



Guide to the  
Kenneth B. Wilton and Alfred L. Ercoline  
Bending Brake and Related Records, 1964-1968  
PP09.07

NASA Ames History Office  
NASA Ames Research Center

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## **Descriptive Summary**

### **Title:**

Kenneth B. Wilton and Alfred L. Ercoline Bending Brake and Related Records, 1964-1968

**Collection Number:** PP09.07

**Creator:** Kenneth B. Wilton

**Dates:** Inclusive: 1964-1968, Bulk: 1964-1965

**Extent:** Volume: 1.25 cubic feet

### **Repository:**

NASA Ames History Office  
Moffett Field, California 94035

### **Abstract:**

This collection includes Kenneth B. Wilton and Alfred L. Ercoline's metal Bending Brake prototype, a display of samples of sheet metal bent with the tool, the patent and drawings, and related correspondence between the Technology Utilization Office at Ames and industry.

## **Administrative Information**

### **Access:**

Collection is open for research.

### **Publication Rights:**

Copyright does not apply to United States government records. For non-governmental material, researcher must contact the original creator.

### **Preferred Citation:**

Expanded:

NASA Ames History Office, NASA Ames Research Center. Moffett Field, California.  
PP09.07, Kenneth B. Wilton and Alfred L. Ercoline Bending Brake and Related Records, 1964-1968, [Container number] : [Folder number]. [Identification of item]. [Date, if available].

Abbreviated:

NASA ARC. PP09.07, [Container number] : [Folder number]. [Identification of item]. [Date, if available].

### **Acquisition Information:**

Donated by Kenneth B. Wilton on February 18, 2009.

## **Biographical History**

Kenneth B. Wilton was born in the 1920s and raised in San Francisco, where he met and married his wife of 70 years. He came to work for Ames in 1941, when it was the Ames Aeronautical Laboratory (AAL), a part of the National Advisory Committee for Aeronautics (NACA). (AAL became NASA Ames Research Center in 1958 with the passage of the National Aeronautics and Space Act.)

During World War II, Wilton worked as a metalsmith in the Sheet Metal Branch and for the Army Quartermaster Corps stationed at Moffett Field. During his 33-year career at Ames, he held various positions in the technical shops, working as both a metalsmith and a draftsman. In 1966 he received a NASA Sustained Superior Performance Award, and in 1971 collected an Honorary Service Award for 30 years spent at Ames. Wilton retired in 1974.

Wilton invented his metal Bending Brake in 1964 in response to the need to create metal boxes with extremely tight tolerance specifications for use as instrument covers on spacecraft. The Bending Brake was patented May 21, 1968. Wilton included his colleague, Alfred Ercoline, as co-inventor on the patent because of Ercoline's suggestion to add an additional lever in the front of the brake to bend metal downward (shown in Figure 1, #32, 33 and 34, on the patent drawing). Wilton and Ercoline designed and fabricated the Bending Brake in the metal shop in building N220, located across the street from the National Full-Scale Aerodynamics Complex. Following the release of articles in the trade press about the brake in December 1964, letters of inquiry poured into the Technology Utilization Office at Ames from corporations and universities interested in using the invention.

Wilton has been a lifelong gun enthusiast, and had a parallel career in small arms dealing in the South Bay. Prior to joining Ames, Wilton worked as a gunsmith repairing firearms at a San Francisco gun shop and by 1946 had established his own business, Wilton's Armory. Located first in Palo Alto and later in Saratoga, California, the shop was tended by Wilton on nights and weekends, and by his wife during the week.

## **Sources Consulted**

"Ames Closeup," *Astrogram* (4 December 1958), 3.

"Honor Rolls," *Astrogram* (27 October 27 1958), 4.

"NASA Honorary Awards to Ames Employees," *Astrogram* (11 November 1971), 2.

Wilton, Kenneth B. Interview by author. Moffett Field, CA, 18 February 2009.

## Scope and Content

This collection contains artifacts and textual records dated from 1964 to 1968. Artifacts include a prototype of the metal Bending Brake invented by Kenneth B. Wilton and Alfred L. Ercoline, and a display of mounted samples of sheet metal bent with the brake. Textual records include the patent, mechanical drawings, and correspondence about the brake between industry and universities and NASA Ames Research Center's Technology Utilization Office.

## System of Arrangement

The collection is arranged by format, with paper records organized by file type.

## Indexing Terms

The following terms may be used to index this collection.

### Corporate Name

Ames Research Center

### Personal Name

Wilton, Kenneth B.

Ercoline, Alfred L.

### Subjects

Bending machines

Bending machines--Design and construction

## Separated Material

One pamphlet describing the Pioneer 10 and 11 missions, and notes on machining costs for a Plasma Probe Proton Analyzer were removed and placed in the Archives Reference Collection (AFS1070.8A).

## Container List

Box	Folder	Folder Title
1	1	Patent and Drawings
	2	Correspondence, 1964-1968 (1 of 3)
	3	Correspondence, 1964-1968 (2 of 3)
	4	Correspondence, 1964-1968 (3 of 3)
2		Metal Bending Brake Prototype (ART0907.1, 11 pieces)
3		Wilton Ercoline Brake Sample Display (ART0907.2, 1 piece)