curtiss school at Miami. Gen. Mitchell learns to fly here at this period.

1916, Nov. 18-20—Group National Guard cross-country flight under Capt. R. C. Bolling from New York to Princeton, N. J. and return. On Dec. 30, another is made to Philadelphia.

1916, Nov. 19-20—Ruth Law flies her 1914 Curtiss pusher Chicago-New York, with 2 stops en route, for new cross-country record.

1916, Dec. 17—To this date the Aero Club of America has certified 636 airplane pilots. In addition are many other pilots who have

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never flown for the Aero Club certificate. On Dec. 31, the Army has graduated 122 pilots since 1909.

1916, Dec. 18—Non-exclusive licenses are offered by Wright-Martin Aircraft Corp. on royalty basis. Terms are considered prohibitory and in 1917 Congress appropriates \$1,000,000 to acquire basic patents. Solution is the cross-license agreement of the Aircraft Manufacturers Association.

1917, Feb. 13—Capt. Francis T. Evans, U.S.-M.C., loops and spins a seaplane at Pensacola.

1917, Feb. 15—Aircraft Manufacturers Association completes organization.

1917, Apr. 6—U. S. declares war on Germany.

1917, Apr. 6—Official strength of the Aviation Section, S. C., is 131, including regular and reserve. Of these, 112 are airplane pilots or student pilots. Enlisted strength is given variously from 1087-1800. At armistice the figures are: total officers, 20,708 (pilots and student pilots, 12,449); enlisted, 174,315.

Airplane strength, "less than 300." Produced in U. S., Apr. 6, 1917—Nov. 1, 1919: 13,894; received from Allies, 5,229; total: 19,123.

1917, May 10—Arrangements made for eight ground schools for theoretical training Reserve officer candidates.

1917, May 16—Aircraft Production Board created. Superseded by the Aircraft Board Oct. 1. Dissolved May 19, 1919.

1917, May 23—French Premier Ribot asks U.S. to furnish 5,000 pilots, 50,000 mechanics, 4,500 planes for active service by spring 1918.

1917, May 29—Liberty engine project inaugurated. An 8-cylinder Liberty is flown in an L.W.F., July 25. The 12-cylinder production Liberty follows in December.

1917, June 1—Barlow robot bomber urged. Armistice ends project.

1917, July 13—Fiske torpedo plane tested with dummy missile. Experiments continue.

1917, July 24—First great U. S. air appropriation, \$640,000,000. Act also provides for increase in organization of Aviation Section, S. C.

1917, July 27—Secretary of Navy authorizes a Naval Aircraft Factory at Philadelphia.

1917, July 27—First British DH-4 arrives to be the first American service plane put into production, with Liberty engine. First American DH-4 completed is flown Oct. 29 by civilian test pilot H. M. Rinehart.

1917, Aug. 5—Original First Aero Squadron leaves Columbus, N.M. for overseas under Maj. Ralph Royce.

1917, Aug. 13—First AEF squadron program calls for 89 wings and 508 squadrons. One wing equals six squadrons (5 airplanes, 2 balloons). A brigade comprises two or more wings.

1917, Sept. 5—Bristol fighter project started. Condemned July 20, 1918, after 27 planes are built.

1917, Sept. 22—Montgomery heirs sue Wright-Martin Aircraft Corp. for infringement. Suit withdrawn June 6, 1921. Suit of same date against U. S. is dismissed May 28, 1928.

1917, Oct. 16—Airplane to airplane radio-telephone conversation is demonstrated.

1917, Oct. 18—McCook Field established as Signal Corps Experimental Laboratory.

1917, Oct. 18—Aviation Medical Research Board established by Signal Corps.

1917, Nov. 15—J. Newton Williams' helicopter proposal results in recommendation of N.A.C.A. for Government prize of \$20,000, not accomplished.

1917, Nov. 21, Robot bomber demonstrated to Army and Navy officers.

1917, Nov. 27—Brig. Gen. B. D. Foulois made Chief of Air Service, AEF.

1917—Gen. William Mitchell claimed as first officer to fly over enemy lines.

1918, Jan. 19—U. S. School of Aviation Medicine begins operations under Signal Corps Maj. William H. Wilmer, Hazelhurst Field, Mineola, L. I., N. Y.

1918, Feb. 28—Under President Wilson's proclamation, licenses are required for civilian pilots or owners; more than 800 are issued.

1918, Mar. 8—Maj. Edward C. Schneider and Maj. James L. Whitney, in simulated altitude flight, reach artificial altitude of 34,000 ft. in 24 min. at Signal Corps, Mineola, N. Y. laboratory.

1918, Mar. 11—First D.S.C. awarded Army air service personnel goes to Lt. Paul Baer of 103rd Squadron for his performance this date.

1918, Mar. 14—Two pilots of First Pursuit Group (95th Squadron) go on patrol.

1918, May 9—Flight Surgeons are organized at flying fields.

1918, May 11—U. S.-built DH-4 Liberty planes received by AEF.

1918, May 15—Congress establishes Air Mail Flyer's Medal of Honor. First award is to M. F. Freeburg, 1932.

1918, May 15—Regular airmail service flown by Army between New York and Washington, D. C.

1918, May 20—Army aeronautics severed from Signal Corps; two departments created: Bureau of Military Aeronautics and Bureau of Aircraft Production.

1918, June 26—A trans-Atlantic flight is urged by Gen. William L. Kenly, Director Military Aeronautics as "most necessary." On Aug. 8, Roy N. Francis is assigned to study project. Experiments continue to 1919 when Navy's NC4 makes the flight.

1918, July 4—Plan to distribute tons of propaganda by balloon over Germany this day fails attainment. Previously extended experiments had been conducted and contracts let.

1918, Aug. 2—First DH Liberty patrol by 135th Aero Squadron

1918, Aug. 17—First Martin bomber flown at Cleveland by Thomas Eric Springer.

1918, Sept. 7—First U. S. demonstration of troop transport by air.

1918, Sept. 12-13—Greatest air concentration of history at St. Mihiel under Gen. William Mitchell—1481 planes.

1918, Sept. 16—German attached type parachutes being in use at least as early as May 1, 1918, the AEF cables need and suggests Floyd Smith, test pilot, prosecute development. Smith develops tree type chute. Leslie L. Irving makes first free jump Apr. 28, 1919.

1918, Sept. 18—Altitude of 28,899 ft. reached by Maj. R. W. Schroeder.

1918, Sept. 25—First Congressional Medal of Honor awarded for air activity voted 1st Lt. Edward V. Rickenbacker of 94th Aero Squadron

1918, Sept. 26—First phase of Meuse-Argonne attack.

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Consolidated PT-1, first modern primary trainer, replaced "Old Jenny" in 1926

1918, Sept. 28—Pilotless airplane maneuvered from another airplane by radio, after some months of experiment. Various automatic pilots and radio controllers tried over the years.

1918, Oct. 2—First successful flights of Army's guided missile. Its prototype had been flown by H. M. Rinehart in July, substituting for the explosive load and the automatic controls.

1918, Oct. 3—Flight refueling demonstrated by Lt. Godfrey L. Cabot, U.S.N.R., continuing into 1920.

1918, Oct. 12—Use of oxygen tanks ordered all pilots over German lines.

1918, Oct. 25—Charles E. Hughes reports on his investigation of dishonesty in aircraft production.

1918, Nov. 11—Armistice signed.

1918, Dec. 4—First Army trans-continental flight made by Major Albert D. Smith's group of JN4 planes, San Diego-Jacksonville-New York-San Diego. Major Smith's plane alone completes the full round trip.

1919, Jan. 2—Maj. Gen. Charles T. Menoher becomes Director of Air Service.

1919, Jan. 21-30—Army second transcontinental flight; Major T. C. Macauley (DH-4 Liberty), Ft. Worth-San Diego-Miami-Ft. Worth. Repeated in April.

1919, Jan. 24—At Issoudun, France, 1st Lt. Temple M. Joyce (Morane) makes 300 consecutive loops.

1919, Mar. 3—U. S.-Canada airmail flown by Edward Hubbard in Boeing seaplane, Type C.

1919, Apr. 26—Lt. Comdr. H. B. Crow, U.S. N. in F5L flying boat makes non-stop endurance record: 20 hr. 10 min.

1919, Apr. 28—Leslie L. Irving makes first free type manually operated airplane parachute jump over McCook Field. (See 9/16/18).

1919, May 8-31—Trans-Atlantic crossing by Lt. Albert C. Read and crew from Rockaway Beach, N. Y., to Plymouth, England, in NC-4, 53 hr. 58 min.

1919, May 14—Navy airship C-5 makes

American non-stop record of 25 hr. 50 min., Montauk Pt., L. I. to St. Johns, N.F.

1919, May 18—In first trans-Atlantic takeoff, H. C. Hawker and McKenzie Grieve alight in ocean 1200 miles and 14½ hours out with engine trouble. Rescued.

1919, May 19—First award of DFC made to M/Sgt. Ralph W. Bottrick for first jump by Army personnel with free-type 'chute.

1919, June 1—First organized and sustained forest fire patrol inaugurated at Rockwell.

1919, June 14—First non-stop Atlantic crossing by Capt. John Alcock and Lt. A. W. Brown (Vickers-2 Rolls 375) St. Johns to Clifden, Ireland: 1890 mi. in 16 hr. 12 min.

1919, June 28—Treaty of peace with Germany signed at Versailles.

1919, July 1—Aerial fish patrols inaugurated at San Diego by Comdr. E. W. Spencer, Jr., U.S.N.

1919, July 2-6—First airship ocean crossing, British R-34, E. Fortune, Scotland, to Mitchell Field, N. Y., 3270 mi. in 108 hr. 12 min.; Lt. Comdr. L. Lansdowne, U.S.N. on board. Return made July 9-12, Col. William M. Hensley, representing Air Service.

1919, Aug. 14—Airmail from Aeromarine flying boat to White Star liner, *Adriatic*.

1919, Aug. 27-29—New York-Toronto race of military and civilian pilots.

1919, Aug. 28-Sept. 19—Lawson "air liner," 26-passenger, twin Liberty biplane, makes demonstration trip Milwaukee-Washington via Chicago, New York and other cities. It returns Sept. 25-Nov. 6.

1919, Sept. 1—Dive bombing demonstrated about this date at Aberdeen Proving Ground.

1919, Sept. 16—Flood relief provided by four JN4D's from Corpus Christi to stranded inhabitants.

1919, Sept. 18—Roland Rohlf's (Curtiss triplane-K12 Curtiss 400) makes world altitude record of 31,420 ft.

1919, Oct. 8-31—Army transcontinental reliability and endurance test New York-San Francisco and return. Forty-four compete

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westbound; 15 eastbound. Ten planes make round trip.

1919, Oct. 30—Reversible pitch propeller tested at McCook Field, Dayton, Ohio.

1919, Nov. 12-June, 1920—Six Navy F-5L's cruise New York to West Indies and return, covering 12,731 nautical miles.

1920—Moon eclipse observed by Lts. J. H. Tilton and W. H. Cushing of Rockaway Naval air station from height of some three miles.

1920, Feb. 27—World altitude record of 33,113 feet set by Maj. R. W. Schroeder (Le Pere-Liberty).

1920, Mar. 29-Apr. 22—Marine Corps group flight Washington-San Domingo and return, 4842 miles.

1920, June 7—Lt. John H. Wilson makes unofficial world parachute jump record of 19,800 ft.

1920, June 4—Army Reorganization Bill approved, creating Air Service in Army.

1920, July 7—F-5L Navy seaplane flown by radio compass from Hampton Roads, Va., to U.S.S. *Ohio*, at sea.

1920, July 15-Oct. 20—New York-Alaska flight; Capt. St. Clair Street, 1st Lt. Clifford Nutt, 2nd Lts. Ross C. Kirkpatrick, Eric H. Nelson and C. E. Crumrine, Sgts. James Long and Joseph E. English, Capt. Howard Douglas, advance officer; Mitchel Field, N. Y., to Nome and return.

1920, Sept. 8—Transcontinental mail route, combination plane-train, New York-Chicago-San Francisco, completed.

1920, Nov. 1—U. S. international passenger service started by Aeromarine West Indies Airways between Key West, Fla., and Havana, Cuba.

1920, Nov. 25—1st Lt. C. C. Moseley (Ver-ville-Packard 600) wins first Pulitzer race at 156.54 mph; 24 contestants finish, 13 others start but do not finish.

1920, Dec. 13-14—Navy balloon of Lts. L. A. Kleer, Walter Hinton and S. A. Farrell land beyond Moose Factory, Ont., after 25 hours, 852 miles from start at Rockaway, N. Y.

1921, Feb. 18—First U. S. airplane parachute escape by C. C. Eversole, airmail pilot.

1921, Feb. 22-23—Night airmail flown by Jack Knight from North Platte, Neb., to Chicago, Ill.

1921, Feb. 24—Lt. W. D. Coney completes transcontinental flight, San Diego-Jacksonville, 2180 mi. in 22 hr. 27 min.; 57 hr. 24 min. elapsed time.

1921, Mar. 23—Lt. A. G. Hamilton drops 23,700 ft. by parachute, Chanute Field.

1921, June 21—Navy F5L planes sink German sub U-117 in demonstration.

1921, July 18-21—Sinking of captured German cruiser, *Frankfurt*, and battleship, *Ost-friesland*, by U. S. bombs proves vulnerability of naval craft to aerial attack.

1921, Aug. 10—Navy Bureau of Aeronautics formed with Rear Admiral W. A. Moffett as Chief.

1921, Sept. 28—New world altitude record of 34,508 ft. set by Lt. J. A. Macready.

1921, Nov. 5—Bert Acosta (Curtiss Navy-C12 Curtiss 400) wins Pulitzer race at 176.7 mph.

1921, Nov. 12—Refueling in air: Earl S. Daugherty transfers *Wesley May* with can of gasoline from wing of another plane.

1921, Nov. 15—Italian airship *Roma* makes initial ascent in U. S. at Langley Field.

1921, Dec. 1—Helium airship, Navy dirigible C-7, flown from Hampton Roads, Va. to Washington, D. C.

1921, Dec. 29—World endurance record of 26 hr. 18 min. 35 sec. made at Roosevelt Field by Edw. Stinson and Lloyd Bertaud (CJL6 BMW 185).

1922, Jan. 1—Underwriters Laboratories starts registration of aircraft for benefit of insurance companies.

1922, Jan. 1—Aeronautical Chamber of Commerce organized, New York, with I. M. Upperco president.

1922, Feb. 21—Airship *Roma* destroyed.

1922, Mar. 20—Airplane carrier U.S.S. *Langley*, commissioned at Norfolk, Va.

1922, June 16—Helicopter demonstrated by Henry Berliner, Washington, D. C.

1922, July 14—Aeromarine Airways starts Detroit-Cleveland flying boat service.

1922, Aug. 5-7—Lt. Clayton Bissell completes first model airway flight, Washington-Dayton-Washington.

1922, Aug. 16—Sperry airway light beacon demonstration, McCook Field.

1922, Sept. 4-5—Transcontinental speed flight by Lt. James H. Doolittle, Pablo Beach, Fla.-San Francisco, Cal., in 22 hr. 35 min. elapsed time.

1922, Sept. 14-23—Transcontinental Army airship flight with Maj. H. A. Straus commanding crew of Capt. C. W. McEntire and others, from Langley Field, Va. to Arcadia, Cal.

1922, Oct. 5-6—World endurance record, 35 hr. 18 min. 30 sec., Rockwell Field, by Lts. J. A. Macready and O. G. Kelly (Fokker T2 Liberty 375).

1922, Oct. 14—Lt. R. L. Maughan wins Pulitzer race at 206 mph (Army Curtiss-D12 Curtiss 375).

1922, Oct. 18—World speed record of 222.97 mph set by Brig. Gen. William Mitchell in Curtiss racer.

1922, Oct. 23—American Propeller Co. demonstrates reversible propeller at Bolling Field.

1922, Dec. 18—Army's De Bothezat helicopter makes first successful flight, 1 min. 42 sec., Dayton, Ohio.

1923, Mar. 29—Lt. R. L. Maughan makes world speed record 236.58 mph (Curtiss R6-Curtiss 465), Dayton, Ohio.

1923, Apr. 16-17—World duration—distance records by Lts. J. A. Macready and O. G. Kelly (Fokker T2 Liberty 375), 36 hr. 4 min. 34 sec., 2516.55 miles.

1923, May 2-3—Cross-country non-stop flight by Lts. J. A. Macready and Oakley G. Kelly in Fokker T-2, from New York to San Diego, 2,520 miles in 26 hr. 50 min. 3 sec.

1923, Aug. 27-28—Lts. L. H. Smith and J. P. Richter (DH-4E Liberty 400) made world duration-distance refueled records: 3293.26 miles, 37 hr, 15 min. 14.8 sec.; Rockwell Field.

1923, Sept. 5—Smoke screen demonstrated by Thomas Buck Hine during naval bombing maneuvers, Cape Hatteras, N. C.

1923, Sept. 5—Langley Field bombers sink naval vessels *New Jersey* and *Virginia*.

1923, Oct. 6—Lt. A. S. Williams, U.S.N. wins Pulitzer race (Curtiss R2C1-D12 Curtiss 460) at 243.68 mph.

1923, Oct. 25-27—Barling bomber makes series weight-carrying records with greatest weight 3000 kg.; duration, altitude records, 1 hr. 19 min. 11.8 sec., 5,344 ft.

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1923, Nov. 4—Lt. A. J. Williams, U.S.N. (Curtiss R2C1-D12A Curtiss 500) makes world speed record 266.59 mph.

1923, Dec. 18—For \$100,000 the Christmas Aeroplane Co. assigns its aileron patent to U. S. Government.

1924, Jan. 16—Navy airship *Shenandoah* tears loose from mast in storm and rides it out during the night.

1924, Feb. 21—Alaskan airmail flown by Carl B. Eielson from Fairbanks to McGrath.

1924, Feb. 22—Lt. J. A. Macready (Leperesupercharged Liberty 400) reaches 41,000 ft. indicated altitude.

1924, Apr. 6-Sept. 28—Round-the-world flight by Lts. Smith, Nelson, Arnold, and Harding, Seattle to Seattle, 26,445 miles, 175 days (368 hours flying time).

1924, June 2—Lt. James T. Neely and storm-riding meteorologist Dr. C. L. Meisinger, Weather Bureau, killed by lightning in balloon near Monticello, Ill.

1924, July 1—Through transcontinental airmail service begun by U. S. Post Office.

1924, Oct. 4—Lt. H. H. Mills wins Pulitzer trophy (Verville Sperry-Curtiss HC D12A) at 216.55 mph.

1924, Oct. 7-25—Navy airship *Shenandoah* makes record cross-country cruise over 7080 miles in 235 hr. 01 min. Air hours total of 422 hr. 23 min. includes time moored.

1924, Oct. 12-15—U. S. Navy's German airship ZR3 (*Los Angeles*) makes fourth aircraft Atlantic crossing, Friedrichshafen - Lakehurst, in delivery under reparations.

1924, Oct. 29—Fog dispersal by electrified silica and sand demonstrated at Bolling Field.

1925, Jan. 29—Eclipse pictures and astro-nomic data secured at high altitudes by Air Service pilots.

1925, Feb. 2—Kelly Bill signed by President Coolidge authorizing private contract air transport of mail.

1925, Apr. 7—Navy carrier *Saratoga* launched.

1925, May 21-July 6—Amundsen-Ellsworth polar flight.

1925, July 15—Dr. A. Hamilton Rice Expe-

dition, first to employ planes in exploration, returns from Amazon; Lt. Walter Hinton, pilot. in Curtiss Seagull.

1925, Aug. 4-22—MacMillan polar expedition, with Navy assistance.

1925, Aug. 5—Seven American pilots leave Paris to fly for the French in the Rif campaign in Africa. Others follow to a total of 17 pilots, 5 observers.

1925, Aug. 31-Sept. 8—In Navy's attempted San Francisco-Honolulu flight, Commander John Rodgers and crew (PN9-2 Packard 500 flying boat) alight short of mark, making non-stop cross-country seaplane record of 1,841 miles.

1925, Sept. 3—Navy dirigible, *Shenandoah*, collapsed in storm over Ava, O., killing 14 of 43 on board.

1925, Sept. 12—Morrow Board appointed by President Coolidge. (Laid down U. S. air policy.)

1925, Oct. 12—Lt. Cyrus Bettis wins 6th Pulitzer race (Curtiss R3C1-VI400 Curtiss 619) at 248.97 mph.

1925, Oct. 26—Lt. J. H. Doolittle wins 8th international Schneider Seaplane Trophy race in first contest in America (Curtiss R3C2—VI400 Curtiss 619) at 232.57 mph.

1925, Dec. 17—Gen. William Mitchell found guilty of violating 96th Article of War; had risked insubordination by demanding unrestricted use of air power. Sentenced five years suspension of rank, pay and command. Resigned.

1926, Jan. 18—A \$2,500,000 air promotion fund established by Daniel Guggenheim.

1926, Jan. 29—Lt. J. A. Macready (XC05A-Liberty 400) makes American altitude record: 38,704 ft.

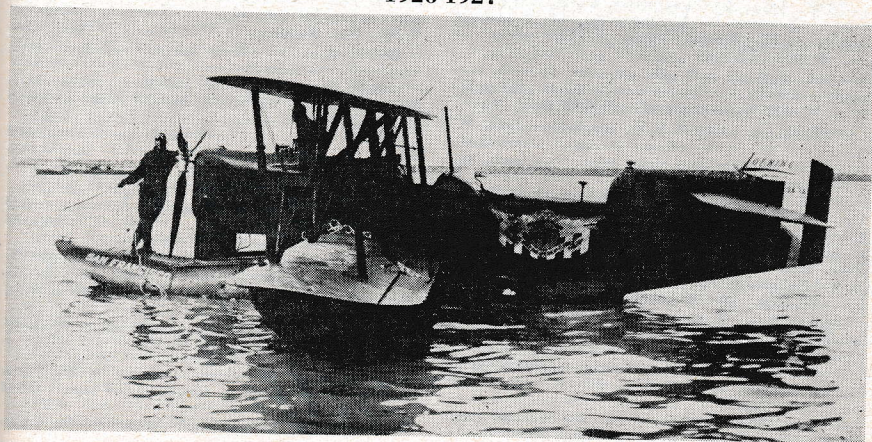
1926, Feb. 11—Strip bombing tests made at Kelly Field.

1926, Apr. 16—First cotton dusting plane purchased by Department of Agriculture.

1926, Apr. 30—Capt. G. H. Wilkins and Lt. Carl B. Eielson complete third round trip Fairbanks-Pt. Barrow-Fairbanks.

1926, May 8-9—Flight over North Pole by

Loening Amphibian flown on Pan American Good-Will Tour, 1926-1927



Richard Byrd, navigator, and Floyd Bennett, pilot, in Fokker monoplane.

1925, May 21-July 6—Amundsen-Ellsworth hile airship Norge crosses Pole in voyage Spitzbergen-Teller, Alaska in 71 hours.

1926, May 20—Air Commerce Act (Bingham-Parker Bill) signed by President Coolidge; Aeronautics Branch, Department of Commerce, established.

1926, May 30—Bennett international balloon race, Brussels, brought to America by the win of W. T. Van Orman and W. W. Morton in Goodyear III balloon. Capt. H. C. Gray, Air Service, second.

1926, July 2—Army Air Service renamed Army Air Corps.

1926, July 2—First reforestation by airplane, Hawaii.

1926, July 14—Armstrong seadrome model demonstrated at Wilmington, Del. to Air Service.

1926, Aug. 18—Metal-clad airship contract let at not over \$300,000.

1926, Aug. 25—JN training plane dropped by parachute, San Diego Naval Air Station.

1926, Dec. 7—Airway beacon erected by Aeronautics Branch, Department of Commerce, on Chicago-Dallas route.

1926, Dec. 21-May 2 ('27)—Mass amphibian good will flight from San Antonio, Tex. through Mexico, Central and South America and West Indies, under Maj. H. A. Dargue.

1927, Mar. 9—American balloon altitude record of 28,508 ft. made by Capt. H. C. Gray.

1927, Apr. 12—New American duration record of Clarence D. Chamberlin and B. B. Acosta (Bellanca-15 Wright 200) 51 hr. 11 min. 25 sec.

1927, May 4—Record balloon altitude attempt by Capt. H. C. Gray, 42,470 ft.

1927, May 15-19 — Greatest concentration since World War I (109 planes) in maneuvers under Brig. Gen. J. E. Fechet.

1927, May 20-21—Non-stop trans-Atlantic solo flight by Charles A. Lindbergh, New York-Paris, 3,610 miles, 33 hr. 30 min. (13th aircraft to make completed crossing.)

1927, May 25—Outside loop demonstrated by Lt. James H. Doolittle.

1927, June 4—First nonstop flight to Germany, Clarence D. Chamberlin and passenger (Bellanca-15 Wright 200), 3,911 miles, 43 hr. 49 min. 33 sec.

1927, July 25—World airplane altitude record by Lt. C. C. Champion, U. S. N. (Wright-P & W 425 supercharged) 38,484 ft.

1927, Aug. 16-17—A. C. Goebel and Lt. W. V. Davis, U. S. N. (Travelair-15 Wright 200) win Dole Oakland-Honolulu race One team finishes. Two teams lost.

1927, Sept. 1—Air express operations begun by American Railway Express and major airlines.

1927, Sept. 10—Bennett international balloon race, Dearborn, Mich., won by E. J. Hillard and A. G. Schlosser with 745 miles; 15 contestants.

1927, Oct. 12—Wright Field dedicated.

1928, Feb. 3-Dec. 28—Lt. H. A. Sutton conducts a series of spin tests; awarded Mackay Trophy.

1928, Mar. 1-9—Transcontinental amphibian flight by Army Lt. Burnie R. Dallas and civilian Beckwith Havens in Loening.

1928, Mar. 28-30—Edw. A. Stinson and George Holderman (Stinson-Wright 200) make

endurance record of 53 hr. 36 min. 30 sec.

1928, Apr. 12-13—First non-stop westbound North Atlantic airplane crossing made by Baron C. von Huenefeld, Capt. Hermann Koehl and Maj. James Fitzmaurice (Junker-Junker 280/310 metal cabin land monoplane) from Baldonnel, Ireland to Greenly Island, N.F., 2,070 miles in 37 hours.

1928, Apr. 15-21 — First eastbound Arctic crossing made by Capt. G. H. Wilkins and Lt. C. B. Eielson (Lockheed-Wright 225) Pt. Barrow-Green Harbor, Spitzbergen, 2,200 miles, 20 hr. 20 min.

1928, May 24—Gen. Umberto's airship is over the Pole in trip from Spitzbergen. It is wrecked May 25, with loss of lives of crew and rescuers.

1928, May 31-June 8—First U. S.-Australasian flight, by Capt. C. Kingsford-Smith, Capt. C. T. P. Ulm, H. W. Lyon and James Warner (F7 Fokker-3 Wright 200) Oakland-Brisbane, 7,410 miles; 83 hr. 19 min.

1928, June 11-12—Mexico-Washington flight by Capt. Emilio Carranza (Bryan-Wright 200).

1928, June 17-18—First woman to fly Atlantic, Amelia Earhart with Wilmer Stultz, pilot, from Trepassey Bay, N.F., to Burryport, England, in trimotored Fokker, 2,140 miles, 20 hr., 40 min.

1928, July 30-31—Twenty-second Bennett international balloon race, Detroit, won by Capt. W. E. Kepner and Lt. W. O. Fareksson; 460 miles, 43 hr.

1928, Sept. 19—First Diesel engine to power heavier-than-air craft; designed by I. M. Woolson, manufactured by Packard Motor Car Co.; flight-tested at Utica, Mich.

1928, Oct. 19—Parachute troop demonstration at Brooks Field.

1928, Nov. 11—First Antarctic flight made by Lt. C. B. Eielson and Sir Hubert Wilkins (Lockheed-Wright 22). Other flights subsequently.

1928, Nov. 23-Dec. 30—New York-Girardot, Colombia, flight by Capt. Benjamin Mendez, 4,600 miles.

1928, Dec. 19—Autogiro flight by Harold F. Pitcairn, Pitcairn Field, Willow Grove, Pa.

1929, Jan. 1-7—Refueling endurance record set by Maj. Carl Spaatz and Capt. Ira C. Eaker, Lt. Elwood R. Quesada, Lt. Harry A. Halverson, S/Sgt. Roy W. Hooe in 150 hr., 40 min., 51 sec.

1929, Apr. 3—Floyd Smith trap-door parachute demonstrated.

1929, Apr. 30—Jack Barstow makes duration glider record of 15 hr. 13 min. at Point Loma, Cal.

1929, June 28-29—Round transcontinental flight by Capt. Frank M. Hawks (Lockheed-P & W) in 40 hr. 4 min. 32 sec. Capt. E. G. Harper repeats the performance July 11-26.

1929, July 13-30—World endurance record of 420 hr. 17 min. by Forrest O'Brien and Dale Jackson (Curtiss Robin-Curtiss 70).

1929, July 18-20 — N. Y.-Alaska flight by Capt. Russ G. Hoyt. Return flight ends at Edmonton, after covering 6,000 miles out of 8,469 itinerary.

1929, Aug. 5-6—Group transcontinental flight of 9 Keystone bombers under Major Hugh J. Knerr.

1929, Sept. 24—Demonstration by Lt. James H. Doolittle results in Guggenheim report blind flying solution.

1929, Oct. 21—Air Ambulance Service organ-

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ized by Colonial Flying Service and Scully Walton Ambulance Co., New York.

1929 — Bennett international balloon race won by W. T. Van Orman and aide, 341 miles, 9 contestants.

1930, Mar. 15—Glider, piloted by Capt. Frank Hawks, released from seaplane, Port Washington, N. Y.

1930, Apr. 6—Transcontinental glider in tow, piloted by Capt. Frank Hawks; San Diego to New York; 2,860 miles in 36 hr., 47 min.

1930, May 20—Dirigible-launched Vought observation plane, flown by Lt. Comdr. Charles A. Nicholson from U.S.S. *Los Angeles* to U.S.S. *Saratoga*, Lakehurst, N. J.

1930, June 4—New world altitude record of 38,560 ft. set by Navy Lt. Apollo Soucek, Anacostia, Md.

1930, June 11-July 4—World endurance record of 553 hr. 41 min. 30 sec. established by John and Kenneth Hunter (Stinson-Wright 200).

1930, July 21-Aug. 17—Refueling endurance record raised to 647 hr., 23 min. by Forrest O'Brien and Dale Jackson in a Curtiss Robin, St. Louis, Mo.

1930, July 22—German air mail plane catapulted 250 miles out en route to New York; 198 such ship-shore flights 1929-1938.

1930, Sept. 1—Bennett international balloon race again won for U. S. by W. T. Van Orman and aide, 542 miles.

1931, Feb. 14-19—Lts. W. W. Lite, Clement McMullen fly New York-Buenos Aires, 6,870 miles, 5 days, 5 hours elapsed time; 52:15:00 flying.

1931, Mar. 30—Airplane-airship mail transfer at Scott Field.

1931, Apr. 10—Airship sub-cloud observation car demonstration by Lt. W. J. Paul.

1931, May 25-28—World endurance record, non-refueled, set by Walter E. Lees and F. A. Brossi, Bellanca, Packard Diesel 225 hp; 85 hr., 32 min., 38 sec., Jacksonville, Fla.

1931, May 14-28—Transcontinental autogiro flight by John M. Miller, from Philadelphia to San Diego.

1931, June 4—Rocket glider flown by William G. Swan; remained aloft for 30 min. with 10 rockets, Atlantic City, N. J.

1931, June 23-July 1—World flight by Wiley Post and Harold Gatty (Lockheed-PW 550), New York-Harbor Grace-Berlin-Moscow-Irkutsk-Khabarovsk-Solomon Beach-Fairbanks-Edmonton-Cleveland-New York, in 14 hours. 8 days 16 hours, 16,500 miles.

1931, July 25-26—Glider duration record of 16 hr. 38 min. by 2nd Lt. John C. Crain, Honolulu.

1931, Oct. 3-5—Trans-Pacific non-stop airplane flight by Clyde Pangborn and Hugh Herndon, Samushiro Beach, Japan, to Wenatchee, Wash.

1931, Oct. 3-5—Herndon and Pangborn (Bellanca-PW 420) left New York July 28 on world trip and had reached Japan Aug. 6, abandoning attempt to better Post-Gatty record.

1931, Oct. 6-9—Navy bomber tests on U.S.S. *Pittsburgh* in Chesapeake Bay.

1931, Nov. 3—Dirigible, *Akron*, carried record number of 207 persons in flight over New York and Philadelphia.

1931, Dec. 17-18—Glider duration record of 21 hr. 34 min. by Lt. Wm. A. Cocke, Honolulu.

1932, May 9—First solo blind flight, by Capt. Albert F. Hegenberger, Wright Field, Dayton, O.

1932, May 20-21—Amelia Earhart soles across Atlantic, St. Johns, New Brunswick to Londonderry, Ireland, in Wasp-powered Lockheed Vega.

1932, Aug. 25—First woman to complete non-stop transcontinental flight, Amelia Earhart, Los Angeles to Newark.

1932, Dec. 1—Teletypewriter weather map service inaugurated by Department of Commerce.

1933, Jan. 19 — Rocket guided by sound waves from enemy aircraft proposed.

1933, Jan. 23 — Steam airplane project launched by Great Lakes Aircraft and General Electric Co. Later Besley brothers fly their steam airplane.

1933, Apr. 4—Navy dirigible, *Akron*, crashes into sea, killing 73; Comdr. Herbert V. Wiley, commanding.

1933, May 3-26 — Airborne troop logistics part of West Coast maneuvers, with 283 aircraft.

1933, July 15-22—Solo round-the-world flight by Wiley Post in Lockheed Vega monoplane, *Winnie Mae*, in 7 days, 18 hr., 49 min.

1933, Sept. 4—World speed record for land planes set at 304.98 mph by James R. Wedell in Wasp-powered Wedell-Williams racer.

1933, Nov. 20-21—World balloon altitude record set at 61,237 ft. by Lt. Comdr. T. C. W. Settle and Maj. C. L. Fordney over Akron, O.

1934, Jan. 10-11—Longest non-stop over-water mass flight completed by six P2Y-1 Navy flying boats under command of Lt. Comdr. Knefler McGinnis, San Francisco to Honolulu.

1934, Feb. 9 — Postmaster General Farley cancels certain mail contracts. Air Corps flies the mail Feb. 19-Mar 10; Mar. 19-May 5.

1934, June 12—Howell commission to study airmail act and report on all phases of aviation by Feb. 1, 1935.

1934, Dec. 31—War Department announces instruction governing GHQ Air Force organization and operation.

1935, Jan. 3—Antarctic flight by Ellsworth and Kenyon (Northrop-PW 600).

1935, Feb. 12—Navy dirigible, *Macon*, crashes into sea, killing 2.

1935, June 12-Aug. 14—Washington-Alaska-Washington flight (Douglas Amphibian-2 Wasps) in test of practicability of such flight with standard equipment and as any ordinary flight. Capt. Hez McClellan and crew of two.

1935, Aug. 15—Will Rogers and Wiley Post killed in take-off crash near Point Barrow, Alaska.

1935, Nov. 11—Balloon altitude record of 72,394 ft. by Capt. O. A. Anderson and Capt. Albert Stevens.

1935, Nov. 21-Dec. 5—Antarctic flights renewed by Ellsworth and Kenyon (Northrop-PW 600).

1935, Nov. 22-29—Trans-Pacific airmail flight by Capt. Edwin C. Musick, Pan American Airways, from San Francisco to Honolulu, Midway Island, Wake Island, Guam and Manila, in Martin *China Clipper*.

1936, June 7—All-instrument transcontinental flight by Maj. Ira C. Eaker, between New York and Los Angeles.

1936, Sept. 10-Oct. 20—Regular trans-Atlantic flying boat service by Deutsche Luft-

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hansa. (Dornier twin Diesel engine 600.) Continued in 1937 and 1938.

1936, Sept. — Trans-Atlantic round-trip flight by Heury (Dick) Merrill and Harry Richman, New York to London and return.

1937, May 6—German dirigible, *Hindenburg*, burned on mooring, killing 36, Lakehurst, N. J.

1937, May 20-July 3—Amelia Earhart Putnam and Fred Noonan lost in Pacific in round-the-world attempt.

1937, June 25—Non-stop transcontinental amphibian flight by Richard Archbold in PBV-1, Catalina, from San Diego to New York.

1937, July 3-Sept. 3—Regular trans-Atlantic service test by Pan American Airways. Imperial Airways also similarly operate July 5-Aug. 2 and continue in 1938.

1937, Aug. 12—In joint coast defense exercise, Navy patrol planes locate target ship *Utah* 300 miles off San Francisco; Air Corps planes attack.

1937, Aug. 23—Wholly automatic landings made, "first in history," at Wright Field by Capt. Carl J. Crane with 2 passengers; awarded DFC.

1938, Feb. 15-27—Miami-Buenos Aires-Miami flight of 6 bombers under Lt. Col. Robert Olds, for inauguration President Ortiz.

1938, Feb. 26—Government acquires monopoly on helium by purchasing production facilities at Dexter, Kan.

1938, Apr. 22—Capt. E. V. Rickenbacker purchases Eastern Air Lines from North American Aviation, Inc., for \$3,500,000.

1938, June 23—Civil Aeronautics Authority with five members, an administrator, and a three-man Safety Board, created under Civil Aeronautics Act signed by President. This superseded Aeronautics Branch, Department of Commerce.

1938, July 10-14—Howard Hughes and crew of four fly short northern course around world in 3 days, 19 hr., 8 min.

1938, July 17-18—Douglas (Wrong-Way) Corrigan flies from New York to Ireland in nine-year-old Curtiss Robin.

1938, Aug. 3-12—Miami-Bogota-Miami goodwill flight of 3 bombers under Major Vincent J. Meloy.

1938, Aug. 10-11 — First Berlin-New York nonstop flight by Capt. Alfred Henke and crew (Focke-Wulf Condor 200), 4,577 miles, 24 hr. 54 min.

1938, Aug. 22—Civil Aeronautics Act becomes effective.

1939, Feb. 4-6—Langley Field-Santiago Red Cross flight by Major C. V. Haynes in XB bomber with medicinal supplies.

1939, Mar. 5—Non-stop airmail system by pick-up demonstrated by Norman Rintoul and Victor Yesulantes in Stinson Reliant planes, Coatesville, Pa.

1939, Apr. 3—The National Defense Act, providing for aerial rearmament, signed by President Roosevelt.

1939, Apr. 17—Inclined runways for assisted takeoff studied by Air Corps Board.

1939, May 20—North Atlantic airmail service begun by PAA between Port Washington, L. I., the Azores, Portugal and Marseille, France.

1939, June 27—Bill authorizing Civilian Pilot Training Program signed by President.

1939, Sept. 1-3—Germany invades Poland. England and France declare war on Germany.

1940, Mar. 26—U. S. commercial airlines complete a full year of flying without a fatal accident or serious injury to a passenger or crew member.

1940, July 1—Air Safety Board abolished with its functions delegated to the Civil Aeronautics Board. Civil Aeronautics Administration transferred to Department of Commerce.

1940, Sept. 23—House committee asks \$80 million for airport development, in \$500 million program; \$40 million voted.

1941, Mar. 17—Milwaukee renames its airport as General Mitchell Field.

1941, Apr. 15—First officially-recorded rotor helicopter flight in western hemisphere, Vought-Sikorsky VS-300A, piloted by Igor I. Sikorsky; flight time, 1 hr., 5 min., 14.5 sec., Stratford, Conn.

1941, May—Barrage balloon defense transferred from Air Corps to Coast Artillery.

1941, June 5—Ferry Command, for delivery of planes to Britain, organized by Army Air Corps.

1941, June 20—Army Air Force, comprising office of Chief of Air Corps and Air Force Combat Command, created.

1941, June—First woman to ferry bomber across Atlantic, Jacqueline Cochran, Canada to British Isles.

1941, Sept. 5—Mass trans-Pacific flight of heavy bombers completed by nine Army B-17 Flying Fortresses.

1941, Dec. 7—Pearl Harbor.

1942, Apr. 8—First flight of Ferry Command over Himalayan "Hump" made by Lt. Col. William D. Old, between Assam, India and Kunming, China.

1942, Apr. 18—First bombing attack on Japanese mainland by 16 B-25 Mitchell bombers from Navy carrier, *Hornet*; Lt. Col. James H. Doolittle commanding.

1942, May 4-9—Battle of Coral Sea.

1942, June 20—Ferry Command redesignated Air Transport Command under Maj. Gen. Harold L. George.

1942, June 3-7—Battle of Midway.

1942, June 17—AAF tow planes successfully pick up gliders in tests at Wright Field.

1942, Aug. 17—First official bombing raid of Eighth Air Force, 12 Flying Fortresses, Brig. Gen. Ira C. Eaker commanding, Rouen, France.

1942, Sept.—Fifty American Eagle squadron pilots, RAF, all Americans, transferred to Eighth Air Force. (Fourth Fighter Group.)

1942, Oct. 1—Jet plane built and flown by Robert M. Stanley; Bell Airacomet (XP-59A), Muroc Dry Lake, Cal.

1943, Mar. 1-4—Battle of Bismarck Sea.

1943, Mar. 19—Lt. Gen. Henry H. Arnold, commanding general of the AAF, advanced to full four-star general, the first in air history.

1943, June 24—World's longest parachute drop, 40,200 ft., made by Lt. Col. W. R. Love-lace at Ephrata, Wash.

1943, June 11—First ground victory by air power when Pantelleria, Italy, surrenders unconditionally to Lt. Gen. Carl Spaatz. First case in history of a well-fortified citadel being defeated without aid of ground forces.

1943, Oct.—World's longest freight line opened by Capt. J. L. Okenfus and crew of five in 28,000-mile round-trip flight, Ohio to India.

1944, June—Army Air Force reaches peak with 78,757 aircraft.

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1945, May 8—War in Europe ends.

1945, Aug. 6—Atomic bomb dropped on Hiroshima from B-29, *Enola Gay*, under command of Col. Paul W. Tibbets, Jr.

1945, Aug. 14—Japan's surrender ends World War II.

1945, Sept. 28-Oct. 4—Round-the-world air service begun by Air Transport Command, Douglas C-54E, Globester, 9 passengers, 23,147 miles in 149 hr., 49 min.

1946, Jan. 26—Jet-propelled P-80, flown by Col. William H. Councill, sets non-stop transcontinental record of 4 hr., 13 min., 26 sec., between Long Beach, Cal., and New York.

1946, Mar. 12—First commercial helicopter license granted by Civil Aeronautics Administration for Bell 2-place Model 47.

1946, Mar. 22—First American-built rocket to escape earth's atmosphere, reaches 50-mile height. Constructed by Douglas.

1946, July 21—The McDonnell XFH-1 Phantom is first U.S. jet to operate from carrier, *U.S.S. Franklin D. Roosevelt*.

1946, Aug. 6—Two B-17 radio-controlled bombers with stand-by crews, fly non-stop, Hilo, Hawaii, to Muroc Lake, Cal.

1947, Feb. 28—Lt. Col. Robt. E. Thacker and Lt. John M. Ard, in a North American F-82 (Rolls Royce V-1650) fly longest known flight by fighter aircraft, Honolulu to N. Y., 4,968 miles in 14 hr. 31 min. 50 sec.

1947, July 18—Air Policy Commission established by President.

1947, July 26—Army-Navy Merger Bill signed by President, making Department of Air Forces co-equal with Army and Navy, and creating Department of Defense.

1947, Oct. 17—First faster-than-sound flight by Capt. Charles E. Yeager in rocket-powered Air Force research plane, Bell XS-1, better 760 mph. (Not announced officially until June 10, 1948.)

1948, June 18—Air parcel post system established by Congress; to begin Sept. 1.

1948, June 26—Berlin Airlift begins "Operation Vittles" with Douglas C-47's carrying 80 tons of supplies the first day. During first five months, Airlift tops cargo volume of all U.S. airlines by flying 93,000,000 ton-miles.

1948, July 1—Air Transport Command and Naval Air Transport Service consolidated as Military Air Transport Service (MATS) under command of Air Force Chief of Staff.

1948, Sept. 15—U. S. Air Force recaptures world speed record with North American F-86 jet fighter traveling 670.981 mph, flown by Maj. Richard L. Johnson.

1948—Northrop's YB-49 Flying Wing, first eight-jet bomber in the U.S. Air Force, makes longest jet-propelled flight on record of approximately 3,400 miles at average speed of 382 mph.

1949, Jan. 7—Air Force announces a new unofficial climbing speed record set by the Bell X-1 at Muroc Air Force Base with Capt. Charles E. Yeager at the controls, climbing more than 13,000 ft. per min., compared with 8-10,000 ft. per min. for jet planes.

1949, Jan. 14—Capt. William Odum, flying a specially modified Beecherft Bonanza, sets a new lightplane distance record, crossing from Honolulu to Oakland, Ca'

1949, Feb. 7—Eastern Air Lines reports new transcontinental speed record for transport aircraft set Feb. 5 by new-type Lockheed Constellation on delivery flight from Los Angeles to La Guardia Field in 6 hr. 17 min. 39-2/5 sec.

1949, Feb. 8—Boeing XB-47 jet bomber sets cross-country speed record to Andrews Field, Washington, D. C. from Moses Lake, Wash. in 3 hr. 46 min.

1949, Mar. 2—Air Force completes the first nonstop round-the-world flight in history, as a Boeing B-50 bomber, *Lucky Lady II*, lands at Carswell AFB, Ft. Worth, Tex. at 9:30 CST, after a 94-hour trip; piloted by Capt. James Gallagher, assisted by a crew of 13, the B-50 flew a total of 23,452 miles at an average speed of 249 mph. Four refueling contacts were made with B-29 tankers.

1949, Mar. 8—New world distance record for light planes set by Capt. William Odum in a Beecherft *Bonanza*, flying 5,273 miles from Honolulu to Teterboro, N. J., in 36 hr. 2 min.

1949, May 3—The Martin *Viking*, 45-ft. research rocket, is fired successfully at White Sands Proving Ground, Las Cruces, N. M., reaching an altitude of 51½ miles and a speed of 2,250 mph.

1949, May 6—Sikorsky S-52-1 helicopter sets new international speed record of 122.75 mph.

1949, Oct. 3—Navy jet-rocket special research plane, the Douglas D-558-II Skyrocket, reaches a top speed of slightly over 700 mph at an altitude of 25,000 ft. in test flight at Muroc, Cal.

1950, Jan. 3—Jacqueline Cochran sets new official F.A.I. 500 kilometer closed course record flying a North American F-51 (Packard-built Merlin V1650) at 444 mph.

1950, Jan. 22—Paul Mantz sets new transcontinental record flying a North American P-51 Mustang (Allison) from Burbank, Calif. to La Guardia Field, N. Y. in 4 hr. 52 min. 58 sec.

1950, Feb. 9—Navy Lockheed P2V Neptune (Wright 3350) patrol bomber completes 5,156-mile flight in 25 hr. 57 min.

1950, Mar. 31—Ana Louisa Branger, flying a Piper Cub Special powered by a Continental C-90-3F engine, sets official new lightplane international altitude record of 24,504 feet.

1950, Sept. 5—North American Aviation announces successful completion of tests at Edwards AFB in which heavy bombs were dropped for first time at speeds over 500 mph with a B-45 Tornado (GE-J47).

1950, Sept. 22—Col. David G. Schilling and Lt. Col. William D. Ritchie fly London-New York nonstop with three in-flight refuellings in two Republic F-84E (Allison J-35A-17) jet fighters. (Schilling completed flight; Ritchie bailed out over Newfoundland and was later rescued by helicopter.)

1950, Nov. 10—A Lockheed F-80 shoots down a Russian-built MIG-15 in first jet aerial combat, Korea.

1951, Jan. 17—Convair RB-36D reconnaissance bomber makes 51 hr. 20 min. non-stop flight without refueling.

1951, Feb. 2—First successful air-to-air refueling of a U.S. jet bomber is carried out by a North American RB-45C Tornado and a Boeing KB-29P tanker at Edwards AFB, Calif.

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1951, Apr. 24—Piper Super Cub, piloted by Mrs. Ana Louisa Branger, sets an international altitude record of 26,820 feet in the minus 1,103-pound category.

1951, May 15—Max Conrad sets non-stop lightplane record in Piper Pacer (125 hp Lycoming), crossing the country in 23 hr. 4 min. 31 sec.

1951, Aug. 8—Navy's Martin Viking VII sets new altitude record for single stage missiles, flying 135 miles up from White Sands Proving Ground, N. M., reaching a top speed of 4,100 mph.

1951, Aug. 18—North American F-86A Sabre jet, piloted by Col. Keith K. Compton, flies from Edwards AFB, Calif., to Detroit, Mich., in 3 hr. 27 min. 56 sec. at an average speed of 553.761 mph.

1952, Jan. 2—A Sikorsky H-19 helicopter completes 1,800-mile flight from Great Falls, Mont., to Ladd AFB, Fairbanks, Alaska, in five days—probably the longest flight ever made by rotary wing craft.

1952, Mar. 18—Two Republic F-84 Thunderjets land in Neubiberg, Germany, after a 2,800 mile flight without refueling—believed to be the longest sustained jet fighter flight in history. The jets crossed seven countries, averaged 585 mph, and were in the air 4 hr. 48 min.

1952, Apr. 30—For the first time in aviation history, air passenger-miles (10,679,281,000) in 1951 exceeded the total passenger-miles traveled in Pullman cars (10,224,714,000).

1952, May 10—Transcontinental lightplane record is set by Max Conrad in a Piper Pacer, traveling from Los Angeles to New York (2,461 mi.) non-stop in 24 hr. 54 min.

1952, Aug. 1—Two Sikorsky H-19 helicopters complete first trans-Atlantic helicopter crossing and break non-stop distance record for rotary wing aircraft.

1952, Nov. 19—New record set by North American F-86D (GE J-47 GE-17) Sabre jet, piloted by Capt. J. Slade Nash, flying at 699.92 mph. (Previous world speed record—670.981 mph.)

1953, Jan. 26—Chance Vought Aircraft completes final F4U Corsair, bringing to an end the longest production record of any airplane ever built.

1953, May 18—Jacqueline Cochran Odlum flies at record speed of 652.337 mph over a 100 km. course, in a Canadair F-86 swept-wing Sabre.

1953, Oct. 3—LCdr. James B. Verdin establishes new world speed record of 753.4 mph in Douglas XF4D-1 Skyray, Navy carrier fighter.

1953, Oct. 20—TWA Lockheed Super Constellation completes first scheduled nonstop transcontinental passenger trip from Los Angeles to New York in 3 hr. 17 min.

1953, Oct. 29—North American YF-100 Super Sabre establishes new world's speed record of 754.98 mph, piloted by Lt. Col. F. K. Everest.

1953, Dec. 12—Maj. Charles E. Yeager, USAF pilot, establishes new world speed record of more than 1600 mph in the Bell X-1A.

1954, Jan. 5—Air National Guard Col. Willard W. Millikan sets New York-Washington speed mark of 24 minutes in North American F-86F.

1954, Mar. 1—Peak is reached in number of U.S. airports: 6,760.

1954, Mar. 29—American Airlines DC-7 sets official Los Angeles-New York commercial speed record: 6 hrs. 10 mins.

1954, May 24—Martin Viking II, single stage rocket, sets altitude record soaring 158 miles high (834,240 feet) at 4300 mph. at White Sands Proving Ground, New Mexico.

1954, May 25—Goodyear ZPG-2 non-rigid airship sets new record for flight without refueling, landing at Key West, Fla., after 200 hrs. 4 mins. in the air.

1954, Aug. 27—Adm. DeWitt C. Ramsey, president of Aircraft Industries Association, reports that U.S. aircraft manufacturers are now building 900 to 1,000 military planes per month.

1955, Feb. 16—Longest non-stop flight by a jet fighter-bomber—2,390 miles—made by Republic F-84F from George AFB in California to Langley AFB, Virginia. Speed averaged 605 mph.

1955, Mar. 9—Republic's F-84F Thunderstreak sets a new official transcontinental speed record, flying 2,445 miles non-stop from Los Angeles to New York in 3 hrs. 44 mins.

1955, May 24—A North American F-86 sets two transcontinental records: (1) as first aircraft to cross the U. S. round trip in daylight and (2) by flying east-west leg in 5 hrs., 27 mins., 37 secs., breaking previous record.

1955, Aug. 1—White House announces that U. S. plans to launch a small unmanned satellite about the size of a basketball sometime after July, 1957. Satellite will circle earth at altitudes between 200 and 300 miles.

1955, Aug. 17—Republic's Thunderstreak sets a new world's non-stop jet fighter distance record of 5,118 mi. from London, England, to Texas.

1955, Aug. 20—North American F-100C sets the first supersonic world speed record of 822.135 mph, 70 miles faster than the previous record set in 1953.

1955, Oct. 15—Douglas A4D Skyhawk sets a new closed course world speed record of 695.163 mph.

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