



Smithsonian

*National Museum of American History Kenneth E. Behring Center*

## Guide to the Erasmus D. Leavitt Papers

NMAH.AC.0966

Alison Oswald

2022

Archives Center, National Museum of American History

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## Collection Overview

<b>Repository:</b>	Archives Center, National Museum of American History
<b>Title:</b>	Erasmus D. Leavitt Papers
<b>Date:</b>	1861-1955
<b>Identifier:</b>	NMAH.AC.0966
<b>Creator:</b>	Calumet and Hecla Mining Company. Leavitt, Erasmus D., 1836-1916
<b>Source:</b>	National Museum of American History (U.S.). Division of Mechanical and Civil Engineering National Museum of American History (U.S.). Division of Work and Industry
<b>Extent:</b>	20.4 Cubic feet (4 boxes, 82 folders)
<b>Language:</b>	English .
<b>Summary:</b>	Papers document prominent nineteenth-century steam engineer Erasmus D. Leavitt.

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## Administrative Information

### Immediate Source of Acquisition

Collection materials donated by Calumet and Hecla, Inc. in 1960 and by Thomas E. P. Rice, 1977.

The collection came to the Smithsonian in 1960 from Calumet & Hecla, Inc. In the course of a reorganization in 1952 mining had been dropped from the company name as the emphasis was on chemicals, foundry work, and forest products. Its remaining mining activities in other areas of Michigan were phased out during the 1960s and in 1968 Calumet & Hecla merged with Universal Oil Products, Inc. Late in 1970 Universal Oil Products scrapped what was left of the Calumet & Hecla physical plant and its remaining assets were auctioned off.

### Provenance

The drawings were collected in two parts for the National Museum of American History, Division of Civil and Mechanical Engineering (now called the Division of Work and Industry). All were transferred to the Archives Center in 2007. The remaining part of the collection was donated in 1996 to the Division of Civil and Mechanical Engineering by Thomas E. P. Rice. That portion was also transferred to the Archives Center in 2007.

### Related Materials

#### Materials at Other Organizations

#### **Michigan Technological University Archives and Copper Country Historical Collections**

Calumet and Hecla Mining Company Collection

## Processing Information

Collection processed by Alison Oswald, archivist, 2022. Additional research notes contributed by Danielle Bennett.

## Preferred Citation

Erasmus D. Leavitt Collection, Archives Center, National Museum of American History.

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## Historical

The Calumet and Hecla Company, which was formed in about 1866, was one of the largest mining operations in the Lake Superior region of Upper Michigan. Over 3 billion pounds of copper were removed from its extensive mines by the time operations ceased in 1939. To facilitate the work in both the mines and smelting plants, the company installed some of the largest steam engines ever built. The aggregate amounted to over 55,000 horsepower.

Noted 19th century steam engineer Erasmus Darwin Leavitt was hired to design the series of huge multi-cylinder engines. Each had sufficient power to support several operations at one time. While an engine drove one of the hoists, it might also power pumping, conveying, and air compressing machinery. At the peak of operations there were at least 50 steam engines of all sizes providing power to Calumet and Hecla. Falling copper prices during the 1920s and the economic depression of the 1930s ultimately forced the mines to close. The engines were of no further use and their countless tons of cast iron and steel ended up in the scrap drives of World War II.

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## Biographical

Erasmus Darwin Leavitt was born in Lowell, Massachusetts, in 1836 and died in 1916 in Cambridge, Massachusetts. He was educated in the Lowell public schools, entered the machine shop of the Lowell Manufacturing Company in 1852, and served three years as an apprentice. He spent one year with Corliss and Nightingale and was later assistant foreman of the City Point works in South Boston, where he was in charge of building the engines for the flagship "Hartford." From 1859 to 1861 he was chief draftsman for Thurston, Gardiner & Co., of Providence, Rhode Island, leaving to enter the United States Navy in the summer of 1861.

Leavitt served during the Civil War and he was detailed to the Naval Academy at Annapolis as instructor in steam engineering. Resigning in 1867, he resumed the practice of mechanical engineering, making a specialty of pumping and mining machinery. He was consulting engineer of the Calumet and Hecla Mining Company from 1874 to 1904 during which time he designed the equipment. He was also consulting engineer for Henry R. Worthington, the Dickson Manufacturing Company, City of Boston and City of Cambridge, and designed the pumping engine for the City of Louisville, Kentucky. He was advisory engineer and designed machinery for the Bethlehem Steel Company and for South African mining companies. He was a member of the American Society of Mechanical Engineers and formerly its president; the American Society of Civil Engineers, American Institute of Mining Engineers, Boston Society of Civil Engineers, American Society of Naval Engineers, an honorary member of the British Society for the Advancement of Science, life member of Franklin Institute, and member of Institution of Civil Engineers and of the Institution of Mechanical Engineers of Great Britain. He was also a fellow of American Academy of Arts and Sciences.

In 1884 Mr. Leavitt received the honorary degree of Doctor of Engineering from Stevens Institute of Technology of New Jersey. Leavitt retired from active practice in 1904. He married Annie Elisabeth Pettit in 1867, and had three daughters, Mary, Margaret and Annie.

### Source

*Cambridge Chronicle*, March 18, 1916

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## Scope and Contents

The Leavitt Papers include a Civil War diary, personal account books, photographs, drawings, and engineering materials relating to steam engines.

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## Arrangement

The collection is arranged into three series.

Series 1: Engineering Materials, 1861-1955

Series 2: Photographs, 1890s, undated

Series 3: Engineering Drawings, 1874-1906

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## Names and Subject Terms

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

### Subjects:

- Engines
- Hoisting and conveying
- Mineral industries
- Mining
- Pumping
- Steam-engines
- Waterworks

### Types of Materials:

- Account books
- Blueprints
- Diaries
- Drawings
- Letterpress books
- Notebooks
- Scrapbooks

### Names:

- National Museum of American History (U.S.). Division of Mechanical and Civil Engineering
- National Museum of American History (U.S.). Division of Work and Industry

### Places:

- Upper Peninsula (Mich.)

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## Container Listing

### Series 1: Engineering Materials, 1861-1955

Box 1, Folder 1	Diary, 1861-1866 Notes: The diary covers the period 1861 to 1865 when Leavitt entered the Navy and was stationed on the gunboat Sagamore. In 1865, Leavitt was assigned to the Naval Academy as an instructor of steam engineering. The diary is a daily log of his engineering duties on the ship along with personal information. The log includes information on the maintenance of the gunboats, ports the gunboat visited, including Cuba, Florida, Alabama and Mississippi.
Box 1, Folder 2	Account Book, 1861-11-1878-01
Box 1, Folder 3	Account Book (loose materials), 1861-1878
Box 1, Folder 4	Calculations, Calumet and Hecla Machinery, 1883
Box 1, Folder 5	Account Book of European Trip, 1885-08
Box 1, Folder 6	Notebook for Cambridge Engine, 1894-1895
Box 1, Folder 7	Notebook of Engine Data and Calculations, 1904
Box 1, Folder 8	"A Few Examples of High-Grade Pumping Engines," by Erasmus Leavitt, undated Notes: Thirty-eight (38) typescript pages.
Box 2, Folder 6	Articles relating to Leavitt engines, 1893-1955
Box 3, Folder 1	Calculations for Engines, 1884-1908 1 Volume
Box 3, Folder 2	Letterpress Book of Sketches and Memoranda, 1884-04-1890-09 1 Volume Notes: Includes information and drawings about work Leavitt did for Calumet and Hecla, Worthington and Dickerson Mill and the cities of Albany, Boston, and Louisville.
Box 4, Folder 1	Engineering Scrapbook #1, 1887-1889 1 Scrapbook Notes: The scrapbooks include newspaper and journal clippings relating to new engines (designed by Leavitt and others), information about the Calumet and Hecla Mines, annual reports, accident reports, financial reports and new machinery. Other prominent information includes the Suez Canal, the

Union and Northern Pacifica Railroads, the Manhattan Bridge  
and the American Society of Civil Engineers.

Box 4, Folder 2

Engineering Scrapbook #2, 1880-1904  
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