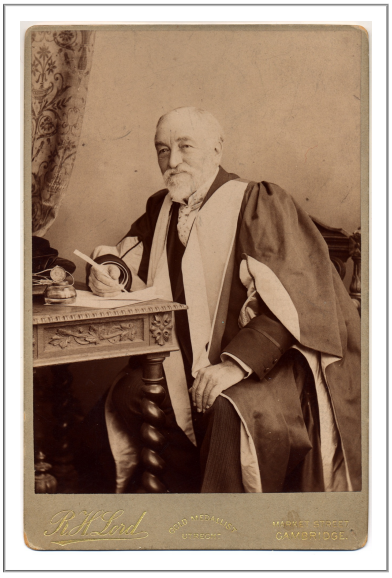
Smithsonian
National Air and Space Museum

Samuel P. Langley Collection

Allan Janus

2008



National Air and Space Museum Archives
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Table of Contents

Collection Overview

Repository:	National Air and Space Museum Archives
Title:	Samuel P. Langley Collection
Date:	1891-1914 (bulk 1891-1900)
Identifier:	NASM.XXXX.0494
Creator:	Langley, S. P. (Samuel Pierpont), 1834-1906
Extent:	24.28 Cubic feet (64 boxes)
Language:	English .
Summary:	This collection includes information about Samuel P. Langley and his colleagues, as well as documentation of Langley's work. The collection includes biographies of Langley and his assistant Charles Manly, newspaper clippings, correspondence, manuscripts regarding Langley's aircraft, photographs and drawings, work requisitions for the Aerodromes, a sketchbook, specifications and measurements for Langley's experiments, the *Langley Memoirs on Mechanical Flight* and the Langley "Waste Books."

Administrative Information

Acquisition Information

Smithsonian generated, transfer, unknown.

Related Materials

Parts of the collection were separated at undetermined dates from the institutional records of Samuel Langley's time as Secretary (now held by the Smithsonian Institution Archives [SIA], as the Samuel P. Langley Papers, 1867-1906, Record Unit 7003).

In addition to Record Unit 7003, researchers may wish to consult these Smithsonian Institution Archives' collections:

Record Unit 31, Office of the Secretary, Correspondence, 1866-1906, with related records to 1927.

Record Unit 34, Office of the Secretary, Correspondence, 1887-1907

Record Unit 7268, J. Elfreth Watkins Collection, 1869, 1881-1903, 1953, 1966 and undated.

The Archives Division of the National Air and Space Museum holds the Charles M. Manly Papers, (Acc. 1999-0004). Manly was Samuel Langley's assistant in the Aerodrome project from 1898 to 1903.

Langley Technical Files: The Archives Division's technical files are housed in the Archives-Library reading room of the Museum's Steven F. Udvar-Hazy Center. Material on Langley and his Aerodromes are housed in folders in the technical files Aircraft Series and in the Biographies Series. Because material from the Samuel P. Langley Collection is thought to have been transferred into the Technical Files, these file headings are included here. In the listings, "Images Available" refers to digital image files available

through the Archives Division's image database; these images may be viewed in the Museum's reading rooms.

Langley Technical Files: Aircraft Series Technical Files:

Langley (Samuel P.), General : Photos, Images Available. Folder(s): AL-198600-80

Langley (Samuel P.), General, NASM: Photos, Photo Dupes. Folder(s): AL-198601-80, AL-198601-99

Langley (Samuel P.) Aerodrome A (Great Aerodrome, Man-Carrying Aerodrome): Documents, Photos, Negatives, Photo Dupes, Images Available. Folder(s): AL-198603-01, AL-198603-80, AL-198603-85, AL-198603-99

Langley (Samuel P.) Aerodrome A, Curtiss 1914 Rebuild: Documents, Photos, Photo Dupes, Photo Dupes, Photo Dupes, Photo Dupes, Images Available. Folder(s): AL-198605-01, AL-198605-80, AL-198605-96, AL-198605-97, AL-198605-98, AL-198605-99

Langley (Samuel P.) Aerodrome A, NASM: Documents, Photos, Photo Dupes, Images Available. Folder(s): AL-198607-01, AL-198607-80, AL-198607-99

Langley (Samuel P.) Aerodromes, Numbered, General: Photos, Photo Dupes. Folder(s): AL-198610-80, AL-198610-99

Langley (Samuel P.) Aerodrome No 0 (1891): Photo Dupes, Images Available. Folder(s): AL-198612-99

Langley (Samuel P.) Aerodrome No 1 (1891): Images Available.

Langley (Samuel P.) Aerodrome No 2 (1892): Images Available.

Langley (Samuel P.) Aerodrome No 3 (1892): Images Available.

Langley (Samuel P.) Aerodrome No 4 (1895): Images Available.

Langley (Samuel P.) Aerodrome No 5 (1895-96) : Documents, Photos, Transparencies, Photo Dupes, Photo Dupes, Images Available. Folder(s): AL-198622-01, AL-198622-80, AL-198622-90, AL-198622-98, AL-198622-99

Langley (Samuel P.) Aerodrome No 6 (1895-96) : Documents, Photos, Photo Dupes, Images Available. Folder(s): AL-198624-01, AL-198624-80, AL-198624-99

Langley (Samuel P.) Clockwork Model: Photos. Folder(s): AL-198628-80

Langley (Samuel P.) Gliding Model Aerodromes (1895): Images Available.

Langley (Samuel P.) Ladder Kite (1896): Photos, Photo Dupes, Images Available. Folder(s): AL-198635-80, AL-198635-99

Langley (Samuel P.) Model Aerodromes, General: Documents, Photos, Photo Dupes, Images available. Folder(s): AL-198640-01, AL-198640-80, AL-198640-99

Langley (Samuel P.) Model Aerodrome No 4 (1895): Photo Dupes, Images available. Folder(s): AL-198648-99

Langley (Samuel P.) Model Aerodrome No 11: Images available.

Langley (Samuel P.) Model Aerodrome No 13: Images available.

Langley (Samuel P.) Model Aerodrome No 14: Images available.

Langley (Samuel P.) Model Aerodrome No 15: Photo Dupes, Images available. Folder(s): AL-198670-99

Langley (Samuel P.) Model Aerodrome No 19: Photos, Images available. Folder(s): AL-198678-80

Langley (Samuel P.) Model Aerodrome No 20 : Images available.

Langley (Samuel P.) Model Aerodrome No 21: Images available.

Langley (Samuel P.) Model Aerodrome No 22: Photos, Images available. Folder(s): AL-198684-80

Langley (Samuel P.) Model Aerodrome No 23: Photos, Images available. Folder(s): AL-198686-80

Langley (Samuel P.) Model Aerodrome No 24: Images available.

Langley (Samuel P.) Model Aerodrome No 25: Images available.

Langley (Samuel P.) Model Aerodrome No 26: Photo Dupes, Images available. Folder(s): AL-198692-99

Langley (Samuel P.) Model Aerodrome No 27: Images available.

Langley (Samuel P.) Model Aerodrome No 28: Photos, Images available. Folder(s): AL-198696-80

Langley (Samuel P.) Model Aerodrome No 30: Images available.

Langley (Samuel P.) Model Aerodrome No 31: Images available.

Langley (Samuel P.) Proposed Man-Carrying Aerodrome (1898-99): Documents, Photo Dupes, Images available. Folder(s): AL-198710-01, AL-198710-99

Langley (Samuel P.) "Quarter-Size" Aerodrome (1900-01: Documents, Photos, Negatives, Photo Dupes, Images available. Folder(s): AL-198720-01, AL-198720-80, AL-198720-85, AL-198720-99

Langley (Samuel P.) "Rubber-Pull" Model Aerodrome (1895-96): Photos, Photo Dupes, Images available. Folder(s): AL-198730-80, AL-198730-99

Langley (Samuel P.) Whirling Arm (1888-90): Photos, Photo Dupes, Images available. Folder(s): AL-198740-80, AL-198740-99

Langley Technical Files: Biographies Series Technical Files:

Langley, Samuel Pierpont, general: Documents. Folder(s): CL-094000-01

Langley, Samuel Pierpont (articles by): Documents. Folder(s): CL-094000-02

Langley, Samuel Pierpont (articles by/Aero): Documents. Folder(s): CL-094000-03

Langley, Samuel Pierpont (articles by/Aero): Documents. Folder(s): CL-094000-04

Langley, Samuel Pierpont (articles by/Astro): Documents. Folder(s): CL-094000-05

Langley, Samuel Pierpont (articles by/Astro): Documents. Folder(s): CL-094000-06

Langley, Samuel Pierpont (articles by/Rocket): Documents. Folder(s): CL-094000-08

Langley, Samuel Pierpont (articles by/French): Documents. Folder(s): CL-094000-09

Langley, Samuel Pierpont (articles on): Documents. Folder(s): CL-094000-10

Langley, Samuel Pierpont (articles on): Documents. Folder(s): CL-094000-11

Langley, Samuel Pierpont (articles on): Documents. Folder(s): CL-094000-12

Langley, Samuel Pierpont (articles on): Documents. Folder(s): CL-094000-13

Langley, Samuel Pierpont (articles on): Documents. Folder(s): CL-094000-14

Langley, Samuel Pierpont (Awards and Honors): Documents. Folder(s): CL-094000-15

Langley, Samuel Pierpont (Wright Controversy): Documents. Folder(s): CL-094000-16

Langley, Samuel Pierpont (Obituaries): Documents. Folder(s): CL-094000-17

Langley, Samuel Pierpont: Photo Dupes. Folder(s): CL-094000-40

Langley, Samuel Pierpont : Photos. Folder(s): CL-094000-80

Langley, Samuel Pierpont: Negatives. Folder(s): CL-094000-85

Langley, Samuel Pierpont: Images available.

Processing Information

Arranged and described by Allan Janus, 2008, 2011. Encoded by Tyler Love, 2014. Encoded by Allan Janus, 2019.

Preferred Citation

Samuel P. Langley Collection, NASM.XXXX.0494, National Air and Space Museum, Smithsonian Institution.

Restrictions

No restrictions on access

Conditions Governing Use

Biographical / Historical

Samuel Pierpont Langley (1834-1906) was an astronomer, a pioneer of aeronautical research, and Secretary of the Smithsonian Institution (1887-1906). As a young man, Langley studied civil engineering and pursued this as a career until 1864, when his interest in astronomy led him to positions at the Harvard Observatory, the Naval Academy, the Western University of Pennsylvania and the Allegheny Observatory in Pittsburgh. In 1887, Langley was named Secretary of the Smithsonian, and spent the following years in the research, construction and tests of flying machines. On May 6, 1896, his unpiloted Aerodrome No. 5, powered by a 1hp steam engine, flew nearly three quarters of a mile. This flight surpassed by more than ten times the best efforts of any predecessor. In 1898, at the request of the Army's Board of Ordnance and Fortifications, Langley started work on another design - the Great Aerodrome, also known as Aerodrome A. However, two attempts at launching the aircraft in 1903 failed. In addition to his scientific experiments, Langley's writings include *Experiments in Aerodynamics* and *The Internal Work of the Wind*, and the *Langley Memoir on Mechanical Flight*, published posthumously. Samuel P. Langley died in Aiken, South Carolina, on February 27, 1906.

A Timeline of Early Aeronautical Milestones and Samuel P. Langley's Life and Career

August 22, 1834	**Samuel Pierpont Langley born to Samuel Langley and Mary Sumner Williams Langley in Roxbury Massachusetts**.
1843	William Henson and John Stringfellow publish their design for the "Aeriel", a steam-powered "Aerial Steam Carriage".
1845	**Langley begins to attend the Boston Latin School.**
1847	Henson tests a model of his aircraft.
1848	Stringfellow and Henson build and test a steam powered model aircraft. It has a wingspan of 10 feet (3.5 meters), and it flies 131 feet (40 meters) before crashing into a wall.
1849	Sir George Cayley tests a towed triplane glider. In one test, it flies several yards with a local boy as a passenger.
1851	**Langley graduates from the Boston High School; begins work as an apprentice with a Boston architect.**
circa 1852-1864	**Langley works for architectural and engineering firms in St. Louis and Chicago.**
1853	Cayley's coachman flies a glider across Brompton Dale, Yorkshire. The coachman resigns his position after the flight.
	Cayley conceives the rubber band–powered model airplane.

	Michel Loup designs a powered twin propeller monoplane with a wheeled undercarriage.
1853-1854	L C. Letur tests his parachute-glider design. Letur is killed in a test flight in 1854.
1855	Joseph Pline coins the word "aeroplane" to describe a propeller-driven dirigible.
1857	Jean-Marie Le Bris, a sea captain inspired by the flight of the albatross, builds a glider he names the "Albatros Artificiel" and makes two short hops, breaking his leg in the second.
	Félix du Temple, a French naval officer, flies a clockwork model aircraft - the first sustained powered flights by a heavier-than-air machine.
1862	Gabriel de la Landelle coins the word "aviation", and later, "aviateur" - aviator.
1864	**Langley returns to Roxbury. He begins work, with his younger brother John, on a five foot focal length telescope, which they complete over three years.**
1864-1865	**Samuel and John Langley tour Europe.**
circa 1865	**Langley is hired as observatory assistant at the Harvard University Observatory, Cambridge, Massachusetts.**
January 1866	The Aeronautical Society of Great Britain (later named the Royal Aeronautical Society) is founded.
circa 1866	**Langley is hired as assistant professor of mathematics at the U.S. Naval Academy, Annapolis, Maryland. Duties include restoring the Academy's astronomical observatory to operation.**
1867	**Langley is named professor of Astronomy and Physics at the Western University of Pennsylvania, Pittsburgh. Duties include directorship of the Allegheny Observatory. His tenure at Allegheny will begin his work at the popularization of science through lectures and writing newspaper and journal articles.**
1868	Stringfellow builds a model triplane.
1869	**Langley proposes a system of standard time distribution via the telegraph to railroads and cities. The Pennsylvania Railroad signs on for the service.**
	Langley joins a U.S. Coast Survey expedition to Oakland, Kentucky, to observe the August 7th solar eclipse. He observes later eclipses in 1870, 1878, and 1900.
1870	**The Allegheny Observatory begins twice-daily time signals to the Pennsylvania Railroad's offices. Other railroads, businesses, and government offices later subscribe to the service. The income from the system aids the operation of the Allegheny Observatory and Langley's research work.**
	Langley travels to Jerez de la Frontera, Spain, to observe a solar eclipse.
1870	Alphonse Pénaud designs his rubber-powered "Hélicoptère".

August 18, 1871	Pénaud demonstrates his "Planophore", a rubber-powered model, at the Tuileries, Paris. It flies 40 meters (approximately 131 feet) in 11 seconds.
1871	Francis Wenham designs the first wind tunnel; it is built by John Browning.
1873	**Langley makes a detailed drawing of a sun spot. Famous for its accuracy of detail, the drawing is widely reproduced for many years.**
1876	Pénaud and Paul Gauchot patent a design for an inherently stable steam-powered full-sized airplane.
1878	Bishop Milton Wright presents a toy based on the Pénaud "Hélicoptère" to two of his sons – eleven year old Wilbur and seven year old Orville.
1879-1880	**Langley designs and builds his bolometer for the measurement of the energy of incident electromagnetic radiation.**
1879	Victor Tatin designs and flies a compressed air-powered seven foot long model.
1881	**Langley organizes an expedition to Mount Whitney in California's Sierra Nevada Range for solar observations and other scientific studies.**
1883	Alexandre Goupil builds a bird-shaped unpowered airplane that briefly lifts off in a tethered test while carrying two men.
1884	**The U.S. Signal Service publishes Langley's report on the Mount Whitney expedition.**
1886	**Langley's interest in aeronautics is kindled by a paper on bird flight by a Mr. Lancaster at a meeting of the American Association for the Advancement of Science in Buffalo, New York. Lancaster also describes making small flying models which he describes as "floating planes" and "effigies".**
1887	**Langley designs and builds his large whirling table at the Allegheny Observatory for the study of aerodynamics; begins aeronautical experimental work. He coins the term Aerodromics for the art of building flying machines from the Greek *aerodromoi*.**
January 12, 1887	**Langley is appointed Assistant Secretary of the Smithsonian Institution.**
April 1887	**Langley begins to build small Pénaud type rubber-powered flying models.**
November 18, 1887	**Langley is named Secretary of the Smithsonian Institution on the death of Secretary Spencer F. Baird. He retains the directorship of the Allegheny Observatory, dividing his time between Washington and Allegheny until 1891 when James E. Keeler becomes director of the observatory.**
1887	Hiram Maxim, an American living in Great Britain and inventor of the Maxim machine gun, begins work on a large powered biplane test rig.
1888	**Langley publishes *The New Astronomy*.**
1889	**The National Zoological Park is founded, due to Langley's support. A site in Washington's Rock Creek Park is selected by Langley and**

	Frederick Law Olmstead. The Zoo becomes part of the Smithsonian in 1890, and is opened in 1891.
1890	**Langley founds the Smithsonian Astrophysical Observatory; its first home is in a wooden building behind the Smithsonian Castle. In 1955, SAO moves to Cambridge, Massachusetts.**
1890	Clément Ader completes his "Éole', a full-sized airplane. It has a fifty foot wing span, and is equipped with a lightweight 20-horsepower steam engine of Ader's design and a four-bladed propeller. At Armainvilliers on October 9, the *Éole* lifts off the ground to an altitude of approximately one foot and skims the ground for about 50 meters (165 feet). Ader later claims a second flight of 100 meters in September, 1891; there is no evidence for the second flight.
March 28, 1891	**First successful flight of one of Langley's rubber-powered models**.
1891	**Work begins on Langley's "Aerodrome No. 0", powered by two small steam engines. Construction is halted before the aircraft is completed.**
1891	Otto Lilienthal, a German mechanical engineer, begins a program of flight research using piloted hang gliders of his own design. He and his brother Gustav will go on to design and build 18 gliders over the next five years, making approximately 2,000 flights.
	Langley's *Experiments in Aerodynamics* is published by the Smithsonian.
1892	**Langley's "Aerodrome No. 1" designed and built. Not flown.**
1892-1893	**"Aerodrome No. 2" and "Aerodrome No. 3" are designed and built. "No. 3" is powered by compressed air. Neither is flown.**
1893	**A 38 foot scow is converted into a houseboat with a workshop and launch platform for Aerodrome testing. In May, it is towed down the Potomac to a point near Quantico, Virginia, off Chopawamsic Island. In November, "Aerodrome No. 4" is taken to the houseboat for testing.**
November 20, 1893	**Test flight of "Aerodrome No. 4" - it falls in the water.**
December 7, 1893	**Second flight of "Aerodrome No. 4" – it falls in the water.**
July 31, 1894	Maxim's large test rig rises briefly from its support rails during a test run.
August 1-4, 1894	Octave Chanute and Albert Zahm sponsor the Conference on Aerial Navigation in Chicago, bringing together an international assembly of aeronautical researchers.
October 1894	**Test flight of modified "Aerodrome No. 4", using improved catapult. Aircraft falls in the water. "Aerodrome No. 5", with a one horsepower gasoline burning steam engine, is also tested. It flies 35 feet for three seconds before stalling and falling into the river.**
November 12, 1894	Lawrence Hargrave, an Australian researcher, links together four of his box kites, adds a simple seat, and flies to an altitude of 16 feet in the device.
1894	Chanute publishes his book *Progress in Flying Machines*.
1895	James Means publishes the first of his three >*Aeronautical Annuals*.

May 6, 1896	**"Aerodrome No. 6" is launched from the houseboat's catapult; the left wing collapses and the aircraft lands in the water. *Aerodrome No. 5* is launched at 3:05 PM and flies about half a mile in a minute and a half at an altitude reaching 100 feet – the first sustained flight of a heavier than air apparatus. In a second flight at 5:10, *Aerodrome No. 5* makes three circles, climbs to about 60 feet, and is airborne for one minute and thirty-one seconds. The flight is witnessed and photographed by Alexander Graham Bell (box 45, folder 9).**
June 1896	Chanute and Augustus Herring establish a camp at the Lake Michigan dunes near Miller, Indiana to conduct flight tests on a number of gliders – several of Chanute's designs, including his multiwing "Katydid", Herring's copy of a Lilienthal design, and a Chanute-Herring triplane collaboration.
August 9, 1896	Lilienthal's glider stalls and crashes from an altitude of about 50 feet. Lilienthal dies of his injuries the next morning. His last words are "Opfer müssen gebracht warden" - "Sacrifices must be made".
November 28, 1896	**"Aerodrome No. 6" is flown from the houseboat – it flies 4800 feet in one minute and forty-five seconds.**
July 1897	Ader completes his "Avion III", also known as the "Aquilon". It features two 20-horsepower steam engines and twin tractor propellers, and a wingspan of nearly 56 feet. The aircraft weighs approximately 880 pounds. Ader attempts a flight on October 14; "Avion III" is unable to rise off the ground.
March 25, 1898	**Assistant Secretary of the Navy Theodore Roosevelt suggests the military use of the Langley "Aerodrome" to Navy Secretary John D. Long (box 40, folder 10).**
April 6, 1898	**Langley proposes a scaled-up version of the "Aerodrome" for military use to a joint Army-Navy board meeting at the Smithsonian. He requests $50,000 to build a large, piloted version of his earlier designs. The proposed aircraft is called the "Great Aerodrome", or "Aerodrome A".**
June 1898	**Charles M. Manly, a Cornell University engineering student, is hired as Langley's "assistant in charge of experiments".**
October 1898	**Major work begins on the "Great Aerodrome", also known as "Aerodrome A".**
December 12, 1898	**A contract is signed between Langley and Stephen M. Balzer of New York. Balzer is to design and build a 12 horsepower motor to power the "Aerodrome". On the same date, Langley writes to the U.S. Army Board of Ordnance and Fortifications, agreeing to design and build a flying machine. He estimates a cost of $50,000 to build his machine.**
May 1899	**A new, larger houseboat equipped with a turntable and catapult is delivered in Washington.**
May 30, 1899	Wilbur Wright sends a letter to Langley at the Smithsonian, requesting material pertaining to aeronautical research. He says in his letter that he wishes "… to begin a systematic study of the subject in preparation for practical work." Assistant Secretary of the Smithsonian Richard Rathbun directs his staff to assemble a package of papers, including Langley's *Story of Experiments in Mechanical Flight* and *Experiments in Aerodynamics*. The Wright brothers receive the package three weeks

	later. They later credit the material they received from the Smithsonian with giving them a "good understanding of the nature of the problem of flying."
June 7 - August 3, 1899	**Additional flights of "Aerodrome No. 5" and "No. 6" are made from the houseboat at Chopawamsic Island.**
July 1899	**Langley visits Ader's workshop in Paris.**
July 1899	The Wright Brothers build a five foot biplane kite.
October 2, 1899	Percy Pilcher dies of his injury after his Lilienthal-type glider breaks up in flight.
May 1900	**Langley and the staff of the Smithsonian Astrophysical Observatory observe the May 28 solar eclipse in Wadesboro, North Carolina.**
August 1900	The Wrights begin to build their first glider, a biplane design with a 17 foot wingspan.
September 1900	The Wrights arrive at Kitty Hawk, North Carolina, to test their glider on the dunes. They begin test flights in early October.
July 1901	The Wrights return to Kitty Hawk with a new biplane glider.
August 1901	**Langley creates the Children's Room, with exhibits designed to inspire interest in science, technology and natural history, in the Smithsonian Castle.**
Autumn 1901	The Wright brothers return to Dayton and begin a program to develop their own fundamental aeronautical data, building a wind tunnel and a test rig mounted on a bicycle.
September 19, 1902	The Wrights complete assembly of their new glider and begin flights the same afternoon. They continue the flights through the autumn. After an early crash, continual modifications improve the design. Wilbur writes to his father, "We now believe the flying problem is really nearing its solution." On their return to Dayton, the brothers file a patent on their design.
July 14, 1903	**The houseboat is towed down the Potomac to a spot opposite Widewater, Virginia, about 40 miles from Washington.**
August 8, 1903	**Langley's "Quarter-Size Aerodrome" makes a successful flight from the houseboat.**
September 3, 1903	**Work is begun on erecting the "Great Aerodrome" on the houseboat catapult.**
October 7, 1903	**The "Great Aerodrome", piloted by Manly, is launched by the houseboat catapult at 12:20 PM. The aircraft is snagged by the catapult launch car, and drops into the river. Langley was in Washington, and does not witness the attempt. The wreckage of the "Aerodrome" is salvaged.**
December 8, 1903	**The refurbished "Great Aerodrome" is readied for flight on the houseboat, now moored below Washington at Arsenal Point at the confluence of the Potomac and Anacostia rivers. At 4:45 PM, the aircraft, with Manly at the controls, is launched. The tail assembly drags along the launch track, and the "Aerodrome's" tail begins to collapse. The "Aerodrome" drops into the river. Manly is briefly**

	trapped by the wreckage, but cuts himself free and is rescued. In the aftermath of the crash, Langley is ridiculed in the press. Though the Army withdraws its support, Langley receives offers of financial support from businessmen to continue his aeronautical work. He politely refuses these offers and ends his aeronautical activities.
December 17, 1903	The Wright brothers make four flights at Kitty Hawk, North Carolina. The first flight covered a distance of 120 feet and lasted 12 seconds; in the fourth flight, the "Flyer" traveled 852 feet in 59 seconds.
June 1905	**The Smithsonian's accountant, W. W. Karr, is accused of embezzling Institutional funds. He is later convicted and imprisoned. Langley holds himself responsible for the loss, and thereafter refuses to accept his salary.**
November 1905	**Langley suffers a stroke.**
February 1906	**Langley moves to Aiken, South Carolina to convalesce.**
February 27, 1906	**After suffering another stroke, Langley dies.**
March 3, 1906	**Samuel Pierpont Langley is buried in Forest Hill Cemetery, Boston.**
May-October 1914	**The "Great Aerodrome" is refurbished and is tested on Lake Keuka, Hammondsport, New York; the tests are conducted by Glenn Curtiss. Using the Manly-Balzer motor and mounted on pontoons instead of using a catapult launch, the "Aerodrome" makes several short flights, the longest lasting about five seconds. Later a Curtiss 80-hp engine is substituted for the Manly-Balzer motor and a flight of about 3,000 feet is made on September 17. The Smithsonian Institution later displays the "Aerodrome" with an exhibit label that reads "The first man-carrying aeroplane in the history of the world capable of sustained free flight." This claim causes a rift between the Institution and Orville Wright (Wilber Wright had died in 1912) that is not fully mended until 1942. The Wright 1903 "Flyer" is presented to the Smithsonian Institution on December 17, 1948. Today, the "Flyer" is on exhibit in the Milestones of Flight Gallery of the National Air and Space Museum's Mall Building; Samuel Langley's "Great Aerodrome" is displayed at the Museum's Steven F. Udvar-Hazy Center in Chantilly, Virginia.**

Scope and Contents

This collection includes information about Langley and his colleagues, as well as documentation of Langley's work. The collection includes the Aerodrome project waste books, biographies of Langley and his assistant Charles Manly, newspaper clippings, correspondence), manuscripts regarding Langley's aircraft, photographs and drawings, work requisitions for staff labor on the project, a sketchbook, specifications and measurements for Langley's experiments, and manuscript material from the *Langley Memoir on Mechanical Flight*.

The National Air and Space Museum's Samuel P. Langley Collection was drawn from several sources in the Smithsonian Institution. Parts of the collection were separated at undetermined dates from the institutional records of Langley's time as Secretary (now held by the Smithsonian Institution Archives [SIA], as the Samuel P. Langley Papers, 1867-1906, Record Unit 7003) for several purposes:

Design papers and notes from Langley's aerodrome project were used for restoring the Langley Aerodromes for exhibits beginning in 1917.

Correspondence from the papers was consulted when controversies arose between the Wright brothers and the Smithsonian, and over credit for the design of the motor built by Stephen M. Balzer and extensively modified by Charles Manly, which was used on Aerodrome A.

Technical drawings of the Aerodromes were drawn from the SIA in the 1970s for conservation purposes.

Other material was added to the collection over the years:

Correspondence, memoranda, notes and label scripts from Langley exhibits from 1913 through the 1960s.

Design notes and work records from Langley's workshop were stored with the Aerodromes in the Museum's collections, and were later transferred to the Archives Division.

Biographical material on Langley, and correspondence to the Museum on Langley and the Aerodromes.

Material from the foundation of the Langley Aerodynamic Laboratory (now NASA's Langley Research Center) in 1913.

In addition to Record Unit 7003, researchers may wish to consult these Smithsonian Institution Archives' collections:

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Record Unit 34, Office of the Secretary, Correspondence, 1887-1907

Record Unit 7268, J. Elfreth Watkins Collection, 1869, 1881-1903, 1953, 1966 and undated.

The Archives Division of the National Air and Space Museum holds the Charles M. Manly Papers, (Acc. 1999-0004). Manly was Samuel Langley's assistant in the Aerodrome project from 1898 to 1903.

Note: The digital images in this finding aid were repurposed from scans made by an outside contractor for a commercial product and may show irregular cropping and orientation in addition to color variations resulting from damage to and deterioration of the original objects.

Arrangement

The Samuel P. Langley Collection is arranged in the following series:

Series 1 - Waste Books: Langley and his staff used waste books - bound ledgers - to keep records of their work on the aeronautical projects, which Langley inspected frequently.

Series 2 - Scrapbooks: A collection of 18 scrapbooks containing newspaper and magazine clippings on "Aerial Navigation". Projects by Langley, Maxim, Lilienthal and many obscure aeronautical experimenters are included. Other clippings are included in Series VIII and XI.

Series 3 - Aeronautical Research and the Aerodromes: This series consists of notes, data, drawings and memoranda from Langley's aeronautical research at both the Smithsonian and the Allegheny Observatory. Subseries 2 contains material used in various Smithsonian exhibitions of the Langley Aerodromes. Some additional material is included in Series 11.

Subseries 3.1 - Design and Construction

Subseries 3.2 - Langley Aerodrome Exhibits

Series 4 - Correspondence: Letters and memoranda written by and sent to S. P. Langley and his assistants, C. M. Manly and J. E. Watkins. Additional correspondence is included in Series 11.

Subseries 4.1 - S. P. Langley Correspondence

Subseries 4.2 - S. P. Langley's Assistants' Correspondence

Subseries 3 - Miscellaneous Correspondence

Series 5 - Manuscripts, Papers, Articles: Manuscripts, published articles and papers by Langley and others. See also Series 11.

Subseries 5.1 - Works by S. P. Langley

Subseries 5.2 - Miscellaneous Manuscripts, Articles, and Notes

Series 6 - Photographs: Photographs, mainly of Langley's Aerodromes. Additional photographs are included with Series 11.

Series 7 - Trade Catalogues and Ephemera: Trade catalogues and price lists from various suppliers and dealers found stored with the "Aerodrome A" at the Museum's Paul E. Garber Facility in Suitland, Maryland.

Series 8 - Miscellaneous Files

Series 9 - Flat Boxes and Oversized Material: Ledgers, drawings, test data, publications

Series 10 - Shorthand Diaries: A collection of 37 notebooks containing notes in an unidentified shorthand system, dating from 1898 to 1902, with 8 notebooks bearing partial dates or undated.

Series 11 - Additional Material: After the publication of the Langley Collection finding aid, two additional boxes of correspondence, manuscript material, drawings and photographs were found in the Museum's rare book room, the Ramsey Room. This material has been included as a separate series.

The Smithsonian Aeronautical Staff

Langley's staff engaged in his aeronautical work as listed in waste books, drawings and correspondence:

The Smithsonian Aeronautical Staff:

F. C. Bache: Laborer with the U.S. Fish Commission, then located at the Smithsonian.

Carl Barus: Formerly of the U.S. Geological Survey and the Weather Bureau. Hired in 1893 as a physicist; acted as the liaison between Langley and the Aerodrome project staff. Part of the crew on the houseboat.

Louville Eugene Emerson : Laborer.

George L. Fowler: An engineer, Fowler was hired by Langley to help design an engine for the Aerodromes.

William Gaertner : Instrument maker.

Heed, Jr.: Name found in a shorthand diary dated 1899 - presumably, a Smithsonian secretary or assistant.

Augustus Moore Herring: An independent aeronautical experimenter and skilled designer and pilot of gliders; hired by Octave Chanute in 1894 and by Langley as chief assistant in 1895. Herring resigned (or was dismissed) in November 1895 and resumed work with Chanute. In 1908, he competed with the Wrights for the Army Flyer contract, but did not complete a finished aircraft.

Edward Chalmers Huffaker: An engineer and aeronautical experimenter; built gliders based on the observation of bird flight; had delivered a paper at the International Conference on Aerial Navigation in Chicago, 1893. Recommended by Chanute, Huffaker was hired by Langley in December, 1894. He resigned from the Smithsonian in 1898 and went to work for Chanute.

L. C. Maltby : Machinist, 1891-1899; assisted in motor design and oversaw the fabrications of the metalwork for the Aerodromes. Part of the crew on the houseboat.

Charles Matthews Manly: Graduate of Cornell University (1896). Hired by Langley and placed in charge of construction of the Great Aerodrome in 1898. Piloted the Great Aerodrome on its two launch attempts, 1903. Manly resigned from the Smithsonian in 1905. He served as a consulting aviation engineer for different government agencies and corporations, including the British War Office, 1915; the Curtiss Aeroplane and Motor Corporation 1915-1919 (from 1919-1920 as the assistant general manger); and as a member of the

US Commission to the International Aircraft Conference, London, 1918. Manly also completed and edited Langley's *Memoir on Mechanical Flight* which was published by the Smithsonian in 1911.

Charles B. Nichols: Smithsonian cabinet maker (1890-1893), in charge of construction of the small rubber powered models.

R. Luther Reed: Smithsonian carpenter foreman (1880-1904). In charge of construction of Aerodromes No. 5 and 6 following between Herring's departure and Manly's arrival. Worked on design of the Great Aerodrome and the second houseboat. Part of the crew on the houseboat.

B.L. Rhinehart: Smithsonian mechanic. Built a small steam motor for Aerodrome No. 0 in 1891. Performed design work on an experimental gasoline motor, c.1896.

William L. Speiden : Draftsman or designer (1893-1899).

John Elfrith Watkins : Assistant engineer of construction with the Pennsylvania Railroad. Joined the Smithsonian as an honorary curator in the Steam Transportation section in 1885. Named curator of Transportation in 1887. He rejoined the Pennsylvania Railroad in 1892, and later worked at the Field Columbian Museum as director of Industrial Arts. Watkins returned to the Smithsonian in 1895 as the National Museum's curator of Technological Collections. In 1898, he was named curator of the Division of Technology. Watkins also served the Smithsonian as Engineer of Property, 1888-1889, and Chief of Buildings and Superintendence, 1896-1903. Watkins carried on much of the Aerodrome project's correspondence, and was the project's expert in steam engine design.

George B. Wells: Smithsonian messenger (1894-1903). Most of the collection's shorthand notebooks (Series X) bear his name; possibly, he acted as Langley's stenographer.

William Crawford Winlock: Curator, Bureau of International Exchange (1889-1899).

Names and Subject Terms

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

Subjects:

Aeronautics
Aeronautics -- 1903-1916
Aeronautics -- Records
Aeronautics -- pre-1903
Langley Aerodrome Family
Langley Aerodrome No 5 (1895-96)
Periodicals

Types of Materials:

Correspondence
Drawings
Manuscripts
Photographs
Publications

Names:

Chanute, Octave, 1832-1910
Herring, Augustus Moore, 1867-1926
Huffaker, Edward C., 1856-1937
Langley, S. P. (Samuel Pierpont), 1834-1906
Manly, Charles Matthews, 1876-1927

Watkins, J. Elfreth (John Elfreth), 1852-1903

Container Listing

Series 1: Waste Books, 1887-1900

Scope and Contents: Samuel Langley distributed waste books - bound office ledgers - to members of the staff working on his aeronautical projects. The staff members were expected to keep track of their work in these books, which Langley inspected frequently. Calculations, weight data, and drawings are to be found in the waste books, along with bound in and inserted memoranda, notes, and letters. The waste book numbers and descriptions are given as found written in each book. Langley's private waste books and several books of his correspondence are included.

Subseries 1.1: S. P. Langley, Aerodromics, 1887-1889

Box 1, Volume 1	Waste Book No. 1, April 25 - November 27, 1887 Notes:	Pages 1-42, 83-90, 101-126, 135-136. Table of contents, page 1. [Also includes pages 360-365 - March 9, 1888.]
Box 1, Volume 1	Waste Book No. 1, March 5 - November 22, 1888 Notes:	91-92 inclusive. 127-134 inclusive. 355-366 inclusive. 3 blank sheets. This sheet separates the contents of Waste-Book No.1, for the years 1887 and 1888.
Box 1, Volume 1	Waste Book No. 2, August 24 - December 21, 1888 Notes:	Pages 1-4, 9-158, 331-336, 401-410. Table of contents, page 3.
Box 1, Volume 1	Waste Book No. 1, October 25 - November 6, 1889 Notes:	Pages 93-94, 151-162. No table of contents.
Box 1, Volume 1	Waste Book No. 2, January 10 - October 30, 1889 Notes:	No table of contents. Pages 159-320, 411-414.
Box 1, Volume 1	[Waste Book No. 3 not present]	
Box 1, Volume 1	Waste Book No. 4, June 6 - December 31, 1889 Notes:	Pages 195-214. No table of contents. Index section is blank.

Subseries 1.2: S. P. Langley, Aerodromics, 1890

Box 2, Volume 2	Waste Book No. 1, October 14 - November 6, 1890 Notes:	Pages 51-52, 95-100, 141-142, 163-164, 175-186, 339-352, 367-384. No table of contents
Box 2, Volume 2	Waste Book No. 2, September 1890 Notes:	Pages 7-8, 395-398. No table of contents.
Box 2, Volume 2	Waste Book No. 3, September 16 - December 31, 1890	

Notes: Pages 1-66, 69-300, 305-444. Table of contents, page 1. Index starts after page 444 (unpaginated).

Box 2, Volume 2 — Waste Book No. 4, October 1 - December 31, 1890
Notes: Pages 1-75, 79-194, 215-222, 227-234, 333-334, 337-358, 365-366. Table of contents, page 333.

Box 2, Volume 2 — Waste Book No. 5, November 25 - December 31, 1890
Notes: Pages 39-114, 123-170. Table of contents, page 39; titled "Pneumatics Book No. 5, Commenced Dec. 15, 1890". Index begins after page 376 (unpaginated).

Subseries 1.3: S. P. Langley, Aerodromics, 1891

Box 3, Volume 3 — From Waste Book No. 4, 1891
Notes: Pages 75-78, 223-226, 235-378. Index begins after page 378; 1st page is a table of contents titled "Index of Vols 1-6".

Box 3, Volume 3 — Waste Book No. 5, 1891
Notes: Pages 115-122, 171-324, 405-420.

Box 3, Volume 3 — Waste Book No. 6, 1891
Notes: Pages 1-340.

Subseries 1.4: S. P. Langley, Aerodromics, 1892

Box 4, Volume 4 — Waste Book No. 7, January 1 - December 31, 1892
Notes: Pages 1-210. Includes bound-in notes of meeting with A.M. Herring, New York City, May 4, 1895; letter from Langley to W.C. Winlock, November 4, 1895; Langley memorandum, January 7, 1896; letter from E.C. Huffaker to W.C. Winlock, undated; letter from J.E. Watkins to Langley, May 26, 1992 - the second page is bound-in at the beginning of Waste Book No. 8.

Box 4, Volume 4 — Waste Book No. 8, January 1, 1892 - December 1892
Notes: Pages 1-322. Inscribed after title page: "Bache - Aerodynamics No. 8 - For the Use of W. Watkins - Commences Jan 1, 1892". Blank index section at end of Volume 4

Subseries 1.5: S. P. Langley, Aerodromics, 1893

Box 5, Volume 5 — Waste Book No. 7, February - November 1893
Notes: Pages 211-276, 329-356. Pages 329-356 also include pages of notes by L.C. Maltby and C.B. Nichols, October 1892 - January 1893.

Box 5, Volume 5 — Waste Book No. 9, January - August 1893

Notes: Pages 1-115, 312-326, 400-413. Written after title page: "Bache Aerodynamics No. 9 - In the Use of S. P. Langley - Commences January 1, 1893 - Devoted to Experiments with the whirling tables at the so [?] and to their reduction. - Also to propellers generally. General rules for users of this waste book.

A. This is a book of original entry. Everything to do with the investigation in hand is to be noted in it, e.g. all serafs [series?] of computations etc. instead of being made on a separate piece of paper, are to be made here preferably on the left hand page, the right being kept for the more important entries. No change should be made in an entry once made.

B. The date is always to be written in the upper left hand corner of the numbered page.

C. As a rule before the days work should be written under the title "Object", a few words stating what the point [illeg.] measurement immediately in hand [?]. And at the end of the day under the head of "Conclusion" a few words stating what has been shown, or failed to be shown. (This is only for the guidance of any other person who may have occasion to use the book)"

Box 5, Volume 5 — Waste Book No. 10, January 1 - October 25, 1893
Notes: Pages 1-62, 99-412. Written after title page: "This book is the property of S. P. Langley - It is left in the temporary use of L.C. Maltby - To be used exclusively for the aerodromics workshop. - To hold orders & drawings, and to make memoranda in. Orders and drawings ["and drawings" strike out] begin on page 21. Memoranda begin on page 201." Notes by Carl Barus are included on pages 363-375 and on pages 100-200. Index follows p.412.

Box 5, Volume 5 — Waste Book No. 11, February 6 - December 31, 1893
Notes: Pages 1-267.

Box 5, Volume 5 — Waste Book No.12, February 7 - March 13, 1893
Notes: Pages 1-31, 98-103. Assigned to M.R.S. Reed [R. L. Reed?].

Box 5, Volume 5 — Waste Book of Gaertner [no number], April 7 - December 31, 1893
Notes: Pages 1-33.

Box 5, Volume 5 — Index to Waste Book 11 follows Gaertner's waste book

Subseries 1.6: S. P. Langley, Aerodromics, 1894

Box 6, Volume 6 — Waste Book No. 9, May 1894
Notes: Pages 118-125.

Box 6, Volume 6 — Waste Book No. 11, January 1 - April 6, 1894
Notes: Pages 268-400. Eight pages of notes inserted between pages 335-336.

Box 6, Volume 6	Waste Book No. 12, 1894 Notes:	Pages 104-107, 116-119.
Box 6, Volume 6	Waste Book No. 13, April 1 - December 31, 1894 Notes:	Pages 1-399. Index follows page 399.
Box 6, Volume 6	Waste Book No. 14, January - December 1894 Notes:	Pages 2-3, 10-41, 200-213 [Actually goes only to page 33].
Box 6, Volume 6	Waste Book of Gaertner [no number], January - December 1894 Notes:	Pages 36-79, 138-159, 200-233.

Subseries 1.7: S. P. Langley, Aerodromics, 1895

Box 7, Volume 7	Waste Book No. 15, January 1 - October 1, 1895 Notes:	Pages 1-419. Inserted following title page: Letter from Herring to Winlock, October 21, 1895. Weights list of Aerodrome 5, June 10, 1895. Drawings of Aerodromes 4 and 5.
Box 7, Volume 7	Waste Book No. 14, January 1 - December 31, 1895 Notes:	Pages 4-9, 34-133.
Box 7, Volume 7	Waste Book No. 16, May 20 - November 8, 1895 Notes:	Pages 1-159.
Box 7, Volume 7	Waste Book of Gaertner [no number], January 26 - September 1, 1895 Notes:	Pages 80-137, 160-197, 234-419. Letter from Langley to Winlock, March 31, 1895, inserted between pages 299-300. Letter from Langley to G.L. Fowler, December 21, 1897 inserted between pages 317-318.
Box 7, Volume 7	Waste Book No. 12, January 1 - December 31, 1895 Notes:	Pages 34-65, 124-179. Index to Waste Book No. 15 follows page 179.
Box 7, Volume 7	Index to Waste-Book 15 Notes:	Index to Waste-Book 15. This sheet separates Waste-Book 12 from Index to Waste-Book No.15

Subseries 1.8: S. P. Langley, Aerodromics, 1895-1897

Box 8, Volume 8	Waste Book of E.C. Huffaker Notes:	Pages 1-439. Index follows page 439.

Subseries 1.9: S. P. Langley, Aerodromics, 1898

Box 8, Volume 9	Waste Book of E.C. Huffaker	

Notes: Pages 1-439. Index follows page 439. Aerodrome No.6 weight list inserted at page 1. Letter from Langley to Huffaker inserted at page 46. Hand-drawn chart with water depths indicated, page 231 (Potomac River?) Account of tests of Aerodromes 4 and 5, October 6, 1894, page 300.

Subseries 1.10: S. P. Langley, Aerodromics, circa 1896

Box 9, Volume 10 S. P. Langley, Aerodromics, circa 1896

Subseries 1.11: S. P. Langley, Aerodromics, circa 1895

Box 9, Volume 11 Waste Book No. 16
Notes: Pages 2-434; noted on first page: "This Waste Book is to furnish a record of the condition, weight - &c. of Aerodromes at the beginning of each month." Data tables at pages 46, 68, and 102. Volume also includes model and parts drawings.

Subseries 1.12: S. P. Langley, Aerodromics, circa 1896

Box 10, Volume 12 Waste Book of L.E. Emerson
Notes: Pages 2-440.

Subseries 1.13: S. P. Langley, Aerodromics, circa 1898-1907

Box 10, Volume 13 Waste Book South Shed
Notes: Pages 4-439.

Subseries 1.14: S. P. Langley, Aerodromics, circa 1895-1896

Box 11, Volume 14 Waste Book of L.C. Maltby
Notes: Pages 2-437.

Subseries 1.15: S. P. Langley, Aerodromics, circa 1896

Box 11, Volume 15 Waste Book of B.L. Rhinehart
Notes: Pages 4-434; working drawings from page 50.

Subseries 1.16: S. P. Langley, Aerodromics, circa 1896-1900

Box 12, Volume 16 Waste Book of R.L. Reed

Notes: Pages 2-439; notes of tests from small houseboat, Chopawamsic Island (Potomac river), summer of 1899.

Subseries 1.17: S. P. Langley, Aerodromics, circa 1891

Box 12, Volume 17 1st Draft Experiments in Aerodynamics (waste book of J.E. Curtis)
Notes: Pages 1-346.

Subseries 1.18: S. P. Langley, Aerodromics, circa 1896

Box 13, Volume 18 Special Order Book (copies of work orders)
Notes: Pages 1-17.

Subseries 1.19: S. P. Langley, Aerodromics, 1898

Box 13, Volume 19 Waste Book of C.M. Manly
Notes: Pages 2-440; entries end following page 128. Includes memoranda and letters from S. P. Langley pasted in. Also includes loose pages of calibration charts dated 1903.

Subseries 1.20: S. P. Langley, Aerodromics, 1898-1899

Box 14, Volume 20 Waste Book of C.M. Manly
Notes: Pages 2-441, entries end following page 401. Includes Manly's notes of test flights of Aerodromes 5 and 6 and notes dictated by S. P. Langley.

Subseries 1.21: S. P. Langley, Aerodromics, circa 1899-1900

Box 14, Volume 21 Waste Book of C.M. Manly
Notes: Pages 2-441; entries end following page 406.

Subseries 1.22: S. P. Langley, Aerodromics, circa 1900-1903

Box 15, Volume 22 Waste Book of C.M. Manly
Notes: Pages 2-441; entries end following page 80.

Subseries 1.23: S. P. Langley, Aerodromics, circa 1888-1894

Box 15, Volume 23 Private Waste Book
Notes: Pages 2-674.

Subseries 1.24: S. P. Langley, Aerodromics, circa 1895-1898

Box 16, Volume 24 — Private Waste Book
Notes: Pages 1-437, entries end following page 391.

Subseries 1.25: S. P. Langley, Aerodromics, circa 1897

Box 16, Volume 25 — Private Waste Book
Notes: Pages 2-439; entries end following page 46.

Subseries 1.26: S. P. Langley, Aerodromics, circa 1893-1903

Box 17, Volume 26 — Private Waste Book
Notes: Pages 1-441; entries end following Page 402.

Box 17, Volume 27 — Correspondence Book No. 1, 1898-1899
Notes: Pages 8 - 499

Subseries 1.28: S. P. Langley, Aerodromics, circa 1899-1900

Scope and Contents: Box 18 was not copied.

Box 18, Volume 28 — S. P. Langley Correspondence Book No.2
Notes: May 1899 --March 1900 Pages 1-504; index before page 1. Volume was not copied.

Subseries 1.29: S. P. Langley, Aerodromics, circa 1900-1901

Scope and Contents: Box 18 was not copied.

Box 18, Volume 29 — S. P. Langley Correspondence Book No.3
Notes: March 1900 - December 1901. Pages 1-507; index before page 1.

Volume was not copied.

Subseries 1.30: S. P. Langley, Aerodromics, circa 1900-1901

[Volume 30 is missing as of September, 1995]

Subseries 1.31: S. P. Langley, Aerodromics, circa 1899-1902

Box 18, Volume 31 — Correspondence Disbursing Clerk

Notes:	January 1899 - December 1902 Pages 1-508.

Return to Table of Contents

Series 2: Scrapbooks, 1893 - 1903

Scope and Contents: A collection of 18 scrapbooks containing newspaper and magazine clippings on "aerial navigation". Projects by Langley, Hiram Maxim, Otto Lilienthal and many other experimenters are included. Individual volumes have pasted labels showing the year covered by the contents; some also have a date range. Where a date range is not given, it has been derived from the contents and is included here in brackets - […]. Additional clippings are included in **Series 11**.

Box 19	[Scrapbook 1], May 27, 1893 - February 18, 1894
Box 20	[Scrapbook 2], January 1 - June 1, 1894
Box 21	[Scrapbook 3], January 20 - May 9, 1894
Box 22	[Scrapbook 4], January 1 - August 1, 1895
Box 23	[Scrapbook 5], July 2, 1895 - January 8, 1896
Box 24	[Scrapbook 6], May 15 - June 9, 1896
Box 25	[Scrapbook 7], May 21 - October 2, 1896
Box 26	[Scrapbook 8], January 23 - May 21, 1896
Box 27	[Scrapbook 9], June 28, 1896 - April 15, 1897
Box 28	[Scrapbook 10], January 13 - October 17, 1897 Notes: index inserted on inside back cover.
Box 29	[Scrap Book 11] S.I. Aerodromies [sic.], June 29 - December 31, 1897
Box 30	[Scrap Book 12] S.I. Aerodromies [sic.], January 1 - November 16, 1898 Notes: Table of contents on page 1. Index on inside back cover.
Box 31	[Scrap Book 13] S.I. Aerodromics, October 22 - November 23, 1898
Box 31	[Scrap Book 14] S.I. Aerodromics, March 8, 1899 - March 18, 1928
Box 32	[Scrap Book 15] S.I. Aerodromics, January 20 - December 22, 1900
Box 32	[Scrap Book 16] S.I. Aerodromics, January 5 - December 20, 1901
Box 33	[Scrap Book 17] S.I. Aerodromics, January 9 - December 31, 1902

Box 34	[Scrap Book 18] S.I. Aerodromics; 1903 [January 15 - June 2, 1903], January 15 - June 2, 1903

Return to Table of Contents

Series 3: Aeronautical Research and the Aerodromes, 1893-1942

Scope and Contents: This series consists of notes, data, drawings and memoranda from Langley's aeronautical research at both the Smithsonian and the Allegheny Observatory. Subseries 2 contains material used in various Smithsonian exhibitions of the Langley Aerodromes. Other drawings are included in Series 9. Additional notes and drawings are included in Series 11.

Subseries 3.1: Design and Construction

Box 35, Folder 1	Aerodrome drawings, 1900
Box 35, Folder 2	Aerodrome drawings - Aerodrome 5
Box 35, Folder 3	Aerodrome drawings - Aerodrome A
Box 35, Folder 4	Aerodrome engine drawings by William L. Speiden, 1898
Box 35, Folder 5	Aerodrome project expenses prior to trial flight
Box 35, Folder 6	Aerodrome tachometer instructions
Box 35, Folder 7	Aerodrome weight tables
Box 35, Folder 8	Aerodrome workers agreement form
Box 35, Folder 9	Aeronautical data - Alleghany Whirling Table Data Trace
Box 35, Folder 10	Aeronautical data - dynamic chronograph data plots
Box 35, Folder 11	Aeronautical data - wind velocity data plots
Box 35, Folder 12	Aeronautical work - pay voucher cards, 1899-1901
Box 35, Folder 13	Aeronautical work - record of shop work voucher book, 1893
Box 35, Folder 14	Aeronautical work records, 1901-1902
Box 35, Folder 15	Aeronautical work - miscellaneous drawings and sketches
Box 35, Folder 16	Aeronautical work - miscellaneous drawings by E. C. Huffaker
Box 35, Folder 17	Aeronautical work - miscellaneous notes, memos, bills, drawings (1 of 2)
Box 35, Folder 18	Aeronautical work - miscellaneous notes, memos, bills, drawings (2 of 2)
Box 36, Folder 1	Army Board of Ordnance and Fortifications Aerodrome grant, 1900

Box 36, Folder 2	Articles and clippings on Aerodromes
Box 36, Folder 3	Congressional Record - House debate on Aerodrome expenditures, January 27, 1904
Box 36, Folder 4	Copies of material from waste books
Box 36, Folder 5	Great Houseboat drawing
Box 36, Folder 6	Ledger - "Tools Borrowed for Use on Langley Aerodrome", 1917-1918
Box 36, Folder 7	Manly-Balzer motor controversy - Orville Wright's account, 1942
Box 36, Folder 8	Notes on experiments
Box 36, Folder 9	Notes - from George Fowler's waste book
Box 36, Folder 10	Notes - E. C. Huffaker
Box 36, Folder 11	Notes - E. C. Huffaker - "Record of Experiments in Open Air", September 3-12 1898
Box 36, Folder 12	Notes - L. C. Maltby's notes, journals
Box 36, Folder 13	Notes - C. M. Manly's notes on the Aerodrome
Box 36, Folder 14	Notes - W. C. Winlock on boilers, 1894
Box 36, Folder 15	Notes - New Rubber Pull Aerodrome, 1895
Box 36, Folder 16	Notes - Rubber Pull Aerodrome, 1895
Box 36, Folder 17	Notes - Preparatory works done prior to the first trial of the Great Aerodrome
Box 36, Folder 18	Parts lists & box contents for Aerodrome tests, June 1895
Box 36, Folder 19	Parts lists - Aerodromes 4 & 5, July 1895
Box 36, Folder 20	Report of shop work on Aerodrome A, May 1900
Box 36, Folder 21	Reports - C. M. Manly on the Great Aerodrome, January 1901
Box 36, Folder 22	Reports - J. E. Watkins on progress of Aerodrome work, September 1892
Box 36, Folder 23	"Rules for Workshops", 1898
Box 36, Folder 24	Specifications for houseboat

Subseries 3.2: Langley Aerodrome Exhibits

Box 37, Folder 1	Langley Aerodrome exhibit, general
Box 37, Folder 2	Aerodrome No. 5 - reproduction for the Panama Pacific Exposition, 1914
Box 37, Folder 3	Aerodrome and motor display labels and label scripts
Box 37, Folder 4	Langley Aerodrome exhibit, 1917
Box 37, Folder 5	Langley Aerodrome exhibit, installation of Aerodrome, general
Box 37, Folder 6	Langley Aerodrome exhibit, installation of Aerodrome, East Hall (A&I bldg) arrangements
Box 37, Folder 7	Langley Aerodrome exhibit, installation of Aerodrome, fabric
Box 37, Folder 8	Langley Aerodrome exhibit, installation of Aerodrome, hardware
Box 37, Folder 9	Langley Aerodrome exhibit, installation of Aerodrome, varnish, dope, paint
Box 37, Folder 10	Langley Aerodrome exhibit, installation of Aerodrome, wire
Box 37, Folder 11	Langley Aerodrome exhibit notes from "Aerodrome Experiments" by George L. Fowler - "The Available Motors", 1897
Box 37, Folder 12	Langley Aerodrome exhibit notes from "Aerodrome Experiments" by George L. Fowler - "Balancing the Aerodrome", 1897
Box 37, Folder 13	Langley Aerodrome exhibit notes from "Aerodrome Experiments" by George L. Fowler - "Experiments with Aerostats", 1897
Box 37, Folder 14	Langley Aerodrome exhibit notes from "Aerodrome Experiments" by George L. Fowler - "Chapter 8. History of Construction of Sustaining and Guiding Surfaces of Aerodromes 4, 5 and 6", 1897
Box 37, Folder 15	Langley Aerodrome exhibit notes from "Aerodrome Experiments" by George L. Fowler - "History of Launching Apparatus and Field Trials", 1897
Box 37, Folder 16	Langley Aerodrome exhibit notes from "Aerodrome Experiments" by George L. Fowler - "The Instruments Used", 1897
Box 37, Folder 17	Langley Aerodrome exhibit - rubber driven models

Box 37, Folder 18 Langley-Manly-Balzer motor - texts and memos for exhibit label, 1908

Return to Table of Contents

Series 4: Correspondence, 1860 - 1962

Scope and Contents: Letters and memoranda written by and sent to S. P. Langley. Most of the correspondence deals with the aeronautical projects, though some non-aeronautical letters, like Langley's notes on making coffee, were included in the files. Langley's official correspondence as Secretary of the Smithsonian is part of the Smithsonian Institution Archives' Official Records of the Smithsonian Institution (Record Unit 34); his personal correspondence is included in the Smithsonian Institution Archives' Samuel P. Langley Papers, 1867-1906 (Record Unit 7003). Additional correspondence can be found in Series 11.

Arrangement: The material is arranged alphabetically by the name of the correspondent.

Subseries 4.1: S. P. Langley Correspondence

Box 38, Folder 1	Partial listing of Langley correspondence, 1890-1907
Box 38, Folder 2	Cleveland Abby, U.S. Signal Office, 1887-1891
Box 38, Folder 3	American Iron and Steel Works, Jones & Laughlins, Ltd, 1887
Box 38, Folder 4	American Tube Works, 1892
Box 38, Folder 5	F.W. Breary, Aëronautical Society of Great Britain, 1887
Box 38, Folder 6	Cole & Reinhart
Box 38, Folder 7	George E. Curtis, US Signal Office, 1887
Box 38, Folder 8	Duryea Motor Wagon Co., 1898
Box 38, Folder 9	Charles H. Emerson, 1892
Box 38, Folder 10	Captain Louis Ferdinand Ferber, Laboratoire des Recherches Relatives à l'Aérostation Militaire, 1905
Box 38, Folder 11	George L. Fowler, 1897-1898
Box 38, Folder 12	George Brown Goode, Smithsonian Institution, 1895
Box 38, Folder 13	Gen. A.W. Greely, U.S. Signal Office, 1889
Box 38, Folder 14	F. W. Gruner, 1892
Box 38, Folder 15	Augustus Herring, 1895
Box 38, Folder 16	Lodewyck Hoornbeek, Industrial Investment & Development Co., 1899
Box 38, Folder 17	E. C. Huffaker to Langley, 1891

Box 38, Folder 18	Professor Hutchins, 1891
Box 38, Folder 19	Kainz Motor correspondence, 1900
Box 38, Folder 20	Charles, Comte de Lambert, 1891
Box 38, Folder 21	Jon W. Langley, 1891
Box 38, Folder 22	Mary Williams Langley (SPL's mother), 1894
Box 38, Folder 23	Charles M. Manly, Smithsonian Institution, 1899-1900
Box 38, Folder 24	O. J. Mason, 1893
Box 38, Folder 25	Hiram Maxim, 1891
Box 38, Folder 26	William McNamara, 1892
Box 38, Folder 27	James Means, 1895-1897
Box 38, Folder 28	E. D. Meier, Diesel Motor Company of America, 1898
Box 38, Folder 29	Merchant & Co., 1890
Box 38, Folder 30	Monier, Seitert, & Pommeret, 1892-1900
Box 38, Folder 31	Mors Electricité & d'Automobiles, 1900
Box 38, Folder 32	L. Moxley, 1890
Box 38, Folder 33	Charles Munroe, U.S. Naval Institute, 1891
Box 38, Folder 34	New York Calcium Light Co., 1890
Box 38, Folder 35	Orin Parker, 1892
Box 38, Folder 36	Parvin & Co., 1890
Box 38, Folder 37	R. L. Reed, Smithsonian Institution, 1896-1900
Box 38, Folder 38	Bently L. Reinhardt, 1890
Box 38, Folder 39	"Scientific American" Magazine
Box 38, Folder 40	Charles Sparhawk, 1892
Box 38, Folder 41	John Sparhawk, Jr., Franklin Institute, 1891-1892

Box 38, Folder 42	Edward E. Spencer, 1892
Box 38, Folder 43	Henry E. Sprague, Alliance Aluminium Co., Ltd., 1890
Box 38, Folder 44	William B. Taylor, 1887
Box 38, Folder 45	Frank Thomson, Pennsylvania Railroad, 1887-1891
Box 38, Folder 46	R. H. Thurston, Cornell University, 1887-1900
Box 38, Folder 47	David P. Todd, Amherst College Observatory, 1891
Box 38, Folder 48	U.S. Navy Department, 1866-1869
Box 38, Folder 49	William H. Wahl, Franklin Institute, 1892
Box 38, Folder 50	C. B. [?] Waring
Box 38, Folder 51	J. E. Watkins, Smithsonian Institution, 1890-1891
Box 38, Folder 52	J. E. Watkins, Smithsonian Institution, 1892-1898
Box 38, Folder 53	M. C. Winlock, Smithsonian Institution, 1891
Box 38, Folder 54	Unsigned letters to S. P. Langley, 1892-1896
Box 38, Folder 55	Extract of letter to an unnamed correspondent from John W. Langley, 1891
Box 38, Folder 56	Guidelines concerning S. P. Langley's correspondence
Box 38, Folder 57	S. P. Langley memoranda, (bulk 1891-1901)
Box 38, Folder 58	S. P. Langley memorandum on the method of coffee making at the Posthof, Carlsbad (Karlsbad, Germany)

Subseries 4.2: S. P. Langley's Assistants' Correspondence

Scope and Contents: The subseries includes correspondence that Charles M. Manly and J. Elfreth Watkins sent and received on behalf of Secretary Langley and his aeronautical work. Additional Watkins correspondence can be found in Series 11.

Arrangement: The material is arranged alphabetically by the name of the correspondent.

Subseries 4.2.1: C. M. Manly Correspondence, 1900-1926

Arrangement: The material is arranged alphabetically by the name of the correspondent.

Box 39, Folder 1	Prentiss Tool & Supply Co., 1900

Box 39, Folder 2	William Roche, 1903
Box 39, Folder 3	C. Fayette Taylor, MIT, 1926

Subseries 4.2.2: J. E. Watkins Correspondence, 1889-1901

Box 39, Folder 4	Cleveland Abbe, 1890
Box 39, Folder 5	Cyrus Adler, 1890-1892
Box 39, Folder 6	E. P. Allen, Pittsburgh Testing Laboratory, 1891
Box 39, Folder 7	Lemuel Bannister, Fuel Gas and Manufacturing Co., 1890
Box 39, Folder 8	Carl Barus, U. S. Geological Survey, 1892
Box 39, Folder 9	James C. Bayles, Spiral Weld Tube Co., 1890
Box 39, Folder 10	Benedict & Burnham Manufacturing Co., 1890
Box 39, Folder 11	Hugo Bilgram, 1891-1892
Box 39, Folder 12	Robert Boyd, 1892
Box 39, Folder 13	J. U. Burket & Co., 1890
Box 39, Folder 14	S. Cabot, 1890
Box 39, Folder 15	Octave Chanute, 1891
Box 39, Folder 16	Thomas Chatard, U. S. Geological Survey, 1892
Box 39, Folder 17	Valentine Clad Cooking Ranges and Broilers, 1892
Box 39, Folder 18	Clay & Torbensen, 1890
Box 39, Folder 19	Cole & Reinhart, 1890-1891
Box 39, Folder 20	Correspondence with lumber dealers
Box 39, Folder 21	James Dietz [?], World's Columbian Exposition, 1891
Box 39, Folder 22	W. D. Doremus, 1890-1891
Box 39, Folder 23	J. H. Dow, 1891

Box 39, Folder 24	James Dubois, 1891
Box 39, Folder 25	P. H. Dudley, 1890
Box 39, Folder 26	Charles E. Duryea, 1892
Box 39, Folder 27	Eimer & Amend, 1892
Box 39, Folder 28	Theodore N. Ely, Pennsylvania Railroad, 1892
Box 39, Folder 29	Charles H. Emerson, 1892
Box 39, Folder 30	Charles Emery [?], U. S. Revenue Marine, 1891
Box 39, Folder 31	Peter Frasse & Co., 1891-1892
Box 39, Folder 32	R. G. Gatling, 1901
Box 39, Folder 33	Mr. Geare, Smithsonian Institution, 1895
Box 39, Folder 34	J. W. Gibboney, Thomson-Houston Electric Co., 1890
Box 39, Folder 35	Elmer Goetz, 1892
Box 39, Folder 36	William Fallock, U. S. Geological Survey, 1891
Box 39, Folder 37	William D. Forbes, 1890
Box 39, Folder 38	M. W. Gily, 1892
Box 39, Folder 39	George Brown Goode, Smithsonian Institution, 1895
Box 39, Folder 40	Reginal[d?] Gordon, 1897
Box 39, Folder 41	W. E. Gray, Holmes Fibre-Graphite Manufacturing Co., 1892
Box 39, Folder 42	Lawrence Hargrave, 1891
Box 39, Folder 43	O. Harmon, 1892
Box 39, Folder 44	E. H. Hawley, Smithsonian Institution, 1889
Box 39, Folder 45	Herreshoff Manufacturing Co., 1891
Box 39, Folder 46	G. F. Hohues, Plymouth Cordage Co., 1891
Box 39, Folder 47	Hotchkiss Ordnance Co., Ltd., 1891-1892

Box 39, Folder 48	E. C. Huffaker, Smithsonian Institution
Box 39, Folder 49	J. E. Hurley
Box 39, Folder 50	Elwood Ivins, Spring Garden Metal Works, 1890-1892
Box 39, Folder 51	John B. Jackson, U. S. Embassy, Berlin, 1900
Box 39, Folder 52	A. Jacobi and Co., 1892
Box 39, Folder 53	W. Jessop & Sons, Ltd., 1891
Box 39, Folder 54	Andrew Joyce's Sons Carriage Builders, 1891
Box 39, Folder 55	A. Kastelic, Venezuelan National Railroad, 1890
Box 39, Folder 56	J. M. Kavanagh, 1892
Box 39, Folder 57	Keen & Hagerty Manufacturers, 1891-1892
Box 39, Folder 58	O. W. Ketchum, 1891
Box 39, Folder 59	J. R. Kynett, 1892
Box 39, Folder 60	John W. Langley, 1891
Box 39, Folder 61	John S. Leng's Son & Co., 1890
Box 39, Folder 62	William Magoffin
Box 39, Folder 63	L. C. Maltby, Smithsonian Institution, 1891
Box 39, Folder 64	E. J. Manville Machine Co., 1890
Box 39, Folder 65	Joseph B. Marvin, U. S. Patent Office, 1892 Notes: Folder contents were not copied.
Box 39, Folder 66	Mr. Maynard, Smithsonian Institution, 1899
Box 39, Folder 67	Memorandum from unnamed Smithsonian employee Notes: Folder contents were not copied.
Box 39, Folder 68	Merchant & Co., 1890
Box 39, Folder 69	Monier, Seitert & Pommeret, 1892
Box 39, Folder 70	Alfred F. Moore, 1892

Box 39, Folder 71	National Pipe Bending Co., 1891-1892
Box 39, Folder 72	James L. Norris, 1891
Box 39, Folder 73	Charles H. Ourand, 1891
Box 39, Folder 74	J. C. Pattison, Pope Manufacturing Co., 1895
Box 39, Folder 75	Philadelphia Charcoal Fuel Co., 1892
Box 39, Folder 76	Postmaster, Chester, Pennsylvania, 1892
Box 39, Folder 77	Postmaster, New Haven Connecticut, 1892
Box 39, Folder 78	J. E. Praul, 1892
Box 39, Folder 79	H. G. Prout, "The Railroad Gazette", 1892
Box 39, Folder 80	Randolph and Clowes, 1891
Box 39, Folder 81	Bently Reinhardt, 1895
Box 39, Folder 82	B. L. Rinehart, 1895-1897
Box 39, Folder 83	George W. Robertson, 1892-1899
Box 39, Folder 84	Romeike Bureau of Press Cuttings, 1890
Box 39, Folder 85	T. W. Scott, 1892
Box 39, Folder 86	S. Shiels, 1891
Box 39, Folder 87	George F. Simonds, 1891
Box 39, Folder 88	M. L. Sperry, Scovill Mfg. Co., 1890
Box 39, Folder 89	J. J. Suckert, National Ice Machine Co., 1895
Box 39, Folder 90	D. Sulzberger, 1892
Box 39, Folder 91	F. T. Tapley, Ashcroft Manufacturing Co., 1891
Box 39, Folder 92	W. H. Travis, 1890
Box 39, Folder 93	Charles Vagt, 1891
Box 39, Folder 94	D. Van Nostrand Co., 1892

Box 39, Folder 95	William H. Wahl, Franklin Institute, 1890
Box 39, Folder 96	H. H. Westinghouse, Westinghouse Air Brake Co., 1890
Box 39, Folder 97	W. F. Wheeler, 1892
Box 39, Folder 98	I. Lloyd Wiegand, 1891
Box 39, Folder 99	A. J. Wilkinson & Co., 1891
Box 39, Folder 100	Thomas Williamson, 1899
Box 39, Folder 101	M. C. Winlock, Smithsonian Institution, 1891-1895
Box 39, Folder 102	W. D. Wyvill, 1892

Subseries 4.3: Miscellaneous Correspondence

Box 40, Folder 1	Stephen M. Balzer engine correspondence, 1898-1899
Box 40, Folder 2	Stephen M. Balzer engine correspondence, 1900
Box 40, Folder 3	Stephen M. Balzer engine correspondence, 1901-1962
Box 40, Folder 4	Octave Chanute to George Brown Goode, Smithsonian Institution, 1896
Box 40, Folder 5	George Brown Goode to Mr. Wilson, Smithsonian, 1894
Box 40, Folder 6	E. C. Huffaker to C. G. Abbot, Secretary of the Smithsonian, 1935
Box 40, Folder 7	Samuel P. Langley (S.P.L.'s nephew) to Dr. Howe, 1918
Box 40, Folder 8	Thaddeus. S. C. Lowe - Joseph Henry correspondence, 1860-1861
Box 40, Folder 9	Manly Family correspondence, 1962
Box 40, Folder 10	Theodore Roosevelt to John D. Long, Secretary of the Navy, 1898
Box 40, Folder 11	George O. Squier - Charles D. Walcott correspondence on naming the National Aeronautical Proving Ground for Langley, 1916
Box 40, Folder 12	Correspondence on the Langley Aerodynamical Laboratory, 1912-1914

Box 40, Folder 13 Correspondence on the Langley Papers, 1907-1962

Return to Table of Contents

Series 5: Manuscripts, Papers, Articles, 1874-1951

Subseries 5.1: Works by S. P. Langley, 1874-1904

Scope and Contents: The manuscripts of *Mechanical Flight* in this subseries also include sections and revisions by Langley's assistant, Charles M. Manly. Original drawings from *Mechanical Flight* are listed in Series 9 - Flat Boxes and Oversized Material. Additional manuscript material is included in Series 11.

Box 41, Folder 1	The Development of the Aerodrome - typed manuscript
Box 41, Folder 2	Experiments in Aerodynamics - Chapter 1 , "Introduction" - mimeo draft with corrections, 1891
Box 41, Folder 3	Experiments in Aerodynamics - "Object and Character of Experiments" - mimeo draft with corrections, 1891
Box 41, Folder 4	Experiments in Aerodynamics - "The Resultant Pressure Recorder" - mimeo draft with corrections, 1891
Box 41, Folder 5	Experiments in Aerodynamics - "The Suspended Plane" - mimeo draft with corrections, 1891
Box 41, Folder 6	Experiments in Aerodynamics - "The Counterpoised Eccentric Plane" - mimeo draft with corrections, 1891
Box 41, Folder 7	Experiments in Aerodynamics - "The Plane Dropper" - mimeo draft with corrections, 1891
Box 41, Folder 8	Experiments in Aerodynamics - Description of plane dropper, pp.68-73, appendices B and C - mimeo draft with corrections, 1891
Box 41, Folder 9	Experiments in Aerodynamics - "Dynamometer - Chronograph" - mimeo draft with corrections, 1891
Box 41, Folder 10	Experiments in Aerodynamics - "Summary" - mimeo draft with corrections, 1891
Box 41, Folder 11	Experiments in Aerodynamics - "Appendix" - mimeo draft with corrections, 1891
Box 41, Folder 12	Experiments in Aerodynamics - "10. The Component Pressure Recorder" - mimeo draft with corrections; also includes illustrations, 1891
Box 41, Folder 13	Experiments in Aerodynamics - mimeo draft (1 of 2) pp. 1-66, 1891
Box 41, Folder 14	Experiments in Aerodynamics - mimeo draft (2 of 2) pp.14-71, 1891
Box 42, Folder 1	Experiments in Aerodynamics - mimeo draft with corrections (1 of 2)

Box 42, Folder 2	Experiments in Aerodynamics - mimeo draft with corrections (2 of 2)
Box 42, Folder 3	The Flying Machine - mimeo draft, 1897
Box 42, Folder 4	Mechanical Flight - mimeo draft with corrections
Box 42, Folder 5	Mechanical Flight - Chapter 7G - "History of Construction of Frame and Engines for Aerodromes No. 4, 5, and 6" - mimeo draft with corrections
Box 42, Folder 6	Mechanical Flight - Final revision - Introduction and Chapter 1A
Box 42, Folder 7	Mechanical Flight - Final revision - Chapter 2B "Experiments with Rubber Motor Models"
Box 42, Folder 8	Mechanical Flight - Final revision - Chapter 3E "Available Motors"
Box 42, Folder 9	Mechanical Flight - Final revision - Chapter 4D - "Early Steam Motor and Other Models"
Box 43, Folder 1	Mechanical Flight - Final revision - Chapter 5G - "On Sustaining Surfaces"
Box 43, Folder 2	Mechanical Flight - Final revision - Chapter 6 - "Balancing the Aerodrome", including notes of calculations
Box 43, Folder 3	Mechanical Flight - section of hand-written manuscript and mimeo draft
Box 43, Folder 4	Mechanical Flight - drafts, notes
Box 43, Folder 5	Mechanical Flight - list of illustrations
Box 43, Folder 6	Mechanical Flight - propeller calculations
Box 43, Folder 7	Note on the Aerodrome of Mr. Langley Prepared for the Conversazione of the American Institute of Electrical Engineers. Multiple copies, 1901
Box 43, Folder 8	Results of Observations by Me on Aerial Propellers, 1893
Box 43, Folder 9	Report of S. P. Langley, 1889
Box 43, Folder 10	Articles and Papers on Aeronautics by S. P. Langley, 1891-1906
Box 43, Folder 11	Articles & papers by S. P. Langley (non-aeronautic) 1 of 3, 1874-1884
Box 43, Folder 12	Articles & papers by S. P. Langley (non-aeronautic) 2 of 3, 1885-1898
Box 44, Folder 1	Articles & papers by S. P. Langley (non-aeronautic) 3 of 3, 1901-1904

Box 44, Folder 2	Notes on bird flight
Box 44, Folder 3	"Supplementary Report - answers to questions [illeg.] by Secretary Langley", 1895

Subseries 5.2: Miscellaneous Manuscripts, Articles, and Notes

Box 44, Folder 4	Charles Abbott - The Relations Between the Smithsonian Institution and the Wright Brothers (1928)
Box 44, Folder 5	Octave Chanute - extract from Progress in Flying Machines (1892)
Box 44, Folder 6	E. C. Huffaker - Experiments with Gliding Models (1899)
Box 44, Folder 7	E. C. Huffaker - The Flight of Birds (nd)
Box 44, Folder 8	E. C. Huffaker - report on experiments in aerodynamics (curved surfaces)(1897)
Box 44, Folder 9	E. C. Huffaker - On Soaring Flight, manuscript, notes, drawings (nd)
Box 44, Folder 10	Charles M. Manly - The Langley Machine at Hammondsport, galley proofs (nd)
Box 44, Folder 11	Memorandum on a paper by Hiram Maxim (nd)
Box 44, Folder 12	Walter Regan - The Langley Medal, radio script (1938)
Box 44, Folder 13	Mr. Maynard - essay on Langley's aeronautical work (1905)
Box 44, Folder 14	James A. Hoyt - The Past is Prologue (biographical sketch of Charles M. Manly) (1951)

Return to Table of Contents

Series 6: Photographs, 1892-1914

Scope and Contents: Several file folders of photographs were found with the Langley papers; others were found with additional Langley material included as Series 11. In addition, the Archives Department's photographic collection holds a number of Langley photographs, which may be researched through the Department's image database. Other photographs are held in the Langley folders in the Aircraft and Biographies Series Technical Files. Subject listings for these photographs may be found in the appendix. Another collection, the Air Museum Photography Collection (Acc. XXXX-0572) contains 30 8x10 glass negatives of Langley photographs.

Box 45, Folder 1	S. P. Langley portraits
Box 45, Folder 2	Aerodromes Exhibit, National Museum, Arts & Industries Building
Box 45, Folder 3	Aerodrome A ("Great Aerodrome", "Large Aerodrome")
Box 45, Folder 4	Aerodrome A, rebuilt by Glenn Curtiss - negative, 1914
Box 45, Folder 5	Aerodrome A ("Great Aerodrome") and Quarter Scale Model - Photographs by Thomas Smillie, January 1900 Notes: Photographs by Thomas W. Smillie, January 1900. From Waste Book Volume 26 (see also Box 56)
Box 45, Folder 6	Aerodrome Launching Apparatus
Box 45, Folder 7	Steam model Aerodrome, circa 1892-1893
Box 45, Folder 8	Aerodrome No. 5
Box 45, Folder 9	Aerodrome No. 5, 1st flight - Photographs by Alexander Graham Bell, May 6, 1896 Notes: Photographs by Alexander Graham Bell
Box 45, Folder 10	Aerodrome No. 5, 1st and 2nd flights - Photographs by F. E. Fowle, May 6, 1896
Box 45, Folder 11	Aerodrome No. 5, chart of flight, November 28, 1896
Box 45, Folder 12	Ladder kite - cyanotypes, 1896
Box 45, Folder 13	Quarter-Size Aerodrome, 1900-1901
Box 45, Folder 14	Quarter-Size Aerodrome flight, August 8, 1903
Box 45, Folder 15	Quarter-Size Aerodrome Motor cyanotype
Box 45, Folder 16	Unidentified model in flight
Box 45, Folder 17	Wadesboro (NC) Eclipse Expedition - photographs by Thomas W. Smillie, May, 1900

	Notes:	Photographs by Thomas W. Smillie
Box 45, Folder 18	Parseval-Sigsfeld observation balloon, Germany - photographic postcard, 1898	

Return to Table of Contents

Series 7: Trade Catalogues and Ephemera, 1885-1908

Scope and Contents: A box of material, mainly trade catalogues and price lists from various suppliers and dealers, was found stored with the Aerodrome A at the Museum's Paul E. Garber Facility in Suitland, Maryland; evidentially from Langley's workshop. Also included in the box was a small piece of stained wood and a sheet of mica; both were transferred to the Museum's Aeronautics Division.

Box 46, Folder 1	Corbin Cabinet Locks Catalogue, 1907
Box 46, Folder 2	Crane Co. Steam Goods Catalogue, 1908
Box 46, Folder 3	Department of Agriculture Bulletin
Box 46, Folder 4	Furniture Catalogues
Box 46, Folder 5	Hardware catalogues and brochures
Box 47, Folder 1	Lunkenheimer Fittings Catalogue
Box 47, Folder 2	Machine tools catalogues
Box 47, Folder 3	F. W. Bolgiano and Company nursery catalogue, 1923
Box 47, Folder 4	Plumbing supplies and fittings catalogues
Box 47, Folder 5	Smithsonian Institution publications, 1908
Box 47, Folder 6	"Specifications for Buoys and Appendages", U. S. Lighthouse Establishment, 1898
Box 47, Folder 7	Tool catalogues
Box 47, Folder 8	Wm. P. Walter's Sons Wood Workers' Tools catalogue, 1885
Box 47, Folder 9	Waterman pen catalogue
Box 47, Folder 10	Damaged catalogue fragments

Return to Table of Contents

Series 8: Miscellaneous Files, 1886-1919

Box 48, Folder 1	Langley Aerodynamical Laboratory, 1913
Box 48, Folder 2	Langley biographical material
Box 48, Folder 3	Langley Collection card index (1 of 3)
Box 48, Folder 4	Langley Collection card index (2 of 3)
Box 48, Folder 5	Langley Collection card index (3 of 3)
Box 48, Folder 6	"Langley Day", Smithsonian press release, May 6, 1912
Box 48, Folder 7	Langley patents
Box 48, Folder 8	Langley, miscellaneous documents salvaged from Langley Laboratory
Box 48, Folder 9	Langley, miscellaneous
Box 49, Folder 1	Congressional bills for the promotion of aerial navigation, 1895-1896
Box 49, Folder 2	Clippings - Langley, the Aerodromes, and other aircraft, 1899
Box 49, Folder 3	Clippings, 1886-1935
Box 49, Folder 4	Clippings, Philadelphia Bureau of Press Clippings, 1898-1899
Box 49, Folder 5	Drawings, diagram of C.P. motor with rheostat
Box 49, Folder 6	Drawings, Hiram Maxim's flying machine and engine drawing, 1891
Box 49, Folder 7	Drawings, Vogt steam engine, 1892 Notes: Folder contents were not copied.
Box 49, Folder 8	National Advisory Committee for Aeronautics regulations, 1918
Box 49, Folder 9	Papers, letters, and photograph of John A. R. Newlands
Box 49, Folder 10	"Phillip's Flying Machine", article from "Engineering", 1893
Box 49, Folder 11	Notes on references to the literature of bird flight; aeronautics clippings
Box 49, Folder 12	Notes on military captive balloons, 1919
Box 49, Folder 13	Miscellaneous publications

Box 49, Folder 14	Miscellaneous notes and calculations
Box 49, Folder 15	Patents and patent drawings

Return to Table of Contents

Series 9: Flat Boxes and Oversized Material, 1889-1911

Box 50	O&F [U.S. Army Board of Ordnance and Fortification] accounts, ledger, 1889-1901
Box 51	O&F [U.S. Army Board of Ordnance and Fortification] ledger, 1901
Box 52	O&F [U.S. Army Board of Ordnance and Fortification] vouchers, 1899-1900
Box 53, Folder 1	Langley letter on his Aerodromics work
Box 53, Folder 2	Wind velocity experiments notes
Box 54	Pneumatics experiments notes
Box 55	"Langley Memoir on Mechanical Flight", 1911
Box 55	Langley "Internal Work of the Wind", 1893
Box 55	R. L. Reed bound journal – financial accounts and work records, 1895-1914
Box 56	Langley article - "Manflight", Boston Evening Transcript; photographs of Langley rubber-pull Aerodrome models by Thomas Smillie, Smithsonian Institution, January 21, 1893 Notes: Folder contents were not copied.

Subseries 9.1: Langley Data and Drawings

General: Oversized material stored at the Steven F. Udvar-Hazy Facility. For item listing, consult the National Air and Space Museum Archives Department's Drawings Databases.

Box 57, Folder 1	Instruments: Allegheny Whirling Table Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620). Folder contents were not copied.
Box 57, Folder 2	Data: Wind Velocity Data Plot Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620)
Box 57, Folder 3	Data: Unidentified Data Traces Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620)
Box 57, Folder 4	Maps and Charts Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620)
Box 57, Folder 5	Boats: Small Houseboat Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620). Folder contents were not copied.
Box 57, Folder 6	Boats: Great Houseboat

	Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620). Folder contents were not copied.
Box 57, Folder 7	Aerodromes: Aerodrome No. 4 Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620). Folder contents were not copied.
Box 57, Folder 8	Aerodromes: Aerodrome No. 5 Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620)
Box 57, Folder 9	Aerodromes: Aerodrome A Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620)
Box 57, Folder 10	Drawings Prepared for Publications: Wind Velocity Graphs Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620)
Box 57, Folder 11	Miscellaneous / Unidentified Drawings Notes: 16x20 folders (16x20x1 drop front box; XXXX-0494 Box 1620)
Box 58, Folder 1	Instruments: Watkins (J. E.) Whirling Table Notes: c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 2	Instruments: Miscellaneous Instruments Notes: c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 3	Data: Anemometer Data Traces Notes: c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 4	Data: Dynamic Chronograph Data Traces (1/2) Notes: c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 5	Data: Dynamic Chronograph Data Traces (2/2) Notes: c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 6	Data: Wind Velocity Data Plots (1/2) Notes: c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 7	Data: Wind Velocity Data Plots (2/2) Notes: c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 8	Maps and Charts

	Notes:	c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 9	Engines: 5" Cylinder Engine	
	Notes:	c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 10	Aerodromes: Aerodrome No. 5	
	Notes:	c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 11	Aerodromes: 1/4 scale Aerodrome A	
	Notes:	c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 12	Aerodromes: Aerodrome A	
	Notes:	c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.
Box 58, Folder 13	Miscellaneous / Unidentified Drawings	
	Notes:	c20x24 folders (20x24x1 drop front box; XXXX-0494 Box 2024). Folder contents were not copied.

Subseries 9.2: Oversized material

Box 59	Engine detail and aircraft component drawings, calculations, 1890-1891	
	Notes:	Folder contents were not copied.

Subseries 9.3: Folders stored in Map Case Drawers

General: Drawings and oversized material may be subject to relocation in different cases or drawers; please consult the Archives Division staff for current location of oversized material.

Drawings larger than 36x48 (consult Archives Division staff for current location)

Box 59	Test results from Weather Bureau Kite Station, Arlington, Virginia, 1890	
	Notes:	Folder contents were not copied.
Box 59	Photograph of Lawrence Hargrave compressed air flying machine by C. Bayless, Sydney, Australia., 1890	
Map-case Map Case Drawers, Folder 1	Instruments: Watkins (J. E.) Whirling Table	
	Notes:	24x36 folders.
Map-case Map Case Drawers, Folder 2	Data: Anemometer Data Traces (1/2)	
	Notes:	24x36 folders.
Map-case Map Case Drawers, Folder 3	Data: Anemometer Data Traces (2/2)	
	Notes:	24x36 folders

Map-case Map Case Drawers, Folder 4	Boats: Small Houseboat Notes: 24x36 folders
Map-case Map Case Drawers, Folder 5	Boats: Great Houseboat Notes: 24x36 folders
Map-case Map Case Drawers, Folder 6	Engines: 2-Cylinder Steam Engine Notes: 24x36 folders
Map-case Map Case Drawers, Folder 7	Engines: Experimental (4 3/16" Cylinder) Engine Notes: 24x36 folders
Map-case Map Case Drawers, Folder 8	Engines: 5" Cylinder (Aerodrome A) Engine (1/2) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 9	Engines: 5" Cylinder (Aerodrome A) Engine (2/2) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 10	Aerodromes: 1/4 scale Aerodrome A Notes: 24x36 folders
Map-case Map Case Drawers, Folder 11	Aerodromes: Aerodrome A Notes: 24x36 folders
Map-case Map Case Drawers, Folder 12	Weight Data Sheets Notes: 24x36 folders
Map-case Map Case Drawers, Folder 13	Drawings Prepared for Publications: Annals of the Astrophysical Observatory of the Smithsonian Institution,, vol. 1 (1/2) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 14	Drawings Prepared for Publications: Annals of the Astrophysical Observatory of the Smithsonian Institution, vol. 1 (2/2) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 15	Drawings Prepared for Publications: Memoir on Mechanical Flight - Original Drawings (1/5) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 16	Drawings Prepared for Publications: Memoir on Mechanical Flight - Original Drawings (2/5) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 17	Drawings Prepared for Publications: Memoir on Mechanical Flight - Original Drawings (3/5) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 18	Drawings Prepared for Publications: Memoir on Mechanical Flight - Original Drawings (4/5)

	Notes: 24x36 folders
Map-case Map Case Drawers, Folder 19	Drawings Prepared for Publications: Memoir on Mechanical Flight - Original Drawings (5/5) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 20	Drawings Prepared for Publications: Memoir on Mechanical Flight - Duplicate Drawings (1/4) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 21	Drawings Prepared for Publications: Memoir on Mechanical Flight - Duplicate Drawings (2/4) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 22	Drawings Prepared for Publications: Memoir on Mechanical Flight - Duplicate Drawings (3/4) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 23	Drawings Prepared for Publications: Memoir on Mechanical Flight - Duplicate Drawings (4/4) Notes: 24x36 folders
Map-case Map Case Drawers, Folder 24	Miscellaneous / Unidentified Drawings Notes: 24x36 folders
Map-case Map Case Drawers, Folder 1	Instruments: Allegheny Whirling Table Notes: 36x48 folders
Map-case Map Case Drawers, Folder 2	Instruments: Watkins Whirling Table Notes: 36x48 folders
Map-case Map Case Drawers, Folder 3	Maps and Charts Notes: 36x48 folders
Map-case Map Case Drawers, Folder 4	Boats: Raft Notes: 36x48 folders
Map-case Map Case Drawers, Folder 5	Boats: Small Houseboat Notes: 36x48 folders
Map-case Map Case Drawers, Folder 6	Boats: Great Houseboat (1/4) Notes: 36x48 folders
Map-case Map Case Drawers, Folder 7	Boats: Great Houseboat (2/4) Notes: 36x48 folders
Map-case Map Case Drawers, Folder 8	Boats: Great Houseboat (3/4) Notes: 36x48 folders

Map-case Map Case Drawers, Folder 9	Boats: Great Houseboat (4/4) Notes: 36x48 folders
Map-case Map Case Drawers, Folder 10	Engines: Experimental (4 3/16" Cylinder) Engine Notes: 36x48 folders
Map-case Map Case Drawers, Folder 11	Engines: 5" Cylinder (Aerodrome A) Engine Notes: 36x48 folders
Map-case Map Case Drawers, Folder 12	Aerodromes: Aerodrome No. 0 Notes: 36x48 folders
Map-case Map Case Drawers, Folder 13	Aerodromes: Aerodrome No. 5 Notes: 36x48 folders
Map-case Map Case Drawers, Folder 14	Aerodromes: ¼ scale Aerodrome A Notes: 36x48 folders
Map-case Map Case Drawers, Folder 15	Aerodromes: Aerodrome A Notes: 36x48 folders
Map-case Map Case Drawers, Folder 16	Miscellaneous / Unidentified Drawings Notes: 36x48 folders

Return to Table of Contents

Series 10: Shorthand Diaries, 1898-1902

Scope and Contents: A collection of 37 notebooks containing notes in an unidentified shorthand system, dating from 1898 to 1902, with 8 notebooks bearing partial dates or undated. Most of the notebooks bear the name of G.B. Wells, a Smithsonian messenger from 1894-1903. Several of the notebooks also bear the phrase "O&F" for "Ordnance and Fortification" --Langley received grants for his aeronautical work from the U. S. Army's Board of Ordnance and Fortification. Notebooks have been numbered in pencil on inside front covers. No attempt was made to decipher the shorthand entries.

Box 60, Folder 1	G.B. Wells, January 16, 1898
Box 60, Folder 2	G.B. Wells, February 26, 1899
Box 60, Folder 3	G.B. Wells, April 10, 1899
Box 60, Folder 4	G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification], April 11, 1899
Box 60, Folder 5	G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification], Finished August 2, 1899, Commenced July 5, 1899
Box 60, Folder 6	G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification], August 3, 1899 #1, Finished September 3, 1899
Box 60, Folder 7	G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification], number 2, August 20, 1899 Image(s): G.B. Wells; O & F [U.S. Army Board of Ordnance and Fortification], number two
Box 60, Folder 8	G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification]; number three, August 29, 1899 Image(s): G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification]; number 3
Box 60, Folder 9	G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification], September 10, 1899
Box 60, Folder 10	G.B. Wells, September 23, 1899, Finished October 23, 1899
Box 61, Folder 1	G.B. Wells, October 23, 1899, Finished November 15, 1899
Box 61, Folder 2	G.B. Wells, November 23, 1899; Commenced January 1, 1900, Finished January 20, 1900
Box 61, Folder 3	[Untitled], Finished December 4, 1899
Box 61, Folder 4	Heed, Jr. [?] and G.B.W. [G.B. Wells], Finished December 13, 1899 Image(s): Heed, Jr. [?] & G.B.W. [G.B. Wells]

Box 61, Folder 5	G.B. Wells; O and F [U.S. Army Board of Ordnance and Fortification], January 25, 1900, Finished March 22, 1900 Image(s): G.B. Wells; O&F [U.S. Army Board of Ordnance and Fortification]
Box 61, Folder 6	[Untitled], Finished February 25, 1900
Box 61, Folder 7	G.B. Wells, February 26, 1900, Finished April 19, 1900
Box 61, Folder 8	G.B. Wells, May 2, 1900, Finished June 19, 1900
Box 61, Folder 9	November 11, 1900, Fin[ished] December, 1900
Box 61, Folder 10	G.B. Wells, November 15, 1900
Box 61, Folder 11	G.B. Wells, Commenced June 4, 1900, Finished December 1900
Box 61, Folder 12	G.B. Wells, December 30, 1900
Box 61, Folder 13	G.B. Wells, February 3, 1901 - March 2, 1901
Box 61, Folder 14	[Untitled], Finished March 23, 1901
Box 62, Folder 1	G.B. Wells, March 23, 1901
Box 62, Folder 2	[Untitled], Fin[ished] November 8, 1901
Box 62, Folder 3	G.B. Wells, November 10, 1901, Finished December 7, 1901
Box 62, Folder 4	G.B. Wells, January 19, 1902
Box 62, Folder 5	G.B. Wells, April 4
Box 62, Folder 6	G.B. Wells, January 12, 190[?]
Box 62, Folder 7	[Untitled], undated
Box 62, Folder 8	[Untitled], undated
Box 62, Folder 9	[Untitled], undated
Box 62, Folder 10	[Untitled], undated
Box 62, Folder 11	[Untitled], undated
Box 62, Folder 12	[Untitled], undated

Box 62, Folder 13	[Untitled], undated

Return to Table of Contents

Series 11: Additional Material, 1890-1914

Scope and Contents: Several additional boxes of Langley Collection correspondence, manuscript material, drawings and photographs were found in the Museum's rare book room, the Ramsey Room, after the organization of the main collection and the publication of the collection finding aid. This additional material has been included as a separate series.

Box 63, Folder 1	Aerodrome project - requisition vouchers, 1899-1901
Box 63, Folder 2	Aerodrome project - requisition vouchers, 1899-1902
Box 63, Folder 3	Biographical material - Samuel P. Langley
Box 63, Folder 4	Biographical material - Charles M. Manly; ms. article by E.L. Jones
Box 63, Folder 5	Clippings,1 of 4, 1893-1904
Box 63, Folder 6	Clippings, 2 of 4, 1893-1904
Box 63, Folder 7	Clippings, 3 of 4, 1893-1904
Box 63, Folder 8	Clippings, 4 of 4, 1893-1904
Box 64, Folder 1	Correspondence, S.P. Langley - James T. DuBois, 1898
Box 64, Folder 2	Correspondence, S.P. Langley - Charles M. Manly, 1898-1899
Box 64, Folder 3	Correspondence, S.P. Langley - James Means
Box 64, Folder 4	Correspondence, S.P. Langley - J.E. Watkins, 1892-1900
Box 64, Folder 5	Correspondence, S.P. Langley - Letters and drawings of engines, 1900
Box 64, Folder 6	Correspondence, S.P. Langley - unidentified correspondents, 1896-1898
Box 64, Folder 7	Correspondence, J.E. Watkins - Charles B. Ball, 1891
Box 64, Folder 8	Correspondence, J.E. Watkins - Octave Chanute, 1890-1893
Box 64, Folder 9	Correspondence, J.E. Watkins - Mendes Cohen, 1891
Box 64, Folder 10	Correspondence, J.E. Watkins - Lawrence Hargrave, 1891
Box 64, Folder 11	Correspondence, J.E. Watkins - Caroline Henry, 1891
Box 64, Folder 12	Correspondence, J.E. Watkins - Mary A. Henry, 1892

Box 64, Folder 13	Correspondence, J.E. Watkins - A. Kastelic, Venezuelan National Railroad, 1891
Box 64, Folder 14	Correspondence, J.E. Watkins - William S. Rosecrans, 1891
Box 64, Folder 15	Correspondence, J.E. Watkins - D. Sulzberberger, 1892
Box 64, Folder 16	Correspondence, J.E. Watkins - Edward B. Wall, 1893
Box 64, Folder 17	Correspondence, J.E. Watkins - M. C. Winlock, Smithsonian Institution, 1892
Box 64, Folder 18	Correspondence, miscellaneous
Box 64, Folder 19	Drawings - Aerodrome A, from "Aeronautics" magazine, May 30, 1914 Notes: Folder contents were not copied.
Box 64, Folder 20	Drawings - reproductions of da Vinci aeronautical designs
Box 64, Folder 21	Drawings - miscellaneous drawings
Box 64, Folder 22	Manuscripts, Papers, Articles - Langley, Mechanical Flight, mimeo draft excerpt
Box 64, Folder 23	Manuscripts, Papers, Articles - "The Langley Airplane", statement by Dr. Walcott - Aerodrome exhibit label
Box 64, Folder 24	Manuscripts, Papers, Articles - "When Men Have Wings", Gibson Gardner, from "Technical World Magazine"
Box 64, Folder 25	Manuscripts, Papers, Articles - written notes on Aerodrome design
Box 64, Folder 26	Manuscripts, Papers, Articles - notebook with drawings, calculations, notes, 1892
Box 64, Folder 27	Miscellaneous notes, 1892-1899
Box 64, Folder 28	Miscellaneous notes, publications
Box 64, Folder 29	Photographs - Aerodrome A, rebuilt by Glenn Curtiss, 1914
Box 64, Folder 30	Photographs - rubber pull Aerodrome No. 26, 1889
Box 64, Folder 31	Photographs - unidentified apparatus
Box 64, Folder 32	Photographs - unidentified test rig, November 27, 1897
Box 64, Folder 33	Experiments in Aerodynamics - proof copy with Langley's corrections (former NASM display) Notes: Folder contents were not copied.

Box 64, Folder 34	"Extrapolations of Pressure" - graph and table, June 17, 1892
Box 65	Scrapbook - Aeronautica, September 1890 - February 1892

Return to Table of Contents