OVERVIEW OF THE COLLECTION

Title: Gerber Fabric Cutter Video Documentation

Collection Date(s): 1995-1996

Extent and Forms of Material: 2.5 cubic feet, including audio and videotape, approximately 19 hours of footage (9 boxes).

Creator: Jerome and Dorothy Lemelson Center for the Study of Invention and Innovation with NMAH staff Curator, Peter Liebhold, of the Division of Work and Industry.

Abstract: This video history documents the inventor H. Joseph Gerber, engineers, assembly workers, operators, and other technicians who worked with the cutter. The Gerber Fabric Cutter S-70 is part of a systematic approach to layout and cutting that has revolutionized the needle trades. It applies numerical control to sizing of patterns and cutting of fabric. The use of this type of equipment made possible a radical change in the make-up of the cutting room workforce.


Collection Number: AC0609

Processing Note: Processed by Alison L. Oswald, July 1997; revised May 1998 and June 2008.

Acknowledgement Statement: This video documentation project was made possible through the Jerome and Dorothy Lemelson Center’s Invention Documentation and Dissemination Projects Program which financially supports projects that propose collaboration between the applicant and Center staff, and that support the Center’s documentation goals.

INFORMATION FOR USERS OF THE COLLECTION

Conditions Governing Access: The collection is open for research use.

Physical Access: Researchers must use reference copies of audio-visual materials. When no reference copy exists, the Archives Center staff will produce reference copies on an “as needed” basis, as resources allow. Series 3, Original Videos, 1996, is located off-site; please inquire.

For additional information, contact the Archives Center at 202.633.3270 or archivescenter@si.edu
Technical Access: Listening to microcassettes is only possible by special arrangement.

Conditions Governing Reproduction and Use: Copyright held by the Smithsonian Institution. Collection items available for reproduction, but the Archives Center makes no guarantees concerning copyright restrictions. Reproduction permission from Archives Center: fees for commercial use.

Preferred Citation: Title and date of item, Gerber Fabric Cutter Video Documentation, dates, Archives Center, National Museum of American History, Smithsonian Institution, box number X, folder number XX, digital file number XXXXXXXX.

IN-DEPTH INFORMATION ABOUT THE COLLECTION

Administrative/Biographical History: Heinz Joseph “Joe” Gerber was born in Vienna, Austria, on April 17, 1924. In 1940, Gerber escaped the Nazis and immigrated to New York City and then to Hartford, Connecticut, with his mother Bertha Gerber, a dressmaker. Gerber’s father, Jacob, is presumed to have died in a concentration camp. Gerber attended Weaver High School and graduated in two years (1943). He attended Rensselaer Polytechnic Institute (RPI) in Troy, New York, on a scholarship and earned a bachelor’s degree in aeronautical engineering in 1947. As a junior at RPI, Gerber developed the Gerber Variable Scale, his first invention. The earliest version of the variable scale was fashioned from an elastic band removed from a pair of pajamas. Gerber created a rubber rule and scale that could flow with a curve, expand, contract, and turn a corner. The scale allows for direct reading of curves, graphs, and graphical representations, giving direct numerical readings of proportions, spacing and interpolation. The Variable Scale became the building block of what would become Gerber Scientific Instrument, Inc.

With financial assistance from Abraham Koppleman, a newspaper and magazine distributor in Hartford, Gerber and Koppleman formed a partnership and incorporated Gerber Scientific Instrument Company in 1948. Gerber served as president, Koppleman as treasurer, and Stanley Levin as secretary. The manufacture of Variable Scale was jobbed out and the distribution was conducted from Hartford. Gerber also worked as a design analytical engineer for Hamilton Standard Propellers of United Aircraft and for Wright Patterson Air Force Base in Dayton, Ohio. Shares of Gerber Scientific Instrument Company were eventually sold to the public in 1961, and in 1978, the company changed its name to Gerber Scientific, Inc. In the 1960s and 1970s, Gerber developed the first series of precision, computer-driven cutting systems for the apparel industry called the Gerber Cutter. The cutters introduced automation to the garment industry. In 1967, Gerber realized that the U.S. garment industry, due to a lack of automation, was faced with increasing overseas competition. Gerber’s solution was to engineer the Gerber Fabric Cutter S-70, a machine that cuts apparel quickly and effectively while using less cloth.

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Gerber holds more than 600 United States and foreign patents. Many of his patents relate to the United States apparel industry. In 1994, Gerber was awarded the National Medal of Technology by President Clinton for helping to revolutionize the optical, garment, automotive, and other industries. His pioneering achievements include:

- a generation of data readers (electromechanical devices that converted graphical data directly into computer readable format);
- projection systems that interactively converted information from aerial photographs for use in computers;
- devices that plotted digital output data from computer cards or tape;
- digital numerically-controlled drafting machines which verify the accuracy of the cutting path of numerical machine tools;
- a photoplotter (drafting machine configured with a unique light source to directly draw high accuracy layouts of printed circuit board masters on photographic film or glass with light beams); and
- systems with laser technology to draw at high speeds.¹

Subsequent subsidiaries of Gerber Scientific, Inc., are: Gerber Garment Technology, Inc., (GGT); Gerber Scientific Products, Inc. (GSP); Gerber Systems Corp. (GSC), and Gerber Optical, Inc., (GO). GGT makes computer-controlled cutting and design equipment for apparel, automotive, aerospace and other industries. GSP produces systems for sign-making and graphic arts industries. GSC makes production systems for printing, industrial machinery and other industries. GO makes equipment for the optical-lens manufacturing industry.²

In 1954, Gerber married Sonia Kanciper. They had a daughter, Melisa Tina Gerber, and a son, David Jacques Gerber. H. Joseph Gerber died on August 9, 1996, at the age of 72.

Scope and Content: The Gerber Fabric Cutter S-70 is part of a systematic approach to layout and cutting that has revolutionized the needle trades. It applies numerical control to the sizing of patterns and cutting of fabric. The use of this type of equipment made possible a radical change in the make-up of the cutting room workforce. This video history contains original, master, and reference videos, Dictaphone microcassettes, and tape digests and notes documenting the development, operation and use of the Gerber Fabric Cutter S-70 in three locations: H.I.S., Inc., in Bruceton, Tennessee (Chic blue jeans use of cuter); General Motors in Grand Rapids, Michigan (automotive use of the cutter); and Gerber Scientific Instrument Company in Hartford, Connecticut (Gerber corporate office and invention factory). The video footage documents H. Joseph Gerber, engineers, assembly workers, operators, and other technicians who worked with the cutter at the three locations. The footage from the Tennessee and Michigan sites provides insight into the complexity of introducing a new technology into the workplace and documents operators and managers discussing the effect of the cutter on workflow,
quality, personnel, and attitudes towards the job. The footage from the Connecticut site documents the engineers who developed the cutter and provides valuable insight into the invention process.

The collection is arranged into five series: Series 1, Notes, 1995-1996; Series 2, Audio tapes (microcassettes), 1996; Series 3, Original videos (BetaCam SP), 1996; Series 4, Master videos (BetaCam SP), 1996; and Series 5, Reference videos ½” VHS), 1996.

**Series 1, Notes, 1995-1996**, includes documentation created by Peter Liebhold in preparation for his site visits to Bruceton, Tennessee, Grand Rapids, Michigan, and Hartford, Connecticut. The documentation includes lists of potential interviewees, questions to ask of the employees, and general notes detailing observations at each site. The H. Joseph Gerber interview file consists of a brief tape digest keyed to each of the seven microcassettes, notes from the interview, and the questions asked of Mr. Gerber. The Gerber Scientific Instrument Company file contains a video digest for only three interviews: Ed Roth, Fred Rosen, and Larry Wolfson.

**Series 2, Audio tapes (microcassettes), 1995 June** consists of seven Dictaphone microcassettes of oral history interviews with H. Joseph Gerber conducted by Peter Liebhold, Curator, American History Museum and Stanley Leven, Director and Secretary of Gerber Scientific Instrument Company.

**Series 3, Original Videos (BetaCam SP), 1996**, consists of thirty-eight BetaCam SP video tapes totaling approximately nineteen hours of footage.

**Series 4, Master Videos (BetaCam SP), 1996**, consists of twenty-six BetaCam SP tapes totaling nineteen hours of footage.

**Series 5, Reference videos (1/2” VHS), 1996**, consists of twenty-six ½” VHS tapes for a total of thirteen hours of footage.

**System of Arrangement:** Collection is arranged into five series.

**Acquisition Information:** This collection was created by the Jerome and Dorothy Lemelson Center for the Study of Invention and Innovation with American History C uartor Peter Liebhold, Division of Work and Industry.

**Accruals:** The Archives Center added notes and audio tapes to this collection in February 2008.

For additional information, contact the Archives Center at 202.633.3270 or archivescenter@si.edu
Custodial History: The collection was transferred to the Archives Center from the Division of Work and Industry on July 8, 1997.


Related Artifacts: The Division of Work and Industry holds artifacts related to this collection including a Gerber Fabric Cutter S-70.

Access Points:

Subject/Names:
Delphi Interior and Lighting Systems
General Motors
Gerber, Heinz Joseph, inventor
Gerber Scientific Instrument Company
H.I.S., Inc.
Rosen, Fred
Roth, Ed
Wolfson, Larry

Subject/Topical:
Carolina—Connecticut—Michigan
Industrial factories—1940-1990
Inventions—1920-2000—United States
Factories—1940-1990
Machinery—1940-1990
Automation—1940-1990
Work—1940-1990
Fabric cutters—1940-1990
Computerized instruments—1940-1990
Inventors—1940-1990

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Gerber Fabric Cutter Video Documentation, 1995-1996

Form/Genre:


CONTAINER LISTING

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Gerber Fabric Cutter Video Documentation, 1995-1996

Bruceton, Tennessee
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Bruceton, Tennessee
Total Running Time: 30:00

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Grand Rapids, Michigan
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Grand Rapids, Michigan
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Grand Rapids, Michigan
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Grand Rapids, Michigan
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Grand Rapids, Michigan
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OV 609.12 General Motors (Delphi Interior and Lighting Systems), 1996
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8 OV 609.13 General Motors (Delphi Interior and Lighting Systems), 1996
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OV 609.14 General Motors (Delphi Interior and Lighting Systems), 1996
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OV 609.20 Gerber Scientific Instrument Company, 1996
Hartford, Connecticut

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MV 609.12 General Motors (Delphi Interior and Lighting Systems), 1996
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Series 5, Reference videos (1/2" VHS), 1996
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RV 609.3 H.I.S, Inc., Bruceton, Tennessee, 1996
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RV 609.4 H.I.S, Inc., Bruceton, Tennessee, 1996
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RV 609.5 H.I.S, Inc., Bruceton, Tennessee, 1996
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5 RV 609.14 General Motors (Delphi Interior and Lighting Systems), 1996
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RV 609.15 Gerber Scientific Instrument Company, 1996
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RV 609.16 Gerber Scientific Instrument Company, 1996
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RV 609.18 Gerber Scientific Instrument Company, 1996
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For additional information, contact the Archives Center at 202.633.3270 or archivescenter@si.edu
Hartford, Connecticut
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