



Smithsonian

National Museum of American History Kenneth E. Behring Center

Guide to the Everett H. Bickley Collection

NMAH.AC.0683

Tom Eisinger.

1999

Archives Center, National Museum of American History

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Table of Contents

Collection Overview	1
Administrative Information	1
Arrangement.....	3
Scope and Contents.....	2
Biographical / Historical.....	2
Names and Subjects	4
Container Listing	5
Series 1: Everett Bickley Personal Papers, 1920 - 1999.....	5
Series 2: The Bickley Manufacturing Company, 1933 - 1980.....	6
Series 3: Sorter Information, 1928 - 1965.....	7
Series 4: Other Inventions, 1919 - 1958.....	11
Series 5: World War Two Related Activities, 1939 - 1950.....	14

Collection Overview

Repository:	Archives Center, National Museum of American History
Title:	Everett H. Bickley Collection
Date:	1919-1980 (bulk 1919-1965)
Identifier:	NMAH.AC.0683
Creator:	Bickley, Everett H., 1888-1972 (Creator)
Extent:	5 Cubic feet (17 boxes)
Language:	English .
Summary:	The Everett H. Bickley Collection, 1919-1980, documents the inventions of Everett Huckel Bickley, most known for his electric sorting machine used to automate the process of sorting beans by use of a photoelectric cell. The collection consists of patents, drawings, photographs, correspondence, and artifacts designed by Bickley. The collection spans a considerable portion of the twentieth century and is of value to those researchers interested in product development, the patent application process, product marketing and promotion, World War II innovation, and the daily operation of a small, privately-owned industry.

Administrative Information

Acquisition Information

Audrey Bickely Beyer, Everett Bickley's daughter, donated the collection to the Archives Center, National Museum of American History, in March of 1999.

Related Materials

Materials at the National Museum of American History

The machine that Bickley used to demonstrate his bean-sorting process is held by Division of Work and Industry.

Processing Information

Processed by Tom Eisinger, July 8, 1999; revised by Erin Molloy (volunteer) and Alison Oswald, 2012.

Preferred Citation

The Everett H. Bickley Collection, 1919-1980, Archives Center, National Museum of American History, Smithsonian Institution.

Restrictions

The collection is open for research use.

Conditions Governing Use

Collection items available for reproduction, but the Archives Center makes no guarantees concerning intellectual property rights. Archives Center cost-recovery and use fees may apply when requesting reproductions. Copyright status of items varies.

Biographical / Historical

Everett Huckel Bickley (1888-1972) was an active inventor and entrepreneur. His inventing career began while a student at the Carnegie Institute of Technology, where he invented a number of items, including a variable speed governor with which he won the Senior Design Competition in 1910, the year he graduated.

In 1911, Bickley developed and marketed his first commercial invention, the "motograph," which was an electric sign which spelled out moving messages with light bulbs. The first motograph was erected over the Columbian Theatre in Detroit, but others were eventually seen in cities throughout the world. Unfortunately, he sold his interests too soon and made little money from this idea.

Only a few years later, while he was watching lines of women sorting navy pea beans in his job as chief engineer for the H. J Heinz Company, Bickley came up with the idea to develop an electric sorting machine to automate the process. By the early 1930s he had developed, patented, and begun to market a machine that could, by use of a photoelectric cell, sort the good beans from the bad. The first company to lease a bean sorter from him was the H. J. Heinz Company. Bickley continued to improve the sorter for the next thirty years, eventually adapting it to sort rice, peanuts, and ball bearings.

The sorter was the only invention from which Bickley ever made any considerable money, but it never dulled his enthusiasm for developing new ideas. At times he had up to nine active patent applications in the works. Examples include a nutcracker, snow shovel, slide mount, faucet, and photographic exposure meter.

Bickley was also active during World War II as a \$1.00 A Year Man and member of the National Inventors Council, which reviewed war related invention ideas. In addition, he contributed over fifty ideas of his own to the National Inventors Council. During the war, his company was able to produce little of its own products due to wartime material restrictions and having most of its workers drafted. Consequently, Bickley spent several fruitless years after the war trying to get his patent rights extended to cover time lost during the war.

Early on, Bickley realized the need to form a company to help develop and promote his many inventions, and formed the Bickley Manufacturing Company shortly after his graduation for just this purpose. When he married in 1913, his new wife, Mary, became an active partner in the company. Later, their daughter Audrey joined the company, producing the photoelectric cells for the sorter, going on sales trips, and working as one of her father's most reliable troubleshooters when the sorters broke down.

Bickley died in 1972 at the age of 84. Always a believer that hard work was necessary for success, he left behind a legacy of inventions, including one that helped to revolutionize the agricultural processing industry.

Scope and Contents

The collection spans a considerable portion of the twentieth century and is of value to those researchers interested in product development, the patent application process, product marketing and promotion, World War II innovation, and the daily operation of a small, privately-owned industry.

The collection consists of general correspondence, patents and patent correspondence, drawings, manuals, trade literature, and photographs. In addition, there are several artifacts designed by Bickley in the collection. These include a photographic exposure meter (Fotimer), a prototype slide mount (Color Tight Slide Mount), dance charts, and even a clipboard (Deskette).

Series 1: Everett H. Bickley Personal Papers, 1920-1999

This series consists of personal information about Everett H. Bickley. It includes his will, a company biography written by Bickley and edited by his daughter, and the story of the motograph, also written by Bickley.

Series 2: Bickley Manufacturing Company, 1933-1980

In this series is information directly related to the day-to-day operations of the company, including a checks-received ledger, office instructions, shop instructions, and employment information.

Series 3: Sorter Information, 1928-1965

This series consists of information about the various sorters that Bickley developed. Included are drawings related to the development of the sorters, engineering part drawings, equipment histories for plants where leased sorters were located (arranged alphabetically by location, though H-M is missing), patents, and patent correspondence related to specific sorter improvements. The patent correspondence in this series is sorted by starting date of the correspondence for each individual patent. If the starting dates were the same, they were then arranged alphabetically within the starting date. This was done to make it easier to trace the development of the sorter. The actual patents are also arranged alphabetically.

Series 4: Other Inventions, 1919-1958

This series documents Bickley's non-sorter related inventions. Included are the development drawings, patents, patent correspondence, and marketing material. In addition, the artifacts that are part of the collection can be found in this series.

Series 5: World War Two Related Activities, 1939-1950

The material in this series pertains to Bickley's work in World War II. It includes correspondence, information on the various ideas he submitted to the National Inventor's Council, and his attempts to get patent protection extended for the years during the war when he could not exploit his inventions. Information on sorter-related activities during the war is in Series III.

Arrangement

The collection is divided into five series.

Series 1, Everett Bickley Personal Papers, 1920-1999

Subseries 1, General Information, 1920-1999

Subseries 2, Publication Material, 1933-1998

Series 2: The Bickley Manufacturing Company, 1933-1980

Subseries 1, General Information, 1949-1980

Subseries 2, Company Operations, 1933-1972

Series 3, Sorter Information, 1928-1965

Subseries 1, Sorter Specific Information, 1933-1965

Subseries 2, General Information, 1928-1965

Series 4, Other Inventions, 1919-1958

Subseries 1, General Information, 1919-1951

Subseries 2, Inventions, 1920-1958

Series 5, World War two Related Activities, 1939-1950

Subseries 1, General Information, 1939-1950

Subseries 2, Ideas Submitted, 1941-1943

Physical Characteristics and Technical Requirements

Gloves must be worn when handling unprotected photographs and negatives.

Names and Subject Terms

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

Subjects:

- Advertising, Outdoor
- Agriculture -- Quality control
- Bean sorters
- Dance notation
- Fotimer (exposure meter)
- Industry
- Insect pests -- Control
- Inventions
- Inventors -- 20th century -- United States
- Military -- Art and science -- 1930-1950
- Patent practice
- Photography -- Apparatus and supplies
- Photography -- Exposure
- Research, Industrial
- Slide mounts
- Sorting devices
- World War, 1939-1945

Types of Materials:

- Correspondence -- 1930-1950
- Dance charts
- Drawings -- 20th century
- Patents
- Photographs -- 20th century

Names:

- Bickley Manufacturing Company
- H. J. Heinz Company

Container Listing

Series 1: Everett Bickley Personal Papers, 1920 - 1999

Subseries 1.1: General Information , 1920 - 1999

Box 1, Folder 1	Miscellaneous documents, 1920 - 1979
Box 18, Folder 1	Photo album, undated
Box 18, Folder 2	Portraits of Everett Bickley (photocopies), undated

Subseries 1.2: Publication Material, 1933 - 1998

Box 1, Folder 5	"The Bickley Bean Sorters", 1998
Box 1, Folder 3	Drafts, undated
Box 1, Folder 4	"The Motograph Electric Sign", undated
Box 1, Folder 5	Notes and extra copies, undated

[Return to Table of Contents](#)

Series 2: The Bickley Manufacturing Company, 1933 - 1980

Subseries 2.1: General Information, 1949 - 1980

Box 1, Folder 6	Miscellaneous company information, undated
Box 1, Folder 7	Post-Everett Bickley, 1976 - 1980

Subseries 2.2: Company Operations , 1933 - 1972

Box 1, Folder 8	Checks received, 1955 - 1972
Box 1, Folder 9	Employment information, 1948 - 1963
Box 1, Folder 10	Information and reference data, 1933 - 1964
Box 1, Folder 11	Instructions, office, 1944 - 1966
Box 1, Folder 12	Instructions, salesmen, undated
Box 1, Folder 13	Instructions, shop, c. 1940, 1961-1964
Box 2, Folder 1	Instructions, shop and office, 1947 - 1959
Box 2, Folder 2	Instructions, shop and outside, 1946 - 1965
Box 2, Folder 3	Laboratory addition, 1946
Box 2, Folder 4	Product material, undated
Box 2, Folder 5	Publications, 1968

[Return to Table of Contents](#)

Series 3: Sorter Information, 1928 - 1965

Subseries 3.1: Sorter Specific Information, 1933 - 1965

Box 2, Folder 6	Ball bearing, general, 1958 - 1964
Box 2, Folder 7-8	Ball bearing, notes and drawings, 1953 - 1964
Box 2, Folder 9	Ball bearing, part ordering, 1952 - 1963
Box 3, Folder 1	Ball bearing, patent-British, 1954 - 1961
Box 3, Folder 2	Ball bearing, patent-other foreign, 1953 - 1958
Box 3, Folder 3	Ball bearing, patent-United States, 1953 - 1957
Box 4, Folder 1	Ball bearing, sales and marketing, 1953 - 1964
Box 4, Folder 2	Ball bearing, miscellaneous topics A-O, 1953 - 1964
Box 4, Folder 3	Ball bearing, miscellaneous topics P-R, 1953 - 1964
Box 4, Folder 4	Ball bearing, miscellaneous topics S-U, 1952 - 1964
Box 4, Folder 5	Ball bearing, miscellaneous topics, 1953 - 1964
Box 4, Folder 6	Ball bearing, testing, 1953 - 1964
Box 4, Folder 7	Bean sorter, bills of material, 1933 - 1959
Box 4, Folder 8	Bean sorter, bills of material, 1940 - 1947
Box 4, Folder 9	Bean sorter, drawings, 1943 - 1947
Box 4, Folder 10	Bean sorter, ideas, 1940 - 1945
Box 5, Folder 1	Bean sorter, instructions, 1945 - 1959
Box 5, Folder 2	Bean sorter, operator's handbook, 1933 - 1936
Box 5, Folder 3	Bean sorter, operator instructions, 1934 - 1945
Box 5, Folder 4	Bean sorter, testing, 1965
Box 5, Folder 5	Peanut sorter, bill of material, 1947
Box 5, Folder 6	Peanut sorter, drawings, 1961 - 1962

Box 5, Folder 7	Peanut sorter, sales and testing, 1964 - 1965
Box 5, Folder 8	Rice sorter, bill of material, 1944 - 1945
Box 5, Folder 9	Rice sorter, drawings, 1944 - 1946
Box 5, Folder 10	Rice sorter, instructions, 1947

Subseries 3.2: General Information , 1928 - 1965

Box 5, Folder 11	Miscellaneous sorter material, 1941 - 1965
Box 5, Folder 12	Equipment record, Bad Axe, 1947 - 1961
Box 5, Folder 13	Equipment record, Bismark-Glendive, 1942 - 1957
Box 5, Folder 14	Equipment record, Philadelphia and Pittsburgh, 1933 - 1961
Box 5, Folder 15	Equipment record, Reese-Watsonville, 1951 - 1961
Box 6, Folder 1	Instructions, 1954 - 1966
Box 6, Folder 2	Layout drawings, 1933 - 1965
Box 6, Folder 3	Maintenance, 1952 - 1965
Box 6, Folder 4	Marketing material, 1944 - 1949
Box 6, Folder 5-15	Parts blueprints, #0-1099, 1933 - 1965
Box 7, Folder 1-11	Parts blueprints, #1100-2141, 1946 - 1962
Box 8, Folder 1-2	Parts blueprints, #2142-2299, 1961 - 1965
Box 8, Folder 3-13	Parts drawings, #0-1299, 1933 - 1965
Box 9, Folder 1-11	Parts drawings, #1300-2299, 1949 - 1965
Box 8, Folder 14	Part orders, 1951 - 1975
Box 10, Folder 1	Patent, general, 1937 - 1955
Box 10, Folder 2	Patent correspondence, cell, 1939 - 1942
Box 10, Folder 3	Patent correspondence, cell, 1940 - 1945
Box 10, Folder 4	Patent correspondence, cell, 1941 - 1943

Box 10, Folder 5	Patent correspondence, cell-Canadian, 1941 - 1942
Box 10, Folder 6	Patent correspondence, foreign, 1946
Box 10, Folder 7	Patent correspondence, sorter, 1946 - 1951
Box 10, Folder 8	Patent correspondence, sorter-Canadian, 1946
Box 10, Folder 9	Patent correspondence, puffer, 1947 - 1958
Box 10, Folder 10	Patent correspondence, sorter, 1948 - 1949
Box 10, Folder 11	Patent correspondence, puffer-Canadian, 1949
Box 10, Folder 12	Patent correspondence, scanner, 1949 - 1954
Box 10, Folder 13	Patent correspondence, sorter-Canadian, 1950
Box 10, Folder 14	Patent correspondence, puffer-British, 1951
Box 10, Folder 15	Patent correspondence, scanner, 1951 - 1954
Box 11, Folder 1	Patent correspondence, scanner-British, 1951 - 1953
Box 11, Folder 2	Patent correspondence, sorter-British, 1951
Box 11, Folder 3	Patent correspondence, puffer, 1952 - 1954
Box 11, Folder 4	Patent correspondence, scanner-Canadian, 1952
Box 11, Folder 5	Patent correspondence, sorter, 1952 - 1956
Box 11, Folder 6	Patent correspondence, scanner, 1953 - 1954
Box 11, Folder 7	Patent correspondence, scanner-Australian, 1953
Box 11, Folder 8	Patent correspondence, scanner-Australian, 1954
Box 11, Folder 9	Patent correspondence, sorter, 1954 - 1957
Box 11, Folder 10	Patent correspondence, scanner-Canadian, 1955
Box 11, Folder 11	Patent correspondence, sorter, 1955
Box 11, Folder 12	Patent correspondence, puffer, 1956
Box 11, Folder 13	Patent correspondence, sorter, 1956

Box 11, Folder 14	Patent correspondence, control valve, 1957 - 1958
Box 11, Folder 15	Patent correspondence, scanner, 1957 - 1958
Box 11, Folder 16	Patent correspondence, sorter, 1957
Box 11, Folder 17	Patent research, 1943 - 1949
Box 11, Folder 18	Patents, 1933 - 1950
Box 11, Folder 19	Patents, 1950 - 1954
Box 11, Folder 20	Patents, 1954 - 1962
Box 12, Folder 1	Photographs, undated
Box 12, Folder 2	Prices, 1955 - 1964
Box 12, Folder 3	Puffer drawings, 1933 - 1949
Box 12, Folder 4	Quality control/testing, 1928 - 1961
Box 12, Folder 5	Sola compensator, 1954 - 1960
Box 12, Folder 6	Trade literature, 1956 - 1967
Box 17	Troubleshooting, Audrey's red troubleshooting binder, undated
Box 12, Folder 7	Wiring drawings, 1940 - 1965

[Return to Table of Contents](#)

Series 4: Other Inventions, 1919 - 1958

Subseries 4.1: General Information, 1919 - 1951

Box 12, Folder 8 Miscellaneous information, 1919 - 1951

Subseries 4.2: Inventions, 1920 - 1958

Box 12, Folder 9 Ball pen, 1947

Box 12, Folder 10 Cap nut and colorator, 1922

Box 12, Folder
11-12 Color tight slide mount, 1945 - 1952

Box 12, Folder 13 La Cucharacha, 1944

Box 13, Folder 1 [Dance charts, undated](#)

Box 13, Folder 2 Depth sounding apparatus, 1949 - 1951

Box 13, Folder 3 Deskette, 1946 - 1949

Box 13, Folder 4 Deskette, undated

Box 13, Folder 5 Dog trainer, undated

Box 13, Folder 6 Double swinging doors and double-ended clothes pin, 1924 - 1950

Box 13, Folder 7 Drafting ruler, 1955

Box 13, Folder 8 Draw nail washer, undated

Box 13, Folder 9 Faucet related, 1923 - 1925

Box 13, Folder 10 [FILL-ER-UP valve, 1937 - 1942](#)

Box 13, Folder 11 Fish hook, 1949

Box 13, Folder 12 Fluid control valve, 1957 - 1958

Box 13, Folder 13 Foldable sound record, 1951

Box 13, Folder 14 Foldable sound record, 1947 - 1950

Box 13, Folder 15 Football down marker, 1946

Box 13, Folder 16	Fotimer, 1944 - 1946
Box 13, Folder 17	Fotimer, 1944 - 1947
Map-case 3, Drawer 16, Folder 1	Fotimer advertisements, undated
Box 13, Folder 18	Guy compensator, 1945 - 1946
Box 13, Folder 19	Kill-Fly, 1943 - 1951
Box 13, Folder 20	Kill-Fly, 1944 - 1946
Box 14, Folder 1	Kill-Fly, photographs, undated
Box 14, Folder 2	Lantern slide mounting, undated
Box 14, Folder 3	Mariner's compass, 1949 - 1950
Box 14, Folder 4	Meat timer, 1955
Box 14, Folder 5	Motograph, 1939
Box 14, Folder 6	Nutcracker, 1950 - 1951
Box 14, Folder 7	Oil delivery control system, 1933 - 1945
Box 14, Folder 8	Optical accessory for pianos, 1943
Box 14, Folder 9	Pecan cracker, 1947
Box 14, Folder 10	Pencil sharpener, 1945
Box 14, Folder 11	Phonograph related, 1921 - 1924
Box 14, Folder 12	Power pulley, 1920 - 1947
Box 14, Folder 13	Production and material control system, 1920
Box 14, Folder 14	Pulp evaporator, 1944 - 1951
Box 14, Folder 15	Radio receiver tuning control mechanism, 1936
Box 14, Folder 16	Snow shovel, 1948 - 1949
Box 15, Folder 1	Sound distribution system, 1954
Box 15, Folder 2	Stereo scenic mount, 1943 - 1944

Box 15, Folder 3	Submarine salvage, 1949
Box 15, Folder 4	Third dimensional motion pictures, 1944
Box 15, Folder 5	Tide clock, 1949 - 1950
Box 15, Folder 6	Tire valve assembly, 1951 - 1954
Box 15, Folder 7	Universal drill clamp, 1946
Box 15, Folder 8	Universal drill jig, 1946

[Return to Table of Contents](#)

Series 5: World War Two Related Activities, 1939 - 1950

Subseries 5.1: General Information, 1939 - 1950

Box 16, Folder 1	Miscellaneous correspondence and information, 1939 - 1943
Box 16, Folder 2	Patent extension bill, 1945 - 1950

Subseries 5.2: Ideas Submitted, 1941 - 1943

Box 16, Folder 3	Aerial photography improvements, 1941 - 1943
Box 16, Folder 3	Airplane construction improvements and Alligator: mine field protector, 1941 - 1943
Box 16, Folder 4	Antidote plane and Bola bomb, 1942
Box 16, Folder 5	Boom torpedo bomb and cat's eye: signalling device, 1939 - 1942
Box 16, Folder 6	Dimout suggestions and electricity saving suggestions, 1942
Box 16, Folder 7	Fighter control panel improvements and Fog-O-Scope, 1942 - 1943
Box 16, Folder 8	Grenade, mine sweep destroyer and Houdini: cable for mines, 1942
Box 16, Folder 9	Mines to Japan and night blindness suggestions, 1942
Box 16, Folder 10	Night Sweep, method of detecting submarines and Night Wind: incendiary device, 1942
Box 16, Folder 11	Octopus: improved submarine mine and Orange Quilt: sea location marker, 1942
Box 16, Folder 12	Owl, night vision aid, Poison bullet and Red Eye: signal device, 1941 - 1942
Box 16, Folder 13	Sea Spot Gun, position marker, Skunk Attacks for dogfights, and Squid, smokescreen for submarines, 1942
Box 16, Folder 14	Talking Black Beam and Talking Fish, submarine decoy, 1942
Box 16, Folder 15	Tanker loss, suggestions for reducing and Turbosupercharger improvements, 1942 - 1943

[Return to Table of Contents](#)