

MSS 240, BERNARD A. BEHREND COLLECTION, SEPARATION LIST

**Oversize Box One**

Folder One

One 12.75" x 9" charcoal drawing of William Makepeace Thackeray which was drawn and signed by Samuel Lawrence, 1882 (Accession No. 90-16).

One 22' x 18" charcoal drawing of William Makepeace Thackeray which was drawn and signed by Samuel Lawrence, no date (Accession No. 94-17).

Folder Two

First National Bank: Cancelled Checks – 1903-1905

Folder Three

Art: [J. M. Heinrich Hofmann], 1912.

Folder Four

Astronomy. Articles from 1929-1932.

Folder Five

From "Behrend, Bernard Arthur. Addresses and Papers" Folder.

"The Debt of Electrical Engineering to C. E. L. Brown", reprinted from *Electrical World and Engineer*, November 16, 1901-March 1, 1902.

From "Behrend, Bernard Arthur. *The Induction Motor. Second Edition*. Notes and Correspondence" Folders.

One blueprint circle diagram of Type-AN8-20-3 ¾, 440 Volts, 900 R.P.M. Synchronous Speed, The Bullock Electric Manufacturing Company, Cincinnati, Ohio, May 13, 1904.

One blue diagram of test curves of a type of a commutator machine, 1904.

Dimensions of Induction Motors, Forms K and L, 60 Cyclescles (No. 14152), Engineering Department, General Electric Company, Changed 27 July 1905.

One blueprint (No. 24242) on information about Bearing Pressures Type AN Motor, The Bullock Electric Manufacturing Company, Cincinnati, Ohio, June 15, 1906.

From "Behrend, Bernard Arthur. Notes, Folder I".

One white 12" x 16' diagram which is printed in black with blue and red ink marks.

The top of the diagram has the following words: "Graphischë Stalik / Bestimmung cines Frägheitsmoments / nach / C. Cullmann".

From "Behrend, Bernard Arthur. Notes, Folder V".

One blueprint (No. 658-D) of the Magnetic Leakage Testing Apparatus, The Bullock Electric Manufacturing Company, Cincinnati, Ohio, E. C. W., January 28, 1901.

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Folder Five (continued)

From "Behrend, Bernard Arthur. Notes, Folder VII".

Two 9" x 24 ½" cream-colored, green-graphed diagrams, no dates.

One 14" x 19.5 plan of Wicklungsschema zuden Gleichstrom Dynamos 96.96 V-VIII.

Purple oval stamp in the upper left-hand corner which states: Maschinenfabrik Oerlikon / 37 JUL 97 / OERLIKON by ZÜRICH. On the lower left-hand side: No. 21084T.

One 13.25" x 25.25" plan of Strassenbahn-Motor / der Maschinenfabrik Oerlikon / für 1m Spurweite. / Spannung 450 bis 500 Volt. Stromstärke bis 25 Ampere. / Eimmalige Uebersetzung 1: 4, 9 (printed at the center of the top). At the top of the left-hand side: Elektromechanische Konstruktionen / zusammengestellt / Von / Gisbert Kapp. / Nackdruck verboten. At the top of the right-hand side: Tafel VI. At the bottom of the right-hand side: Photolithographie von C. L. Keller in Berlin.

From "Behrend, Bernard Arthur. Residence in Massachusetts" Folder.

Six blueprints of his house and laboratory in Wellesley Hills, Massachusetts, 1925.

From "Darwin, Charles" Folder.

One 14.625" x 9.625" print drawing of a young Charles Darwin sitting in a chair which was done by M. & N. Hanhart Lith Printers and it is signed "C. H. Maguire / 1849".

One 14.625" x 9" print drawing of Charles Darwin with a long beard, [n.d.].

From "Einstein, Albert" Folder.

Three articles from *The Illustrated London News* which are dated June 28, 1930; July 4, 1931; and August 5, 1933.

From "Electric Motors: [Induction] Motors" Folder.

One blueprint (No. 2583.D.1) of the 50 HP Induction Motor, Westinghouse, 400 Volts, 67 AMP, 850 R.P.M., 3 Phase, 60 Cycles, Bullock Electric Manufacturing Company, Cincinnati, Ohio, 1903.

From "Electric Motors: Induction—Single Phase Motors" Folder.

One blueprint (No. 3521-D) of a winding diagram of the 4 Pole-Single Phase-Compensated Motor, Bullock Electric Manufacturing Company, Cincinnati, Ohio, 1904.

Hammermill Paper Company. *The Paper Mill and Wood Pulp News*, August 31, 1918.

Huxley, Thomas Henry. One 13.625" x 10.75" print drawing of Thomas Henry Huxley with his left arm leaning on three books on a table and holding a human skull, [n.d.].

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Folder Six

“Niagara Hudson”, *Fortune*, June 1931, Volume III, No. 6, pages 41-49, 106, 108, 112, 114, 116, 118.

Shafts and Shafting: Vibrations. One 14” x 10.5” blue book entitled *Engineering: An Illustrated Weekly Journal*, 1918.

Speed Reducers. *Two Articles on Reduction Gears. A Reprint from “Engineering”, London*, 1916.

From “Tariff: Law” Folder.

*The Tariff Law of 1913*. C. S. Hammond & Co. Printers and Publishers, New York.

From “Turbo Generators” Folders.

Log of Test No. 1 of 500 K.W. Allis-Chalmers Company Steam Turbine-Alternator Built for Western United Gas & Electric Company, Aurora, Illinois. Average Load 570.8 K.W., December 16, 1906.

Log of Test No. 2 of 500 K.W. Allis-Chalmers Company Steam Turbine-Alternator Built for Western United Gas & Electric Company, Aurora, Illinois. Average Load 385.67 K.W., December 16, 1906.

One stress-sheet (No. 3430.D.1) for Turbo-Generator 5000 K.W., 3 PH., 6600 VOLTS, 25 Cycles, 750 R.P.M. at 4-68-61¾. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., September 16, 1904.

One stress-sheet (No. 3873-D-1) for Turbo-Generator 5000 K.W., 3 PH., 6600 VOLTS, 25 Cycles, 750 R.P.M. at 4-68-61¾. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., December 13, 1905.

One stress-sheet (Nos. 3478-D.1 and 3478-D.2) for Turbo-Generator 5500 K.W., 6600/11000 VOLTS, 3 PH., 4 P., 25 Cycles, 750 R.P.M. at 4-75-51¼. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., September 24, 1904.

One stress-sheet (No. 3478-D.1) for Turbo-Generator 5500 K.W., 6600/11000 VOLTS, 3 PH., 4P., 25 Cycles, 750 R.P.M. at 4-75-51¼. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., September 24, 1904 and December 14, 1905.

One blueprint (No. 183897) of Stresses in Rotor AT4 3235 ¾. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., August 17, 1904.

One blueprint (No. 21321) of Rotor Slot Insulation Type AT4.75.51¼. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., March 24 and 25, 1905.

One blueprint (No. 23194) of Rotor Slot Insulation Type AT4 6861¾. This DWG. Supersedes No. 18720. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., August 19, 1905.

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Folder Six (continued)

From "Turbo Generators" Folders.

- One blueprint (No. 24555) of Rotor Slot Insulation Type AT2 34 35½. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., December 4, 1905.
- One blueprint (No. 24945) of A. C. Turbo Generator Outline, Type AT2-21 29, 500 K.W., 2300 VOLTS, 3600 R.P.M., 3 Phase, 60 Cycles. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., March 2, 1906.
- One blueprint (No. 25297) of Rotor Slot Insulation Type AT2 21 29. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., February 16 and March 1, 1906.
- One blueprint (No. 25543) of Rotor Slot Insulation Type QT4 36-33. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., February 23, 1906.
- One blueprint (No. 25548) of Rotor Slot Insulation Type AT4 32. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., March 21, 1906.
- One blueprint (No. 25700) of A. C. Turbo Generator Outlines. Table of Dimensions. Supersedes DWG #22215. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., March 22, 1905.
- One stress-sheet (No. 25730) for AT2-21 29. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., March 13, 1906.
- One blueprint (No. 27250) of A. C. Turbo Generator Outlines. Table of Dimensions. Supersedes DWG #25700. The Bullock Electric Manufacturing Company, Cincinnati, Ohio, U.S.A., September 14 and October 6, 1906.
- One blueprint (No. 42345) of Turbo Alternator, Dimensions Size 501-S-4. Crocker Wheeler Company, Ampere, New Jersey, December 20, 1904.

From "Whitman, Walt" Folder.

- Four 22.5" x 17.5" copies of *The Long-Islander* (Newspaper), Huntington, Long Island, New York, which has articles pertaining to Walt Whitman. The dates are Thursday, July 2, 1959 (Section Three—Page 1); Thursday, May 24, 1962 (Section Two—Page 3); Thursday, May 30, 1963 (Section two—Page 8); and Thursday, May 28, 1964 (Section Three—Page 1).

Folder Seven

*Bookplates*

- One 14" x 10" poster of a black-and-white bookplate. The bookplate design is rectangular-shaped with "B. A. BEHREND" at the bottom. The bookplate shows a row of electrical generators with two electrical transmission towers in the background. In the upper left-hand corner is "EX / LIBRIS". Underneath the bookplate design are the following two lines of words: "A BOOKPLATE / JUNIOR DESIGN – WILLMON, E. L.". On the bottom of the right-hand side of the poster is the signature of Hon. Meution in blue pencil. 1941.

**Oversize Box One**

Folder Seven (continued)

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*Bookplates*

One 14" x 10" poster of a black-and-white bookplate in the center. The bookplate design is rectangular-shaped with "B. A. BEHREND" at the bottom. The bookplate shows three horses running over the top of a waterfall. The horses are attached by string to a water-driven generator, which is in the lower left-hand side of the bookplate. Above the horses are the words: "EX / LIBRIS". Underneath the bookplate design are the words: "BOOKPLATE". On the Bookplates bottom of the right-hand side of the poster is the signature of H. McCoy in black ink and Hon. Meution in blue pencil. 1941.

One 14" x 10" poster of a black-and-white bookplate in the center. The bookplate design is rectangular-shaped with the scene of a waterfall in the center. Around the edge of the waterfall scene are other little scenes related to electricity. At the top of the bookplate are the words: "EX LIBRIS B. A. BEHREND". Underneath the bookplate design are the following four lines of words: "A BOOKPLATE / for / B. A. BEHREND'S BOOKS / SOPH. DESIGN / H. L. COOPER". On the bottom of the right-hand side of the poster is written "\$10.00 prize" written in blue pencil. 1941.

One 10" x 14" One 14" x 10" poster of a black-and-white bookplate on the left-hand side. The bookplate design is rectangular-shaped with "B. A. BEHREND" at the top. The bookplate shows a row of water-driven electrical generators in front of a window with a view of Niagara Falls. On the lower right-hand corner of the bookplate design is "EX / LIBRIS". On the right-hand side of the poster are the following three lines of words: "A PROPOSED BOOKPLATE / SCALE TO BE ½ PRESENT SIZE / SENIOR DESIGN – HASSIE FORRESTER". On the bottom of the right-hand side of the poster is the signature of Hon. Meution in blue pencil. 1941.

One 15" x 10.75" poster of a black-and-white bookplate in the center. The bookplate design is rectangular-shaped with "B. A. BEHREND" at the bottom. At the top of the bookplate it shows a muscular man preparing to throw a lightning bolt from his right hand while he holds another one in his left hand. Underneath the muscular man it shows a man working an induction motor. On the bottom of the right-hand side of the poster is the signature of Hon. Meution in blue pencil. 1941.

One 20" x 15" poster of a black-and-white bookplate in the center. The bookplate design is circle-shaped with a drawing of a line of water-driven generators installed for the Niagara Falls Power Company. Around the edges is the following description: "ex libris / B. A. Behrend". Underneath the bookplate design are the following three lines of words: "BOOKPLATE COMPETITION / DESIGNED BY W. E. HALLMAN / REDUCE TO ONE-FOURTH SIZE". On the bottom of the right-hand side of the poster is the signature of Hon. Meution in blue pencil. 1941.

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Folder Eight

## MSS 240, BERNARD A. BEHREND COLLECTION, SEPARATION LIST

### German Newspapers

*Berliner Tageblatt* 1914 editions. Have the following dates: July 2, 9, 16, 23; August 4-7, 13, 20, 23, 24, 27; September 3, 10; October 1.

*Berliner Lokal-Anzeiger* 1914 editions. Have the following dates: August 3 and 21.

### **Oversize Map Drawer**

#### Folder One A-C

From "Behrend, Bernard Arthur. Allis Chalmers-Bullock Old Records" Folders.

Eighty blueprints on different types of electrical motors and generators, and related areas, 1902-1907. Also included is a listing of the blueprints.

#### Folder Two

From "Behrend, Bernard Arthur. *The Induction Motor. Second Edition*. Notes and Correspondence" Folder.

Seventy-four blueprints on different types of electrical motors and generators, and related areas, 1903-1906. Also included is a listing of the blueprints.

#### Folder Three

From "Correspondence as Consulting Engineer" Folders.

One blueprint of Double-acting Duplex Pumps 40 R.P.M. 24" Stroke, Worst Combination of 2-Duplex Pumps (62-116), The Goulds Manufacturing Company, Seneca Falls, New York, 1925.

One blueprint concerning Indicator between Valves in Pump with Small Flywheel (Chart No. 2029), The Goulds Manufacturing Company, Seneca Falls, New York, 1925.

One blueprint of Mounting of Spindel and Backshaft, Precision Lathe 1" Collect, The New Departure Manufacturing Company, Bristol, Connecticut, Drawing No. SE-4687-D. B. A. Behrend, Wellesley Hills, Massachusetts, November 6, 1928.

### **Artifacts**

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Nine metal test bars of different sizes, which were removed, from the interior of the defective nickel steel forgings of the new 10,000 horse-powered electric generator which exploded at Plant No. 3 of the Niagara Falls Hydraulic Power and Manufacturing Company on April 28, 1908.

4" diameter medal which states on one side "AWARDED BY THE CITY OF PHILADELPHIA" engraved around the rim. In the center two women stand between a shield with a set of scales above it. The other of the medal has these words engraved around the rim: "THE JOHN SCOTT MEDAL / TO THE MOST DESERVING". In the center are these words: "To / BERNARD ARTHUR BEHREND / for his / HIGH SPEED ELECTRIC / GENERATORS on the / recommendation / of the / FRANKLIN INSTITUTE / 1911". The medal is stored in a black case with a purple velvet interior. Inside the lid of the case is the following inscription in gold letters: "MEDAL / AWARDED BY / THE CITY OF PHILADELPHIA. / TRUSTEE UNDER THE / WILL OF / JOHN SCOTT / OF / EDINBURGH, SCOTLAND".

2 1/2" diameter medal which shows on one side three women sitting on the steps of a temple with the center woman holding a steam boat in her lap. Above the center woman is a portrait of a man with these words beneath him: "Robert Fulton / 1765-1815". Underneath the three women are these words: "FIRST USE OF STEAM IN NAVIGATION / ON THE HUDSON RIVER / 1807". The other side of the medal shows six men working on a boat. Engrave around the rim of the medal are these words: "DISCOVERY OF HUDSON RIVER BY HENRY HUDSON / A.D. MDCIX / HUDSON-FULTON CELEBRATION COMM". The medal is stored in a black case with a green velvet interior. On the outside of the box there are some words in gold: "Hudson Fulton Banquet / September 29, 1909.

2 3/4" tall medal in the shape of a shield with a wingspread eagle sitting on a rectangular box on one side of the medal. In the rectangular box are these words: "GOLD MEDAL / LOUISIANA PVCHASE / EXPOSITION". On the other side of the medal there are two women standing with these words circling them: "UNIVERSAL EXPOSITION \_\_\_?\_\_\_ VNITED STATES OF AMERICA / MCMIV". The medal is encased in a "4 7/8" x 4 3/4" dark wood frame with a dark burgundy velvet interior.

1 3/4" diameter medal showing a muscular man bent down on his knees with his right arm stretched out and his left one slightly behind him. Beneath the man are these words: "DASS SICH DAS GROSSE WERK VOLLENDE GENÜGTEIN GEIST FÜR TAUSEND HÄNDE". This sentence roughly translates into "That (yourself, itself, oneself) the greatness work completed enough a (spirit, mind, intellect) for thousand hands". The other side of the medal shows a Roman/Greek style temple in the center. Engraved around the rim of the medal are these words: "BERLINER BEZIRKSV DEUTSCH INGENIEURE / JUNI 1913". This sentence translates into "Berlin District German Engineering / June 1913".

### **Artifacts (continued)**

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3 3/4" tall metal award of a team turbine blading which has engraved on the bottom front: "ALLIS-CHALMERS CO. / MILWAUKEE, WISCONSIN. U.S.A. / STEAM TURBINE BLADING". Engraved on the bottom backside is: "PATENT / APR. 1, 1902-DEC. 9, 1903 / FEB. 14-MAR. 14-AUG. 15, 1905 / OTHER PATENTS PENDING".

5 1/12" x 3 5/8" metal engraved portrait of Lord William Thomson Kelvin.

3 3/8" x 3 5/12" metal engraved profile of Edward Dean Adams. The words engraved on the left side of the profile are: "IN UNWANDELBARER TREVE / R. MARSCHALL WIEN 1922". The words engraved on the right side of the profile are: "EDWARD DEAN ADAMS GEB. 1846 / MEINEM LIEBEN FREUNDE DEM VOR- / BILDLICHEN FORDERER DER MEDIALLEVR- / KUNST". On the back of the engraved profile is a short engraved letter of December 10, 1923 to Mr. Behrend from Edward D. Adams.

5/8" diameter white-and-gold colored pin (14 karat gold) which says "HAMMERMILL PAPER COMPANY / 20 YEARS". On the back is engraved: "B. A. Behrend / 1898 August 21-1918".

5/8" diameter light-blue-and-silver colored pin (18 karat gold) which says "HAMMERMILL PAPER COMPANY / 30 YEARS". On the back is engraved: "B. A. Behrend / 1898 August 21-1928".

5/8" purple-and-gold colored, slightly curved square pin which has the gold letters "AIEE" in the center. These letters stand for American Institute of Electrical Engineers. On the back are these engraved words: "548 / Bernard / Arthur / Bernard".

5/8" gold colored, slightly curved square pin which has the purple letters "AIEE" in the center. These letters stand for American Institute of Electrical Engineers. On the back are these engraved words: "2796 / B. A. Bernard".

6/8" purple-and-gold colored shield-shaped pin which has these words in gold: "AMERICAN / SOCIETY OF / CIVIL / ENGINEERS / FOUNDED / 1852". On the back are these engraved words: "Bernard / Arthur / Bernard / 3476".

6/8" purple-and-gold colored glover-shaped pin which has these letters in gold: "ASME". These letters stand for American Society of Mechanical Engineers.

4 1/2" x 4 1/2" navy blue and gold-colored Hammett's Planisphere Showing the Principal Stars Visible for Every Hour in the Year from Lat. 40° N[orth]. From J. L. Hammett Company, Educational Supplies. Cambridge, Mass., Boston, Mass., Newark, N.J. Printed in Great Britain.

**Artifacts (continued)**



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3 1/8" diameter surveying aneroid, jeweled and compensated S 2195/2219. Cooke, Troughton & Simms Ltd. London and New York. No. 2879.

Artifacts (continued)

7 1/4" diameter plaster plaque which shows the profile of a man with a mustache. There are three words on the left hand side of the plaque: "BASHRA BAEFF FECIT". The plaque is broken.