



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

## Guide to the Ernst P. Boas Papers

NMAH.AC.0881

Alison Oswald

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## Collection Overview

<b>Repository:</b>	Archives Center, National Museum of American History
<b>Title:</b>	Ernst P. Boas Papers
<b>Identifier:</b>	NMAH.AC.0881
<b>Date:</b>	1927-1946
<b>Extent:</b>	0.25 Cubic feet (2 boxes)
<b>Creator:</b>	Boas, Ernst P. (Ernst Philip), 1891-1955
<b>Language:</b>	English  Collection is in English. Some materials in German.
<b>Summary:</b>	The papers document Dr. Ernst P. Boas and his work with Benjamin Liebowitz and Dr. Ernst F. Goldschmidt to develop the cardi tachometer (US Patent 1,816,465), a device to measure patients' heart rates for long periods of time. Materials include Dr. Boas's correspondence, patient experiment data, articles, and reprints of journal articles authored by Dr. Boas and with others that relate to the development of the cardi tachometer.

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## Administrative Information

### Acquisition Information

The collection was donated by Norman F. Boas on December 14, 1974.

### Provenance

The collection was transferred to the Archives Center from the Division of Medical Sciences, now the Division of Medicine and Science, in 2005.

### Related Materials

#### **Materials in the Archives Center, National Museum of American History**

Del Mar Avionics Holter Monitor Records (AC1249)

#### **Materials in the Division of Medicine and Science, National Museum of American History**

The Division of Medicine and Science holds artifacts related to this collection. See accession #1984.0638.04.

#### **Materials in Other Organizations**

American Philosophical Society, Ernst P. Boas Papers, circa 1907-1955

## Processing Information

Processed by Alison Oswald, archivist, 2012.

## Preferred Citation

Ernst P. Boas Papers, 1927-1946, Archives Center, National Museum of American History. Gift of Norman F. Boas.

## Restrictions

Collection is open for research.

## Conditions Governing Use

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## Biographical / Historical

Ernst Philip Boas was born on February 4, 1891 in Worcester, Massachusetts where his father, Franz Boas, held a docentship in anthropology at Clark University. Later, the family (including Ernst Boas's mother, Marie Krackowizer Boas; his three sisters, Helene, Gertrude, and Franziska; and his brother, Henry, moved to the New York City area.

Boas attended the Ethical Culture School through high school and then went on to receive his B.S. from Columbia University in 1910. He remained at Columbia to receive his M.A. in 1912 and his M.D. in 1914, the latter from the College of Physicians and Surgeons, where he graduated first in his class.

After some trouble finding an internship, apparently because of anti-Semitism, Boas became an intern at The Mount Sinai Hospital from 1914 to 1916. In 1917, he was appointed Instructor in Pathology at the College of Physicians and Surgeons of Columbia University. On August 6, 1917, he was drafted into the Army as First Lieutenant in the Medical Section of the Officers' Reserve Corps and was appointed Captain on April 20, 1918. While in the Army (including some duty in France), he served as a cardiovascular specialist.

When Boas was honorably discharged from the Army on 24 May 1919, he began his first private practice from an office in his home on West 96th Street in New York City. He practiced there until 1921 when he joined the staff of the Montefiore Hospital for Chronic Diseases as Medical Director. From 1920 to 1921, Boas was Instructor in Physiology at the College of Physicians and Surgeons of Columbia University. Later, from 1926 to 1951, he taught post-graduate courses in diseases of the heart at the College of Physicians and Surgeons.

In 1929, Boas left the medical directorship of Montefiore Hospital but retained the position of Attending Physician there for one year, from 1929 to 1930. Also in 1929, Boas moved to The Mount Sinai Hospital, where he was Associate Physician until 1951, at which time he became a consultant to the hospital.

Meanwhile, Boas resumed his private practice in 1929 (he was certified as a cardiovascular disease specialist by the American Board of Internal Medicine in 1941), opening an office at 41 West 83rd Street. He later established a permanent office at 1185 Park Avenue, where he entered into a partnership with Hyman Levy in 1949. One of Boas's sons, Norman F. Boas (also a physician), was his assistant from 1949 to 1951. Some of Boas's famous patients included William Laurence, science editor of the *New*

*York Times*; Charles C. Burlingham, New York lawyer and politician; Sidney Hillman, President of the Amalgamated Clothing Workers of America; Henry A. Wallace, a United States cabinet official and presidential candidate; Karl Menninger, founder of the Menninger Clinic; and Dr. Felix Adler, founder of the Ethical Culture Society.

From 1937 to 1943, Boas was a Special Lecturer at the Teacher's College of Columbia University where he specialized in the education of the handicapped. From 1938 to 1951, he was Assistant Clinical Professor of Medicine at the College of Physicians and Surgeons.

Boas was a prolific writer of articles and books on scientific topics (such as cardiology), as well as on topics in the popular media, such as geriatrics and chronic illness. Many of his publications advocate compulsory national health insurance. He served as Associate Editor of *Modern Hospital* from 1923 to 1929. Some of his books include *Treatment of the Patient Past Fifty*, *The Unseen Plague--Chronic Disease*, and *The Heart Rate*. This latter book grew out of Boas's research with Ernst F. Goldschmidt in developing the cardi tachometer, an electronic device that measures the heart rate continuously over many hours. Other research included his discovery of the calcification of the pineal gland; studies of neurocirculatory asthenia in soldiers in World War I; studies of the physiology of capillaries; and studies on cholesterol and its role in the pathogenesis of arteriosclerosis.

Boas also served as a medical consultant to numerous organizations and health care institutions, including Beth Israel Hospital of Passaic, New Jersey; the Group Health Cooperative, Inc.; the New York Guild for the Jewish Blind; the Sidney Hillman Health Center (where he directed a large research program on atherosclerosis); Irvington House; Lexington Hospital; Long Beach Hospital; Moosehaven; the New York Metal Trades Council and Hotel Association; and the Workmen's Circle.

Boas was involved with city, state, and federal organizations that dealt with health care. He was Chairman of the Committee on Chronic Illness of the Welfare Council of the City of New York. His work with this committee encouraged the construction of the Municipal Hospital for Chronic Diseases (now called Goldwater Memorial Hospital) on Welfare Island, as well as the elimination of many of the almshouses there. He also served on the Advisory Council of the New York City Department of Health and on the General Advisory Committee for the Cardiac Program of the New York State Department of Health. He was a consultant to the Social Security Board of the United States Federal Security Agency. He also testified in compensation hearings to show that heart attacks may result from unusual effort or trauma.

Besides his purely medical work, Boas was deeply involved in social causes. He worked with such agencies as the China Aid Council, Inc.; the Emergency Committee in Aid of Displaced Foreign Medical Scientists (serving as Secretary in 1945); the Committee of Physicians for the Improvement of Medical Care, Inc.; the National Committee for Resettlement of Foreign Physicians; the Physicians Committee of the National Refugee Service (serving as Chairman in 1943), and the United Service for New Americans, Inc. He founded The Physicians Forum, Inc., in 1939, to study and discuss health care issues, resist McCarthyism, and counter the American Medical Association's opposition to national health insurance. He also continued to work against discrimination in any form and was instrumental in the appointment of African-American physicians and nurses to hospital staffs.

He was a member of the American Heart Association, the American Medical Association, the American Society for the Study of Arteriosclerosis (founding member), the Authors' Guild, the Child Study Association of America, the Committee for the Nation's Health, the Committee of Citizens Against the Feinberg Law (a law to eliminate subversives from the New York state public school system), the Harvey Society, the Medical Society of the County of New York, the National Medical Committee of the NAACP, the New York Academy of Medicine, the New York Heart Association, Inc. (founding member and Chairman), the New York Tuberculosis and Health Association (Chairman of the Heart Committee), and the United States Committee, Inc. (founding member), an organization created in support of the World Medical Association. He also belonged to the honorary societies of Alpha Omega Alpha, Phi Beta Kappa, and Pi Gamma Mu.

Boas died on March 9, 1955 in New York City of pancreatic cancer. He was survived by his wife, Helene Tuthill Sisson Boas, and his children, Donald P. Boas, Norman F. Boas, and Barbara G. Crutchley.

## References

Biographical note courtesy of the Ernst Boas Papers, American Philosophical Society.

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## Scope and Contents

The papers document Dr. Ernst P. Boas and his work with Benjamin Liebowitz and Dr. Ernst F. Goldschmidt to develop the cardi tachometer (US Patent 1,816,465), a device to measure patients' heart rates for long periods of time. Boas and Liebowitz were also assisted in their work by Dr. Alfred N. Goldsmith, Julius Weinberger, Theodore A. Amith, and George Rodwin of the Radio Corporation of America (RCA). The RCA team was able to work out the theoretical and practical solutions for the amplifier, an important aspect for the device.

The papers include Dr. Boas's correspondence, patient experiment data, articles, and reprints of journal articles authored by Dr. Boas and with others that relate to the development of the cardi tachometer.

**Series 1, Cardi tachometer Materials, 1926-1948**, consist of the US patent issued to Boas, correspondence and writings that relate to the development of the cardi tachometer

**Subseries 1, Correspondence, 1926-1934**, consists of correspondence, invoices, receipts, and business cards, that relate to the development of the cardi tachometer and responses from physicians about its use. The majority of the correspondence relates to the development of the cardi tachometer and documents Boas's communications with companies who supplied parts (relays, wiring, contact devices, counters) such as the Weston Electrical Instrument Corporation, Veeder Manufacturing Company, A. Wittnauer Company (watchmakers), C.H. Stoelting Company, and Radio Corporation of America.

**Subseries 2, Writings, 1928-1935**, consists of articles written by Boas and with others related to the cardi tachometer and heart issues. Most of the articles are reprints from medical journals such as *American Journal of the Medical Sciences*, *Archives of Internal Medicine*, *American Medical Association*, *Journal of Clinical Investigation*, *The American Heart Journal*, and the *Journal of Mount Sinai Hospital*.

**Series 2, Patient Experiment Files, 1928-1929**, consists of cardi tachometer experiments Dr. Boas conducted at Montefiore Home and Hospital in New York. The documentation consists of data for 48 patients, but the experiment numbers which were assigned to each patient in the study indicate more patients participated. The majority of patients are male, and the series is arranged by experiment number.

The files contain an overall health history (name, occupation, education, marital status, hobbies, sex, birth date, family history, habits and hygiene (sleep, diet, bowels, and menstruation), and past illnesses; physical examination (addressing teeth, tonsils, heart, joints, liver, spleen, lungs, etc.); diet sheet (types of foods eaten along with average pulse rates); measurements (height, arm length, leg length), cardi tachometer data (time, counter reading, rate, body position, room temperature, and remarks), cardi tachometer tape readings, and in some instances correspondence. A follow-up survey form was sent to patients by Dr. Boas, who participated in the experiment. The survey questions included issues such as mental work, dreaming, morning wake time, and preferences for staying in bed.

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## Arrangement

The collection is divided into three series.

**Series 1, Cardiometer Materials, 1926-1948**

Subseries 1, Correspondence, 1926-1948 (bulk 1926-1934)

Subseries 2, Writings, 1928-1935

**Series 2, Patient Experiment Files, 1928-1929**

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## Names and Subject Terms

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

Subjects:

- Cardiology
- Cardiometer
- Medical innovations
- Medical instruments and apparatus
- Medical sciences
- Medicine -- Research
- Physicians

Types of Materials:

- Correspondence -- 20th century
- Reprints
- Technical literature

Names:

- Goldschmidt, Ernst F. (Ernst Friedrich), b. 1892
- Montefiore Hospital for Chronic Diseases.

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## Container Listing

### Series 1: Cardi tachometer Materials, 1926-1948 (bulk 1926-1934)

#### Subseries 1.1: Correspondence, 1926 - 1948

Box 1, Folder 1	US Patent 1,816,465, Cardi tachometer, 1931 July 28
Box 1, Folder 2	Correspondence (development of cardi tachometer), 1926 - 1934
Box 1, Folder 3	Correspondence (development of cardi tachometer), 1928
Box 1, Folder 4	Correspondence (development of cardi tachometer), 1929 - 1930
Box 1, Folder 5	Correspondence (development of cardi tachometer), 1931 - 1934
Box 1, Folder 6	Correspondence (requests for information), 1928 - 1930
Box 1, Folder 7	Correspondence (requests for information), 1931 - 1932
Box 1, Folder 8	Correspondence (Allied Laboratory Instrument, Inc.), 1948, 1946
Box 1, Folder 9	Correspondence (General Radio Company), 1930 - 1933
Box 1, Folder 10	Correspondence (pulse resonator), 1927 - 1928
Box 1, Folder 11	Correspondence (Thomas, Charles C.)
Box 1, Folder 12	Invoices , 1928 - 1930

#### Subseries 1.2: Writings, 1928 - 1935

Box 1, Folder 13	Boas, Ernst P. "The Cardi tachometer. An Instrument to Count the Totality of Heart Beats over Long periods of Time," <i>Archives of Internal Medicine</i> , 1928 March
Box 1, Folder 14	Boas, Ernst P. "Heart Rate During Sleep as Determined by the Cardi tachometer, Its Clinical Significance," <i>American Medical Association</i> , 1929
Box 1, Folder 15	Boas, Ernst P. and Ernst F. Goldschmidt. "Continuous Recording of the Heart Rate During Operations," <i>Journal of the American Medical Association</i> , 1930



- Box 1, Folder 16      Boas, Ernst P. and Ernst F. Goldschmidt. "Continuous Recording of the Heart Rate During Operations," *Journal of the American Medical Association*, 1930 June
- Box 1, Folder 17      Boas, Ernst P. and Henrietta Lowenburg. "The Heart Rate in Progressive Muscular Dystrophy," *Archives of Internal Medicine*, 1931
- Box 1, Folder 18      Boas, Ernst P. "The Heart Rate of Boys During and After Exhausting Exercise," *The Journal of Clinical Investigation*, 1931
- Box 1, Folder 19      Boas, Ernst P. Digitalis Dosage in Auricular Fibrillation. The Influence of the Activity of the Cardiac Nerves on the Size of the Effective Dosage," *The American Heart Journal*, 1931
- Box 1, Folder 20      Boas, Ernst P. and Walter Landuaer. "The Effect of Elevated Metabolism on the Hearts of Frizzle Fowl," *American Journal of the Medical Sciences*, 1933
- Box 1, Folder 21      Boas, Ernst P. "Spontaneous Variations in Ventricular Rate in Complete Heart Attack," *Journal of the Mount Sinai Hospital*, 1935

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**Series 2: Patient Experiment Files, 1928-1929**

	Experiment 1, Lachapelle, Lillian, 1928
Box 2, Folder 2	Experiment 2, Hoover, Katherine, 1928
Box 2, Folder 3	Experiment 3, Terry, Robert, 1928
Box 2, Folder 4	Experiment 5, Dodd, Burwell, 1928
Box 2, Folder 5	Experiment 6, Loughrdie, Andra, 1928
Box 2, Folder 6	Experiment 8, Leach, Harvey, 1928
Box 2, Folder 7	Experiment 10, Palmer, Archie, 1928
Box 2, Folder 8	Experiment 25, Hunter, Lawrence, 1928
Box 2, Folder 9	Experiment 27, Tarr, Leonard, 1928
Box 2, Folder 10	Experiment 51, Lubin, David, 1928
Box 2, Folder 11	Experiment 53, Henehan, Patrick, 1928
Box 2, Folder 12	Experiment 54, Levy, Sam , 1928-1929
Box 2, Folder 13	Experiment 56, Reiss, Charles, 1928
Box 2, Folder 14	Experiment 57, Weider, Joseph, 1928
Box 2, Folder 15	Experiment 60, McAlpine, William, 1928
Box 2, Folder 16	Experiment 63, Jordan, David, 1928
Box 2, Folder 17	Experiment 64, Ellenbogen, Henry, 1928
Box 2, Folder 18	Experiment 67, Bernstein, Stanley, 1928
Box 2, Folder 19	Experiment 68, Baronberg, Louis, 1928-1929
Box 2, Folder 20	Experiment 72, Goerland, Egbert, 1928
Box 2, Folder 21	Experiment 73, Lugin Sr., Walter, 1928

Box 2, Folder 22	Experiment 75, Lugin Jr., Walter, 1928
Box 2, Folder 23	Experiment 76, Konen, Vail, 1928
Box 2, Folder 24	Experiment 77, Konen, Paul, 1928
Box 2, Folder 25	Experiment 78, Newman, Frederic, 1928
Box 2, Folder 26	Experiment 84, Hoffman, Felix, 1928
Box 2, Folder 27	Experiment 88, Jackson, Murray, 1928
Box 2, Folder 28	Experiment 90, Levitt, George, 1928-1929
Box 2, Folder 29	Experiment 91, Deutsch, Max, 1928-1929
Box 2, Folder 30	Experiment 92, Schnee, Murray, 1928
Box 2, Folder 31	Experiment 94, Younghans, Carl, 1928-1929
Box 2, Folder 32	Experiment 95, Stauntrup, Helge, 1928-1929
Box 2, Folder 33	Experiment 102, Wallfield, Mark, 1928-1929
Box 2, Folder 34	Experiment 107, Meyer, John, 1928-1929
Box 2, Folder 35	Experiment 109, Mandel, Morris, 1928-1929
Box 2, Folder 36	Experiment 109, Mandel, Max, 1928
Box 2, Folder 37	Experiment 113, Smith, Nathan, 1928-1929
Box 2, Folder 38	Experiment 118, Whiting, Harry, 1928-1929
Box 2, Folder 39	Experiment 125, Seymour, James, 1928
Box 2, Folder 40	Experiment 126, Busch, Henry, 1928
Box 2, Folder 41	Experiment 130, Fraenkel, Fred, 1928
Box 2, Folder 42	Experiment 132, Diamond, Israel, 1928

Box 2, Folder 43	Experiment 135, Nagle, William, 1928
Box 2, Folder 44	Experiment 136, Wilson, William, 1928
Box 2, Folder 45	Experiment 138, Michelson, Nikolai "Nic", 1928
Box 2, Folder 46	Experiment 139, Weinstein, Joseph, 1928-1929
Box 2, Folder 47	Experiment 140, Weiss, Morris, 1929
Box 2, Folder 48	Experiment 143, Koerner, Alfred, 1928-1929

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