

**ACCESSION #2005.0.32.0**  
**Mechanical & Electrical Power Collection**  
**1785 - 1966**  
**Bulk dates 1880-1940**

Approximately 15 linear feet  
(11 document boxes and 3 oversize boxes)

Acquisition: Power history material that was accumulated by agents of Henry Ford and Edison Institute staff and placed in the museum vertical file.

Access: The collection is open for research.

Processed by: Dawn Dittmar, Simmons Intern, 2005

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## **HISTORY OF THE COLLECTION**

Up until May 2005, the Mechanical & Electrical Power Collection (Accession #2005.0.32.0) was the Power section of the Henry Ford museum vertical file, located in the Benson Ford Research Center on the campus of The Henry Ford in Dearborn, Michigan.

The Edison Institute (now known as The Henry Ford), Henry Ford's concept of a living history museum, encompasses Greenfield Village and the Henry Ford Museum. Even before breaking ground for construction of the museum and village in October, 1927, Henry Ford had amassed a large collection of artifacts that were stored in the vacant Ford Motor Company tractor operations building known as Building 13.

As word got out that Henry Ford was collecting Americana for a museum and historic village, offers of artifacts poured into Ford's office. Along with the offers, people sent in photographs, originals and copies of catalogs, newspaper clippings, and other documents that highlighted the history of Power.

Prior to the official opening of the Henry Ford Museum and the establishment of a museum library, many of these paper and photographic materials were stored in the Ford Motor Company archives and in the personal files of agents and employees of Ford.

A few of the Ford agents and employees who are referenced in the Mechanical & Electrical Power collection are;

Jim Bishop – Henry Ford's collector of electrical apparatus  
Frank Campsall – Personal secretary to Henry Ford  
James Humberstone – "Curator" of artifacts in Building 13  
Herbert F. Morton – Contracted by Ford to acquire steam engines  
Fred Smith – Henry Ford Museum "boss"

In the early 1960s The Ford Motor Company corporate archive was in danger of being dissolved and staff at the Henry Ford Museum and Greenfield Village expressed their interest to acquire it. In May of 1963, Donald Shelley, then the Executive Director of The Henry Ford Museum & Greenfield Village stated the following to William Clay Ford:

*We would certainly hope that...any such archives materials relating to our organization, Mr. Ford's personal history, or his association with Burbank, Firestone, Burroughs, and a myriad of other prominent Americans would be channeled here for all time...<sup>1</sup>*

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<sup>1</sup> Shelley, Donald to Ford, William Clay, 20 May 1963, Accession 895 Box 1, Archives, The Henry Ford, Dearborn, Michigan.

Ford agreed that the museum was the appropriate entity to preserve and house the archive and the materials began to arrive (at the museum) the last week of December, 1964.<sup>2</sup> Today, the Ford archive, The Henry Ford's manuscript collections, and Edison Institute are housed in the Benson Ford Research Center.

The current museum vertical file material is an amalgam of museum related archives culled from the Ford archives along with accumulated paper records that were collected by museum staff. It is from this rich well of documentation (museum files and the Ford archive) that this collection originated

### **SCOPE AND CONTENT NOTE**

The Mechanical & Electrical Power Collection is composed of manuscript material, newspaper and professional trade journal clippings, original trade literature (company catalogs, advertising, and sales pamphlets and booklets), technical drawings (blueprints), a few ephemera items, and photographic prints.

The paper and photographic items contained in this artificial collection offer the researcher interesting historical documentation of electrical, internal combustion, and steam power development in the United States. The collection also provides a window through which one may see how Henry Ford and his agents went about obtaining artifacts and; more relevant to this collection, how historical information regarding those artifacts and their manufacturers found their way into the vertical file at The Henry Ford.

While there is plenty of primary source material within the collection (e.g. originals), the researcher should note that most of the professional trade and science periodicals articles are negative or positive photostats of the originals.

The Power Collection is divided into four series:

- Electrical Power
- Internal Combustion Power
- Steam Power
- Other Power Sources

#### **Electrical Power**

The Electrical Power series comprises the largest amount of material within the collection – approximately 10 linear feet. This seems only natural as Thomas Edison was a great hero to Henry Ford. The series is broken down into the following subseries: Companies, Topical, Personalities, and Photographs.

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<sup>2</sup> Head, Jeanine, *From Corporation to Museum: The Evolution of the Ford Archives*, Master of Arts essay, p. 30, March 1987

### Internal Combustion Power

The Internal Combustion series is the third largest in the collection (1 linear foot). Like Electrical Power it is subdivided into the following subseries: Companies, Topical, Personalities, and Photographs.

### Steam Power

The second largest series (3 linear feet), Steam Power, is divided into the following subseries: Company Histories, Engines, Boilers, Appliances, Topical, Personalities, and Photographs.

### Other Power Sources

The smallest series (less than 1 linear foot), Other Power Sources contains material relating to Hot Air, Nuclear, Solar, Water, and Wind power. The series is broken down into subseries by the type of power technology.

Why the Topical subseries? Vertical files are inherently organized around subjects and the Power section of the museum vertical files followed this organization. However, due to the rich amount of corporate and manufacturer information contained within this collection, it was decided to first reunite corporate material if at all possible. However, once organized by corporation you are left with some topical items such as patent documents and general articles about power history and science. To accommodate these materials, a Topical subseries is included for the larger series, namely, Electrical Power, Internal Combustion Power, and Steam Power.

**Series I**  
**Electrical Power**

The Electrical Power Series contains advertisements, company publications (i.e. periodicals, newspapers, monographs, instruction manuals, catalogs, etc.), newspaper clippings, articles from professional trade and science periodicals, excerpts from presentations and textbooks, technical blueprint drawings, patents, biographical information and photographs.

140 electric power suppliers and electrical equipment manufacturers are represented in this series. Of the 140 companies, General Electric has the most material. Westinghouse second.

The time period represented ranges from 1838 (original copy of a report by Michael Faraday documenting his experiments) to 1965 (issue of the periodical *Transelektro News*). The bulk of the material covers roughly the late 1880s to the early 1940s.

**Subseries: Companies**

Archival material within this subseries was either produced by the corporations or manufactures noted or the corporation or manufacturer (or their product) was the subject of the created items (e.g. published articles and correspondence).

The companies are listed alphabetically and then the material is broken down by subject beneath the corporate heading. Any photographs related to a particular company can be found with like corporate related material.

Of particular interest are the Bulletins for Agents, produced by the following companies: Edison, Compagnie Continentale, Edison Company for Isolated Lighting, Western Edison Light Company and Edison Electric Light Company. These bulletins, produced to assist agents in their sales effort, provide fascinating details concerning the growth of each company and how they fought to compete with each other and the myriad of electrical power suppliers during the 1880s.

**Series I – Electrical Power**  
**Subseries - Companies**

**Box 1**

- Allis-Chalmers Mfg. Co.
  - History of –
    - Pioneer Years, a Brief History of an Early Electrical Mfg., 1940
  - Photograph
    - Manhattan Engines
- American Electric Light Company
  - Electric Lighting in Kansas City, *Western Electrician*, February 15, 1890
- American Electric Manufacturing Company
  - Advertisement (*see* oversized Box # 14)
  - Wood Arc Lighting System
    - Recent Improvements in the American System of Electric Lighting, *The Electrical World*, April 23, 1887
- American Electric Railway Company
  - Interview with Thomas A. Edison, 1884
- Anaconda Wire & Cable Company
  - Industrial Wiring Survey, 1936
- Arrow-Hart & Hegeman Electric Company
  - History of-
- Associated Sangamo Electric Companies
  - Service to the Central Station Industry, a Brief Summary of the Development that Resulted in the Growth of the Central Station Industry, 1923
- Automatic Switch Company
  - Automatic Motor Starters
  - Elevator Starters and Pressure Controllers
  - Motor Starting Apparatus
- Ball Electric Light Company
  - Arc Lighting and Dynamos
    - Ball Unipolar Dynamo, *Electrical Review*, February 13, 1886
    - Bi-Polar and Compound Multi-polar Dynamos, *Scientific American*, October 15, 1881
    - Scientific American*, February 9, 1889 (factory views on cover)
- Baxter Electric Manufacturing Company
  - Dynamos

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 1**  
**(cont.)**

- Bentley-Knight Electric Railway Company  
Company Monographs  
Electric Street Railways (street cars), 1888  
No. 1  
No. 2, The Storage Battery System vs. Direct System  
No. 3, The Observatory Hill Passenger Railway An Interview with Edward M. Bentley, Veteran of Early Street Railway History, (unknown publication) [n.d.]
- Bergmann & Co.  
Photograph of building façade, [n.d.]
- Bergmann-Elektricitäts-Werke  
Company Periodical  
*Bergmann Mitteilungen*  
1923 (January, June, August, October, and December)  
1924 (April, June, August, and October)
- Products  
Controllers  
Drying Apparatus [n.d.]  
Electric Locomotives  
Edison Motors, 1889/90  
Sirens
- Birmingham Electric Company  
Employee Newsletter, *The Buzzer*, October 9, 1926
- Brady Mfg. Co.  
Dynamos, *American Machinist*, July 30, 1881
- Brennan, James A.  
Arc Lamp Accessories
- Brooklyn Electric Construction Company  
Knowles-Moffatt Arc System, 1886
- Brush Electric Company  
Arc Lighting  
Lighting Broadway, New York, with the Brush Electric System, *American Machinist*, January 1, 1881  
Lighting up of Wabash, Indiana Courthouse, March 31, 1880  
The Arc Light, by Charles F. Brush, *Century Magazine*, May 1905  
The Brush System of Electric Lighting, by C.F. Brush, 1879  
*Scientific American*, April 2, 1881



**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 1**  
**(cont.)**

- Brush Electric Company (cont.)
  - Catalogs
  - Company Monographs
    - The Brush Arc Dynamo, 1893
    - The Brush Electric Light, 1882
  - Catalogs
  - Dynamos
    - Arc Light (Specification tables)
    - The New Brush Dynamo, *The Electrical World*, September 20, 1884
    - Specifications of Brush Dynamo Electric Machines (unknown source), [n.d.]
    - Windmill
      - Mr. Brush's Windmill Dynamo, *Scientific American*, December 20, 1890
  - Generators
    - The Brush Electric Company's New Alternating Current System, *The Electrical World*, July 13, 1889
    - Arc Generator specs. and price list, 1912
    - Arc Generator Belt Tightener blueprint, 1901 (*see* *oversize Box # 13*)
  - Henry Ford Museum
    - Work order for repair of a Brush Incandescent Dynamo for the Edison Institute, September 27, 1938
  - History of-
    - Incandescent Lighting
      - Lamp Fitting
  - Litigation
    - Brush Electric Co. vs. The Electrical Accumulator Company *et al.*, 1891
      - Violation of Patents
    - Brush Electric Co. *et al.* vs. Electric Storage Battery Co., 1893
      - Opinion of Judge Green, Denying Motion for Injunction.
  - Motors, 1886
  - Photographs
    - Arc Lamp Apparatus
    - Buffalo, New York, 1881
    - Cleveland, Ohio, 1880
  - Dynamos
  - Exhibits

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

- Box 1**  
**(cont.)**
- Brush Electric Company (cont.)
    - Photographs (cont.)
      - New York City Streets-Arc Lighting, ca. 1880s
      - Testing Room in Cleveland Ohio, 1930
      - Wabash, Indiana, 1873
  - Card Electric Motor Company
    - History of-
  - Century Electric Company
    - Engineering leaflet regarding their induction motors. Sent to James Bishop, 1932
  - Cleveland Electric Illuminating Company
    - Photograph
      - Canal Road Station, ca. 1890s
  - Compagnie l'Alliance
    - Photograph (Dynamo)
  - Consolidated Electric Storage Co.
    - Catalog (batteries), 1891
  - Consumers Power Company
    - Company Periodical
      - The Au Sable News*, October 1929
    - Photographs
      - Cathode Ray Ocillograph House and Potentiometer
      - Croton Dam, Michigan
        - Million-Volt Portable Impulse Generator, Jackson Michigan, 1929
  - Continental Dynamo Company
  - Cooper Hewitt Electric Company
    - Cooper Hewitt Mercury Lamp
      - The Cooper Hewitt Lamp and Static Converter, *Scientific American*, February 7, 1903
    - Cooper Hewitt Reflector
      - The Cooper Hewitt Light-Transforming Reflector, by Joseph B. Baker, *Scientific American*, December 24, 1910
    - Polarity Paper (ephemera)
  - Crocker-Wheeler Company
    - Appliances (couplings, speed reducers/increasers)
    - Catalogs
      - Arc dynamos, motors, etc., ca. 1890s
      - Motors (induction), [n.d.]
    - Company Monographs
      - A Crocker-Wheeler Trolley Trip, [n.d.]
      - Direct Current Lighting and Power Generators
      - The Vital Subject is Lighting, 1905

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 1**  
**(cont.)**

- Crocker-Wheeler Company (cont.)
  - Correspondence
    - February 24, 1930 letter to Henry Ford regarding bi-polar machine.
  - Dynamos
    - Electrical Power Machinery, May 1898
  - Generators
    - AC/DC, June 1905 and August 1927
    - Case Engine Direct Connected to Crocker-Wheeler Generator, 1907
  - Motors
- Cutler-Hammer Mfg. Co.
  - History of- The Story of Cutler-Hammer, June 1929
  - Vertical Contacts, 1940
- Detroit Dynamo Company
- Detroit Edison
  - Company Monographs and Articles
    - Half Century of Electric Service in Port Huron, 1884-1934
    - Thirty Years of Farm Electrification, by R.T. Duncan, [n.d.]
  - Company Periodical
    - Synchroscope* (Dec. 1930 and March 1931)
    - Coal To Kilowatts* (Jan., May, July, 1953)
  - Conners Creek Power Plant, 1935-36
  - Sales Districts (1937 map)
- Donaldson-Macrae Electric Company
  - A Chapter in American Storage Battery History-The Donaldson-Macrae Storage Battery, reprinted from *The Electrical Engineer*, April 20, 1892
- Durango Electric Light
  - Photograph of the Power Station in Durango, Mexico
- Eddy Electric & Mfg. Co.
  - History of -
    - Mather Dynamo-Electric Machine, 1882
  - Motors
    - Electric Power in the Globe Tobacco Company's Works at Detroit, Michigan, *Electrical World*, August 10, 1889
  - Photograph (factory façade), ca. 1929
- Edison, Compagnie Continentale
  - Bulletins for Agents
    - No. 2, October 10, 1882
    - No. 3, February, 1883

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 1**  
**(cont.)**

Edison Company for Isolated Lighting  
Bulletins for Agents  
Nos. 1 (May 15, 1885) thru 11 (November 24, 1885)  
Catalog  
The Edison System of Incandescent Electric Lighting as  
Applied in Mills, Steamships, Hotels, Theatres, Residences,  
&c., 1883  
Testimonials, pricing

**Box 2**

Edison Electric Illuminating Company  
Booklet highlighting company Christmas party (Boston), 1911  
Correspondence  
September 29, 1943 letter to Henry Ford from James  
Bishop regarding the death of Frederick B. Slocum  
Dynamos, 1884  
Photographs  
Customer receipt, ca. 1890s  
Detroit (1892, 1895, and 1898)  
Building Façade  
General Factory Shots  
New Orleans, 1894  
Staff Council, 1896  
State Street Entrance, 1895  
Edison Electric Light Company  
Bulletins for Agents  
Nos. 1 (January 26, 1882) thru 19 and 21 (December 18,  
1883)  
S.S. *Columbia* Lighting System  
On the S.S. *Columbia*, Forty-five Years Ago, *The Log*,  
August, 1925 (original can be found in oversize Box # 12).  
Fifty Years of Electricity on Ships, *The Log*, June, 1930  
(original can be found in oversize Box # 12).  
Company Monographs  
Economy Test of the Edison Electric Light, 1881  
The Edison Electric Light, the Legal and Commercial  
Status, October 7, 1886  
The Edison Light, ca. late 1880s (sales pamphlet)  
Rules for Wiring Buildings, and Tables of Conductors,  
1887  
A Warning from the Edison Electric Light Co., ca. 1885  
Correspondence  
From Francis Jehl in London to Mr. Clarke in New York,  
June 8, 1882

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 2**  
**(cont.)**

- Edison Electric Light Company (cont.)
  - Dynamos
    - The Edison Steam Dynamo, “Jumbo, *The Edison Monthly*, July 1924
    - Old Edison Generator Still Operating Daily after 44 Years’ Duty, *Elk City News*, October 23, 1931
  - Edison Municipal System
    - Pricing for machines and devices, Dec. 1888
    - Switchboards (blueprint diagrams)
  - Europe
    - Report detailing the state of the Edison Electric Light Company of Europe, Ltd., 1882.
  - History of-
    - Fifty Years Ago, a Monograph on the Edison Electric Light Company and Mr. Grosvenor P. Lowrey, by Francis Jehl, 1928
  - List of Licensees, November 1, 1890
  - Litigation
    - Edison Electric Light Company, *et al.* vs. Mount Morris Electric Light Company, *et al.*, 1893
      - Incandescent Lamp Cases
    - Edison Electric Light Company vs. The United States Electric Lighting, Company, 1891
      - The Edison Incandescent Lamp Case
  - Photographs
    - Company Office Building, 1881
    - Dynamos, ca. 1882
  - Promoters Contract
  - Street Lighting
    - Blueprint drawings, [n.d.] (*see also* oversize Box # 14)
    - Edison Municipal
      - Excerpt from Smithsonian Miscellaneous Collections, Vol. 76 pgs. 62-65.
      - Street Lighting by the Edison Municipal System, 1886
- Edison Electric Tube Company
  - Photographs of illustrations from unidentified publication Brooklyn, New York (outside of building), [n.d.]
- Edison General Electric Company
  - Annual Report, 1892
  - Arc Electric Light Plant
    - Blank Proposal/Contract
- Armatures
  - Specifications and Price List, 1891

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 2**  
**(cont.)**

- Edison General Electric Company (cont.)
  - Central Station System
    - Brief Instructions for Operating Edison Dynamos in Central Stations, [n.d.]
    - Instructions Booklet for Foremen, ca. early 1890s
    - Testimonial Letters (pamphlet), 1891
  - Dynamos
    - Arc Light (diagrams of connections, dimensions, etc.), 1891, 1892, & 1893 (*see also* blueprints in oversize Box # 14)
    - Parts and Pricing, 1891
    - Spec. drawings and test data
    - Switchboard for-
      - Electric Mine Plant (Blank Proposal/Contract)
      - Electric Percussion Drill, [n.d.]
    - Electric Railroads
      - Brief Instructions for Operating Dynamos in Electric Railway Power Stations, [n.d.]
      - Instructions for Using Equalizing Coils on No. 6 Street Car Motors, [n.d.]
    - Generator, 150 Volt, blueprint, 1891 (*see* oversize Box # 13)
    - History of-
      - Indicators
        - Edison Pressure Indicator, [n.d.]
    - Litigation
      - Edison General Electric Co. vs. The City of Cincinnati, 1890
        - Edison Incandescent System
    - Meters
      - Ampere and Galvanometer
      - The Edison System Meter Instructions, 1891
    - Motors
      - Blank Proposal/Contract, 1891
      - Electric Motors for Constant Current or Arc Circuits, [n.d.]
      - Directions for Setting Up and Running Edison Electric Motors, 1890
      - Small Edison Slow-Speed Motors, 1891
    - Edison Lamp Company/Works
      - Catalogues
        - Edison Lamps, Low Volts, 1889
        - Lamps, ca. 1880
      - Circuits, 1922

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 2**  
**(cont.)**

Edison Lamp Company/Works (cont.)

Company Monographs and Articles

Artificial Daylight for Merchandising and Industry, by  
G.H. Stickney, April, 1922

Edison Lighting Institute (pamphlet), [n.d.]

The Incandescent Lamp-Its History, by Henry Schroeder,  
January 1923

Pictorial History of the Edison Lamp, [n.d.]

Recent Developments in Electric Lighting Appliances, by  
G.H. Stickney, 1917 (reprint of lecture)

Company Periodical

*The Edison Sales Builder*

May 1915

August 1915

November 1915

January 1916

December 1916

July 1929

Correspondence

June 19, 1889 letter to two Edison sales agents from the  
Treasurer of The Edison Lamp Company. The letter  
outlines how an agent should offer a discount to potential  
customers to close a deal.

June 21, [1889] letter to Edison Central Station customers  
from the Treasurer of Edison Lamp Company asking them  
to buy replacement lamps directly from the Edison Lamp  
Company rather than Edison United Manufacturing  
Company (attached to the June 19 letter).

October 25, 1928 letter to James Bishop (Representative to  
Henry Ford) regarding photographs that Edison Lamp  
Works (of General Electric) sent to the Henry Ford  
Museum

Edison Indicators

Photographs

Dynamo (installed at Hinds & Ketchum, Co.), 1881

Howell Voltage Indicator, 1928

Indicators

Pressure Indicator, *Electricity*, September 30, 1891

Comparative Indicator, 1886

Table: per candle lamp /hour-incandescent versus gas.

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 2**  
**(cont.)**

- Edison Machine Works
  - Dynamos
    - General Information
    - Hinds Ketcham Co. Installation
    - Specs. and Drawings (*see also* oversize Box # 14)
  - Goerck St. New York
    - Sales Pamphlet, [n.d.]
  - Photographs
    - Dynamos
      - Bi-Polar, [n.d.]
      - Type H, 1883
    - Goerck St. (building facade), spring 1881
    - Schenectady, 1888
  - Schenectady, New York
    - History of Schenectady, N.Y. operations (clippings and pamphlets)
    - The Utilization of Electric Power at the Schenectady Works, by T.C. Martin, reprinted from the *Electrical Engineer* February 3, 1892 (*see* oversize Box # 12)
  - Switch Board (diagrams and specs.), ca. 1880s
- Edison Storage Battery Company
  - Company Monographs and Articles
    - A Series of Twelve Non-Technical Letters on the Edison Storage Battery, by Miller Reese Hutchison, 1912
    - Edison Alkaline Storage Batteries and Some of Their Applications, 1915
    - Edison and His Storage Battery, by W.H. Meadowcroft, 1928
    - Storage Batteries in Industry, [n.d.]
    - Edison Steel-Alkaline Storage Batteries, 1927
    - Over Seventy Two Millions More Annually, by G.E. Stringfellow, April 12, 1928
  - Company Periodical
    - Storage Battery Power*, March 1958
- Edison Batteries (catalogs/product literature)
  - Batteries for Delivery Vehicles and Trucks
  - Edison-BSCO
  - The Edison, a Practical Storage Battery for Ignition and Lighting of Automobiles and Gasoline Trucks, 1914
  - Lalande
  - Marine
  - Primary Batteries
  - Telephones



**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 2**  
**(cont.)**

- Edison Storage Battery Company (cont.)
  - Edison Batteries (catalogs/product literature) (cont.)
    - Type A and Type B
    - History of-
      - Some Interesting Facts about the Development of the Edison Storage Battery, *Scientific American*, May 7, 1904
      - Fifty Years of Progress, 1939
  - Mining Lamps
    - Electric Safety Mine Lamp, [n.d.]
    - Parts List of the Edison Electric Safety Mine Lamp, [n.d.]
- Edison, Thomas A. Inc.
  - Batteries
    - Edison Primary Batteries for the Direct Operation of Light Signals, [n.d.]
    - General Instructions for the Installation and Care of Edison Storage Cells in Railway Signal Service, October 1927
  - Company Periodical
    - Edison Battery Readings*
      - April, May and June, 1928
  - Edison Nite Box for Railroad Motor Cars, [n.d.]
  - Railroad Signal Devices
    - A.C. Power and Light Signals, March 1924
    - The Edaligner Light Positioning Device, July 1924
    - Electrically-Lighted Switch Lamps, September 1926
    - Electrically-Lighted Switch Lamps and the Sun Relay, September 1924
- Edison & Unger
  - Photograph, Company Office, [n.d.]
- Edison United Manufacturing Company
  - Charge slip notebooks for foremen, ca. 1880s
  - Correspondence
    - August 5, 1886 letter from Thomas Edison to B.F. Card of Edison United Mfg. Co. regarding meter patent documents.
  - Dynamos, blueprint specs. & drawings, [n.d.] (*see* *oversize* Box # 12)
  - List of Edison Plants, 1886
  - List of Edison Plants, 1888
  - Photograph
    - Office and Showrooms [n.d.]
  - Spec. drawings (photostats), 1888 & 1889 (*see* *oversize* Box # 14)

**Box 3**

- Eickemeyer, Rudolf
  - Dynamo

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 3**  
**(cont.)**

- Electrical Accumulator Company
  - Instructions for the Installation, Care and Maintenance of Electrical Accumulators, [n.d.]
- Electrical Arc Light Company
  - Dynamos, [n.d.]
- Electric Products Company
  - Electric Battery Charging Apparatus
- Electric Storage Battery Company
  - Company Periodicals
    - Exide Ironclad Topics*, July 1935 and July 1938
    - Exide News*, June 1935
  - Company Sales Booklets, 1935
  - Correspondence
    - Regarding donation of exhibit to the Henry Ford Museum, June 9, 1928 (*see also* Subseries: Topical-Henry Ford Museum)
  - Emergency Lighting Batteries, ca. 1931
- Elektron Manufacturing Company
  - History of –
    - Perret Motor
- Elliott Company
  - Company Periodical
    - Powerfax*, 1935 and 1944
  - Dynamo, blueprint, 1931 (*see* oversize Box # 14)
- Excelsior Electric Company
  - Generators and Motors
- Ferranti, Ltd.
  - Transformers
    - Thirty-Year Old Transformers Still in Service, *Electrical World*, Vol. 79, No. 9, [n.d.]
- Ford-Washburn Storelectro Company
  - Report on the Ford-Washburn Storage Cell, by J.W. Langley & C.F. Maybery, June 12, 1893
- Fort Wayne Electric Works (*see* Fort Wayne Electric Works Collection)
- Fort Wayne & Elmwood Street Railway Company
  - The Street Car Co. Wins, *The Evening News*, January 6, 1890
- Ganz Electrical Works
  - Catalog
    - Transformers, 1935

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 3**  
**(cont.)**

Ganz Electrical Works (cont.)

Correspondence

October 27, 1961 letter to William Distin (Registrar) from Robert G. Koolakian regarding Edison's agreement with Ganz to acquire a Ganz transformer

To Mr. Minor Wine Thomas (curator) from Dr. Andrew A. Halacsy regarding a Ganz Transformer in the Henry Ford Collection, October 27, 1961

History of –

The Forty Years' History of the Transformer, 1885-1925  
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*Transelektro News*, May 1965

General Electric Company

Alternating Current

Alternating Current Fan Motors, January 1, 1900

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Interchangeable Arc Lamps, 1901

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Price List for Apparatus

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Complete Charging Equipments for Electric Vehicles, January 1905

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Circuit Breakers, ca 1930s

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 3**  
**(cont.)**

General Electric Company (cont.)

Company Articles & Monographs (topical)

Apprentice System

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The Long Road to Modern Comfort, by John W. Hammond

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Edison Bi-Polar Dynamo

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**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 3**  
**(cont.)**

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Industry Developments

Developments in the Electrical Industry During 1930

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The General Electric Company's Contribution to Outdoor Lighting, by J.W. Hammond, 1928

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The Story of the First Electrically Operated Textile Mill, by Sidney B. Paine, 1930

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**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 3**  
**(cont.)**

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Turbines

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Dynamos

Blueprints

Edison Bi-Polar (specs. and test data)

Electric Pumping Machinery, 1896

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 3**  
**(cont.)**

General Electric Company (cont.)

Electric Railroads

Correspondence

November 2, 1899, from Eastern Carbon Works regarding the prices of street railway brushes.

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Electric Mine Locomotives, August 6, 1900

Electric Railways, May 15, 1893

General Information on the Cost of Construction and Equipment of

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Railway Power Generators, Railway Department, August 1, 1892

Standard Apparatus for Electric Railway Service, August 1, 1894

Generators

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Instruction Book, Edison Bipolar Generators for

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History of-

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Original Buildings and G.E. Plant Today, *The Schenectady Union-Star*, December 15, 1928

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Apparatus and Supplies, July 1, 1893

Catalog of Edison Incandescent Lamps, February 26, 1900

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Lighting Department

Semi-Monthly Bulletins

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Litigation

General Electric Company vs. Morgan-Gardner Electric Company, 1908, Shunted Motor Controller Case

Marine Supplies, November 1903

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 4**  
**(cont.)**

General Electric Company (cont.)

Meters

General Data on Thomson Recording Wattmeters  
(instruction book), October 17, 1898  
General Data on Thomson Recording Wattmeters, 1903  
Thomson Recording Watt-meters, 1898  
Price List of Thomson Recording Watt-Meters, July 25,  
1893

Monocyclic Generators and Motors, December 15, 1894

Monocyclic System of Lighting

Price List, April 1, 1895

Motors

General Data on Generators and Motors, March 2, 1896  
Instructions for Installing and Operating  
Form H Slow & Moderate Speed Generators &  
Motors, February 28, 1898  
Induction Motors (squirrel-cage and wound-rotor),  
September 1930  
Repulsion Induction Motors, August 1926  
Repulsion Induction Motors, December 1930  
Synchronous & Super Synchronous, March 1930  
Thomson-Houston Stationary Motors, October 15,  
1892  
Three-Phase and Monocyclic Apparatus, August 16,  
1897  
Three-Phase and on Monocyclic Circuits, May 11,  
1896  
Three-Phase and on Monocyclic Circuits, May 25,  
1896  
Three-Phase and on Monocyclic Circuits, April 5,  
1897

Slow and Moderate Speed Motors, May 15, 1895

Sprague (specs. and drawings), 1893

Photographs

Bi-Polar Dynamo

Fan Motor

Motor, 1893

Posters

Service Shops

X-Ray Tube



**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 4**  
**(cont.)**

General Electric Company (cont.)  
Power and Mining Department  
Semi-Monthly Bulletins  
No. 27, May 15, 1896 thru No. 37, October 15,  
1896  
Roentgen Ray Apparatus  
Price List, 1897  
Search Lights  
Instructions for Installing and Operating Searchlight  
Projectors, April 20, 1896  
The Thirty Inch Searchlight Projector, July 1, 1893  
Street Lighting  
The Series Alternating System in Practical Operation  
(testimonials), 1900  
Surface Air Coolers (air conditioning), 1929  
Testing Department  
The Testing Department at Schenectady, New York,  
December 27, 1897  
Transformers  
Aging of Transformer Iron, October 1, 1900  
Core Type Transformers for Three-Wire Secondary  
Service, November 14, 1900  
General Catalogs  
March 1, 1893  
December 1, 1894  
Instructions for Installing Type H 60 Cycle Transformers,  
October 26, 1896  
The Test by Fire, December 8, 1902  
Transformer Testing, June 16, 1900  
Transformers Type H, August 1906  
Type H Transformers, February 20, 1899  
Type H Transformers in Use (testimonials), October 1,  
1900  
Type H Oil Transformers, November 13, 1899  
Type P (Blueprint)  
Wiring  
Alternating Wiring and Connections, August 31, 1896  
Gleason, E.P. Manufacturing Company  
Little McDonald Cut-Out

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 4**  
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- Gramme Company
  - Dynamos
    - Photographs
    - A Few Practical Remarks on the Formation and Use of N. De. Kabath's Patent Accumulators, 1882
    - The Gramme Magneto-Electric Machine, *Iron*, December 4, 1875
    - Photographs, Dynamos
- Hanson & Winkle
  - Plating Dynamo
- Hartford Electric Light Company
  - History of –
    - The Hartford Electric Light Company, 1882-1929
- Heisler Electric Light Co.
  - Incandescent Electric Light System
- Hochausen, William
  - Arc and Incandescent Light System
- Holmes, Booth & Haydens
  - Table of Maximum Safe Carrying Capacity of Bare Copper Wire, 1886
- Holtzer-Cabot Electric Company
  - Catalog, [n.d.]
  - History of –
    - Fifty Years 1875-1925
  - Motor
    - The Holtzer-Cabot Constant Speed Motor, *The Electrical World*, [n.d.]
- Interurban Railway & Terminal Company
  - Correspondence
    - March 7, 1910 letter to Frank B. Rae (Ray?) regarding installation of electric railroads on the Calumet Road in 1892
- Jenny Electric Motor Company
  - Dynamos & Motors
  - Photograph
    - Arc Light Dynamo, 1890
    - Unidentified Motor
- Jones, C.E. & Bros. (Electricians)
  - Table of Dimensions, Resistances and Capacities of Pure Copper Wire, 1886

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 4**  
**(cont.)**

- Julien Electric Company
  - Isolated Electric Lighting by Means of the Julien Storage Battery, ca. 1888
  - Electric Railroads
    - The Julien System of Electric Traction, 1888
    - The Julien Electric Tram Car at the Antwerp International Exhibition of Mechanical Traction, 1885 (*see* oversize Box # 12)
- Keystone Electric Company
  - Dynamos
- Knott, L.E. Apparatus
  - Meters
- Lakon Company
  - Transformers
    - New Lakon Transformers, *Western Electrician*, November 19, 1898
- La Roche Electric Works
  - Dynamos
- London Electric Supply Company
  - The Most Wonderful Cable Ever Made, *Engineering Gazette*, August 14, 1936
  - The Grosvenor Gallery Central Station, London, *The Electrical World*, December 1, 1868
  - Press Clippings
    - Edison visits the Deptford works of the London Electric Supply Company, 1889
- Manhattan General Construction Company
  - Arc Lamps
- Mather Electric Company
  - Incandescent Lighting Systems,
  - Motors
    - Table showing sizes of Conductors, B.S. Gauge, necessary in operating the Perkins lamp on circuits of various lengths, [n.d.]
- Moloney Electric Company
  - Transformers
- Monitor Mfg. Company
  - Controllers, 1907 and 1936
- National Carbon Company
  - November 1929 to February 1930, two-way correspondence between George Little (National Carbon Co.) and James Bishop (Henry Ford representative) regarding the history of the dry-cell battery.

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

- Box 4**  
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- National Electric Manufacturing Company
    - Direct Current Dynamo, 1890
  - New American Company
    - Dynamos
  - New Jersey Light & Power Company
    - Oil Switch Glass Tanks (diagram), 1933
  - New York Edison Company
    - Company Periodical
      - The Edison Monthly*, June 1924
    - History of –The Builders, *The United News*, August 15, 1928
    - Photographs
      - New York Street-Arc Lighting, ca. 1880s
    - Presentation by M.S. Sloan, Company President, April 1930
  - Noye, John T. Manufacturing Company
    - An 800-HP Railway Engine, *The Electrical World*, Vol XXVIII, [n.d.]
  - O'Brien Electric Lamp and Reflector, 1907
    - Testimonials (see oversize Box # 12)
  - Patterson & Cooper, London
    - Electrical Measuring Instruments, *Iron*, [n.d.]
  - Pennock Electric Company
    - Testimonials
  - Phoenix Fire Company
    - Rules for Electric Light Installations and Electrical Power Installations, 1887
  - Port Huron Electric Light and Power Company
  - Rhode Island Electrical Equipment Company
    - Correspondence
      - July 1, 1908, quote for a generator
  - Salem Electric Lighting Company, 1882-1932
  - San Joaquin Light & Power Corporation
    - Veteran Generator Comes to Rest, *San Joaquin Power Magazine*, November 1928
  - Sautter, Harle & Company
    - Company Monographs
      - Histoire D'une Maison D'Electricite, 1893
      - Sur Les Projecteurs Mangin
    - Catalog (also contains corporate history), 1893
    - Correspondence
      - Letter to E.R. Knowles of the Schuyler Electric Co. from Mr. Harle (letter in French), November 10, 1893

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 4**  
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- Sautter, Harle & Company (cont.)
  - Search Lights
    - Instructions for the use of the Projector Controlled from a Distance, May 1891
    - Testing Results, 1892
  - Sautter, Lemonnier & Company
    - Search Lights
      - Testing results, 1890 and 1893
  - Schuckert & Co.
    - Booklet of the company's exhibit at the World's Columbian Exhibition in Chicago in 1893
    - Search Light, Subseries-Topical -Search Lights *see also*, subseries-Electric Power Suppliers-Sautter, Harle & Co. and Sautter Lemonnier & Co.
    - World's Oldest Working Dynamo, *The Electrician*, January 17, 1936
  - Schuyler Electric Company
    - World's Fair Electrical Fountains, 1894
  - Siemens & Halske Electric Company
    - Dynamos
      - The Five Wire System of Distribution at Paris, *Electricity*, March 16, 1892
    - Photographs
      - Alternating Current Generator, [n.d.]
      - Dynamos, 1868
  - Sprague Electric Company
    - Correspondence
      - Various letters that outline corporate history, ca. 1920s
    - Motors
      - Railway Motors
  - Sprague Electric Railway and Motor Company
    - Blueprint drawings (photostats) (*see* oversize Box # 14), 1887
    - Company Monographs
      - Advantages of a Feeder and Sub-Feeder System for Electric Railways, [n.d.]
      - To Managers of Street Railway Companies, [n.d.]
      - The Richmond, Virginia Electric Road, [n.d.]
    - Dynamos
      - Brief Instructions for Operating Dynamos, [n.d.]
    - Inspection Handbook, [n.d.]
    - Motorman's Hand Book, [n.d.]

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

**Box 4**  
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- Sprague Electric Railway and Motor Company (cont.)  
Motors  
Directions for Setting Up and Running Sprague Electric Motors, ca. 1893  
The Electric Motor for Street Railways, Hearing before the Selectmen of Brookline, Massachusetts, ca. 1888  
Mechanical and Electrical Data Regarding the Sprague Motor and the Transmission of Power, 1888  
The Sprague Electric Motor for Railway Work, April 1889  
Overhead Lines  
General Specifications for Pole Line Construction for Electric Railways, April 1, 1890  
Square D Company  
Circuit Breakers  
Standard Electric Company  
Arc Light Dynamos and Lamps  
Stanley Electric Mfg. Co.  
Generators  
Litigation-Stanley vs. Toledo Port Clinton et. al., [190?] (*see* oversized Box # 14)  
Star Iron Tower Company  
Correspondence  
October 16, 1934 letter to B. Willard of General Electric from William H. O'Beirne regarding the construction and tearing down of towers for electrical lines in New Orleans. Also included are photographs.  
Stow Manufacturing Company  
Stow Multi-speed Motor  
Sundh Electric Co.  
Pressure Regulator (photograph)  
Telegraph Supply & Manufacturing Co.  
Blank Stock Certificate (*see* oversized Box # 12)  
Correspondence  
December 12, 1930 letter to James Bishop from C.J. Leephart of General Electric regarding the history of the Telegraph Supply & Mfg. Co. which eventually became Brush Elec. Co.  
Thomson-Gibb Electric Welding Co.  
Company Periodical, *Flashes*, October 1936  
**Box 5**  
Thomson-Houston Electric Company  
Alternators (spec. drawings)  
Apparatus-Electric Lighting Hand Book  
Arc Lighting (instructions for installing), [n.d.]

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

- Box 5**  
**(cont.)**
- Thomson-Houston Electric Company (cont.)
    - Dynamos
      - Alternating Current
        - The Thomson-Houston Electric System, *Iron*, 1889
      - Incandescent
        - The Thomson-Houston System at the Philadelphia Exhibition, *The Electrical World*, January 3, 1885
    - Electric Railway
      - Early Electric Railway Work of Thomson-Houston Electric Company, a narrative by A.L. Roehrer [n.d.]
      - Photograph of the second railway motor built by Thomson-Houston, 1887
    - Generators
    - Litigation
      - Thomson-Houston vs. Nassau Electric Railroad Company, 1898 (Series-Parallel Controller Case)
    - Motors
      - The New Thomson-Houston W.P. Motor, *The Electrical Engineer*, December 9, 1891
    - Photographs
      - Dynamos
      - Generators, 1934
  - Tillotson, L.G. & Co.
    - Batteries (Hill's, Western Union Standard and "Crow Foot"), [n.d.]
  - Tokyo Electric Light Company, Limited, 1928
  - United Electric Apparatus Company
    - Electrical Apparatus for Operating Signaling Systems and for Charging Storage Batteries from Light and Power Circuits, 1916
  - United Electric Light & Power Company
    - Company Newsletter
      - The United Newsletter*, October 31, 1928
      - The Builders*, August 15, 1928 (supplement to the *United Newsletter*)
  - United Light and Power Company
    - Annual Report, 1933
  - United Railways and Electric Company
    - Company Periodical
      - Baltimore Trolley Topics*, July 1925
  - United States Electric Lighting Company
    - Advertisement, [n.d.] (*see* oversize Box # 14)
  - Dynamos

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

- Box 5**  
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- USL Battery Corporation
    - Automotive Starting-Lighting and Ignition Batteries, 1905-1930
    - (chart)
    - History of-
  - Van Depoele Electric Manufacturing Company
    - Arc Lighting System
    - Detroit Newspaper Clippings, 1879 and 1880
    - Electric Railway Systems, 1887
    - Plating Machine, ca. mid 1880s
  - Wagner Electric Mfg. Co.
    - Niagara Falls, Canada Plant
  - Walker Company
    - Electric Railroad Motors (testimonials), 1894-1896
  - Wallace & Farmer
    - Arc Light Systems, 1870s
  - Wallace & Sons
    - Dynamo-Electric Machines, 1884
    - Photograph
    - Dynamo
  - Warren Electric Mfg. Co.
    - Warren Induction Alternators, ca. 1886
  - Waterhouse Electric and Mfg. Company
    - Ammeter
      - The Waterhouse Ammeter, *American Machinist*, October 1, 1887
    - Arc Lighting
      - The Waterhouse Arc Lamp, *American Machinist*, November 10, 1888
      - The Waterhouse Dynamo and Arc Lamp, *American Machinist*, September 17, 1887
    - Galvanometer
      - The Waterhouse Differential Galvanometer, “*American Machinist*, September 1, 1888
    - Regulator
      - The Waterhouse Instantaneous Automatic Regulator, *American Machinist*, October 6, 1888
  - Wenstrom Consolidated Dynamo & Motor Company
    - Electrical Apparatus
  - Western Edison Light Company
    - Bulletin for Agents
    - No. 1, September 12, 1882



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**Subseries – Companies (cont.)**

- Box 5**  
**(cont.)**
- Western Electric Company
    - History of –
      - Western Electric Company, 1869-1944
    - Incandescent Dynamo
    - Ironclad Arc Dynamos
      - Ironclad Arc Dynamos, *The Electrical World*, March 7, 1896
    - Move to Chicago
      - The Electrical World*, March 15, 1884
    - Photographs
      - Rateau Turbine Co. Chicago, Illinois, 1908
  - Westinghouse Church Kerr & Company
    - Company Periodical, *Work Done*, Nos. 1 & 3 [n.d.]
  - Westinghouse Electric & Manufacturing Company
    - Agreement with Thomson-Houston
      - The Westinghouse and Thomson-Houston Electric Companies Combine, *Electrical Review*, October 8, 1887
    - Alternating Current System
      - The Electrical World*, September 3, 1887
    - Annual Report, 1949
    - Circuit Breakers
      - Automatic Single Pole, 1903
      - The New Deion Circuit Breaker, ca. 1929
      - Oil Circuit Breakers, 1921
    - Company Monographs & Articles
      - Electrified by Westinghouse, Atlantic City, N.J. Auditorium and Convention Hall, May 1929
      - Engineering Achievements of Westinghouse (1926, 1928, and 1935)
      - Milestones in Small Turbine Development, by Ivan Stewart Ford, *The Electric Journal*, [n.d.]
      - Welding-Past and Present, by A.M. Candy, 1934
    - Correspondence
      - February 1, 1933 letter from Stephen Hayes of Westinghouse to James W. Bishop regarding street cars.
    - Dynamos
      - Direct Connect Steam Dynamo
        - A Peculiar Adaptation of the Westinghouse Engine, *American Machinist*, July 29, 1882
      - Drawings, 1904 and 1906

**Series I – Electrical Power**  
**Subseries – Companies (cont.)**

- Box 5**  
**(cont.)**
- Westinghouse Electric & Manufacturing Company (cont.)
    - Educational Department (Extension Courses)
      - Early History of the Westinghouse Electric & Mfg. Company (assignment No. 2), 1929
      - Early History of the Westinghouse Electric & Mfg. Company (assignment No. 3), 1929
      - Educational Apparatus, [n.d.]
    - Electric Railroads
      - The Traction Motor Gets Reducing Diet, by C.A. Atwell, *The Electric Journal*, December 1936
    - History of –
      - Various Articles
    - Insulators
    - Lamp Bases
    - Litigation
      - Westinghouse vs. Condit Electrical Mfg. Company, 1909 Edgewise Circuit-Breaker Case
      - Westinghouse vs. Middleburg & Schoharie Electric Light, Heat and Power Company
        - Self-Regulating Transformer Case
    - Meters
      - Shallenberger's Alternating Current Meter, *The Electrical World*, September 15, 1888 (see oversize Box # 14)
    - Motors
      - Electric Railway Motor
        - Electrical Engineer*, October 1890
        - The Electrical World*, March 7, 1891
      - Standard Polyphase Tesla Motors, October 1895
    - Photograph
      - Engine-Generator
    - Product Catalogs
      - Fluorescent, Mercury, and Infrared Lamps
    - Time Capsule II
  - Weston Factory
    - Dynamos
      - Weston's New Dynamo-Electric Machine and Arc Lamp, *American Machinist*, June 16, 1883
      - The Weston Dynamo-Electric Machine, *Scientific America*, July 14, 1883
    - Photographs
      - Dynamos
  - Wheeling Electric Company

History of – Sixty Three Years of Progress, 1882-1945

**Series I – Electrical Power**

**Subseries – Companies (cont.)**

**Box 5**  
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Willard Storage Battery Company

Characteristics of Starting and Lighting Batteries of the Lead Acid Type, by O.W.A. Oetting, April 1919

A History of the Storage Battery, by Wayne M. Carleton, *The Connector*, May 1927

Wireless Sun Glow Cyllindrode Battery Co.

The Wireless Sun Glow Battery, A New Discovery for the Treatment of Disease by a Natural Electric Current w/o any Wires, ca. 1902

Wiremold Company

Posters

Parts Chart

Principal Applications of No. 1100B&C and 1500 Series Raceway and Fittings

Wirt, Charles & Co.

Rheostats and Theatre Dimmers (photograph)

York Gas and Electric Light Company

Correspondence

March 9, 1888 letter to Oscar DeSilva from M. Dings, general manager of the York Gas & Electric Light Co. regarding a power plant installed in Nebraska.

Youngstown Electric Light Company

Table of transformer data, 1897

Ziegler Apparatus Company

Ziegler Electric Company

Note Book of Tables, Diagrams, and Useful Information

## Subseries: Topical

Items in this subseries could not be readily linked to a particular corporation or manufacturer. These include general articles about electrical power and related issues in professional journals and newspaper clippings, patent documents, and photographs. The subseries is organized alphabetically by topic. Topics range from Accumulators to Wiring.

Included is material related to the Edison Central Power Stations and Edison Isolated Plants. This material is further broken down by geographic location. A topic titled Edison Laboratories (Menlo Park and West Orange) is also present. Of particular note are time cards that Thomas Edison used in 1912 while working at his West Orange laboratory.

### Box 5

#### Accumulators

##### French

Articles extraits De Diverses Revues Scientifiques Sur Les  
Accumulateurs Electriques, 1884-1888

u rune Nouvelle Forme De Lame-Support Pour  
Accumulateurs, by Par M.A. Bandedt, [n.d.]

#### Alternating Current

##### History of –Various Articles

Polyphase Transmission, a paper by Chas. F. Scott

#### Alternators

A Self Exciting Alternator, by E.F. Alexanderson, text from a  
presentation at the American Institute of Electrical Engineers  
meeting, January 1906

#### American Institute of Electrical Engineers

Electrical Men to Greet 50<sup>th</sup> Year of Power Era, *Detroit News*,  
March 15, 1939

Transactions of the American Institute of Electrical Engineers,  
May 22, 1889

#### Apparatus

Dynamo Brush (Wirt) spec. blueprint, 1893 (*see* oversize Box #  
14)

Early Electrical Experimentation (various instruments), ca. 1815

Porcelain Insulator (blueprint) [n.d.]

#### Batteries

Electric Storage Batteries and Electrolyte, by Thomas J. Fay, 1901

Lecture on the Storage of Energy, by Professor Ayrton, 1882

Philco Battery (table: volts per cell/charge rate amperes per  
positive plate), 1928

Storage Batteries in Railway Work, by R. Macrae, *The Electrical  
Engineer*, June 29, 1892

University of Michigan test results of battery, March 31, 1892

**Series I – Electrical Power**  
**Subseries – Topical (cont.)**

**Box 5**  
**(cont.)**

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Boulder Dam, 1935

Condensers

Energy Losses in Some Condensers Used in High-Frequency Circuits, by Dept. of Commerce and Labor, 1912

Simultaneous Measurement of the Capacity and Power Factor of Condensers by Dept of Commerce and Labor, 1907

Edison Central Power Stations

Adams Street Station, Chicago, Illinois

Photograph (parade float showing machinery), [n.d.]

Appleton, Wisconsin

Appleton, the Home of Electricity, *Consolidated News*, January, 1927

Calendar Illustration, 1902

Ford Museum Hunting First Power Plant, *Detroit Free Press*, October 8, 1928

Little Left of Historic Lighting Plant at Appleton, *Electrical World*, December 29, 1917

Souvenir Booklet Commemorating the 50<sup>th</sup> Anniversary of the opening of the World's First Hydroelectric Central Station at Appleton, Wisconsin, September 1932

Wisconsin's Significance in the History of Early Electrical Development, by Louis Kurz (?), ca. 1933

Brockton Station, Massachusetts

Central Stations in United States as of Jan.1887

Detroit, Michigan

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**Box 5**  
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59<sup>th</sup> Street, New York

Detroit, Michigan [n.d.]

Motors designed for the station

Boiler Room

Generators

Steam engines

Harrisburg, Pennsylvania, [n.d.]

Pearl Street

Site of, after fire

Models of Jumbo no. 9

Philadelphia, Pennsylvania, 1889

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Electric Lighting for Siege Purposes, *Scientific American*, March 25, 1882

Les Projecteurs et Leurs Applications, by F. Nerz, 1892  
Remarks on the Comparative Tests of the Lighting Capacity of a Mangin and a Schuckert Reflector, by Mr. Burstyn (Austrian Navy)

Search Lights with Parabolic Reflector, (unknown author) [n.d.]  
Text from a presentation by E.R. Knowles, 1893  
The Verification of Projector reflectors by Means of Photography, by Tchicolew, 1892

Standardization of Engines and Dynamos

Report by Committee on Standardization of Engines and Dynamos, 1901

Street Lighting

Arc and Incandescent Lighting  
Notes on Series Street Incandescent Lighting, by Welles E. Holmes, 1903

Public Lighting by Arc Lamps, (author unknown), ca. 1928  
Chicago, Ill.

Report by the Sanitary District, 1912

**Series I – Electrical Power**  
**Subseries – Topical (cont.)**

**Box 7**  
**(cont.)**

- Street Lighting (cont.)  
History of-  
Kansas City, Mo.  
Electric Lighting in Kansas City, *Western Electrician*,  
February 15, 1890  
Michigan  
Bibliography of Detroit news articles, 1880-1893  
Detroit  
Detroit Free Press Clippings, 1882-1892  
Genesis of Electric Lighting in Detroit (author  
unknown) [n.d.]  
Electric Light, *Detroit Post and Tribune*, May 16  
1879  
Landmarks of Detroit, by R. Ross & G. Catlin, 1898  
History of Electric Lighting in Michigan, (unknown author)  
[n.d.]  
Houghton and Hancock  
Newspaper clippings, 1935  
Manistee  
Newspaper clippings, 1933  
Photographs  
Use of Alternating Current for Electric Lighting in  
Michigan, 1878-1936, by James W. Bishop, 1936  
New York  
First Report of the Board of Electrical Control, 1888  
Lights in New York Are Now Robotized, (unidentified  
newspaper clipping) [1928]  
Photographs  
Symbols, used for electrical diagrams (one leaf, no date)  
Transformers  
A Complete Test of Modern American Transformers of Moderate  
Capacities, by Arthur Hillyer Ford, ca. 1895  
The Development of the Electrical Transformer, by Sir Robert A.  
Hadfield, *World Power*, September 1931  
Early Days in Transformers, by L.W.W. Morrow *Electrical World*,  
Nov. 1, 1930  
Funfzig Jahre Transformator, (unknown author) [n.d.]  
Tungsten  
The Romance of Invention-XVII, by C.H. Claudy, *Scientific  
American*, September 18, 1920  
The Romance of Tungsten, by George Gaulois, *Scientific  
American*, August 7, 1920  
Underground Wiring, *see* Subseries: Topical-Electrical Subways

**Series I – Electrical Power**  
**Subseries – Topical (cont.)**

**Box 7**  
**(cont.)**

Windmills

Generating Electricity by Windmills, by Lieutenant I.E. Lewis, *The Engineering Magazine*, December 1894

Wiring

Cost Estimate for wiring job (Edison General Electric?), ca. 1889  
(see oversize Box # 12).

Diagram for Electric Wiring, designed by Edgar E. Stark, 1887  
(see oversize Box # 14)



**Subseries: Personalities**

This subseries contains textual biographical information on electrical power pioneers and others who advanced the science either through their experimentation or by their presence as officers of electrical power or manufacturer corporations. For portraits of these personalities and many more not included in this subseries, the researcher is recommended to the subseries titled Photographs.

**Box 7**

“A to Z” single sheet biographies

**Box 8**

Bain, Foree (1853-1928)  
Beach, Ralph (1860-1957)  
Bergmann, Sigmund (1851-1927)  
Bernstein, Alexander  
Brush, Charles F. (photograph) (1849-1929)  
Burke, James (1873-1940)  
Clark, Wallace S. (1864-1929)  
Davenport, Thomas (1802-1851)  
Faraday, Michael (1791-1867)  
Farmer, Moses Gerrish (1820-1893)  
Ferranti, Sebastian Ziani De (1864-1930)  
Hammer, William Joseph (1858-?)  
Hochhausen, William  
Insull, Samuel (1859-1938)  
Jenny, Arthur E. (1831-1904)  
Latimer, Lewis Howard (1848-1928)  
Leggett, Wells W. (photograph) (1847-1891)  
Lincoln brothers: James Finney (1883-?) and John Cromwell (1866-?)  
Lord Kelvin formerly William Thomson (1824-1907)  
Mungle, Alexander (*see* oversize Box # 14)  
Ohm, Georg Simon (1789-1854)  
Rae, Frank B.  
Rice, Edwin Wilbur Jr. (1862-?)  
Schuckert, Sigismund (1846-1895)  
Sperry, Elmer Ambrose  
Sprague, Frank J. (1857-1934)  
Stanley, William (1858-1916), *see also* Westinghouse, George  
Steinmetz, Charles Proteus (1865-1923)  
Tesla, Nikola  
Thomson, Elihu (1853–1937)  
Van Depoele, Charles (1846-?)  
Van DeGraaff (1901-1967)  
Van Vleck, John (1864-1927)  
Wallace, William  
Westinghouse, George (1846-1914)  
Weston, Edward (1850-1936)

**Series I – Electrical Power**  
**Subseries – Personalities (cont.)**

Wirsching, Alois (1838-1910)

Wood, James J.

Young, Owen D.

**Subseries: Photographs**

Photographs in this subseries could not be readily linked to a particular corporation or manufacturer. Included are portraits of personalities, photographs used by Francis Jehl in his three volume memoir Menlo Park Reminiscences, and unidentified electrical equipment and personalities.

**Box 8**

Alternators  
    Slattery Alternator, 1895  
Arc Lighting  
Circuit Breakers, [n.d.]  
Dynamos  
    American Dynamo Electric Machine  
    Anthony & Molar, 1875  
    Archer & Baldwin  
    Edison  
    Maxim Dynamo, 1880  
    Nullet Dynamo, 1851  
Electric Torchlight Procession in New York [n.d.]  
First Attempt at Photographing under Electric Light, ca. 1883  
Generators  
    Edison Pyro-magnetic, 1881  
    Rae Railway Generator, 1889  
Jehl, Francis (some of the photographs that Jehl used in his three volume memoir, Menlo Park Reminiscences)  
    Edison Light Fixtures  
    Edison Underground Fixtures  
    Edison Meters  
        -includes 4 negatives: 3 with corresponding prints, 1 w/o  
Transformers  
Misc. Electrical Equipment  
    Press Driver Control [n.d.]  
    Paiste, Single Pole Switch  
    Three Wire Lightning Arrester, (diagram)  
    Turbines  
    Welding Device (Thomson, Elihu)  
Personalities  
    Acheson, Edward G.  
    Anderson, Hugo  
    Andrus, Milo  
    Batchelor, Charles  
    Beggs John J. (also negative of portrait)  
    Bohn, Ludwig

**Series I – Electrical Power**  
**Subseries – Photographs (cont.)**

**Box 8**  
**(cont.)**

Personalities (cont.)

Berggren, Ernest J.  
Bergmann, Sigmund  
Blathy, O.T.  
Bradley, Charles S.  
Carr, Jim, (*see* Subseries: Companies-Edison Machine Works-Photographs-Goerck St.)  
Carman, William  
Clarke, Charles L.  
Claudius, Herman  
Coffin, Charles  
Colombo, Guiseppe  
Cooper, Edward  
Cunningham, David  
Dean, Charles  
Dick, A.B.  
Dolivo-Dobrowolsky, M.V.  
Dow, Alex  
Edgar, Charles L.  
Ferranti, Dr. S.Z.  
Ferraris, Galileo  
Force, Martin  
Fox, Sir George Lane  
Gilmore, William  
Gordon, J.E.  
Grosvenor, Lowrey P.  
Halloway, James  
Hammer, William J.  
Hipple, James C.  
Holzer, William  
Howell, Wilson S.  
Hughes, Charles  
Insull, Samuel  
Jehl, Francis (also 2 negatives-one glass plate-w/o accompanying prints)  
Johnson, Edward  
Kennelly, E.A.  
Krusei, John  
Kurz Brothers: Frank and William  
Leggett, Wells W.  
Lieb, John W.  
Logan, Thomas  
Lowrey, Grosvenor P. (also negative of portrait)

**Series I – Electrical Power**  
**Subseries – Photographs (cont.)**

**Box 8**  
**(cont.)**

Personalities (cont.)  
Maxwell, James Clerk  
Meadowcraft, William H.  
Melick, George F.  
Moffett, Benjamin  
Moffett, Charles William  
Morgan, John Pierport  
Mungle, Alexander  
Picard, Jean  
Rae, Frank B.  
Rathenau, Emil  
Rau, Louise  
Rice, E.W. Jr.  
Schallenberger, O.B.  
Schmid, Albert  
Seymour, James M.  
Shaw, P.B.  
Sprague, Frank J.  
Stanley, William  
Steinmetz, Charles P.  
Tate, Alfred O.  
Tesla, Nikola  
Upton, Francis (also negative of portrait)  
Westinghouse, George  
Unidentified electrical equipment and personalities

**Series II**  
**Internal Combustion Power**

The Internal Combustion Power Series contains advertisements, company catalogs, photostats of articles from professional trade and science periodicals, excerpts from textbooks, patents, newspaper clippings, and photographs. In general, these materials relate to gas, oil, and diesel powered engines. Thirty-four internal combustion engine manufacturers are represented in this series.

The time period represented ranges from 1866 (a booklet by the Union Gas Company titled, *Self-Acting Gas Machine for Illuminating Dwellings, Churches, Factories, &c*, 1866) to 1966 (an issue of *Marathon World* published by Marathon Oil Company). The bulk of the material covers roughly the late 1880s to the early 1900s.

**Subseries:    Companies**

Archival material within this subseries was either produced by the corporations or manufacturers noted or the corporation or manufacturer (or their product) was the subject of the created items (e.g. published articles and correspondence).

The companies are listed alphabetically and then the material is broken down by subject beneath the corporate heading. Any photographs related to a particular company can be found with like corporate material.

Of particular interest are the signs produced by Crossley Brothers, Ltd. that provide instructions on how to operate three of their engines. Also included is a pamphlet that includes testimonials, prices, and terms (ca. 1866) for the Otto & Langen Atmospheric Gas Engine, also manufactured by Crossley Brothers.

**Box 8**            Aermotor Company  
                         Gasoline Engines  
                         History of-  
                         La Verne Noyes Scholarships  
American Diesel Engine Company  
                         The Diesel Engine in America and Europe, by Louis A.  
                         Schlosstein, March 7, 1931  
Benz & Company  
                         Motorboote (boat motor)  
                         Motorwagen, 1888  
                         Neuer Petroleum Motor  
Bielefeld Diesel Engine  
                         Diesel Engine Air-Fuel Mixture Improved by New Method, by F.  
                         Ernst Bielefeld, *Automotive Industries*, April 21, 1928

**Series II – Internal Combustion**  
**Subseries – Companies (cont.)**

**Box 8**  
**(cont.)**

- Blackmer Rotary Pump, Power and Manufacturing Company  
Gasoline Pumping Unit  
Sketches (found in same file but unidentified)
- Brayton Petroleum Engine Company  
Brayton Oil Engine (handwritten excerpt) from Gas, Air, and Oil Engines by Donkin  
The Brayton Petroleum Engine, *American Machinist*, November 11, 1882  
Fair of the New England Manufacturers' and Mechanics' Institute, *American Machinist*, September 30, 1882  
Brayton Engine, a description of the two cycle, slow speed internal combustion engine designed by George B. Brayton and patented on April 2, 1877. (unknown author), [n.d.]  
Photographs  
Photo's of various Brayton engines presented to The Henry Ford. Several photos reference the Selden Patent suit.
- Clerk, Dugald Gas Engine  
The Clerk Gas Engine, *American Machinist*, August 5, 1882
- Crossley Brothers, Ltd.  
Correspondence  
March 29, 1928 departmental communication to Mr. Goldsmith from H. Morton regarding Otto Engines  
April 2, 1928 departmental communication to Mr. Goldsmith from H. Morton regarding Otto Engines.
- Instruction Signage  
Crossley's Vertical Gas Engine [n.d.]  
Domestic Motor "Otto" Gas Engine [n.d.]  
New Rotary Valve Silent "Otto" Gas Engine, December 1892
- Otto & Langen Atmospheric Gas Engine, 1866  
Directions for Erecting and Working Otto and Langen's and Crossley's Patent Atmospheric Gas Engines, September 1878  
The Gas Engine, *English Mechanic and World of Science*, August 25, 1876  
On Otto and Langen's Atmospheric Gas Engine, and Some Other Gas Engines, by Mr. Francis W. Crossley, (unknown source) [n.d.]  
Photograph (Deutsche Museum)  
Testimonials and Prices & Terms, ca. 1871

**Series II – Internal Combustion**  
**Subseries – Companies (cont.)**

- Box 8**  
**(cont.)**
- Crossley Brothers, Ltd. (cont.)
    - Otto & Langen's Gas Engine  
*Engineering*, December 31, 1875
    - Otto's Silent Engine  
New Gas Engine, *Scientific American Supplement*, March 30, 1878
  - Crossley Brothers, Ltd.
    - Photographs
      - Otto & Langen atomospheric gas engine, 1866
      - Double Engine Slide Ignition
      - Early Tube Ignition
      - Electric Ignition Gas Engine 1902 and 1915
      - Modern Crossley Gas Engine, 1921
      - Slide Valve Gas Engine
      - Vertical Engine with Rotary, 1896-1903
      - Vertical Engine with Slide Valve, 1882
  - Daimler Gas and Petroleum Engines
    - New Gas and Petroleum Motor, *Scientific American*, February 7, 1891
  - Emerson Apparatus Company
    - The Emerson Fuel Calorimeter, 1908
    - Emerson Fuel Calorimeters, 1920
    - Photograph
      - Fuel Calorimeter
  - Evinrude Motor Co.
    - Advertisement for the Evinrude Oil Engine, *The Wisconsin Agriculturist*, October 20, 1917
  - Grob, J.M & Company
    - Neuer Petroleum Motor
  - Korting Gas Engine
    - New Design of the Korting Gas Engine, *American Machinist*, February 18, 1888
    - Photographs
  - Lenoir Gas Engine Company
    - Photographs
      - Model Gas Engine, 1860
      - Two Cycle Double-Acting Gas Engine, 1860
  - Lozier Motor Company
    - Marine Gas Engines Catalogs, 1901



**Series II – Internal Combustion**  
**Subseries – Companies (cont.)**

**Box 8**  
**(cont.)**

- Maedler Engine Corporation
  - Engine with Nebulized Fuel Injection, *Oil Engine Power*,  
September 1925
- MAN Company
  - Photograph of a diesel engine, 1903
- Mietz & Weiss Engine
  - Mietz Oil Engine Corporation and the Weiss Engine Company  
Correspondence
    - August 19, 1940 letter from the New York Public  
Library to Fred Smith of the Henry Ford regarding  
corporate histories.
    - March 13, 1941 letter from Alexander P. Clark to  
Fred Smith regarding corporate histories.
  - The Mietz and Weiss Engine (excerpt) from *Gas, Oil and Air  
Engines* by Bryan Donkin, 1911
- Miller Improved Gas Engine Co.
  - Gas Engines and Compressors
  - Miller Gas Engine, 1905
  - Watts-Miller Gas Engines

**Box 9**

- Morey, Samuel
  - Photograph
    - Model of an 1826 engine
- Novo Engine Company
  - General Product Info.
  - History of-
- Olin Gas Engine Company
  - Product Pamphlet, 1894
- Otto Gas Engine Works
  - The Otto Cycle, 1913
  - Gas Engine Instruction Book
  - A New Otto Gas Engine, *American Machinist*, March 17, 1892
- Otto Gas Engines
  - Henry Ford
    - A New Ford Book, *The Efficiency Magazine*, [n.d.]
    - Henry Ford and the Otto Gas Engine, *Power*, September 4,  
1928
  - Otto's Silent Engine
    - English Mechanic and World of Science*, June 24, 1881
  - Scrapbook of articles from *The English Mechanic and World of  
Science*, 1875-1884

**Series II – Internal Combustion**  
**Subseries – Companies (cont.)**

**Box 9**  
**(cont.)**

- Peugeot Heavy-Oil Engine
  - Peugeot Heavy-Oil Engine Now Has Water Cooled Head,  
*Automotive Industries*, April 15, 1926
- Pierce Engine Company
  - Correspondence
    - September 18, 1940 letter to Fred Smith from L.G. Samsel of the J.I. Case Company regarding the founder of Pierce Engine Company
- Remington Oil Engine Company
  - History of-  
Remington Oil Engine
- Sperry Development Company
  - Sperry Diesel Plane Engine
- Spiel's Petroleum Engine
  - American Machinist*, January 15, 1887
- Transcontinental Oil Company
  - Photograph of display of Marathon Products, [n.d.]
- Union Gas Company
  - Self-Acting Gas Machine for Illuminating Dwellings, Churches, Factories, &c, 1866
- Webster Manufacturing Company
  - History of-  
Webster Engines
- Wright, George W. Gas Engines (leaflet)
- Yacht, Gas Engine and Launch Company
  - Catalog [n.d.]

**Subseries: Topical**

Items in this subseries could not be readily linked to a particular corporation or manufacturer. These include general articles about gas or diesel engines and related issues in professional periodicals and newspaper clippings, patent documents, and photographs. The subseries is organized alphabetically by topic. Topics range from Anti-knock Compounds to Turbines.

**Box 9  
(cont.)**

Anti-Knock Compound

New Anti-Knock Compound Painted on Combustion Chamber Walls, *Automotive Industries*, by P.M. Heldt, April 21, 1928

Diesel Engines, general topical articles

Diesel Automotive Engines, by P.M. Heldt, *Automotive Industries*, June 10, 1926

The Diesel Engine, *Hearld (Edison Institute of Technology)*, [n.d.]

Diesels on Wheels, *Fortune*, December 1934

Diesel Engines, by Abbie, [n.d.]

The High-Speed Air-Cooled Diesel Engine-Past and Present, by Dr. Kloss, March 6, 1956

Engine Museum in Cologne

The Engine Museum in Cologne, *Gas and Oil Power*, January 1954

Photographs of the Deutz collection of historical gas engines.

Ethyl Gas

How We Found Ethyl Gas, by Thomas Medgley Jr., *Motor*, January 1925

Gas Consumption of Engines

Cutting the Gas Consumption of an Engine, by A.E. Hershey *Power*, May 8, 1929

Gas Engines and Gas Power, general topical articles

*Engineering*, (untitled article) January 25, 1901

Engines, Gas and Vapor, pg. 633 (unknown source) [n.d.]

History of Gas Engines

Descriptions (including patent numbers) for early gas engines designed by S. Brown, W.L. Wright, and Wm. Barnett, (unknown author), [n.d.]

Gas Engine, pgs. 496-499 (unknown source) [n.d.]

Manufacture and Distribution of Gas

Gas Making with Cheap Oxygen, an address given by E.A.W. Jefferies, February 16, 1921

Gas Plants in Central Supply Stations, by Percy R. Allen, *Gas & Power*, May 1, 1913

Modern Practice in the Manufacture and Distribution of Gas, by Harry Edward Jones, 1901

Report on the Manufacture of Gas by the Decomposition of Water and Petroleum, 1875

**Series II – Internal Combustion**  
**Subseries – Topical (cont.)**

**Box 9**  
**(cont.)**

- Gas Engines and Gas Power, general topical articles (cont.)
- Marine Engines
    - The Possibilities of the Internal Combustion Engine Applied to Marine Propulsion, by Percy R. Allen, *Cassier's Magazine*, December 1911
    - The Present Position of the Gas Engine, by Percy R. Allen, *Cassier's Magazine*, March 1913
  - The Repair and Maintenance of Machinery, [n.d]
    - Atkinson Engine
    - Bisschop Engine
    - Otto & Langen Engine
  - A Textbook on Gas, Oil and Air Engines, by Bryan Donkin, 1911
    - Chapter II, Heat Cycles & Classification of Gas Engines
    - Chapter III, History of the Gas Engine
    - Chapter IV, History of the Gas Engine (cont.)
  - A Thermodynamic Analysis of Gas Engine Tests, by Crandall Z Rosencrans and and George T. Felbeck, *University of Illinois Bulletin*, August 10, 1925
  - Gas Furnace
    - Four a Feu Continu Au Gaz, [n.d.]
  - Gas Lighting
    - Detroit
      - Getting the Gas Company Started, by Martin Wolfe [n.d.]
      - Gas First Lit Boston's Path to Modernity, *Boston Evening Transcript*, December 28, 1921
    - Fixtures & Lamps
      - Archer & Warner Company
      - Cornelius, Baker & Co.
      - Hulett & Co.
      - Smith & Tarbell
    - Gas Logic*, April 1923
      - published by the Consolidated Gas Company of New York
    - Illuminating Power of Coal Gas, by William Sugg, 1876
    - Practical Gas Educational Courses, Illumination, by National Commercial Gas Association, 1918
  - Henry Ford Museum
    - Exhibit Labels
  - Patents
    - Abel, Charles Denton
      - Combined Gas and Air Engines, August 3, 1867
      - Gas Motor Engines, February 18, 1874
      - Gas Motor Engines, May 17, 1876

**Series II – Internal Combustion**  
**Subseries – Topical (cont.)**

**Box 9**  
**(cont.)**

Patents (cont.)

Crossley, Francis William

Gas Motor Engines, September 19, 1874

Gas Engines, September 15, 1875

Gas Motor Engines, January 12, 1876

Gas Motor Engines, June 4, 1877

Gas Motor Engines, December 13, 1878

Langen, Eugene & Otto, Nicolaus A

Improvement in Air Engines, August 13, 1867

Otto, Nicolaus A.

Gas Motor Engines, February 5, 1877

Improvement in Gas Motor Engines, August 14, 1877

Otto, N. & Crossley F. & Crossley W.

Improvement in Gas Motor Engines, October 23, 1877

White, Charles. & Middleton, Arthur R.

Gas Engine, July 9, 1889

Gas Engine, October 14, 1890

Gas Engine, September 10, 1895

Igniter for Gas Engines, August 24, 1897

Power Transmission, May 9, 1905

Explosive Engine, January 29, 1907

Petroleum Industry

Drake Oil Well in Titusville, Pennsylvania

History of-

Newspaper Clippings

The Pittsburgh Press

July 30, 1934 to August 4, 1934

Titusville Herald, August 1933

Wheeling Daily News, September 20, 1929

Photographs, 1861

Haymaker Oil Well in Murrys ville, Pennsylvania

Newspaper Clipping

Pittsburgh Press, August 5, 1934

History of-

Brief Outline of Petroleum Industry in America, (author unknown) [n.d.]

A Short History of Petroleum, *Lumberman's Gazette*, [n.d.]

**Series II – Internal Combustion**  
**Subseries – Topical (cont.)**

**Box 9**  
**(cont.)**

Petroleum Industry (cont.)

Industry Publications (complete issues)

*Ethyl News*, March/April 1959

Ethyl Corporation

Gulf Oil Corporation

The Industry Nobody Really Knows, by Craig

Thompson, ca.1950s

*Marathon World*, 1966

Marathon Oil Company

*Oil- Power*, January 1942

Socony-Vacuum Oil Company

*Oil Power*, 1926

Standard Oil Co.

Refining Petroleum

Howland, Weston

Correspondence

October 12, 1928 letter from Rachael

Howland to Henry Ford regarding her

father's achievements in refining petroleum.

His Great Discovery, *Boston Journal*, Monday 20,  
1901

Turbines

Development of Gas and Oil Turbines, *The Iron Age*, November  
20, 1924

Efficiency of –

*The Iron Age*, November 27, 1924

Gas Turbine Research, *Engineering Research Institute*  
*News*, University of Michigan, April 1956

**Subseries: Personalities**

This subseries contains biographical information on internal combustion power pioneers. Photographs accompany some of the textual information. Of particular interest are the articles regarding the mysterious death of Rudolph Diesel.

- Box 9**  
**(cont.)**
- Brayton, William
  - Diesel, Rudolph (1858-1913)
  - Howland, Weston
    - also photograph
  - Langen, Eugene
    - also photograph
  - Middleton, Arthur R (1862-1933)
    - also photograph
  - Otto, Dr Nicolaus August (1832-1891)
    - also photograph
  - Winton, Alexander (1860-1932)
    - See Subseries Personalities-Diesel, Rudolph

**Subseries: Photographs**

Photographs in this subseries could not be readily linked to a particular corporation or manufacturer.

- Box 9**  
**(cont.)**
- Diesel Motor, 1893
    - Deutches Museum
  - Gas Motors, 1880
    - Deutches Museum
  - Gas Meter, ca. 1879
  - Portable Gas Engine
  - Photograph of an illustration from an unidentified publication that contains the following engines: Lenoir, Otto-Lange, and Otto Horizontal gas engines.

**Series III**  
**Steam Power**

The Steam Power Series contains advertisements, company catalogs, newspaper clippings, photostats of articles from professional trade and science periodicals, excerpts from presentations and textbooks, technical blueprint drawings, patent documents, and photographs. Seventy-seven steam engine, boiler, and appliance manufacturers or suppliers are represented in this series.

The time period represented ranges from 1785 (negative photostat of a patent document) to 1959 (an article in *Detroit Times Pictorial Living* titled Selected Treasures of Henry Ford Museum). The bulk of the material covers the 1880s

**Subseries:   Company Histories**

This subseries includes items in any format (photographic, manuscript, and printed material) that highlights corporate history and does not focus on a particular product.

**Box 9**           Allis-Chalmers Manufacturing Company  
                  Ames Iron Works  
                  Atlas Engine Works  
                  Buckeye Engine Company  
                  -see Subseries Engines-Buckeye Steam Engine  
                  Burleigh Rock Drill Co.  
                  -see Subseries Personalities-Burleigh, Charles  
                  Clark & Knight  
                  Coons, Adams & Company  
                  Exeter Machine Works  
                  Farquhar, A.B. Company  
                  Fishkill Landing Machine Company  
                  Harrisburg Foundry & Machine Works  
                  Illustration from an unidentified publication showing the general  
                  office and main building of the company.  
                  Hooven, Owens & Rentschler Company  
                  Lunkenheimer Company  
                  McCord Radiator & Mfg. Company  
                  New York Engine Company  
                  Payne, B.W. & Sons  
                  Penberthy Injector Company  
                  Penney, J.W. & Sons  
                  Skinner Engine Company  
                  Stillman Allen & Company  
                  Taylor Manufacturing Company (photograph of engraving of buildings)



**Series III – Steam**  
**Subseries – Company Histories (cont.)**

**Box 9**  
**(cont.)**

Trill Indicator Company  
-*see* Subseries Appliances-Indicators  
Watertown Steam Engine Company (*see also* Subseries Company  
Histories-New York Engine Company)  
Wilson, John B.& Company  
Wright Engine Works

**Subseries: Engines**

This subseries includes steam engine trade literature and also information about particular engines without manufacturers identified. Types of engines and engine manufacturers are listed alphabetically. Any photographs related to a particular manufacturer or type of steam engine can be found with like manufacturer or engine-type material.

**Box 9**

- Allis, E.P. & Co.
  - Columbian Exhibition Notes, *American Machinist*, June 22, 1893
- American Engine Co.
  - Duplex Compound Engine & Direct Connected Generator (advertisement in *Cassier's Magazine*, [n.d.])
- Ames Iron Works
  - Agricultural Catalogs, 1885
  - Automatic Engines
    - A New Automatic Engine, *American Machinist*, October 12, 1893
  - Catalogs (photostats of general product offerings): 1880, 1886, 1887, 1888, 1890, 1891, 1893, 1897, 1898, 1904, 1905, 1906, & 1908 (note: some of these are not collated and may be missing pages).
- Box 10**
  - Catalogs [n.d.]
  - Compound Engines
    - A New Compound Engine, *American Machinist*, November 22, 1894
  - Correspondence
    - January 13, 1926 letter to T.T. Burton of the Ford Motor company from Ames regarding regarding the use of their products.
  - Henry Ford Museum
    - Prize World's Fair Exhibit Found on Eaton Farm, *Charlotte Republican Tribune*, June 8, 1934
  - Ames Iron Works (cont.)
    - Portable Engines
      - Catalogs, 1874, 1876, 1879 (cover only), 1880 (cover only), 1883 (cover only)
      - Portable Agricultural Engines, *American Machinist*, January 24, 1880
    - Atmospheric Engines (photographs)
      - Drawing of engine (probable installation date 1790-1800)
      - Engine erected in Scotland, ca. 1815
  - Barrows, E.
    - Double Rotary Engine (engraving)
  - Baxter Portable Engine
    - see Subseries Engines-Todd, J.C. & Company
  - Buckeye Steam Engine (photograph)

**Series III – Steam**  
**Subseries – Engines (cont.)**

**Box 10**  
**(cont.)**

- Budd, Edward G. Manufacturing Company
  - Photographs of model of steam engine
- Chandler & Taylor Company
  - High Speed Automatic Steam Engines
- Corliss Engines
  - Atlas-Corliss
    - 1941 memorandum regarding the museum's scrapping of an Atlas-Corliss engine.
  - Centennial Engine
    - It Ran Everything, by Henry H. Smith, *Providence Sunday Journal*, September 11, 1955
  - Harris-Corliss Engine (photographs)
  - Instructions
    - Setting the Valves of the Corliss Engine (negative photostat of an instruction booklet)
  - Litigation
    - Text from the May 12, 1853 deposition of witnesses in the U.S. Circuit Court case of William B. Sickels, et al., vs. Young & Cutter
- Cornish Engines
  - How the Cornish Engine Came to London, by Dr. H.R. Dickinson, *Engineering*, May 31, 1946
  - Preserving the Cornish Engine, by James T. Kemp, *Mechanical Engineering*, May 1947
- Dry Steam Engines
  - see Subseries Engines-Taylor Manufacturing Company
- Erie Ball Engine Company (mechanical drawings)
  - "Tangye" Bed Automatic Engine
- Erie Engine Works
  - Medium speed (side crank) automatic cut-off engines.
- Evans, Oliver
  - Marietta Steam Mill, 1812
    - Photographic prints of vintage newspaper articles that describe the construction of the steam engine used at the mill. These prints were purchased by the Edison Institute from Marietta College (Ohio) in 1959.
  - Oructor Amphibolis
    - Transcript from *The Locomotive Engine and Philadelphia's Share in its Early Improvements*, by Joseph Harrison, 1872

**Series III – Steam**  
**Subseries – Engines (cont.)**

**Box 10**  
**(cont.)**

- Fishkill Landing Machine Company
  - Fishkill-Corliss Tandem (photograph)
  - Traction Steam Engine (photograph)
  - see also Subseries: Company Histories-Fishkill Landing Machine Company
- Fitchburg Steam Engine Company
  - Photographs of Fitchburg Steam Engines
  - Testimonials, ca. 1870s
- Forbes, W.D. & Company
  - Steering Engine
  - Vertical Engine, blueprint, 1898 (see oversize Box # 14)
- Harrisburg Foundry & Machine Works
  - The Harrisburg Ide Automatic Compound Engine, *Power-Steam*, November 1889
  - Harrisburg Standard Self-Oiling Engine (ad in *Cassier's Magazine*), [n.d.]
- Heilman Machine Works
  - Photograph of a traction engine, [n.d.]
- Hendry Rotary Steam Engine, ca. 1870 (photograph of a model of the engine)
- Herreshoff Manufacturing Company
  - American Industries- No. 65, the Herreshoff Launch, *Scientific American*, February 12, 1881
  - The Herreshoff Torpedo Launch, *Scientific American*, April 5, 1879
- Hewes & Phillips Iron Works
  - Advertisement in *Cassier's Magazine*, [n.d.]
- Hoadley Portable Engine
  - Advertisement from an unidentified publication that includes prices for portable steam engines.
  - Half-tone engraving of a Hoadley portable steam engine.
- Hooven, Owens & Rentschler Company
  - Hamilton-Corliss Engines
    - Advertisement in *Cassier's Magazine*, [n.d.]
    - Partial List of Purchasers, 1906
- Hornblower Steam Engine
  - see Subseries: Photographs-Engines
- Jackson and Wiley (iron foundry)
  - Advertisement in Detroit City Directory, ca. 1855
- Lane & Bodley Steam Engine (photograph of engraving)

**Series III – Steam**  
**Subseries – Engines (cont.)**

**Box 10**  
**(cont.)**

- Leavitt Steam Engines
  - Henry Ford Makes Us a Call, *Plymouth Cordage Notes*, April 2, 1929
  - Performance of a Compound Pumping Engine, *American Machinist*, March 6, 1880 (*see* oversize Box # 14)
  - Vertical Beam Engine (cyanotype print)
- Leopold Steam Engine
  - see* Subseries: Photographs-Engines
- Lyon, Charles W., Inc.
  - Positive Photostat of a model steam engine
- McNaught
  - McNaught's Double Cylinder Steam Engine, *The Practical Mechanic*, ca. 1840s
- Marine Steam Engines
  - Photograph of an illus. of the triple-expansion marine engine of the Steamship "Ivy"
  - Sketch of an unidentified side lever marine engine
  - Steam Engineering in 1860, (unidentified publication), January 7, 1860
- Matthias Vertical Steam Engine
  - Matthias W. Baldwin, Vertical Steam Engine, from *The History of the Baldwin Locomotive Works*, 1923 (includes photograph)
- Maudslay Table Steam Engine (photographs)
- Nagle Engine and Boiler Works
  - Portable Engine on Skids (engraving from unidentified publication)
- Newark Machine Works
  - Advertisement with prices
- Newburgh Steam Engine Works
  - Catalog
    - Whitehill Corliss Engine, ca. late 1880s
- Newcomen Engine
  - Photographs of a model of a Newcomen and of the engine on exhibit at The Henry Ford museum
- New York Safety Steam Power Company
  - Babcock and Wilcox Engines
    - Excerpt from *Stationary Steam Engines* by Robert H. Thurston, 1902
- New York Steam Engine Works
  - Advertisement from the *Detroit City Directory*, ca. 1856/57
- Oscillating Engine, 1830 (photograph)

**Series III – Steam**  
**Subseries – Engines (cont.)**

**Box 10**  
**(cont.)**

- Otis Brothers & Co.  
Stationary Cylinder Engine, blueprint, 1871 (*see* oversize Box # 13)
- Perkins Steam Engines  
Perkins' Patent Expansion Steam Engine, *Arcana of Science, Mechanical Inventions*, [n.d.]  
Perkins Steam Engine, *New England Farmer*, [n.d.]  
The Steamer Anthracite, *American Machinist*, September 4, 1880
- Porter-Allen Engine  
The Porter-Allen Engine *Engineering*, February 7, 1879
- Prosser Steam Engine  
Test of a Prosser-Type Reciprocating Steam Engine, by L.V. Ludy, presented at the Annual Meeting of the American Society of Mechanical Engineers, December 1924
- Putnam Machine Company  
Improvements in Steam Engines, *American Machinist*, June 1878
- Rumsey Steam Boat Engine, 1790 (photograph of a model of the engine)
- Russell & Co.  
Detached Steam Engine and Boiler, *American Machinist*, July 15, 1882  
Photograph of Traction Engine at the Henry Ford
- Saunders, W.H.
- Savery Pumping Engine  
Drawing of a scale model of a pumping engine dated 1698 in the Science Museum at Kensington, England (*see* oversize Box # 13)
- Skinnner Engine Company  
Skinner Balanced Slide Valve Engines (*see* oversize Box # 12)  
“Universal Unaflow” Steam Engines for Laboratory Study & Testing  
Photographs
- Slater Steam Engine  
Correspondence  
[n.d.], from Frank Slater to Henry Ford regarding the engine he designed.
- Stationary Steam Engine  
The Stationary Steam Engine, its Practical Evolution from Savery to the Present Day, [n.d.]
- Stevens Boat Engine (photograph), 1804
- Stimson, B.G. & Co.  
Advertisement from the Detroit City Directory, ca 1855

**Series III – Steam**  
**Subseries – Engines (cont.)**

**Box 10**  
**(cont.)**

- Sutton, J.T. and Company  
Philadelphia's Oldest Steam Engine (photographs and description of the engine that was operating at the Wetherill & Brother White Lead Works in Philadelphia), [n.d.]
- Tangyes' Limited  
Revised Horizontal Steam Engines  
Ad in *Engineering*, December 4, 1891
- Taylor Manufacturing Company  
Portable Dry Steam Engine (photographs)
- Tifft, Geo. W. & Sons  
Ad in a publication titled, *The Industries of Buffalo*, [n.d.]
- Todd, J.C. & Company (successor to Todd & Rafferty Co.)  
The New Baxter Portable Engine, *Scientific American*, February 2, 1878
- Trevithick Steam Engine, 1804  
History, Specifications, and Photograph
- Walking Beam Engine  
Model of a walking beam engine, *Scientific American*, November 18, 1848
- Watt Steam Engine  
*Engineering*, December 7, 1883  
Excerpt from a publication titled, *Early History of the Steam Engine*  
Photographs  
Copies from *The Bulletin*, January 28, 1936  
Watt and the Modern Steam Engine, *Power-Steam*, March 1888  
Watt's Engine Still Runs, by W.H. Millgate, *The Detroit News*, March 31, 1935
- Weston Engine Company  
Weston Automatic Engine, *Western Electrician*, October 10, 1891  
The Weston Engine, *Industries*, December 18, 1891
- Wheelock Steam Engines  
Excerpt from the publication *Industrial Worcester*, [n.d.]  
U.S Patent Office Official Gazette  
-various Photostats of Jerome Wheelock patents for engines, valves, lubricators, etc., 1870s-1880s.
- Wilson, James W. & Company  
Sketches of advertisements that appeared in the Boston City Directories for 1879 & 1867
- Woolf Double-Cylinder Beam Engine  
-see Subseries: Photographs-Engines

**Subseries: Boilers**

This subseries includes steam boiler trade literature and also information about particular boilers without manufacturers identified. Types of boiler and boilers manufacturers are listed alphabetically. Any photographs related to a particular manufacturer or type of boiler can be found with like manufacturer or boiler-type material.

**Box 10**

- Abendroth & Root Mfg. Company
  - Description of the Root Improved Sectional Water Tube Boiler (part of a proposal document), ca. 190?
  - The Root New Water-Tube Steam Boiler, *Western Electrician*, November 8, 1890
- Ames Iron Works
  - see Subseries Engines-Ames Iron Works
- Babcock and Wilcox
  - Blueprints, 1879 & 1880 (see oversize Box # 14)
  - Negative Photostats from an unidentified publication referencing Water-Tube Boilers, [n.d.]
- Benson Boiler
  - 3300-Lb. Benson Boiler Operates Successfully, *Power Plant Engineering*, July 1, 1927
- Bergmann Elektricitats-Werke
- Boiler Accessories
  - see Subseries: Photographs-Boilers
- Compound Tubular Boiler
  - see Subseries: Photographs-Boilers
- Cornish Boilers
  - The Production of Steam-Boilers, excerpt from, *The Steam Engine and other Heat Engines* by Ewing, J.A., 1902
  - The Growth of the Steam Boiler, excerpt from *Maxims and Instructions for the Boiler Room*, by Hawkins, N., 1900
- Fairbairn Boiler
  - see Subseries: Photographs-Boilers
- French or Elephant Boiler
  - see Subseries: Photographs-Boilers
- Galloway Boiler
  - see Subseries: Photographs-Boilers
- Harris-Corliss Engine (photographs)
- Harrison Safety Boiler Works
  - Cochrane Feed Water Heater and Purifier
  - Paper tracing from a blueprint dated March 10, 1902
- Harrison Boiler Works
  - Harrison Sectional Boiler
  - see Subseries: Photographs-Boilers
- Haythorn Water Tube Boiler
  - see Subseries: Boilers-Abendroth & Root Mfg. Co.



**Series III – Steam**  
**Subseries – Boilers (cont.)**

**Box 10**  
**(cont.)**

- Hotchkiss's Mechanical Boiler Cleaner
  - see Subseries: Photographs-Boilers
- Howard Water Tube Boiler
  - see Subseries: Boilers-Abendroth & Root Mfg. Co.
- International Boiler Company
  - Sterling Boiler
    - see Subseries: Photographs-Boilers
- Lancashire Boiler
  - see Subseries: Photographs-Boilers
- Manning Boiler
  - Blueprint, October 27, 1904 (see oversize Box # 13)
- Miller's Tubular Boiler
  - see Subseries: Photographs-Boilers
- Nagle Corliss Engine Works
  - Photographs
- New York Safety Steam Power Company
  - see Subseries: Engines-New York Safety Steam Power Company
- Russell & Company (see also Subseries Engines-Russell & Co.)
  - Universal Boiler for Straw, Coal or Wood
- Steam Pumps
  - Buffalo Steam Pump Company
    - The Buffalo Independent Air-Pump and Condenser,  
*American Machinist*, April 13, 1893
  - Carrett
    - Negative Photostat of a page from an exhibition booklet highlighting, "Machines for Direct Use, Including Carriages". [n.d.]
  - Dean
    - New Independent Condensing Apparatus and Pumps,  
*American Machinist*, September 24, 1881
  - Detroit Edison Company
    - Reciprocating Pumps –a booklet for students
  - McGowan
    - Railroad, Cistern & Deep Well Pumps
  - Owens, S. & Company
    - Pumping Petroleum, *Engineering*, January 27, 1882
  - Savery Steam Pump
    - Photograph of a model of a ca. 1690 engine
  - Winchell, Geo. D. Bros. & Co.
    - Railroad and Fire Pumps
  - Woodward, C. & G.M.
    - Safety Steam-Pump and Fire Engine, 1867

**Series III – Steam**  
**Subseries – Boilers (cont.)**

**Box 10**  
**(cont.)**

Steam Pumps (cont.)

Woodward Steam Pump Mfg. Company

Woodward Patent Improved Safety Steam Pump & Fire  
Engine, 1867

Worthington & Baker

Safety Steam Pump

Worthington, H.R.

Photographs (model of engine & illustrations of engines)

Safety Steam Pump & Fire Engine (directions, one page)

The Worthington Steam Pumping Engine, History of its  
Invention and Development 1876

Worthington Pumping Engine Company

Worthington Boiler Feed Pumps, advertisement in  
*Engineering*, October 23, 1885

Worthington Compound Steam Pump, *Engineering*, May 1,  
1885

Worthington Power Pump, *American Machinist*, December  
24, 1881

Worthington Pump & Machinery Corporation

Advertisement in *Chemical & Metallurgical Engineering*,  
June 1929

Correspondence

Fall 1930 and spring 1931, two way correspondence  
between J.A. Humberstone of the Henry Ford and  
Mr. Frank Duck of Worthington Pump &  
Machinery. In the correspondence, Mr.

Humberstone is requesting a donation of an early  
Worthington pump to add to the museum (note: the  
photographs mentioned in the letter are missing).

First pump built by Henry Worthington-an excerpt from  
Henry Worthington's autobiography, [n.d.]

General Instructions for Setting up and Operating

Stevens, John Boiler (photograph)

Trevithick Boilers

Excerpts from an unidentified publication

Wooden Boilers

Excerpt from an unidentified publication with the partial title:  
International Exhibition, 1876, General Report of the Judges of  
Group XX

Wooten Locomotive Boiler

-see Subseries: Photographs-Boilers

**Subseries: Appliances**

This subseries includes information on appliances for steam engines and boilers. The appliances are listed alphabetically by type and then broken down by corporation or inventor if information is available on the document.

**Box 10**

Automatic Cut-Off

History of-

Boiler Incrustation Preventer

Weissenborn's Patent

Gauges

Edson Recording and Alarm Gauge Co.

Shaffer's Patent Steam Gauge, ca. 1850s

Governors

Ball (also photograph)

Siemen's Chronometric

General Information

Pickering Governor Company

List of Engine Builders Using Pickering governors as  
Equipment between the Years 1880 and 1930

Pickering Governors in Collection Ford Industrial Museum

The Mechanical and Electrical Regulation of Steam Engines, by  
John Richardson, *American Machinist*, September 12, 1895

Some Historical Notes Relative to Governors, and Their Use for  
Determining the Point of Cut-off in Steam Engines, by W.F.

Durfee, *American Machinist*, May 9, 1895

Wright Engine Works (blueprints)

Indicators

Bacharach Industrial Instrument Company

Correspondence

November 12, 1940 letter to Fred Smith of the  
Henry Ford from Rudolf Ulrich of Bacharach  
regarding their indicators.

Clark

The Engine Indicator, by Kalman DeJuhasz, *Instruments*, June  
1932

Henry Ford Museum

Correspondence

February 9, 1933 departmental communication from  
W.W. Dulmage (power dept.) to F. Campsall that  
contains a list of steam engine indicators sent to the  
museum.

History of-

Lehmann & Michels

Making the Indicator Talk, by Jack Holley, *Oil Engine Power*,  
October 1926

**Series III – Steam**  
**Subseries – Appliances (cont.)**

**Box 10**  
**(cont.)**

- Indicators (cont.)
  - Thompson Steam Engine
    - Ephemera
      - Blank forms-“indicator diagram”
  - Trill Indicator Company
    - Correspondence
      - November 11, 1940 letter to The Henry Ford from W.L. Trill regarding a product catalogue that was sent to the museum and a bit of corporate history (note: catalog is not in the vertical file material).
- Injectors
  - Hall, Joseph (clipping from unidentified publication)
- Low Water Detectors
  - Ashcroft, E.H. (one page advertisement), [n.d.]
- Lubricators
  - Bowser, S.F. & Company
    - Correspondence
      - December 18, 1940 letter to Fred Smith regarding the history of the Bowser Company
  - Manzel Brothers Company
    - Correspondence
      - November 30, 1940 letter to Fred Smith regarding catalogs that the company sent to the museum (note: catalogs are not in the vertical file material).
  - Powell, Wm. Company
    - Correspondence
      - November 27, 1940 letter to Fred Smith regarding Power lubricators.
- Oil Cup
  - General Info. (page from unidentified publication)
  - Seibert Cylinder Oil Cup Co (advertisement in *Scientific American*) [n.d.]
- Repair Parts (vertical engines)
  - New York Safety Steam Power Company
- Valves
  - Expansion Valves, *The Practical Mechanic and Engineer's Magazine*, 1846
  - General Information (19 page excerpt from an unidentified publication), [n.d.]

**Subseries: Topical**

Items in this subseries could not be readily linked to a particular corporation or manufacturer. These include general articles about steam power and related issues in professional and scientific periodicals and newspaper clippings, patent documents and photographs. The subseries is organized alphabetically by topic with topics ranging from Bibliography to Turbines.

**Box 10**

**Bibliography**

A list of references to articles and books regarding steam engines in professional literature, [n.d.]

**Boiler Pressure**

Boiler Pressure Above 500 Pounds, *Iron and Steel Engineer*, June 1928

Chart for Determining Allowable Pressures on Spherical Heads, [n.d.]

High Speed Boiler Feed Pumps for High Pressure Boilers, *Powerfax*, autumn, 1936

**Central Lighting Systems**

A list of engines (and their manufacturers) that are used in central lighting systems (unidentified author)

**Fuel for Steam Engines**

Pulverized Fuel and Efficient Steam Generation, by David Brownlie, October 3, 1923

**Henry Ford Museum**

**Artifacts**

A handwritten manuscript with specifications for engines within the Henry Ford collection at the time, [n.d.]

**Company listings**

Handwritten tables by Henry Ford museum staff regarding steam engine manufacturers, [n.d.]

**Exhibit Labels**

[General Information about steam engines that was generated by museum staff]

Indicators (*see* Subseries Appliances-Indicators)

Leavitt Vertical Beam Engine (*see* Subseries Engines- Leavitt Steam Engines)

Mills Portable Engine (*see* Subseries Personalities-Mills, Emory)

Monnier Engine (*see* Subseries Personalities-Monnier, Alfred)

Pickering Governors (*see* Subseries Appliances-Governors)

Reciprocating Pumps (*see* Subseries Engines-Steam Pumps-Detroit Edison Company)

Selected Treasures of Henry Ford Museum, by Ethel Smilick, *Detroit Times Pictorial Living*, October 11, 1959

Watertown Traction Engine (*see* Subseries Company Histories-Watertown Steam Engine Company)

**Series III – Steam**  
**Subseries – Topical (cont.)**

**Box 10**  
**(cont.)**

Mechanical Cut-off for Steam Engines  
History of the Mechanical Cut-Off for Steam Engines, by George B. Catlin, February 5, 1930  
Misc. Publications (complete issue)  
*American Artisan and Patent Record*, October 7, 1868 (*see* oversize Box # 12)  
*Journal of the Franklin Institute of the State of Pennsylvania*, June 1842  
*Patent Record* (supplement to *American Artisan*), January 7, 1868 (*see* oversize Box # 12)

**Box 11**

Model Steam Engines  
Fine Historical Steam Engine Models and Ship Models. Christie's Illus. Auction Catalogue. Auction date: October 5, 1966  
Patents (dates reflect the date the patent was issued)  
Bigelow, Frank  
Arch Plate, May 14, 1912  
Bishop, John  
Obtaining and Applying Motive Power, 1799  
Bramah, Joseph  
Hydrostatical Machine and Boiler, Propelling Vessels, Carriages, &c., 1785 (negative photostat)  
Bramah and Dickenson  
Rotary Engines, 1790 (negative photostat)  
Brunel, Marc Isambard  
Obtaining Motive Power, 1810 (negative photostat)  
Churbuck, Isaac Y.  
Fan Governor for Steam-Engines, December 13, 1859  
Cite, Joseph D.  
Cut off Valve Gear, December 15, 1885  
Dash Pot, November 27, 1888  
Cooper, James  
Application of Water Power to Mills &c.  
Corliss, G.H.  
Governor June 10, 1851  
Steam Cut-Off Gear July 12, 1859  
Steam Engine May 13, 1851  
Steam Pump, June 2, 1857  
DeWitt, Lloyd  
Coal-Magazine for Automatic Stokers, April 2, 1907  
Donkin, Bryan  
Obtaining Rotatory Motion, 1803

**Series III – Steam**  
**Subseries – Topical (cont.)**

**Box 11**  
**(cont.)**

Patents (cont.)

Dumbell, John

Obtaining and Applying Motive Power, the Construction of Carriages &c, 1808

Fortune, John

Actuating Mechanism for Automatic Stokers, March 8, 1910

Furnace

April 2, 1907

November 16, 1909

December 27, 1910

June 13, 1911

October 6, 1914

Furnace Fire Door, November 16, 1909

Protecting-Cap for Furnace Bridge Walls, November 30, 1909

Fortune, J.R. & Bigelow, F.B.

Arch Plate for Furnaces, March 5, 1912

Fortune, J.R. & Wells, H.S.

Grate Structure, January 10, 1911

Refuse Burner, January 10, 1911

Green, N.T.

Steam Cut Off, March 13, 1855

Haigh, G.R. & Fortune, J.R.

Furnace, October 25, 1910

Hateley, Joseph

Obtaining Motive Power, 1790

Huntoon, Reuben K.

Governors for Steam Engines

December 4, 1866

November 19, 1867

December 3, 1867

May 4, 1869

December 14, 1869

November 8, 1870

May 2, 1871

July 4, 1871

Jackson, Joseph

Water Mills, 1774

Lynch, J.A. & Huntoon

Improvement in Governors for Steam Engines, September 22, 1868

**Series III – Steam**  
**Subseries – Topical (cont.)**

**Box 11**  
**(cont.)**

Patents (cont.)

- Marden, Jeremiah  
Improvement in Governors for Steam Engines, October 6, 1868
- Mead, Thomas  
Steam Engines, 1808
- Miller, Samuel  
Steam Engines, 1805 (negative photostat)
- Mills, Emory W.  
Portable Engine, May 11, 1880
- Murphy, Thomas  
Air and Steam Feeding Device for Furnaces, October 8, 1895  
Boiler Furnace  
July 8, 1895  
July 29, 1879  
April 28, 1885  
July 22, 1902  
October 7, 1902  
August 25, 1903  
January 19, 1904  
Improvement in Grate Bars, November 9, 1875  
Self Feeding Furnace, August 3, 1897
- Nouaille, Peter  
Water Wheels, 1812
- Parker, Thomas  
Obtaining and Applying Rotatory Motion, 1792
- Payne, John  
Machinery for Obtaining Motive Power, etc., 1728
- Phillip, George  
Automatic Stoker, March 5, 1912
- Pottle, George F.  
Improvement in Governors for Steam Engines, February 7, 1871
- Rumsey, James  
Applying Water and Steam Power to Machinery, to the Propulsion of Vessels, &c., 1790 (negative photostat)  
Application of Steam and Water Power to Mills and Machinery, 1791 (negative photostat)  
Obtaining and Applying Water Power, 1792 (negative photostat)



**Series III – Steam**  
**Subseries – Topical (cont.)**

**Box 11**  
**(cont.)**

- Patents (cont.)
- Sadler, James
    - Steam Engines, 1791 (negative photostat)
  - Sickels, F.E.
    - Steam Engine Valve Gears
      - May 20, 1842
      - July 20, 1843
      - October 19, 1844
  - Wells, H.S. & Fortune, J.R.
    - Cleavage Bar for Furnaces, August 9, 1910
- Steam Power, general topical articles and monographs
- Boilers
    - Evolution of Steam Boilers, R.N. Appleby Miller, *The Edgar Allen News*, [n.d.]
  - Cylinder Temperature
    - Cylinder Temperature Control by Evaporation, by A.G. Herreshoff, reprinted from *The Journal of the Society of Automotive Engineers*, February 1926
  - Engineering Students
    - Untitled article, *The Practical Mechanic*, [n.d.]
  - High Speed Engines
    - Text from a speech by Gardiner C. Sims [n.d.]
  - History of-
    - A blown up copy of Plate X –Synopsis of events in the History of the Steam Engine, from the book by H.W. Dickinson titled, *A Short History of the Steam Engine*, 1938.
    - Excerpt regarding Steam Engines from the book titled, *Heat Engines* by Joseph Allen and Joseph Bursley, 1941
    - The Story of the Steam Engine, *The Edgar Allen News*, [n.d.]
    - History of the Steam Engine, by Robert Shackleton, *Herald*, September 4, 1936
  - Steamboats
    - A Novel Atlantic Steamer, *Iron*, June 23, 1882
    - The Stevens Iron Clad Battery, 1874 (monograph describing the iron clad to potential buyers)
  - Steam Carriages
    - Origin of Steam Carriages, (clipping from an unidentified English newspaper), ca. 1837-1851
  - Steam Driven Equipment
    - Steam Pile-Driver, *English Mechanic and Mirror of Science*, September 18, 1868

**Series III – Steam**  
**Subseries – Topical (cont.)**

**Box 11**  
**(cont.)**

- Steam Power, general topical articles and monographs (cont.)  
Technical Information about-  
Steam Engine section of Machinery's Encyclopedia, [n.d.]  
-Use in Manufacturing  
Steam and Water Power Used in Manufactures (excerpt  
from unidentified publication), ca. 1880  
Thomas Register – Sept. 1931  
Steam Engine Manufacturers section (negative Photostat)
- Turbines  
DeLaval (photograph)  
The Growth of the Turbine Engine, *The Literary Digest*, July 27,  
1907  
The Development of the Parsons Steam Turbine (one page),  
(unidentified publication), [n.d.]  
The Development of the Steam Turbine, by Hon. C.A. Parsons,  
*Cassier's Magazine*, [n.d.]  
Report of the Committee on Steam Turbines and Generators, 1922

**Subseries: Personalities**

This subseries contains biographical information for steam power pioneers and others who advanced the technology either through their experimentation or by their presence as owners or founders of Steam Power manufacturing companies. Items in this subseries include newspaper clippings, articles from professional trade periodicals, photostats of excerpts from published books and photographs.

**Box 11**

Burleigh, Charles (1824-1883)  
Corliss, George H. (1817-1888)  
    -also newspaper clipping regarding his daughter's will.  
Evans, Oliver (1755-1819)  
    -see also Subseries Topical-Steam Carriages  
Herreshoff, James B.  
Hoadley, J.C. (photograph)  
Huber, Edward (photograph)  
Kendall, Edward (1821-1915)  
Mills, Emory W. (1842-1882)  
    -also photographs  
Monnier, Alfred (1857-1934)  
Newcomen, Thomas (1663-1729)  
Parsons, Charles (photographs)  
Perkins, Jacob (1766-1849)  
Reynolds, Edwin (1831-?)  
Richards, Charles  
Sharp, Joel (see Subseries: Engines-Buckeye Steam Engine)  
Sickels, Frederick E. (photograph)  
Smith, Erastus, W.  
Stephenson, George  
Tangye Brothers (photograph)  
Trevithick, Richard (1771-1833)  
Watt, James (also photographs)  
    -see also Subseries: Personalities-Corliss, George H.  
Wheelock, Jerome (1834-?)  
Worthington, Henry (1817-1880)

**Subseries: Photographs**

Photographs in this subseries may or may not contain identifying information. Some photos may contain views of a number of boilers, engines, or appliances on a single photo (these photographs were copied from illustrations in an unidentified publication).

**Box 11**

Accessories

Plate of illustrations from an unidentified publication showing different accessories for boilers.

Boilers

Various

Engines

Corliss Engine

Locomotives

Single Cylinder

Table Engine, 1824

Traction Engines

Traction engine compensating gears

Unidentified engine

Valves

Plate of illustrations from an unidentified publication showing different valves for engines and governors.

**Series IV**  
**Other Power Sources**

The Other Power Sources Series contains archival material relating to hot air, nuclear, solar, water, and wind power. Each subseries is arranged alphabetically by subject. Interesting items include; a newspaper clipping that describes a way to power airplanes using solar power, mid 19<sup>th</sup> century reprints of late 18<sup>th</sup> century water power patents, and a catalog for a water engine (Ross Valve Company) used to power church organs. The series also includes photostats (and some originals) of advertisements and of articles from professional trade and science periodicals, excerpts from textbooks, and photographs.

**Subseries: Hot Air Power**

**Box 11**

- Air Engines, general information
  - Engines, Air (excerpt from an unidentified textbook), [n.d.]
  - Hot Air Engines, (excerpt from "Guide No. 4"), [n.d.]
- Ericsson Hot Air Engines
  - Caloric Engine (model of), 1869 (photograph)
  - Ericsson's Caloric Engine, *Mechanics' Magazine and Register of Inventions and Improvements*, February 1834
  - The Ericsson Domestic Motor, *English Mechanic and World of Science*, March 25, 1881
  - Operation of the Ericsson Pumping Engine, (unknown author), [n.d.]
  - Pumping Engine (advertisement)
  - see also Rider Engines and Rider-Ericsson Engine Corporation
- Ericsson, John
  - The Ericsson Memorial Caused Much Loss of Sleep, *Kansas City Times*, May 29, 1926
  - The Father of the Battleship, by Violet K. Libby, *The Dearborn Independent*, December 3, 1927
  - Manuscript of biographic information by unidentified author, [n.d.]
- Hargreaves Hot Air Engines
  - The Hargreaves Hot Air Engine, *Power-Steam*, March 1888
- Hayward, Tyler & Company (photograph of engine)
- Heinrici Hot Air Motor (photograph)
- Lowne Engines (photographs)
  - Lowne Patent Atmospheric Engine (front and rear view)
  - Lowne Vacuum Engine, 1897
- Patents
  - Roper, S.H.
    - Improvement in Hot-Air Engines
    - February 4, 1862
    - March 18, 1862
    - June 9, 1863

**Series IV – Other Power**  
**Subseries – Hot Air**

**Box 11**  
**(cont.)**

- Patents (cont.)
  - Roper, S.H. (cont.)
    - June 5, 1866
- Rider Engines
  - Early Rider-Ericsson Hot Air Engine (advertisement?)
    - The Rider Air-Engine, *English Mechanic and World of Science*,  
September 1, 1876
  - The Rider Compression Pumping Engine (advertisement)
    - The Rider Compression Pumping Engine, *Scientific American*,  
March 2, 1878
- Rider-Ericsson Engine Corporation
  - Directions for Operating the Improved Ericsson Pumping Engine,  
[n.d.]
  - Reeco-Rider pumping engines (advertisement)
  - Reeco-Ericsson pumping engines
  - Correspondence
    - November 7, 1929 from Harold V. Gustafson to Henry  
Ford regarding the information about the engine.
- Rotor Corporation of America
  - Vacuum Rotor (photographs)
- Stirling Engines
  - Highlights from 6500 Hours of Stirling Engine Operation, by F.E.  
Heffner, presented at SAE Congress, January 1965
  - Philips Stirling Engine Activities, by R.J. Meijer, presented at SAE  
Congress, January 1965
  - Theoretical Performance of Stirling Cycle Engines, by G.Walker &  
M.I. Khan, presented at SAE Congress, January 1965
  - Thermal Design of Stirling-Cycle Machines, by F.A. Creswick,  
presented at SAE Congress, January 1965
  - A Thermodynamic Analysis of the Stirling Cycle and a  
Comparison with Experiment, by D.W. Kirkley, presented at SAE  
Congress, January 1965
- Woodbury, Merrill, Patten & Woodbury Air Engine Company
  - A Remarkable New Motor, *Engineering News*, September 14,  
1889

**Subseries: Nuclear Power**

**Box 11**  
**(cont.)**

- Cook Nuclear Power Plant (pamphlets)
  - Cook Nuclear Center, [n.d.]
  - Donald C. Cook Nuclear Plant, [n.d.]
- Enrico Fermi Atomic Power Plant
  - Atomic Power for Peace and Prosperity (pamphlet), April 1, 1960

**Series IV - Other Power**  
**Subseries: Solar Power**

- Box 11**  
**(cont.)**      Burning Sunlight to Run the Stratosphere Airships, *American Weekly*,  
1935  
M.I.T. to Study Use of Sun's Heat, *Power Plant Engineering*, [n.d.]  
Photograph (illustrations from an unidentified publication)  
    Ericsson's Sun Motor  
    Mouchot's Sun Engine

**Subseries: Water Power**

- Box 11**  
**(cont.)**      Andrews, Chauncey Water Wheel (testimonials), [n.d.]  
    Backus Water Motor Company (photographs of motor)  
    Bodine & Company  
        Illustrated Catalogue of Bodine's Jonval Turbine Water Wheel,  
        1868  
        Bodine's Jonval Water Wheel (specs. and directions for setting up)  
    Burden, Henry Water Wheel (photograph of in-situ water wheel), [n.d.]  
    Eagle Iron Works, Eagle Turbine (testimonials), ca., late-1860s  
    Fourneyron Turbine  
        Ancient Waterwheel had Curved Buckets, *Power*, October 6, 1931  
    Henry Ford  
        Invite Ford to Come to City, *Watertown Daily Times*, January 6,  
        1928  
    Holyoke Machine Company  
        Turbine Water Wheel Tests, [*Scientific American*], June 26, 1880  
    Hotchkiss, Gideon Water Wheels (testimonials) ca., mid-1840s  
    Howd Turbine (photograph of a model)  
    McCormick Hydraulic Turbine (photograph of a model)  
    Patents  
        Bannister, John  
            Obtaining Motive Power, 1794  
        Beatson, Robert  
            Applying Wind & Water Power to Horizontal Mills, &c.,  
            1797  
        Brayshay, Richard & McMahon, William  
            Obtaining Motive Power, Propelling Vessels, &c., 1801  
        Browne, Mark  
            Obtaining Motive Power, 1801  
        Dunn, William Bruce  
            Wind & Water Mills for Grinding, &c., 1794  
        Fussell, James  
            Water and Wind Wheels, &c., 1803  
        Gullett, Christopher  
            Hydraulic Engine, 1773

**Series IV – Other Power**  
**Subseries – Water**

**Box 11**  
**(cont.)**

- Patents (cont.)
- Lukin, Lionel
    - Motive Power, 1801
  - McCormick, John
    - Improvement in Turbine Water Wheels, June 30, 1874 and November 27, 1875
  - Norton, John
    - Water Mills, 1803
  - Parks, William
    - Applying Compressed Air as Moving Power, 1801
  - Seller, William
    - Diminishing Friction in and Communicating Rotatory Motion to Wind or Water Drainage Mills, &c., 1801
  - Shorland, William
    - Water & Other Mills, &c., 1791
  - Silvester, George
    - Wind and Water Mills, 1792
  - Trotter, John
    - Rotatory Engine
  - Watts, William
    - Obtaining & Applying Motive Power, 1809
  - Regulator for Water Wheel
    - Nathan Scholfield's (instructions for operation), [n.d.]
  - Ross, J.G. Tidewater Wheels (advertisement), [n.d.]
  - Ross Valve Company
    - Ross Water Engine for Blowing Church Organs (pamphlet) ca., 1890
  - Saxon Mill
    - The Old Saxon Mill at Guys' Cliff, *American Machinist*, July 2, 1914
  - Smith, Frederick, Water Wheel (advertisement that offers testimonials, specifications, and prices)
  - Southern Appalachian Water Power Conference
    - Proceedings of the First Annual Meeting, June 1922
  - Stout, Mills & Temple
    - American Turbine Water Wheel (testimonials), ca. early-1860s
  - Van Dewater Water Wheel
    - Specifications and Testimonials, ca. mid-1860s



**Series IV – Other Power**  
**Subseries – Water**

**Box 11**  
**(cont.)**

- Water Power, general information  
American Hydro Power in the 20<sup>th</sup> Century, by Edward Uehling, reprinted from *Allis-Chalmers Electrical Review*, 1955  
Hydro-Electric Power Stations by David Rushmore & Eric Lof, chapter I (History of Water Power and Electrical Developments) and chapter VIII (Turbines)  
The Romance of Water Power by Paul Lewis, chapters V (Water Wheels), VI (The Advance from Water Wheel to Turbine), and VII (Turbines), 1931  
Water Over the Dam, by Edward Uehling, reprinted from *Allis-Chalmers Electrical Review*, 1954  
Water Power Development Still Waits on Legislation, *Electrical World*, May 22, 1920  
Water Power-How it Works (booklet), by Robert Howard, 1979  
Water Resources Inventory Report, Water Supply Commission of Pennsylvania, part VII, 1917
- Water Pumps  
Chain  
    James M. Boyd (negative photostat of advertisement)  
Hand (pitcher) (negative photostat of advertisements)  
    Bennett  
    Farnam  
    Holly  
    Strever, J.H.  
    Washburn, R.F. & Company  
Rotary (negative photostat of advertisement)  
    Cary  
    Hubbard  
    Stiven
- Water Wheels, general information  
Clippings of unidentified water wheels in-situ.  
Kinne Collection  
    4 cyanotypes of water wheels in the Kinne Collection  
Making a Water Wheel  
    How to Make a Couple of Old Fashioned Water Wheels, *Herald*, ca. 1935  
Photographs of illustrations from an unidentified publication  
Testing (results of comparative testing of various wheels), 1879  
Tide Mills  
    Tide Mills (part 2), by Rex Wailes, *The Edgar Allen News*, September 1958

**Subseries: Wind Power**

**Box 11**  
**(cont.)**

Aero Manufacturing Company  
    Assembly Instructions for the Aero Windmill  
Harnessing Wind, Water, and Sun, by George B. Waldron,  
*Munsey's Magazine*, [n.d.]  
One Year's Work done by a 16-foot Geared Windmill, University  
of Wisconsin Agricultural Experiment Station, June 1898  
Patents (*see* Subseries Water Power-Patents)  
What Type of Water System Shall I Install?, by E.A. Stewart,  
University of Minnesota, March 1922  
Windmill Electric Lighting and Power, by Wallace Manikowske,  
North Dakota Agricultural College Experimental Station, August  
1913  
Windmills (pamphlet), The Society for the Protection of Ancient  
Buildings  
Windmills (pamphlet), by R. Thurston Hopkins, [n.d.]

## **Oversize Boxes**

### **Box # 12 (Size A)**

*American Artisan*, October 7, 1868  
Cost Estimate for Wiring Job, [1889]  
Edison Central Power Station-Chicago, Illinois, [1895]  
Edison Central Power Station-Patterson, N.J.-*Electrical Engineer*, December 9, 1896  
Edison Electric Light Company-S.S. *Columbia-The Log*. June 1930  
Edison Electric Light Company-S.S. *Columbia-The Log*. August 1925  
Edison Laboratories-Menlo Park-Satire-Puck Newspaper, 1879 & 1880  
Edison Machine Works-Schenectady Works-*Electrical Engineer*, 1892  
Edison United Manufacturing Company-Dynamo-Blueprints & Specs. [n.d.]  
Experimental Researches in Electricity (11<sup>th</sup> series) by Michael Faraday, 1838  
Experimental Researches in Electricity (12<sup>th</sup> & 13<sup>th</sup> series) by Michael Faraday, 1838  
Julien Electric Company- Exhibition of Mechanical Traction, 1885  
Menlo Park- Map of Machine Shop, June 1928  
O'Brien Electric Lamp and Reflector-Testimonials 1907  
Skinner Engine Company-Skinner Balanced Slide Valve Engines  
Telegraph Supply & Manufacturing Company-Blank Stock Certificate, [187?]

### **Box # 13 (Size F)**

Brush Electric Company-Generators-Arc Generator Belt Tightener-blueprint, 1901  
Edison General Electric-Generator (150 V)-blueprint, 1891  
General Electric Company-Armature Bar Winding-blueprints, 1901  
Manning Boiler-blueprint October 27, 1904  
Otis Brothers & Co.-Stationary Cylinder Engine-blueprint, 1871  
Savery Pumping Engine-Drawing of a scale model of 1698 engine.

### **Box # 14 (Size C)**

American Electric Manufacturing Company-advertisement, [n.d.]  
Babcock & Wilcox Boilers-blueprints, 1879 & 1880  
Diagram for Electric Wiring by Edgar E. Stark, 1887  
Dynamo Brush (Wirt) specs. & blueprint, 1893  
Edison Central Power Stations-specs. & drawings, [1880s]  
Edison Electric Light Company-Street Lighting-blueprint drawings (photostats), [n.d.]  
Edison General Electric-Dynamos-Arc Light-specs. & drawings, 1891, 1892, & 1893  
Edison Machine Works-Dynamos-Specs. & Drawings, [mid-1880s]  
Edison's Light, reproduction of *New York Herald*, December 21, 1879  
Edison United Manufacturing Company-spec. drawings (photostats), 1888 & 1889  
Elliott Company-Dynamo blueprint, 1931

**Oversize Boxes (cont.)**

**Box # 14 (cont.)**

Forbes, W.D. & Co.-Vertical Engine, blueprint, 1898

Leavitt Steam Engine, *American Machinist*, March 6, 1880

Menlo Park- Map of Machine Shop, June 1928

Mungle, Alexander (biographic information)

The Progress in the Art of Modern Incandescent Lighting, *Electrical World*, September 12, 1891

Sketches in Edison's Laboratory, *The Daily Graphic*, December 31, 1879

Sprague Electric Railway & Motor Company-blueprint drawings (photostats), 1887

Stanley Electric Manufacturing Company-Litigation-Stanley vs. Toledo Port Clinton & Lakeside Railway Company [190?]

Thomas A. Edison's Laboratory and Machine Shop at Menlo Park, N.J., *The Daily Graphic*, April 10, 1878

United States Electric Lighting Company-Advertisement, [n.d.]

A Visit to Menlo Park, *Puck*, November 17, 1880

Westinghouse Electric & Manufacturing Company-Shallenberger's AC Meter, *Electrical World*, Sept. 15, 1888

The Wizard of Electricity, *Frank Leslie's Illustrated Newspaper*, January 10, 1880