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## **Guide to the Albert Adams Merrill Papers, 1892-1951**

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### Descriptive Summary

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### Abstract

Albert A. Merrill was an aviation pioneer and designer. He was born on October 23, 1874 in Hyde Park, Massachusetts. From 1894 to 1911 he worked for Boylston National Bank in Boston, then from 1911 to 1918, as an accountant for T. C. Edwards and Waldron Rand in Boston, finally ending up at Price Waterhouse in Los Angeles. In 1918, he joined the Throop faculty as an instructor in accounting and aeronautics. Merrill left the Caltech staff in 1930 to engage privately in airplane design, but later returned in 1940.

At Caltech, Merrill supervised the design, construction, and operation of a small wind tunnel on campus. It was the first wind tunnel on the west coast, and continued in operation until it was destroyed by fire in the 1930s. He helped to develop

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small subsonic wind tunnels operable by one person. A 110-foot long tunnel of this type was built at Caltech in the late 1940s and dedicated to Merrill in August, 1950.

He held several patents for airplane design. One of his earliest was for the 'up only' aileron, which provided lateral control by deflecting upward only and eliminating drag on the down aileron. Accordingly, it eliminated the need for combined use of rudder and aileron, which had been necessary for many years. The Merrill Aircraft Company built the Stagger-Decalage biplane based on his designs, which claimed to land "safely without manipulation of controls and...will not nose dive, stall, or spin."

Throughout his lifetime Merrill was interested in flying. Upon his graduation from English High School in Boston in 1892 and 11 years before the Wright Brothers' first flight, he delivered an essay on aerial navigation. In this essay, he predicted that man would be able to fly in small ships with light, powerful engines within 10 to 15 years. In 1894, he started the Boston Aeronautical Society and was both secretary and treasurer until it disbanded in 1912. Merrill learned to fly in 1911, first at Squantum and later at the Wrights' place in Dayton. He published numerous articles on airplane design and other contemporary topics as well. Merrill died in 1952.

The collection contains biographical material, a small amount on wind tunnels and early flight, reprints of Merrill's articles, manuscript articles, patent specifications, and manuscripts of three books.

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Box-folder 1.1	<b>Biographical</b> <b>Photo, 1910, of A. A. Merrill with Wilber Wright, Ralph Johnstone, Walter Brookins</b> <b>"Order of Exercises," 1892</b> <b>Press releases, biographical information sheet, obituaries</b>
Box-folder 1.2	<b>Wind tunnel, flight</b> <b>"Alterations Made on Merrill Wind Tunnel Balance," Feb. 17, 1950</b> <b>2 photos of a device for studying airplane design, 1950</b> <b>Note from E. Sechler to Wm. Bowen, n.d.</b> <b>4 postcards showing sunspots, nebula</b> <b>Graph, untitled, n.d.</b> <b>"My Baltimore Trip in the Safety Plane," by A. L. James, n.d. [photostat, 2 copies]</b> <b>"Transcript - May 23, 1914" [2 copies]</b> <b>"A Tribute to the Wright Brothers," <i>Aerosphere</i>, 1943</b> <b>Southern California Cooperative Wind Tunnel brochure, n.d.</b>
Box-folder 1.3	<b>Reprints (by Merrill unless otherwise noted)</b> <b>"The Revolving Slope," <i>Boston Aeronautical Annual</i>, 1896</b> <b>"A New Method of Experimenting with Gliding Flights," <i>Aeronautical Journal</i>, 1906</b> <b>"Roll and Yaw in Flight," <i>Western Flying</i>, 1928 [3 copies]</b> <b>"Free Will and Intuition," <i>Psych. &amp; Sci. Methods</i>, 1918 [2 copies]</b> <b>"Prediction and Spontaneity," <i>Psych. &amp; Sci. Methods</i>, 1919 [2 copies]</b> <b>"Mechanism," <i>J.F.I.</i>, 1935</b> <b>"The t of Physics," <i>Journal of Philosophy</i>, 1922</b> <b>"The Water Test," 1922 [3 copies]</b> <b>"A Note on Gresham's Law," <i>New Democracy</i>, 1935 [3 copies]</b> <b>"Limitations," <i>Journal of Philosophy</i>, 1930</b> <b>"Free Will," <i>Psych. &amp; Sci. Methods</i>, 1918</b> <b>"Duration and Relativity," <i>Journal of Philosophy</i>, 1923 [3 copies]</b> <b>"What is Décalage?," <i>Western Flying</i>, 1928 [3 copies]</b> <b>"The Movable-Wing Biplane," <i>Western Flying</i>, 1928</b> <b>"Safety and the Slotted Wing," <i>Aeronautical World</i>, 1928</b> <b>Alexander Kemlin, "The Merrill Movable Wing Stagger Décalage Biplane," <i>Aviation Engineering</i>, 1931</b> <b>"Planes 'Foolproof' in Operation are Sought to Enlarge Demand," <i>United States Daily</i>, April 15, 1941</b> <b>Howard Mingos, "Flying Speeds the Pace of Transportation," <i>Magazine of Wall Street</i>, May 26, 1931</b> <b>"The Stagger-Décalage Biplane," <i>Mechanical Engineering</i>, 1931</b>
Box-folder 1.4	<b>Correspondence</b> <b>Dewey, John, to Merrill, March 1, 1918 [photostat]</b>

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	Poor, Charles Lane, to Merrill, Jan. 23, 1931 [photostat]
	Poor, Charles Lane, to Merrill, Feb. 3, 1931 [photostat]
	Richtmyer, F. K., to Merrill, Oct. 16, 1930 [photostat]
	Anderson, J. A., to Merrill, June 5, (n.y.) [photostat]
	Kennard, E. H., to Merrill, Feb. 16, 1931 [photostat]
	Poor, Charles Lane, to Merrill, Jan. 19, 1931 [photostat, 3 pp.]
	Chanute, Octave, n.d. [photograph]
	Claverie, A. Walter, to Balzer & Ballou, July 1, 1927
	Diehl, Walter S., unsigned copy of affidavit, April 1931
	Ballou, John McK., "Notes on the Merrill Biplane," n.d.
	White, H. J., to Klemin, April 14, 1931 [photostat]
	Gazley, Richard C., to John McK. Ballou, May 8, 1931 [photostat]
	Lloyd, Robert (Bob), June 30, 1927 [photostat]
	Ovington, Earle, to Balzer & Ballou, March 1, 1928 [photostat]
	Kelley, M. F., July 26, 1928 [photostat]
	Ferguson, L. L., to Merrill, April 10, 1931 [photostat]
	Ballou, John McK., to Richard C. Gazley, May 26, 1931 [photostat]
	Gazley, Richard C., to John McK. Ballou, May 28, 1931
	Budwig, Gilbert G., to John McK. Ballou, April 15, 1931 [photostat]
	Budwig, Gilbert G., to John McK. Ballou, May 21, 1931 [photostat]
	Lloyd, G. L., to John Ballou, June 3, 1931 [photostat]
	Moure, K. R., to John Mck. Ballou, May 5, 1931 [photostat]
Box-folder 1.5	<b>Patent specifications</b>
	1,849,652, to John McK. Ballou, airplane, March 15, 1932
	1,856,093, to Ford, Ballou, Balzar, airplane, May 3, 1932
	1,889,864, to Merrill, airplane, Dec. 6, 1932
	1,856,094, to Ford, Ballou, Balzar, airplane, May 3, 1952
Box-folder 1.6	<b>Manuscript articles</b>
	"A Simple Optical system for Null Headings," n.d.
	"Advertising," n.d.
	"Honest Finance," 1936
	"Population and War," n.d.
	"Gold and Social Credit, or What Might Have Happened," n.d.
	"The Standard of Living," n.d.
	"Taxes," n.d.
	"(A note on position-velocity uncertainty)," Dec. 31, 1935
	"What is Truth?," n.d.
	"Theory and Practise," n.d.
	"To the Editor of Scientific American," n.d.
	"Surplus Energy," 1935
	"Technical Note: 'Happy Landings'," n.d. [carbon]
	"Relative or Absolute," n.d.
	Letter to an editor, June 20, 1936
	"Intellect and the 'Thing in Itself'," n.d.
	"Creative Evolution and Relativity," n.d.
	"Time," n.d.
	"'C' as a Limiting Velocity," n.d.
	"Two Heresies," n.d.
	"Some Victorians," 1934
Box-folder 1.7	<i>The Merrill Type Airplane</i> , Sept. 1, 1932
Box-folder 1.8	<i>The Merrill Type Monoplane</i> , by John McK. Ballou, Feb. 28, 1933
Box-folder 1.9	<i>A Picture of World Events</i> , by A. A. Merrill, inscribed to Clark Millikan, n.d. (pre-1930)
Box-folder 1.10	<i>A Picture of World Events</i> , revised copy with author's notes, June 1951

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