

**MEDICAL CENTER ARCHIVES
OF
NEWYORK-PRESBYTERIAN/WEILL CORNELL**

**1300 York Avenue # 34
New York, NY 10065**

**Finding Aid To
THE HUGH DEHAVEN, PHD (1895-1980) PAPERS**

**Dates of Papers:
1919-1980**

**55.5 Linear Inches
(9 Boxes)**

**Finding Aid Prepared By:
BSM, 03/1983;
HIPAA restrictions updated by Rebecca Snyder in 2020**

Provenance

The Hugh DeHaven Papers came to the Medical Archives along a circuitous route. In 1978, the Insurance Institute for Highway Safety (IIHS) approached Dr. DeHaven and offered to help him process his papers, with the understanding that they would in the end be given to Cornell University Medical College. DeHaven agreed to this, and also to the proposal that a complete set of duplicates would be retained at the Institute.

In May of 1980, after the death of Dr. DeHaven, five boxes of records arrived at the Medical College from the IIHS. The contents had been item indexed and numbered in red marker, and a thick guide accompanied the material. To this collection from the IIHS has been added files on Dr. DeHaven that the Wood Library of the Medical College had, and also some material of Hugh DeHaven's that was found by a relative, Mr. Walter DeHaven, after his death. These last pieces are in Boxes 6 and 7 and are not included on the item index sheets created by the IIHS.

Biography

1895	Born, Brooklyn, NY, father steel worker and inventor
1906-09	Fessenden School, West Newton, Mass.
1909-14	Hill School, Pottstown, PA.
1914-15	Attended Cornell University, Mechanical Engineering course
1915-16	Attended Columbia University
1916	Turned down for enlistment in U.S. Army Air Corps, enrolled as cadet pilot in Royal Flying Corps, Toronto, Canada
1917	Involved as cadet in mid-air collision in training aircraft day before he was to be commissioned, only one to survive, began his interest in crashes and crash injury
1918-33	Designed automatic machinery and fluid transmissions for automobiles; worked on his inventions
1922	Married Constance Beardsley Eldredge (d.1970)
c1933	Retired for first time on income from patents and inventions, lived in Cooperstown, NY and did free-lance projects and inventions
1936	Started to study freefalls and did egg-dropping experiments to study kinetics
1942 (April)	Crash Injury Research Project begins at Cornell University Medical College; Research Assoc. in Dept. of Physiology, CUMC; Director, Crash Injury Research (CIR) Program
1942 (July)	Article "Mechanical Analysis of Survival in Falls from Heights of Fifty to One Hundred and Fifty Feet" published in <u>War Medicine</u> , v. 2: 586-596.

1945	Co-founder of Fight Safety Foundation, V. P. 1945-1948
1947	Helped organize Cornell's Committee on Aviation Safety Research
1950	Crash Injury Research Program transferred to Dept. of Public Health, Chairman, Dr. Smillie. (This was at the retirement of Dr. Eugene DuBois, Chairman of the Dept. of Physiology, who had cleared the way for CIR's establishment at CUMC.)
1952	Studies on Automotive CIR with the Indiana State Police begin
1954	DeHaven retires as Director of Crash Injury Research Program. John Moore becomes Director of Automotive Division and A. Howard Hasbrook takes over Aviation studies. Makes home in Lyme, Conn
1967	Shared Elmer A. Sperry Award
1968	Received Arthur William Memorial Gold Medal of the World Safety Research Institute
1970	Wife dies
1979	Given an award by the Dept. of Transportation (National Highway Traffic Safety Administration for Automotive Engineering Excellence)
1980	Died Lyme, Conn, a suicide by carbon monoxide poisoning

Scientific Contributions

Initiated first statistical study of injuries and their causes in aircraft accidents, (1942)

Experimental development of inertia reel which was the basic element in safety belts for aircraft and automobiles. (1942)

Developed and operated high speed sled on roof of Cornell University Medical College for studying high deceleration effects on human subjects which produced invaluable data for design engineers. (1942)

Crash Injury data led to redesign of cockpits and seats in aircraft and subsequently wide range of safety features in car design, culminating in the car air bag. (1942)

A new Bio-Engineering field was developed; namely, that of Crash-Survival Design Engineering. (1942-1956)*

*This information taken from a biographical fact sheet that was created for the occasion of the receipt by Cornell University Medical College of the DeHaven Papers. (Box 6)

Scope and Content

This collection is very important for the information it contains on the project that was the first to study crash injury and also for the material on the man who gave the initial impetus to this research, Hugh DeHaven. The papers are, however, more informative regarding the research than they are regarding the man. Glimpses of Hugh DeHaven are given most frequently in the comments that he attached to various items as he was sorting his papers in 1977* Other insights into Dr. DeHaven can be found in the transcripts of two interviews that he did, one with Dr. William Haddon, Jr. of the Insurance Institute and the other with Erich Meyerhoff, the Head Librarian of the Wood Library, Cornell University Medical College (Box 6); the scrapbook that was created at the time of his retirement (Box 7); and the file of miscellaneous correspondence (Box 7). The diaries that Dr. DeHaven kept, usually a very personal and revealing record, are really research notes containing very few personal entries.

If a clear picture of Hugh DeHaven is to be found here, it will only be through the careful combing of the records relating to the Crash Injury Research Program that form the bulk of this collection, and even then only a limited view of the man can be seen. But while the man himself is not explicated in these files, his life's interest and work, Crash Injury Research, is.

In 1936, because of his interest in crash survivability that his 1917 air accident had created, Hugh DeHaven began studying freefall accidents so that he could learn more about how the body reacts to impact with various materials, e.g. pavement, car metal, soft earth, fencing, etc.. He retained an interest in this subject and collected clippings and reports about such accidents throughout his life (Box 5). His findings from these studies, and the implications they had in crash injury, were published in 1942 in an article in War Medicine. Crash Injury research had, in effect, arrived.

It was also in 1942 that the Crash Injury Research Project (CIR) began at Cornell University Medical College. (For a history of CIR see the finding aid for the Crash Injury Research Program Papers and also the chronology attached to this inventory.) The Project was headed by Hugh DeHaven from 1942 until his retirement in 1954. The files contained in this collection demonstrate what Crash Injury Research at Cornell was during the intervening years. The correspondence reveals not only the progress and problems of the research, but also the administrative side of the Project: budget and staffing difficulties (there was a chronic shortage of money for both, hence) fundraising efforts; laboratory space; grant and patent applications; institutional support and relations with Cornell University in Ithaca and its many groups working on aeronautics, especially Cornell Aeronautical Laboratories in Buffalo, and engineering projects.

*Because these comments were scotch-taped to some of the material in the collection, or, more usually, mounted with tape to sheets of paper, it was felt that

they should be removed from the files so that the tape could not hurt other material around it. Photocopies have been made and put in place of the originals, which are retained in Box 5.

Also shown here is the interest of outside groups, civilian and military, in the results of the CIR projects and the developing networks for the gathering of the great amounts of data that was necessary for the CIR studies. The vitality of the Program participants and their missionary zeal in spreading the word of crash safety is evident in the many publications written and conferences attended and participated in. DeHaven et al., through the use of their research data and the safety equipment features they developed, began an interest in Crash Injury that spread not only to other researchers but also to the aviation industry and the government itself. The value of this work was recognized by the many awards presented to this group, from the 1940's to the Automotive Engineering Excellence Award given to Hugh DeHaven in 1979. (See Boxes 1 and 8) There can also be seen the developing interest in automotive CIR that led in 1953 to a split in the Program into two divisions, AvCIR (aviation) and ACIR (automotive).

Non-Manuscript Material

This collection contains books and awards that belonged to Hugh DeHaven (Boxes 8-9). There were also some photographs contained in the files, and these have been placed in the Archives' Photograph Collection under Personal Collections-DeHaven. These photographs consisted of shots of experiments, air and car crashes and equipment. The cassette tapes from the interviews Dr. DeHaven did with Erich Meyerhoff and Dr. William Haddon, Jr. are in the Audio File of the Archives.

Subjects

Annual Reports
Awards
Bibliographies
DuBois, Eugene
Environmental Safety
Hinsey, Joseph
Physiology,
Dept. of Public Health
Wartime Activity

Container ListBox 1

- f.1 Selected Bibliography
- f.2 Awards
- f.3 Correspondence, undated, 1936-1944 (folder 1 of 3)
- f.4 Correspondence, undated, 1936-1944 (folder 2 of 3)
- f.5 Correspondence, undated, 1936-1944 (folder 3 of 3) (HIPAA-Restricted)

Box 2

- f.1-3 Correspondence, 1945-1980
- f.4-6 Meetings and Conferences, 1943-1979

Box 3

- f.1 Miscellaneous-Sample Accident Info, 1954
- f.2 Miscellaneous-Reproductions of two cases from ACIR files, 1953-1956 (HIPAA-Restricted)
- f.3 Miscellaneous -Forms Used by Agencies Cooperating With ACIR
- f.4 Miscellaneous-Charts, Scales, and Notes, 1942, 1947, undated
- f.5 Miscellaneous--Blueprints and Diagrams, 1942-1950
- f.6 Miscellaneous-Reports, 1943 & undated
- f.7 Miscellaneous-Interview Notes, 1936, 1977-1979
- f.8 Miscellaneous-Personal Resume, 1959
- f.9 Miscellaneous-Budgets, 1942-1948
- f.10 Miscellaneous-Military Regulations, 1942
- f.11 Miscellaneous-Lists, 1943-1954
- f.12 Miscellaneous-Notes
- f.13-14 News clips, 1941-1980
- f.15 Patents, 1921-1958

Box 4

- f.1-3 Studies, 1940-1945 (Folders 1 & 2, HIPAA-Restricted)
- f.4-6 Studies, 1946-1952
- f.7 Studies, 1953-1967, undated (#1)

Box 5

- f.1 Studies, 1953-1967, undated (# 2)
- f.2 Studies-Freefalls, 1919, 1922, 1939-1941 (Restricted) (HIPAA-Restricted)

- f.3 Transcripts, 1979
- f.4 Originals of Material Copied at Archives, 12/82

Box 6

- f.1 Awards, Conference participation, etc. 1945-1968
- f.2 Biographical Materials (some collected by Archives staff), undated
- f.3 Clippings (originals discarded), undated
- f.4 Correspondence, Miscellaneous, 1936-1980
- f.5 Diaries, 1942, 1943
- f.6 Haddon, William, Jr. Articles, testimony, etc., including references to Hugh DeHaven, 1971-1979
- f.7 **Interview With Erich Meyerhoff, Transcript, Nov. 13, 1977 (HIPAA-Restricted)**
- f.8 Miscellaneous Notes, including proposal for defense of bombing planes- "particularly from pursuit ship attack", 1940, 1947
- f.9 Reprints and Speeches, 1941-1953; 1968
- f.10 Reprints and Articles not by Hugh DeHaven Re: Crash Injury, 1955-1980

Box 7

- f.1 Retirement Scrapbook, circa 1954
- f.2 Selected Bibliography and Papers, Hugh DeHaven
- f.3 Snyder, Richard (Jerry) G., Reports, 1968, 1978

Box 8

Twelfth Stapp Car Crash Conference (book), 1968
Thirteenth Stapp Car Crash Conference (book), 1969
Fourteenth Stapp Car Crash Conference (book), 1970
Nineteenth Stapp Car Crash Conference (book), 1975
Handbook of Gasoline Automobiles 1905-1905-1906 (book), 1969
Proceedings of the 21st Conference of the American Association for Automotive Medicine (book), 1977
Proceedings General Motors Corporation Automotive Safety Seminar (book), 1968
 Aviation Week Air Safety Award, 1949
 Model of Rif Cord-fuller, submitted to Wright Field for use in 40,000 foot freefall parachute bailout, Unknown date
Accident Research: Methods and Approaches by William Haddon Jr. MD (book), 1964
Principles and Practice of Aviation Medicine by Harry G. Armstrong, BS, MS, MD (book), 1939
 "Apollo 8: Man Around the Moon" (booklet), 1968
 "Log of Apollo 11" (booklet), undated
 "Apollo 14: Science at Fra Mauro" (booklet), undated

“Apollo 15: At Hadley Base” (booklet), undated
“Civil Aircraft Restraint Systems: State-of-the-Art Evaluation of Standards, Experimental Data, and Accident Experience” by Richard G. Snyder (publication, 2 copies), 1977
“Advanced Techniques in Crash Impact Protection and Emergency Egress from Air Transport Aircraft” by R.G. Snyder (publication), 1976
“Effectiveness, Benefits, and Costs of Federal Safety Standards for Protection of Passenger Car Occupants” (publication), 1976
“General Aviation Structures Directly Responsible for Trauma in Crash Decelerations” by John J. Swearingen, D.Av.T (publication), 1971

Box 9

Elmer A. Sperry Award to Hugh DeHaven, 1967
American Association for Automotive Medicine plaque to Hugh DeHaven, 1975
Safety Award for Engineering Excellence, 1979
Associates in the Fields of Aviation and Automotive Transportation award to Hugh DeHaven, 1954