OVERVIEW OF THE COLLECTION

Title: James A. E. Halkett, H. J. Sugarman, & Sigmund A. Wesolowski Collection

Collection Date(s): 1948-1951

Extent and Forms of Material: .15 cubic feet; 1 box

Creator: James A.E. Halkett, (physicist, author, donor)


Collection Number: AC0220

Processing Note: Processed by unknown. Finding aid written by Barbara Kemp, August 1986.

INFORMATION FOR USERS OF THE COLLECTION

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

Conditions Governing Reproduction and Use: Collection items are available for reproduction, but the Archives Center makes no guarantees concerning copyright restrictions.

Preferred Citation: Title and date of item, James A.E. Halkett and Sigmund Wesolowski Collection, 1948-1951, 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: James A.E. Halkett, H. J. Sugarman, and Sigmund A. Wesolowski, M.D. (now named Adam Wesolow) experimented on an early mechanical heart. In 1948, James Halkett and William Sewell successfully bypassed the left side of a cat's heart, and in 1949 bypassed both sides of a dog's heart. In each case the animal survived for several hours. With subsequent modifications in the pump and surgical procedures, Dr. Sigmund A. Wesolowski and others achieved long-term survival of animals after bypass surgery.

Halkett and Wesolowski went on to other projects. Although Wesolowski published two articles on this work, neither went on to develop this technology for trials with human subjects.

Scope and Content: The Halkett, Sugarman, and Wesolow(ski) materials make two important contributions to the Museum's collection on the artificial heart. First, they show the process of technological innovation through laboratory protocols.

They also demonstrate the various alternatives explored in the search for effective artificial
circulation by using materials which would not damage or clot blood and that could be sterilized. The evolution of the pumping mechanism and power source, the design and materials of the pump itself, and a series of catheters (cannulae) or varying shapes and materials are described as a workable solution is found.

Secondly, the diversity of techniques developed to solve the problems of artificial circulation and their contributions to that work are documented.

The Museum of American History has collected a number of objects related to the development of the artificial heart including power systems, several types of pump chambers and valves, blood reservoirs and cannulae.

None of the copies in this collection are the originals. All materials in this collection are copies.

System of Arrangement: This collection is divided into three series, series I: James A.E. Halkett papers, Series II: Sigmund A. Wesolowski papers, and Series III, H.J. Sugarman papers.

Custodial History: Transferred from the Division of Medical Sciences, January 23, 1986.

CONTAINER LISTING:

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<th>Box</th>
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<td>1</td>
<td>“An Artificial Heart” by James A.E. Halkett for Master’s Thesis, 1948</td>
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<td>“The Biography of an Idea” by James A.E. Halkett, M.D. Description of how he got interested in research on the mechanical heart</td>
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<td>12 laboratory protocols 7/22/49 – 9/27/49 Halkett – Wesolow</td>
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For more information contact the Archives Center at archivescenter@si.edu or 202-633-3270
JAMES A. E. HALKETT, H. J. SUGARMAN, &
SIGMUND A. WESOLOWSKI COLLECTION, 1948-1951
(.15 cubic feet; 1(.5) DB)

Container List

Series I: James A.E. Halkett Papers

1 "An Artificial Heart" by James A.E. Halkett for Master's Thesis, 1948
"The Heart" by James A.E. Halkett - Diary of an experiment 2/48 - 4/48
"The Biography of an Idea" by James A.E. Halkett, M.D. Description of how he got interested in research on the mechanical heart
12 laboratory protocols 7/22/49 - 9/27/49 Halkett - Wesolow

2 Correspondence to and from Halkett, 1948-1981

Series II: Sigmund A. Wesolowski Papers


Series III: H. J. Sugarman Papers

1&2 Experiments on Cardiac Pump

Barbara Kemp, August, 1986

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