The Descriptive Finding Guide for the Theodore P. Hall Personal Papers
SDASM.SC.10061.O/S

San Diego Air and Space Museum Library and Archives
2001 Pan American Plaza, Balboa Park
San Diego 92101
URL: http://www.sandiegoairandspace.org/
The Descriptive Finding Guide for
the Theodore P. Hall Personal
Papers SDASM.SC.10061.O/S

Language of Material: English
Contributing Institution: San Diego Air and Space Museum Library and Archives
Title: Theodore Parsons “Ted” Hall Personal Papers
Identifier/Call Number: SDASM.SC.10061.O/S
Physical Description: 3 Cubic Feet Archival Boxes
Date (bulk): bulk

Abstract: Theodore Parsons “Ted” Hall, was a noted designer of the Consolidated flying automobile. This collection contains information on his life and flying cars.

Conditions Governing Access
The collection is open to researchers by appointment.

Preferred Citation

Immediate Source of Acquisition
The materials in this Collection were donated to the San Diego Air and Space Museum.

Biographical / Historical
Theodore Parsons “Ted” Hall, noted designer of the Consolidated flying automobile, was born in Wallingford, Connecticut, December 18, 1898. He was a graduate of Syracuse University, with a degree in electrical engineering, and a graduate of the Massachusetts Institute of Technology, with a master’s degree in aeronautical engineering.

He was employed by the Thomas Morse Aircraft Company in Ithaca, New York while attending Syracuse University, and, after graduation, joined Cunningham-Hall Aircraft Company in Rochester, New York, working at Cunningham-Hall from 1928 until 1931. Cunningham-Hall had been formed in 1928 by his older brother Randolph F. Hall, in partnership with James Cunningham, Son and Company. Randolph Hall, a noted aircraft designer and inventor, was later associated with the formation of Bell Aircraft Corporation.

Ted Hall joined Consolidated Aircraft Corporation in Buffalo, New York in 1931 as a structural engineer, quickly advancing to senior-level project engineering assignments. He came to San Diego when Reuben Fleet relocated Consolidated in 1935. He was involved in the development of many of the Consolidated, later Consolidated-Vultee Aircraft models, including the PBY (Catalina), B-24 and C-87 (Liberator), PB2Y-3 (Coronado), the B-32 (Dominator), and also received a patent for what eventually became the XC-99.

His involvement with Catalina design and development was particularly significant, responsible for the design of such innovative features as the integral fuel tanks and the retractable wing tip floats. He was also a leader in developing Catalina performance improvements through use of designs which featured high wing loadings. He was later chief development engineer for the company.

Ted Hall first attracted national attention when he was at Cunningham-Hall, involved in the design of aircraft which minimized landing speed through the innovative use of high lift devices, a feature more commonplace today. One aircraft design was entered in the Guggenheim competition, with its performance very close to that of the winning Curtiss Tanager. Mr. Hall held several early patents for his high-lift wing designs.

It was with this advanced development background that Mr. Hall was able to bring to reality a convertible car-airplane, more commonly called the flying automobile. Many had tried to perfect the concept, but Mr. Hall was the first to introduce a successful design. He began his convertible car-airplane program in 1938, and began construction of the prototype the following year, all accomplished on “his own time,” still a Consolidated employee. The development vehicle was successfully test flown in 1940 at the Linda Vista Airport.

In 1946, Hall sold rights to his flying car program to Southern Aircraft Corporation for further development. Southern Aircraft, however, after several months, returned all rights to Mr. Hall. He left Consolidated employment to continue development of his flying car, and was able to secure the company’s development backing in 1946. In 1948, after a considerable expenditure, Consolidated abandoned the project, transferring all rights of manufacture and the prototype back to Mr. Hall, in accordance with their agreement.

He formed Airways Motors, Inc., as well as T.P. Hall Engineering Corporation in San Diego, but a lack of funding eventually doomed continuation of his flying car program. Three vehicles had been developed, and all were successfully flown, the last in 1948. There were approximately 140 flights during the program. Mr. Hall’s prototype was displayed at San Diego Air & Space Museum until destroyed by fire in 1978. Hall’s two remaining roadable airplanes were stored at Camp Elliott in the San Diego area, but were destroyed by vandals.
Theodore P. Hall passed away in San Diego on March 17, 1978. He was survived by his wife, the former Marion Parsons, three daughters, and eight grandchildren.

**Scope and Contents**
9 archival boxes containing documents, photographs, articles, drawings and reports.
[https://www.flickr.com/photos/sdasmarchives/sets/72157629762111670](https://www.flickr.com/photos/sdasmarchives/sets/72157629762111670)

**Subjects and Indexing Terms**
General Dynamics Corporation. Convair Division
Flying Automobiles
Convair Model 116
Consolidated Aircraft (Firm)
Hall, Theodore P.

---

**Box 1 of 9**

**Series I: Correspondence and Official Papers**

---

**Box 2 of 9**

**Series II: Technical Reports and Special Studies**
Scope and Contents
Series II: Technical Reports and Special Studies

Scope and Contents


Box 3 of 9

Series II: Technical Reports and Special Studies

Scope and Contents


Box 4 of 9
Series II: Technical Reports and Special Studies

Scope and Contents
1. Model 116/118, Hall Informal Notes/Analysis/Design, 1 of 3
4. Flying Automobile Program (1947)
5. Model 116/Voyager 165 Performance Comparison (1947)
6. Model 118, Artist Illustrations (1947)
7. Consolidated Flying Car Marketing Brochure Sketches
8. Flying Automobiles in 1947
9. Model 118, Consolidated Vultee Study
10. Flying Automobile Marketing Brochure, Original Art
11. Model 118, Design Sketches/Material Information/Manufacture Information
12. Model 118, Roadable Design Performance Characteristics
17. Model 118, Wheel and Brake Development Tests, 4.50-12 Wheel (1947)
18. Model 118, Wheel and Brake Development Tests, 6.00-6 Wheel (1947)
19. Model 118, Wheel and Brake Engineering Data (1947)

Box 5 of 9

Series II: Technical Reports and Special Studies

Scope and Contents
1. Model 118, Weight Analysis, 1 of 2 (1946-1947)
5. Convertible Airplane – Light Armored Car (c. 1947)
7. Outline Specification, Flying Automobile, Army Ground Forces (1947)
8. Flying Auto Military Variants (Jeep/Truck/Litter)
9. Specification for Convertible Car-Airplanes
10. Preliminary Design Data Showing Several Arrangements for Use as a Liaison-Observation Aircraft (1948)
11. Model 118, Flight Test Performance Data (1948)
12. Model 118, ZW-118-003, Weight Summary (1948)
13. Army Air Corps Flying Truck Variant (1948)
14. Model 118, Flight Preparation Sheets
15. Model 118, Shock Strut Design Analysis

Box 6 of 9

Series II: Technical Reports and Special Studies

Scope and Contents
1. Model 118, 0.22 Scale Model Wind Tunnel Tests, Without Power (1947)
2. Model 118, Strut Drop Test Results
3. Model 118, CAA Airworthiness Certificate (1947)
4. Model 118, Weight Reports/Analysis
5. Model 118, Lacquer/Plastic Sample Panel
6. Ted Hall’s Notes/Calculations/Analyses, 1 of 3
7. Ted Hall’s Notes/Calculations/Analyses, 2 of 3
8. Ted Hall’s Notes/Calculations/Analyses, 3 of 3
9. Model SC100, Design Sketches
10. XCP-1/VC-3 Technical Information/Characteristics (1953)
11. Model 118, Control Surface Ordinates (1947)
12. Model 118, Maneuvering Tail Load Calculations (1948)
13. Model 118, Aileron, Flap Pulley Design Notes (1948)
14. Model 118, Miscellaneous Documentation
15. Hydraulic Coupling, Twin Disc Clutch Company (1948)
16. Engineering Notes, Airway Motors, Inc. (1947)

Box 7 of 9
Series III: Interviews, Recollections and Biographical Information

Scope and Contents
1. Theodore Parsons Hall Biographical Information

Series IV: Published Information and Articles

Scope and Contents

Series V: Photographs

Scope and Contents

Series VI: Invention Development Records and Patents

Scope and Contents
Theodore P. Hall Development Records and Patents

Other Early Aircraft Patents: Patents 1,051,659 (1908) through 1,701,451 (1929)

Box 8 of 9

Series VI: Invention Development Records and Patents

Scope and Contents
Series VII: Engineering Drawings

Scope and Contents

Box 9 of 9

Series VII: Engineering Drawings

Scope and Contents


Series VIII: Awards and Certificates

Scope and Contents
Certificate