



Smithsonian

National Air and Space Museum

A. Francis Arcier Collection

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1999, 2019



National Air and Space Museum Archives
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Collection Overview

Repository:	National Air and Space Museum Archives
Title:	A. Francis Arcier Collection
Date:	Circa 1890-1981
Identifier:	NASM.XXXX.0072
Creator:	Arcier, A. Francis, 1890-1969
Extent:	2.97 Cubic feet (7 boxes)
Language:	This majority of this collection is in English but there are also some materials in French and Swedish.
Summary:	A. Francis Arcier, (1890-1969) was an aviator, scientist, designer and engineer whose pioneering work in aviation design spanned six decades and earned him many honors.

Administrative Information

Acquisition Information

Elizabeth Arcier, gift, 1972, additional material received from Francis Arnoult, 2019, NASM.XXXX.0072.

Processing Information

Arranged and described by Hank Brown, 1999. Updated and encoded by Jessamyn Lloyd, 2019.

Preferred Citation

A. Francis Arcier Collection, NASM.XXXX.0072, National Air and Space Museum, Smithsonian Institution.

Restrictions

No restrictions on access.

Conditions Governing Use

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Biographical Note

A. Francis Arcier, (1890-1969) was an aviator, scientist, designer and engineer whose pioneering work in aviation design spanned six decades and earned him many honors. Born in London, he studied aeronautics in Passey, France under Sir Gustave Eiffel, the designer of the Eiffel Tower. He served as draftsman for such notable aircraft designers as Gabriel Voisin, Henri Coanda, Frank Barnivell and Gordon England. At the age of 21, he learned to fly and received his international aviator's certificate. He served as a flight instructor at the Hall School of Flying in Hendon, England and during World War I, with Handley Page, Ltd. He designed the

first twin engine and the first four engine bombers used by the United States and its Allies. Arcier emigrated to the United States in 1919 and was employed as Chief Engineer at the Witterman Aircraft Corporation, makers of the Barling Bomber designed by Arcier. It was the largest heavier-than-air aircraft of its time. During his years with Witterman, Arcier won the Army Air Service Engineering Divisions' design competition for a bomber aircraft design. That same year, Arcier became Chief Engineer for the Fokker Aircraft Corporation, where among other notable accomplishments, he designed the Fokker Trimotor Transport which was used by Amelia Earhart and by Richard Byrd in his flight over the North Pole and also across the North Atlantic. After Arcier attained his United States citizenship in 1929, he became Vice President of Operations and Director of the General Airplanes Corporation in Buffalo, New York. In 1930 under his leadership, the "Mailplane", one of the first all-metal airplanes, was built. Later in 1930, Arcier became Chief Engineer of the Weaver Aircraft Company, WACO. He worked for WACO for 17 years in various capacities. Arcier and the Waco Aircraft Company made many contributions to the National Defense Program during World War II such as the Model UPF-7. The Waco Company was entrusted with the entire combat and cargo glider Program of the U.S. Army Air Forces. This was initiated in an Army Design Competition which the Company won and resulted in a program involving the design, prototype construction and, in some cases, production construction of some twelve models ranging from Model CG-3A to the CG-15A. These gliders were built by the thousands under Arcier's technical direction by sixteen prime contractors and many hundreds of sub-contractors throughout the nation. In 1948, Arcier became Chief Scientist for U.S. Air Force Intelligence at Wright- Patterson AFB until he retired in 1963. After his retirement, he served as consultant to the Commander, Foreign Technology Division and Special Advisor to the Division's Advisory Group on scientific and technical intelligence matters. Among his honors were the USAF Meritorious Civilian Service Award (1953), and the USAF Distinguished Civilian Service Award (1961.) A. Francis Arcier died on November 21, 1969.

Scope and Contents

The A. Francis Arcier Collection contains approximately 3 cubic feet of material relating to his extraordinary career in aviation. This collection has biographical and professional documents, technical information on aircraft designs, patents, correspondence, newspaper clippings, publications, certificates, photographs, negatives and three scrapbooks.

Note: The digital images shown for this collection were repurposed from scans made by an outside contractor for a commercial product which did not reproduce all materials found in this collection; some items have not been scanned.

Arrangement

Every effort was made to provide dates when possible and each series is arranged in chronological order.

The collection is arranged as follows:

- Series 1: Biographical and professional material
 - Series 2: Technical material
 - Series 3: Publications
 - Series 4: Photographs
 - Series 5: Scrapbooks
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Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

Aeronautical engineers
Aeronautics
Periodicals

Types of Materials:

Correspondence
Diaries
Drawings
Financial records
Photographs
Publications
Scrapbooks

Names:

Air Force Museum (U.S.)
Arcier, A. Francis, 1890-1969
Fokker Aircraft Corp
GAC (General Airplanes Corp)
Waco Aircraft Company
Wittmann Aircraft Corp

Container Listing

Series 1: Biographical and Professional Material

Scope and Contents: This series contains job applications, personnel records, speeches, patents, dissertations, clubs and organizations. The clubs and organizations are listed in chronological order.

Box 1, Folder 1	A. Francis Arcier biographical information, 1929 - 1981
Box 1, Folder 2	A. Francis Arcier job applications and personnel records, 1919 - 1959
Box 1, Folder 3	A. Francis Arcier job applications and personnel records, 1962 - 1972
Box 1, Folder 4	A. Francis Arcier, notes on speeches, undated
Box 1, Folder 5	Dissertations by A. Francis Arcier, 1928 - 1949
Box 1, Folder 6	Correspondence from A. Francis Arcier, 1913 - 1971
Box 1, Folder 7	Correspondence to A. Francis Arcier, 1919 - 1967
Box 1, Folder 8	A. Francis Arcier, Retirement Ceremony, addresses and copies of cables, 1963-03
Box 1, Folder 9	[Certificates], 1953, 1961
Box 1, Folder 10	Patent, Aircraft Landing Gear, Alex Francis Arcier and Max P. Baker, Patent No. 2,254,260 -- Serial No. 264,894, 1941-09-02 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 1, Folder 11	Patent, Improvement in Rope and Wire Clamps, Bror Johan Brunzell, Patent No. 1,600,394, 1926-09-21
Box 1, Folder 12	A. Francis Arcier, original pencil sketch, 1942
Box 2, Folder 1	Sketches of Badges for the New York Flying Club, 1921
Box 2, Folder 2	Institute of the Aeronautical Sciences, 1933 - 1965
Box 2, Folder 3	Royal Aeronautical Society, 1940 - 1968
Box 2, Folder 4	Dayton Philharmonic, 1945 - 1969
Box 2, Folder 5	Society of British Aircraft Constructors, 1953-09-07
Box 2, Folder 6	Anglo-American Aeronautical Conference, 1973-09-17

Box 2, Folder 7	Early Birds, Chirp 50, 53, 54, 64, 68, 70, 71, 72, 73, 75 and 77, 1953 - 1971
Box 2, Folder 8	Early Birds, 1954 - 1971
Box 2, Folder 9	The National Cash Register Company, 1954-05-13
Box 2, Folder 10	Members of National Advisory Committee for Aeronautics and of its Committees and Subcommittees, 1956-01-01
Box 2, Folder 11	Fifth Air Force, Fuchu Air Station, Japan, Command Organization, 1956-09-12
Box 2, Folder 12	The Air Force Historical Foundation, 1957-07-01
Box 2, Folder 13	Handley-Page, 50th Anniversary Dinner Celebration, 1959
Box 2, Folder 14	Alaskan Air Command, Elmendorf Air Force Base, Alaska, 1960-05-26
Box 2, Folder 15	National Aviation Hall of Fame, 1963 - 1968
Box 2, Folder 16	Proposed Air Force Museum, Dayton, Ohio, 1965-03
Box 2, Folder 17	Engineers Club, brochures, correspondence, newspaper article, 1965 - 1969
Box 2, Folder 18	"Weight Saving by Structural Efficiency" dissertation by Charles Ward Hall, 1930-08-26
Box 2, Folder 19	"Air Pick-up and Gliders as Related to Future of Air Cargo" dissertation by Richard C. Du Pont, 1942-12-09
Box 2, Folder 20	"What I have Learned about Innovation" dissertation by Frederick J. Hooven, 1968-10-02
Box 2, Folder 21	"World Domination A Continuous Variable" dissertation by Albin N. Benson, undated

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Series 2: Technical Documents

Scope and Contents: The technical documents are listed in chronological order. Arcier worked for a variety of companies starting with Wittemann and ending with Waco. Each airplane type is listed in numerical order within each company.

Box 2, Folder 22	Wittemann Aircraft Corporation, organization chart, 1921-05-16
Box 2, Folder 23	Wittemann Lewis Aircraft Company, Navy 2-Place Bi-Plane Type F.A.4, Four View Drawing, Drawing No. 1, 1920-01-04 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 2, Folder 24	General Airplanes Corporation, Operating Organization, undated
Box 2, Folder 25	General Airplanes Corporation, financial records, 1929-06-30
Box 2, Folder 26	General Airplanes Corporation, Aristocrat Monoplane, General Information, 3-View Drawing and Correspondence, 1928 - 1929 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 2, Folder 27	General Airplanes Corporation, Three Passenger Cabin Monoplane, Type 102-A, Stress Analysis, 1930-06-30 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 1	General Airplanes Corporation, Type 116, Light Triple Engine Transport, 1930-02-17
Box 3, Folder 2	General Airplanes Corporation, 3-View Drawings of Various Aircraft, undated Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 3	Waco, correspondence, research policy, 1944-11-30
Box 3, Folder 4	Waco Aristocraft, General Information, newspaper article, 1946 - 1947
Box 3, Folder 5	Waco Aristocraft, General Information, Correspondence, 3-View Drawing, 1946 - 1947
Box 3, Folder 6	Waco Model "G", Drawing No. SK400, 1941-03-10 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 7	Waco Model NZR, Air Corps Model CG-4A, 1942-02-04 Notes: Model Specification: Glider and Troop Transport Towed, Air Corps Project No. 42-16, Report No. 1326-A This folder contains technical drawings which have not been digitally reproduced.

Box 3, Folder 8	Waco Model "X" S.K. No. 3168, Side View Drawing, 1945-10-01 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 9	Waco Cargo Type, Highwing, Bi-Motored Monoplane, Drawing No. 70000, 1941-08-29 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 10	Waco Airplane, Drawing No. 120000, undated Notes: [no model] This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 11	Models C-7, D-7, F-7, M-7, S-7 basic descriptions, program, 1937
Box 3, Folder 12	C-62, Meeting for General Design Requirements of the AAF Cargo Airplanes, 2/12, no year
Box 3, Folder 13	Study of German Gotha 242 Glider, A.A.F. Materiel Command ENG-51-4569-2-8, 1944-08-25 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 14	Model W, Characteristics of Proposed Propeller Drive Installation, 1946-04-04
Box 3, Folder 15	Engineering Memos No. 460, 464, 465, 466, 474, 479, 499 and 502, 1932
Box 3, Folder 16	Aircraft designs by A. Francis Arcier, 1919 - 1929 Notes: This folder contains technical drawings which have not been digitally reproduced.
Box 3, Folder 17	Summary of Airplane Characteristics, 1946 Notes: Technical Notes
Box 3, Folder 18	Basic Sketches of 4 Aircraft, 1943-08-21 Notes: [no model numbers] This folder contains technical drawings which have not been digitally reproduced.

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Series 3: Publications

Scope and Contents: This series is arranged alphabetically by title publication and has numerous articles that deal with A. Francis Arcier and aviation.

Box 3, Folder 19	Air Progress Magazine, 1964 April - 1964 May
Box 3, Folder 20	American Airman Magazine, 1960-12, 1958-01
Box 3, Folder 21	Aviation News Magazine, 1946-09-30
Box 3, Folder 22	Bendix Radio, "Radio Sketchbook of Personal Aviation", 1945
Box 3, Folder 23	Dayton USA Magazine, 1968-02 Notes: Contents of this folder are not digitally reproduced in their entirety due to copyright, patent, or trademark restrictions.
Box 3, Folder 24	Dayton Views, 1943 Notes: (2 copies)
Box 3, Folder 25	Eiffel Aerodynamic Laboratory, Resume of Principal Works Executed during the War, 1915 - 1918
Box 3, Folder 26	Laboratory of Auteuil, New Research on the Resistance of Air and Aviation, Sir Gustave Eiffel (Atlas), 1920 Language: French. Notes: Blank pages in the original and pages containing technical drawings have not been digitally reproduced.
Box 4, Folder 1	Laboratory of Auteuil, New Research on the Resistance of Air and Aviation, Sir Gustave Eiffel (Text), 1920 Notes: Blank pages in the original have not been digitally reproduced.
Box 4, Folder 2	National Geographic Magazine, "Gliders-Silent Weapons of the Sky", 1944-08 Notes: Digital surrogate unavailable due to copyright, patent, or trademark restrictions.
Box 4, Folder 3	Waco Pilot, No. 21, 1940, 1940
Box 4, Folder 4	The Waco Word, Vol. 1, No. 2, May, 1943 and Vol. 2, No. 5, August, 1944, 1943-05, 1944-08
Box 4, Folder 5	"The Supplement" to Who's Who, March-May, 1959
Box 4, Folder 6	Wright-Patterson A.F.B., "A Pictorial Review, 50th Anniversary", 1919 - 1967
Box 4, Folder 7	Newspaper clippings, 1929 - 1969
Box 4, Folder 8	Newspaper clippings, 1930 - 1970

Box 4, Folder 9;
Box 4, Folder 9

Miscellaneous: articles, invitations, notes and map, 1949 - 1967

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Series 4: Photographs

Scope and Contents: This series contains a set of numbered photographs and negatives along with a group of miscellaneous photographs and negatives.

Box 4, Folder 10	Photographs, 1928 - 1958
Box 4, Folder 11	Presentation photographs, 1963 - 1968
Box 4, Folder 12	[Retirement Ceremony Photographs], 1963
Box 4, Folder 13	[Miscellaneous Photographs]
Box 4, Folder 14	Photographs A-735, A-747, A-749 Notes: [Blueprint Copies] and Negatives of A-748 and A-749
Box 4, Folder 15	8" x 10" Negatives
Box 4, Folder 16	8" x 10" Transparency
Box 5	3" x 4" Negatives

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Series 5: Scrapbooks

Scope and Contents: This series contains three scrapbooks. The first dates to 1933 and 1934 and contains photographs of Arcier and colleagues as well as shots of various aircraft models. The second scrapbook consists of letters and telegrams sent to Arcier upon his retirement in 1963. The third contains biographical information on Arcier from a variety of sources.

Box 6 [Scrapbook, 1933 and 1934](#)

Box 7, Folder 1 [Retirement Scrapbook, Letters and Telegrams], 1963

Box 7, Folder 2 [Scrapbook of Biographical Information], 1921-1978

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