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## Guide to the John E. Hand & Sons Co. Records

**Creator:** John E. Hand & Sons Company

**Dates:** 1865-2002, and n.d. [bulk dates: 1900-1980]

**Quantity:** 26 linear feet (45 document cases, 7 volumes, 9 flat file drawers and 18 rolls)

**Call Phrase:** Hand Collection

**Provenance:** Donated by Michael Rivkin. ISM number: 2002.38

**Processed by:** Courtney Smerz, with assistance from Judy Stevenson, 2007

**Processing note:** Processing of this collection was made possible by a generous grant from the Albert M. Greenfield Foundation.

**Restrictions:** Access and use restrictions are placed on several files as noted on box and folder lists. Restrictions to be lifted in 2026.

### **Hand Company instruments in Curatorial Department:**

Binnacle and compass with cover, ISM # 1989.46A-B

Depth gauge, ISM # 1987.82.1A-E

Navy Sounding Machine, ISM # 1999.38

Pelorus, ISM # 1995.29.5A-B

Printer's plates, ISM # 2002.38

Plaque, ISM # 2002.38

### **Bibliography:**

Department of the Navy, Bureau of Ships. *Bureau of Ships Consolidated Index of Drawings, Materials and Services Related to Construction and Conversion*. 1965.

Golden, Caron. "John E. Hand & Sons: A Story of an American Marine Instrument Manufacturer," *Nautical World* (April, 1999): 42-49.

Navy Filing Manual. Available online: <http://www.hnsa.org/doc/navyfile/agroup.htm>

**Historical note:** The John E. Hand & Sons Company was founded in Philadelphia in 1873, quickly gaining a reputation as competent manufacturers of nautical instruments and compass adjusters. In fact, John Enos Hand, the company founder, is recognized as “the first man in America to adjust a compass aboard an iron ship.”<sup>1</sup>

The Hand Company built navigational equipment for all varieties of floating vessels, and operated a chain of retail outlets with “service stations” in numerous port cities, including Baltimore and New Orleans, until 1956. Service stations sold Hand instruments as well as other nautical paraphernalia and provided compass adjusting services. Additionally, John E. and his two sons, John L. and Bartram, were inventors, who patented design improvements for numerous instruments that were employed in the company’s work.

Commercial and private contracts dominated the firm’s business until the late 1930s when the United States military began preparations for World War II. Though the Hand Company never completely abandoned its involvement with private industry, after World War II, military contracts monopolized their business. The Company obtained contracts with the Navy, Coast Guard and Marines to develop new instruments, and to build military-engineered nautical equipment. Of note are the wrist compass, developed for the Navy beginning in the 1950s, and the Mark VII Model 5 Navy Standard Binnacle.

Though it moved numerous times, the Hand Company headquarters and factory remained in the Delaware Valley, occupying several buildings in Philadelphia and southern New Jersey. Maintaining its central office in Philadelphia well into the 1900s, the factory was moved to Atco, New Jersey around the turn of the twentieth century and subsequently to Haddonfield, New Jersey. It moved one last time in the 1960s to Cherry Hill, New Jersey.

In 1997, California-based Sunset Cliffs Merchandising Corporation purchased the Hand Company and all its assets for \$100,000.

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<sup>1</sup> Caron Golden, “John E. Hand & Sons: A Story of an American Marine Instrument Manufacturer,” *Nautical World* (April, 1999), 42-49.

**Scope and content:** The collection documents the business activities of the John E. Hand & Sons Company from its institution in 1873 to 1997, when the company was sold. The collection boasts a wide breadth of material that includes legal documents, financial records, patents, correspondence, contracts, reports, catalogs and other ephemera, photographs, and engineering plans. Together, the records provide a thorough account of the firm's operations.

With the exception of catalogs, photographs and measured drawings, materials dating from the late nineteenth and early twentieth centuries are primarily administrative in nature. Financial records and correspondence, for example, detail the day to day activities of the business of making nautical instruments. Later documentation, in contrast, is more technical in content, allowing for a greater understanding of the engineering work completed by the firm at the time.

Researchers should note that there is very little material regarding the personal lives of John E. Hand or his family, however, a few documents are present in the following series: II. John P. Mays Records, VI. Photographs and Negatives, and VIII. Hand Family Memorabilia.

Please review series descriptions and folder lists for further details.

**Arrangement:** The collection is divided into nine series.

The collection's nine series are clustered into three general groups. The first group, comprised of series I to IV, houses textual records, such as correspondence, financial records and reports that document the company's day to day operations over 100 years. The series are produced in chronological order, each representing a distinct period of time in the firm's history and leadership. Due to changes in record keeping behaviors of company managers overtime, each series maintains its own unique arrangement scheme.

Series V to VII contain company catalogs and other ephemera, photographs and negatives, and measured drawings, respectively. These series, as with series I to IV, are based on original record groups created through the day to day work of the Hand Company. Researchers should note that while separate series are designated for record groups, such as photographs and measured drawings, these materials can also be found sporadically throughout the collection, augmenting textual documentation.

Rounding out the collection are series VIII and IX, which house miscellaneous materials that include personal items belonging to John E. Hand and reference materials on compass adjusting.

Collection overview

I	Central file	1873-1995, [bulk: 1904-1958]
	a. Legal Documents	1904, 1911
	b. Financial records	1905-1995, [bulk: 1905-1958]
	c. Patents	1911-1952
	d. Personnel	1893-1965 [bulk: 1940-1950]
	e. Real estate	1905-1963
	f. Early correspondence & subject files	1873-1948, [bulk: 1873-1926]
	g. Correspondence, agreements & contracts	1929-1977, [bulk: 1933-1955]
	h. Newspaper clippings	1898-1969
	i. Offshoot companies	1917-1922
II	John P. Mays Records	1954-1979, n.d.
	a. Instrument development and manufacturing files	1954-1994, [bulk: 1955-1977]
	b. Correspondence and subject files	1957-1977, n.d.
III	Irene Richael Records	1955-2002, [bulk: 1980-1999]
	a. Instrument development and manufacturing files	1955-2002, [bulk: 1967-1997]
	b. Correspondence and subject files, incl. 1998 company sale records	1979-1999, n.d.
IV	Vendor / distributor contacts and purchase orders	1947-1979, n.d.
	a. Kardex file	1946-1948
	b. Index card file	1950-1969, n.d.
V	Catalogs, printed materials and ephemera	1909-1993, n.d.
VI	Photographs and negatives	1873-1990, n.d.
	a. Portraits and snapshots	1873-1987, n.d.
	b. Instruments	1900-1990, n.d.
VII	Measured drawings	1912-1991, [bulk 1912-1980]
	a. Engineering plans created before 1946	1917-1948, n.d.
	b. Parts and Assembly plans created from 1946 to 1948	1941-1963, [bulk: 1946-1948]
	c. Engineering plans created after 1948	1948-1991, n.d.
	d. BuShips and other government issued engineering plans.	1912-1972, n.d.
	e. Aperture cards [issued by BuShips]	1974-1988, n.d.
VIII	Hand Family memorabilia	1865-1955, n.d.
IX	Reference	1927-1969

## **I. Central file, 1873-1995, and n.d. [bulk: 1904-1958]**

Brought together under the umbrella “Central File,” series I is comprised of two original file systems of the same nature, documenting the first eighty-three years of the company’s history. It is by far the most diverse series in the collection and includes legal, financial, patent, personnel and real estate records, newspaper clippings as well as company correspondence and subject files. The series is divided into nine subseries based on the above listed document categories. Collectively, the subseries offer a more thorough overview of business activities than subsequent series; however there is little technical information to specifically document the development or manufacture of nautical instruments.

The Legal; Financial; Patents; Personnel; and Newspaper clippings subseries are arranged chronologically. Real estate; Early correspondence and subject files; Correspondence, Contracts and orders; and Offshoot companies subseries are arranged alphabetically.

Please note that a number of the personnel records are restricted until the year 2026, due to the presence of employees’ social security numbers on the documents.

The researcher is advised to give attention to bulk dates. A number of later documents were included in the series due to their nature or subject matter, however, there is very little in the series dated beyond 1958.

## **II. John P. Mays Records, 1950-1979, and n.d.**

John P. Mays joined the Hand Company as an instrument maker in 1943. By 1956, he was promoted to the position of General Manager, where he served until his retirement in 1977. The records in this series document Mays’s tenure as General Manager. They are divided into two subseries.

Subseries a, Instrument Development and Manufacturing Files, evidences the actual work of the firm, providing a plethora of technical information about the nautical instruments the company produced in the mid-twentieth century. Generally, researchers will find development reports, product manuals, purchase orders, related correspondence and manufacturing contracts for a majority of the products represented. Files on the development and manufacture of a wrist compass for the United States Navy and the Mk VII Mod 5 Navy Standard Binnacle are particularly robust. Records are arranged alphabetically by instrument name. See multiple subseries in Series VII, Measured Drawings for associated engineering plans.

Subseries b, Correspondence and Subject Files, contains all files from Mays’s tenure that were not specifically affiliated with instrument records. In particular, there are numerous files pertaining to the firm’s history. Mays took a special interest in the Company’s early years as it approached its 1973 centennial anniversary. He compiled copies of historic photographs and documents in a scrapbook, which is housed in this subseries. Unrelated to the firm’s history, there is also significant correspondence with Electro Marine Corporation. Files are arranged alphabetically by subject and/or correspondent.

There are no personnel records for this time period.

### **III. Irene Richeal Records, 1955-2002, and n.d., [bulk: 1978-1998]**

Irene Richeal, like John P. Mays, advanced her position within the company. She joined the staff as a secretary in the 1940s; by the late 1970s she was one third owner of the firm and serving as General Manager. The records in this series date circa 1978 to 1998. They also document the company's 1998 sale to San Diego-based company, Deutche-Optik. The series is divided into two subseries.

Subseries a, Instruments, houses information for company produced nautical instruments. Like Mays's records, files are arranged alphabetically by instrument name.

Subseries b, Correspondence and Subject Files, is almost exclusively devoted to records produced through the company sale and associated transfer of instruments, antiques and records in the late 1990s.

### **IV. Vendor/distributor contacts and purchase orders, ca. 1947-1979, and n.d.**

Series IV documents purchases of raw materials, parts and other supplies, and provides contact information for retailers that sold Hand Company products. It is divided into two subseries.

Subseries a. contains a Kardex® card file, which evidences the purchase of raw materials, parts and other supplies used in the manufacture of Hand instruments from 1947 to 1948. The information is organized in three ways. The first group is arranged numerically by parts' identification numbers. Researchers should note that the identification numbers directly correlate to Series VII. Measured Drawings, subseries b. Engineering Plans, 1946-1948, which houses drawings for those parts. The second group is arranged alphabetically by the name of the relevant raw material. For example, all brass parts are filed together under the heading "brass." The third group is arranged alphabetically by part name; all records for the purchase of bolts are filed together. Generally, in each of the three subgroups, researchers will be able to identify for which instrument the part or raw material was purchased, a product description, part identification number, purchase order number and date, quantity purchased and unit price. In addition, there is provided a vendor name with contact information.

Subseries b. houses an index card file that provides information on vendors and suppliers as well as distributors of Hand instruments for the period ca. 1950 to 1979. It, too, is divided into three alphabetically arranged groups. The first is alphabetized by the part or raw material name, providing the names, addresses and phone numbers for all suppliers of that particular product. Following are two alphabetically arranged groups of dealers and distributors that sold Hand instruments in their shops. The groups are dated ca. 1950 to 1960 and ca. 1960 to 1979, respectively. Each card lists the name and location of the company or individual and purchase dates.

## **V. Catalogs, printed material & other ephemera, 1909-1990, and n.d.**

Materials created by the Hand Company to market their products are housed in Series V. In addition there are competitor catalogs, federal specification pamphlets and other printed materials. There are no formal subseries.

Sales catalogs, dating from ca. 1909 to 1915, followed by four catalog-like volumes, dating ca. 1915 and 1956 to 1965, are first in the series. The last volumes are basically assembled brochures, ephemera and photographs. Next, researchers will find issues of "The Nautical Almanac" (published until 1920) and "The Hand Book" (published after 1926). Produced as comprehensive reference guides for seafarers these Hand Company publications included, among other things, tide charts, pertinent addresses, coastal and geodetic surveys, compass reading instructions, Morse code and the Beaufort scale of winds. Other printed materials include, advertising brochures, individual catalog pages, design layout materials and promotional calendars.

Wrapping up the series are numerous competitors' catalogs, federal specifications and other miscellaneous materials.

Please review folder listing for further details.

## **VI. Photographs and Negatives, 1873-1990, and n.d.**

Series VI houses a majority of the collection's photographic prints and negatives. It is divided into two subseries.

Subseries a, Portraits and Snapshots, gathers together images in which the subject matter is other than nautical instruments. Portraits of John E. Hand, his sons and grandsons as well as images of men working in the Atco factory at the turn of the twentieth century offer a glimpse into a more personal side of the business, which is otherwise absent from the collection. Researchers will also find images of nearly all company buildings in Philadelphia and New Jersey.

Subseries b, Instruments, contains a collection of black and white photographs of company manufactured nautical instruments that are presumed to date from the early decades of the twentieth-century. Other prints were added to the record group during processing, dating from the second half of the twentieth century. Photographs are arranged alphabetically by instrument name.

Filed at the end of each of the subseries are negatives of various formats including 2 x 3 in. and 35 mm. While many of the negatives match photographs in the series, there are numerous negatives for which there are no corresponding prints.

## **VII. Measured Drawings, 1912-1991, and n.d., [bulk 1912-1980]**

This series houses engineering plans created or used by the Hand Company from 1912 to 1991. There are original pencil sketches and drawings, reproducibles, blueprints, sepia and diazo prints, photostats, photocopies and microfilm. It is divided into five subseries, which are based on the

date of creation and/or maker. The first three subseries house plans created by the Hand Company. Following, are two subseries of engineering plans created by military agencies.

Subseries a, Engineering Plans Created Before 1946, retains drawings for a variety of nautical instruments designed and/or manufactured by the Hand Company from 1917 to 1946. A chronological arrangement was imposed during processing.

Subseries b, Engineering Plans Created from 1946 to 1948 was created by company engineers, providing for the construction of individual instrument parts and assembly. It is distinguished from other measured drawings subseries in the collection by its design and unique organizational scheme. All drawings within the group maintain the same format, which consists of a signature block in the lower right corner, and identification number and part name noted in the upper right corner. Identification numbers provide the basis for the numerical arrangement scheme.

Three categories of drawings are represented: instrument parts, part assembly diagrams and complete assembly diagrams. Instrument parts drawings are assigned eight digit identification numbers; the first four digits correspond to the general type of part, the last four correspond to the specific part. Please note, however, that folder titles reflect only the first four digits. Part assembly diagrams are identified by a four-digit number preceded by the letter "A," and complete assembly diagram identification numbers are preceded by "CA." A majority of parts plans are drawn to actual size, pictured on 8 ½ by 10 inch sheets of paper. Large format drawings also exist for a number of the plans.

Please note that there are two duplicate sets of drawings. The first houses "reproducible" pencil drawings, and the second consists of blueprint reproductions.

Researchers interested in materials or supplies used in the manufacture of these parts should also consult Series IV. Vendor / distributor Contacts and Purchase Orders, which contains a complimentary file; its organization mimics that of this subseries and it also dates to the mid 1940s.

Subseries c, Engineering Plans Created After 1948, contains drawings for company buildings as well as nautical instruments, dating from 1948 to 1991. A chronological arrangement was imposed during processing, with a group of unidentified drawings filed at the end.

Subseries d, Bureau of Ships (BuShips) and Other Military Issued Engineering Plans, gathers drawings associated with military contracts, identified by military identification numbers and agency names, from 1912 to 1972. The drawings are first grouped by agency; New York Navy Yard, Coast Guard, Bureau of Ships (BuShips), Ships Parts Control Center and the Naval Engineering Center, and then arranged chronologically. Folder titles take the following format: "Creating agency name. "Instrument name and/or title of drawing(s)." Drawing number(s)." Please review box and folder list for more details.

Subseries e, Filmed Engineering Plans (Aperture Cards), is the last subseries in Series VII. It consists of aperture cards, which are machine readable cards containing mounted microfilm. They were issued to the Hand Company by the Navy's Bureau of Ships from 1974 to 1988.

Cards are marked with government assigned drawing numbers that coordinate with numbers assigned to drawings housed in the previous subseries. Please review the folder list for more details.

**VIII. Hand Family Memorabilia, 1865-1955, and n.d.**

Series VIII contains scant nineteenth- and early twentieth- century materials pertaining to the personal life of John E. Hand and his son Bartram.

Please review folder list for further details.

**IX. Reference, 1927-1969**

The last series holds four mid-twentieth-century reference books on the subjects of magnetic properties and compass adjusting.

Please review folder list for further details.

**I. Central File, 1873-1995 [bulk 1904-1956]; a. Legal Documents, 1904, 1911**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Articles of Co-partnership.	1904	1	1
Incorporation papers.	1911	1	2

**I. Central File, 1873-1995 [bulk 1904-1956]; b. Financial Records, 1905-1995 [bulk: 1905-1958]**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Statements & comparison sheets.	1905-1912, n.d.	1	3
Statements & comparison sheets (all company outlets).	1911-1920, n.d.	1	4
Balance sheets.	1911-1932	1	5
Statements & comparisons or balance sheets.	1945, 1947	1	6
Tax records. Reports sent to the Commonwealth of Pennsylvania.	1912-1921	1	7
Tax records. Reports sent to the State of New Jersey.	1913-1922, 1936	1	8
Tax records. Reports sent to the United States Government.	1913-1924, n.d.	1	9
Tax records. Receipts.	1913-1924, n.d.	1	10
Tax records. General finances.	1917, 1921	1	11
Tax records.	1921-1925, n.d.	1	12
Tax records. Correspondence with IRS.	1921	1	13
Tax records. Excess profits.	1941-1945	1	14
Tax records.	1942-1948	1	15
Tax records. "Carryover, carry back." 1:2	1937-1942	1	16
Tax records. "Carryover, carry back." 2:2	1943-1948	1	17
Tax records. Letters to the IRS	1970	1	18
Annual reports.	1947-1948	1	19
Business census.	1919, 1921, 1923	1	20
Business census.	1939, 1948-1954, 1983	1	21
Lending agencies. R.G. Dun & Company.	1911-1921	1	22
Lending agencies. New Jersey Bankers Association.	1912-1921	1	23
Lending agencies. Bradstreet Company.	1917-1920, n.d.	2	1
Lending agencies. First Camden Bank and Trust Co.	1927-1935	2	2
Lending agencies. Reconstruction Finance Corporation.	1945, 1949	2	3
Lending agencies. United States. Small Business Administration. 1:2	1955-1958, 1995	2	4
Lending agencies. United States. Small Business Administration. 2:2	1956-1958	2	5
Miscellaneous. Transfer of stock, company insurance, and receipts.	1919-1921	2	6
Miscellaneous. Pass book (Newport News, VA).	1920-1921	2	7
Miscellaneous. Liberty Bonds.	1920-1921	2	8
Miscellaneous. Transfer of stock between Hand and George Evans & Frank Godley.	1926	2	9
Miscellaneous. Company appraisal.	1942	2	10

**I. Central File, 1873-1995 [bulk: 1904-1956]; c. Patent records, 1911-1952**

Folder Title	Date	Box	Folder
Transfer of Patent # 649771.	1911	2	11
Patent # 1282075, instrument for taking soundings.	1918	2	12
Patent # 1614240, nautical instruments.	1927	2	13
Patent, interference # 63349, "Titterington v. Hand."	1933, n.d.	2	14
Patent # 1973808, magnetic compass corrective device.	1934	2	15
Patent # 1990939, systems for compensating a navigational compass.	1935	2	16
Patent # 1990940, compensation devices for compasses.	1935	2	17
Patent # 2069065, compasses.	1937	2	18
Patent # 2613468, fishing reel.	1949-1952	2	19
Application.	1914-1915	2	20
Application, illuminating device.	1945-1946	2	21
Miscellaneous. Unidentified drawings, correspondence and other records.	1945, n.d.	2	22
Patents – NOT HAND.	1888, 1914, 1926	2	23

**I. Central File, 1873-1995 [bulk: 1904-1956]; d. Personnel, 1893-1965 [bulk: 1940-1950]**

Folder Title	Date	Box	Folder
[Apprenticeships], notes re contract beginnings.	1893	2	24
Selective Service Registration. See also: I. Central file / f. Early Correspondence and Subject Files / f. Emergency Fleet Corp., 1918	1918	2	25
Employee contracts.	1922-1923, 1929	2	26
Department of Labor (incl. list of staff with wages).	1940-1943, 1965, n.d.	2	27
Employee profile cards, tax withholding forms, and war bonds (photocopies for research use).	1940-1948	2	28
Employee profile cards, tax withholding forms and war bonds. <b>RESTRICTED until 2026.</b>	1940-1948	2	29
"Standard Practice Instruction Manual," employee handbook from Baltimore store.	1944	2	30
"Notice to all Employees."	1948	2	31
Payroll ledger. <b>RESTRICTED until 2026.</b>	1944-1951	Vol. 1	

**I. Central File, 1873-1995 [bulk: 1904-1956]; e. Real estate, 1905-1963**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Baltimore, MD (lease agreements).	1905-1952	2	32
Cherry Hill, NJ (purchase agreement).	1963	3	1
Haddonfield, NJ (deeds, mortgage, lease and correspondence).	1897-1919, 1936	3	2
New Orleans, LA (lease agreement).	1924	3	3
Newport News, VA (lease agreement).	1918	3	4
Norfolk, VA (bill of sale, and lease agreements).	1919, 1925-1931	3	5
Philadelphia, PA: 208 Chestnut Street (mortgage and insurance papers, deed, and bond and warrant).	1901-1930	3	6
Philadelphia, PA: 208 Chestnut Street (title papers).	1902-1931	3	7
Philadelphia, PA: 222-224 Walnut Street (lease agreement).	1904, 1917	3	8

**I. Central File, 1873-1995 [bulk: 1904-1956]; f. Early correspondence and subject files, 1873-1948 [bulk: 1873-1926]**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Deviation tables (in John E's hand), certificates and other early records.	1873-1889	3	9
Correspondence and other materials.	1900-1920	3	10
Adding machine.	1915	3	11
Advertising contracts.	1912-1914	3	12
Bethlehem Shipbuilding Corporation.	1920	3	13
Board of directors meeting minutes and proxy forms.	1928-1931, 1948	3	14
Emergency Fleet Corporation.	1918	3	15
"Examination of the directive power of the compass by means of the universal deflector."	n.d.	3	16
Gulf Refining Company.	1919	3	17
J.V. Falck Supply Company.	1920-1921	3	18
Marine Hardware and Supply Company (promissory notes).	1920-1921	3	19
Philadelphia Electric Company.	1913	3	20
Pusey and Jones Company.	1920	3	21
[Sales book].	1918-1926	3	22
Telephone service.	1906-1919	3	23
Virginia Shipbuilding Corporation (Alexandria, Va.).	1921	3	24
William Cramp & Sons Ship and Engine Building Co.	1920	3	25
Miscellaneous contracts, agreements and bills of sale.	1907-1923	3	26

**I. Central File, 1873-1995 [bulk: 1904-1956]; g. Correspondence, contracts & orders, 1929-1977  
[bulk: 1933-1955]**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Advertising contracts.	1947, 1959	3	27
Airplane & Marine Direction Finder.	1931-1932	3	28
American Car and Foundry Company.	1934, 1939-1940, 1948	3	29
Baker, Lyman and Company. See also: I. Central File / g. Correspondence, contracts & orders / f. "Ship yard price information," 1934, n.d.	1940	3	30
Baltimore Store, customer list.	1952	3	31
Bath Ironworks Corporation.	1940	3	32
Bethlehem Shipbuilding Corporation.	1933	3	33
Bethlehem Steel Company.	1937-1940, 1948, n.d.	3	34
"Binnacle Assembly."	n.d.	3	35
Charleston Shipbuilding & Dry Dock Co.	1940	3	36
"Compass adjusting."	1943-1945	4	1
Consolidated Shipbuilding Corp.	1940	4	2
Defoe Boat & Motor Works.	1933-1934	4	3
Department of Commerce.	1934, 1939-1940	4	4
E.J. Willis Co.	1935-1937	4	5
Elisha Webb & Son Co.	1948	4	6
Fulton Sylphon Co.	1947	4	7
General Electric Company.	1947-1948	4	8
General Engineering and Dry Dock Co.	1933	4	9
Gibbs & Cox.	1948	4	10
"Government Form of Bid."	1935-1937, 1940, n.d.	4	11
Gulfport Boiler & Welding Works, Inc.	1939	4	12
Ingalls Shipbuilding.	1939-1940, 1948	4	13
Instruments. Crusader.	n.d.	4	14
Instruments. Lifeboat compass.	1943-1949, 1967, 1976, 1977, n.d.	4	15
Instruments. Pneumatic expansion compass (drawing of jewel post & cage assembly).	1941	4	16
Instruments. Sextants.	1942-1951	4	17
Instruments. Sounding machine.	1941	4	18
Instruments. Telespeed (contains blueprints).	1935-1938, 1940, n.d.	4	19
Intercontinent Corporation.	1939	4	20
Jersey Central Power and Light Company.	1948	4	21
John H. Mathis Co. (Camden, N.J.).	1939, 1940	4	22
Levingston Shipbuilding Co.	1948	4	23
Luders Marine Construction Co.	1934, 1940	4	24
Manitowoc Shipbuilding & Dry Dock Co. (Manitowoc, Wis.).	1934, 1940	4	25
Marietta Manufacturing Co.	1934	4	26
Maryland Drydock Company.	1939-1940, 1948, n.d.	4	27
Mathis Yacht.	1940	4	28

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Megaphones. See also: I. Central File / g. Correspondence, contracts & orders / f. Newport News Shipbuilding, 1938-1948	1947, n.d.	4	29
Moore Dry Dock Company.	1933, 1938-1940	4	30
National Bulk Carriers.	1940	4	31
Naval Supply Depot, Norfolk, VA.	1934-1940, n.d.	4	32
Navy bids, Mare Island, CA.	1932-1942, n.d.	4	33
Navy bids, New York Naval Yard.	1935, 1937, 1940	4	34
Navy bids, Norfolk VA.	1932-1942, n.d.	4	35
Navy bids, Philadelphia Naval Yard.	1935, 1940	4	36
Navy bids, San Diego and San Francisco, CA.	1932-1943	4	37
Newport News Shipbuilding & Dry Dock Co.	1938-1948, n.d.	4	38
Newport News Shipbuilding & Dry Dock Co.	1945-1947	4	39
New York Shipbuilding Corporation.	1934, 1946-1947, n.d.	4	40
“Order reports.”	1944, 1945	5	1
Peden Iron & Steel Co.	1939, 1940	5	2
Preservation Iron Foundry. See also: I. Central file / g. Correspondence, contracts & orders/ f. “Government form of bid,” 1935-1937, 1940, n.d	1937	5	3
Philadelphia Chamber of Commerce.	1948	5	4
Pusey & Jones Corporation.	1933-1934, 1937- 1940, 1948	5	5
Quaker City Gear Works, Inc.	1946	5	6
[Sales book], “Binnacles, Type and No.” (Also incl. PEX compass).	1929-1946	5	7
Sheffler-Gross Co.	1947	5	8
Sun Shipbuilding and Dry Dock Company.	1934-1940, 1948	5	9
Ship Chandlers, Inc.	1951	5	10
“Ship Yard Price Information.”	1934, n.d.	5	11
Spedden Shipbuilding Co., Inc.	1939-1940	5	12
Sturgeon Bay Shipbuilding & Dry Dock Co.	1940	5	13
T.S. & J.D. Negus.	1931-1934, 1947	5	14
Tampa Shipbuilding and Engineering Co.	1938, 1939	5	15
[Traveling salesman reports].	n.d.	5	16
United Dry Docks, Inc. (Staten Island, N.Y.).	1933	5	17
United States. Army. Corps of Engineers; and “Water Craft Amphibians.”	1934, 1940, n.d.	5	18
United States. Army. European Theater of Operations.	n.d. [ca. 1945]	5	19
United States. Bureau of Lighthouses, Philadelphia.	1939	5	20
United States. Coast Guard. See also: I. Central file / g. Correspondence, contracts & orders / Instruments. Lifeboat compass, 1943-1949, 1967, 1976, 1977, n.d.	1933-1940, 1948, n.d.	5	21
United States. Coast Guard. Re: Kelvin & Wilfred O. White & Co.	1934	5	22

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
United States. Maritime Commission. See also: I. Central file / g. Correspondence, contracts & orders / f. Instruments. Lifeboat compass, 1943-1949, 1967, 1976, 1977, n.d.	1938-1940, 1948	5	23
United States. National War Labor Board.	1943, n.d.	5	24
United States. Navy. Contract Information.	1945, 1949	5	25
United States. Navy Yard (various).	1932-1948, n.d.	5	26
United States. War Shipping Administration Price Adjustment Board.	1943-1945, n.d.	5	27
War Damage Corporation.	1942	5	28
William Cramp & Sons Ship and Engine Building Co.	1939	5	29
William Messer Corp.	1948, n.d.	5	30
Multiple correspondents.	1934	5	31
Multiple correspondents.	1940	5	32
Multiple correspondents.	1948, 1950-1951, 1955, n.d.	5	33
Miscellaneous notes.	1946, n.d.	5	34

**I. Central File, 1873-1995 [bulk: 1904-1956]; h. Newspaper clippings, 1898-1969**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
News clippings (photocopies).	1898-1969	6	1
News clippings. <b>FRAGILE, use photocopies.</b>	1898-1927	6	2
News clippings. <b>FRAGILE, use photocopies.</b>	1927-1969	6	3
News clippings, incl. printing plate.	1969, 1970	41	1

**I. Central File, 1873-1995 [bulk: 1904-1956]; i. Offshoot Companies, 1917-1922**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Kramer Manufacturing Company, certificate of incorporation.	1917	6	4
Kramer Manufacturing Company, financial information.	1921	6	5
Leonard-Lawrence Co., certificate of incorporation.	1921-1922	6	6

**II. John P. Mays Records, 1954-1979, n.d.; a. Instrument Files, 1954-1994, n.d. [bulk: 1955-1977]**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Binnacle. Mk VII Mod 2.	1962, 1964, 1966-1967, n.d.	6	7
Binnacle. Mk VII Mod 4, redesign.	1967	6	8
Binnacle. [Mk VII Mod 5], NSR 103 Reflector binnacle, general info. <i>See also:</i> II. John P. Mays Records / a. Instrument files / f. Binnacle. Mk VII Mod 5, contract # N00104-68-D-0015, 1967-1969, n.d.	1968, n.d.	6	9
Binnacle. Mk VII Mod 5, correspondence & other records.	1963-1975, n.d.	6	10
Binnacle. Mk VII Mod 5, reflector adaptor kit.	1967-1968	6	11
Binnacle. Mk VII Mod 5, test report, "Environmental Testing."	1967	6	12
Binnacle. Mk VII Mod 5, test report, "Shock & Vibration Testing."	1968	6	13
Binnacle. Mk VII Mod 5, "Preliminary Manual for US Navy Standard Reflector Binnacle Mk VII Mod 5."	April 15, 1969, n.d.	6	14
Binnacle. Mk VII Mod 5, Compass reader and compass card.	1976	7	1
Binnacle. Mk VII Mod 5, Reflector binnacle dome.	1977	7	2
Binnacle. Mk VII Mod 5, "Lens & Mirror Housing Assembly."	n.d.	7	3
[Binnacle. Mk VII Mod 5], purchase orders.	1967-1969	7	4
Binnacle. Mk VII Mod 5, receipts.	1967-1969, 1975	7	5
[Binnacle. Mk VII Mod 5], parts certification.	1968-1970	7	6
Binnacle. Mk VII Mod 5, miscellaneous.	1968	7	7
Binnacle. Mk VII Mod 5, contract # N00104-68-D-0015.	1967-1969, n.d.	7	8
Binnacle. Mk VII Mod 5, contract # N00104-68-D-0015.	1968	7	9
Binnacle. Mk VII Mod 5, contract # N00104-70-D-0314, purchase orders.	1969	7	10
Binnacle. Mk VII Mod 5, contract # N00104-70-D-0314, inspection reports.	1969-1970, n.d.	7	11
Binnacle. Mk VII Mod 5, contract # N00104-70-D-0314, inspection reports, receiving & other records.	1969	7	12
Binnacle. Mk VII Mod 5, contract # N00104-70-D-0314.	1969-1971, n.d.	7	13
Binnacle. Mk VII Mod. 5, contract # N00104-76-C-3644.	1976	7	14
Binnacle. Mk VII Mod 5, measured drawings (mostly photocopies).	1967-1968, 1971, n.d.	7	15
Binnacle. Mk VII Mod 5, photographs (color & b/w).	n.d.	7	16
Binnacle. Mk VII Mod 5, negatives & color slides.	n.d.	7	17
Binnacle. Mk VII Mod 5, miscellaneous notes.	1967-1968, 1970, n.d.	7	18
Binnacle. Mk VII Mod 5, catalogs (NOT HAND).	n.d.	7	19
Binnacle. K-2 Coil, "Mk VII Mod 5 with K-2 Coil."	1971	8	1
Binnacle. K-2 Coil, "Changes Required to Adapt K-2 Coil to Mk VII Mod 4 and 5 Binnacles."	1972	8	2

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Binnacle. K-2 Coil, "Changes Required to Adapt 7 ½ in. Compass FSN 6605-464-6162 to Early Models of Mk VII Navy Binnacles."	n.d.	8	3
Binnacle. K-2 Coil, correspondence & other records.	1971-1972, n.d.	8	4
Binnacle. TR 100, reflector binnacle, general correspondence.	1973-1978, n.d.	8	5
Binnacle. TR 100, reflector binnacle, general information.	1974-1978	8	6
Binnacle. TR 100, reflector binnacle, instrument description and instructions for correcting.	n.d.	8	7
Binnacle. TR 100, reflector binnacle, purchase orders.	1977, n.d.	8	8
Binnacle. TR 100, reflector binnacle, photographs & negatives.	n.d.	8	9
Binnacle. TR 100 (also TX 100, TR 101), reflector binnacle, miscellaneous measured drawings.	n.d.	8	10
Binnacle. Mk II Mod 0, "Technical Manual" & other records.	1971, 1972, n.d.	8	11
Binnacle. Mk II Mod 0, contract # N00104-70-D-0350, Technical Manual.	n.d. [1970]	8	12
Binnacle. Mk II Mod 0, contract # N00104-71-C-1645, Technical Manual.	[1971]	8	13
Binnacle. No. 3, order for drawings.	1972	8	14
Binnacle/ Compass. No. 3, general correspondence & other records.	1965, 1990, n.d.	8	15
Binnacle/ Compass. No. 3, correspondence with United States Coast Guard.	1970	8	16
Binnacle/ Compass. No. 3, correspondence with Henschel Corp.	1973	8	17
Binnacle/ Compass. No. 3, adjusting.	1970, n.d.	8	18
Binnacle/ Compass. No. 3, mounting & adjusting instructions.	n.d.	8	19
Binnacle/ Compass. No. 3, parts list, diagram and manufacturing instructions.	1962, 1967, 1994	8	20
Binnacle/ Compass. No. 3, parts, flinders bar elements.	1969, n.d.	8	21
Binnacle/ Compass. No. 3, parts, nameplate.	1972	8	22
Binnacle/ Compass. No. 3, purchase orders.	1967-1968	8	23
Binnacle/ Compass. No. 3, photos & slides.	n.d.	8	24
Binnacle/ Compass. No. 3, measured drawings.	1967-1972, n.d.	8	25
Binnacle/ Compass. No. 3, miscellaneous notes.	n.d.	8	26
Binnacle/ Compass. No. 3, contract # N00024-67-M-5344.	1966-1967	8	27
Binnacle/ Compass. No. 3, contract # N00024-68-C-5152.	1967-1968	9	1
Binnacle/ Compass. No. 3, contract # N00024-68-C-5152, photos, slides & microfilm.	n.d.	9	2
Binnacle/ Compass. No. 3, contract # N00024-69-M-5192.	1969	9	3
Compass. No. 5, Illumination, type B light assembly information (for Government of Israel).	1977, 1979, 1982	9	4
Compass. No. 5, "For the Government of Israel."	1979	9	5
Compass. No. 5 (Mk II Mod 0), "Schedule of Material: Quantity Required for One. . . ."	n.d.	9	6

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Compass. No. 5, contract # N00104-76-D-5926, includes mounting instructions.	1958-1959, 1976, n.d.	9	7
Compass. 6 in. compass.	1961, 1966	9	8
Compass. Mk 8, Technical Manual	1962	9	9
Compass. Mk 8, proposal and other miscellaneous information.	1968	9	10
Compass. Navy 7 ½ in., Mk I Mod 1, "Proposed Redesign. . ."	1968, 1973, n.d.	9	11
Compass. Mk I Mod 3.	1976	9	12
Compass. Compass reader.	1958, 1972	9	13
Compass. OSD 100, Subsea Compass.	1973, 1975, n.d.	9	14
Compass. Proposed Auto Compass.	1974	9	15
Compass. LMC 101-D Lifeboat Compass, light stick illumination.	1977	9	16
Digicourse. Includes measured drawings.	1976-1977	9	17
Digicourse. Promotional materials.	1977	9	18
Indicator Position Angle.	1974	9	19
Portable Wind Direction Instrument.	n.d.	9	20
"Sample quality control."	1969, n.d.	9	21
Thruster Lever.	1975	9	22
Wrist Compass. "1) Contract information."	1964-1965, n.d.	9	23
Wrist Compass. "2) Miscellaneous test reports."	1964-1965	9	24
Wrist Compass. "3) Quotations."	1963-1965	9	25
Wrist Compass. "4) Part # 1, bowl."	1964-1965, n.d.	9	26
Wrist Compass. "5) Part # 2, course ring."	1964-1965	10	1
Wrist Compass. "6) Part # 3, course ring cover – bottom."	1964	10	2
Wrist Compass. "7) Part # 4, course ring cover – top."	1964-1965	10	3
Wrist Compass. "8) Part # 5, bowl cover."	1964	10	4
Wrist Compass. "9) Part # 6, jewel post."	1964	10	5
Wrist Compass. "10) Part # 7, jewel."	1964-1965	10	6
Wrist Compass. "11) Part # 8, retainer disc."	1964-1965	10	7
Wrist Compass. "12) Part # 9, retainer ring."	1964	10	8
Wrist Compass. "13) Part # 10, diaphragm."	1964-1965	10	9
Wrist Compass. "14) Part # 11, pivot."	1964-1965, n.d.	10	10
Wrist Compass. "15) Part # 12, pivot cap."	1964	10	11
Wrist Compass. "16) Part # 13, magnet holder."	1964	10	12
Wrist Compass. "17) Part # 14, magnets."	1964-1965	10	13
Wrist Compass. "18) Part # 15, spring."	1956, 1964-1965	10	14
Wrist Compass. "19) Part # 16, card."	1964	10	15
Wrist Compass. "20) Part # 17, wrist strap."	1963-1965	10	16
Wrist Compass. "21) Part # 18, screw."	1965	10	17
Wrist Compass. "22) Part # 19, filler plug gasket."	1964-1965	10	18
Wrist Compass. "23) Part # 20, compass liquid."	1963, 1965	10	19
Wrist Compass. "24) Part # 21, screw."	1965	10	20
Wrist Compass. "Cost per unit."	1964	10	21
Wrist Compass. Mk I Mod 1, parts lists with prices.	n.d.	10	22
Wrist Compass. Mk I Mod 1, Phase I.	1965-1966	10	23
Wrist Compass. Mk I Mod 1, Phase I.	1967	10	24

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Wrist Compass. Mk I Mod 1, Phase I, Interim Report.	Sept. 1965 to April 1966	10	25
Wrist Compass. Mk I Mod 1, [Phase I], Interim report.	April to Oct. 1966	10	26
Wrist Compass. Mk I Mod 1, Phase II, redesign.	1967	10	27
<b>See also:</b>			
<b>II. John P Mays / a. Instrument files / f. Wrist Compass.</b>			
Contract no. Nobs 94002, "Wrist Compass Design," 1965-1969.			
Wrist Compass. Mk I Mod 1, Phase II, Interim Report.	July to No. 1967	10	28
Wrist Compass. [SK 1007], proposed change in design.	1968	10	29
Wrist Compass. SK 1007, Test Reports 1-3.	1969-1970	10	30
Wrist Compass. SK 1007, Test Reports 1-5 with related correspondence.	1969, 1970	10	31
Wrist Compass. LS-100, correspondence.	1966-1971, n.d.	10	32
Wrist Compass. LS-100, general information.	n.d.	11	1
Wrist Compass. LS-100, development drawings.	1969	11	2
Wrist Compass. LS-100, photographs, negatives and measured drawing.	n.d.	11	3
Wrist Compass. LS 3, general information.	1978	11	4
Wrist Compass. Packing lists & test certification forms.	1964-1965	11	5
Wrist Compass. Correspondence & inspection reports.	1965, 1966, n.d.	11	6
Wrist Compass. Correspondence.	1965-1969	11	7
Wrist Compass. Correspondence.	1970-1972, n.d.	11	8
Wrist Compass. Correspondence.	1968, 1974-1979, 1982, n.d.	11	9
Wrist Compass. Correspondence with Westinghouse Electric Corp.	1969-1970, n.d.	11	10
Wrist Compass. General information.	1968	11	11
Wrist Compass. Sketches and measured drawings.	1965-1969, n.d.	11	12
Wrist Compass. Parts purchase orders.	1967, 1971-1973	11	13
Wrist Compass. Product testing, environmental tests.	1969	11	14
Wrist Compass. Product testing, "Test Report #2."	1969	11	15
Wrist Compass. Product testing.	1970	11	16
Wrist Compass. Operating & storage instructions.	n.d.	11	17
Wrist Compass. Sample parts.	n.d.	11	18
Wrist Compass. Materials catalog (NOT HAND).	n.d.	11	19
Wrist Compass. Contract # Nobs 66367.	1954-1955	12	1
Wrist Compass. Contract # Nobs 78324.	1958-1962	12	2
Wrist Compass. Contract # N104-2518A.	1963-1964, n.d.	12	3
Wrist Compass. Contract # N104-3788A.	1964-1965	12	4
Wrist Compass. Contract # Nobs 94002, "Wrist Compass Design" (contains photographs).	1965-1969	12	5
<b>See also:</b>			
<b>II. John P. Mays / a. Instrument files / f. Wrist compass. Phase II, 1967.</b>			
Wrist Compass. Contract #'s N104-19516A and N00104-67-B-1746.	1967-1968	12	6
Wrist Compass. Contract # N00104-68-D-0036.	1967	12	7

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Wrist Compass. Contract # Nobs 94002.	1970	12	8
Wrist Compass. Contract # Nobs 94002.	February 1970	12	9
Wrist Compass. Contract # N00104-73-R-ZH46.	n.d. [1973]	12	10
Wrist Compass. Contracts.	1964-1967	12	11
Wrist Compass. Contracts.	1967-1968	12	12
Wrist Compass. Advertisement in Collier's Magazine.	May 27, 1955	43	1
Multiple Instruments. Compass jewels.	1978	12	13
Unidentified. Parts lists.	n.d.	12	14
Unidentified. Parts calibration.	1969-1974	12	15
Unidentified. Purchase orders.	1968-1969	12	16
Unidentified. Certificates of compliance from Engar Machine Company.	1972	12	17
Unidentified. Miscellaneous, measured drawings.	n.d.	12	18
Unidentified. Page from manual, "Installation of Compass Correction Components."	n.d.	12	19
Unidentified. Miscellaneous: purchase orders, test reports, inspection reports, correspondence, photographs and other materials.	1958-1989, n.d.	12	20

**II. John P. Mays Records, 1954-1979, n.d.; b. Correspondence and subject files, 1957-1977, n.d.**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Advertisements.	1958-1959	12	21
"Amendment to invitation to bid."	1957	12	22
Baker, Lyman and Company.	1961, n.d.	12	23
Company Boat, <i>Evaluator</i> , logbook.	1960	12	24
Company Boat, <i>Evaluator</i> .	1972-1974, n.d.	13	1
Company Boat, <i>Evaluator</i> .	n.d.	13	2
Company Building. Cherry Hill, NJ, photograph album. <i>See also:</i> VI. Photographs / a. Portraits and snapshots / f. Building, Cherry Hill, NJ, 1963, 1965, n.d.	1969	13	3
Company History. "Contents of Nautical Room."	1976	13	4
Company History. Scrapbook. 1:3	1969-1973	13	5
Company History. Scrapbook. 2:3	1969-1973	13	6
Company History. Scrapbook. 3:3	1969-1973	13	7
Company History. [Scrapbook, layout] incl. negatives.	n.d.	13	8
Company History. Narratives about John E. Hand & early company history.	n.d.	13	9
Electro Marine Corporation. General correspondence.	1969-1976, n.d.	13	10
Electro Marine Corporation. "Installation and Instruction for Model 600 Radio – Beacon System with Antenna and Pressure Case."	n.d.	13	11
Electro Marine Corporation. "Report Covering Evaluation Tests Electro Magnetic Compass System Conducted on U.S. Coast Guard Cutter <i>PT Turner</i> WPB82365."	1969	13	12
Electro Marine Corporation. "Technical Manual for Solid State Inverters Models 111-D to 113-D."	n.d.	13	13

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Electro Marine Corporation. Brochures for multiple products.	n.d.	13	14
Electro Marine Corporation. "A New Electro-Magnetic Compass System."	1969	13	15
Electro Marine Corporation. Report, "Electric Remote Reading Compass System."	1968	13	16
Manual. "Compass Adjusting for Small Boat Owners," by John F. Vandegrift.	1971	13	17
"Quality Control System," by John P. Mays.	1962	14	1
Samuel T. Freeman & Co. Auctioneers, company auction.	n.d.	14	2
Ships Parts Control Center, Mechanicsburg, PA.	1963	14	3
[Trade Show], unbound volume.	n.d.	14	4
Miscellaneous, notes, list of Company owned machinery and equipment, and other items.	1957, 1973, n.d.	14	5
Miscellaneous, correspondence.	1963-1974, 1977, n.d.	14	6

### III. Irene Richeal Records, 1955-2002, n.d.; a. Instruments, 1955-2002 [bulk: 1967-1997]

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Binnacle. Mk VII Mod 5.	1967-1991, n.d.	14	7
Binnacle. Mk VII Mod 5.	1973-1999, n.d.	14	8
Binnacle. Mk VII Mod 5.	1985-1997, n.d.	14	9
Binnacle. Mk VII Mod 5, Technical information, also incl. information regarding flinders bar.	1972-1987	14	10
Binnacle. Mk VII Mod 5 & 7 ½ in. Compass (National Steel and Shipbuilding).	1991-1995, n.d.	14	11
Binnacle. Navy Standard Binnacle and Reflector Hood, reel assembly.	1968-2002, n.d.	14	12
Binnacle. Mk II Mod 1, Correspondence.	1986, n.d.	14	13
Binnacle. No. 3, Test Reports, Shock & Vibration Tests.	1984	14	14
Binnacle. No. 3, Test Reports, Shock & Vibration Tests, includes associated correspondence.	1982-1984	14	15
Binnacle. No. 3, Contract # N64281-83-M-0473.	1983-1987	15	1
Binnacle/ Compass. No. 3, Engineering change proposal.	1971-1983, n.d.	15	2
Binnacle/ Compass. No. 3, Wire change.	1979, 1992	15	3
Binnacle/ Compass. No. 3, Test Reports, Shock & Vibration Tests.	1968-1983, n.d.	15	4
Binnacle/ Compass. No. 3.	1970-1990, n.d.	15	5
Binnacle/ Compass. No. 3 (Henschel Corp.).	n.d.	15	6
Compass. No. 3.	1979-1996, n.d.	15	7
Compass. 7 ½ in. Reflector compass.	1988-1992	15	8
Compass. No. 5 Boat compass.	1965-1994, n.d.	15	9
Compass. No. 5 Boat compass.	1968-1970	15	10
Compass. No. 5 Boat compass, includes production time sheets and parts lists.	1976-1985, n.d.	15	11
Compass. No. 5 Boat compass, "Light Cap Assembly 01-300-8233."	1972-1996, n.d.	15	12

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Compass. No. 5 Boat compass, "Mod 5-2 Reflector Compass Reader & Light Shield."	1979, 1981, n.d.	15	13
Compass. No. 5 Boat compass, bracket assembly.	1986, 1998, n.d.	16	1
Compass. No. 5 Boat compass, correction indicating device, incl. photographs.	1979, 1980, n.d.	16	2
Compass. No. 5 Boat compass, shipping.	1998	16	3
Compass. [No. 5 Boat compass], contract # N00104-87-M-TP65.	1987	16	4
Compass. 4 in. Cruiser compass and 5 in. Hansphere compass.	1955-1995, n.d.	16	5
Compass. Adjusting instructions.	1980, 1983, 1985, n.d.	16	6
Compass. Compass card "artwork." <i>See also:</i> V. Catalogs, printed materials & other ephemera / f. "Artwork," compass card designs, 1969-1986, n.d.	1979, n.d.	16	7
Compass. Repair & other miscellaneous information.	1979-1980, n.d.	16	8
Compass. Compass Readers.	1962-1995, n.d.	16	9
Pelorus. 4 ½ in. Illuminated Pelorus, 0236 Mk I Mod 1.	1981, n.d.	16	10
Nameplates. Transparencies, multiple instruments.	1970s, 1980s	42	1

### III. Irene Richeal Records, 1955-2002, n.d.; b. Correspondence and subject files, 1979-1999, n.d.

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Brown & Bigelow, re: advertising calendars.	1990	16	11
Ritchie Navigation Instruments.	1987	16	12
Company Sale. Sunset Cliffs Merchandizing Corporation. Company sale agreement & associated documentation.	1997	16	13
Company Sale. Transition, packing lists (instruments sent to San Diego).	1997-1998	16	14
Company Sale. Transition, general correspondence (mostly letters forwarded to San Diego).	1989, 1997-1998, n.d.	16	15
Company Sale. Transition, general correspondence & other records.	1986, 1995, 1998-1999, n.d.	16	16
Company Sale. Transition, general correspondence & other records.	1997-1998, n.d.	16	17
Company Sale. Transition, purchase orders & invoices.	1997-1999	16	18
Company Sale. Deutche-Optik, Feld-Fraktions-Periskop.	n.d.	16	19
Miscellaneous. Typescript of article "John E. Hand & Sons," by Caron Golden.	1998	16	20
Miscellaneous. Correspondence, certificate of approval from Coast Guard, and other records.	1979, 1997, n.d.	16	21

**IV. Vendor / distributor contacts and purchase orders, 1947-1969, n.d.; a. Kardex® card file, 1947-1948**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
0001-0005 to 0025-0040.	1947-1948	17	1
0026-0001 to 0051-0017.	1947-1948	17	2
0052-0002 to 0062-0015.	1947-1948	17	3
0064-0003 to 0074-0005.	1947-1948	17	4
0075-0001 to 0094-0009.	1947-1948	17	5
0095-0001 to 0128-0002.	1947-1948	17	6
Balls & bearings.	1947-1948	18	1
Drill rod.	1947-1948	18	2
Gauge stock.	1947-1948	18	3
Rawhide, handles, & locks.	1947-1948	18	4
Rivets & screws.	1947-1948	18	5
Sockets, receptacles, & plugs.	1947-1948	18	6
Sounding tubes, rods & wire.	1947-1948	18	7
Telephones, radio parts, lamps, & bulbs.	1947-1948	18	8
Wire.	1947-1948	18	9
Final assembly.	1947-1948	18	10
Aluminum rod & sheet.	1947-1948	19	1
Brass rod.	1947-1948	19	2
Brass sheet.	1947-1948	19	3
Brass tube & angle.	1947-1948	19	4
Brass parts (various).	1947-1948	19	5
Bronze rod, strip & sheet.	1947-1948	19	6
Copper strip.	1947-1948	19	7
Steel rod.	1947-1948	19	8
Enamel, varnish, & paint.	1947-1948	19	9
Glass, vinylite, plexiglass, & plastic.	1947-1948	19	10
Rubber & neoprene.	1947-1948	19	11
Wood.	1947-1948	19	12
Miscellaneous. 1:2	1947-1948	19	13
Miscellaneous. 2:2	1947-1948	19	14

**IV. Vendors & Distributors, 1947-1969, n.d.; b. Index Card File, 1950-1969, n.d.**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Products and materials A-C.	n.d.	20	1
Products and materials D-H.	n.d.	20	2
Products and materials I-O.	n.d.	20	3
Products and materials P-R.	n.d.	20	4
Products and materials S-W.	n.d.	20	5
Dealers & Distributors A-C.	1950-1959	20	6
Dealers & Distributors D-G.	1950-1959	20	7
Dealers & Distributors H-L.	1950-1959	20	8
Dealers & Distributors M-N.	1950-1959	20	9
Dealers & Distributors O-R.	1950-1959	20	10

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Dealers & Distributors S.	1950-1959	20	11
Dealers & Distributors T-Z.	1950-1959	20	12
Dealers & Distributors A-E.	1960-1969	20	13
Dealers & Distributors F-M.	1960-1969	20	14
Dealers & Distributors N-W.	1960-1969	20	15

**V. Catalogs, printed material & other ephemera, 1909-1993, n.d.**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Company catalog.	1909, n.d.	21	1
Company catalog.	1911	21	2
Company catalog.	[ca. 1915], n.d.	21	3
[Company catalog], unbound.	1956, n.d.	21	4
[Company catalog], price lists, unbound.	1957-1990	21	5
[Company catalog], brochures and other advertisements, unbound. Incl. photographs.	1965, n.d.	21	6
[Company catalog], brochures and other advertisements, unbound. Incl. photographs.	n.d., [ca. 1915]	21	7
Nautical Almanac.	1907	21	8
Nautical Almanac.	1914	21	9
Nautical Almanac.	1915	21	10
Nautical Almanac.	1916	21	11
Nautical Almanac.	1917	21	12
Nautical Almanac.	1918	21	13
Nautical Almanac.	1919	21	14
Nautical Almanac.	1920	22	1
The Hand Book.	1926	22	2
The Hand Book.	1927	22	3
The Hand Book.	1928	22	4
Brochures / catalog pages. Binnacles.	n.d.	22	5
Brochures / catalog pages. Compasses.	1947, 1959, n.d.	22	6
Brochures / catalog pages. Depth Gauge.	n.d.	22	7
Brochures / catalog pages. Deviatat.	n.d.	22	8
Brochures / catalog pages. Megaphone.	n.d.	22	9
Brochures / catalog pages. Mile Dial.	n.d.	22	10
Brochures / catalog pages. Pelorus.	n.d.	22	11
Brochures / catalog pages. Sounding Machines & Accessories.	n.d.	22	12
Brochures / catalog pages. Spot Cord.	n.d.	22	13
Brochures / catalog pages. Taffrail Log.	n.d.	22	14
Brochures / catalog pages. "Take Care of It!"	n.d.	22	15
Brochures / catalog pages. Telemile & Telespeed.	n.d.	22	16
Brochures / catalog pages. "Your Ultimate Cruiser: Matthews '38' Deluxe Sedan" (Not Hand).	1947	22	17
Layout sheets. "As Seen in Yachting," compass advertisement.	n.d.	22	18
Layout sheets. Binnacle, unidentified model.	n.d., before 1965	42	2

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Layout sheets. Binnacle, MK VII Mod 5.	n.d., [ca. 1965]	42	3
Layout sheets. "Crusader Compass."	n.d.	22	19
Layout sheets. "Cruiser Compass."	n.d.	42	4
Layout sheets. "Hansphere Model Compass."	n.d.	22	20
Layout sheets. Hansphere, advertising brochure.	n.d.	42	5
Layout sheets. Hansphere, mounted photographs.	n.d.	42	6
<b>See also:</b>			
V. Catalogs, printed materials & other ephemera / f. Layout sheets. "Take Care of It!" 2:3, n.d.			
Layout sheets. "Miledile," mounted photographs.	1946	42	7
Layout sheets. Sounding Machine.	n.d., [ca. 1930]	42	8
Layout sheets. "Take Care of It!" 1:3	n.d.	22	21
Layout sheets. "Take Care of It!" 2:3	n.d.	22	22
<b>See also:</b>			
V. Catalogs, printed materials & other ephemera / f. Layout sheets. Hansphere, mounted photographs, n.d.			
Layout sheets. "Take Care of It!" 3:3	n.d.	42	4
Layout sheets. Telespeed/ Telemile.	n.d.	22	23
Layout sheets. Wrist Compass Catalog.	1968	22	24
Layout sheets, Miscellaneous mounted photographs.		22	25
"Artwork." Compass card designs, 1:2.	n.d.	23	1
"Artwork." Compass card designs, 2:2.	n.d., 1969, 1970, 1986	42	9
"Artwork." Telespeed.	n.d.	23	2
"Artwork." Logo design for company boat.	n.d., [ca.1975]	FF	
Hand business cards.	1964, n.d.	23	3
Aqua Meter Instrument Corp.	1965-66	23	4
Bureau of Ships Manual, "Remote Reading Magnesyn Compass Marine Type."	1944	23	5
"Which Way is Home?"	1972	23	6
United States. Coast Guard [Requisition for Binnacle].	n.d.	23	7
Miscellaneous. Includes driving maps of Trenton, NJ and Pennsauken, NJ	n.d., [ca. 1985]	23	8
Competitor catalogs. Baker, Lyman, & Co., Inc.	n.d.	24	1
Competitor catalogs. Cassens & Plath.	n.d.	24	2
Competitor catalogs. Chelsea Clock Co.	n.d.	24	3
Competitor catalogs. Danforth/White.	1967	24	4
Competitor catalogs. Davis Instrument Corp.	1979	24	5
Competitor catalogs. E.S. Ritchie & Sons Inc.	1929, n.d.	24	6
Competitor catalogs. Hull Manufacturing Co.	n.d.	24	7
Competitor catalogs. Keefer & Co.	n.d.	24	8
Competitor catalogs. Marine Compass Co.	n.d.	24	9
Competitor catalogs. Marine Instruments Ltd.	n.d.	24	10
Competitor catalogs. Nuclear Engineering Co., Inc.	n.d.	24	11
Competitor catalogs. Radiomarine Corporation of America.	1946	24	12
Competitor catalogs. Shaw Model Maker.	n.d.	24	13
Competitor catalogs. Sherrill.	n.d.	24	14
Competitor catalogs. Silva Inc.	n.d.	24	15

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Competitor catalogs. Stryker Machine Products Co.	n.d.	24	16
Competitor catalogs. Tel-A-Comp Inc.	n.d.	24	17
Competitor catalogs. Thos. Walker & Son Ltd.	1948	24	18
Competitor catalogs. T.S. & J.D. Negus.	1936, n.d.	24	19
Competitor catalogs. W.T. Darrach Co.	1960	24	20
Competitor catalogs. Multiple. [Unbound].	1970	24	21
Competitor catalogs. Multiple. [Unbound].	1972	24	22
Periodicals.	1948	24	23
Periodicals.	1968, 1976, 1993	24	24
Promotional Calendars.	1967-1990	25	N/A
Federal specification, 18C14 (INT). Compasses: Boat, Magnetic, Navy Standard No. 3 with Compensating Binnacle.	1945	26	1
Federal specification, DOD-STD-480A. Military Standard Configuration Control: Engineering Changes, Deviations, & Waivers.	1978	26	2
Federal specification, MIL-B-16541B (WP). Bronze, Valve: Castings.	1964	26	3
Federal specification, MIL-B-16541B (OS). Bronze, Valve: Castings.	1964, 1968	26	4
Federal specification, MIL-C-23472 (SHIPS). Compass: Ship. Transmitting, magnetic.	1963	26	5
Federal specification. MIL-C-2370A. Case: First Aid Packet or Lensatic Compass, M-1942.	1953	26	6
Federal specification, MIL-C-382148 (USAF). Military Specification Compass: Magnetic, Mounted.	1968	26	7
Federal specification, MIL-E-917C (Navy). Electric Power Equipment, Basic Requirements for (Naval Shipboard Use).	1960	26	8
Federal specification, MIL-E-16400G (Navy). Electronic, interior communication & navigation equipment, naval ship and shore.	1974	26	9
Federal specification, MIL-H-3982B. Hardware (fasteners and related items), packaging and packing for shipment of.	1964	26	10
Federal specification, MIL-I-45208A. Inspection System Requirements.	1963	26	11
Federal specification, MIL-I-983E (Ships). Interior communication equipment, naval shipboard; Basic design requirements for.	1966	26	12
Federal specification, MIL-L-5020A and B. Liquid, Compass, Aircraft.	1956, 1975	26	13
Federal specification, MIL-M-15071G (Navy). Manuals, technical; Equipments and systems content requirements for.	1969	26	14
Federal specification, MIL-M-19590B. Marking of commodities and containers to indicate radioactive material.	1958	26	15

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Federal specification, MIL-Q-9858A. Quality Program Requirements.	1963	26	16
Federal specification, MIL-R-3781D. Roller motorized 3-wheel, 10 to 12 ton gasoline or diesel engine driver.	1972	26	17
Federal specification, MIL-S-901C (Navy). Shock tests, High impact, Shipboard machinery, Equipment & systems, Requirements for.	1964	26	18
Federal specification, MIL-S-3950C. Switch, Toggle, General Specification for.	1967, 1968	26	19
Federal specification, MIL-T-46072 (MR). Tube, round, copper alloy numbers 330, 331, 332, and 370 (leaded brass), seamless.	1963	26	20
Federal specification, MIL-STD-120. Gage Inspection.	1950	26	21
Federal specification, MIL-STD-276. Impregnation of porous, nonferrous metal casting.	1956	26	22
Federal specification, MIL-STD-105B. Military Standard Sampling Procedures for Inspection by Attributes.	1958-1961	26	23
Federal specification, MIL-STD-105D. Sampling Procedures and Tables for Inspection by Attributes.	1963	26	24
Federal specification, MIL-STD-129D. Marking for Shipment and Storage.	1964-1969	26	25
Federal specification, MIL-STD-108E. Definitions and basic requirements for enclosures for electric and electronic equipment.	1966	26	26
Federal specification, MIL-STD-480. Configuration Control: Engineering Changes, Deviations, and Waivers.	1968	26	27
Federal specification, MIL-STD-171C (MR). Finishing of Metal and Wood Surfaces.	1972	26	28
Federal specification, QQ-B-613c. Brass, leaded and nonleaded: flat products.	1967	27	1
Federal specification, QQ-B-621b. Brass, castings, leaded yellow.	1957	27	2
Federal specification, QQ-B-626c. Brass, leaded and nonleaded: Rod, shaped, forgings, & flat products with finished edges.	1967	27	3
Federal specification, QQ-B-637a. Brass, naval: Rod, wire, shapes, forging, & flat products with finished edges.	1967	27	4
Federal specification, QQ-B-639a. Brass, naval: Flat products.	1967	27	5
Federal specification, QQ-B-654. Brazing alloys, silver.	1970	27	6
Federal specification, QQ-C-390. Copper alloy castings (including cast bar).	1967	27	7
Federal specification, QQ-I-652b. Iron castings, gray.	n.d.	27	8
Federal specification, QQ-W-321d. Wire, copper alloy.	1967	27	9
Federal specification, TT-W-571. Wood preservative: Treating practices.	1968	27	10

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Federal specification, TT-W-572b. Wood preservative: Water repellent.	1969	27	11
Federal specification, TT-V-00121f (GSA-FSS). Varnish, spat, water-resisting.	1967	27	12
Federal specification, WW-T-791. Tubing, Brass, Seamless.	1931	27	13
Federal specification, Navy Procurement Directives. Appendix A. Manual for Source Inspection & Administration of Navy Procurement.	1960	27	14
Federal specification, Armed Services Procurement Regulation Supplement No. 3 Property Administration.	1967	27	15
Federal specification, Miscellaneous Government Publications.	1952-1967, n.d.	27	16
Federal specification, No. CGY-S1-1. Specification for Installation and Record Drawing for the U.S. Coast Guard.	1964	27	17
Federal specification, No. 41-UT-S24-1. Specification for Magnetic Compass for U.S. Coast Guard.	1972	27	18
Federal specification, 4ND-SPCC-P-4030/13. Preparation for Delivery.	1963	27	19
Specifications, not federal. Various.	n.d.	27	20

**VI. Photographs and negatives, 1873-1990, n.d.; a. Portraits and snapshots, 1873-1987, n.d.**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
John E. Hand.	ca. 1873	43	2
John E. Hand.	ca. 1900; 1930, n.d.	28	1
Bartram Hand.	1916, n.d.	28	2
John L. Hand.	1972, n.d.	28	3
[John L. Hand], multiple images.	n.d.	44	1
John B. Hand.	1974, 1987	28	4
John P. Mays.	n.d.	28	5
John P. Mays (un-framed).	n.d.	44	2
Staff, Men working.	1915, n.d.	28	6
Staff, Men working.	[1940s?], n.d.	28	7
[Staff], Christmas party.	1943	28	8
Staff, Testing Mk VII Mod 5 binnacle.	[ca. 1970], n.d.	43	3
Building, Atco, NJ.	[ca. 1900], n.d.	28	9
Building, Atco, NJ (mounted photos).	[ca. 1900], n.d.	28	10
Building, Atco, NJ, exterior and interior images.	1915, n.d.	44	3
Building, Cherry Hill, NJ.	1963, 1965, n.d.	28	11
Building, Haddonfield, NJ.	[before 1964?], n.d.	28	12
Building, Philadelphia, 3 <sup>rd</sup> and Chestnut Streets, prior to construction of the Hand Building.	[ca. 1880?], n.d.	44	4
Building, Philadelphia, PA, 243 Chestnut St.	n.d.	28	13
Building, Unidentified Retail Location, Baltimore (?).	n.d.	28	14

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Building, Unidentified Interior, Cherry Hill (?).	n.d.	28	15
Company Boat, <i>Evaluator</i> .	n.d.	28	16
Photo Albums, containing copies of historic photographs, probably compiled by John Mays. <i>See also:</i> II. John P. Mays / b. Correspondence and subject files / f. <i>Company history. Multiple files.</i>	[ca. 1973], n.d.	28	17
[Samuel T. Freeman & Co., Company auction].	ca. 1976	28	18
Trade Show set ups.	ca. 1940s, 1960s, n.d.	28	19
USCGS <i>Bear</i> , arctic expedition.	[1924], n.d.	44	5
Miscellaneous, Unidentified prints.	n.d.	28	20
Miscellaneous, Unidentified negatives (not related to Hand Company).	1986, n.d.	28	21
Negatives. John E. Hand.	n.d.	31	1
Negatives. John L. Hand, A. Badger, and John P. Mays.	n.d.	31	2
Negatives. Bill Braaksma.	n.d.	31	3
Negatives. Charles Summer, pictures on a boat.	1971	31	4
Negatives. Staff, miscellaneous images, incl. a group portrait from staff Christmas Party.	ca. 1900, n.d.	31	5
Negatives. Building, Atco, NJ, exterior.	n.d.	31	6
Negatives. Building, Haddonfield, NJ, exterior.	[ca. 1915], n.d.	31	7
Negatives. Building, Haddonfield, NJ, exterior. "Hand building & station" (incl. portrait of unidentified man).	1963	31	8
Negatives. Building, Haddonfield, NJ, exterior & interior.	1966	31	9
Negatives. Building, [Haddonfield, NJ], interior.	n.d.	31	10
Negatives. Building, Cherry Hill, NJ, exterior.	1963	31	11
Negatives. Building, Cherry Hill, NJ, exterior.	1965	31	12
Negatives. Building, Cherry Hill, NJ, exterior.	1977	31	13
Negatives. Building, Cherry Hill, NJ, exterior in winter.	1969	31	14
Negatives. Building, Cherry Hill, NJ, exterior & interior ("fish eye" lens).	1968	31	15
Negatives. Building, Cherry Hill, NJ, interior ("fish eye" lens).	1965	31	16
Negatives. Building, Cherry Hill, NJ, interior.	1963	31	17
Negatives. Building, Cherry Hill, NJ, interior. Nautical Room.	1976	31	18
Negatives. Building, Cherry Hill, NJ, interior. Office.	1967	31	19
Negatives. Building, Cherry Hill, NJ, interior. Trophy Room.	1966	31	20
Negatives. Building, Cherry Hill, NJ, interior. Trophy Room (50mm lens).	1966	31	21
Negatives. Building, Cherry Hill, NJ, interior. Trophy Room ("fish eye" lens).	1968	31	22
Negatives. Building, Philadelphia, PA, 243 Chestnut St.	n.d.	31	23
Negatives. Building, unidentified, "Old Hand Building," interior.	1965	31	24
Negatives. Auction.	April 16, 1975	31	25

Folder Title	Date	Box	Folder
Negatives. Show Installation for New York Show, (trade show?).	January 10, 1977	31	26
Negatives. News clippings & other historic documents. 1:4	ca. 1960	31	27
Negatives. News clippings & other historic documents. 2:4	ca. 1960	31	28
Negatives. News clippings & other historic documents. 3:4	ca. 1960	31	29
Negatives. News clippings & other historic documents. 4:4	ca. 1960	31	30
1907 Nautical Almanac and co. catalog.	n.d.	31	31
Negatives. USCGC <i>Bear</i> , arctic expedition. 1:2	1924	31	32
Negatives. USCGC <i>Bear</i> , arctic expedition. 2:2	1924	31	33
Negatives. USCG <i>Gallatin</i> , incl. shots of instruments.	May, 1970	31	34
Negatives. Tanker, Great Lakes.	1978	31	35
Negatives. "Parma, 1902-1935."	n.d.	31	36
Negatives. Oil Paintings of Ship, owned by J.B. Hand?	n.d.	31	37
Reel to Reel Film. Wrist Compass L-S-I Lonnie A. Sutherland Side #1: -"1 <sup>st</sup> Meeting July 19, 1969" -"392 Pre-Agreement" -"520 Talk about sales" -"972 End" Side #2 -"Tape sent us Sept. 1, 1969" -"390 Return tape 9/12/69" -"683 Phone call 10/30/69"	1969	40	
Reel to Reel Film. J.E. Hand & Sons Co. Auction. Samuel T. Freeman Co. Philadelphia, PA	April 22, 1975	40	

**VI. Photographs and negatives, 1873-1990, n.d.; b. Instruments, 1900-1990, n.d.**

Folder Title	Date	Box	Folder
Azimuth, photo nos. 6591-6592, 6594.	n.d.	28	22
Azimuth, multiple models.	n.d.	28	23
Banjo.	n.d.	28	24
Binnacle.	ca. 1900	28	25
Binnacle, "CG Binnacle."	1986	28	26
Binnacle, Eureka u/4 Binnacle, photo nos. 3680-3681.	n.d.	28	27
Binnacle, Hand Skylight Binnacle, photo no. 60356.	n.d.	28	28
Binnacle, LNS Binnacle, photo nos. 2908-2910.	n.d.	28	29
Binnacle, LNS Binnacle, photo nos. 3710-3711.	n.d.	28	30
Binnacle, LNS Binnacle, photo nos. 3713-3715.	n.d.	28	31
Binnacle, LNS Binnacle, photo no. 7048.	n.d.	28	32
Binnacle, LNS Binnacle, multiple models.	n.d.	28	33
Binnacle, Mk VII Mod 5, Lens & Mirror Housing Assembly.	n.d.	28	34

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Binnacle, Navy Standard Binnacle, photo nos. 370-371.	n.d.	28	35
Binnacle, "N.S. Binnacle & Compass."	n.d.	28	36
Binnacle, Navy Standard Binnacle, unidentified models. 1:3	n.d.	28	37
Binnacle, Navy Standard Binnacle, unidentified models. 2:3	n.d.	29	1
Binnacle, Navy Standard Binnacle, unidentified model. 3:3	n.d.	44	6
Binnacle, No. 3 Reflector Binnacle (for Henschel Corp.).	n.d.	29	2
Binnacle, Offshore Binnacle & Compass.	1990	29	3
Binnacle, PD Binnacle, photo nos. 1146-1147.	n.d.	29	4
Binnacle, PD Binnacle, photo nos. 57281, 57855-56, 57865.	n.d.	29	5
Binnacle, PD Binnacle, photo nos. 58396-58399.	n.d.	29	6
Binnacle, PD Binnacle, various images.	n.d.	29	7
Binnacle, [Reflector Binnacle], unidentified model.	ca. 1990	29	8
Binnacle, Shelf Binnacle, unidentified model.	n.d.	29	9
Binnacle, Shelf Binnacle with Compasses, multiple models.	1990, n.d.	29	10
Binnacle, ST7 Binnacle with Spherical Compass, photo nos. 3328-3332.	n.d.	29	11
Binnacle, STD 7-9 Binnacle with Spherical Compass, photo nos. 1148-1150	n.d.	29	12
Binnacle, TR100, reflector binnacle.	n.d.	29	13
Binnacle, Unidentified binnacle aboard the USCG <i>Dallas</i> .	n.d.	29	14
Clinometer, photo no. 68537.	n.d.	29	15
Clinometer.	1952	29	16
Compass, "Boat Compass in Binnacle," US Navy No. 4.	n.d.	29	17
Compass, Box compass, Pex model.	n.d.	29	18
Compass, Box compasses, multiple models.	n.d.	29	19
Compass, Navy Standard Compass with Azimuth Circle, photo nos. 6593-6594, 6596.	n.d.	29	20
Compass, Navy Standard Compass with Azimuth Circle, multiple images.	n.d.	29	21
Compass, T100 Compass & Binnacle.	n.d.	29	22
Compass, Unidentified models.	n.d.	29	23
Compass Readers.	n.d.	29	24
Compass Reader for 7 ½ in. to 10 in. cards.	n.d.	29	25
"Cruiser," model AB-103-3.	n.d.	29	26
"Cruiser," model AB-103-4D. 1:2	n.d.	29	27
"Cruiser," model AB-103-4D. 2:2	n.d.	29	28
"Cruiser," model AB-103-5D.	n.d.	29	29
["Cruiser"].	n.d.	44	7
["Cruiser"], unidentified models.	n.d.	29	30
Crusader.	n.d.	29	31
Dolphin.	n.d.	29	32
Electric Navigator Log, photo no. 6000.	n.d.	29	33
Hand Depth Gauge.	n.d.	29	34

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Hand Deviatat, photo no. 2392.	n.d.	29	35
Hand Nantucket Harpoon Log, photo no. 6589.	n.d.	29	36
Hand Zephyr Taffrail Log, photo no. 6590.	n.d.	29	37
“Hansphere,” models HS-102-7f and HS-102-7fD.	n.d.	30	1
“Hansphere,” model HS-102-5g.	n.d.	30	2
[“Hansphere”], multiple models.	n.d.	30	3
[Hansphere], multiple models.	n.d.	44	8
Lifeboat Compass, Coast Guard, photo nos. 5861-5862.	n.d.	30	4
Lifeboat Compass, Maritime Comm, photo nos. 6226-6227.	n.d.	30	5
Matthews “38” Cruisers and other pleasure boats equipped with Hand Instruments.	1930s	30	6
Parallel Rule, photo no. 2394.	n.d.	30	7
Pelorus, “A” pelorus, photo nos. 68535-68536.	n.d.	30	8
Pelorus & Stand (multiple versions), photo no. 6497.	n.d.	30	9
Pelorus, “Type CG 7 ½” photo no. 372.	n.d.	30	10
Pelorus, 4 ½ in. Pelorus, color prints & negatives.	ca. 1980	30	11
Skylight Head.	n.d.	30	12
Sounding Machine, photo nos. 2911-2913.	n.d.	30	13
Sou’ wester.	n.d.	30	14
Telespeed & Telemile, photo no. 2861.	n.d.	30	15
Telespeed & Telemile, photo nos. 5341-5343.	n.d.	30	16
Telespeed & Telemile, photo no. 6001.	n.d.	30	17
Telespeed & Telemile, photo no. 7259.	n.d.	30	18
Telespeed & Telemile, various shots, multiple models.	n.d.	30	19
Wrist Compass.	ca. 1955	30	20
See also: II. John P. Mays / a. Instrument files / f. Wrist Compass. LS-100, photographs & negatives, n.d.			
Album, incl. images of multiple instruments.	n.d.	30	21
Miscellaneous instruments, incl. photos of groups of instruments.	n.d.	30	22
Unidentified, binnacles, photo nos. 8184-8186.	n.d.	30	23
Unidentified [instrument to gauge direction of wind?].	n.d.	30	24
Unidentified instruments.	n.d.	30	25
Unidentified instruments.	1968, n.d.	30	26
Unidentified instruments.	n.d.	44	9
Not Hand, incl. information on Bludworth Direction Finder & Radio (incl. blueprints).	ca. 1936	30	27
Index to the following series of photos filed by John P. Mays.	n.d.	30	28
#2 Bearing Circle.	n.d.	30	29
#3 No. 3 Binnacle. Mk II Mod 0. Film of engineering plan.	n.d.	30	30
#4 Binnacle Hood Ref[lector].	n.d.	30	31
#6 Wrist Compass (includes negatives).	n.d.	30	32
#7 Mk VII Mod 5 Binnacle (prints & negatives).	n.d.	30	33
#12 Baker American Binnacle (color photos/slides).	n.d.	30	34

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
#16 Thruster Level, 2 models (color photos & negatives).	n.d.	30	35
#17 TR 100 (color photos & negatives).	n.d.	30	36
#18 Subsea Compass (color photos/slides).	n.d.	30	37
Negatives. Binnacle, Mk VII Mod. 5.	1968	31	38
Negatives. Binnacle, Mk VII Mod. 5.	December 13, 1968	31	39
Negatives. Binnacle, Mk VII Mod. 5 Test Lab.	1968	31	40
Negatives. Binnacle, Mk VII Mod. 5, Associated Testing Lab.	August 17, 1968	31	41
Negatives. Binnacle, Mk VII Mod. 5, reflector dome.	April 1977	31	42
Negatives. Binnacle, Mk VII Mod. 5, hood, mirror, & lens assembly.	1978	31	43
Negatives. Binnacle, Mk VII Mod. 5 (includes portrait of unidentified woman).	n.d.	31	44
Negatives. Binnacle, parts, flinders bar for No. 3 binnacle.	n.d.	31	45
Negatives. [Binnacle], Ref[lector] Assembly (Sperry Rand Corp).	January 18, 1974	31	46
Negatives. Binnacle, TR 100, "first pictures."	1974	31	47
Negatives. Binnacle, TR 100.	February 1978	31	48
Negatives. Binnacle, TR 100, Reflector binnacle.	ca. 1961	31	49
Negatives. Binnacle, two unidentified models.	n.d.	30	38
Negatives. Compass, 7 ½ in. Compass.	May 3, 1968	31	50
Negatives. Compass, No. 5 Compass (Gov't of Israel order no. 833-80211-01-A-C1).	February 24, 1978	31	51
Negatives. Compass, Navy No. 5 and Mk 8.	n.d.	31	52
Negatives. Compass, "Old Compass, Correction on Compass."	n.d.	31	53
Negatives. Compass reader, Mk I Mod. 4 on 7 ½ in. Compass.	October 1975	31	54
Negatives. Mounts, L.M.C prop types of mounts.	n.d.	31	55
Negatives. Not Hand, Electro Marine Compass Remote Indicator.	July 1969	31	56
Slides. Unidentified shelf binnacle. 1:2	n.d.	31	57
Slides. Unidentified shelf binnacle. 2:2	n.d.	31	58

**VII. Measured drawings, 1912-1991, n.d. [bulk 1912-1980]; a. Engineering plans created before 1946, 1917-1948, n.d.**

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
2 in. compass bowl.	1917/1918	43	4
3 in. compass bowl.	1917/1918	41	2
4 in. compass bowl.	1917/1918	41	2
5 in. compass bowl.	1917/1918	43	4
6 in. compass bowl.	1917/1918	Flat file 1	4
7 in. compass bowl.	1917/1918	Flat file 1	4
8 in. compass bowl.	1917/1918	Flat file 1	4
9 in. compass bowl.	1917/1918	Flat file 1	4
10 in. compass bowl.	1917/1918	Flat file 1	4

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Unidentified compass bowls.	[1917/1918], n.d.	Flat file 1	3
Unidentified compass bowl.	[1917-1918], n.d.	Flat file 1	6
Compass boxes, various sizes.	1918	41	3
6 in. Hansphere.	1925	32	1
LNS binnacle, incl. drawing no. 1874.	1932, 1942, 1943, n.d.	Flat file 1	7
[A-st. C-1], various drawings.	1934	43	5
OTS 7 (binnacle).	1934	43	6
Speed Indicator.	1935	Flat file 1	2
Hand Deviatat.	1935	41	4
OTS-5.	1935	41	4
PEX (compass).	1935	41	4
Hand Log.	[ca. 1935], n.d.	41	4
Parts: Trunion head.	1935	32	2
Parts: Miscellaneous.	1935	32	3
Parts: Miscellaneous.	n.d.	32	4
Telespeed / Telemile. 1:2	1935, 1937	32	5
Telespeed / Telemile. 2:2	1935, 1937	32	6
Speedometer unit (proposed design).	1938	32	7
7 in. Spherical Compass.	1941	41	5
Binnacle Type FSS with PEX.	1941	41	5
Pneumatic Expansion Compass.	1941	32	8
Pneumatic Expansion Compass.	1941	41	5
UNS [compass].	1941	41	5
Broom Fairlead.	1942	Flat file 1	6
Punch 7 ½ in. card.	1942	41	6
Type PEX U/NS (compass), drawing no. 1875.	1942	Flat file 1	5
Type PEX U/5 (5 in. compass), drawing no. 1877.	1942	Flat file 1	5
Type PEX U/7 [7 in. compass], drawing no. 1878.	[1942], n.d.	Flat file 1	5
Type SXD binnacle with U/5 compass, drawing no. 1882.	1942	Flat file 1	5
5 in. quadrantal globe.	1943	32	9
[Pelorus], sketches.	1943, n.d.	32	10
Sounding Machine (sinker).	1943	Flat file 1	6
Type N.S. Compass.	1943	Flat file 1	6
ST U/7 (binnacle), quadrantal brackets.	1943	Flat file 1	2
U.N.S. Compass and New Float.	1943	41	6
4 in. molded glass compass. 1:2	1944, n.d.	32	11
4 in. molded glass compass. 2:2	1944, n.d.	32	12
Compass reader.	1944	41	7
Lifeboat compass. 1:2	1944	43	7
Lifeboat compass. 2:2	1944	Flat file 1	6
Compass box.	1947-1948	41	7
5 in. spherical compass.	n.d.	32	13
7 in. Hansphere.	n.d.	41	8
Binnacle type STQ-7 (dimension sketch).	n.d.	Flat file 1	6
Clinometer.	n.d.	32	14
Compass bowls, misc. drawings and sketches.	n.d.	41	9

Folder Title	Date	Box	Folder
Unidentified, drawings.	1934-1935, n.d.	32	15
Unidentified, blueprints.	1934, 1937, 1940, n.d.	32	16
Unidentified, sketches and drawings.	1935, 1940, 1944, n.d.	41	10
Unidentified, sketches and drawings.	1943, n.d.	32	17
Unidentified.	1935, n.d.	Flat file 1	2
Not Hand, "726 Meter mounting dimensions."	1938	32	18
Not Hand, "Hook up for a U-flex two tube reflex circuit."	n.d.	32	19

**VII. Measured Drawings, 1912-1991, n.d. [bulk 1912-1980]; b. Engineering plans created 1946-1948, 1941-1963**

Folder Title	Date	Box	Folder
[Bills of Materials], Clinometer.	1946-1947	32	39
AB-103.	1947-1948	32	40
CA-100 to CA-157, AB-103-04, Saturn-II-2.	1946-1948	45	1
CA-100 to CA-159, AB-103-04, Unnumbered.	1946-1948	Flat file 2	1
CA-103, Instrument assembly diagrams.	1947-1948	32	41
CA-154, Instrument assembly diagrams.	1947	32	42
A-0000 to A-0049, Parts assembly diagrams.	1947	32	43
A-0004 to A-0140, Parts assembly diagrams.	1946-1948	45	2
A-0014 to A-0132, Parts assembly diagrams.	1946-1948	Flat file 2	2
A-0050 to A-0099, Parts assembly diagrams.	1947	32	44
A-0100 to A-0149, Parts assembly diagrams.	1947-1948	32	45
0001 to 0025.	1946-1948	45	3
0001, Bowl Rings.	1947-1948, 1963	32	46
0002, Verge Rings.	1946-1947, 1963	32	47
0003, Glass.	1946	32	48
0004, Bowls.	1946-1948	32	49
0005, Bellows.	1946-1947	32	50
0006, Card Blanks.	1947-1948	32	51
0007, Gimble Rings.	1946-1947	32	52
0008, Spacer Ring.	1946	32	53
0009, Under Lite Bellow Shield.	1947	32	54
0010, Pivots.	1946-1947	32	55
0011, Jewels.	1946-1947, 1957	32	56
0012, Pins.	1946-1948	32	57
0014, Float Tops.	1948	32	58
0015, Cones.	1935, 1944, 1946, 1948	32	59
0016, Springs.	1946-1947	32	60
0017, Float Bottoms.	1946, 1948	33	1
0018, Washers.	1946-1947	33	2
0019, Springs.	1946-1947	33	3

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
0020, Spacers.	1947	33	4
0021, Magnet Holders.	1935, 1945-1948	33	5
0022, Gaskets.	1946-1947, 1968	33	6
0023 to 0111, Large format drawings.	1946-1948	Flat file 2	6
0024, Cups.	1946-1947	33	7
0025, Brackets & Mounts.	1946-1948	33	8
0026, Buttons.	1946-1947	33	9
0027 to 0052, Large format drawings.	1946-1948	45	4
0027, Cowls.	1946-1948	33	10
0028, Connectors.	1946	33	11
0029, Glare Shields.	1946	33	12
0030, Deviatat Magnet Holders.	1946-1947	33	13
0032, Magnets.	1946-1947	33	14
0033, Rings.	1946-1947	33	15
0034, Prism Hold Down.	1947	33	16
0035, Magnets.	1946	33	17
0037, Light Sockets.	1946	33	18
0038, Bushings.	1946-1947	33	19
0040, Jewel Posts.	1946, 1948	33	20
0041, Retainers.	1946-1947	33	21
0042, Caps.	1946-1947	33	22
0044, Blocks.	1946-1947	33	23
0045, Deflectors.	1946-1947	33	24
0046, Deviatat Mounts.	1946-1947	33	25
0047, Bellow Shields.	1946	33	26
0048, Rods.	1946-1947	33	27
0049, Caps.	1946-1947	33	28
0050, Slugs.	1946-1947	33	29
0051, Posts & Sleeves.	1944, 1946	33	30
0052, Cylinders.	1946	33	31
0053, Plugs.	1946-1947	33	32
0054, Clips.	1946-1947	33	33
0055 to 0125, Large format drawings.	1946-1948	45	5
0055, Glass.	1946-1948, 1977	33	34
0056, Rings.	1946, 1948	33	35
0057, Support Rings.	1946-1947	33	36
0059, Tubes.	1946-1948	33	37
0060, Studs.	1946-1948	33	38
0061, Lubber Lines.	1946-1947	33	39
0062, Bases & Bottoms.	1946-1947	33	40
0064, Bolts & Screws.	1946-1948	33	41
0065, Screws & Pins.	1946-1948	33	42
0066, Lugs & Lug caps.	1946-1947	33	43
0067, Ears.	1946-1947	33	44
0068, Plates.	1946-1948	33	45

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
0070, Rings.	1946-1947	33	46
0071, Deviatat Magnet Covers.	1946	33	47
0072, Lamp Hood.	1946	33	48
0073, Knobs.	1946-1947	33	49
0075, Nuts.	1946-1948	33	50
0076, Light Shutter.	1946	33	51
0077, Light Shutter.	1946	33	52
0079, Angles.	1946-1947	33	53
0080, Deviatat Keys.	1947	33	54
0082, Verge Rings.	1946	33	55
0083, Gears.	1946-1948	33	56
0084, Pinion Gears.	1946-1948	33	57
0085, Shafts.	1945-1947	33	58
0086, Couplings.	1946, 1948	33	59
0087, Worms & Gears.	1946-1947	33	60
0088, Drive Dog.	1946	33	61
0089, Pointers & Hands.	1946-1947	33	62
0090, Wheels.	1946-1948	33	63
0091, Rotar Fin.	1947	33	64
0092, Hooks.	1946-1947	33	65
0093, Diaphragm Fixtures.	1946	33	66
0095, Mile Dial.	1946-1947	33	67
0096, Lead Link.	1947	33	68
0098, Level Vial.	1947	33	69
0099, Door Latch.	1946	33	70
0100, F.B. Elements & Clamp Bar.	1946-1947	33	71
0102, Sheeve Wheel.	1947	33	72
0103, Supports.	1947	33	73
0104, Compass Reader Bases.	1947	33	74
0106, Crusader #158 Plastic Compass.	1947	33	75
0107, Verge Ring.	1947	33	76
0109, Sphere.	1946	33	77
0110, Doors.	1946	33	78
0111, Cases.	1946-1947	33	79
0112, Mile Dial.	1946	33	80
0113, Vibrastat.	1946	33	81
0114, Hood Collar.	1946	33	82
0116, Pendulums.	1947	33	83
0117, Bridges.	1946-1947	33	84
0118, Mile Dial Bow.	1947	33	85
0121, Deviatat Rivets.	1947	33	86
0122, Legs.	1947	33	87
0123, Large Compass Reader.	1947	33	88
0124, Compass Reader Leg Extension.	1947	33	89

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Obsolete CA-103, Obsolete instrument assembly diagrams.	1946	33	90
Obsolete A-0000 to A-0070, Obsolete parts assembly diagrams.	1945-1947	34	1
Obsolete A-0071 to A-0150, Obsolete parts assembly diagrams.	1947	34	2
Obsolete [Bills of Materials].	1947	34	3
Obsolete 0001 to 0025, Obsolete parts plans.	1941, 1946-1947	34	4
Obsolete 0026 to 0050, Obsolete parts plans.	1946-1947	34	5
Obsolete 0051 to 0075, Obsolete parts plans.	1946-1947	34	6
Obsolete 0076 to 0100, Obsolete parts plans.	1946-1947	34	7
Unnumbered drawings.	1946-1947	34	8
AB-103.	1947	34	9
CA-100 to CA-157, Large format drawings (blueprints).	1946-1948	45	6
CA-100 to CA-157, Large format drawings (blueprints).	1946-1948	Flat file 2	3
CA-100, Bills of materials (blueprints).	1947	34	10
CA-101, Bills of materials (blueprints).	1946	34	11
CA-103, Instrument assembly diagrams (blueprints).	1947-1948	34	12
CA-104, Instrument assembly diagrams (blueprints).	1947	34	13
A-0000 to A-0050, Parts assembly diagrams (blueprints).	1946-1947	34	14
A-0014 to A-0140, large format drawings (blueprints).	1946-1948	Flat file 2	4
A-0046 to A-0136, large format drawings (blueprints)	1946-1948	45	7
A-0051 to A-0100, Parts assembly diagrams (blueprints).	1947-1948	34	15
A-0101 to A-0150, Parts assembly diagrams & bills of materials (blueprints).	1947-1948	34	16
0001 to 0015, large format drawings (blueprints).	1946-1948	45	8
0001, Bowl rings (blueprints).	1946-1948, 1963	34	17
0002, Verge rings (blueprints).	1946, 1963	34	18
0003, Glass (blueprints).	1946	34	19
0004, Bowls (blueprints).	1946-1948	34	20
0005, Bellows (blueprints).	1946-1947	34	21
0006, Cards (blueprints).	1947-1948	34	22
0007, Gimble Rings (blueprints).	1946-1947	34	23
0008, Spacer Rings (blueprints).	1946	34	24
0009, Shield Bellows (blueprints).	1946-1947	34	25
0010, Pivots (blueprints).	1946-1947	34	26
0011, Jewels (blueprints).	1946-1947	34	27
0012, Shadow Ring (blueprints).	1946-1948	34	28
0014, Float Tops (blueprints).	1946	34	29
0015, Cones (blueprints).	1944, 1946, 1948	34	30
0016, Coil Springs (blueprints).	1946-1947	34	31
0017, Float Bottoms (blueprints).	1946	34	32
0018, Washers (blueprints).	1946-1947	34	33
0019, Springs (blueprints).	1946-1947	34	34
0020, Spacers (blueprints).	1947	34	35

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
0021, Card Magnets (blueprints).	1946-1948	35	1
0022, Gaskets (blueprints).	1946-1947, 1968	35	2
0023 to 0046, Large format drawings (blueprints).	1946-1948	45	9
0023, Binnacle Deck Mounts (blueprints).	1946	35	3
0024, Cup Deviatat (blueprints).	1946-1947	35	4
0025, Brackets & Mounts (blueprints).	1946-1948	35	5
0026, Buttons (blueprints).	1946-1947	35	6
0027 to 0110, Large format drawings (blueprints).	1946-1948	Flat file 2	5
0027, Cowls (blueprints).	1946-1947	35	7
0028, Connectors (blueprints).	1946	35	8
0029, Glare Shields (blueprints).	1944, 1946	35	9
0030, Deviatat Magnet Holder (blueprints).	1946-1947	35	10
0032, Deviatat Magnets (blueprints).	1946-1947	35	11
0033, Glare Shield Support Ring (blueprints).	1946-1947	35	12
0034, Prism Hold Down (blueprints).	1947	35	13
0037, Light Socket (blueprints).	1946	35	14
0038, Bushings (blueprints)	1946-1947	35	15
0040, Jewel Posts (blueprints).	1946-1948	35	16
0041, Retainers (blueprints).	1946-1948	35	17
0042, Cap Retainers (blueprints).	1946-1947	35	18
0044, Blocks (blueprints).	1946-1947	35	19
0045, Deflectors (blueprints).	1946-1947	35	20
0046, Platforms (blueprints).	1946-1947	35	21
0047, Bellow Shields (blueprints).	1946	35	22
0048, Rods (blueprints).	1946-1948	35	23
0049, Caps (blueprints).	1946-1947	35	24
0050, Slugs (blueprints).	1946-1947	35	25
0051, Jewel Post Sleeves (blueprints).	1946	35	26
0052 to 0063, Large format drawings (blueprints).	1946-1948	45	10
0052, Cylinders (blueprints).	1946	35	27
0053, Plugs (blueprints).	1946-1947	35	28
0054, Clips (blueprints).	1946-1947	35	29
0055, Glass (blueprints).	1944, 1946-1948	35	30
0056, Rings (blueprints).	1946, 1948	36	1
0057, Supporting Rings (blueprints).	1946-1947	36	2
0059, Tubes (blueprints).	1946-1948	36	3
0060, Studs (blueprints).	1946-1947	36	4
0061, Lubber Lines (blueprints).	1946-1947	36	5
0062, Bases & Bottoms (blueprints).	1946-1947	36	6
0063, Sealing Rings (blueprints).	1946	36	7
0064, Bolts & Screws (blueprints).	1946-1948	36	8
0065, Screws & Pins (blueprints).	1946-1948	36	9
0066, Lugs & Lug Caps (blueprints).	1946-1947	36	10
0067, Ears (blueprints).	1946-1947	36	11
0068, Plates (blueprints).	1946, 1948	36	12

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
0069 to 0115, (blueprints).	1946-1948	45	11
0070, Rings (blueprints).	1946-1947	36	13
0071, Deviatat Magnet Covers (blueprints).	1946	36	14
0072, Hoods (blueprints).	1946	36	15
0073, Knobs (blueprints).	1946-1947	36	16
0075, Nuts (blueprints).	1946-1948	36	17
0076, Light Shutter (blueprints).	1946	36	18
0077, Light Shutter (blueprints).	1946	36	19
0079, Angles (blueprints).	1946-1947	36	20
0080, Deviatat Keys (blueprints).	1947	36	21
0082, Verge Rings (blueprints).	1946	36	22
0083, Gears (blueprints).	1946-1948	36	23
0084, Pinion Gears (blueprints).	1946-1948	36	24
0085, Shafts (blueprints).	1945-1947	36	25
0086, Couplings (blueprints).	1946, 1948	36	26
0087, Worms & Gears (blueprints).	1946-1947	36	27
0088, Drive Dog (blueprints).	1946	36	28
0089, Pointers & Hands (blueprints).	1946-1947	36	29
0090, Wheels (blueprints).	1946-1948	36	30
0091, Rotar Fin (blueprints).	1947	36	31
0092, Hooks (blueprints).	1946-1947	36	32
0093, Diaphragm Fixtures (blueprints).	1946	36	33
0095, Mile Dial (blueprints).	1946-1947	36	34
0096, Lead Link (blueprints).	1947	36	35
0099, Door Latch (blueprints).	1946	36	36
0100, F.B. Elements & Clamp Bar (blueprints).	1946-1947	36	37
0102, Sheeve Wheel (blueprints).	1947	36	38
0103, Supports (blueprints).	1947	36	39
0104, Compass Reader Bases (blueprints).	1947	36	40
0106, Crusader #158 Plastic Compass (blueprints).	1947	36	41
0109, Sphere (blueprints).	1946	36	42
0110, Doors (blueprints).	1946	36	43
0111, Cases (blueprints).	1946-1947	37	1
0112, Mile Dial (blueprints).	1946	37	2
0113, Vibrastat (blueprints).	1946	37	3
0117, Dolphin Log Bridge (blueprint).	1947	37	4
0118, Mile Dial Bow (blueprint).	1947	37	5
0121, Deviatat Rivets (blueprint).	1947	37	6
0122, Legs (blueprints).	1947	37	7
0123, Large Compass Reader (blueprints).	1947	37	8
0124, Compass Reader Leg Extension (blueprints).	1947	37	9
Unnumbered drawings (blueprints).	1947	37	10
[Bills of Materials].	1947	37	11
[Binnacle Assembly Instructions].	n.d.	37	12
Projection System (Compass).	n.d.	37	13

Folder Title	Date	Box	Folder
[Telemile].	1935, 1937-38	37	14
Miscellaneous Drawings.	1941	37	15

**VII. Measured Drawings, 1912-1991, n.d. [bulk 1912-1980]; c. Engineering plans created after 1948, 1948-1991, n.d.**

Folder Title	Date	Box	Folder
Company building, Haddonfield, NJ. <b>FRAGILE</b>	1948	Flat file 4	1
Company building, Cherry Hill, NJ.	1961, 1963, 1964	Flat file 3	8
Compass equipment models.	1950	Flat file 6	1
Proposed compass reader.	1955	Flat file 4	6
Proposed pressure gage to be worn on wrist.	1955	32	20
Float.	1956	32	21
Tel-a-comp.	1958	Flat file 4	6
Dara compass corrector.	1958	Flat file 4	6
[Material – NI – CU]. Dwg no. 069.	1960	Flat file 4	6
Wrist compass. Dwg no. 400-533966, multiple copies, heavily annotated.	1960	Flat file 6	2
Wrist compass, Mk I Mod I, Dwg nos. Ex; EX-701.	1961	Flat file 3	2
Wrist compass, Tool for assembly.	1962	Flat file 3	1
Wrist compass, Proposed, Dwg no. 691120.	1969	Flat file 3	3
Wrist compass, LS-1, Dwg no. 700-501.	1970	Flat file 3	3
Wrist compass, Dwg nos. SK-1000 to SK-1004, Sk-1007 (Rev. A), incl. contract # Nobs 94002.	1965, 1966, n.d.	Flat file 6	3
Wrist compass, Dwg no. SK 1007, Rev. C, p. 1:1, contract # Nobs 94002.	1970	Roll 1	
Wrist compass, Various drawings and scraps. <i>See also:</i> <i>1. John P. Mays/ Instruments / Wrist Compass, multiple files.</i>	1960, 1978,	43	8
Wrist compass, Sketches of parts.	n.d.	Flat file 4	5
Projector compass.	1961	Flat file 4	6
6 in. compass.	1961	43	9
6 in. compass, assembly plan.	1971	Roll 2	
Navy No. 3 compass reader. Dwg no. CR-106, CR-106 Rev. A. (Contract No. N00024-67-M-5344).	1965, 1967, n.d.	Flat file 6	1
Navy No. 3 compass. Lens.	1965	32	22
SDT 5" Binnacle. Dwg n. 1885.		Flat file 6	1
Bezel ring (parts).	1966	32	23
Binnacle, MK VII Mod 5, Healing magnet.	1968	32	24
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev A, p. 1:6.	1968-1969	Roll 3	
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev. A, B pp. 3:6, 5:6, 6:6.	1968-1969	Flat file 5	1
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev B, pp. 1:5, 2:5.	1968-1969	Roll 4	
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev B, pp. 3:5, 4:5, 5:5.	1968-1969	Flat file 5	2

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev B, (photostats).	1968, n.d.	Flat file 4	3
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev C, pp. 1:6, 2:6.	1968-1969	Roll 5	
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev C, D, pp. 3:6, 4:6, 5:6, 6:6.	1968-1969	Flat file 5	3
Binnacle, MK VII Mod 5, dwg no. NSR 103-100, Rev D, pp. 1:6, 2:6.	1968-1969	Roll 6	
Binnacle, MK VII Mod 5, dwg no. NSR 103-100-H, Rev B, p. 1:1.	1968	Flat file 5	3
Binnacle, MK VII Mod 5, dwg no. NSR 103-100.	n.d.	Roll 7	
Binnacle, MK VII Mod 5, reflector kit, dwg no. NSR 104-100, Rev. A, p. 1:1.	1969	Roll 8	
Binnacle and compass, MK VII Mod 5, dwg no. 9240-030, pp. 3:6, 4:6, 5:6, 6:6.	1975	Flat file 5	4
Binnacle, MK VII Mod 5, dwg no. RD 100.	1977	Flat file 3	6
7 ½ in. compass, NSR 102-100, pp. 1:3, 2:3, 3:3.	1969, n.d.	Flat file 5	5
“Change parts.” Re. BuShips dwg no. S2407-F-533806.	1971	32	25
Section for mounting magnetic compass. Dwg no. SK547.	1973	Flat file 5	6
Installation of reflector compass [dlgn] frigate, Dwg no. 3R100; plan for mounting magnetic compass (for Henschel Corp).	1973	Flat file 5	6
Installation of reflector compass [dlgn] frigate, Dwg no. 3R100; plan for mounting magnetic compass (for Henschel Corp).	1973	Roll 9	
Thruster lever, Dwg no. TL100.	1974-1975	Flat file 5	7
Offshore Binnacle.	n.d.	43	9
Offshore Baker Compass.	1968	32	26
Binnacle Stand Assembly Drawing No. 770809 (2 pages)	1977	Flat file 4	2
Magnetic compass deviation correction indicator. Dwg no. 800201.	1980	Flat file 3	4
Projector compass. No. 5 Expansion bezel ring.	1991	32	27
Compass card scraps.	n.d.	43	8
“Installation of dome clip.”	n.d.	32	28
Drawings and sketches, various parts.	n.d.	32	29
Unidentified (multiple instruments).	1956, 1973, n.d.	Flat file 4	4
Unidentified (multiple instruments) 1:2.	n.d.	32	30
Unidentified (multiple instruments) 2:2.	n.d.	32	31
Unidentified (scraps).	n.d.	Flat file 3	7
Not Hand. Corrector Assembly.	1960	Flat file 3	5
Not Hand. Bearing circle and compass holder, installation and assembly.	1961	Flat file 3	5
Not Hand. Under [water] wrist compass.	1969	Flat file 3	5
Not Hand. Pedestal type binnacle and assorted parts.	1970	Flat file 3	5
Not Hand. Standard-Thomson Corp. “2 15/16 O.D. Bellows.”	Ca. 1955	32	32

Folder Title	Date	Box	Folder
Not Hand. Bendix Corp., parts plans.	1960-1961	32	33
Not Hand. Bethos, Inc. "Compass element model 260 underwater current compass."	1965	32	34
Not Hand. Electro Marine Corp., parts, 1:2.	1970	32	35
Not Hand. Electro Marine Corp., parts, 2:2.	1970	32	36
Not Hand. Wrought Metal Products, parts.	1979	32	37

**VII. Measured Drawings, 1912-1991, n.d. [bulk 1912-1980]; d. BuShips and other military issued engineering plans, 1912-1972**

Folder Title	Date	Box	Folder
NY Navy Yard. "Compensating binnacle type VI & VII, details." 28127-F.	1912	Flat file 7	2
NY Navy Yard. "Compensating binnacle type VI, assembly." 28127-H.	1912	Flat file 7	2
NY Navy Yard. "Compensating binnacle torpedo boat type." 42819-F, 2-9:9 sheets.	1917	Flat file 7	2
NY Navy Yard. "Lead line reels. Deep sea, coasting and log, Type plan." Hull div. no. 67773.	1919	Flat file 7	2
NY Navy Yard. "Compensating binnacle Mk VI and VII Mod 2, switch receptacle and plug, small details." N42.	1937	Flat file 7	4
NY Navy Yard. "Parts for compensating binnacle MK VI and others," annotated.	1939-1943	Flat file 7	1
NY Navy Yard. "Assembly for Mk VII Mod 5, and assorted parts." N3100, N352 to N970, N1529 to 3139 (not inclusive), photographic reproductions. Some pages annotated.	1939-1940, 1967 n.d.	Vol. 2	
NY Navy Yard. "Assembly for Mk VII Mod 4 and assorted parts." N3100, N352 to N970, N1529 to 3139 (not inclusive), photographic reproductions, loose pages. Some pages annotated.	1939-1940, 1967 n.d.	41	11
NY Navy Yard. "Card float and assembly details." N232.	1939	Flat file 7	4
NY Navy Yard. "Window frame." N442.	1940	Flat file 7	4
NY Navy Yard. Parts, various. N453A, N455B to 461, N525C, N531, N970, N2228, N3129.	1942-43	41	12
NY Navy Yard. "UNS Standard compensating binnacle Mk VII Mod 4 (for 7 ½ in. magnetic compass)." N3100.	1943	Flat file 7	4
NY Navy Yard. "Dome assembly." N3131.	1943	Flat file 7	4
NY Navy Yard. "Heeling magnet assembly, and packing box assembly." N405, N571A.	1940, 1943	43	10
NY Navy Yard. "Pedestal," annotated. N343.	[1943]	41	11
NY Navy Yard. "Bid no. N140-125-58." N440 to N443, N453 to 462 (not inclusive), N970, N2228, N3129, N3131, S2407 533627 and S2407 533638.	1939-1940, n.d.	Flat file 7	3

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
Coast Guard. "Boat compasses, sketch of standard mounting." RD 5 S2471.	1944	43	11
BuShips. "General type plans gauge board for mounting trim and heel indicator clinometer tubes." S2407 860348, alt D.	1941	Flat file 8	2
BuShips. "Heeling magnet, Mk 1 Mod 0." S2407 921609.	1941	Flat file 9	4
BuShips. "Heeling magnet holder, Mk 1 Mod 0 (for shelf type binnacle)." S2407 921609.	1941	Flat file 8	3
BuShips. "Heeling magnet Mk 1 brass holder and box." 58530 S2407 533139, alt. 1.	1944	Flat file 8	3
BuShips. "Compensating binnacle no. 1 Mk VII." 466730 to 466734, 487066 (also marked with NY Navy Yard nos. N10 to N15).	1942	Flat file 8	2
BuShips. "Sectional Assembly . . . high pressure air compressor." 533820.	1942	Flat file 9	4
BuShips. "Compass reader." S2407 501979.	1944	43	10
BuShips. "Composite scales (range time speed)." 564095 S2407 533063, Alt. 1.	1944	Flat file 8	6
BuShips. "Azimuth, assembly & details." S2407 607127, also includes note.	1944, 1971	Flat file 9	4
BuShips. "Sluable gimbal support." 58000 S2407 533080, Alt. 2.	1945	Flat file 8	6
BuShips. "Dome head shelf binnacle for 7 ½ in. compass, assembly." 58010 S2407 533598, Alt 4.	1945	Flat file 8	2
BuShips. "Navy no. 1 compass Mk 1 Mod 0." 58000 S2407 533381 to 533392.	1945	Flat file 8	1
BuShips. "Navy no. 1 compass, Mk I Mod 0." 58000 S2407 533389, p. 9:12.	1945	Flat file 8	3
BuShips. Navy no. 5, Mk II Mod 0. "Handle & support bracket to adapt no. 5 compass for portable & non compensating use, assembly & details." 58249 S2407 533348, Alt B.	1945	Flat file 8	4
BuShips. Navy no. 5 Mk II Mod 0. 58246 S2407 533181 to 533189, Rev. A, B.	1946	Flat file 8	4
BuShips. "Navy No. 5, Mk II Mod 0, assembly and details." 58246 S2407 533180 to 533189, Rev. A, B, C.	1946	Flat file 9	5
BuShips. "Standard plan compass reader for 5 in. compass." S2407 501979.	1946	Flat file 9	2
BuShips. Corrector Magnets. 58529 S2407 533675.	1951	41	15
BuShips. "6 in. Azimuth Circle (Mk IV Mod 0), assembly." S2407 E 533653C to 660.	1952, 1957-1958	41	14
BuShips. [Wrist compass], parts. SK524164 to 524208 (not inclusive).	1953	Flat file 9	3
BuShips. "Wrist compass, Mk I Mod 0, Assembly and details." S2407 E 533690 to 533691, Rev. 1, 2	1956	Flat file 9	7
BuShips. "4 ½ in. Illuminated pelorus, Mk I Mod 0, details." S2407 533679. Missing p. 2:3.	1954	Flat file 8	5

<b>Folder Title</b>	<b>Date</b>	<b>Box</b>	<b>Folder</b>
BuShips. "4 ½ in. illuminated pelorus, Mk I Mod 0, details" annotated.	1981	Flat file 9	4
BuShips. "Pelorus Stand with combined switch for Mk III Mod 0 & 1."	1954	41	15
BuShips. "Compass reader Mk IV Mod 1." S2407 533689, Revs. A, B, C.	1955-1959	Flat file 8	5
BuShips. "Compass reader Mk IV Mod 1." S2407 533689, Rev C.	1959	41	15
BuShips. "Binnacle for Navy no. 3 compass." S2407 F 533809 to 810, incomplete set of drawings.	1956	Flat file 8	2
BuShips. "Binnacle for Navy no. 3 compass, assembly." S2407 F 533806 to 810, Rev. A.	1959	43	10
BuShips. "Navy no. 3 compass." S2407 H 533825, Rev. A, p. 5:8.	1956	Roll 10	
BuShips. "Navy no. 3 magnetic compass." S2407 H 533821 to 828 Rev. B, missing p. 826.	1960	Roll 11	
BuShips. "Navy no. 3 compass." S2407 H 533823 to 828, Rev. B.	1960	Roll 12	
BuShips. "Navy No. 3 compass." S2407 H 533821 to 828, Rev. B (duplicates).	1960	Flat file 9	6
BuShips. "Plotting board maneuvering and formation Mk I Mod 0." 815 1853015, Rev A.	1959	41	13
BuShips. "Bearing Circle & compass holder for portable gyro heater." 815 F 1853069, Rev. A, B.	1960	Flat file 8	6
BuShips. "Magnetic unmounted submersible wrist type, MK I Mod 1." 400-533976 to 533977, Rev. A, B, C.	1962	Flat file 9	7
BuShips. "Mk II Mod 0 binnacle for Navy no. 3 magnetic compass." S2407 F 533806, Rev. C, D. Contract # N00024 68 C 5152	1968	Roll 13	
BuShips. "Mk II Mod 0 binnacle for Navy no. 3 magnetic compass." S2407 F 533806, Rev. D, annotated. Contract # N00104 72 W 7036.	1972	Roll 14	
BuShips. "Mk II Mod I binnacle for Navy no. 3 Magnetic compass." S2407 F 533806, Rev. F, G. Contract # N00104 72 W 7036.	1972	Roll 15	
BuShips. "Mk II Mod 0 binnacle for Navy no. 3 magnetic compass." S2407 F 533806, Rev. G, annotated. Contract # N64281 83 M 0473.	1972	Roll 16	
BuShips. "Mk II Mod 0 binnacle for Navy no. 3 magnetic compass." S2407 F 533806.	[ca. 1972], n.d.	Roll 17	
BuShips. "Mk II Mod 0 binnacle for Navy no. 3 magnetic compass." S2407 F 533806. Photostatic copies, incomplete set.	n.d.	Flat file 9	6
BuShips. "No. 1 compass, MK I MOD 1." 400 533166A to 533177A.	n.d.	Flat file 8	3
BuShips. "6 in. compass assembly." S2407 F 533774 to 783, pp. 26-35:38.	n.d.	Flat file 8	7
BuShips. Unidentified scraps.	n.d.	41	16

Folder Title	Date	Box	Folder
Ships Parts Control Center (SPCC). "Quadrantal Sphere." H6605 369 4443.	1962	32	38
Naval Ship Engineering Center. "Pilot House & Bridge Wing Console." 800-4385799. 2 copies, one noted Henshal Corp.	1969, n.d.	Flat file 8	1
Naval Ship Engineering Center. Mk 7 Mod 5 Binnacle 9240-030 (photocopy)	n.d.	Flat file 8	1
Naval Ship Engineering Center. Mk VII Mod 5 binnacle dwg. no. 9240-030, pp. 1:6, 2:6.	n.d.	Roll 18	

**VII. Measured Drawings, 1912-1991, n.d. [bulk 1912-1980]; e. Filmed engineering plans (Aperture cards), 1974-1988, n.d.**

Folder Title	Date	Box	Folder
Navy No. 1 Compass, 533211 to 222, 533381 to 91	n.d.	37	16
Navy No. 3 Compass, 533821 to 28, 1853085	1980-83	37	17
Navy No. 3 Compass [encapsulated in glass]	n.d.	37	18
Navy No. 5 Compass, 533180 to 89, 533348	1980-85	37	19
Navy Standard 7 ½" Compass for Binnacle, 102-100-NSR, 6605-464-6162H, 4759447, 533589	1980-88	37	20
Bureau of Ships 6" Compass, 533624, 533991 to 98	n.d.	37	21
Army Wrist Compass, 13215E9650 to 668	n.d.	37	22
Wrist Compass, 533976 to 77	1980	37	23
Lensatic Compass, 13208E4680 to 4712, 13219E0750 to 0787, 13219E3959, 13219E9740, 13204E1700, MIL-C-0010436F	n.d.	38	1
M2 Compass, 921609, 10547166, 10543560, MIL-C-58052B#4	1977-85	38	2
Bezel & Ring Compass, 6605-319-5791	n.d.	38	3
Compass Readers, 501979, 533260 to 68, 533627, 533689, 8635955, 921609, 6605-369-4443, 6605-464-6162H	1976-84	38	4
Navy Standard Binnacle, NSR 103-100, NSR 104-100, 9240-030, 6605-179-1686, 6605-464-6162H, 533139	1981-85	38	5
Navy Standard Binnacle, N343B to N970M	n.d.	38	6
Navy No. 3 Binnacle, 533625 to 27, 533806, 921609, 1853085	1980-87	38	7
Compensating Binnacle, N2754 to N3139	n.d.	38	8
Navy Standard Pelorus, 533260 to 68	1974-80	38	9
4 ½" Pelorus, 533678 to 80	1981	38	10
Azimuth & Bearing Circle, 9240-002, 250624, 533624, 533627, 533653 to 56, 607127 to 29	1980-85	38	11
6" Bearing Circle, 533689, 533657 to 60	n.d.	38	12
Underwater Log, 30595 to 601, 31091, 40260 to 64	n.d.	38	13

Folder Title	Date	Box	Folder
Alidade, 533911, 533875 to 94, 533968 to 75, 73687	n.d.	38	14
Telescope, 27991, 29969, 526591 to 92, 533000, 573911 to 12, 618143 to 45	n.d.	38	15
Portable Gyro Repeater, 1853069	1974	38	16
Sextant Type Stadimeter, 533120 to 34	n.d.	39	1
Fiske Stadimeter, 533050 to 54, 533181 to 89, 533598, 6605-369-4443, 252901, 1484227	n.d.	39	2
Corrector Magnets, 533180 to 89, 533348, 533625, 533627	n.d.	39	3
Quadrantal Spheres & Cylinders, 533195, 6605-369-4443	n.d.	39	4
Molds & Arrangements for Sealing & Packing Cable Ends, 73687, 73754, 73902 to 03, 329108	n.d.	39	5
Support Slugable Gimbal, 6605-369-4445	n.d.	39	6
Junction Box Cover, Plug, & Coil Assembly, 3004, 3007, 3033, 3036	n.d.	39	7
Levels, 6605-527-6460	n.d.	39	8
Unidentified Cards	n.d.	39	9
Index Cards	n.d.	39	10

#### VIII. Hand Family Memorabilia, 1865-1955, n.d.

Folder Title	Date	Box	Folder
Bible Handbook [Owned by John E. Hand]. FRAGILE	1865	Vol. 7	
Assorted personal effects of John E. Hand.	1900-1923	40	1
Estate papers for Bartram Hand.	1926, 1948, 1955	40	2
Mounted Advertisement.	1926	40	3
Compass card and business card from Reynolds & Sons Compass Adjusters.	n.d. [ca. 1870]	40	4

#### IX. Reference, 1927-1969

Book. Spooner, Thomas. <i>Properties and Testing of Magnetic Materials, 1<sup>st</sup> edition.</i> New York: McGraw-Hill Book Company.	1927	Vol. 6	
Book. Spenser, Nye and George Kucera. <i>Handbook of Magnetic Compass Adjustment and Compensation, 2<sup>nd</sup> edition.</i> Washington, DC: U.S. Government Printing Office.	1945	Vol. 5	
Book. <i>Handbook of Magnetic Compass Adjustment and Compensation, 3<sup>rd</sup> edition.</i> Washington, DC: U.S. Government Printing Office. 1:2	1969	Vol. 4	
Book. <i>Handbook of Magnetic Compass Adjustment and Compensation, 3<sup>rd</sup> edition.</i> Washington, DC: U.S. Government Printing Office. 2:2	1969	Vol. 3	