

John Ericsson

A Register of His Papers in the Library of Congress

**Prepared by Audrey Walker
Revised by Patrick Kerwin**



Manuscript Division, Library of Congress

Washington, D.C.

2003

Contact information: <http://lcweb.loc.gov/rr/mss/address.html>

**Finding aid encoded by Library of Congress
Manuscript Division, 2003**

Finding aid URL: <http://hdl.loc.gov/loc/mss/eadmss.ms003059>

Latest revision: 2004-07-19

Collection Summary

Title: Papers of John Ericsson

Span Dates: 1821-1890

Bulk Dates: (bulk 1842-1886)

ID No.: MSS19877

Creator: Ericsson, John, 1803-1889

Extent: 1,500 items; 11 containers; 4.4 linear feet; 6 microfilm reels

Language: Collection material in English, and Swedish

Repository: Manuscript Division, Library of Congress, Washington, D.C.

Abstract: Engineer and inventor. Correspondence, writings, design specifications, articles, memoranda, technical notes, financial and legal papers, drawings, printed matter, and miscellany relating primarily to Ericsson's activities in marine engineering, especially his work on screw propellers and his design of the steamship *Princeton* and the ironclad *Monitor*. Includes correspondence of Ericsson's biographer, William C. Church.

Selected Search Terms

The following terms have been used to index the description of this collection in the Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

Names:

Ericsson, John, 1803-1889

Adlersparre, A.--Correspondence

Browning, S. B.--Correspondence

Chandler, William E. (William Eaton), 1835-1917--Correspondence

Church, William Conant, 1836-1917--Correspondence

Dahlgren, John Adolphus Bernard, 1809-1870--Correspondence

Delamater, Cornelius Henry, 1821-1899--Correspondence

Elworth, Hjalmar--Correspondence

Ericson, Nils--Correspondence

Fox, Gustavus Vasa, 1821-1883--Correspondence

Griswold, John A. (John Augustus), 1818-1872--Correspondence

Haswell, Chas. H. (Charles Haynes), 1809-1907--Correspondence

Horsford, Eben Norton, 1818-1893--Correspondence

Ingersoll, Robert Green, 1833-1899--Correspondence

Jones, William Gore--Correspondence

Ogden, Francis Barber, 1783-1857--Correspondence

Oscar II, King of Sweden, 1829-1907--Correspondence

Paulding, Hiram, 1797-1878--Correspondence

Sargent, Epes, 1813-1880--Correspondence

Sargent, John Osborne, 1811-1891--Correspondence

Seward, William Henry, 1801-1872--Correspondence

Smith, Joseph, 1790-1877--Correspondence

Stockton, Robert Field, 1795-1866--Correspondence

Welles, Gideon, 1802-1878--Correspondence

United States. Navy --History--19th century

Monitor (Ironclad)

Princeton (Steamship)

Subjects:

Anti-submarine warfare

Armored vessels

Destroyers (Warships)

Floating batteries

Hydrometer

Marine engineering
Naval architecture
Ordnance, Naval
Propellers
Pyrometers
Shipbuilding
Solar energy
Warships
Warships--Turrets
United States--History, Naval--19th century

Occupations:

Engineers
Inventors

Administrative Information

Provenance:

The papers of John Ericsson, engineer and inventor, were given to the Library of Congress by Agnes M. Church in 1945 and 1955. Additions were received as a deposit of the Naval History Society, 1913, and by purchase, 1975.

Processing History:

The papers of John Ericsson were processed in 1980. The finding aid was revised in 2003.

Transfers:

Photographs have been transferred to the Library's Prints and Photographs Division where they are identified as part of these papers.

Copyright Status:

The status of copyright in the unpublished writings of John Ericsson is governed by the Copyright Law of the United States (Title 17, U.S.C.).

Microfilm:

A microfilm edition of part of these papers is available on six reels. Consult a reference librarian in the Manuscript Division concerning availability for purchase or interlibrary loan.

Preferred Citation:

Researchers wishing to cite this collection should include the following information: Container or reel number, John Ericsson Papers, Manuscript Division, Library of Congress, Washington, D.C.

Biographical Note

| <i>Date</i> | <i>Event</i> |
|---------------|---|
| 1803, July 31 | Born, Vermland Province, Sweden |
| 1815 | Commissioned to make drawings for the Gota Canal Co. |
| 1815-1820 | Assistant leveler and leveler at various stations of the Gota Canal Co. |
| 1820 | Ensign, 23d Regiment Rifle Corps, Swedish army |

| | |
|--------------|---|
| 1821 | Commissioned second lieutenant |
| 1825-1826 | Constructed a condensing flame engine of ten horsepower |
| 1826 | Went to London, England |
| 1827 | Commissioned captain and later resigned from the Swedish army |
| 1828 | Designed steam fire engine for which he received the gold medal of the Mechanics Institute of New York in 1840 Made the first application to navigation of the principle of condensing steam and returning water to the boiler in the ship <i>Victory</i> Designed self-acting gun lock later applied to wrought iron gun of the <i>Princeton</i> |
| 1829 | Designed and constructed the steam locomotive <i>Novelty</i> |
| 1830 | Introduced "link motion" for reversing locomotive engines |
| 1833 | Introduced the "caloric" engine |
| 1833-1834 | Experimented with submerged propellers |
| 1836 | Invented and patented the screw propeller Married Amelia Byam |
| 1837 | Built steam vessel with two screw propellers |
| 1838 | Constructed the <i>Robert F. Stockton</i> , an iron screw steamer |
| 1839 | Came to the United States |
| 1841 | Furnished designs for the first screw-propelled warship, the <i>Princeton</i> , commissioned in 1844 |
| 1851 | Exhibited inventions at United States division of the World's Fair in London Developed design and plans for the <i>Ericsson</i> , a ship propelled by "caloric" engines, completed in 1853 |
| 1854 | Developed plans for a submerged armored vessel with guns in revolving shot-proof cupola placed centrally on deck |
| 1861 | Built <i>Monitor</i> , an armored ship embodying the features designed in 1854 |
| 1869 | Constructed thirty steam gunboats for the Spanish government |
| 1881 | Devised the <i>Destroyer</i> , a submarine torpedo boat |
| 1883 | Erected "sun motor" which ran on solar energy at New York |
| 1889, Mar. 8 | Died, New York, N.Y. |

Scope and Content Note

The papers of John Ericsson (1803-1889) span the years 1821-1890, with the bulk of the material falling within the years 1842-1886. The collection consists of correspondence, design specifications, articles, memoranda, technical notes, financial and legal papers, drawings, and printed matter.

Ericsson's papers relate mainly to his designs and scientific pursuits following his emigration from England to the United States. Early letters, mainly correspondence with Robert Field Stockton, concern Ericsson's "caloric" engine and the development of the screw propeller as a means of propulsion for ships. In 1841 by contract with the United States Navy, Ericsson designed the *Princeton*, the first screw-propelled warship with motive machinery below the water line. His papers include correspondence, specifications, and notes relating to the construction of this ship, an early effect in modern naval construction.

The collection reflects Ericsson's continued interest in naval warfare. An earlier design for an armored vessel which Ericsson sent to Napoleon III in 1854 is included in his papers. After 1861 the papers contain numerous letters and other documents pertaining to the design and construction of the *Monitor*, the ironclad ship which defeated the *Merrimac* in 1862 and inspired the United States and other maritime nations to build armored monitor fleets. The progress of seafaring countries in accepting the ironclad vessels as components of their navies can be traced in Ericsson's correspondence.

After the Civil War, Ericsson turned his attention to the vulnerability of armored ships and revived his earlier idea of a system of submarine attack using submerged lighter weight torpedo boats which featured speed and guided torpedoes as countermeasures to the impregnability of the ironclad ships. His plan was embodied in a boat which he called the *Destroyer*, and his papers from the late 1860s to 1888 contain letters detailing his efforts to sell the system to the United States and other maritime nations. Letters to S. B. Browning, his agent in London for all European countries except Sweden, depict Ericsson's strategy for creating interest in the *Destroyer* in England and eventually persuading the British Admiralty to purchase a vessel for test trials. Other topics related to naval defense include gun installations, floating batteries, revolving turrets, development of fleets, and the general outfitting of ships of war.

Letters to editors of scientific and naval journals describing Ericsson's designs and often responding to critiques made by other scientists and naval officers are interspersed throughout the correspondence. References to his work on solar energy can be found in several letters in the latter part of the 1860s. The specifications and technical notes file contains other papers relating to his designs and ideas, including materials on the pyrometer, the hydrometer, and other apparatuses which he exhibited at the 1851 World's Fair in London, as well as notes on various engines with which he was associated. Many of the letters are in Swedish, particularly the [family correspondence](#). Correspondence from 1889 to 1890 consists of letters addressed to Ericsson's biographer, William Conant Church.

Correspondents include A. Adlersparre, S. B. Browning, William E. Chandler, John Adolphus Bernard Dahlgren, Cornelius Henry Delamater, Hjalmar Elworth, Nils Ericson, Gustavus Vasa Fox, John A. Griswold, Charles H. Haswell, Eben Norton Horsford, Robert Green Ingersoll, William Gore Jones, Francis Barber Ogden, Oscar II, King of Sweden, Epes Sargent, John Osborne Sargent, William Henry Seward, Joseph Smith, Robert Field Stockton, and Gideon Welles.

Organization of the Papers

The collection is arranged in six series:

- [Diaries, 1841-1842](#)
- [Family Correspondence, 1860-1883](#)
- [General Correspondence, 1821-1890, n.d.](#)
- [Writings File, 1833-1880, n.d.](#)
- [Financial Records, 1844-1889, n.d.](#)
- [Miscellany, 1836-1887, n.d.](#)

Description of Series

Container

Series

BOX 1
REEL 1

Diaries, 1841-1842

Extract from Ericsson's daily journal.

BOX 1
REEL 1

Family Correspondence, 1860-1883

Letters exchanged between Ericsson and his brother, Nils Ericson, and his son, Hjalmar Elworth.
Arranged chronologically.

BOX 1-4
REEL 1-5

General Correspondence, 1821-1890, n.d.

Letters received, retained copies and drafts of letters sent, copies of cablegrams, and memoranda.
Arranged chronologically.

BOX 5
REEL 5-6

Writings File, 1833-1880, n.d.

Copies and drafts of articles, drawings, specifications, technical notes and memoranda, and poems.
Arranged alphabetically by type of writing.

BOX 6-11
REEL 6

Financial Records, 1844-1889, n.d.

Correspondence, notes, receipts, and checkbook stubs.
Arranged chronologically.

BOX 11
REEL 6

Miscellany, 1836-1887, n.d.

Biographical data, extracts and copies of articles relating to Ericsson and his inventions, legal papers, miscellaneous lists, technical papers, notes, and printed matter.
Arranged alphabetically by type of material.

Container List

Available on microfilm. Shelf no. 18,203

| <i>Container</i> | <i>Contents</i> |
|-----------------------------------|---|
| BOX 1 REEL 1 | Diaries, 1841-1842 Extract from Ericsson's daily journal. |
| BOX 1 REEL 1 | Extract from daily journal, 1841, Feb.-1842, Feb. 28 |
| BOX 1 REEL 1 | Family Correspondence, 1860-1883 Letters exchanged between Ericsson and his brother, Nils Ericson, and his son, Hjalmar Elworth. Arranged chronologically. |
| BOX 1 REEL 1 | 1860-1883 (2 folders) |
| BOX 1-4 REEL 1-5 | General Correspondence, 1821-1890, n.d. Letters received, retained copies and drafts of letters sent, copies of cablegrams, and memoranda. Arranged chronologically. |
| BOX 1 REEL 1-2 | 1821, 1832, 1837-1863 (14 folders) |
| BOX 2 REEL 2-3 | 1864-1869 (11 folders) |
| BOX 3 REEL 4 | 1870-1881 (11 folders) |
| BOX 4 REEL 4-5 | 1882-1890, n.d. (13 folders) |
| BOX 5 REEL 5-6 | Writings File, 1833-1880, n.d. Copies and drafts of articles, drawings, specifications, technical notes and memoranda, and poems. Arranged alphabetically by type of writing. |
| BOX 5 REEL 5-6 | Articles "American and English Iron Clads," 1862 "Improvements in Actuating and Regulating the Speed of Telegraphic Instruments," 1859 "Improvements in Street Locomotives," n.d. "The Loss of the <i>Captain</i> ," 1870 "Motive Engines," 1861 |

Writings File, 1833-1880, n.d.

Container

Contents

"Movable Torpedos," 1879

"New System of Naval Attack," with draft and fragmentary copy, 1854

"Submarine Warfare," 1880

"The Turret of the Pacific," 1862

List of articles by Ericsson

Poems

Specifications and technical notes

Centrifugal forces of the earth, 1870

Engines, 1836-1867

Miscellany

Notes and reply to charges by Sir John Ross in controversy over the *Victory* (steamship), 1833

Notes on meters, gauges, and other mensuration apparatus, 1849[?]

Notes on the moon, 1870

Screw propeller, 1837-1858

Ships

Dictator (bark), 1866

Ericsson (ship), 1854

Princeton (steamship), 1842-1846

Specification for an ironclad shot-proof steam floating battery

Spherical dynamic register

Drawings and engravings of designs

BOX 6-11

REEL 6

Financial Records, 1844-1889, n.d.

Correspondence, notes, receipts, and checkbook stubs.

Arranged chronologically.

Miscellaneous, 1844-1887, n.d.

BOX 6

REEL 6

(2 folders)

not filmed

Checkbook stubs

1844-1862

(6 folders)

BOX 7

1862-1871

(7 folders)

BOX 8

1871-1877

(8 folders)

BOX 9

1877-1882

(13 folders)

BOX 10

1882-1886

(10 folders)

Financial Records, 1844-1889, n.d.

Container

Contents

BOX 11

1886-1889
(7 folders)

BOX 11
REEL 6

Miscellany, 1836-1887, n.d.

Biographical data, extracts and copies of articles relating to Ericsson and his inventions, legal papers, miscellaneous lists, technical papers, notes, and printed matter.
Arranged alphabetically by type of material.

BOX 11
REEL 6

Awards and prizes, lists of

Biographical data

Contributions to the centennial exhibition, 1877, Aug. 29

Contributions to the Kungliga Bibliotheket, Stockholm, Sweden, 1877, Oct. 17

Extracts and copies of articles relating to Ericsson and his inventions, 1860-1887

Legal papers, agreements, affidavits and patent papers, 1836-1887

Lists of ironclad vessels in the United States Navy during the Civil War, 1878

Miscellaneous

(2 folders)

Naturalization papers, 1848

Printed matter

Sketch of Ericsson at twenty-one years of age