



Smithsonian

National Air and Space Museum

Harold F. Pierce Aviation Medicine Collection

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National Air and Space Museum Archives
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Table of Contents

Collection Overview	
Administrative Information	1
Biographical / Historical	2
Scope and Contents	2
Arrangement	2
Names and Subjects	
Container Listing	
Series 1: Professional Materials, 1916-1985	4
Series 2: Personal Materials, 1909-1985	9

Collection Overview

Repository:	National Air and Space Museum Archives
Title:	Harold F. Pierce Aviation Medicine Collection
Date:	1909-1985
Identifier:	NASM.2014.0044
Creator:	Pierce, Harold Fisher, 1889-1963
Extent:	3.27 Cubic feet (4 legal document boxes; 1 legal half-size document box; 3 flat boxes)
Language:	English .
Summary:	The Harold F. Pierce collection consists of documents relating to Pierce's career in aviation medicine, particularly his service as a flight surgeon in World War I and World War II and his work on the Henderson Pierce rebreathing apparatus. Materials include correspondence, photographs, military records, certificates, technical drawings, and news clippings.

Administrative Information

Acquisition Information

Ms. L. Pierce, Gift, 2014.

Other Finding Aids

The [Harold F. Pierce Papers, 1889-1969](#) , consisting of personal, family, and genealogical documents, can be found at the Connecticut Historical Society.

Processing Information

Arranged, described, and encoded by Elizabeth C. Borja, 2018.

Preferred Citation

Harold F. Pierce Aviation Medicine Collection, Acc. 2014.0044, National Air and Space Museum, Smithsonian Institution.

Restrictions

No restrictions on access

Conditions Governing Use

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Biographical / Historical

Harold F. Pierce (1889-1963) received his degree from Clark University in 1912, having previously served in the Navy. He then worked in the electrical engineering and testing laboratory of the General Electric Company. After entering academia, he was an instructor of chemistry at Dartmouth College and transferred to Harvard Medical School.

When the United States entered World War I, Pierce was working on gas mask technology for the Bureau of Mines. In 1917, he joined the American Expeditionary Forces, U.S. Army Air Service, Sanitary Corps in World War I as a flight surgeon. During his time in service, Pierce helped to develop the Henderson-Pierce rebreathing apparatus, based on his prewar work with Yale University's Professor Yandell Henderson. He was instrumental in establishing medical research laboratories, first at Hazelhurst Field, Mineola, Long Island, and then in France at the 2nd Aviation Instruction Center, Tours, and the 3rd Aviation Instruction Center, Issoudun.

After leaving the military in 1919, Pierce continued his studies and work with rebreathing equipment at Oxford University as a tutor and demonstrator of physiology, including involvement with British Mount Everest reconnaissance expeditions. In 1922, he earned a BSc (OXON) Degree in pathology.

He returned to the United States to serve as Associate Physiologist at the College of Physicians and Surgeons at Columbia University, earning his Ph.D. in colloidal chemistry in 1927. From 1927 to 1935, he served as Associate Professor of research ophthalmology at Wilmer Institute, Johns Hopkins University, Baltimore, Maryland. (He had served with founder William H. Wilmer in WWI.) In 1935, he received his M.D. and served as Assistant Resident in medicine at Bellevue Hospital, New York City. He also assisted in the design of the capsule for the Explorer II manned high-altitude balloon launch.

Pierce rejoined the U.S. Army Air Forces in 1942 serving as a flight surgeon and altitude physiologist at the School of Aviation Medicine, Randolph Field, Texas. In 1945, he was transferred to the Avon Old Farms Convalescent Hospital in his home state of Connecticut.

After World War II, Pierce served as medical director of the Connecticut State Welfare Department and as a consultant in aero-physiology at Hartford Hospital until retiring in 1960. He is recognized as a pioneer in the field of aviation medicine.

Scope and Contents

This collection consists of approximately three cubic feet of material relating to Harold F. Pierce's career in aviation medicine including correspondence; photographs; military records; certificates; technical drawings; and news clippings. The collection also contains a scrapbook which covers Pierce's service in World War I, his experiments at Oxford University and Columbia University, the Wilmer Institute, and World War II. Notable figures found in the collection include John Paul Stapp; David Goodman Simons; James A. Healy; Albert William Stevens; Sir William Osler; Merritte Weber Ireland; William H. Wilmer and others. The collection also contains personal letters from Pierce to his family written during his time in service during both World Wars. Large format drawings include maps of the Second and Third Aviation Instruction Centers, France, during World War I, and technical drawings for his rebreathing apparatus.

Arrangement

The collection is arranged into two series: Professional Materials and Personal Materials.

Series 1 contains documents related to Harold F. Pierce's career in aviation medicine, particularly his service as a flight surgeon during World War I and World War II.

Series 2 contains Harold F. Pierce's personal documents, including letters of appointment, resumes, news clippings (both biographical and on subjects of interest), photos and portraits, and family materials.

Some of the materials were organized by L. Pierce (the donor, Pierce's daughter) into categories, particularly those related to aviation, the Henderson-Pierce rebreathing apparatus, and inventions. Select paragraphs of correspondence were clipped from the original document and placed under these categories. These materials frequently were kept in the category in which they were found. Numerous notes (underlining, checkmarks, dates, etc.) made by L. Pierce can be found on documents throughout the collection.

Names and Subject Terms

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

Subjects:

- Aeronautics
- Aviation Instruction Center, 3rd (France)
- Aviation medicine
- Explorer II (Balloon)
- Hazelhurst Field, Mineola, N.Y. Medical Research Laboratory
- Wilmer Ophthalmological Institute
- World War, 1914-1918
- World War, 1939-1945

Names:

- Henderson, Yandell, 1873-1944

Container Listing

Series 1: Professional Materials, 1916-1985

Arrangement: Materials are organized by topic: military orders and correspondence, correspondence both professional and personal, appointments and records, personal diary pages (aviation-related), general technical documents, materials related to the Wilmer Institute, materials related to the Explorer II expedition, and photographs. Within topic, materials are organized chronologically.

Box 1, Folder 1	Military Orders and Correspondence, 1917
Box 1, Folder 2	Military Orders and Correspondence, 1918
Box 1, Folder 3	Military Orders and Correspondence, 1919
Box 1, Folder 4	Military Orders and Correspondence, 1936
Box 1, Folder 5	Military Orders and Correspondence, 1940-1941
Box 1, Folder 6	Military Orders and Correspondence, 1942
Box 1, Folder 7	Military Orders and Correspondence, 1943
Box 1, Folder 8	Military Orders and Correspondence, 1944
Box 1, Folder 9	Military Orders and Correspondence, 1945
Box 1, Folder 10	Military Orders and Correspondence, 1946-1950
Box 1, Folder 11	Correspondence, Professional, 1918-1920
Box 1, Folder 12	Technical Correspondence, 1918
Box 1, Folder 13	Correspondence, Professional, 1938-1944
Box 1, Folder 14	Correspondence, Professional, 1950-1963
Box 1, Folder 15	Correspondence, Henderson Rebreathing Apparatus, 1917-1924
Box 1, Folder 16	Correspondence, Henderson Rebreathing Apparatus, 1943-1944
Box 1, Folder 17	Correspondence, Yandell Henderson, 1917-1918
Box 1, Folder 18	Correspondence, Yandell Henderson, 1942

Box 1, Folder 19	Correspondence and Articles, Inventions and Experiments, 1919-1922
Box 1, Folder 20	Correspondence and Articles, Inventions and Experiments, 1923-1933
Box 2, Folder 1	Correspondence, Emergency Oxygen Therapy for Ambulances, 1943-1944
Box 2, Folder 2	Correspondence, Regarding 1918 Training Film Fit to Fly, 1943-1944
Box 2, Folder 3	Correspondence, Isaac Jones, 1943-1945
Box 2, Folder 4	Correspondence, Personal, 1918-1919
Box 2, Folder 5	Correspondence, Personal, Clippings, 1918-1926
Box 2, Folder 6	Correspondence, Personal, 1919-1922
Box 2, Folder 7	Correspondence, Personal, 1923-1930
Box 2, Folder 8	Correspondence, Personal, 1933-1936
Box 2, Folder 9	Correspondence, Personal, August 1942
Box 8, Folder 3	Certificate of Service, Naval Training Cruise for Civilians, 1916
Box 2, Folder 10	Appointment to Bureau of Mines, 1917
Box 2, Folder 11	Officer's Record Book, 1917-1919
Box 2, Folder 12	Sanitary Corps Commissions, 1918-1919
Box 2, Folder 13	Course Certifications, School of Aviation Medicine, 1942-1943
Box 2, Folder 14	Flight Records (Official and Personal), 1943-1944
Box 2, Folder 15	Identification Card and Pilot and Crew Member Physical Record Card, 1944
Box 2, Folder 16	War Department Publications, Special Orders, 1944-1946
Box 2, Folder 17	Diary Pages, 1917
Box 2, Folder 18	Diary Pages, 1919
Box 2, Folder 19	Diary Pages, 1921
Box 2, Folder 20	Menus (Hazelhurst, Paris), 1918-1919
Box 2, Folder 21	Pierce Reports, Notes, and Sketches on Respirators, Bureau of Mines, 1917

Box 7, Folder 2	Bureau of Mines, Reports and Drawings, 1917
Box 7, Folder 4	Air Service Bulletin, Monosoupape Engine, 23 November 1918
Box 2, Folder 22	Technical Document, Hazelhurst Field, Mineola, "Colored Systems for Piping", circa 1918
Box 7, Folder 1	Henderson Rebreathing Apparatus Drawings, 1918
Box 7, Folder 12	Floor Plans, Medical Research Laboratory, Hazelhurst, NY, 1918
Box 7, Folder 10	Building Plans, Medical Research Laboratory, 3rd Aviation Instruction Center, France, 1918
Box 7, Folder 11	Technical Drawings, Medical Equipment, Hazelhurst Field, Mineola, 1918
Box 2, Folder 23	Descriptive Catalogue, Royal Society, 25 June 1919
Box 7, Folder 24	Physiological Congress, Stockholm, August 1926
Box 2, Folder 25	Notes Taken by Pierce, School of Aviation Medicine, August 1942
Box 2, Folder 26	Outline of Course of Instruction in High Altitude Physiology, 1941 [O2 Officers School by H.G. Pierce], 24 April 1941 [11 August 1942]
Box 2, Folder 27	History of Aviation Medicine Documents, Randolph Field, 1939-1948
Box 2, Folder 28	25th Anniversary, The School of Aviation Medicine, Randolph Field, April 1943
Box 3, Folder 1	Technical Manual, B-25C/D, Flight Manual, AN 01-60GB-1, 25 December 1943
Box 3, Folder 2	Brooke Bluebonnet Broadcast, Newsletters, Brooke General Hospital, Ft. Sam Houston, TX [covers only], 1944
Box 3, Folder 3	Quadrangle Review, Newsletter, Old Farms Convalescent Hospital, 1945
Box 3, Folder 4	Notes on the History of the Sam Low Pressure Chamber, 23 September 1959
Box 7, Folder 3	Equipment Drawings, Harold F. Pierce, undated
Box 3, Folder 5	Personal Correspondence Regarding William Wilmer and the Wilmer Institute, 1911-1939
Box 3, Folder 6	William Holland Wilmer Foundation Brochure, June 1924
Box 3, Folder 7	The William Holland Wilmer Foundation, Founder's Day Brochure, May 1925

Box 3, Folder 8	Resignation from Wilmer Foundation, November 1927
Box 3, Folder 9	Dedication of the Wilmer Institute, Programme, Invitation, Book, October 1929
Box 3, Folder 10	Brochure (2 copies), The Wilmer Institute, 1929
Box 7, Folder 5	Newspaper Clippings, Wilmer Eye Institute, 1929
Box 3, Folder 11	Wilmer Foundation Reports, 1932-1933
Box 3, Folder 12	Photographs, Dr. William Wilmer and Wilmer Institute Staff, 1932-1933
Box 3, Folder 13	Obituary, William H. Wilmer, 1936
Box 3, Folder 14	Photographs and Correspondence regarding William Osler, 1955
Box 3, Folder 15	Photograph, Harold F. Pierce with Dr. M. Ito, Mayo Clinic, 1923
Box 3, Folder 16	Mayo Clinic Promotional Materials, 1969-1985
Box 3, Folder 17	News Clippings, Explorer II, 1938, 1976
Box 3, Folder 18	National Geographic Magazine, "Exploring the Stratosphere," by Capt. Albert W. Stevens, October 1934
Box 8, Folder 1	National Geographic Society, U.S. Army Air Corps Stratospheric Flight of 1935 in the Balloon "Explorer II" [signed by Albert W. Stevens], 1936
Box 8, Folder 2	Piece of Explorer II Stratospheric Balloon; Correspondence with Col. John F. Stapp regarding piece of Explorer II, 1935, 1957
Box 3, Folder 19	Correspondence, Personal, Explorer II, 1935-1958
Box 3, Folder 20	Correspondence, Personal, Ruth and Albert Stevens, 1937-1949
Box 6, Object 1	<p>Scrapbook - Department of Pathology, Oxford University; Columbia University School of Medicine Laboratory; Wilmer Institute; World War I; World War II, 1918-1943</p> <p>Notes: Original album contains numerous blank pages that have not been digitally reproduced. Any gaps in numbering of image filenames in slideshow are due to their omission.</p>
Box 3, Folder 21	Photographs, Medical Testing Facilities, Hazelhurst Field, Mineola, 1918
Box 3, Folder 22	Photographs, Portraits, Pierce, Mineola, 1918
Box 3, Folder 23	Photographs, Henderson Pierce Rebreathing Apparatus, 1918-1923

Box 3, Folder 24	Photographs, Medical Testing Facilities, France, 1918-1919
Box 4, Folder 1	Photographs, Portraits, Military, 1917-1944
Box 4, Folder 2	Photographs, Inventions and Experiments, 1919-1933
Box 4, Folder 3	Photographs, Ruggles Orientator, circa 1919
Box 4, Folder 4	Photographs, Mount Everest Expedition, 1922
Box 4, Folder 5	Photographs, Miscellaneous Aircraft, 1920s
Box 4, Folder 6	Photographs, Aerial, 1924-1929
Box 4, Folder 7	Photographs, Carlisle Barracks, Loose Scrapbook Pages, 1926
Box 4, Folder 8	Photographs, Wilmer Eye Institute, circa 1929
Box 4, Folder 9	Photographs, Brooks Field, Kelly Field, Blind Flying, 1929-1930
Box 4, Folder 10	Photographs, Harold F. Pierce, Military, Informal, 1930s and 1940s
Box 8, Folder 5	Photographs, Military, Signed, Colonel James A. Healy, Major General Merritte Weber Ireland, 1940s
Box 4, Folder 11	Photographs, Randolph Field, 1942
Box 4, Folder 12	Photographs, Military, Signed, Randolph Field, 1942-1943
Box 4, Folder 13	Photographs, School of Aviation Medicine, Randolph Field, Class and School, 1942-1943
Box 4, Folder 14	Photographs, Brooke General Hospital, 1944
Box 7, Folder 8	Photographs, Harold F. Pierce Portraits (oversize), 1917-1944
Box 7, Folder 6	Photos, Miscellaneous, undated

[Return to Table of Contents](#)

Series 2: Personal Materials, 1909-1985

Arrangement: Materials are organized by topic: letters of appointment, resumes, and memberships; news clippings; personal items and materials related to Pierce's death; and photographs. Within topic, materials are organized chronologically.

Box 7, Folder 9	Diplomas, Licenses, and Certificates, 1903-1954
Box 7, Folder 7	Clark College, circa 1912
Box 4, Folder 15	Letters of Appointment, 1915-1964
Box 4, Folder 16	Resumes and Biographical Information, 1917-1951
Box 4, Folder 17	Membership Cards, Invitations, and Name Plates, 1917-1960
Box 4, Folder 18	Registration with Oxford City Police, October 1919
Box 4, Folder 19	Articles, Lectures, and Radio Appearances, 1933-1948
Box 4, Folder 20	American Rocket Society, 1957
Box 4, Folder 21	Harold Pierce's "View on Life", 1957, undated
Box 4, Folder 22	News Clippings, Biographical and Obituaries, 1919-1963
Box 4, Folder 23	News Clippings, 1917-1918
Box 4, Folder 24	News Clippings, 1923-1951
Box 4, Folder 25	News Clippings (After Pierce's Death), 1965-1985
Box 5, Folder 1	Periodical Clippings, 1922-1943
Box 5, Folder 2	Miscellaneous Personal Items, 1920-1943
Box 5, Folder 3	Ex Libris Drawing, undated
Box 5, Folder 4	Portrait Sketches, Oriel College, Oxford, 1926
Box 8, Folder 4	Pencil Sketch of Harold F. Pierce [possibly by Carl van Doren], 24 June 1929
Box 5, Folder 5	Presidential Certificate Honoring Death, 1963
Box 5, Folder 6	Correspondence, Family (After Pierce's Death), 1963-1966
Box 5, Folder 7	Photographs, Clark College, (bulk 1909-1912, 1962)

Box 7, Folder 7	Photographs, Clark College, circa 1912
Box 5, Folder 8	Photographs, Harold F. Pierce, 1916
Box 5, Folder 9	Photographs, Harold F. Pierce, Professional Portraits, 1917-1960
Box 5, Folder 10	Photographs, Harold F. Pierce, 1918-1920
Box 5, Folder 11	Photographs, Portraits, Civilians and Doctors, 1938
Box 5, Folder 12	Photographs, Harold F. Pierce, early 1940s
Box 5, Folder 13	Photographs, Johns Hopkins, 1920s
Box 5, Folder 14	Photographs, Family, 1932-1944

[Return to Table of Contents](#)