



**INVENTORY TO  
THE BENJAMIN F. MIESSNER COLLECTION,  
1906-1978**

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Compiled By: Archives Staff

## Descriptive Summary

<b>Creator Information</b>	Miessner, Benjamin F., 1890-1976
<b>Title</b>	Benjamin F. Miessner Papers
<b>Collection Identifier</b>	MSP 2
<b>Date Span</b>	1906-1978, predominant 1930s-1963
<b>Abstract</b>	Correspondence, patents, photographs, and clippings documenting the engineering and inventing career of Benjamin F. Miessner.
<b>Extent</b>	43 cubic feet (42 cubic foot boxes, 1 oversize box)
<b>Finding Aid Author</b>	Unknown, revised December, 1989. Retyped and Revised by Eric Yu and Elizabeth M. Wilkinson, August 2008
<b>Languages</b>	English, German, and some French
<b>Repository</b>	Archives and Special Collections, Purdue University Libraries

## Administrative Information

<b>Location Information:</b>	HKRP Range 352, 354
<b>Access Restrictions:</b>	Collection is open for research
<b>Acquisition Information:</b>	June 24, 1978; Eleanor M. Miessner, donation.
<b>Preferred Citation:</b>	Benjamin F. Miessner Collection, Archives and Special Collections, Purdue University Libraries
<b>Copyright Notice:</b>	Purdue University Libraries

## Subjects and Genres

### Persons

Miessner, Benjamin F. (Benjamin Franklin), b. 1890

### Organizations

Miessner Inventions, Inc.

United States. Navy

Veteran Wireless Operator Association

Wurlitzer Company

### Topics

Electronic piano

Electronic organ

Electric guitar

Electronic instruments

Engineering sciences. Electrical engineering

Radio—Receivers and reception.

Musical inventions and patents

Fountain pens

Inventors—United States

### Form and Genre Types

Black-and-white photographs

Clippings (information artifacts)

Correspondence

Notebooks

Patents

45 rpm records

## Biography of Benjamin Franklin Miessner 1890-1976

Benjamin Franklin Miessner was born July 27, 1890, to Charles and Mary Reutepohler Miessner. He had an older brother, William Otto Miessner. He was a graduate of Huntingburg High School in 1908 and a United States Navy enlistee in 1909. He attended and graduated from the United States Naval Electrical School in Brooklyn, New York in 1909. The Navy then sent Miessner to Washington, D.C. to work as wireless operator at the Naval Radio Station. Soon he was promoted to Chief Operator, and he invented and patented a device called the "cat whisker" detector that enabled reception of radio waves by crystal sets. He left the Navy in 1911 to work with John Hays Hammond, Jr. and Dr. Fritz Lowenstein on wireless control of torpedoes. Around this time he also invented and developed a superheterodyne radio system. He left Hammond's service in 1912 and from 1913-1916 studied electrical engineering at Purdue University. He returned to the Navy in 1916 as an Expert Radio Aid for Aviation in charge of developing radio for aircraft. In June 1916 Miessner married Eleanor Marguerite Schulz in Buffalo, New York. They subsequently had two daughters, Jane Eleanor and Mary Elizabeth. In 1918 Miessner went to work for Emil J. Simon in New York City and worked on developing aircraft radio and transoceanic receivers.

In the early 1920s Miessner was associated with the Brunswick Balke Collender Company in Chicago. He worked as an acoustical expert and in its acoustical research laboratory, which he founded. He devised an entirely new system of sound recording and reproduction. Miessner moved on to the chief engineering position at Garod Corp. in New Jersey in 1926. In the late 1920s he founded and became the president of Miessner Inventions, Inc. Miessner was a pioneer researcher in electronic musical instruments and receivers, phonography, radio dynamics, directional microphones for aircraft and submarines, and aircraft radio. At the time of his retirement in 1959 Miessner had been granted over 200 patents in the U.S. and foreign countries. He also perfected the Wurlitzer organ and electronic piano.

Miessner was also very active outside of his work interests. He was a member of the Acoustical Society of America, American Physics Society, A.A.A.S, Veteran Wireless Operators Association, and the Purdue Club of Miami, Florida. He was on the board of the Academy of Applied Sciences, president of Patent Equity Association, and member of the ad hoc Patent System Reform panel for the U.S. Dept of Commerce in 1963. He was a recipient of the De Forest Audion gold medal for inventive achievement in radio and electronics in 1963, and received the Distinguished Service Award from the Boys Club of America in 1964.

Miessner was also an author of several speeches and talks, as well as the following books:

Radiodynamics, the wireless control of torpedoes and other mechanisms. New York, D. Van Nostrand company, 1916

All-electric radio receiver design. [Short Hills, N.J., 1929]

On the early history of radio guidance. San Francisco, San Francisco Press [1964]

Benjamin F. Miessner passed away on March 25, 1976 in Miami, Florida.

*Source(s):*

National Cyclopedia of American Biography.

Slonimsky, Nicolas, rev. Baker's Biographical Dictionary of Musicians. 7<sup>th</sup> ed.  
New York: MacMillan Pub. Co., 1984. 1543.

Thompson, Donald E., comp. Indiana Authors and Their Books, 1917-1966. Crawfordsville,  
IN: Wabash College, 1974. 423.

Who Was Who in America. Vol. 7, 1977-1981. Chicago: Marquis Who's Who, 1981. 403.

## Collection Description

### Scope

The Benjamin F. Miessner papers (1906-1978; 43 cubic feet) documents the career of Benjamin Franklin Miessner and his work in electronics and his inventions. The papers include many of the patents for his inventions, correspondence with companies using his patents and with the United States Army and Navy, notebooks, drawings of inventions, photographs of his inventions and products using his patents, contracts for licensing his patents, and some legal documents when there were patent disputes. Also included are some personal and family correspondence, journal articles and books used in his research, and records albums using electronic instruments.

The collection is currently arranged in the way it was packed by the donor. The list below is an inventory of the boxes.

**Descriptive Rules** Anglo-American Cataloguing Rules, 2<sup>nd</sup> Edition / Describing Archives: A Content Standard

## DETAILED DESCRIPTION OF THE COLLECTION

### **Box 1 Books**

1. Arguimbau, Lawrence B. Vacuum-Tube Circuits N.Y., Wiley, 1948.  
Annotations by BFM.
2. Ashton, C. H. and Marsh, W. R. Five Place Logarithmic Tables, N. Y., Scribners, 1910.
3. Benade, Arthur H. Horns, Strings, and Harmony Garden City, N. Y., Anchor Books-Doubleday, 1960.
4. Beranek, Leo L. Acoustics N. Y., McGraw-Hill, 1954.
5. Bitter, Francis Magnets: The Education of a Physicist Garden City, N. Y., Doubleday Anchor, 1959. Annotations by BFM
6. Borden, Perry A. and Thynell, Gustave M. Principles and Methods of Telemetering N. Y., Reinhold, 1948.
7. Boston Power Transmission Equipment. Catalog Number 52. 1938.
8. Briggs, G. A. Loudspeakers; The Why and How of Good Reproduction 3<sup>rd</sup>. ed., Bradford, England, Wharfedale Wireless Works, 1949.
9. Briggs, G. A. Pianos, Pianists, and Sonics 1<sup>st</sup> ed., Bradford, England, Wharfedale Wireless Works, 1951.
10. Burrin, Frank K. Edward Charles Elliott, Educator [West] Lafayette, Indiana, Purdue University Studies, 1970.
11. Cameron, James R. Motion Pictures With Sound Manhattan Beach, N. Y., Cameron Publishing, 1929.
12. Chaffurin, Louis Francais-Anglais, English French Paris, Larousse, 1937.  
Larousse Interpreter Guide.
13. Chavez, Carlos Toward a New Music 1<sup>st</sup> ed., N. Y., Norton, 1937.
14. The Chemical Formulary Volume I H. Bennett, Editor-in-Chief Brooklyn, N. Y., Chemical Formulary, 1933.
15. Christie, Clarence V. Electrical Engineering 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1913.
16. Crandall, Irving B. Theory of Vibrating Systems and Sound N. Y., Van Nostrand, 1927.
17. Crowhurst, Norman H. Electronic Musical Instrument Handbook 1<sup>st</sup> ed., Indianapolis, Sams, 1962.
18. Culver, Charles A. Musical Acoustics Philadelphia, Blakiston, 1941.
19. Davis, Hallowell Hearing Aids; An Experimental Study of Design Objectives Cambridge, Harvard, 1947.
20. Decamp, L. Sprague The Heroic Age of American Invention Garden City, N. Y., Doubleday, 1961. Annotations by BFM.
21. De Forest, Lee Father of Radio; The Autobiography of Lee de Forest Chicago, Wilcox & Follett, 1950.
22. Eisler, Charles The Million-Dollar Bend N. Y., William-Frederick, 1960.  
Autographed gift copy from author to BFM.  
Annotations by BFM.
23. Eby, Robert L. Electronic Organs; A Complete Catalogue, Textbook and Manual

- Wheaton, Illinois, Van Kampen Press, 1953.
24. Denmark, Sigurd Om Ratten Till Arbetstagaes Uppfinningar Stockholm, Norstedt, 1950.
  25. Electronics' Engineering Manual Rev. ed., N. Y., Electronics (McGraw-Hill), n.d.
  26. The Encyclopedia of Electronics N. Y., Reinhold, 1962.
  27. Fahie, J. J. A History of Wireless Telegraphy 1838-1899 N. Y., Dodd, Mead, 1899.
  28. Ferry, Ervin S. A Brief Course in Elementary Dynamics for Students of Engineering N. Y., Macmillan, 1908.  
Author was Purdue Professor of Physics.
  29. Fischer, F. A. Grundzuge der Elektroakustik Berlin, Fachverlag Schiele Schon, 1950.
  30. Fletcher, Harvey Speech and Hearing N. Y., Van Nostrand, 1929.

## **Box 2 File Folders and Portfolios**

### Folder

- 1 U. S. Patents Granted to B. F. Miessner, 1929-1942.
  - 1,733,232, Oct. 29, 1929, Electrodynamic Sound Reproducing System
  - 1,788,342, Jan. 6, 1931, Electrical Supply and Filter System
  - 1,789,950, Jan. 20, 1931, Electrical Signal Amplifying and Repeating System
  - 1,830,401, Nov. 3, 1931, Electromagnetic Sound Reproducer
  - 1,830,042, Nov. 3, 1931, Electromagnetic sound Reproducer
  - 2,027,054, Jan. 7, 1936, Amplifier System
  - 2,138,500, Nov. 29, 1938, Apparatus for the Production of Music
  - 2,140,025, Dec. 13, 1938, Method and Apparatus for the Production of Music
  - 2,215,709, Sep. 24, 1940, Apparatus for the Production of Music
  - 2,225,195, Dec. 17, 1940, Apparatus for the Production of Music
  - 2,273,975, Feb. 24, 1942, Apparatus for the Production of Music
2. War II. Government Work. Copies of my letters, 1941-1942.  
Carbon Copies of BFM letters Dec. 9, 1941 – Jan. 27, 1942, offering services, laboratory facilities, etc., to U. S. Government agencies. BFM efforts to find employment for skills
3. Static electricity: Electrets: BFM Eliminating Schemes, BFM Reed Vibrator Static VM, BFM Microphones, etc.  
Journal articles, reports, patents, BFM ms notes.
4. E. H. Loftin – Miessner Inventions, Inc. – Agreement, 1931 & 1936.  
Correspondence, agreements re sale of BFM patents to Radio Corporation of America.
5. Bernhardt Furniture, Ltd. (2 folders) 1955-1958.  
Correspondence, agreements, design information, photographs, advertising folder, re manufacture, marketing of electronic piano designed by BFM.



6. Signal Corps, 1941-1943.  
Correspondence re BFM work in WWII defense effort, esp. development of lightweight "walkey-talky". License agreement with U. S. government for royalty free use of BFM patents.
7. Department of Commerce.  
Correspondence, proposals from BFM for inventions, etc., to aid WWII effort. Some post-war material.
8. Questionable New Cases, 1951-1956.  
Manuscript descriptive notes re patents for various parts of vibrating piano, etc. Most addressed to Charles (Charles T. Jacobs?).
9. U. S. Patents for Electronic Musical Instruments, etc. (3 folders)
10. B. F. Miessner, Notes, Graphs, 1964.  
Notes, graphs on performance of loudspeakers, etc.
11. Miscellaneous Clippings, Notes, Correspondence, etc.  
Related to musical instruments, electronic equipment and devices, etc.

### **Box 3 File folders and Portfolios**

#### Folder

- 1 Pensacola 1916, January to June 1917
  - Pensacola 1916. Autobiographical material; travel orders; duty as expert radio aid; correspondence re equipment, projects, etc.
  - Pensacola January 1917. Ltr from W. Oldenburger; correspondence re Florida Engineering Society, equipment, personnel, flight pay for BFM, etc.
  - Pensacola February 1917. Announcement and application for Civil Service exam for Expert Radio Aid; correspondence, memos, notes re equipment, personnel, etc.
  - Pensacola March 1917. Results of BFM Civil Service exam; ltr from M. H. Liddell, Purdue Professor of English; ltrs, memos re procurement, use of equipment, flight pay for BFM.
  - Pensacola April 1917. Ltr of appointment of BFM as expert radio aide; ltrs, memos re BFM rights to inventions, equipment, personnel matters, flight pay for BFM. Typescript of article Development of Aircraft Radio in the Navy.
  - Pensacola May 1917. Travel orders, expense records for BFM trips; authorization of flight pay for BFM; ltrs re equipment procurement, operation, publication of articles.
  - Pensacola June 1917. Ltrs and memos re personnel, BFM flight pay, aircraft radio equipment, publication of articles by BFM.
2. RF Altimeter Patents, 1943.  
Correspondence re patent search March, April 1943. Copies of U. S. patents located as result of search.
3. Guided Missiles (radar), Atomic Energy Commission, Navy, Army.

- Ltrs re BFM work, clippings, articles re state of the art. WWII correspondence re BFM research, Navy Dept appointment.
4. Radio Corporation of America re Electronic Piano License, 1939-1955.  
Extensive correspondence re BFM efforts to have RCA make electronic components for electronic piano, etc.
  5. California Prospects, 1957-1958.  
Correspondence 1957-58 with companies re licensing, manufacture of electronic piano.
  6. Engineers and Patentry, 1963.  
Paper by BFM delivered July 23, 1963 to Miami section of IEEE. One copy partially reworked Nov 15, 1963.
  7. Miscellaneous Notes and Data on Radar, 1941-1954.  
BFM notes, correspondence 1941, 1942, 1943. Clippings 1942, 1954.
  8. Piano Companies, 1954-1957.  
Correspondence 1954-57 with piano companies re licensing and manufacture of electronic pianos.
  9. Electronic Companies, 1955-1958.  
Correspondence 1955-58 with electronics companies re licensing and manufacture of electronic piano. Enquiries about acquiring piano.
  10. Photo Electric Cells and Thermoelectricity, 1920-1963.  
Clippings, articles annotated by BFM; notes; specifications from makers, suppliers. Material dated 1920, 1937, 1947, 1954, 1963.
  11. Submarine Locator Radio Buoy; Midget Walkie Talkie, 1942.  
Clippings, correspondence, notes re BFM design, use of buoy; article, correspondence re midget walkie talkie.
  12. Kranzberg, 1961-1964.  
Correspondence with Melvin Kranzberg, Secretary of The Society for the History of Technology and Editor of Technology and Culture re publication of BFM article. Ltrs re deposit of BFM papers.
  13. Instruction Manual Model DS-660 Frequency Counter Serial 46061.
  14. Operation and Service Manual DS-660.
  15. Patent System Panel of the Commerce Technical Advisory Board Report, 1963-1964.
  16. BFM comments in ltr.
  17. Correspondence with A. D. T. Libby: BFM Inventions re Fountain Pens.
  18. Aid to the Blind.  
BFM notes, drawings; clippings, etc., re electronic devices to aid blind.

#### **Box 4 File Folders and Portfolios**

##### Folder

- 1 Correspondence, Clippings (2 folders), 1962-1963.  
Cuban missile crisis; inventors and patent system; BFM relations with J. H. Hammond, Jr. etc.
2. Railroad Signal Relays, etc., 1918-1919.  
Correspondence, notes, etc., re design of railroad signal relays.
- 3 German Correspondence, 1932.  
Ltrs, telegrams re BFM activities in Europe re patents, etc.
4. Personal Correspondence, 1930-1933, 1941.  
BFM correspondence re oil paintings, financial matters, etc.
5. Kratt File, 1955.  
Correspondence between Wm. Kratt Co. and suppliers re steel wire to be used in electronic piano. Includes wire samples, etc.
6. Pen, 1951-1956  
BFM correspondence with manufacturers re design for fountain pen.
7. Piano License.  
Patent license agreement – printed form and typed drafts.
8. Electronic Piano, 1954-1956.  
Correspondence re articles about piano, promotion, publicity, etc.
9. Matt. Hohner, 1964.  
Correspondence re licensing Hohner to use BFM patents, etc.
10. Jasper Electronic Manufacturing Corp., 1963-1965  
Correspondence re use of BFM patents, etc. BFM ms notes for meeting.
11. Piano License Prospects, 1963-1964.  
Correspondence with Litton Industries, Baldwin, Everett Piano Co., General Electric, Radio Corporation of America, etc., re electronic piano.
12. Three Way Fire Alarm Patent Application, 1965.  
Includes copy of patent 3, 184, 727 issued to BFM May 18, 1965
13. Magnets of Reed Steel; Reed Piano, 1958-1965.  
Correspondence, specifications from suppliers, etc.
14. AF Metal Comparator (“Metal Matcher”), 1962-1964.  
Correspondence, BFM ms notes, drawings, device for restarting human heart, etc.
15. Milan’s Patent Searches, 1962-1963, 1967  
Rotary steam engine patent; design for rocket toy; patents for shaping tubes; mousetrap; golf club handle, etc.
16. Soil Moisture Meter.  
BFM investigations of methods of measuring soil moisture content.
17. Pianos, Foreign, 1955-1958.  
Correspondence with foreign manufacturers re licensing for BFM electronic piano.
18. David Sarnoff (My Paintings), 1934.  
BFM gift of own paintings to Sarnoff.
19. Exposure Meter, 1913-1934.

- 20. BFM use of selenium in exposure meter, remote control devices, etc.  
Solar Heaters, Energy, etc. (Patents)  
Articles, patents re solar energy. BFM description of own invention.
- 21. Industrial Container Co., Inc. (Fountain Pen Barrels)  
BFM efforts to obtain suitable material for fountain pen barrels.
- 22. Birdsong Recordings.  
BFM ltr re own work; articles, etc., re work at Cornell Univeristy.
- 23. Charles T. Jacobs, 1954  
Correspondence re Jacobs's fees, service; BFM electronic piano patents.
- 24. Charles T. Jacobs, 1959-1961.  
Correspondence re BFM move to Florida, current inventing work, etc.
- 25. Joseph Maxfield (Electrophonography), 1954.  
BFM ltrs re own work, etc.
- 26. Pen Application, 1965.  
Correspondence re U. S. Patent 3,183,893 issued to BFM May 18, 1965 for fountain pen.
- 27. Gas Heater Data.  
BFM ltr protesting gas company complaints re his furnace installation.
- 28. Eastman: Tenite Polypropylene, (1961, 1962)  
Correspondence re obtaining material for BFM design fountain pen.
- 29. Miessner Electronic Musical Instruments Patents, 1932-1955.  
Numerical lists of patents; patent license agreement form.
- 30. Miscellaneous Correspondence, 1949-1958.  
Correspondence re materials, devices, technical problems, etc.
- 31. Bell Telephone Laboratories, 1946, 1947, 1958.  
Ltrs re electronic musical instruments, etc.
- 32. Wood & Brooks Company, 1961.  
Correspondence, clippings re device to produce chords on piano. BFM ltrs re own work, patents.
- 33. Reed Piano mss, 1954-1958.  
Typescript The Miessner Stringless Electronic Piano. BFM ltrs re piano manufacture, GE special lamps, Bakelite materials.
- 34. Photophonograph, 1950, 1954.  
Correspondence with Dupont, Eastman Kodak re materials, methods.
- 35. Rutgers University, 1955, 1958, 1964.  
Correspondence, mss, re BFM presentations on creativity to engineering students.

**Box 5 File Folders, Portfolios, Photographs**

Folder

- 1 Patent Equity Association Members and Prospects, 1956-1957.  
Correspondence, financial reports on efforts to further patent legislation in Congress.
- 2. Patent Legislation, 1950-1956

- Correspondence, statements, etc., re revision of U. S. patent legislation.
- 3 Patent Equity Association Mailing Lists.  
Lists of names of U. S. Senators and Representatives.
  4. National Inventors Council, 1958.  
BFM letters re NIC handling of defense ideas presented by inventors.
  5. Patent Legislation, 1957-1958. (1)  
BFM (president, Patent Equity Association) correspondence with Senators, Congressmen re U. S. patent legislation.
  6. Patent Legislation, 1957-1958. (2)  
BFM (president, Patent Equity Association) correspondence re U. S. patent legislation.
  7. Patent Legislation, 1956-1957. (3)  
Correspondence, etc., re U. S. Patent legislation.
  8. Patent Legislation, 1956-1958. (4)  
Correspondence, PEA financial report, statements, etc., re U. S. patent legislation.
  9. Patent Legislation, 1957. (5)  
Correspondence, etc., with National Small Businessmen's Association re U. S. patent legislation.
  10. Patent Legislation, 1955-1956. (6)  
BFM correspondence with editors re publication of ltr re U. S. patent legislation.
  11. Patent Legislation, 1956-1957. (7)  
Statements, copies of bill, etc., re U. S. patent legislation.
  12. Patent Legislation, 1955. (8)  
Correspondence, Patent Equity Association financial records, notes re U. S. patent legislation.
  13. Patent Legislation, 1956. (9)  
BFM ltrs to U. S. Senators re legislation extending time of patent protection.
  14. National Patent Council, 1956-1957.  
Correspondence, etc., re legislation increasing Patent Office fees. BFM ltrs re extension of time of patent protection.
  15. Ear Tones, 1952, 1961.  
BFM correspondence re effect of physical changes on tones heard in ear.
  16. Sun-Air Electronics, Inc., 1960-1962.  
BFM directorship; correspondence re products; 1960, 1961 annual reports.
  17. Patent Assignments, etc., 1962, 1965.  
Assignment by BFM to Miessner Inventions, Inc. of patent applications, Jan. 13, 1965.
    - 173,718, Feb. 10, 1962, Fountain pen
    - 222,331, Sep. 10, 1962, Alarm System
    - 245,599, Dec. 18, 1962, Electronic piano
 Letters Patent for U. S. Patents issued to BFM, Miessner Inventions, Inc.
    - 3,183,296, May 11, 1965, Tone Generating Means for Electrical Musical Instruments.
    - 3,184,727, May 18, 1965, Alarm System

18. Fountain Pen Patents, 1953-1956  
 Letters Patent for U. S. Patents issued to BFM, Miessner Inventions, Inc. for leakproof fountain pen, etc.
  - 2,642,041, Jun. 16, 1953
  - 2,642,043, Jun. 16, 1953
  - 2,669,223, Feb. 16, 1954
  - 2,669,224, Feb. 16, 1954
  - 2,693,172, Nov. 2, 1954
  - 2,694,382, Nov. 16, 1954
  - 2,713,848, Jul. 26, 1955
  - 2,724,366, Nov. 22, 1955
  - 2,753,845, Jul. 10, 1956
  - 2,753,846, Jul. 10, 1956
  - 2,771,059, Nov. 20, 1956
 Description, illustration of Miessner Non-Flooding Fountain Pen
19. Dual-Mode Chimes, 1961.  
 Letters Patent for U. S. Patent 3,007,363, Nov. 7, 1961 for Tone Generator invented by BFM. Correspondence, etc., re BFM efforts to interest manufacturers.
20. BFM Article "What's Wrong with Our Patent System." 1962  
 Ms. typescript copies. Note on typescript "For Missiles and Rockets".
21. Electronic Piano Reed Assemblies, 1956.  
 Three copies of full-scale drawing dated Nov. 5, 1956
22. Everett Piano Company Patent License Agreement, 1936.  
 July 29, 1936 agreement with Miessner Inventions, Inc.
23. Wurlitzer Organ and Electronic Piano License, 1945, 1964.  
 May 1, 1945 agreement; supplemental agreements; Wurlitzer Mar. 19, 1964 letter terminating agreement, etc.
24. Agreement with C. G. Conn, Ltd., 1965.  
 Copy of Feb. 1, 1965 agreement between Conn and Miessner Inventions, licensing Conn to use Miessner patents; attorney's letter re terms.
25. Motorola FM pickup.  
 Sample pickup; flier for Motorola hi-fi system; C. T. Jacobs letter re phonograph patents; U. S. patent 1,783,138, Transforming of Acoustic Swingings into Electric Capacity Swingings; U. S. patent 1,817,612, Sound Reproducing System.
26. Photographs of B. F. Miessner, etc.  
 BFM receiving DeForest Andion Award; in laboratory with award; with three of his paintings; BFM, Donald F. Mallett, Purdue Vice-President for Student Services, Mrs. Mallett. Sketch maps showing routes to BFM New Jersey residence. Unidentified adding machine tapes, cancelled checks, etc.
27. American bonded Mortgage Co., etc., 1961-1962.  
 Clippings, correspondence re questionable investment activities, etc.
28. Rhea, Thomas L., 1978.  
 The evolution of electronic musical instruments in the United States. Ph. D. dissertation, George Peabody College for Teachers, 1972. Letter from Rhea, re

BFM's work, possible production of electronic piano, etc.

## **Box 6 File Folders, Portfolios, Books, Recordings**

### Folder

1. Violins – Stringed Instruments, 1959.  
Correspondence, articles re construction of violins, production of musical sounds, application of electronics to bowed stringed instruments, etc.
2. Wurlitzer Licensing Agreements, 1959.  
Agreements of 1952, 1959. Correspondence re negotiations with Wurlitzer.
3. Bill of Sale, 1926.  
Legal documentation of releases, sales to BFM, etc.
4. J. H. Hammond, Jr., Infringement Charges, 1937-1939.  
Correspondence, notes, discussions, etc., re J. H. Hammond, Jr. infringement charges vs. Miessner Inventions, Inc., licensees.
5. Agreement Between B. F. Miessner, Miessner Inventions, Inc., and Radio Corporation of America, July 3, 1930.  
Terms of licensing RCA to use BFM patents.
6. Ms of Article: Engineers and Patent Rights.  
Original and carbon with corrections. BFM note: Editorially condensed and published in American Engineer 4/63.
7. Miscellaneous, 1954.  
Article on device to ignite flashbulbs; clipping re creativity; General Information Concerning Patents (1954); Schlieren photography pamphlet; essay on inventing, patent process; photo of man playing electronic organ, ms table of computations for stringing scales for Miessner Electroclavier.
8. Reed bars, Reeds, and Pickup Assembly.  
Original drawing and copy. (Rolled)
9. Drawings of Piano Reed Bars, etc.  
Original drawings. (Rolled)
10. Tracings of piano Reed Bars, etc. (Rolled)
11. Notes on Electricity, 1915.  
Marked B. F. Miessner ΣII House. Some penciled annotations.
12. Lertes, P. Elektrische Musik. Dresden, Steinkopf, 1933.
13. Essays on Creativity in the Sciences. N. Y., New York Univ. Press, 1963.  
Ltr from editor Myron A. Coler to BFM enclosed.
14. Scientific Creativity; Its Recognition and Development N. Y., Wiley, 1963.  
Annotations and underlining by BFM.
15. Phonograph Records.  
A collection of 20 records including performances on electronic instruments. The descriptions in this listing are taken from the labels on the records. The records have not been checked by playing. Before they are played, it will be necessary to have competent technical advice about a suitable player, type of stylus, turntable speed, etc.
16. Melody. Charles D. Doves (?) Amy Mill. 0239 Chicago #1 C-5

17. The Mirror Song from Thais. Chicago Test. 0236 Chicago #2 10-B
18. "Dawn" Mrs. Morris Rosenwald; Mae O. Rosenwald. Chicago #2 0201 D-7
19. "No One Knows" Miss Winegart. Chicago #3 0197 6B
20. "Life" Mrs. Morris Rosenwald; Mae O. Rosenwald. Chicago #3 0202 D-6
21. Nocturne in E-Flat. Amy Mill. Chicago #3 0241 C-4
22. Isham Jones Orchestra. Electric. 0191x5 4B
23. Cope Harvey's Orchestra. Electric. Chicago 0187x1 5A
24. Cope Harvey's Orchestra. Electric. Chicago 0189x3 6A
25. Chicago Test. 0282. E-1 Radio Phone Announcement.
26. Electronic Piano. Feb 22, 1933. Part 2, Part 4. Recorded on metal disc.
27. Electronic Piano. (?) Feb 22, 1933. Part 3 of 4. Recorded on metal disc.
28. Electronic Clavichord. Sides 1, 2. Demonstration of various effects, etc.
29. Miessner Stringless Electronic Piano. Sides 1, 2. Made from Otto Miessner's Wurlitzer piano tape recording and re-recorded. 78 rpm.
30. Eleanor Miessner Mar 18, 1958; From Luberoff Piano Playing. Disc apparently lacks recording grooves.
31. Anton Rovinsky Electronic Piano. Sides 1, 2. Recorded on metal disc.
32. All Electronic Orchestra Broadcast. May 25, 1939. 10:30-11 p.m. National Broadcasting Company. Blue Network. Sides 1-3, 2-4, 5, 6. 78 rpm.  
Note on side 2 label. End of BFM Speech.

**Box 7 File Folders and Portfolios, Scrapbook, Photographic Prints and Negatives, Slides, Audio Tapes, etc.**

Folder

1. Patent System Panel of the Commerce Technical Advisory Board, 1963-1964  
Correspondence, reports, memoranda, etc.
2. Congressmen – Patentry, 1963  
Correspondence re BFM efforts to obtain legislative reform of U. S. patent system.
3. Purdue University Centennial Fund, 1970  
Ltrs from E. L. Butz, F. L. Hovde (President of Purdue University), Corydon Hall.
4. National Society of Professional Engineers, 1962  
Correspondence, publications, etc.
5. Tone Generating Means for Electrical Musical Instruments, 1965.  
Changes in specifications in BFM patent application. Correspondence, notices, etc. Patent 3,183,296 issued May 11, 1965.
6. Plat of BFM Residence and Lot, 1970.  
Pencil drawing showing lot boundaries with dimensions, outline of house, etc.
7. Drawings for Speaker-Amplifier Cabinet, 1955.  
"For wire reed piano" June 13, 1955. Four sheets.
8. Tracing (full size) of Electronic Piano Reed Bar 1952.
9. Ben Miessner – Huntingburg Scholarship.  
Financial statement of fund; Purdue material about donations, Centennial Fund,



- etc.
10. “Engineers and Patentry” – BFM Article in American Engineer, 1962-1963.  
Correspondence re publication, reprints, mailing list, etc.
  11. Scrapbook – State Republican League, 1940-1947  
Clippings, statements, documents, notes, etc., re fraudulent fund raising scheme.
  12. Photographic Prints and Negatives.  
Pictures of electronic musical instruments, performers, apparatus, etc.
  13. Slides, Photographic Negatives, Prints – Nine boxes, 1936, 1953-1958, 1941.  
Box 1 – 35mm negative film strips. (See Laboratory Notebook 43, p. 120-121)
    - Strip #0 Dec 14, 1953. Piano Sound Board Frequency Characteristics (Oscilloscope tests). Lab Notebook 43, p. 80-81.
    - Strip #A Dec 23, 1953. Reed Piano S. P. Tests. (Chaldini Sound Patterns) (+ 2 speakers) Lab Notebook 43, p. 86.
    - Strip #1 Jan 3, 1954. String drive (B3-120) by non-polarized magnet + 60 cps sonic spectrograms. Lab Notebook 43, p. 105.
    - Strip #2 Jan 4, 1954. String drive (B3-120) by 60 cps magnet (non-polarized) blocked and unblocked S. B., String and S. B. decrement also pictures of apparatus. Piezo Pickup. Lab Notebook 43, p. 107-108.
    - Strip #3 Jan 5, 1954. String drive (B3-120) by non-polarized 60 cps magnet. Piezo pickup and MIKE pick up and sonic analyser. Lab Notebook 43, p. 108-109.
    - Strip #4 Jan 5, 1954. 20 cps clapper and piezo P. U. with Sonic Analyser. Lab Notebook 43, p. 110.
    - Strip #5 Jan 6, 1954. A. F. osc. drive (String B-120 cps) with polarized electro magnet, piezo P. U. and sonic analyzer also MIKE tests. Lab Notebook 43 p. 111-113.
    - Strip #6 Jan 7, 1954. A. F. osc. and polarized string drive for F #-370, Piezo pick up and sonic analyser. Lab Notebook 43, p. 114.
    - Strip #7 Jan 8, 1954. A. F. and polarized string drive for F #-740 and Piezo P. U. and sonic analyser. Lab Notebook 43, p. 115.
- Box 2 – Slides.
- 1-20 Reeds in vibration. Feb 20, 1957, Feb 26, 1957.
  - 21-27 Mini grand piano and details. Jun 1, 1957.
  - 28-33 New pick ups. Jun 1, 1957.
  - 34-36 Laboratory and office. Aug 1, 1957.
- Box 3 – Slides.
- 1-21 Early reed piano apparatus. BFM note: #5, 6, 13, 17, 20 to Ed Shinn [?] May 17, 1957.
  - 30-36 Carillon rod assembly. Sep 27, 1941 (Rec'd)
- Box 4 – Slides.
- 1-12 Unidentified apparatus.
  - 13-14 Keyboard, etc.
  - 15-29 Unidentified apparatus.
- Box 5 – Slides.

- 1-14 Technical-Piano. Bernhardt 1956 and Miessner Piano. Bernhardt and Miessner model action.
- 15-26 Wave analyzer. Displays for dual yoke-type pickups with +/- polarity. See notebook 48, page 245, Jul 25, 1957. (Film M-1797)

Box 6 – slides.

- 1-33 Bernhardt Furniture, Ltd. Piano plants ad people. Slides received Mar 26, 1956.
- 34-36 BFM piano.

Box 7 – Slides

- Piano electronics and mechanism. Apparatus set-up. Piano action models, etc. 1953-1955, 1958.

Box 8 – IRE Paper Films. Paper Printed May, 1936 (Electronic Music and Instruments).

- Electrical and mechanical details of electronic piano, etc. Figure captions. Organs, pianos, etc., in living room, studio settings, etc. 3"x4" b & w negatives.

Box 9 – Slides, B & W Prints.

- Slides: Electrical apparatus; metal locator; piano tone generator; 3-way fire alarm; Wurlitzer piano; pottery.
- B & W Prints: Wurlitzer Model 111 piano. Complete piano, electronic components, action, controls, carrying case, etc.

14. Audio Tapes.  
Five reels, various electronic instruments.
15. Piano Hammers.

## **Box 8 File Folders and Portfolios**

Folder

1. Brunswick-Balke- Collender Co., 1920-1921.  
BFM employment; development proposals; outline of experiments and tests Dec 23, 1920; progress report May 6, 1921.
2. BFM Publications, Correspondence, etc., 1949-1950  
Ltrs to editors of popular and technical journals re electronic devices, etc. Most are 1949-1950.
3. U. S. Navy Hydrographic office. Chart 2619 South West Coast of Cuba. Gulf of Batabano.
4. Brief and Appendix for Appellees – Miessner vs. Hoschke, 1941.  
BFM suit to compel issuance of patent for electronic organ.
5. Technical Data: Nickel Alloys; Hydrogen Thyatron.  
Driver-Harris Nichrome catalog with BFM annotations; data sheets for Thyatron.
6. Appeals, Documentation, Correspondence, etc., for Allowance by U. S. Patent Office of Claims by BFM, 1951-1958.  
Includes extensive documentation by BFM of bases for appeals. Nine legal-size folders.

7. Agreement With Edward H. Loftin, 1926, 1931.  
Agreement re Loftin's role in obtaining patents for BFM, development, Agreement dated Dec 4, 1926; release dated Jul 30, 1931.
8. Miessner Inventions, Inc. Safe Deposit Box Contents, 1939, 1947.  
Ms listing of contents of box Feb 10, 1939 with Sep 10, 1947 corrections.
9. Tax Liability Appeal, 1944.  
Ltr Feb 23, 1944 from attorney about need for counsel familiar with tax matters and patents.
10. U. S. Patents, P. O. Gazette Excerpts, Foreign Patents,  
U. S. Patents – Extra Copies.

\* Denotes patentee other than BFM.

U. S. Patents.

- Folder 1 – \*1,580,112; 1,718,059; 1,719,189; 1,720,914; 1,733,232; \*1,886,687; \*1,906,607; 1,915,859; 1,915,860; \*1,915,861.
- Folder 2 – 1,929,027; 1,929,028; 1,929,029; 1,929,030; 1,929,031; 1,929,032; \*1,933,294; 1,933,295; \*1,933,296; 1,933,297; 1,933,298; 1,933,299; 1,961,159; 1,963,668; 1,977,832; 1,979,633; 1,992,438.
- Folder 3 – 2,001,391; 2,001,392; 2,002,919; 2,007,302; \*2,027,073; 2,027,074; \*2,027,075; 2,033,440; 2,045,917; 2,071,649; \*2,088,205.
- Folder 4 – 2,138,500; 2,140,025; \*2,165,707; 2,168,623; 2,187,611; 2,187,612; 2,215,708; \*2,224,965; 2,225,95; 2,225,196; 2,233,058; 2,237,105; 2,246,855.
- Folder 5 – 2,271,460; 2,323,232; 2,413,062; 2,414,062; 2,414,886; 2,469,568; 2,533,830; 2,535,503; 2,640,384; \*2,907,244; \*2,938,419; \*2,939,359; \*2,940,251; \*2,941,433; \*2,941,434; \*2,941,435.
- Folder 6 – \*3,160,694; \*3,160,695; \*3,161,713; \*3,161,714; \*3,166,622; \*3,170,020; \*3,178,499; \*3,178,500; \*3,178,501; \*3,178,502; \*3,180,918; \*3,180,919; \*3,185,755; \*3,193,607; \*3,193,608; \*3,193,609; \*3,196,200; \*3,196,201; \*3,197,541; \*3,197,542; \*3,197,543; \*3,197,544; \*3,198,872; \*2,204,020; \*3,207,835; \*3,229,021; \*3,229,022.  
Reissue 21,225 (Original 2,071,649); \*Reissue 25,728 (Original 3,035,472)  
Excerpts from P. O. Gazette 1,830,401; 1,832,646; 1,834,131; 1,834,414; 1,985,946; 2,002,919.  
Foreign Patents, France 653,825; Germany 695,056.
- Folder 7 U. S. Patents – Extra Copies (Inclusive Numbers)  
1,718,059
- Folder 8 U. S. Patents – Extra Copies (Inclusive Numbers)  
1,719,189 – 2,001,391
- Folder 9 U. S. Patents – Extra Copies (Inclusive Numbers)  
2,001,392 – 2,271,460

## Box 9 File Folders and Portfolios

### Folder

1. Hammond Patents Case, 1926-1929.  
Correspondence re infringement of BFM patents by John Hays Hammond, Jr. Mostly about legal and procedural concerns.
2. BFM Loose Notes, 1938.  
Notes, sketches, descriptions, mostly of electronic musical devices and instruments. Filing dates indicated. Ms of BFM article Recent Developments in Electronic Music (for Radio Craft).
3. Applications for Patents; Assignments, 1931-1932.  
BFM applications for patents for bottle holder; electromagnetic translating systems; sound direction finding system; alarm system; alarm system and apparatus. Assignments to Miessner Inventions, Inc.
4. Application 485,471 for U. S. Patent for Electronic Piano (Reed Piano), 1956-1957.  
Petitions to Commissioner of Patents, correspondence with attorneys, etc.
5. Vibrator (Plug Clamp) Application 291,829, 1952-1956.  
BFM ms notes, application for U. S. patent for fixed-free vibrator, appeals for rejected claims.
6. Apparatus for the Production of Music. Application 284,134, 1952-1956.  
BFM ms notes, application for U. S. patent. Appeals for rejected claims.
7. Patent Infringement Suits, 1949-1951.  
Correspondence, reports on status of patents, settlement agreements re infringement suits brought by BFM.
8. Smoker's Pipe, Cigar, Cigarette Holder, etc., 1939.  
BFM interest in devices, proposed improvements, copies of others' existing patents.
9. Patents Searches: Hammond Patents; Plucking Action for Reeds, 1932-1934.  
Listing of numbers of U. S. patents issued to John Hays Hammond, Jr., and patents related to plucking action of reeds.
10. Stromberg-Carlson Telephone Manufacturing Company, 1928-1930.  
Licensing agreement; royalty statements; correspondence re technical problems; circuit diagrams, invoices, receipts, etc.
11. Correspondence with Frederic D. Merrill, Victor Mumma, 1937.  
Reports to BFM in Ontario and Florida re business and technical matters, esp development of electronic piano, relations with manufacturers, etc. (Aug-Dec 1937)
12. Electronic Piano: Technical and Descriptive Information, 1937.  
Characteristics of electronic piano; technical information for manufacturers and servicemen; descriptive non-technical notes re electronic piano.
13. Krakauer Bros. Piano Makers, 1936-1940.  
Correspondence re technical concerns, marketing and promotion, reports on public performance, Hammond patent infringement claims; technical information about electronic piano.
14. Cooper, Kerr, Dunham, 1925, 1927.  
Correspondence, memos, billing records re BFM's patent infringement claim.

15. Miessner Radio Corporation, 1925-1926.  
Records of incorporation, meetings; financial statements.
16. Miessner Radio Receiver, 1925-1926.  
Correspondence with radio manufacturers re licensing for BFM inventions to eliminate "hum" in radios using house current. Includes sketch of BFM's career.
17. BFM License Agreements, 1928.
18. Marshall-Estey Organ, Inc. Patent License Agreement, 1945.
19. Sleeper Radio & Mfg. Corp., 1928.  
Instructions re installation, use of radio receiver; schematic diagram and illustration of filter.
20. Stromberg-Carlson Interference, 1948-1958.  
Correspondence, Patent Office petitions, etc., re BFM claims of his patents for dual tone vibrator, electronic carillon.
21. Fountain Pen With Squeezable Barrel, 1958-1959.  
BFM description of his invention; ltr re difficulties with patent attorneys; correspondence re legal representation for application for pen patent.

#### **Box 10 File Folders and Portfolios, Notebooks, Photographic Prints and Negatives**

##### Folder

1. Notebook: Electrical and Mechanical, May 1908.  
Inside front cover – B. F. Miessner, Enlisted May 1908, Enlistment expires July 27, 11. Inside back cover – Ben J. Miessner...Electrical Class U. S. S. Hancock. Ms notes on electrical apparatus and devices, steam engines. Includes graphs, drawings, etc., laid in on loose sheets.
2. Notebook: Electrical Topics, 1909, 1910.  
Inside front cover – Begun at Naval Air Station, Washington, D. C. July 1, 1909. Ms notes on electrical topics, algebra, etc. Includes notes on observation of Halley's Comet, May 28, 1910. A – M tabbed pages lacking at front.
3. Notebook: Electrical Topics.  
Inside front cover: Book No. 2 B. J. Miessner, LDS Electrician, U. S. Naval Electrical School, Brooklyn, New York. Ms notes on electrical topics, applications of electricity in ships, etc. Section on wireless telegraphy.
4. Letters from BFM to Family, 1909-1911.  
Letters, messages describing activities in U. S. Navy. Includes letters from England, France, and U. S. stations.
5. Photographic Prints, Negative, Clippings.  
Illustrations of electrical apparatus, training classes, etc. Period of BFM U. S. Navy enlistment.
6. Electronic Pianos, Organs, etc.  
Mfrs literature; recital announcements, programs. Carnegie Hall program with ad for Hammond organ; magazine article reprints.
7. The Rudolph Wurlitzer Company, 1856-1972.  
Annual reports 1955, 1956, 1957, 1958, 1959, 1960, 1962, 1964, 1972 (many

- with annotations by BFM) References to electronic piano, electronic organ. Centennial booklet 1856-1956.
8. Photographic Prints and Negatives.  
Electrical apparatus and devices, results of experiments. Prints of BFM in setting with electrical apparatus.
  9. Articles, Papers by BFM on Electronic Instruments, etc., 1929, 1935, 1937, 1938, 1955, 1962.  
All-Electric Radio Receiver Design 1929; Design Considerations for Simple and Versatile Electronic Music Instrument 1935; The Electronic Piano 1937; Electronic Consoles and Their Future 1937; Electronic Musical Instruments 1938; The Electronic Piano 1955; Comments on "Linguistic Consideration of Porpoise Sounds 1962; The Electronic Piano, undated
  10. Some Historical Acoustical Reminiscences by BFM, 1962.  
Narrative account of BFM's educational, technical career 1913-27. Gives details of experiences, experimental work. Typescript 41p.
  11. DeForest Audion Award, 1963-1964.  
Award made by Veteran Wireless Operators Association to BFM, Feb 23, 1963. VWOA 1963, 1964 Yearbook. Photos of BFM.
  12. Highlights in Careers of Inventor Award Nominees, 1965.  
Self Nomination by BFM for award. In Idea. The patent, Trademark and Copyright Journal of Research and Education, Fall 1965 (vol 9, no 3) p 527-530.
  13. Articles on Piano Technology, 1938-1941.  
Series of articles in Piano Trade Magazine by Dr. William Braid White for "Piano Tuners and Musical Instrument Technicians". Aug 1938 – Nov 1941. Some articles with BFM annotations. Sections cut from some pages.
  14. Lertes, P. Elektrische Musik.  
English translation of sections of book. Copy of book in Box 6.
  15. Translations of German Articles, Patents, Section of Handbuch der Experimental Physik, 1919-1937.  
Material on electrical instruments, devices, etc.
  16. Trautonium School.  
Instructions for playing the Trautonium, a solo type electric orchestral instrument.
  17. Dealer Enquiries re Electronic Piano, 1955.  
Requests for demonstrations, description, prices, etc., of BFM electronic piano.
  18. Miscellaneous, 1955.  
Articles on Hammond organ, servicing television sets, technical report writing, 1964 R & D forecast, inventors, patenting, inventiveness, etc. Tung-Sol electron tube specs, description of RCA electric carillon, BFM biographical sketch in Inventor New Product Digest Sep 1955 p9-12.
  19. Miessner Patents.  
Lists of numbers of U. S. patents assigned to Miessner Inventions, Inc; unidentified lists of patent numbers; orders for copies of patents; list provided by RCA of BFM patents; copies of patents assigned by employees to Miessner Inventions, Inc.

20. Biographical Sketch of BFM 1937, rev 1961; List of Lectures by BFM on Original Researches...; List of Researches and Publications by BFM; List of Significant Inventions.
21. Photo Phonograph System; Electronic Accordion, etc., 1947, 1949.  
BFM ms notes for patent application; sketches, brief notes re designs, procedures for suing coconut shells.
22. Patent System and Practices, 1961-1963.  
Clippings from journals, newspapers, etc., re inventors and inventing, patent rights; annotations by BFM. Correspondence, ltrs to editors.

### **Box 11 File Folders and Portfolios, Books**

#### Folder

1. Miscellaneous Correspondence, Notes, Technical Information, etc., 1927-1929  
Technical problems, equipment; personnel, royalties, licensing agreement, etc.
2. United Reproducers Corporation.  
Receivership proceedings; BFM royalty statements; technical information re radio receivers.
3. Correspondence with Frederic D. Merrill, 1937, 1940.  
Technical and personal matters; electronic piano recital; with BFM in Florida 1937; reports by Merrill on testing and experimentation on electronic organ; business matters 1940.
4. Radio Corporation of America, 1930-1936.  
BFM licensing agreement and payments; foreign patents; prosecution of applications, etc.
5. Louis Luberoff – M. P. Moller, 1935-1938.  
Luberoff ltrs re patents for volume control, other devices; role as salesman.  
Moller ltr re pipe organs.
6. Sebastian Gundling & Son, 1938-1940.  
Correspondence re licensing, manufacture, patent coverage of electronic organs.
7. Licensee prospects for Electronic Piano, 1938-1939.  
Correspondence with manufacturers soliciting interest in using BFM patents.  
Includes Magnavox, Philco, Crosley, Zenith, Stromberg-Carlson, Capehart, General Electric.
8. BFM Service as Expert Witness: Wireless Specialty Apparatus Company v. The United States, 1925.
9. Wm. Kratt Compnay, 1954-1958.  
Correspondence with BFM re manufacture of piano parts, materials needed financial records, etc.
10. Organ and Piano Company Enquiries, 1932-1939.  
Ltrs from manufacturers, dealers re making, selling electronic pianos and organs, other kinds of musical instruments; BFM replies.
11. Electronic Pianos, General, 1955-1957.  
Clippings re piano manufacturing and sales statistics; piano business prospects;

- descriptive material for various instruments.
12. Charles Eisler, 1961.  
GFM ltrs to Eisler re experiences as inventors; management attitudes, treatment of inventors.
  13. John E. Abate, 1959-1961.  
Papers on star tracking and scanning systems, astro Doppler velocity measurement.
  14. Frozen Food Temperature Indicator, 1960-1961.  
Correspondence with Wall Street Journal, laboratories, manufacturers, re indicator to show that frozen food has thawed.
  15. Clair O. Musser, 1960.  
Correspondence re BFM evaluation of U. S. Patent 2,818,760 Modulation System for Electrical Musical Instrument.
  16. Camera Shutter Speeds, 1961.  
BFM ltrs to U. S. Camera re timing of exposures; own early work; relations with Eastman Kodak.
  17. Patent Legislation, 1956-1958. (1)  
Correspondence re efforts to obtain extension of term of patents to make up for World War II stop orders. Ltrs to individuals, companies. Patent Equity Association financial records.
  18. Patent Legislation, 1955-1956. (2)  
BFM ltrs to officials, public figures, radio commentators, popular journals seeking support for patent term extension legislation.
  19. Patent Legislation, 1956-1957. (3)  
Correspondence with United Inventors and Scientists of America re patent term extension legislation.
  20. Patent Legislation, 1955-1956. (4)  
Ltrs, telegrams to members of Congress asking for support for patent term extension legislation. Replies from members.
  21. Patent Legislation, 1947. (5)  
Correspondence with Senator Hawkes re patent term extension legislation.
  22. Role of Inventor, Patent Process, etc., 1935-1954.  
Articles, clippings, ltrs, etc., re role of inventor, patenting, research, etc.
  23. Sources of Inventions, 1935-1938.  
Clippings, correspondence re role of individual inventor, industrial research laboratories; ms of BFM article. BFM correspondence with Waldemar Kaempffert, science editor, NY Times.
  24. Creativity and Invention, 1956-1961.  
Clippings, advertisements, correspondence, conference announcements, etc., re role of inventor, project teams, research, creativity, company policies, etc.
  25. Miscellaneous Technical Information, 1954-1962.  
Descriptive, technical information re devices, equipment, instruments, materials, from suppliers, manufacturers.
  26. Music Instrument Statistics, etc., 1961.  
Journal articles, clippings.
  27. The Radio Engineering Handbook 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1933.



28. Standard Handbook for Electrical Engineers 4<sup>th</sup> ed., N. Y., McGraw-Hill, 1917.

**Box 12 Scrapbook, File Folder, Books.**

Folder

1. Scrapbook: Electronic Piano, 1933.  
BFM presentation to Radio Corporation of America; photographic prints of piano, details of construction; papers presented at meetings; script of radio broadcast; clippings, suggested price list.
2. Electronic Piano (Loose material from 1933 scrapbook), 1931-1933.  
Correspondence, articles, electronic piano recital programs, broadcasts.
3. Scrapbook: February 1933-October 1937.  
Photographic prints of piano strings on frame, electronic components, details. Some with annotations.
4. Scrapbook #8: March 1935-May 1936.  
Clippings, advertisements, magazine articles about Hammond organ, other electronic instruments. Comparisons with traditional pipe organ.
5. Scrapbook #10: January 1937-February 1938.  
Articles, clippings, advertising material re electronic piano, organ, other instruments. Reviews of recital on electronic piano.
6. Scrapbook: Photographs October 2, 1937-March 1939.  
Photographic prints of electronic orchestra, individual instruments, workshop/laboratory scenes.
7. Scrapbook #11: February-August 1938.  
Newspaper clippings, magazine articles, advertising material, Miessner Inventions, Inc. advertisements, recital announcements for electronic piano, organ. Federal Trade Commission v. Hammond decision re Hammond Claims.
8. Radiotron Designers' handbook 4<sup>th</sup> ed., Sydney, Australia, Wireless press, 1953. (Reproduced and distributed by RCA Victor Division, Radio Corporation of America)
9. Kinsler, Lawrence E. and Frey, Austin R. Fundamentals of Acoustics 2<sup>nd</sup> ed., N. Y., Wiley, 1962.
10. Read, Oliver. The Recording and Reproduction of Sound 2<sup>nd</sup> ed., Indianapolis, Sams, 1952.

**Box 13 Books**

1. Funk-Taschenbuch. Teil II. English-Deutsches Funk-Worterbuch, Berlin, Weidmannsche Buchhandlung, 1924.
2. Funke, Otto. Das Klavier und seine Pflege z. Auflage Radebeul, E. Germany, otto Funke, 1946.
3. George, W. H. "On the forces at the ends of a vibrating string" Philosophical Magazine Series 6, Vol. 49, No. 289, Jan 1925, pages 97-107.  
Negative Photostat. Pages lacking?

4. Gelatt, Roland. The Fabulous Phonograph, from Tinfoil to High Fidelity 1<sup>st</sup> ed., Philadelphia, Lippincott, 1955.
5. General Electric Transistor Manual 3<sup>rd</sup> ed., Syracuse, N. Y., General Electric company, 1958.
6. Geyger, William A. Magnetic-amplifier Circuits: Basic Principles, Characteristics and Applications, N. Y., McGraw-Hill, 1954.  
Annotations by BFM
7. Gilfillan, S. C. The Sociology of Invention, Chicago, Follett, 1935.
8. Griffin, Donald R. Echoes of Bats and Men, Garden City, N. Y., Anchor Books-Doubleday, 1959.
9. H-Weiss, Eugene. Phonographes et Musique Mecanique, Paris Hochette, 1930.
10. Handbook of Electronic Control Circuits 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1959.
11. Handbook of Industrial Electronic Circuits, N. Y., McGraw-Hill, 1948.
12. Handbook of Industrial Electronic Control Circuits, N. Y., McGraw-Hill, 1956.
13. Handbook of Noise Control, N. Y., McGraw-Hill, 1957.  
Annotations by BFM
14. Handbuch der Experimentalphysik. Technische Akustik. Erster Teil. Leipzig, Akademische Verlagsgesellschaft, 1934.
15. Handbuch der Experimentalphysik. Technische Akustik. Zweiter Teil. Leipzig, Akademische Verlagsgesellschaft, 1934.  
Annotations by BFM
16. Hansing, Siegfried. Das Pianoforte in seinen Akustischen Anlagen. 2d improved and enlarged edition. New impression, 1950.  
Two-page typed commentary laid in. Undated, not signed.
17. Helmholtz, Hermann L. F. On the Sensations of Tone as a Physiological Basis for the Theory of Music 4<sup>th</sup> ed., London, Longmans, Green, 1912.  
Annotations by BFM
18. Hertz, Heinrich. Electric Waves, N. Y., Dover, 1962.  
Republication of work first published by Macmillan in 1983.
19. Hoar, Roger S. Patent Tactics and Law, N. Y., Ronald, 1939.  
Annotations by BFM
20. Houwink, R. Elasticity, Plasticity and the Structure of Matter 2<sup>nd</sup> ed., Washington, D. C., Harren Press, 1953.
21. Howe, Alfred H. Scientific Piano Tuning and Servicing Rev. and enl. Ed., Tuckahoe, N. Y., Alfred H. Howe, 1955.  
Annotations by BFM
22. Hughes, Donald J. The Neutron Story, Garden City, N. Y., Anchor Books-Doubleday, 1959.
23. Hunt, Frederick V. Electroacoustics: The Analysis of Transduction and Its Historical Background, Cambridge, Harvard, 1954.  
Annotations by BFM. Draft of part of letter from BFM to author laid in.

#### **Box 14 Books**

1. Hunter, Joseph L. Acoustics, Englewood Cliffs, N. J., Prentice-Hall, 1957.

- Annotations by BFM.
2. Inventor's Handbook, Greenwich, CT, Fawcett, 1954.
  3. Jamison, Alpha P. Elements of Mechanical Drawing 2d, rev. ed., N. Y., Wiley, 1911.
  4. Jeans, James. Science & Music, N. Y., Macmillan, 1938.  
Annotations by BFM.
  5. Jewkes, John, Sawers, David, Stillerman, Richard. The Sources of Invention, London, Macmillan, 1958.  
Annotations by BFM.
  6. Klanstruktur der Musik; Neue Erkenntnisse music-elektronischer Forchung, Berlin, Verlag Fur Radio-Foto-Kinotechnik, 1955.
  7. Kolsky, H. Stress Waves in Solids, Oxford, Clarendon, 1953.  
Annotations by BFM
  8. Langbein, George. Electro-Deposition of Metals, N. Y., Henry Carey Baird, 1920.  
Annotations by BFM
  9. Lemon, Harvey B. and Ference, Michael, Jr. Analytical Experimental Physics rev. ed., Chicago, Chicago U. P., 1946.
  10. Lessing, Lawrence. Man of High Fidelity: Edwin Howard Armstrong 1<sup>st</sup> ed., Philadelphia, Lippincott, 1956.
  11. Lion, Kurts. Instrumentation in Scientific Research, N. Y., McGraw-Hill, 1959.  
Annotations by BFM.
  12. Locke, Arthur S. et al. Principles of Guided Missile Design: Guidance, Princeton, N. J., Van Nostrand, 1955.
  13. Loeb, Jacques. Forced Movements, Tropisms and Animal Conduct, Philadelphia, Lippincott, 1918.  
Gift copy from author. Holograph letter from author laid in.
  14. "Lucite" Acrylic Resin Manual, Arlington, N. J., DuPont, 195?.  
Reprint of manual published during W. W. II.
  15. Luck, David G. C. Frequency Modulated Radar, N. Y., McGraw-Hill, 1949.
  16. McPherson, William and Henderson, William E. An Elementary Study of Chemistry rev. ed., Boston, Ginn, 1906.
  17. Manual of Spring Engineering, Cleveland, American Steel and Wire Company, 1941  
Annotations by BFM. Advertising material laid in.
  18. Marceson, Simon. The Scientist in American Industry, N. Y., Harper, 1960.  
Two copies. Both copies annotated by BFM.
  19. Matzke, Hermann. Unser Technisches Wissen von der Musik, Lindan im Bodensee, W. Germany, Werk-Verlag KG Frisch & Perneder, 1949.
  20. Mechanical Engineers' Handbook 5<sup>th</sup> ed., N. Y., McGraw-Hill, 1951.
  21. Miessner, B. F. Radiodynamics; The Wireless Control of Torpedoes and other Mechanisms, N. Y., Van Nostrand, 1916.  
Annotations by BFM. This copy marked as Defendants' Exhibit D-18 in suit Radio Corporation of America vs. The George W. Walker Company. Separate envelope of clippings from newspapers and magazines; correspondence, etc., re content of Radiodynamics.

## **Box 15 File Folders, Phonograph Records.**

### Folder

1. Miscellaneous Correspondence, 1928-1930.  
Correspondence re BFM publications; comments on articles; BFM response to questionnaire on psychology of the inventor; ltrs to BFM re employment; Victor Talking Machine Co interest in BFM, etc.
2. Miscellaneous Patent Matters, 1919-1929.  
Vacuum tube radio circuit; gasoline depth guage; loudspeaker diaphragm; use of BFM patents.
3. Miscellaneous Technical Information, 1918-1925.  
Circuit diagrams; BFM notes on vacuum tube improvements; translating device; vacuum tube hum neutralizer; tuning thermionic amplifier circuits; Photostats of dated, numbered pages showing wired radio receiver circuitry, cabinet design; notes on a. c. amplifier, power transformer.
4. Address, Paper by BFM, 1934-1936, 1938.  
To American Guild of Organists re electronic piano (1934); to National Association of Organ Builders (1935); to National Association of Piano Tuners re development of electronic piano (1936); recent developments in electronic music (1938).
5. Telephone Transmitter; Speaking Tube for Aircraft, 1918-1929.  
Patent application by BFM for speaking tube for aircraft; method and apparatus for telephonic transmission; U. S. patents for telephone transmitter, etc; sketches of telephone transmitter; ltr repatent searches; correspondence with patent attorney A. L. Kent re application, etc.
6. Photographic Prints of Electronic Organs, Pianos, Guitar; Article on Piano Tuning.
7. Miscellaneous BFM Personal Financial Records, Railroad Tickets, etc, 1928-1930.
8. Correspondence, Invoices, Descriptive Information re Equipment, Materials, Publications, 1928-1930.
9. Garod Corporation, 1926-1929.  
Correspondence; agreement with BFM; receivership; BFM royalty claims.
10. Report on Investigation of Webster Electric Company; Reports on Setting Up Transmitting and Receiving "Loops".
11. Polyphone Demonstration, New York City Feb 26-Mar 12, 1932.  
Business cards left by visitors; telephone messages; description of Lumia, "Art of Light"; publicity piece re Victoria Boshko, touring Russian pianist: Program for explanatory piano recital of Das Rheingold.
12. Correspondence With U. S. Government Agencies, Officials, etc., 1960-1962.  
Ltr to Sen Smathers re Russian missiles in Cuba; American foreign policy; fires caused by cigarettes, sun focused by bottles; location of underwater objects; size of envelopes used by U. S. Patent Office; attack warning system; evaluation of school textbooks; postage rates; television broad-casting policies; advice to President-elect Kennedy.
13. Missiles and Rockets (journal), 1960-1963.  
Correspondence re various technical subjects, role of individual inventor; clippings of articles; letters to editor, etc.

14. Nikola Tesla, 1956-1943.  
The Problem of Increasing Human Energy by Tesla in The Century Magazine, June 1900, p. 175-210; Bibliography of Nikola Tesla; Revue Yugoslave des Postes et Telecommunications (1932) tribute to Tesla; correspondence, BFM and K. M. Swezey; facsimile of 1904 announcement by Tesla.
15. Electronics (journal), 1955-1963.  
Extensive comments by BFM re articles, etc., on new developments, patent procedures, BFM's own work.
16. Edward H. Loftin, 1928-1930.  
Correspondence with BFM re patent matters, interferences, licensing, royalty payments from manufacturers, etc.
17. Photographs of Upright Piano Action Model.
18. Astronomy, 1932-1940, 1961.  
Astronomical photographs made by BFM; typescript of article by BFM on celestial photography; miscellaneous photographic studies; correspondence re equipment.
19. Inventors and Inventions, 1938-1941.  
Ltrs to BFM from inventors re patents, inventions for musical instruments.
20. Charles T. Jacobs, 1937-1940.  
Ltrs from Jacobs, electrical engineer and patent attorney to BFM re specific technical points of various patents for electronic musical instruments and devices.
21. Charles T. Jacobs, 1941-1944.  
Ltrs from Jacobs, electrical engineer and patent attorney to BFM re specific technical points of various patents for electronic musical instruments and devices.
22. Phonograph Records.
  - Germantown Carillon – 3 discs
  - Carillon recital – It's Christmas at Camp Patrick Henry
  - Electronic Keyboard "oboe", "drum"
  - Test records – 12 discs
  - Debussy. Children's Corner Suite, Preludes. A. Cortot, piano. Victrola.
  - Beethoven. Sonata in C minor (Pathetique). W. Bachaus, piano. Victrola 2 discs.
  - Strauss, R. Til Eulenspiegels Lustige Streiche. Parts 3, 4. London Symphony Orchestra. Coates. Victrola.
  - Debussy. Claire de Lune; Schumann. Novelette in D. H. Bauer, piano. Victrola
  - Beethoven. Leonore Overture, no. 3. Parts 3, 4. New Queen's Hall Orchestra. Wood. Columbia.
  - Tchaikovsky. Nutcracker Suite. Parts 1, 2. Fred Waring and his Pennsylvanians. Decca.
  - Tchaikovsky. Piano Concerto in B Flat Minor. 1<sup>st</sup>, 3d Movements. Egon Petri, piano. London Philharmonic Orchestra. Goehr. Columbia.

## Box 16 File folders and Portfolios

### Folder

1. Radio Electronics (journal), 1962-1965.  
Correspondence with publisher Hugo Gernsback re Cuban missile crisis; BFM inventions; Franklin Institute medal; John J. Hammond, Jr. patents; clippings from Radio-Electronics.
2. Submarine Detection, 1962-1964.  
Correspondence, clippings re means of detecting objects underwater. BFM correspondence with U. S. Navy, Edwin A. Link.
3. International Science and Technology (journal), 1962-1963.  
BFM ltrs re articles on patent process; comments on cover illustrations.
4. Research Corporation, 1962-1964.  
Functions of Research Corporation; correspondence with inventor with patent assigned to Research Corporation; rewards to inventors working in industry. Problems with Florida trash incinerator.
5. DuPont, 1962-1963.  
Correspondence, publications re DuPont policies for rewarding inventors on staff.
6. Wire and Radio Communications (journal), 1961.  
Ltrs re early work in radio transmission; correspondence re BFM articles on Lee DeForest, etc.
7. Hamilton Watch Company, 1958-1971.  
Correspondence, billing records, technical information re electric watch owned by BFM.
8. Wurlitzer Patents – Pianos and Organs.  
Copies of U. S. patents for electronic instruments, related devices; some assigned to Wurlitzer; some annotated by BFM. BFM booklet The Miessner Stringless Piano; notes on BFM's own work.
9. Licensing Name Plates, 1945-1958.  
Plates to be fixed to Wurlitzer instruments listing BFM patents used. Sample plates, design drawings, orders placed with makers.
10. Olson & Trexler, 1959-1962.  
Correspondence re BFM's disclosures to Wurlitzer, reductions in royalty rates, allegations that others patented BFM's ideas.
11. Wurlitzer Note Book References, 1957.  
BFM ltr to brother Otto re suit vs Wurlitzer for use of BFM's ideas and patents. Typescript, ms lists of notebook references re BFM's relations with Wurlitzer, technical development of electronic pianos and organs.
12. Music Trades (journal), 1960-1963.  
Ltrs re BFM's work on electronic piano; request for support for Franklin Institute award.
13. Piano Trade Magazine, 1961-1963.  
Ltrs from BFM re piano performance need for change in basic design, etc. Includes clippings from Piano Trade magazine.
14. The Decline of American Invention; Its Causes and It Remedies.

- Ms 26 p; typescript 27p; incomplete typescript with interleaved corrections. Mimeograph copy of Part I 13 p. with cover sheet and list of contents. Note on cover sheet: Sent to all Members of Congress. Typescript of Part II Creativity, Its Seeds, Its Culture and Its Fruits 77 p.
15. Wurlitzer Royalty Payments; Premier Metal Etching Company, 1954-1957.  
Royalty statements from Wurlitzer. Order correspondence with Premier Metal re BFM licensing plates on Wurlitzer organs.
  16. Wurlitzer Royalties, 1947-1964.  
Ltrs of transmittal for royalty checks, statements of organs shipped. BFM summary notes of payments.
  17. Clifford W. Andersen and References, 1958.  
Letter of transmittal and group of patents of musical instruments, devices with BFM annotations.
  18. Calvin W. Taylor, 1962-1965.  
Correspondence with BFM, articles, conference and workshop programs re creativity.
  19. Simple Electronic Metal Detector.  
Ms and typed copy of technical paper by BFM.
  20. Heath Company, 1958-1961.  
Correspondence re BFM difficulties in assembling Heathkit oscilloscope kit. Includes manual, notes, instruction sheets, etc.
  21. Miscellaneous Correspondence, etc. (3 File folders), 1945-1969.  
Correspondence re inventions and patent process; inventors' rights; creativity; pacemaker device; disposal of BFM papers; Cuban missile crisis; astronomy camera invention; electric eye camera; Oskar Vierling re BFM activities; ASCAP protection of rights; F. L. Hovde re Purdue honorary degree procedure; training of scientists; specifications for depth finders; radio, radar equipment for boats; early developments in radio; difficulties of individual inventor; Dynatech Corporation role in developing inventions; BFM ltr to FBI re gambling; BFM ltr to D. D. Eisenhower re painting technique; patent office procedures in various countries; design of adjustable golf club; equality of commercial bread; method of determining ripeness of fruit; counting fruit on tree; patent for guiding cars on highway.

### **Box 17 File Folders**

#### Folder

1. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (1-3), 1933-1952.  
Correspondence between Wurlitzer and Miessner Inventions re piano royalties.
2. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (4), 1953-1956.  
Extensive correspondence re use of BFM patents, royalty payments, tonal quality of electronic piano, etc.
3. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (5), 1956-1957.  
Extensive correspondence re legal preparations for trial. Correspondence between BFM and brother Otto re Wurlitzer.

4. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (6), 1955-1956.  
Extensive correspondence, documentation re suit. BFM ltr Feb 25, 1956 is his review of case.
5. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (7), 1957.  
Wurlitzer notice and attached motion for summary judgment.
6. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (8), 1957-1958.  
Correspondence re setting trial date, selection of BFM attorney.
7. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (9), 1959.  
Correspondence, etc. re financial settlements.
8. The Rudolph Wurlitzer Company v. Miessner Inventions, Inc. (10), 1959.  
List of papers, etc. returned to BFM after use by Synnestvedt & Lechner Law firm.
9. Transfer of Miessner Patent Cases from C. T. Jacobs to William P. Cole 1958-1959.
10. Benjamin F. Miessner V. Clifford V. Anderson, 1958-1959.  
Patent interference case.
11. The Rudolph Wurlitzer Company – Miscellaneous, 1952-1955.  
BFM request to Wurlitzer to sell guitars used in patent suit; suggested use of anti-static liquid; IRS form 1099 for 1959 Wurlitzer royalties; 1951-1952 Wurlitzer annual report; organ promotion program.
12. Synnestvedt & Lechner, 1958-1959.  
Statements of charges for legal services, etc. to Miessner Inventions, Inc.
13. The Rudolph Wurlitzer Company – Piano Actions, 1944-1947.  
Correspondence re design of piano actions.
14. Wurlitzer Organ Manuals.
15. Wurlitzer Service Manuals.
16. Electronic Piano Patent, 1955-1957.  
Records of application, etc.
17. Everett Orgatron, 1938-1952.  
Correspondence re development, licensing, etc. of electronic organ.
18. Miessner Family Correspondence, 1946-1954.  
BFM ltrs to Children; ltrs from Mrs. Miessner, Otto Miessner, mostly family matters. Some mention of work on electronic piano.

### **Box 18 File Folders, Notebooks**

#### Folder

1. The Baldwin Piano Company, 1950, 1955-1956.  
Correspondence re BFM's efforts to have Baldwin use his patents to make electronic piano.
2. Correspondence Between BFM and Brother Otto, 1950-1951, 1954, 1955.  
Effort to have Wurlitzer make electronic piano; technical developments; Otto's role in marketing piano. Otto's device for visualizing position of tape in player.
3. Patent License Agreement With the Rudolph Wurlitzer Company, 1945-1949.  
Sale of Everett Piano Company Orgatron Division to Wurlitzer; May 1945 agreement and 1948 supplemental agreements with Wurlitzer. Sample copy of



Folder

4. Miessner Inventions Inc. patent license agreement form.  
Vibratory Translation Devices and Electro(nic) Musical Instruments, 1939.  
Analysis of prior art patents and other publications by BFM.
5. Assignments of B. F. Miessner Patents to Miessner Inventions, Inc., 1940-1957.
6. Slaymaker et al v. Miessner Interference No. 88,017. 1957.  
Miessner exhibit no. 8-A. BFM ms notes for invention Tuned Vibrators for Musical Instruments.
7. Institute of Electrical and Electronics Engineers. Audio and Electro-acoustic Group, 1967.  
Membership Directory 1967.
8. Sigma Pi Fraternity. Eta Chapter. (Purdue University), 1960, 1962.  
Address Lists Jan 1960, Jun 1962.
9. "Today's Inventor –A Study in Frustration", 1963.  
Reprint of BFM article in April 1963 issue of American Engineer.
10. "Tape Teaching and Monitor Systems", 1963.  
Reprint of BFM letter Nov-Dec 1963 issue of Sound (vol. 2, no. 6, p.43)
11. Etude Article on Electronic Piano, 1955.  
Correspondence re publication of article in April 1955 issue. Copy of article not included.
12. Miscellaneous Technical Journal Articles, Reprints, Reports, Papers, etc. (2 folders)
13. Pocket Notebook (1), 1913-1916.  
Addresses, technical notes, sketches, appointments, notes on used cars. Notes re Purdue – addresses, textbook titles, assignments, expenses, class notes, experimental notes.
14. Loose-Leaf Pocket Notebook (2), 1920-1921.  
Brief descriptions of residential properties; some technical notes; financial records; daily expense records. Calendar for 1920, 1921 at front.
15. Pocket Notebook Pages (3), 1923.  
Notes, sketches, schedules, addresses. Some dated Feb 1923. On first page "Removed Oct 1-24 BFM"
16. Loose-Leaf Pocket Notebook (4), 1925?  
Address of individuals, companies. Some sketches and calculations, expense record.
17. Astronomic Record Book (5), 1933.  
Records of BFM astronomic photography work.
18. Guest Book (6), 1932, 1954.  
Miessner Electronic Piano Demonstrations for the Musical Public. Guest Book, Room 811, Steinway Hall, New York City, Feb 1932. Includes signatures of Josef Hofmann, Jose Iturbi, Harold Bauer, George Gershwin, Lew White. Separate section for demonstration for RCA personnel Oct 11, 1954.
19. Pocket Notebook (7).  
Miscellaneous addresses of suppliers, offices. Calculations re tubing n. d.
20. Pocket Notebook (8), 1917.  
Notes on experimental procedures; notes on actions to be taken; sketches of apparatus; daily expense records.

Folder

21. Notebook No. 1 Radio Laboratory, Naval Aeronautic Station (9), 1916-1917.  
Technical notes, observations, sketches, schematic diagrams re airplane radio equipment tests, experiments. Entries dated Feb-Jun 1917.
22. Notebook No. 2 Radio Laboratory, Naval Aeronautic Station (10), 1917.  
Technical notes, observations, sketches, schematic diagrams re airplane radio equipment tests, experiments. Entries dated Feb-Jun 1917.
23. Pocket Notebook (11), 1917.  
Technical notes, observations, sketches, schematic diagrams re airplane radio equipment tests, experiments. Entries dated Jun-Oct 1917.
24. Pocket Notebook (12), 1917.  
Technical notes, observations, sketches, schematic diagrams re airplane radio equipment tests, experiments. Entries dated Nov-Dec 1917.

**Box 19 File Folders**

Folder

1. Agreement Between BFM, Edward H. Loftin and Edwards, Sager and Bower, 1925.  
Enforcement of BFM rights to inventions made while in employ of Brunswick-Balke-Collender Company.
2. Patent Process, Inventors, Inventing, 1964-1965.  
Clippings, articles, copies of BFM letters, replies from U. S. Senators, etc.
3. Patent Interference Statements by BFM, 1926.  
Preliminary statements by BFM re Commissioner of Patents interferences of Feb. 26, 1926. Specifies BFM actions, dates of drawings, description, explanation to others, operation of machine, etc. Devices for sound recording, reproducing, etc.
4. Description, Drawings for BFM Inventions: Synthetic Music Chart, Telephone Receiver, Radio Telephone Headphone, Loud Speaker.  
Undated.
5. Anderson, John W., Pres., National Patent Council; Pres., Anderson Co., Gary, Indiana, 1954, 1960.  
“Only Constitutional Incentivism can Keep You Free!” Lecture delivered Apr. 21, 1960, at Rose Polytechnic Institute, Terre Haute, Indiana. “What Feeds Free Enterprise?” Address at Annual Meeting of Cleveland Patent Law Association, Dec. 9, 1954.
6. Benjamin F. Miessner vs. Frederick A. Hoschke. Interference No. 71,788. 1936-1937.  
Record on behalf of Miessner, in the United States Patent Office, before the Examiner of Interferences. Brief for Miessner Appellee and Cross-Appellant.
7. Benjamin F. Miessner and Miessner Inventions, Inc., Appellants v. Wilhelmina Hoschke, et al. No. 7962.  
Appeal from the District Court of the United States for the District of Columbia to the United States Court of Appeals for the District of Columbia. Brief for Appellants; Appendix for Appellant.

8. Patent Collection: Apparatus for the Production of Music, etc., 1932, 1960.  
Copies of patents issued to BFM and others, No. 1,886,687, Nov. 8, 1932; No. 2,942,512, Jun. 28, 1960. Annotated by BFM. In binder with numbered index tabs.
9. Patented Inventions of Benjamin Franklin Miessner.  
Copies of patents issued to BFM 1914-1965. In binder with additional separate copies.
10. Journal Articles, Reports 1931-1940.  
Copies of articles on acoustics, musical instruments, etc., from German technical publications.
11. Miessner, B. F., 1962.  
Comments on "Early Experiments with Stereotape Recording." Letter to IRE Transactions on Audio, vol. AU-10, no. 5, Sep-Oct. 1962, p. 958 (?).
12. Miessner, B. F., 1963.  
Electrophonography. Letter to IEEE Proceedings, vol. 51, no. 6, June 1963. Offprint.
13. Vierling, Oskar, 1936.  
The Electro-Acoustic Piano. Doctor's thesis, Friedrich-Wilhelms Universitat, Berlin. 1936. Translated 1936 by F. D. Merrill, Jr. 71p.
14. Political Campaign Material, 1964.  
Southern Republican Challenge; Goldwater Freedom Special.
15. Special Bulletin: Recent News and Views on Science and Art, Feb. 1963.  
'Exciting "breakthroughs" in electronic music'. Published by Ivor Darreg, composer and electronic music consultant.
16. 1953 Spectrum of FCC Requency Allocations.
17. Cole, Ralph I. ed., 1964.  
Patent Incentives and Rapid Growth Industry. American University. Center for Technology and Administration. Bulletin No. 11, April 1964.  
Annotated by BFM.
18. Current and Emerging Problems in Property Rights to R & D and Related Information, 1964.  
Program of the 8<sup>th</sup> annual public conference of the Patent, Trademark, and Copyright Research Institute of the George Washington University. June 18, 1964.
19. Cornell Aeronautical Laboratory. Research Trends, vol. 7, no. 4. Winter 1960.  
Martin, James F., New Tool for Research; Spaulding, Ellis R., A Low Range Airspeed Indicator for Helicopters.
20. Emil J. Simon Agreement, 1919.  
Agreement with Emil J. Simon to commercially exploit BFM inventions.
21. Thomas A. Edison, Inc. Agreement, 1928.  
Agreement granting Edison licenses to make, use, and sell devices embodying BFM inventions.
22. U. S. Congress. Senate. Committee on the Judiciary. Subcommittee on Patents, Trademarks, and Copyrights. (1), 1955-1956.  
Hearings on Patent Extension. S. 116, H. R. 2128. 84<sup>th</sup> Congress, 2<sup>nd</sup> Session. May 4, June 13, 1956. Includes testimony by BFM. Another copy marked

BFM statements removed.

Hearings on the American Patent System. S. R. 92. 84<sup>th</sup> Congress, 1<sup>st</sup> Session. Oct. 10, 11, 12, 1955.

Annotated by BFM.

23. U. S. Congress. Senate. Committee on the Judiciary. Subcommittee on Patents, Trademarks, and Copyrights. (2), 1956, 1961.  
Hearing on National Patent Policy. S. R. 55 on S. 1084, 1176. 87<sup>th</sup> Congress, 1<sup>st</sup> Session. June 2, 1961.  
Testimony of Admiral H. G. Rickover.  
  
Hearings on Government Patent Policy. S. R. 55 on S. 1084, 1176. 87<sup>th</sup> Congress, 1<sup>st</sup> Session. May 31, June 1, 2, 1961.  
Annotated by BFM. BFM letter May 17, 1961 (p. 638-639) removed. In 1955 scrap book.  
  
Hearings on Wonder Drugs. S. R. 167. 84<sup>th</sup> Congress, 2<sup>nd</sup> Session. July 5, 6, 1956.
24. U. S. Congress. Senate. Committee on the Judiciary. Subcommittee on Patents, Trademarks, and Copyrights. (3), 1961-1962.  
Hearings on Registration of Protection of Trademarks. S. R. 55 on s. 1396. 87<sup>th</sup> Congress, 1<sup>st</sup> Session. June 20, 21, 1961.  
  
Hearings on Design Protection. S. R. 55 on S. 1884. 87<sup>th</sup> Congress, 1<sup>st</sup> Session. Aug. 15, 16, 17, 1961.  
  
Hearings on Registration and Protection of Trademarks. S. R. 267 on S. 1396. 87<sup>th</sup> Congress, 2<sup>nd</sup> Session. May 16, 1962.  
  
Hearings on Patent Office Fees. S. R. 267 on S. 2225. Sep. 4, 1962.  
Annotated by BFM  
  
Preliminary Report on Patent Practices of the Federal Communications Commission. S. R. 267. 87<sup>th</sup> Congress, 2<sup>nd</sup> Session. Aug. 18, 1962.
25. U. S. Congress. Senate. Committee on the Judiciary. Subcommittee on Patents, Trademarks, and Copyrights – continued, 1947, 1953, 1955, 1956, 1962-1964.  
Preliminary Report on Patent Practices of the Department of the Interior. S. R. 267. 87<sup>th</sup> Congress, 2<sup>nd</sup> Session. Aug. 20, 1962.  
  
Report No. 1481. Patents, Trademarks, and Copyrights. S. R. 55. 87<sup>th</sup> Congress, 1<sup>st</sup> Session. May 9, 1962.  
Annotated by BFM.  
  
Report No. 1018. Patents, Trademarks, and Copyrights. S. R. 65. 88<sup>th</sup> Congress, 1<sup>st</sup> Session. May 1, 1964.  
Annotated by BFM.  
  
Report No. 2704. Patents Extension. To accompany H. R. 2128. 84<sup>th</sup> Congress, 2<sup>nd</sup> Session. July 20, 1956.  
  
Hearings on Extension of Patents in Certain Cases. H. R. 65, H. R. 124, H. R. 1107, H. R. 1984. 80<sup>th</sup> Congress, 1<sup>st</sup> Session. Apr. 2, May 9, 14, 1947.

Annotated by BFM.

Hearing on Extension of Terms of Patents. H. R. 1301 and 4944, H. R. 2309, H. R. 1228, H. R. 3534. 83<sup>rd</sup> Congress, 1<sup>st</sup> Session. June 10, 1953.

Annotated by BFM.

Hearing on Patent Office Fees. H. R. 10966. 87<sup>th</sup> Congress, 2<sup>nd</sup> Session. April 19, 1962.

Annotated by BFM

Report No. 1297. Patent Extension. To accompany H. R. 2128. 84<sup>th</sup> Congress, 1<sup>st</sup> Session. July 20, 1955.

Report No. 949. Patent Office Fees. To accompany H. R. 81901. 88<sup>th</sup> Congress, 1<sup>st</sup> Session. Dec. 3, 1963.

Annotated by BFM.

26. Noise control (journal), 1960-1961.  
Issues for 1960: Jan-Feb, Mar-Apr, Jul-Aug, Nov-Dec. Vol. 6, nos. 1, 2, 4, 6.  
Issues for 1961: Jan-Feb, mar-Apr, May-Jun, Jul-Aug, Sep-Oct, Nov-Dec.  
Vol. 7, nos. 1, 2, 3, 4, 5, 6.
27. Audio (journal), 1959.  
Issues for 1959: Oct, Dec. Vol. 43, nos. 10, 12.
28. Sound (journal), 1962, 1963.  
Issues for 1962: Jan-Feb, Mar-Apr, May-Jun, Jul-Aug, Sep-Oct, Nov-Dec.  
Vol. 1, nos. 1, 2, 3, 4, 5, 6.  
Issues for 1963: Jan-Feb, Mar-Apr, May-Jun, Jul-Aug, Sep-Oct, Nov-Dec.  
Vol. 2, nos. 1, 2, 3, 4, 5, 6.
29. Patent Legislation, 1964.  
Letter dated Apr. 2, 1964 sent to members of Senate by BFM, President Patent Equity Association, re H. R. 8190 increasing Patent Office fees. Printed copy, typescript, ms. List of Senators.
30. Patent Equity Association, 1965-1966.  
Correspondence re transfer of records, reactivation, from BFM to new officers.

## **Box 20 File Folders, Laboratory Notebooks.**

### Folder

1. Letters Patent Issued to B. F. Miessner by U. S. Patent Office. 7 Folders. 1933-1958

Folder 1	Folder 2
1,912,293 May 30, 1933	1,929,030 Oct 3, 1933
1,915,858 Jun 27, 1933	1,929,032 Oct 3, 1933
1,915,859 Jun 27, 1933	1,933,295 Oct 31, 1933
1,915,860 Jun 27, 1933	1,933,297 Oct 31, 1933
1,929,027 Oct 3, 1933	1,933,298 Oct 31, 1933
1,929,028 Oct 3, 1933	1,961,159 Jun 5, 1934
1,929,029 Oct 3, 1933	1,963,668 Jun 19, 1934

1,977,832 Oct 23, 1934  
1,979,633 Nov 6, 1934  
1,992,438 Feb 26, 1935  
2,001,391 May 14, 1935

Folder 3

2,001,392 May 14, 1935  
2,007,302 Jul 9, 1935  
2,027,074 Jan 7, 1936  
2,033,440 Mar 10, 1936  
2,045,917 Jun 30, 1936  
2,071,649 Feb 23, 1937  
(Reissue 21,225 Oct 3, 1939)  
2,138,500 Nov 29, 1938  
2,140,025 Dec 13, 1938  
2,168,623 Aug 8, 1939  
2,187,611 Jan 16, 1940

Folder 4

2,187,612 Jan 16, 1940  
2,200,718 May 14, 1940  
2,215,708 Sep 24, 1940  
2,215,709 Sep 24, 1940  
2,225,195 Dec 17, 1940  
2,233,058 Feb 25, 1941  
2,237,105 Apr 1, 1941

Folder 5

2,246,855 Jun 24, 1941  
2,271,460 Jan 27, 1942  
2,273,975 Feb 24, 1942  
2,319,622 May 18, 1943  
2,323,232 Jun 29, 1943  
2,352,730 Jul 4, 1944  
2,413,062 Dec 24, 1946  
2,469,568 May 10, 1949

Folder 6

2,533,830 Dec 12, 1950  
2,535,503 Dec 26, 1950  
2,594,697 Apr 29, 1952  
2,640,384 Jun 2, 1953  
2,654,810 Oct 6, 1953  
2,656,755 Oct 27, 1953  
2,672,781 Mar 23, 1954  
2,704,957 Mar 29, 1955  
2,755,697 Jul 24, 1956

Folder 7

2,761,127 Aug 28, 1956  
2,767,608 Oct 23, 1956  
2,813,447 Nov 19, 1957  
2,826,109 Mar 11, 1958  
2,832,843 Apr 29, 1958  
2,834,243 May 13, 1958  
2,845,829 Aug 5, 1958

2. Letters Patent Issued to B. F. Miessner by U. S. Patent Office Arranged by Types of Inventions.

Apparatus for the Production of Music.

1,929,029; 1,929,030; 1,929,032; 1,979,633; 2,001,391; 2,007,302;  
2,027,074; 2,033,440; 2,071,649 (Reissue 21,225); 2,138,500; 2,168,623;  
2,215,708; 2,215,709; 2,225,195; 2,233,058; 2,237,105; 2,246,855;  
2,271,460; 2,273,975; 2,323,232; 2,413,062; 2,594,967; 2,656,755

Methods and Apparatus for the Production of Music.

1,912,293; 1,915,858; 1,915,859; 1,915,860; 1,929,027; 1,929,028;  
1,933,295; 1,933,297; 1,933,298; 1,961,159; 1,977,832; 1,992,438;  
2,001,392; 2,045,917; 2,140,025; 2,187,611; 2,187,612.

Amplifying System.

1,963,668.

Electronic Pianos.

2,200,718.

Phonographic Pickup Device.

2,319,622.

Tools for Stringing Tennis Rackets.

2,352,730.

Piano Actions.

2,469,568.

Vibrator-Exciting Actions.

2,533,830; 2,535,503.

Photoelectric Translating System.

2,654,810.

Vibratory Reed Musical Instrument.

2,640,384; 2,672,781

Radio Frequency, Electro-Dynamic Pick-Up System.

2,704,957.

Vibratory Reed.

2,755,697.

Electrical Tone Generator.

2,761,127.

Vibrator Exciting Action.

2,767,608; 2,813,447.

Mounting Arrangement for Vibratory Reeds.

2,826,109.

Sound Reproducing Device.

2,832,843.

Tone Generators for Electronic Musical Instruments.

2,834,243.

Key Actions for Musical Instrument.

2,845,829.

3. Patents Issued to B. F. Miessner by Patent Office of Canada, 1943, 1948.

410,532 Feb 9, 1943 Electronic Pianos

452,874 Nov 23, 1948 Apparatus for the Production of Music

452,875 Nov 23, 1948 Apparatus for the Production of Music

452,876 Nov 23, 1948 Apparatus for the Production of Music

452,877 Nov 23, 1948 Apparatus for the Production of Music

4. Letters Patent Issued by U. S. Patent Office. 2 Folders, 1926, 1933, 1936-1940, 1943

- Evan P. Bone 1,580,112 Apr 13, 1926 Sound Producers.

- Frederic D. Merrill, Jr. 2,323,231 Jun 29, 1943 Methods and Apparatus for the Production of Music.

- Oskar Vierling 1,933,299 Oct 31, 1933 electronically-Controlled

Musical Instruments; 2,027,073 Jan 7, 1936 Electronically Controlled Musical Instruments.

- Charles T. Jacobs 1,886,687 Nov 8, 1932; 1,906,607 May 2, 1933; 1,915,861 Jun 27, 1933; 1,933,294 Oct 31, 1933; 1,933,296 Oct 31, 1933; 2,027,075 Jan 7, 1936; 2,224,965 Dec 17, 1940 Methods and apparatus for the Production of Music. 2,088,205 Jul 27, 1937 Tone Modifying Circuits. 2,165,707 Jul 11, 1939 Apparatus for the Production of Music.

5. U. S. Patents for Various Electric, Electronic Musical Instruments, Components, Controls, etc. 6 Folders.

BFM patents noted in References Cited. Some with BFM notes. Invention names include Electronic musical instrument, Control device for electronic musical instrument, Electrical musical instrument, Pick up and circuit for musical instrument, Modulator system, Stereophonic organ, Electric organ, Key contact system for electronic organ, Microphone pickup for pianos, Electronic carillon, Background noise eliminator, etc.

Folder 1		Folder 2		Folder 3	
2,800,047	2,839,960	2,856,805	2,897,710	2,946,252	2,963,933
2,802,386	2,841,043	2,865,243	2,911,870	2,946,253	2,967,447
2,809,547	2,842,021	2,871,745	2,913,947	2,948,178	2,968,204
2,811,069	2,844,983	2,873,637	2,921,494	2,949,803	2,971,420
2,811,887	2,846,913	2,878,708	2,924,137	2,949,804	2,972,273
2,812,679	2,848,919	2,879,683	2,924,138	2,949,805	2,973,680
2,817,261	2,848,920	2,886,999	2,928,306	2,951,412	2,973,681
2,818,759	2,854,879	2,887,000	2,933,004	2,953,052	2,976,755
2,818,760	2,855,816	2,888,849	2,937,556	2,953,053	2,978,945
2,818,761		2,888,850		2,953,054	2,983,177
2,818,762		2,892,371		2,953,055	2,984,140
2,819,640		2,892,372		2,953,056	2,986,963
2,821,878		2,892,373		2,958,249	2,986,964
2,821,879		2,893,281		2,959,083	2,988,945
2,828,659		2,896,491		2,960,899	2,988,946
2,830,481		2,897,709		2,962,922	
Folder 4		Folder 5		Folder 6	
2,989,884	3,006,228	3,007,362	3,035,472	3,038,365	3,054,318
2,989,885	3,004,460	3,008,367	3,037,413	3,039,346	3,054,319
2,989,886	3,006,229	3,011,378	3,037,414	3,309,347	3,056,326
2,989,887	3,007,361	3,011,379	3,038,364	3,040,612	3,056,327
2,994,240		3,015,979		3,040,613	3,058,381
2,995,054		3,018,680		3,041,910	3,063,324
2,997,908		3,022,695		3,045,522	3,066,567
3,000,252		3,022,696		3,046,826	
3,001,432		3,023,657		3,048,071	
3,002,411		3,026,756		3,048,072	
3,003,382		3,026,757		3,049,957	
3,003,383		3,031,909		3,049,959	



3,004,459

3,034,390

3,051,032

6. Assignments to Miessner Inventions, Inc., of Rights to Inventions by BFM, Charles T. Jacobs, Oskar Vierling, Evan P. Bone, 1931-1939. 2 Folders.
7. Patent Search: Condenser-Type Loudspeaker, 1958.  
Correspondence, patents re "nesting" type speaker.
8. Laboratory Notebook #34, 1948-1949.  
Entries dated Aug 24, 1948-Aug 1, 1949. 300 Numbered pages. BFM notes on slips copied on rag paper and tipped in.  
Note books compiled by B. F. Miessner unless noted otherwise.
9. Laboratory Notebook #49, 1957-1958.  
Entries dated Oct 5, 1957-Mar 5, 1958. 300 numbered pages. BFM notes copied on rag paper and tipped in.
10. Laboratory Notebook #53, 1963-1964.  
Entries dated Nov 3, 1963-Dec 28, 1964. 298 numbered pages. BFM notes on slips copied on rag paper and tipped in. Samples of metal reeds on pages 145, 193.

**Box 21 Laboratory Notebooks.**

Folder

1. Laboratory Notebook #1, 1920-1921.  
Entries dated Dec 18, 1920-Apr 17, 1921. 152 numbered pages. Inside front cover: B. F. Miessner, Brunswick Balke Collender Co., 623 So. Wabash Avenue, Chicago, ILL. Research Laboratory.  
Book I Ideas and Inventions.  
BFM notes on slips transcribed on rag paper and tipped in.  
Supplementary material in separate folder.  
Notebooks compiled by B. F. Miessner unless noted otherwise.
2. Laboratory Notebook #1. Supplementary Material, 1921-1926.  
Photostats of laboratory notebook pages, etc., various dates, Mar 1921-Mar 1926. Some not dated.
3. Laboratory Notebook #2, 1921.  
Entries dated Apr 27, 1921-Oct 12, 1921. 152 numbered pages.  
Inside front cover: Benj. F. Miessner, Research Laboratory, Brunswick Balke Col. Co., 623 So. Wabash Avenue, Chicago.  
Captions on index tabs at bottom of pages: p. 6 Hot needle recording; p. 7 Resurfacing wax blanks; p. 26 Variable area photo recording; p. 58 RF FM microphone system; p. 63 "Punch effect"; p. 72 Vertical deflection of lat. Cut grooves.
4. Laboratory Notebook #3, 1921-1922.  
Entries dated Oct 16, 1921-Feb 23, 1922. 152 numbered pages. BFM notes on slips transcribed on rag paper and tipped in .
5. Laboratory Notebook #4, 1922-1924.  
Entries dated Feb 22, 1922-Jun 16, 1924. 152 numbered pages. Inside front

- cover: Data & Inventions.  
 Supplementary material in separate folder.
6. Laboratory Notebook #4. Supplementary Material.  
 Photostats of pages from Laboratory Notebook #3, #4.
  7. Laboratory Notebook #16, 1931-1932.  
 Entries dated Apr 15, 1931-Apr 25, 1932. 303 numbered pages. BFM notes on slips transcribed on rag paper and tipped in.
  8. Laboratory Notebook #17, 1932-1933.  
 Entries dated Apr 26, 1932-Sep 11, 1933. 300 numbered pages. BFM notes on slips transcribed on rag paper and tipped in.  
 Notebooks compiled by B. F. Miessner unless noted otherwise.
  9. Laboratory Notebook #18, 1933-1935.  
 Entries dated Sep 12, 1933-May 8, 1935. 300 numbered pages. BFM notes on slips transcribed on rag paper and tipped in.
  10. Laboratory Notebook #25, 1940-1941.  
 Entries dated Oct 5, 1940-Sep 1, 1941. 300 numbered pages.
  11. Laboratory Notebook #50, 1958.  
 Entries dated Mar 9, 1958-Sep 6, 1958. 296 numbered pages.
  12. Laboratory Notebook #51, 1958-1961.  
 Entries dated Sep 7, 1958-Apr 4, 1961. 300 numbered pages. BFM notes on slips transcribed on rag paper and tipped in.
  13. Laboratory Notebook #52, 1961-1963.  
 Entries dated Apr 5, 1961-Oct 31, 1963. 300 numbered pages.
  14. Miessner Telephone Transmitter: Experimental Record Book Vol. II, 1919-1920.  
 Entries dated Apr 8, 1919-Oct 9, 1920. 153 numbered pages. Some pages blank, missing.
  15. Laboratory Notebook, 1935-1936.  
 Entries dated Sep 26, 1935-Feb 17, 1936. 152 numbered pages. Index on pp. 149-152.  
 Notebook compiled by Frederic D. Merrill, Jr. On spine: Merrill #1.
  16. Laboratory Notebook, 1936.  
 Entries dated Feb 1, 1936-Dec 17, 1936. 300 numbered pages. Index on pp. 296-300. Notebook compiled by Frederic D. Merrill, Jr. On spine: Merrill #2.
  17. Laboratory Notebook, 1936-1937.  
 Entries dated Dec 17, 1936-Jun 11, 1937. 300 numbered pages. Index on pp. 293-300.  
 Notebook compiled by Frederic D. Merrill, Jr. On spine: Merrill #3.
  18. Laboratory Notebook, 1937.  
 Entries dated Jun 15, 1937-Nov 11, 1937. 152 numbered pages. Index on pages 149-152.  
 Notebook compiled by Frederic D. Merrill, Jr. On spine: Merrill #4.
  19. Laboratory Notebook, 1937-1939.  
 Entries dated Nov 11, 1937-Mar 16, 1939. 300 numbered pages. Index on pages 290-300.  
 Notebook compiled by Frederic D. Merrill, Jr. On spine: Merrill #5.
  20. Laboratory Notebook, 1939-1941.

Entries dated Mar 18, 1939-May 21, 1941. 300 numbered pages; pages 190-291 blank. Index on pages 292-300  
Notebook compiled by C. T. Jacobs. On spine: Jacobs 30-36.

## **Box 22 Laboratory Notebooks**

### Folder

1. Laboratory Notebook #19, 1935-1936.  
Entries dated May 9, 1935-Jun 5, 1936. 300 numbered pages.
2. Laboratory Notebook #24, 1939-1940.  
Entries dated Nov 3, 1939-Oct 3, 1940. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.
3. Laboratory Notebook #26, 1941-1942.  
Entries dated Sep 1, 1941-Dec 19, 1942. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.
4. Laboratory Notebook #27, 1942-1943.  
Entries dated Dec 22, 1942-Aug 25, 1943. 300 numbered pages.
5. Laboratory Notebook #28, 1943-1944.  
Entries dated Aug 26, 1943-Mar 13, 1944. 298 numbered pages. BFM notes transcribed on rag paper and tipped in.
6. Laboratory Notebook #29, 1944-1945.  
Entries dated Mar 14, 1944-Feb 3, 1945. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.
7. Laboratory Notebook #30, 1945-1946.  
Entries dated Feb 3, 1945-Jul 26, 1946. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.
8. Laboratory Notebook #31, 1946.  
Entries dated Jul 26, 1946-Oct 19, 1946. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.
9. Laboratory Notebook #36, 1949.  
Entries dated Sep 22, 1949-Dec 20, 1949. 152 numbered pages. BFM notes transcribed on rag paper and tipped in.
10. Laboratory Notebook #37, 1949-1950.  
Entries dated Dec 27, 1949-Feb 13, 1950. 155 numbered pages. BFM notes transcribed on rag paper and tipped in.
11. Laboratory Notebook #38, 1950.  
Entries dated Feb 13, 1950-Jul 3, 1950. 302 numbered pages. BFM notes transcribed on rag paper and tipped in.
12. Laboratory Notebook #42, 1953.  
Entries dated Jan 22, 1953-Jul 3, 1950. 302 numbered pages. BFM notes transcribed on rag paper and tipped in.
13. Laboratory Notebook #43, 1953-1954.  
Entries dated Nov 10, 1953-Mar 13, 1954. 296 numbered pages. BFM notes transcribed on rag paper and tipped in. Entry on last page dated Mar 13, 1958.
14. Laboratory Notebook #44, 1954.

- 15. Laboratory Notebook #45, 1954-1955.  
Entries dated Mar 14, 1954-Aug 17, 1954. 153 numbered pages.
- 16. Laboratory Notebook #46, 1955-1956.  
Entries dated Aug 18, 1954-Apr 18, 1955. 300 numbered pages.
- 17. Laboratory Notebook #47, 1956-1957.  
Entries dated Apr 30, 1955-Feb 7, 1956. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.
- 17. Laboratory Notebook #47, 1956-1957.  
Entries dated Feb 7, 1956- Mar 1, 1957. 301 numbered pages.

**Box 23 Laboratory Notebooks.**

Folder

- 1. Laboratory Notebook #5, 1934-1925.  
Entries dated Jun 19, 1924-Apr 8, 1925. 150 numbered pages.
- 2. Laboratory Notebook #6, 1925-1926.  
Entries dated Apr 9, 1925-Feb 1, 1926. 152 numbered pages.
- 3. Laboratory Notebook #7, 1926-1927.  
Entries dated Feb 2, 1926-Sep 20, 1927.
- 4. Laboratory Notebook #8, 1927-1928.  
Entries dated Oct 3, 1927-Mar 3, 1928. 152 numbered pages. Supplementary material in file folder.
- 5. Laboratory Notebook #8. Supplementary Material.  
Photostats of pages of other laboratory notebooks, etc.
- 6. Laboratory Notebook #9, 1928.  
Entries dated Mar 6, 1928-Jun 5, 1928. 150 numbered pages.
- 7. Laboratory Notebook #10, 1928.  
Entries dated Jun 2, 1928-Sep 9, 1928. 152 numbered pages.
- 8. Laboratory Notebook #11, 1928-1929.  
Entries dated Sep 9, 1928-Jan 9, 1929. 153 numbered pages.
- 9. Laboratory Notebook #12, 1929.  
Entries dated Jan 8, 1929-May 29, 1929. 152 numbered pages.
- 10. Laboratory Notebook #13, 1929.  
Entries dated Jun 21, 1929-Nov 13, 1929. 152 numbered pages.
- 11. Laboratory Notebook #14, 1929-1930.  
Entries dated Nov 14, 1929-Feb 10, 1930. 155 numbered pages.
- 12. Laboratory Notebook #15, 1930-1931.  
Entries dated Feb 11, 1930-Apr 15, 1931. 153 numbered pages.
- 13. Laboratory Notebook #20, 1936-1937.  
Entries dated Jun 11, 1936-Apr 12, 1937. 300 numbered pages.
- 14. Laboratory Notebook #21, 1937-1938.  
Entries dated Apr 15, 1937-Jan 25, 1938. 300 numbered pages.
- 15. Laboratory Notebook #22, 1938.  
Entries dated Jan 26, 1938-Sep 30, 1938. 300 numbered pages. SB (soundboard) index tabs at bottom of pages 1, 31, 39.
- 16. Laboratory Notebook #23, 1938-1939.

- Entries dated Oct 6, 1938-Oct 30, 1939. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.
17. Laboratory Notebook #32, 1946-1947.  
Entries dated Oct 12, 1946-Jul 6, 1947. 303 numbered pages. BFM notes transcribed on rag paper and tipped in.
  18. Laboratory Notebook #33, 1947-1948.  
Entries dated Jul 7, 1947-Aug 24, 1948. 152 numbered pages. BFM notes transcribed on rag paper and tipped in.
  19. Laboratory Notebook #35, 1949.  
Entries dated Aug 4, 1949-Sep 22, 1949. 302 numbered pages. BFM notes transcribed on rag paper and tipped in.
  20. Laboratory Notebook #39, 1950-1951.  
Entries dated Jul 4, 1950-Jan 5, 1951. 302 numbered pages. BFM notes transcribed on rag paper and tipped in.
  21. Laboratory Notebook #41, 1951-1952.  
Entries dated Aug 15, 1951-Jan 21, 1952. 300 numbered pages. BFM notes transcribed on rag paper and tipped in.  
Pages 217-246 removed by BFM. See his note on page 215.

#### **Box 24 Books**

1. Myer-Eppler, Werner. Elektrische Klangerzeugung. Bonn, W. Germany, Ferd Dummlers Verlag, 1949.  
Gift of author. Annotations by BFM.
2. Meyer-Eppler, Werner. ed. Gravesano; Musik, Raumgestaltung, Elektroakustik; 19 Abhandlungen. Mainz, Ars viva Verlag, 1955
3. Miller, Dayton C. Anecdotal History of the Science of Sound. N. Y., Macmillan, 1935.
4. Miller, Dayton C. The Science of Musical Sounds. N. Y., Macmillan, 1916.  
Given to BFM by brother Otto. Annotations by BFM.
5. Miller, Dayton C. Sound Waves, Their Shape and Speed. N. Y., Macmillan, 1937.
6. Mills, John. A Fugue in Cycles and Bells. N. Y., Van Nostrand, 1935.
7. Morecroft, John H. et al. Principles of Radio Communication 2d ed., N. Y., Wiley, 1927.
8. Morse, Philip M. Vibration and Sound 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1936.  
Annotations by BFM.
9. Olson, Harry F. Acoustical Engineering. Princeton, N. J., Van Nostrand, 1957.  
Annotations by BFM.
10. Pan American Airways. New Horizons, the Guide to World Travel. N. Y., Simon and Schuster, 1957.
11. Pfeiffer, Walter. Die Verlängerungen im Hammerwerk des Klaviers. Berlin, Verlag von Dr. Ernst Euting, 1924.  
1949 reprint.
12. Pfeiffer, Walter. Vom Hammer; Untersuchungen aus einem Teilgebiet des Flügel- und Klavierbaus. Stuttgart, W. Kohlhammer Verlag, 1948.

- Annotations by BFM. Sketches of piano hammers by BFM laid in. English summary of pages 125-127 laid in.
13. Piano and player Hardware, Felts, Tools, etc., for Tuners and Repairers Catalog No. 650. N. Y., American Piano Supply Co., n. d.
  14. Pierce, John R. The Beginnings of Satellite Communications. San Francisco, San Francisco Press, 1968.  
Gift of author to BFM. Letter from author laid in.
  15. Pohl, R. W. Einführung in die Mechanik und Akustik 2d improved ed., Berlin, Springer, 1931.
  16. Pollard, Ernest C. and Sturtevant, Julian M. Microwaves and Radar Electronics. N. Y., Wiley, 1948.  
Annotations by BFM.
  17. Popp, Ewald. Konstruktion und Bau Elektromagnetischer Lautsprecher-Antriebssysteme. Berlin, Richard Carl Schmidt & Co., 1928.
  18. Principle of Transistor Circuits. Richard f. Shea, ed., N. Y., Wiley, 1953.
  19. Pronouncing Pocket-Manual of Musical Terms. Theodore Baker, ed., N. Y., Schirmer, 1905.
  20. The Purchaser's Guide to the Music Industries 1950, 1960. N. Y., Music Trades Corporation.
  21. The Radio Amateur's Handbook 1942, 1950, 1962. West Hartford, CT, American Radio Relay League.  
1942 issue annotated by BFM.
  22. Rayleigh, John William Strutt, Baron, The Theory of Sound, Volumes I, II 2<sup>nd</sup> ed., rev and enlarged. London, Macmillan, 1929.  
Annotations by BFM.
  23. Recording Sound for Motion Pictures. Lester Cowan, ed., 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1931.
  24. Redfield, John. Music: A Science and an Art. N. Y., Knopf, 1928.  
Annotations by BFM.
  25. Reference Data for Radio Engineers 3<sup>rd</sup> ed., N. Y., Federal Telephone and Radio Corporation, 1949.
  26. Remsen, Ira. An Introduction to the Study of Chemistry 7<sup>th</sup> ed., rev., and enl. N. Y., Holt, 1907.

#### **Box 25 Books**

1. Renne, Harold S. Electronic Metal Locators 1<sup>st</sup> ed., Indianapolis, Sams, 1956.  
Annotations by BFM.
2. Rhea, Thomas L. The evolution of Electronic Musical Instruments in the United States. Ph. D. dissertation. Nashville, TN, George Peabody College for Teachers, 1972.
3. The Rheology of Elastomers. Proceedings of a Conference Organized by the British Society of Rheology... May 1957. N. Y., Pergamon, 1958.  
Annotations by BFM.
4. Richardson, E. G. Sound, a Physical Text-Book. London, Arnold, 1927.

5. Richtmyer, F. K. Introduction to Modern Physics 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1928.
6. Robison, S. S. Robison's Manual of Radio Telegraphy and Telephony for the Use of Naval Radiomen 8<sup>th</sup> rev., ed., Annapolis, MD, U. S. Naval Institute, 1928.
7. Romer, Alfred. The Restless Atom. Garden City, N. Y., Doubleday Anchor, 1960.
8. Rossman, Joseph. The Psychology of the Inventor. Washington, D. C., Inventors Publishing Co., 1931.  
Annotations by BFM.
9. Sattelberg, O. Englisch-Duetsches und Deutsch-Englisches Worterbuch der Elektrischen Nachrichtentechnik. Zweiter Teil: Deutsch-Englisch. Berlin, Springer, 1926.
10. Settel, Irving. A Pictorial History of Radio. N. Y., Citadel Press, 1960.
11. Smithsonian Physical Tables 7<sup>th</sup> rev., ed., Washington, D. C., Smithsonian Institution, 1923.
12. Smithsonian Physical Tables 9<sup>th</sup> rev., ed., Washington, D. C., Smithsonian Institution, 1954.  
Annotations by BFM
13. Sommerfeld, Arnold. Mechanics of Deformable Bodies. N. Y., Academic, 1950.
14. Southworth, George C. Forty Years of Radio Research. N. Y., Gordon and Breach, 1962.
15. Standard Handbook for Electrical Engineers 8<sup>th</sup> ed., N. Y., McGraw-Hill, 1949.  
Annotations by BFM.
16. Steel Methods and Materials by Ward's 1935 ed. Boston, edgar T. Ward's Sons Co.
17. Stewart, John L. The Analog Ear Story. Menlo Park, CA, Santa Rita Technology, 1964.  
Annotations by BFM.
18. Stong, C. L. The Scientific American Book of Projects for the Amateur Scientist. N. Y., Simon and Schuster, 1960.
19. Swoope, C. Walton. Lessons in Practical Electricity... 15<sup>th</sup> ed., N. Y., Van Nostrand, 1918.
20. Terman, Frederick E. and Pettit, Joseph M. Electronic Measurements 2<sup>nd</sup> ed., N. Y., McGraw-Hill, 1952.
21. Thompson, Silvanus P. Elementary Lessons in Electricity and Magnetism. Rev. and enl., Chicago, Thompson & Thomas, 1906.  
Annotations by BFM.

## Box 26 Books

1. Timoshenko, S. Vibration Problems in Engineering 3<sup>rd</sup> ed., N. Y., Van Nostrand, 1955.
2. Fischer, F. and Lichte, H. Tonfilm Aufnahme und Wiedergabe nach dem Klangfilm-Verfahren. Leipzig, S. Hirzel, 1931.
3. Trendelenburg, Ferdinand. Fortschritte der physikalischen und technischen Akustik. Leipzig, Akademische Verlagsgesellschaft, 1932.
4. Trendelenburg, Ferdinand. Klange und Gerausche. Berlin, Springer, 1935.
5. [U. S. Attorney General. National Committee to Study the Antitrust Laws.] Patent-

Antitrust Problems.

- Photocopies of pp. 223-260 of Chapter V of unidentified publication.  
Annotations by BFM.
6. U. S. Bureau of Naval Personnel. Basic Electronics. N. Y., Dover, 1963.  
Dover reprint. Annotations by BFM.
  7. U. S. National Research Council. Committee on Undersea Warfare. Panel on Underwater Acoustics. A Survey Report on Basic Problems of Underwater Acoustics Research. Washington, D. C., 1950.  
Article "Underwater Sound" by Robert A. Frosch International Science and Technology, Sep. 1962, pp. 40-46 laid in. Report and article annotated by BFM.
  8. U. S. National Research Council. Committee on Undersea Warfare. Research Analysis Group. Physics of Sound in the Sea. Part I: Transmission. Part II: Reverberation. Part III: Reflection of Sound from Submarines and Surface Vessels. Part IV: Acoustic Properties of Wakes. Washington, D. C., U. S. Office of Technical Services, n. d.  
PB 111202, 111207, 111208, 111209. Part III has annotations by BFM.
  9. Van Bergeijk, Willem A., Pierce, John R., David, Edward E., Jr. Waves and the Ear. Garden City, N. Y., Doubleday Anchor, 1960.  
Annotations by BFM.
  10. Vierling, Oskar. Das elektroakustische Klavier. Doctoral dissertation, Friedrich-Wilhelms-Universität, Berlin, 1936.  
English translation in Box 19.
  11. Von Ardenne, Manfred. Verstärkermesstechnik; Instrumente und Methoden. Berlin, Springer, 1929.
  12. Von Fange, Eugene K. Professional Creativity. Englewood Cliffs, N. J., Prentice-Hall, 1959.  
Annotations by BFM.
  13. Waveforms, ed. By Britton Chance [and others, under the supervision of the] Office of Scientific Research and Development, National Defense Research Committee 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1959.
  14. West, W. Acoustical Engineering. London, Pitman, 1932.
  15. White, William B. Piano Tuning and Allied Arts 4<sup>th</sup> ed., rev. and enl., Boston, Tuners Supply Co., 1943.  
Autographed gift copy from author to BFM. Author's note: This copy has the Author's autograph corrections of the press.
  16. Williams, Samuel R. Magnetic Phenomena. 1<sup>st</sup> ed., N. Y., McGraw-Hill, 1931.
  17. Wilson, E. Bright, Jr. An Introduction to Scientific Research N. Y., McGraw-Hill, 1952.  
Annotations by BFM.
  18. Wilson, Mitchell. American Science and Invention: A Pictorial History. N. Y., Simon and Schuster, 1954.
  19. Wise, John K. Patent Law in the Research Laboratory. N. Y., Reinhold, 1955.
  20. Wood, A. B. A Textbook of Sound. London, Bell, 1930.  
Annotations by BFM.
  21. Wood, Alexander. The Physics of Music 6<sup>th</sup> ed., N. Y., Dover; London, Methuen,



- 1962.
22. Zworykin, V. K. and Ramberg, E. G. Photoelectricity and its Application. N. Y., Wiley, 1949.  
Annotations by BFM.

### **Box 27 Laboratory Notebooks, Journals.**

#### Folder

1. Laboratory Notebook, 1915, 1919.  
Entries of various dates: Apr-May 1915, Mar 1919. Some undated. 199 numbered pages; some pages blank. On flyleaf: Benj. F. Miessner.
2. Laboratory Notebook, 1918, 1919.  
Entries dated Sep 17, 1918 (?)-Apr 4, 1919. 152 numbered page; p. 145-150 lacking. Inside front cover: Experimental Record of Tests on the B. M. Telephone Transmitter; B. F. Miessner, 142 Fulton St., c/o E. J. Simon, Room 34.
3. Laboratory Notebook, 1927-1928.  
Entries dated Oct 14, 1927-Nov 21, 1928. Performance curves of various equipment, etc. On outside front cover: B. F. Miessner, 142 Fulton St., c/o E. J. Simon, Room 34.
4. Laboratory Notebook, 1937-1940.  
Entries dated June 3, 1937-Oct 16, 1940. 300 numbered pages; pages 237-300 blank. Notebook compiled by Victor Mumma. Inside front cover: V. M. Book #1.
5. Laboratory Notebook, 1938-1939.  
Entries dated Jan 27, 1938-Mar 25, 1939. 152 numbered pages; p. 7-152 blank. Inside front cover: B. F. Miessner, Jan 26, 1938. Record of negatives exposed for laboratory apparatus pictures for proof of dates.
6. Laboratory Notebook 26 – W(ar), 1941-1943.  
Entries dated Dec 7, 1941-Apr 30, 1943. 300 numbered pages; 1 unnumbered page at end. BFM note inside front cover: National Defense Note Book.
7. Laboratory Notebook #40, 1951.  
Entries dated Jan 20, 1951-Aug 15, 1951. 300 numbered pages; 3 unnumbered pages at end. BFM notes on slips transcribed on rag paper and tipped in.
8. Laboratory Notebook #48, 1957.  
Entries dated Mar 2, 1957-Oct 3, 1957. 300 numbered pages; 2 unnumbered pages at end. BFM notes on slips transcribed on rag paper and tipped in.
9. The patent, Trademark, and Copyright Journal of Research and Education, 1957-1964, 1967.
  - Vol. 1 nos. 1, 2 – Jun, Dec 1957
  - Vol. 1 Conference Supplement – 1957
  - Vol. 2 nos. 1, 2, 3 – Mar, Jun, Sep 1958
  - Vol. 3 nos. 1, 2, 3, 4, Spring, Summer, Fall, Winter 1959
  - Vol. 3 Conference Number 1959
  - Vol. 4 nos. 1, 2, 3, 4, Spring, Summer, Fall, Winter 1960

- Vol. 4 Conference Number 1960
  - Vol. 5 nos. 1, 2, 3, 4, Spring, Summer, Fall, Winter 1961-1962
  - Vol. 5 Conference Number 1961
  - Vol. 6 nos. 1, 2, 3, 4, Spring, Summer, Fall 1962, Winter 1962-1963
  - Vol. 6 Conference Number 1962
  - Vol. 7 nos. 1, 2, 4, Spring, Summer 1963, Winter 1963-1964
  - Vol. 8 no. 1, Spring 1964
  - Vol. 11 Conference Number 1967 (Title Changed to Idea...)  
Some Issues with annotations by BFM.
10. Journal of the Patent Office Society, 1963, 1964.  
Vol. 45 No. 3 Mar 1963  
Vol. 46 No. 5 May 1964

**Box 28 U. S. Congress. Senate. House. Committee Hearings, Reports, Prints, etc. Audio Tapes, File Folders.**

Folder

1. U. S. Congress. Senate. Committee on the Judiciary. Subcommittee on Patents, Trademarks, and Copyrights.  
Reports No. 1464. Review of the American Patent System.  
S. R. 92. 84th Congress, 2nd Session. Jan 30, 1956.
- Committee Prints: Study No. 1, Proposals for Improving the Patent System. Study No. 2, The Patent System and the Modern Economy. Study No. 3, Distribution of Patents Issued to Corporations (1939-1955). Study No. 4, Opposition and Revocation Proceedings in Patent Cases. S. R. 167. 84th Congress, 2nd Session. 1956, 1957.
- Report No. 72. Patents, Trademarks, and Copyrights.  
S. R. 167. 85th Congress, 1st Session. Feb 18, 1957.  
2 copies annotated by BFM.
- Committee Prints: Study No. 5, The International Patent System and Foreign Policy. Study No. 6, Patents and Nonprofit Research. Study No. 7, Efforts to Establish a Statutory Standard of Invention. Study No. 8, The Role of the Court Expert in Patent Litigation. S. R. 55. 85th Congress, 1st Session. 1957, 1958.
- Report No. 1430. Patents, Trademarks and Copyrights. S. R. 55. 85th Congress, 2nd Session. Mar 31, 1958.  
Annotated by BFM.
- Committee Prints: Patent Practices of the National Science Foundation; Patent Practices of the Tennessee Valley Authority. S. R. 236. 85th Congress, 2nd Session. 1959.
- Committee Prints: Study No. 9, Recordation of Patent Agreements—A Legislative History. Study No. 10, Exchange of Patent Rights and Technical Information Under Mutual Aid Programs. Study No. 11, The Impact of the

Patent System on Programs. Study No. 12, Compulsory Licensing of Patents—A Legislative History. Study No. 13, Patent Office Fees—A Legislative History. Study No. 14, Economic Aspects of Patents and the American Patent System: A Bibliography. Study No. 15, An Economic Review of the Patent System. Study No. 16, The Research and Development Factor in Mergers and Acquisitions. Study No. 17, Renewal Fees and Other Patent Fees in Foreign Countries. Study No. 18, Synthetic Rubber: A Case Study in Technological Development Under Government Direction. Study No. 20, Single Court of Patent Appeals—A legislative History. Study No. 21, Technical Research Activities of Cooperative Associations. S. R. 236. 85th Congress, 2nd Session. 1958, 1959.

Some with annotations by BFM.

Committee Prints: Patent Practices of the Department of Health, Education, and Welfare; Patent Practices of the Government Patents Board; Patent Practices of the Post Office Department; Patent Practices of the General Services Administration. S. R. 53. 86th Congress, 1st Session. 1959, 1960.

Committee Prints: Copyright Law Revision. Studies: 1) The History of U.S.A. Copyright Law Revision From 1901 to 1954. 2) Size of the Copyright Industries. 3) The meaning of “Writings” in the Copyright Clause of the Constitution. 4) The Moral Right of the Author. 5) The Compulsory License Provisions of the U. S. Copyright Law. 6) The Economic Aspects of the Compulsory License. S. R. 53. 86th Congress, 1st Session. 1960.

Some with annotations by BFM.

Committee Prints: Study No. 22, Government Assistance to Invention and Research: A Legislative History. S. R. 53. 86th Congress, 1st Session. 1960.

Hearings on Government Patent Practices. S. R. 240 on S. 3156 and S. 3550. 86th Congress, 2nd Session. May 17, 18, 1960.

Annotated by BFM.

Report No. 1202. Patents, Trademarks, and Copyrights. S. R. 53. 86th Congress, 2nd Session. Mar 16, 1960.

Committee Prints: Patent Practices of the Government Printing Office; Patent Practices of the Department of the Treasury; Patent Practices of the Federal Aviation Agency. S. R. 240. 86th Congress, 2nd Session. 1960, 1961.

Committee Prints: Compulsory Patent Licensing Under Antitrust Judgments. S. R. 240. 86th Congress, 2nd Session. 1960.

Committee Prints: An Analysis of Patent Litigation Statistics. S. R. 240. 86th Congress, 2nd Session. 1961.

Committee Prints: Study No. 23, Expediting Patent Procedure. Study No. 24, Patent and Technical Information Agreements. Study No. 25, Court Decisions as Guides to Patent Office. Study No. 26, The Patent System: Its Economic and Social Bias. Study No. 27, An Analytical History of the Patent Policy of the Department of Health, Education, and Welfare. Study No. 28, Independent

Inventors and the Patent System. Study No. 29, The Examination System in the U. S. Patent Office. S. R. 240. 86th Congress, 2nd Session. 1960, 1961.

Committee Prints: Copyright Law Revision. Studies – 7. Notice of Copyright. 8. Commercial Use of the Copyright Notice. 9. Use of the Copyright Notice by Libraries. 10. False Use of Copyright Notice. 11. Divisibility of Copyrights. 12. Joint Ownership of Copyrights. 13. Works Made for Hire and on Commission. 14. Fair use of Copyrighted Works. 15. Photo Duplication of Copyrighted Material by Libraries. 16. Limitations on Performing Rights. 17. The Registration of Copyright. 18. Authority of the Register of Copyrights to Reject Applications for Registration. 19. The Recordation of Copyright Assignments and Licenses. 20. Deposit of Copyrighted Works. 21. The Catalog of Copyright Entries. 22. The Damage Provisions of the Copyright Law. 23. The Operations of the Damage Provisions of the Copyright Law: An Exploratory Study. 24. Remedies Other Than Damages for Copyright Infringement. 25. Liability of Innocent Infringers of Copyrights. 26. The Unauthorized Duplication of Sound Recordings. 27. Copyright in Architectural Works. 28. Copyright in Choreographic Works. 29. Protection of Unpublished Works. 30. Duration of Copyright. 31. Renewal of Copyright. 32. Protection of Works of Foreign Origin. 3. Copyright in Government Publications. 34. Copyright in Territories and Possessions of the United States; Subject Index to Studies 1-34. S. R. 240. 86th Congress, 2nd Session. 1960, 1961.

Report No. 143. Patents, Trademarks, and Copyrights... Together with Individual Views. S. R. 240. 87th Congress, 1st Session. Apr 3, 1961.  
Annotated by BFM.

Committee Print: Patent practices of the Department of Defense. S. R. 55. 87th Congress, 1st Session. 1961.

Hearing on National Patent Policy. S. R. 55 on S. 1084, 1176. 87<sup>th</sup> Congress, 1<sup>st</sup> Session. Jun 2, 1961. Testimony of Admiral H. G. Rickover.  
Annotated by BFM.

Committee Print: Study No. 30, The Law of Employed Inventors in Europe. S. R. 267. 87<sup>th</sup> Congress, 2<sup>nd</sup> Session. 1963.

Report No. 107. Patents, Trademarks, and Copyrights. S. R. 267. 88<sup>th</sup> Congress, 1<sup>st</sup> Session. Apr 3, 1963.  
Annotated by BFM.

Committee Print: U. S. Patent Office Research and Development Program. S. R. 65. 88<sup>th</sup> Congress, 1<sup>st</sup> Session. 1963.

Hearings on Patent Office Fees. S. R. 270 on S. 2547 and H. R. 8190. 88<sup>th</sup> Congress, 2<sup>nd</sup> Session. Feb 27, 28, 1964.  
BFM note: BFM objections [p. 282-288] removed for Scrap Book.

Hearing on Design Protection. S. R. 48 on S. 1237. 89<sup>th</sup> Congress, 1<sup>st</sup> Session. Jul 28, 1965.

Hearings on Patent Infringement. S. R. 48 on S. 1047. 89<sup>th</sup> Congress, 1<sup>st</sup> Session. Jun 1, 2, 3; Jul 6, 7; Aug 17, 19, 1965.

Hearing on Patent Office Fees. S. R. 48 on S. 729, 730, 1228. 89<sup>th</sup> Congress, 1<sup>st</sup> Session. Jun 1, 2, 3; Jul 6, 7; Aug 17, 19, 1965

Hearings on Government Patent Policy. S. R. 48 on S. 789, 1809, 1899. 89<sup>th</sup> Congress, 1<sup>st</sup> Session. Part 1 – Jun 1, 2, 3, 1965; Part 2 – Jul 6, 7; Aug 17, 19, 1965.

Annotated by BFM.

2. U. S. Congress. House. Committee on Judiciary, 1961.  
Committee Print: Copyright Law Revision. Report of the Register of Copyrights on the General Revision of the U. S. Copyright Law. 87<sup>th</sup> Congress, 1<sup>st</sup> Session. Jul 1961.
3. U. S. Court of Appeals. Second Circuit, 1956.  
No. 302 October Term 1965. Docket No. 23686. Marion B. Robinson v. United States of America. Decided July 12, 1956.  
Recovery of compensation for damages resulting from secrecy order.
4. U. S. Patent Office, 1961.  
Patent Laws. Jan 3, 1961.  
Annotations by BFM.
5. Audio Tapes, 1954, 1955.  
(1) Miessner Stringless Electronic Piano 1954, (2) Wurlitzer Electronic Piano; Miessner Electronic Piano; Miessner Single Tone from round wire reed, etc. 1955; (3) BFM piano; Music Box.
6. Loop Pick-up Piano Disclosure; Opposed Appositely Polarized Pick-ups; Tapered Reeds, etc. (3 folders), 1958.  
Extensive ms notes, descriptions, correspondence, etc., re BFM's inventions.

## **Box 29 File Folders**

### Folder

1. Submarine Detection, Sonar Devices, U. S. Navy R & D, Metal Detection and Location, 1951, 1960-1963  
Correspondence with Navy Dept.: general suggestions; homing torpedo control; protection of ideas submitted by inventors; suggestions for specific inventions, e. g. metal detector. Clippings, advertising material re metal detection; radio communications; undersea warfare, etc., BFM notes, diagrams for metal detection devices, etc.
2. U. S. Navy Dept; Bureau of Ships; Radar, etc., 1941-1945, 1950, 1955.  
Correspondence re BFM offer to donate services, laboratory facilities to war effort; discussions of technical problems, devices; arrangements for sue of BFM's service. (Dec. 1941-Nov. 1945, Feb. 1950). Reports on absolute altimeter (Mar. 1941, Mar. 1943); time interval measurement systems (Feb. 1942); Clippings on submarine detection; Doppler radar; new aerial weapons; radar; proximity fuze. (1943-45, 1955)

3. Agreement Between B. F. Miessner and Oskar Vierling re Patent Rights for the Electro-Acoustic Music Instruments, 1932.  
Agreement made at Berlin, Germany, Aug 24, 1932.
4. Electronic Piano Promotion, 1932-1933.  
Correspondence re radio broadcasts of electronic piano recitals, demonstrations; requests for descriptive publications and information; references to Mar. 25, 1933, Literary Digest article. 3 folders.
5. Patent Sale to Radio Corporation of America, 1930.  
Correspondence re contingent payments, check stubs, photographs of checks, etc.
6. Patent Sale to Radio Corporation of America, 1932, 1935, May 1936.  
Correspondence, Assignment, etc., re sale of BFM patents to R. C. A.
7. Radio Corporation of America Consideration of Miessner Electronic Piano, 1931-1935.  
Correspondence, Statements by BFM re development, Manufacture of electronic piano.
8. Miessner, B. F. Letter to Editor of Sound (journal), 1963.  
Music-Science and Art. Letter to editor, Sound, Vol. 2, no. 2, p. 5, 7, 43, Mar-Apr 1963  
Tape Teaching and Monitor Systems. Letter to editor, Sound, vol. 2, no. 6, p. 43, Nov-Dec 1963.
9. Radio Club of America, Inc. Proceedings, 1968.  
Vol. 44, no. 2, 2<sup>nd</sup> qu 1968. Pages 7-15 only.
10. Simon Radio, 1920.  
Booklet "a record of the conception and development of radio signaling and especially the achievements and products of the organization of Emil J. Simon..." (p. 1), 31p.
11. Simon Radio, 1920.  
Another copy, 37p. 1920. Photographs of Simon 25<sup>th</sup> anniversary dinner, letter about death of Emil Simon, disposal of his papers, etc. On title page autograph note: Written and Prepared by Benj. F. Miessner, Radio Engineer.
12. Vierling, Oskar, 1936.  
Patent for electric music instrument. English translation of German patent V 30,615. Dec. 5, 1936. Typescript copy. Der Formantbegriff. Annalen der physic. 5. Folge. Bd. 26. Heft 3. 1936. 219-232.
13. The story of the First Trans-Atlantic Short Wave Message, 1950.  
Proceedings of the Radio Club of America, Inc., Oct 1950. 78 p.
14. Miessner Deposition, 1924.  
Deposition by BFM in unidentified proceeding. Pages numbered 127-134, 145-161.
15. The Rudolph Wurlitzer Company, Plaintiff vs. Miessner Inventions, Inc., Defendant. Civil Action 902-55 in the U. S. District Court for the District of New Jersey.
  - Vol. I Deposition of R. C. Rolfing, Chicago, Apr. 16, 1957, p. 1-125.
  - Vol. II Deposition of Clifford Andersen, Chicago, Apr. 18, 1957, p. 126-274.
  - Vol. III Deposition of Clifford Andersen (continued), Chicago, Apr.

- 19, 1957, p. 275-435.
- Vol. IV Deposition of Clifford Andersen (concluded), Chicago, Apr. 20, 1957, p. 436-600.
- Vol. V Deposition of Clifford Andersen, Chicago, May 27, 1957, p. 601-699.
- Deposition of Raymond Haimbaugh, Buffalo, Apr 24, 1957, p. 1-152.
- Deposition of Raymond Haimbaugh (continued), Depositions of Fred H. Osborne and Howard Bauer, Buffalo, Apr. 25, 1957, p. 153-340.
- Deposition of Roy F. Waltemade, Buffalo, Apr. 26, 1957, p. 341-502.
- Deposition of Roy F. Waltemade (Continued), Buffalo, Apr. 27, 1957, p. 503-652.
- Defendants Deposition (DD) Exhibits. List of 121 exhibits. Typed 10 page list.

## **Box 20 File Folders.**

### Folder

1. George H. Clark, 1937-1938.  
Correspondence re relations between BFM and John Hays Hammond Jr.; efforts to interest RCA in electronic, etc.
2. Musical Performances with Electronic Instruments, 1936-1939.  
Correspondence re use of electronic instruments in public performances, esp piano with orchestra. Includes ltrs from Carlos Chavez, Ferde Grofe, Harold Bauer.
3. Staten Island Loop, 1920.  
Technical notes, lists of work to be done, radio log, photographs of equipment and installation, etc.
4. Berlin notes.  
BFM notes re visits to piano makes, researchers, German electronic pianos. Miscellaneous records of trip, financial records, etc. Notes re visit to see electronic organ in Paris. Approx. 73 b&w photographic prints of musical instruments, electrical apparatus, equipment, tables and figures. Includes some duplicates.
5. A. C. Amplifier, 1922-1924.  
BFM notes, schematics, description of invention, etc.
6. Letters on Chicago A. C. Demonstration, 1922, 1929.  
BFM Oct 1929 chronology A. C. History; ltrs from Westinghouse, General Electric, etc re BFM radio receiver developments. Ltrs enquiring about availability of receiver.
7. A. C. Tube Data, Curves, etc., 1925-1929.  
BFM notes schematics, curves, data, etc. BFM outline: A new system of A. C. power supply and its application to a commercial broadcast receiver, Sep 3, 1926. Advertisement for Miessner Elektric radio receiver operated by house current.
8. German Patents, 1932-1933.

- Correspondence, lists, billing and payment records for German patents sent to BFM.
9. Oskar Vierling, 1932.  
Contract between BFM and Vierling re patent rights; correspondence transmitting patents, applications to Vierling, etc.
  10. Otto Miessner (brother of BFM), 1930-1936.  
Correspondence between Otto Miessner and BFM. Efforts to promote use of electronic piano in concerts, broadcasts. Suggestion to offer prize for composition for electronic piano. BFM reports on work in progress. Mention of family matters, Otto's business and personal financial situation.
  11. Miscellaneous Correspondence 1941, 1952-1959.  
Collected by BFM Dec 20, 1961.
  12. Miscellaneous Radio Inventions, 1919-1921.  
Correspondence 1910-1911 re BFM invention of detector.  
Manuscripts, typescripts of papers by BFM:  
Method of Sustaining Alternating Current Electric Arcs – With Special Applications to Electric Arc Welding. May 25, 1919. 9p.  
Method of Sustaining Alternating Current Electric Arcs. Jun 1, 1919. 1p.  
Vibratory A. C. Welding Electrode (drawing) Jun 1, 1919. 1p.  
Secret Radiophone System. Jun 29, 1919. 3p.  
Airplane Altimeter. Jul 29, 1919. 1p.  
Improvements in Loop Receivers. Nov 12, 1919. 7p.  
Improvements in Loops for Radio Signaling Antennae. Nov 21, 1919. 8p.  
Improvements in Anti-Static Radio Receiving Systems. May 6, 1920. 5p.  
Distortion Compensating Method and Apparatus. Mar 6, 1921. 9p.  
Apparatus for Step-by-Step Synchronization of a Reproducing Phonograph With a Stereopticon Projector. Oct 30, 1921. 1p.  
Survey System for Radio Communication. Jun 26, 1922. 22p.  
Method for Compensating for Distortions in Sound Reproducing Systems. Feb 1, 1925. 22p.  
BFM notes re ideas, inventions.  
Ltr from R. E. Engler re types of telephone transmitters. May 12, 1923.
  13. Nernst, Driescher Patent Information, 1932.  
Report of search by Milans & Milans. List of Patents and Published applications.
  14. Continuous Wave Receiving System, 1920.  
Manuscripts, typescripts of papers by BFM:
    - Old Radio Telegraph Receiver for Continuous Waves. Jan 14, 1920. 3p.
    - New (?) BM Radio Telegraph Receiver for Continuous Waves.



- Jan 14, 1920. 6p.
  - Method and Means for Reducing the Frequency of Periodic Electric Currents. Feb 24, 1920. 10p.  
Same. Typescript. Mar 3, 1920.
  - Points of Difference between the Miessner and Heterodyne Methods of Frequency Reduction. May 4, 1920. 3p.
  - Some Experimental Proofs That the Miessner Method of Frequency Reduction Does Not Operate on the Heterodyne Principal. Mar 5, 1920. 1p.
  - Test Book Definitions of the Heterodyne Method of Continuous Wave Reception. 5p. 2 copies.
15. Miscellaneous notes, etc.
  16. U. S. Patent. Methods of Receiving Radio Signals, etc.
  17. Reports by Charles T. Jacobs, 1926-1927.  
Technical reports on performance, defects, servicing, etc., of electrical devices and equipment.
  18. A. C. Data, 1926-1927.  
Tables of values, performance curves, descriptive notes, reports on tubes, etc., from C. T. Jacobs.
  19. Miessner Radio Corporation, 1925-1927.  
Correspondence between BFM, Miessner Radio Corp., Sampter Radio Corp., James O. Pumphrey re BFM patent applications, salary payment and lawyer's action, possession of various pieces of equipment, Dubilier patent, etc. (1925-1927)  
Agreement Feb 17, 1925 establishing Miessner Radio Corp., BFM and Miessner Radio Corp. exclusive license agreement Mar 14, 1925; Modification to license agreement Jun 20, 1925; Miessner Radio Corp. and BFM employment agreement Mar 14, 1925; Blank forms for Miessner Radio Corp. stock offering; BFM and Sampter Radio Corp. non-exclusive license agreement Mar 9, 1926; Promotional material, instruction sheet for Miessner Elektric radio; Correspondence re development of BFM radio; offer to make parts, etc. Time payment arrangements for BFM purchase of Stutz automobile.
  20. Unclassified Correspondence, 1935-1936.  
Ltr re electronic piano, equipment, publications, damage to car, settlement of doctor's bill, etc.
  21. Humless Tube Letters, 1929-1930.  
Ltr from individuals, companies, laboratories re BFM's tube; references to manual All Electric Radio Receiver Design.
  22. Radio Electronics (journal), Gernsback, etc., 1958-1962.  
Correspondence with journal editors, publisher Hugo Gernsback, etc.
  23. Studio Photographic Portrait of B. F. Miessner.  
National Cyclopedia of American Biography.
  24. Institute of Radio Engineers; Institute of Electrical and Electronics Engineers, 1963-1967.  
Correspondence re patent policies, inventors' rights; editorial policies and tax status; BFM controversy with John Hays Hammond Jr. re inventions 'pirated'

- from BFM; BFM protests re award to Hammond; BFM efforts to get Franklin Institute Award; interest in Purdue honorary degree; correspondence with T. F. Jones, Pres Univ. S. Carolina, former editor IRE Proc, Purdue faculty member, etc.
25. Institute of Radio Engineers Correspondence; Zenith Pickup, etc., 1929, 1954, 1958, 1961-1963.  
Extended correspondence with Marvin Camras, editor IRE transactions on Audio re patents, BFM work, recognition, early work anticipating others' etc. BFM 1954 paper on Zenith Cobra Pickup. Arrangements for 1929 BFM talk on hum elimination in all-electric radio receivers.
  26. Commerce Technical Advisory Board Panel on Patents, 1963.  
Clippings, notes, copies of Senate, House bills, correspondence; Panel on Patents; BFM statement about earnings from patent licensing and sale; papers, addresses.
  27. Commerce Technical Advisory Board Panel on Patents; Small Business Administration, etc, 1956, 1962-1963.  
Minutes of Patent Panel meetings; extensive correspondence re government industry policies re inventors, patent system; statements, clippings, etc.
  28. Report on Balke-Brunswick-Collender Recording Room, 1920.  
BFM 11p ms report on recording room acoustics, Nov 12, 1920.
  29. Brunswick-Balke-Collender Co Agreements With B. F. Miessner, 1920, 1921.  
Employment agreements dated Nov 1, 1920 and Nov 1, 1921.
  30. Miscellaneous, 1928, 1930.  
Rough sketches of circuits; invoice from Weston Electrical Instrument Corp., Sep 12, 1928; royalties received from May 15, 1930 to (?).
  31. Miessner Application for U. S. Patent for Stringless Piano 1951.

### **Box 31 File Folders.**

#### Folder

1. Splitdorf-RCA Suit Settlement, etc., 1961.  
BFM correspondence with R. Villers, D. V. Edwards re Splitdorf withdrawal of appeal. BFM ltr to C. D. Tuska re IRS ruling on tax liability.
2. Audio Engineering (journal), 1947-1954.  
BFM comments on proposed plan for pipeless organ, on article Is Live Music on the Way Out?; typescript The F. M. Phono Pickup; comments on various articles on recording techniques, devices, etc.
3. Spherical Loud Speaker, 1958.  
Correspondence with manufacturers re production of speaker patented by BFM; invitation to give talk to Audio Engineering Convention, etc. Copies of patent 2,832,843 Sound Reproducing Device, issued Apr 29, 1958.
4. Audio Instruments, Wave Analyzers, etc., 1955-1958.  
Correspondence, manufacturers' technical literature re stroboscopic frequency meter, spectrum analyzer, sonic analyzer, waveform analyzer, etc.
5. Piano Parts Suppliers, 1950-1957.

- Correspondence, BFM specifications, manufacturers' technical information, advertisements re materials, e.g. metal reeds, shock absorbing material, pick up heads, etc. 2 folders.
6. Lloyd Espenschied Correspondence, 1944-1963.  
Extensive correspondence with BFM re history of radio and electronics development, esp BFM's work with John Hays Hammond Jr., BFM claims to work patented by Hammond, IRE award to Hammond, etc. Hammond's article on early work, Espenschied's critique, ms of BFM's comments.
  7. John Hays Hammond Jr. and B. F. Miessner, 1910, 1912, 1915, 1927, 1963.  
Various technical, legal, etc materials re circumstances of BFM's termination of work with Hammond; Attorneys statements about BFM's work: testimony in unidentified proceedings. Sketches, circuit diagrams, description of control box (?), beat selective system. Navy dept. ltr Oct 12, 1910 to BFM re his proposed invention. Photo of Hammond, BFM-Hammond sailing for Europe. Ltr from Hammond July 4, 1912 to BFM re Hammond's activities in Europe and radio telegraphy conference (first page only, photocopy).  
Positive photocopy of part of John Hays Hammond's Feb 28, 1912 ltr to Lowenstein. Complete copy in John Hays Hammond Jr. folder, this box.  
Selective Transmitter Receiver Unit – 3p negative photocopy; Circuit diagrams, wave patterns, etc – 3p negative photocopy, 1p positive photocopy; Cover pages of compilations of testimony in case of The Radio Corporation of America v. George W. Walker Company 1927; Photograph of pile of documents “from which selections were made for this book.” Ltr to BFM from K. M. Swezey re Tesla papers, etc Apr 15, 1963; Tesla ltrs dated Sep 29, Oct 8, Nov 8, 1915 to BFM at Purdue University (photocopies) Typescript of BFM (?) statement quoting Sep 29, 1915 ltr. BFM summary of substance of ltr to Hammond prior to dismissal; Photocopy of Hammond termination check to BFM Dec 10, 1912.
  8. John Hays Hammond, Jr., 1912.  
Hammond ltr Feb 28, 1912 to Lowenstein; BFM log of work done with Hammond, n.d.; text page re BFM, Hammond work on radio receiver, n.d.; BFM note “Complete duplicate set of photos sent with Espenschied copy of M. S. to Harodan Pratt...Sep 1, 1963”; N. Y. Times, Herald Tribune Hammond obituaries.
  9. Hammond, J. H. Jr. & Purington, E. S., 1957, 1959.  
A History of Some Foundations of Modern Radio Electronic Technology  
Institute of Radio Engineers. Proceedings. Sep 1957 p. 1191-1208 2 copies.  
Discussion. Critique by Lloyd Espenschied. IRE Proceedings Jul 1959 p. 1253-1268 2 copies.
  10. B. F. Miessner. Critique of Hammond, Purington IRE Paper “A History of Some Foundations of Modern Radio Electronic Technology”, 1964.  
Original ribbon copy, “basis of On the Early History of Radio Guidance” 110p  
Additional photocopy, 2 carbon copies.
  11. B. F. Miessner. On the Early History of Radio Guidance. History of Technology Monograph Series. San Francisco, San Francisco Press. V. 73 p.  
Photocopy of typescript. Annotations by BFM 1963 (?) Ltr Aug 22, 1963 to

BFM from Charles Susskind; ltr Aug 22, 1963 to Lloyd Espenschied from Susskind. Copies of Hammond, Purington article "A History of Some Foundations of Modern Radio Electronic Technology" and Espenschied discussion.

12. John Hays Hammond, Jr. Correspondence With B. F. Miessner, and Related Material 1910-1918, 1925.

Many items have slips attached showing use as exhibit in suit Radio Corporation of America vs. The George W. Walker Co.

BFM= Benjamin F. Miessner

JHH= John Hays Hammond, Jr.

Items are numbered in lower left corner of sheet.

1. Ltr to BFM Aug 29, 1910 from F. Lowenstein re characteristics of current generated by dynamo  
A, B BFM notes re ltr.
2. Ltr to BFM Oct 12, 1910 from L. W. Austin, U. S. Navy Bureau of Steam Engineering re BFM ltr re wireless telegraphy generator intensifier.
3. Ltr to BFM Oct 31, 1910 from patent attorney re patenting intensifier.  
A BFM 1962 note re ltr.
4. Ltr to BFM Jul 26, 1911 from F. Lowenstein re BFM working relationship with Lowenstein (?)  
ABFM note: My Navy enlistment expired July 27, 1911.
5. Ltr to BFM Jul 24, 1911 probably from JHH re work to be done for him by BFM  
A BFM note: Rest of Letter has been missing for a long time.
6. Ltr to BFM Jan 31, 1911 from JHH giving instructions about work, equipment, etc.
7. Ltr to BFM Jan 31, 1912 from JHH re own plans, instructions to BFM.  
A, B, C, D BFM 1962 notes re content of ltr.
8. Ltr to BFM Feb 5, 1912 from JHH giving instructions for work to be done, equipment to be acquired, etc.  
A, B BFM notes re content of ltr.
9. Ltr to BFM Feb 9, 1912 from JHH reporting comments by Dr. L. W. Austin on Hammond's work.
10. Ltr to BFM Feb, 1912 from JHH describing own concepts for radio control, apparatus, etc.  
A BFM 1962 note giving references to laboratory notebook.
11. Ltr to BFM Feb 12, 1912 from JHH re BFM's work, etc., re radio control of torpedoes.
12. Ltr to F. Lowenstein Feb 28, 1912 from JHH asking for technical information re circuit frequencies, etc.
13. Ltr to BFM, undated, from JHH re own new ideas, purchase of equipment patent applications.
14. Ltr to BFM Mar 1, 1912 from JHH re work in progress, problems,

- equipment, etc.
15. Ltr to BFM Mar 2, 1912 from JHH re steering apparatus. Drawing referred to not identified.
  16. Ltr to BFM Mar 2, 1912 from JHH re design of small car controlled by light source. Figs I, II on separate sheet show schematics. A, B BFM 1962 note refers to own work. Separate sheet shows schematic of orientation mechanism (BFM design).
  17. Ltr to BFM mar 2, 1912 from JHH re relay, steering motor, aerials, etc.
  18. Ltr to BFM Mar 6, 1912 from JHH Re equipment, current developments, etc. "Actual experiments" to begin in 2 and half months.
  19. Ltr to BFM Mar 19, 1912 from JHH re multiplex telephony, with schematic sketch.
  20. Ltr to BFM Mar 23, 1912 from JHH re wireless typewriter, multiplex telephone system, developments at Gloucester, asks for report on status of work.
  21. Schematic sketches of Method of Telegraphing Shorthand, Method of Radiographing Shorthand. Both with notation Inventor John Hays Hammond, Jr. Witness Benj F. Miessner March 27, 1912. BFM later comments.
  22. Personal Accident Policy on BFM, expires Jun 21, 1913. Note on envelope: re Dangers in boat control operations, high voltage, etc.
  23. Ltr to BFM from JHH office sending salary check, pay roll funds for workmen constructing tower.
  24. B & W photo of BFM, JHH made when JHH was leaving for Europe in June 1912.
  25. Ltr to BFM Jul 4, 1912 from JHH at International Radiotelegraphic Conference in London. Describes activities in England, plans to go to Berlin, Paris. Reports on current European developments and own plans.
  26. Statement of technical data re unidentified apparatus or experiment. References to plates 2, 3, 6, number of turns, sparks, distances, motor speed, etc. Observers BFM, JHH. On Harvard University Engineering Laboratory form.
  27. Ltr To Whom It May Concern Dec 3, 1912 from JHH giving character reference for BFM.
  28. Ltr to BFM Dec 10, 1912 from JHH with check for balance of salary and bonus check for "faithful" performance. Form invoice attached.
  29. Ltr to Otto Miessner (BFM's brother) Dec 6, 1912 from Jno P. Koehler commenting on circumstances of termination of BFM by Hammond. Koehler was also an employee of Hammond.
  30. Ltr to BFM Dec 16, 1912 from R. W. McKay re BFM's request to see John Hays Hammond, father of JHH.
  31. Ltr to BFM Dec 18, 1912 from R. W. McKay re BFM's request for interview with John Hays Hammond.

32. BFM Statement of points of contention with JHH. "For asking a consideration of the above requests, I was dismissed."
33. Ltr to BFM Dec 24, 1912 from JHH mentions termination arrangement for BFM, ongoing work, need for BFM's notes, suggests that when BFM has "a thorough engineering education and qualified yourself as an expert" Hammond would be glad to have his cooperation.
34. Ltr to JHH Dec 26, 1912 from BFM presenting his position on relations with JHH. Asks for interview.
35. Ltr to BFM Jan 18, 1913 from JHH asking for written statement that BFM has no claims against him and that he will keep confidential the knowledge he has of Hammond's work.
36. Ltr to BFM Feb 6, 1913 from JHH re his intention to form "our organization".
37. Ltr to BFM Feb 18, 1913 from JHH stresses need for stamen from BFM that he has no claims against JHH before offering BFM a position in the company that is being formed.
38. Telegram to BFM Mar 7, 1913 from JHH asking BFM to assist with preparation for "government demonstration". Reference to publication of Hammond's work.
39. Ltr to JHH Mar 10, 1913 from BFM stating conditions under which he will return to work with Hammond.
40. Ltr to JHH Mar 23, 1913 from BFM mentions lack of answer to his Mar 10 ltr, states his intention to publish results of work that was original with him.
41. Ltr to BFM Apr 1, 1913 from JHH explains need for BFM's services, unconcern re revelation of past work, inability to give BFM contract for extended period.
42. Ltr to JHH Apr 7, 1913 from BFM about his education plans, request for specific information about conditions for possible work with Hammond.
43. Ltr to BFM Apr 12, 1913 from JHH re BFM's education plans, will offer BFM position if JHH is still in radio work when BFM completes his studies.
44. Ltr to JHH Apr 21, 1913 from BFM expresses appreciation for Hammond's Apr 7 (12?) ltr, offers to help JHH in future.
45. Ltr to F. Pfund, Radio Engineering Co May 21, 1913 directing that BFM be offered a position if services can be utilized in the company formed by Hammond.
46. Ltr to BFM May 21, 1913 from JHH re employment situation at Gloucester laboratory and enclosing copy of May 21 ltr re possible employment with Radio Engineering Co.
47. Ltr to JHH Jun 4, 1913 from BFM about his education plans if work with Hammond not available.
48. Ltr to BFM Jun 8, 1913 from Jack Koehler describing equipment, staff, visitors, working conditions, Hammond's personality, relations

with Koehler, Koehler's family life.

A Envelope

49. Ltr to BFM Sep 24, 1913 from Jack Koehler describing equipment, commenting on own duties and attitude; technical question about Prof Curie's "electrometer"; information about boat used for experiments.
- A Envelope
50. Ltr to BFM Oct 11, 1913 from JHH declines to provide information about work for security reasons; mentions patent applications, practical developments in radio control. Says points BFM recorded while with Hammond are now obsolete.
  51. Ltr to BFM Nov 28, 1913 from R. W. McKay re possible employment opportunity for BFM.
  52. Ltr to BFM Jan 5, 1914 from J. P. Koehler re operation of "electric dog".
  53. Ltr to BFM Mar 10, 1914 from JHH enclosing two photographs of the "work" ("electric dog"?). Blue print copy.
  54. Two 6" x 8" B & W prints of JHH demonstrating "electric dog"; 2 4<sup>1</sup>/<sub>2</sub>" x 6" B & W prints of BFM, "electric dog" at Purdue in 1914; 3" x 4" B & W prints of "electric dog".
  55. Ltr to BFM Mar 16, 1914 from JHH asking BFM to check notebooks for information for JHH to use in patent interference case.
  56. Ltr to BFM Apr 13, 1914 from J. P. Koehler re his working relationship with JHH, working conditions at Gloucester laboratory, invitation to BFM to come for summer.
  57. Ltr to BFM Jun 13, 1914 from JHH mentions short time BFM would be available, lack of familiarity with apparatus in use, make summer employment impractical.
  58. Ltr to BFM Sep 13, 1914 from JHH states inability to send information about work done at Gloucester laboratory says more significant work done in Europe. Blue print copy.
  59. Ltr to BFM Sep 22, 1914 from JHH offers to send mechanism for BFM's lecture; requests to read ms. of BFM's new book. Blue print copy.
  60. Ltr to BFM Jan 27, 1915 from J. P. Koehler in Washington, D. C. awaiting word from "Board" and Congress about proposal which "runs close to a million dollars."
  61. Telegram to BFM Feb 2, 1915 "Must have experimental notes here before Sunday. Don't fall. John Hays Hammond, Jr." [Original]
  62. Telegram to BFM Feb 2, 1915 "Must have experimental notes here before Sunday. Don't fall. John Hays Hammond, Jr." [Copy]
  63. Ltr to BFM Feb 6, 1915 from law offices of Messimer & Austin, New York, N. Y. asking BFM to send documentation to support patent claims made by JHH.
  64. Ltr to BFM Feb 14, 1915 from J. P. Koehler pressing BFM to send documentation to support Hammond's patent claims. Implication

that refusal will be disadvantageous for BFM.

65. Ltr to BFM Oct 21, 1916 from J. P. Koehler reports his termination of relationship with JHH.
  66. Ltr to BFM Jan 1, 1918 from Blount & Blount & Carter requesting that BFM follow up on unidentified matter previously discussed.
  67. Ltr to BFM Feb 2, 1918 from Blount & Blount & Cater re representation in possible suit between BFM and JHH.
  68. Ltr to E. F. W. Alexanderson, RCA engineer Feb 22, 1925 from BFM re BFM's early work done for JHH.  
A Alexanderson, E. F. W. New Fields Open for Development in Science of Radio Signaling. N. Y. Heral Tribune Radio Magazine Feb 22, 1925 p. 6. An address before AIEE, Cleveland, Ohio.
  69. Ltr to BFM Mar 4, 1925 from E. F. W. Alexanderson in reply to BFM ltr Feb 22, 1925.  
An Envelope.
13. B. F. Miessner. On the Early History of Radio Guidance. Typescript carbon copy, pages unnumbered. Annotations by BFM. Copies of Hammond, Purington article, Espenschied discussion.
  14. B. F. Miessner. On the Early History of Radio Guidance. Page Proofs, etc., 1959. Page proofs, glossy prints for figures, etc. IRE Proceedings Sep 1957 issue: front cover, p 1191-1209 Hammond, Purington article; Jul 1959 issue p 1253-1268 critique by Espenschied, annotated by BFM.
  15. B. F. Miessner. On the Early History of Radio Guidance. Publication Arrangements, 1963-1965.  
Extensive correspondence with Charles Susskind re San Francisco Press publication of BFM book intended as rejoinder to Hammond, Purington claims. Includes 1958 Lee Deforest ltr. 2 folders.
  16. B. F. Miessner. On the Early History of Radio Guidance San Francisco, San Francisco Press, 1964.
  17. B. F. Miessner. On the Early History of Radio Guidance. Distribution, 1964.  
Lists of persons to whom book was sent; ltrs of acknowledgment.
  18. Amplitude Limitation Anti Static Tests, 1919-1920.  
BFM notes, graphs of test results, etc.
  19. Radio Corporation of America, Plaintiffs vs. George W. Walker Company, Defendant. U. S. District Court. Northern District of Ohio, Eastern Division.  
Book 1 Testimony of B. F. Miessner Mar 22, 24, 1927. Book 2 Testimony of B. F. Miessner, J. P. Koehler, O. C. Roos, A. L. Kent May 25, 26, 27, 1927.
  20. Miscellaneous Patent Drawings, Laboratory Notes Patents, etc., 1919-1940.  
Application for patent-Electrical Modulator Apparatus and Method. Abandoned Jun 26, 1928. BFM Feb 7, 1920 ltr to E. H. Armstrong re super heterodyne. BFM "Comments on Major Armstrong's Paper" mentions own early work in frequency modulation, current limitation, super heterodyne system... Dec 19, 1935.
  21. BFM Comments on Static Suppression, talk by J. J. Lamb at Radio Club of America meeting May 26, 1936.
  22. Radio Club of America. Proceedings.



Vol 16, no. 2, Frequency in Radio Broadcasting

Vol 25, no. 3, A study of the Operating Characteristics of the Radio Detector and its Place in Radio History, by E. H. Armstrong.

23. Miscellaneous.

**Box 32 File Folders, Notebooks, Scrapbook, Photographic Prints and Negatives.**

Folder

1. Laboratory Notebook, 1912.  
Entries dated Jun 8, 1912- . On outside front cover: Hammond Radio Research Laboratory. B. F. Miessner.
2. Laboratory Notebook, 1912-1913.  
Entries dated Feb 1912-Jan 3, 1913. 176 numbered pages. Label on outside front cover: Hammond – B. F. Miessner 115 Nassau St. Slips noting that material was used in case Radio Corporation of America vs. George W. Walker Co. BFM explanatory notes tipped in Mar 1962. Supplementary sheets in separate folder. Notebook page locations indicated.
3. Scrapbook, 1911-1912.  
Typed invention disclosures. Some have attached note showing use in RCA vs. George Walker Co 1928 case. Notes, sketches, diagrams. Photographs 1911-1912: views of Gloucester, Mass (?), individuals, groups, apparatus, etc. Some captioned, notes on back, some not identified. Clippings re J. H. Hammond Jr.
4. Testimony by Edward H. Loftin and E. S. Purington re BFM Relationship With John Hays Hammond, Jr., 1938.  
Page 1-67 Loftin testimony Mar 29, 1938  
Page 73-104 Purington testimony Feb 19, 1938  
Note on outside front cover: Received June 16, 1957 with John Hays Hammond Jr's letter of June 4. L. Espenschied. BFM notes tipped in; some annotations direct on text.
5. Pensacola July-December 1917.  
July 1917 Memos re equipment, facilities, etc., Ltr from M. H. Liddell, Purdue Professor of English; BFM request for leave  
  
Aug 1917 BFM pay increase; employment status; Westinghouse employment; report on voice tube in airplanes; reports on equipment testing, etc.  
  
Sep 1917 reply to BFM ltr re patent searches; Aerial League of America information folder; memos re equipment, test, etc.  
  
Oct 1917 Memos re equipment; development of aircraft antenna reel; ltr re BFM patent searches; approval of leave request, etc. Ltr re error in Radio dynamics.  
  
Nov 1917 Listings of work in progress at Radio Laboratory; semi-monthly radio report; personnel regulations; test result reports, etc.  
  
Dec 1917 Reports on equipment, test procedures, etc. Memos from E. H.

- Loftin requesting equipment.
6. Pensacola 1918-1920.
 

Correspondence, etc., re BFM's termination of Navy service. Includes detailed statement by BFM of personal history, Navy service, his version of events. BFM military draft status.
  7. Correspondence re publication of BFM's Radiodynamics, etc., 1914, 1915-1917.
 

Flexner ltrs of advice re BFM's papers re Radiodynamics book; opposition to Congressional appropriation to Hammond; arrangements for BFM talk to National Electric Light Assn. (1914)

Albert Scheible ltrs re publishing of Radiodynamics.

Correspondence with Van Nostrand re publication of BFM's book, esp threat of action by Hammond. Some items identified as exhibits in case Radio Corporation of America vs. George W. Walker Co. (1915-1917)

BFM correspondence with Brig Gen E. M. Weaver re security concerns re BFM's book, Hammond's concerns with disclosures. Some items identified as exhibits in case RCA vs. George W. Walker Co. (1915-1916)

Correspondence with F. Lowenstein re content of BFM's Radiodynamics. (1916)

Correspondence with E. A. Sperry re BFM's work, interest in working with Sperry, etc. (1917)
  8. Miscellaneous Correspondence, 1912, 1914, 1915, 1922.

**Bos[32] File Folders, Notebooks, Scrapbook, Photographic Prints and Negatives continued.**

Folder

1. B. F. Miessner Technical Papers, 1911, 1913, 1928.
  - A Generator Intensifier for Use in Wireless Telegraphy. 24p Jan 26, 1911
  - A Generator Intensifier for Use in Wireless Telegraphy. 12p Jan 30, 1911
  - Lecture Outline A IEE (re Dirigible Torpedo) 4p undated
  - Change in Antenna Power With Change of Wave Length. 2p undated
  - Draft of Telegram re use of "electric Dog" undated
  - Untitled description of transmission of sound by light beam. 3p undated
  - The application of Radio Telautomatics for torpedo Control 5p undated
  - The Dirigible Torpedo. 5p. undated, 3 copies. One copy with note Sci Am 1913

Some papers have slips attached identifying them as exhibits in Radio Corporation of America Vs George D. Walker Co., 1928.
2. Electronic Piano Demonstrations, Radio Broadcasts, 1931-1934.
 

Correspondence re broadcasts, demonstrations, requests for information.

- Efforts to interest well known musical figures, etc.
3. Hammond-Purington IRE Paper Correspondence, 1958-1962.  
Correspondence re publication of Hammond-Purington paper on work done 1911-1912; BFM's work and records, possible courses of action to rebut Hammond's claims to inventions, etc.
  4. Invention Disclosures 1911-1912. Duplicate Typed Copies.  
Selective System 3p; Duplex Radio Telephony System 2p; Improved Microphone for Wireless Telephony 2p; Selective Transmitter-Receiver Unit 3p (Identified as exhibit in Radio Corporation of America v. George W. Walker Co. 1928); Selective Duplex Telegraphy & Telephony 2p; Simultaneous Radio Telegraphy and Telephony 2p; Selective Wireless Telegraph Typewriter System 3p; Multiplex Telegraphy 2p; System of Shorthand Telegraphy 4p; System of Torpedo Control 3p; Selective Multiplex Wireless Telegraphic & Telephonic System p 324 only; Water Antenna 2p; Selective System for Control of Mechanisms...2p. (Some reports have unnumbered pages of figures, etc.)  
Picture postcards of 1911-1912 scenes at Gloucester, Mass.
  5. B. F. Miessner, 1963.  
Today's Inventor – A study in Frustration.  
In American Engineer April 1963. Un paged reprint. Envelope for copies returned by Post Office as Undeliverable.
  6. Doppler Effect, 1941-1962.  
BFM correspondence with National Bureau of Standards, Carnegie Institution, typescript of BFM paper submitted to IRE, etc.
  7. D. C. Wilkerson, Engineering Staff, General Motors, 1958-1961.  
Correspondence with BFM about their earlier work and associations; arrangements for BFM to give talk to Engineering Society of Detroit.
  8. Radio Corporation of America, General Electric Company, and Westinghouse Electric & Manufacturing Company, Plaintiffs vs. Splitdorf Electrical Company, Defendant.  
Equity no. 1669 on Alexanderson Patent no. 1,173,079. Transcript of Record. U. S. District Court. District of New Jersey. 1926.  
BFM testimony p 261-296.
  9. Splitdorf Electrical Company Appellant vs. Radio Corporation of America, General Electric Company, and Westinghouse Electric & Manufacturing Company.  
Brief for defendant-appellant in the U. S. Circuit Court of Appeals for the 3<sup>rd</sup> Circuit, n. 3561 March Term 1927.  
Lacks p. 81. See BFM note at that page.
  10. Water Wave Pictures.  
Approx 55 3" x 5" bw prints. Lack descriptive notes.  
Two bw prints of BFM performing experiment.  
One bw print of unidentified man using binoculars (J. H. Hammond Jr?)
  11. Photographic Negatives.  
Apparatus, buildings, airplane communication apparatus (?), balloon, Hammond experimental boat, "Electric Dog" (?), "water wave" pictures, landscapes, etc.

- Lack descriptive notes.
12. Photographic Negatives.  
Approx 45 4" x 5" negatives of documents, letters, testimony, notebook pages, etc., re BFM controversy with J. H. Hammond, Jr.  
Note on outside of box July 16,63.

### **Box 33 File Folders and photographic Prints**

#### Folder

1. B. F. Miessner. Some Historical Acoustical Reminiscences, 1962.  
Ms. p. 1-15, 15A-15G, 16-27. Original and carbon copy. Additional typed and ms materials.
2. B. F. Miessner. Crystal Detectors and Loud Speakers  
Ms. 13p. n. d.
3. C. G. Conn, Ltd., 1963-1965.  
Extended correspondence with Earle L. Kent, Conn Director of Research, Development and Design re Conn interest in electronic piano, technical development, financial conditions of agreement with BFM. Ltr Oct 5, 1966 terminating agreement with BFM.
4. C. G. Conn, Ltd. Patent Agreement, 1964-1965.  
Correspondence with R. H. Rines re wording of agreement to protect BFM's interests re Wurlitzer and arrangements to be made with C. G. Conn.
5. Special Radio Report on Noise Conditions Affecting Radio Reception on Airplanes. U. S. Navy Aeronautic Station, Pensacola, Florida, Jan 10, 1917.  
Photocopy of 48 page report. Correspondence 1920, 1934, 1958, 1969, re use of report.
6. Patent System Panel, Commerce Technical Advisory Board, 1964.  
Correspondence, report, etc. Proposed membership for Presidential Commission on Patents.
7. Lawrence Fleming, Research Engineer, Bell & Howell, Correspondence with B. F. Miessner, 1962-1964, 1967.  
Extensive correspondence re science and invention, role and status of inventors, discussions of specific inventions, comments about own feelings, health, family, other personal matters, etc. Seven folders – (1) Feb 26, 1962-Aug 4, 1962. (2) Aug 10, 1962-Dec 24, 1962. (3) Dec 31, 1962-May 15, 1963. (4) May 23, 1963-Aug 8, 1963. (5) Aug 11, 1963-June 6, 1964. (6) Jul 10, 1964-Oct 27, 1964. (7) Nov 3, 1964-Oct 29, 1967.
8. Webster Electric Company, Racine, Wisconsin.  
Instructions for various equipment: amplifiers, loudspeakers, pre-amplifiers; circuit diagrams, etc.
9. B. F. Miessner. Miscellaneous Papers, Letters, etc., 1927, 1930, 1932, 1934, 1936, 1954, 1955, 1962, 1963.  
A. C. as a Filament Supply Source-Parts One, Two. Radio Club of America. Proceedings, Dec 1926, Jan 1927; The Three Element A. C. Vacuum Tube. Radio Broadcast Sept 1927; Hum in All-Electric Radio Receivers IRE

Proceedings, Jan 1930; The Application of Electronics to the Piano. AIEE, New York Section, Feb 1932; The Application of Electronics to the Piano. Radio Club of America. Proceedings Jan 1934; Electronic Music and Instruments. Announcement. Institute of Radio Engineers. May 1936; Frequency Modulation Phonograph Pickups. IRE Transactions Jul-Aug 1954; New Electronic Piano. Radio-Electronics 1955; Automatic Exposure. U. S. Camera. May 1961; Comments on “Linguistic Consideration of Porpoise Sounds.” Acoustical Society of America. Journal. Apr 1962; Simplified Metal Locator. Radio Electronics Sep 1962; The Patent Brouhaha. International Science & Technology. Sep 1962; A Century of Microphones. 1962 (?); What’s Wrong with Our Patent System? “For Missiles & Rockets” 1962; Music-Science and Art. Sound. Mar-Apr 1963; Today’s Inventor-a Study in Frustration. American Engineer. Apr 1963; Companies and Inventors. International Science and Technology. Apr 1963; Electrophonography IEEE Proceedings. Jun 1963; Engineers and Patentry. Announcement only. Institute on Patent Incentives and Utilization. Nov 1963; Tape Teaching and Monitor Systems. Sound. Nov-Dec 1963; Conventional vs. Electronic Pianos. n. d.

10. B. F. Miessner Biographical and Related Materials, etc., 1943, 1963.  
National Cyclopedia of American Biography offprint; bw studio portrait; Miami Sunday News Sept 29, 1963 article; Huntingburg (IN) Independent Sept 5, 1963 Ben Miessner Day issue; news release Jul 18, 1963 re BFM gift to Boys Club; ltr to BFM re his enquiry about employment Jan 29, 1943.
11. Miscellaneous, 1927, 1936, 1937-1940, 1964.  
Article re Cracraft electric orchestra. Music Trades Feb 1940; Electronic Piano...BFM Music Trade Review. Dec 1937; Electone – an Electronic Piano. Electronics. Jan 1939; Electronic Marvels in Pittsburg. Modern Music. Mar-Apr 1938; Problems of A. C. Filament Lighting. Radio Broadcast Advertiser. Mar 1927; Baldwin Piano & Organ Co. adv. 1964; Music in 1955 by George Antheil. Coronet. Dec. 1936.
12. Photographic Prints.  
8 x 10 B & W  
First showing of Miessner Electronic Stringless Piano, 1955. (2); Basic model of Piano (2); Electronic piano (4); Piano open to show reeds, etc. (13); Detail of reed mountings (2); Detail of controls (2); Pictograms of D. B. amplitude-time relationships (2); Piano action (2); BFM carrying piano to car (7); Child with headset playing electronic piano (6); BFM sitting at open piano (2); BFM working on piano (2); BFM in laboratory-workshop (8); BFM playing electric guitar (1); BFM using oscilloscope (1).  
  
4 x 5 B & W  
BFM sitting at open piano (5); Piano open to show reeds, etc. (3); Oscilloscope set up over piano.  
  
5 x 7  
Drawing of piano action (1)

## Box 34 Scrapbooks

In addition to material mounted on scrapbook pages, there are items laid in loose. Many mounted items becoming separated from pages. Scrapbook mounting pages in poor condition.

1. Scrapbook, 1912-1923.  
Journal articles by BFM; clippings about BFM's work; photographs, etc.  
c. 40 leaves
2. Scrapbook, 1924-1927.  
Clippings from journals, newspapers re Garod radio operated on house current. Informational material, advertising photos, etc. Material re new radio tube developed by BFM.  
c. 50 leaves
3. Scrapbook, 1925.  
Advertising material, clippings, photographs of Miessner batteryless Electric Radio Receiver, Garod radio receivers. Menu for dinner announcing Miessner radio, July 1925.  
c. 21 leaves
4. Scrapbook, 1927-1931.  
Clippings re radio tubes to convert a. c. for radio use; photographs of radio receivers, various types of radio apparatus; articles about elimination of hum, etc. Ltr July 7, 1930 to BFM from his father Charles Miessner re patent sale to Radio Corporation of America.  
c. 30 leaves
5. Scrapbook, 1938-1940.  
Note at front: This scrapbook contains a few pieces of published literature...concerning the commercial developments of some of the licensees of Miessner Inventions, Inc., who manufacture electronic music instruments under our patents. Advertising material, articles, clippings re electronic pianos, organs. Radio City Music Hall program for performance using BFM electronic pianos. Sample ltrs from BFM to manufacturers soliciting interest in BFM patents, 1938, 1940.  
c. 30 leaves
6. Oscilloscope Patterns.  
3" x 4" b & w photographic prints of oscilloscope patterns formed by piano strings. Mounted on c. 40 leaves.
7. Wave Form Pictures.  
3" x 5" b & w photographic prints of wave forms. Mounted on 19 scrapbook pages. No notes or annotations.
8. Scrapbook: B. F. Miessner Inventions Patented and/or Claimed by Others.  
Clippings from journals, newspapers, Patent Office Gazette, etc.; letters re inventions, technical developments, etc. BFM.  
c. 30 leaves
9. Scrapbook, 1954-1956.  
Label on front cover: Miessner Stringless Piano. Clippings advertising

- material, etc. re Wurlitzer, other makes.  
c. 20 leaves
10. Scrapbook, 1954-1958.  
Label on front cover: Electronic Musical Instruments. Clippings, articles, advertisements from music trade journals, newspapers, etc. Additional later material laid in at end. Correspondence re licensing, manufacture, selling of BFM pianos.  
c. 40 leaves
  11. Scrapbook, 1956-1963.  
Journal articles; newspaper clippings re patent policy legislation, electronics, individual inventors, industrial research laboratories; BFM ltrs to journal, newspaper editors.  
c. 30 leaves
  12. Scrapbook, 1963-1968.  
Journal and newspaper clippings. BFM ltrs to editors. Awards to BFM; Huntingburg scholarship; BFM Day, etc.  
c. 40 leaves

### **Box 36 Scrapbooks**

In addition to material mounted on scrapbook pages, there are items laid in loose. Many mounted items becoming separated from pages. Scrapbook mounting pages in poor condition.

1. Scrapbook #5, Oct 1930-Dec 1932  
Clippings, photographs of various types of electrical musical instruments; reports of performances. Includes journal articles, newspaper reports; some foreign material.  
c. 51 leaves
2. Scrapbook #6, Nov 1926-Sep 1933  
Cover label: Electronic Musical Instruments. Journal articles, newspaper clippings re various electronic musical instruments. Clippings re performances on Miessner Electronic Piano. Includes foreign material.  
c. 41 leaves
3. Scrapbook #7, Sep 1933-Apr 1935  
Photographs of demonstration of BFM electronic piano at trade show; news clippings of American Guild of Organists convention, Jun 1934. Article New Vistas in Radio by Leopold Stokowski.  
c. 50 leaves
4. Scrapbook #9, May 1936-Jan 1937  
Journal articles, advertising material, technical papers, etc., on electronic musical instruments.  
c. 50 leaves
5. Scrapbook #12, Aug 1938-Aug 1939  
Cover label: Electronic Musical Instruments. Clippings from journals, newspapers, re various types of musical instruments. Descriptions of Wurlitzer,

- Ansley, etc., instruments.  
 Advertisements by Miessner Inventions, Inc., various dealers, etc.  
 c. 50 leaves
6. Scrapbook #13, Aug 1939-Apr 1940  
 Clippings re electronic pianos, organs, other instruments, performances, etc.  
 c. 50 leaves
  7. Scrapbook #14, Apr 1940-Nov 1940  
 Material from music trade journals, newspapers re electronic music  
 instruments, performances, etc.  
 c. 25 leaves
  8. Scrapbook #15, Oct 1940-Jul 1947  
 Clippings from music trade journals, newspapers re electronic instruments,  
 performances, BFM development role, etc.  
 c. 25 leaves
  9. Scrapbook #16, Jan 1941-Aug 1954  
 Clippings from music trade journals, newspapers re electronic instruments, etc.  
 Some material re WW II electronic developments.  
 c. 30 leaves

**Box 37 Photographic Prints, Negatives, etc.**

Folder

1. Photographic Prints, Negatives  
 Approx. 2,000 b & w photographic prints and negatives, mostly of oscilloscope  
 patterns of sound waves made by piano strings. Labels in photos give  
 information about piano, location of microphone, other technical data, etc.  
 Some pictures of apparatus set up equipment, etc.
2. Rider, John F. Obtaining and Interpreting Test Scope Traces. N. Y., Rider, 1954.
3. Sample Pieces of Apparatus, etc.  
 Crystal accelerometer, preamplifier, transistors.

**Box 38 File Folders**

Folder

1. B. F. Miessner. Some Historical Acoustical Reminiscences. (1)  
 Typescript. 41p. Corrections and notes by BFM. Photographs, other material  
 mounted on separate sheets and inserted.
2. B. F. Miessner. Some Historical Acoustical Reminiscences. (2), 1962-1964.  
 Correspondence with R. B. Lindsay (editor of Sound) re ms; BFM claims re  
 own early work in underwater acoustics.
3. Hewlett-Packard 200 AB Audio Oscillator.  
 Operating and Service Manual.
4. Panoramic Sonic Analyzer. Model AP-1. Instruction Manual, 1962.  
 Includes separate circuit diagrams. BFM correspondence re diagrams, etc.



5. Baldwin Company. Electronic Organ, 1947, 1952.  
Correspondence re piano action designed by BFM.
6. Baldwin Company. Piano Action, 1944-1945.  
Correspondence re piano action designed by BFM.
7. The Baldwin Company, 1931-1935, 1950-1954.  
Correspondence urging Baldwin involvement with electronic instruments; arrangements for demonstration for Baldwin; manufacturing licensing; BFM purchase of Baldwin piano for developmental work. (1931-1935).  
Correspondence re stringless piano; BFM efforts to interest Baldwin. BFM work on piano action, use of hammer assemblies, drawings of hammers, action. (1950-1954)
8. Remy Langloys, 1954.  
Correspondence with Remy Langloys re Langloys work on electronic musical instruments; BFM demonstrations for Langloys; BFM's comments on Langloys's work, suggestions for collaboration. Copies of patents for musical devices, instruments, etc.
9. Ansley Radio Corporation – Dynatone Piano, 1938-1949.  
Financial settlement with BFM by Ansley bankruptcy trustee; Miessner patent license agreement with Ansley; discussions of technical developments; royalty statements; Ansley requests for assistance with promotional efforts for electronic piano; comments on sound quality of Ansley Dynatone piano.
10. Vantage Press Correspondence, 1962-1964.  
Correspondence, contract for publication of BFM's book *Invention and Creativity*.
11. B. F. Miessner. Tape Teaching and Monitor Systems, 1961-1963.  
Letter to editor of *Sound*; proof, correspondence, manuscript, typescript, etc.
12. Creativity Advertisements and Clippings, 1961-1962.  
Journal and newspaper clippings of articles, advertisements re creativity, research, etc., (1961-1962). Four page ms of BFM introductory remarks for talk on creativity.
13. Piano Sound Boards, 1957-1958.  
Correspondence, articles, patents re materials, design of plates and sounding boards, musical instruments, etc.
14. Variable Resistor, etc., 1939-1940.  
Correspondence with possible sources of variable resistor; steel, brass washers, etc.
15. B. F. Miessner. Creativity—How It Begins and How It Works, 1962?  
Manuscript, 43 numbered pages, additional lettered pages, additional loose notes.
16. Clippings, Publicity, Etc., 1963-1964.  
Newspaper clippings re BFM scholarship; science building for boys club; Ben Miessner Day, Huntingburg, Indiana. Miami Shores Florida Optimist Club material.
17. Phonograph Pickups, 1930-1950.  
BFM notes, clippings, correspondence re equipment, materials, sound reproduction; suppliers announcements, service information.

18. B. F. Miessner. Frequency Modulation Phonograph Pickups, 1954.  
Typescript of BFM paper and related material, clippings, correspondence, notes, etc.
19. Weathers FM Pickup, 1945-1955.  
Advertisements, copies of Weathers patents, for pickups, turntables, loudspeakers. Correspondence re infringement, licensing of BFM patents.
20. Zenith Radio Corporation, 1940, 1944, 1949.  
Correspondence etc re BFM patents and Zenith "Cobra" phonograph pickup. Summary of BFM tests on Zenith pickup; Zenith interest in pickup developed by BFM.
21. B. F. Miessner. Frequency Modulation Phonograph Pickups, 1950.  
Nineteen-page typescript; correspondence with editor of Radio Electronics, etc.
22. B. F. Miessner. FM phonograph Pickup, 1940-1950.  
Correspondence with manufacturers re production of BFM design, arrangements for demonstrations, etc.
23. B. F. Miessner. The Miessner Stringless Electronic Piano, 1955.  
Typescript, additional ms and typed text, originals of figures, correspondence, etc.
24. B. F. Miessner. Frequency Modulation Phonograph Pickups, 1954.  
Typescript (irregular paging), correspondence, supplemental material.
25. Toilet Plunger Improvement, 1960.  
Correspondence, drawings, etc. for BFM improvement to toilet plunger.
26. Universal Temple of Truth Foundation, 1961.  
Material about beliefs of group, etc. (BFM folder heading: Wm. Chakford screw ball religion)
27. Electronic Musical Instruments, 1950-1958.  
Clippings from Radio-Electronics, Radio and Television News, Audio Engineering, High Fidelity, Electronic Engineering.
28. Stringless Piano, 1942-1954.  
Clippings from Piano Trade magazine, Electronics, Music Trades Magazine, Journal of applied Physics. Acoustical Society of America. 33<sup>rd</sup> meeting 1947. Program.
29. Clarkstan Corporation.  
Specification, technical information for test records, pick up arm, needle pressure gauge, etc. made by Clarkstan.
30. Miscellaneous, 1955, 1957.
  - Shure Brothers Reactance Slide Rule.
  - 35mm negatives Wurlitzer Electronic Piano, May 30, 1955—  
Photographs of action etc.
  - 35mm negatives – Photograph of wave pattern.
  - Audio Tape,
    1. Label: Start Mus Nov 10. Scale (?).
    2. Label Received from David B\_\_\_\_\_? at "Sundown" on October 15, 1957. BFM.

## Box 39 File Folders

### Folder

1. Howe, Alfred H. Scientific Piano Tuning and Servicing.  
Galley proofs. On back of p. 147: 1 to 147, 130-131 blank.
2. Miessner Inventions, Inc. vs. Story and Clark Piano Company, 1939-1942.  
Extensive correspondence re BFM infringement claims vs. story & Clark, attorneys' statements, royalty settlements, termination of agreement, etc.
3. Story & Clark Piano Company, 1932, 1936-1939.  
Correspondence re Story and Clark licensing to make electronic piano, discussion of technical problems. Role of Stromberg-Carlson in making electronic components. Patent license agreement between Miessner Inventions, Inc. and Story and Clark Piano Co. Dec. 9, 1936.
4. Brunswick-Balke-Collender Acoustical Research Laboratory, 1920-1921.  
Outline of Experiments and Tests, Dec. 23, 1920; Notes on Technical developments, Jan 27, 1921; Progress Report, May 6, 1921.
5. Electrical Research Laboratories, Chicago, Illinois, 1928-1929.  
Correspondence re licensing by BFM, royalty payments; comments about technical problems, equipment; amplifier wiring diagram.
6. Correspondence With C. T. Jacobs, 1934-1935.  
Reports to BFM on vacation in Canada, Florida re technical developments, patents and licensing; legal and financial matters, etc. Ms. letters from BFM to Jacobs.
7. Charles T. Jacobs Correspondence, 1934-1937.  
Extensive correspondence from Jacobs, patent attorney with BFM re patent problems.
8. Charles T. Jacobs Correspondence, 1936.  
Letters to BFM on vacation in Canada, covering patent legal matters, reports on work at BFM lab, drafting of licensing agreement, Jacobs billing for services.
9. E. H. Loftin Correspondence, 1928-1931.  
Correspondence re patent matters; agreement with Crosley Radio Corporation, RCA request for information from BFM re German patent application.
10. A. A. Thornton, 1939-1941.  
Correspondence with A. A. Thornton, patent agents, London re searches for British patents.
11. B. F. Miessner Inventions, 1939.  
Blueprint copies of descriptions of inventions made by BFM 1918-1920. On Emil J. Simon Engineering Dept. forms. BFM list of early inventions "from money" dated Jan. 29, 1939, covers 1908-1933.
12. Foreign Correspondence, 1935-1939.  
Correspondence with German patent attorneys re searches, orders for patents; relations with Oskar Vierling; proposal to translate Lertes Elektrische Musik; Orders for publications, billing and settlements, etc.
13. Electronic Piano Radio Broadcasts, 1933.  
Scripts of broadcasts on CBS, NBC.
14. Electronic Piano, 1932-1935.

- Extensive file of correspondence re demonstrations, publicity; patents, enquiries, articles re electronic music; equipment and parts, loudspeakers, etc.
15. Correspondence with Frederic D. Merrill. 1937.  
Detailed reports to BFM on vacation in Canada re work in laboratory, preparations to display organ in Chicago, questions from potential licensees, discussions of equipment etc. Originals and carbon copies. Some ms. letters from BFM to Merrill. (July-Sept., 1937)
  16. Correspondence with Frederic D. Merrill, Victor Mumma, 1938.  
Detailed reports to BFM on vacation in Canada re work in laboratory. Radio City Music Hall electronic piano performances, business matters, advertising, technical problems, materials, etc. Originals and copies. Some ms. letters from BFM to Merrill, Mumma. (June-Sept., 1938)
  17. Correspondence with Frederic D. Merrill, 1939.  
Detailed reports to BFM on vacation in Canada re work in laboratory, relations with musical instrument makers, visitors to laboratory, technical problems, etc. Originals and copies. Some ms. letters from BFM to Merrill. (June-Sept., 1939)
  18. Correspondence with Victor R. Mumma, 1938-1939.  
Mumma's work at Packard-Rile plant on electronic piano, piano-organ. Discussions of technical problems, arrangements for BFM licensing, etc. Visits to piano, organ mfrs. In Chicago, Ft. Wayne.
  19. Estey Organ Corporation, 1935-1938.  
Extensive correspondence re technical questions re organ parts, BFM work on Estey organs, patent licensing and infringement concerns, royalty rates.
  20. Records of BFM work, 1920-1922.  
Sketches, notes, schematics, lists of materials, cost estimates re alternating current radio set and tube. Notes from Brunswick-Balke-Collender period.
  21. Prospective Licensees, 1938-1940.  
Enquiries from companies, individuals re manufacture of electronic instruments. BFM responses re general terms.
  22. Inventors, Inventions, Patents, 1963-1964.  
Correspondence, clippings, etc. re role, rights of inventors, rewards, possible courses of action.
  23. Miscellaneous, 1928-1930, 1944.  
Photographic prints of wave patterns, with notes on back; miscellaneous technical notations; billing for materials, equipment, etc. Sales promotion suggestions for electronic piano; letter from Otto Miessner about need to inexpensive instrument for teaching, 1944; letter from Richard E. Byrd about Frigid Flyer, 1928; BFM request to Indiana State Board of Health for birth certificate.
  24. Miscellaneous Notes.
  25. Miscellaneous Correspondence, etc., 1931-1934.  
Attorney fee settlements for sale of BFM patents to RCA; BFM demonstration of piano; C. T. Jacobs resignation from Miessner Inventions; Orders for books from German dealer; Miessner Inventions reports to N. J. tax dept; miscellaneous correspondence, etc. Two 3<sup>1/2</sup> x 5<sup>1/4</sup> b & w negatives:

- unidentified building; equipment set-up.
- 26. Miscellaneous Correspondence, etc.  
BFM mortgage loan; interest on bonds; orders to German bookdealer, etc.
- 27. Miscellaneous Correspondence, 1934-1935.  
Design, production on proposal for "baseball dolls," request for BFM affidavit in patent case; correspondence re article on electronic music instrument in Acoustical Society of America Journal (1934), BFM offer to lecture before Franklin Institute; proposal to demonstrate electronic piano at Annual Science Exhibition in Pittsburgh; demonstration of piano in New York City, etc.
- 28. B. F. Miessner Lectures on Electronic Music and Instruments.
- 29. B. F. Miessner Application of U. S. Patent for Apparatus for Telephonic Transmission, 1919.
- 30. Records of BFM work, 1923-1924.  
Notes, sketches, diagrams. "Alternating current receiver dope 1923-1924", States Radio, etc.
- 31. Records of BFM work 1925-1926.  
Notes, schematics, sketches, etc.
- 32. E. H. Loftin Correspondence, 1927-1932.  
Extensive correspondence re BFM patents, licensing, etc.
- 33. Licensing Agreements, 1927-1928.  
Copies of BFM licensing agreements with Garod Corporation, 1927, Sampter Radio Corporation, 1927, Zenith Radio Corporation, 1928.

#### **Box 40 File Folders**

##### Folder

- 1. Institute of Radio Engineers, 1958-1963.  
Correspondence re publication of BFM paper Decline of American Invention; comments (ms and IRE Proceedings off prints) on article about development of phonographic recording, description of own work; comments re article on Industrial Patentry, IRE publishing policy.
- 2. Fountain Pens, 1950-1956.  
Correspondence re BFM efforts to interest Scripto, Esterbrook, Sheaffer in making pens to his designs. Ltrs to suppliers requesting materials to make prototypes. Advertisements for various types of pens, pencils. Drawings of various pens invented by BFM.  
  
Fountain pen patents issued to BFM:  
2,597,664, May 20, 1952, Antileak Fountain Pen  
2,642,041, Jun 16, 1953, Antileak, Fountain Pen  
2,642,043, Jun 16, 1953, Fountain Pen  
2,669,223, Feb 16, 1954, Antiflood Fountain Pen  
2,669,224, Feb 16, 1954, Pen Nib with Spreader.
- 3. Leakproof Fountain Pen, 1950-1958.  
Extended correspondence with Parker Pen Co., Sheaffer, Waterman, urging manufacture, acquisition of patents for pen developed by BFM.

4. Pratt, Read & Co., 1952-1958.  
Correspondence, specifications, drawings of piano parts to be made for BFM. Some correspondence with other suppliers of materials.
5. Patents and Research, 1961-1963.  
Drafts of statements for inclusion in Final Report of U. S. Dept. of Commerce Technical Advisory Board. Statements, articles re patents and pharmaceutical research. National Industrial Conference Board Report Research and Development, Its Growth and composition.
6. Patent Legislation, 1955-1958.  
BFM testimony, correspondence, etc., re effort to extend term of patents to make up for World War II stop orders. Patent Equity Association mailing list, etc. Report: Government Contract Patent Policies and Economic Growth: Industry Evaluation. Center for Technology and Administration. The American University Bulletin 14. n.d.
7. Patent Legislation, 1956.  
Statements by BFM, others to subcommittee on Patents, Senate Judiciary Committee in support of H. R. 2128 extending term of patents affected by W. W. II stop orders. Patents Equity Association effort to favor legislation.
8. Directional Curves, 1918-1925.  
Graphs of directivity, distance intensity curves. Reports on importance of acoustics in broadcasting; directional characteristics of horns, etc. Acoustical Laboratory Report No. 1 on Recording Room Characteristics, Brunswick Recording Laboratories, No. 12, 1920.
9. Acoustical Society of America, 1961-1963.  
Correspondence re programs of ASA meetings, membership; BFM contributions to ASA journal; BFM letters describing own work.
10. Piano Trade Magazine, 1947, 1950-1958, 1963.  
Extensive file of BFM correspondence with editors discussing technical aspects of piano manufacture, tone production, BFM's development, promotion of electronic instruments, use for instruction; music trade and selling, etc.
11. Franklin Institute Award, 1960-1964.  
Extensive correspondence re BFM nomination, candidacy, qualifications for Franklin Institute Award. BFM not recommended for award.
12. Miscellaneous Correspondence, etc., 1943, 1946-1950. (3 folders)  
Includes letters requesting materials, equipment to use in own work; demonstration program; comments on book on patent practice and management; election as Fellow of Acoustical Society of America; complaints about newly purchased automobile; BFM traffic violations; ground water; sale of residence; insurance payments for fire damage to home, etc.

#### **Box 41 Books**

1. Ansley, Arthur C. Manufacturing Methods and Processes. Philadelphia, Chilton, 1957.

- Passages underlined by BFM.
2. Barnes, William H., The Contemporary American Organ, 4<sup>th</sup> ed., New York, J. Fischer & Bro., 1948.  
Inscribed to BFM by author.
  3. Begun, S. J. Magnetic Recording, N. Y., Murray Hill Books, 1949.
  4. Bekesy, Georg von Experiments in Hearing, N. Y., McGraw-Hill, 1960.  
Annotations by BFM.
  5. Beranek, Leo L. Acoustic Measurements, N. Y., Wiley, 1949.
  6. Chambers's Technical Dictionary Rev. ed. With Supplement. N. Y., Macmillan, 1948.
  7. Crede, Charles E. Vibration and Shock Isolation, N. Y., Wiley, 1951.  
Annotation, underlining by BFM
  8. Daniell, Alfred, A Text Book of the Principles of Physics, 2d, ed., London, Macmillan, 1885.  
Annotations by BFM.
  9. Dorf, Richard H. Electronic Musical Instruments, Radio Magazines, Inc., Mineola, N. Y., 1954.
  10. Douglas, Alan, The Electronic Musical Instrument Manual, London, Pitman, 1949.  
Annotations by BFM.
  11. Douglas, Alan, The Electronic Musical Instrument Manual, 2d. ed., N. Y., Pitman, 1954.  
Annotations by BFM.
  12. Fessenden, Helen M. Fessenden, Builder of Tomorrows, N. Y., Coward-McCann, 1940.  
Annotations by BFM.
  13. Frayne, John G. and Wolfe, Halley, Elements of Sound Recording, N. Y., Wiley, 1949.  
Annotations by BFM.
  14. Getting the Most Out of Your Lathe, Milwaukee, Delta Manufacturing Co., c. 1935.
  15. Kinsler, Lawrence E. and Frey, Austin R. Fundamentals of Acoustics, N. Y., Wiley, 1950.
  16. Mason, Warren P. Electromechanical Transducers and Wave Filters, 2d. ed., N. Y., van Nostrand, 1948.
  17. Massa, Frank, Acoustic Design Charts, Philadelphia, Blakiston, 1942.
  18. The New Encyclopedia of Machine Shop Practice, George W. Barnwell, editor. N. Y., Wise, 1941.
  19. Ogden, Robert M. Hearing, N. Y., Harcourt Brace, 1924.
  20. Olson, Harry F. Musical Engineering, N. Y., McGraw-Hill, 1952.
  21. Olson, Harry F. and Massa, Frank. Applied Acoustics, Philadelphia, Blakiston, 1934.
  22. Palmer, Frank R. and Luerssen, George V. Tool Steel Simplified 2<sup>nd</sup> ed., Reading, PA., Carpenter Steel Company, 1948.  
Annotations by BFM.
  23. Petzoldt, Herbert. Elektroakustik. Band 1 Allgemeine Anlagentechnik, Leipzig, Fachbuchverlag, 1951.

## Box 42 File Folders, Books, Photographs

### Folder

1. Records of BFM Inventions, etc., 1918-1920, 1925-1931.  
Ms, blue print dated descriptions of inventions made by BFM, miscellaneous notes, 1918-1920, 1925-1931. Airfone descriptive material, photographs, reports on efforts to interest War Dept., 1918. Clippings re Brunswick "Panatrope" phonograph, 1925.  
  
B & W photographs: boat used of experiments at Gloucester, MA; unidentified radio and electrical apparatus; Airfone; unidentified group including BFM. Some have brief notes, date on back.
2. Kozma, Ladislaus, 1934.  
Schaltungen zur Bestimmung Kleiner Kapazitätsanderung. Dissertation, Technische Hochschule zu Karlsruhe 1934. With typescript English translation, original and carbon copy.
3. Electronic (Stringless) Piano, etc., 1949-1951.  
Ms detailed technical description of principles of operation, characteristics, materials, etc. of electronic piano, 1949-1950; Ms Conventional vs. Electronic Pianos; Ms Stringless Piano. Description of BFM invention, 1947; Mechanical Formant System for Electronic Reed Instruments. Ms description of BFM invention, 1951. Correspondence with patent attorneys R. J. Jurick, C. T. Jacobs.
4. Piano Reed Test Data, 1951.  
Ms notes, descriptions, specifications, sketches for reeds used in electronic piano. Ltr to Wurlitzer re damping of reeds.
5. Electronic Chimes and Bells, 1951.  
Ms (30p) description of BFM invention.
6. Leakproof Fountain Pen, 1949.  
Ms description with sketch of leakproof fountain pen invented by BFM.
7. Frequency Modulation Phonograph Pickups.  
Ms (64p) of paper by BFM. Typescript More Detailed Explanation of the Operation of the Zenith Cobra Phono Pickup and Circuit... BFM note Removed from original and copy 4/4/54.
8. Normally Deflected Vibrator Excitation System. Design for Stringless Piano, 1949, 1950.  
Ms (25p) Combined Exciter and Damper Action for Tuned Vibrators, invented by BFM, Feb 16, 1950. Ms (9p) Design for Stringless Piano, invented by BFM, May 22, 1949. Loose notes.
9. Poynting, J. H. and Thomson, J. J. A Text-Book of Physics: Sound, London, Griffin, 1920.
10. Richardson, E. G. Sound; A Physical Text-Book 2d ed. London, Arnold, 1935.
11. Skudrzyk, E. Die Grundlagen der Akustik. Wien, Springer-Verlag, 1954.
12. [Stahl, A. W. and Woods, A. T.] Elementary Mechanism, N. Y., Van Nostrand.  
Lacks title page.
13. Stewart, George W. and Lindsay, Robert B. Acoustics: A Text on Theory and



- Applications, N. Y., Van Nostrand, 1930.
14. Swenson, George W. Principles of Modern Acoustics, N. Y., Van Nostrand, 1953.
  15. Trendelenburg, Ferdinand, Einführung in die Akustik, Berlin, Springer-Verlag, 1950.
  16. Watson, Leland a. and Tolan, Thomas, Hearing Tests and Hearing Instruments, Baltimore, Williams and Wilkins, 1949.