

# The AMA History Project Presents: Biography of HENRY STRUCK



September 11, 1916-March 11, 2002 Modeler since 1935 AMA #2021

Written & Submitted by JB (07/00), Transcribed by NR (08/2000), Edited by SS (2002), Updated by JS (10/2008), Reformatted by JS (02/2010)

### **Career:**

- 1939/1940: Held National Class C Gas records with Record Hound
- 1940: Designs include one of the most popular and widely built models, the New Ruler; the designs were published in Air Trails
- 1940: His best-known rubber design was the Flying Cloud, with a 44-inch span
- American Ace, a smaller four and a half-foot, Class B version of New Ruler won three of the first 10 places at the Chicago Nationals
- 1941: Grand champion at the Chicago Nationals
- His 50-inch span towline glider design, Sinbad the Sailor, was a Berkeley kit
- His designs appeared in Air Trails, Model Airplane News, Flying Aces, and Frank Zaic's Model Aeronautic Yearbook.
- Henry built and designed, gas, outdoor rubber, indoor, towline glider and flying scale
- Fifty Struck designs were published in magazines; forty-five were produced as kits
- Model airplane designer and leader of more than 60 years

### **Honors:**

- 1976: Model Aviation Hall of Fame
- 1978: National Free Flight Society Hall of Fame
- 1985: AMA Distinguished Service Award
- 1990: Society of Antique Modelers Hall of Fame
- 1998: AMA Fellow

The following biography was written and submitted by Jim Bennett in May 2000.

## **Henry Struck**

Henry Struck of Old Lyme, Connecticut, is a model airplane designer and leader of more than 60 years. He is a native of the New York City area and was born in [1916]. Henry resided in Jackson Heights during his early design, building and flying years. He is a member of the Model Aviation Hall of Fame, the National Free Flight Society (NFFS) Hall of Fame and the Society of Antique Modelers (SAM) Hall of Fame.

Grand champion at the 1941 Chicago Nationals, he placed in indoor and outdoor rubber, gas, and flying scale.

In 1939, he totaled high point in indoor at Detroit placing high in cabin and stick. His planes won the National Scale Championship twice at National meets in Detroit and in Chicago. He placed high in Class C gas and outdoor rubber cabin and outdoor rubber stick at the Nationals too. He held National Class C gas records in 1939 and 1940 with his Record Hound.

Famous Struck designs include one of the most popular and widely built models in 1940, the New Ruler. The Class C, Brown engine powered, pylon plane had a six-foot span, onefoot chord. The elliptical crosssection fuselage was a little over four feet long. A cowled engine and an open cockpit with headrest aft of wing pylon were features giving semi-scale realism to a contest duration model. The design was published in two issues of Air Trails. American Ace, a smaller four and a half-foot, Class B version New Ruler won three of the first 10 places at the Chicago Nationals. The plane could be flown in A or C with



Henry Struck with his Wakefield model in June 1956.

engine changes. A three-foot span American Ace used an Atom or Madewell engine. Berkeley Model Company of Brooklyn, New York, produced all.

His best-known rubber design was the 1940 Flying Cloud, with a 44-inch span, 195-square inch wing. The Class D outdoor rubber cabin qualified as a Moffett and a Wakefield under the prewar rules. A kit sold by Berkeley was priced at \$1. Air Trails offered a one-year subscription and the kit for \$1.50.

Struck's 50-inch span towline glider design, Sinbad the Sailor, was a Berkeley kit. His 1941 National Flying Scale Champion, a rubber powered, three-foot span scale, averaged over two and a half minutes a flight. The model of the Interstate Cadet, a trim tandem light plane, was featured in the January 1942 issue of Model Airplane News. Berkeley produced it, too.

His designs appeared in Air Trails, Model Airplane News, Flying Aces, and Frank Zaic's Model Aeronautic Yearbook.

A designer, builder, and flyer in all that is now named Free Flight – Struck's planes were winners. Gas, outdoor rubber, indoor, towline glider, and flying scale were those categories. In addition, he became an early designer in Control Line and Radio Control.

In 1950, he set the world speed record for free flying gas-powered models. The model is in the Smithsonian Air and Space Museum.

Fifty Struck designs were published in magazines. Forty-five were produced as kits.

For over a half century Henry Struck has been an organizer and supporter of model aviation. He was a member of the AMA Contest Board over 25 years.

Jim Bennett, July 10, 1999

## James Bennett provided the following paragraphs on Struck.

Henry Struck, a notable designer, builder and contest flyer in a grand era of model airplane history, was an all around flyer. He was Grand Champion at the 1941 Chicago Nationals and the 1938 Detroit Nationals. He placed in Gas Power, Indoor Rubber, Outdoor Rubber, and Flying Scale. In Chicago Roscoe Turner, three-time 1930s Thompson Trophy winner presented the Grand Championship trophy. Henry won the 1938 Grand Championship at the Detroit Nationals by winning firsts in Open Indoor Cabin and Open Outdoor Flying Scale. In 1939 at the Detroit Nationals, he scored high point in Indoor placing high in Cabin and. Stick. His planes won the National Scale Championship at National meets in Detroit and in Chicago.

Struck's "New Ruler" was one of the favorite and widely built models in 1940. The six-foot span, one-foot chord pylon wing model was powered with a Brown engine. An engine cowl and an open cockpit with headrest aft of wing pylon gave a semi-scale look. The elliptical cross-section fuselage was a little over four feet long two issues of Air Trails, April and May 1940 covered the design and construction.

"American Ace," a smaller four and a half-foot, Class B version "New Ruler" won three of the first ten places at the Chicago Nationals. The plane could be flown in A or C with engine changes. A three-foot span, Class A "American Ace" used an Atom or Madewell engine. Berkeley Model Company of Brooklyn produced the kits. These were the years of the Carl Goldberg designs produced in big numbers by Comet; the Zipper, Mercury, Sailplane and Interceptor. And the Cleveland Models company Playboy series by Joe Elgin. Berkeley was producing the Sal Taibi designs, Pacer and Brooklyn Dodger.

Henry held National Class C Gas records in 1939 and 1940 with his "Record Hound" presented in the August 1939 Air Trails.

His KGS design, the sixty-six inch span, Kovel Grant Struck, was the main article in the February 1940 Model Airplane News. KGS planform and moments were based on the 1934-KG,

Kovel Grant ten-foot span 1935 record holder design by Charles Grant editor of Model Airplane News. The KG was built and flown by Joe Kovel of Brooklyn...

Henry's pod and boom, gull wing Class B gas, Ohlsson 23, "Boomer Bus" appeared in the February 1941 Air Trails.

"Flying Cloud," a 1940 design, was Struck's best-known Outdoor Rubber Cabin. The forty-four inch span, 195 square inch wing. Qualified as a Moffett and a Wakefield under the prewar rules. This AMA Class D (150 to 200-sq. in. wing area) Outdoor Rubber Cabin became a kit sold by Berkeley. Priced at one dollar. Air Trails offered a one-year subscription and the kit for \$1.50.

In June 1936, Model Aircraft Builder carried a Struck design, "Two in One Rubber or Gas" with drawings and instructions for a rubber model that could be converted to a gas-powered model using a Baby Cyclone engine. The 1935 Baby Cyclone has a displacement of 0.36 cu. in. and 1/6 horsepower. A later Struck rubber design, a Class C Cabin of 148 square inch wing area, diamond cross-section and sheeted leading edge, was in the July 1936 Model Aircraft Builder.

Henry's glider designs include hand launch and towline His 1940 fifty-inch span towline glider "Sinbad the Sailor," was a Berkeley kit. Henry held the Class C Outdoor Hand Launch Glider (100 to 150 sq. in.) record in the senior class in 1936. His 1935 four-foot span all balsa towline (100 feet) is shown in three-view in Zaic's 1935-36 Yearbook.

Struck's 1941 National Flying Scale Champion, a rubber powered, three-foot span scale averaged over two and a half minutes a flight. The model of the Interstate Cadet, a neat tandem light plane, was featured in the January 1942 issue of Model Airplane News Berkeley produced the kit.

His designs were in Air Trails, Model Airplane News, Flying Aces, and Zaic's Yearbook.

In 1950, he set the World Speed Record for free flying gas-powered models. The model is in the Smithsonian Air and Space Museum. In the 1940s, Henry became an early designer in Control Line and Radio Control

Fifty Struck designs were published. Forty-five were produced as kits.

Henry was the author of "1940 Nationals Design Trends" in the October 1940 Air Trails.

He co-authored, "Smoke Tunnel" in the 1944 Air Trails Annual. Design details and research of a non-return tunnel with a test area over six feet tall, seven feet long, and four inches deep were presented. System power was a Ford Model-'A' engine. Models in a field of twenty-four smoke streams were viewed through heavy plate glass. Twenty-three plates of airfoils and airplane configurations were shown in the article.

For over a half century Henry Struck was an organizer and supporter of model aeronautics. He was a member of the AMA Contest Board over twenty-five years.

A productive designer in a great growth era of model airplane design and research, his models were excellently engineered and good-looking. Henry Struck is a model airplane enthusiast of seventy years. A resident of Old Lyme, Connecticut sixty years, he was born in [1916]. Henry is a native of New York City and resided in Jackson Heights of Queens on Long Island during his early design, building and flying years.

He is a member of the Model Aviation Hall of Fame, the National Free Flight Society (NFFS) Hall of Fame and the Society of Antique Modelers (SAM) Hall of Fame.

The following article on Henry Struck ran in the Model Airplane News magazine 1961 Annual.

Looking back over the past 30 years, there are few people who have added so many interesting new trails to follow and new things to do, than Hank Struck, truly a real pioneer who lives and breathes for model flying, year in and year out. Known primarily as a great designer and flyer of scale models, many are not familiar with his ventures looking for the new horizons in model building.

Hank Struck, now 44-years-old, first became interested in model aviation in the late 1920s when he was given a book on model building written by Paul Garber, currently curator and director of the wonderful airplane collection at the Smithsonian Institute in Washington. Mutual interest in aviation brought together Hank and the late Louis Garami. Their new innovations in model building during the 1930s are legend. Garami specialized in new construction methods while Hank proved to the perfectionist at flight adjustment.

When it came to flight adjustment, there never has been an equal to Hank. One test flight, then make the necessary adjustment and put the model away until the next big contest. Hank has built all types of models, indoor and outdoor, rubber-powered, gas-powered and Radio Control. When it came to record breaking, he was a master. Twice he held the Free Flight gas record before there were separate classes for displacement. Indoors he held the indoor cabin record. As far as championship trophies, his home in Hamburg Cove, Connecticut, is amply lined with them. Looking at the engravings, we see the Junior Birdman Championship for New York, both indoor and outdoor, the National Flying Scale trophy, which he retired after winning it three times and his most prized possession, the miniature of the National Championship trophy. Hank gets quite a kick out of the fact that he has been national champion longer than anyone else. Woody Blanchard has had to beat his brains out to win the Nationals three times and be national champion for three years. Hank won the trophy in 1941 and held it until 1946 because there were no contests during the war.

The supposedly impossible has always been a challenge to Hank. Ask him to build a special model that supposedly would not fly to advertise model aviation, and Hank would dig in and come up with the answer. Typical projects included a group of gas-powered flying saucers built for the Plymouth Motor Corporation to publicize the Plymouth Internationals or fly international airmail by Radio Control Model across the Detroit River from Detroit, to Windsor, Ontario, in

his Sea Cat.

Perhaps the greatest feat and certainly one of the most costly, was to break the FAI Free Flight speed record held by the Russians. Bill Effinger managed the program for the Plymouth Motor Corporation, Bill Atwood supplied the engines; Hank designed and built the models, applied his deft touch to adjusting and testing them, trained a young model flyer to handle them and then supervised the actual flights. These flights had to be made over a fixed, surveyed course in two directions, electrically timed under National Aeronautic Association Sponsorship. Here again Hank's magic touch for adjustment paid off. The Russian record was broken by more than 25%. Today, the model hangs in a proud place in the Smithsonian Institute. By strange coincidence, entrusted to the care of the same Dr. Paul Garber, who sparked Hank's model building career.

Looking back, the names Record Hound, Flying Cloud, New Ruler, American Ace, Sinbad, Skybuggy, and the Grant-Struck KG-S recall pleasant memories for tens of thousands of model builders. A Struck-designed model always meant rugged construction and non-critical dependable flying. Hank was the first model builder to use the 6400 series of NACA airfoil sections. Hank found out about them the hard way, by testing everything he possibly could build. His experiments bore out the truth of the NACA reports on airfoils at low Reynolds Numbers.

Although Hank is best known for his Interstate Cadet and Stinson Sentinel scale models, he started the vogue of building real Old-Timers like the Curtiss Pusher and the Caudron, which won the 1938 Nationals. Later he designed the kit model of the Buhl Pup, which won the Dallas Nationals five years ago. The basic pattern of Struck designs actually won every national scale contest from 1938 to 1958, a real tribute to sound planning. The designs weathered the transition from rubber-powered to gas without any noticeable problem.

Hank Struck has always been a very humble model flyer, never the Prima Donna type. He is always a quiet, nervous flyer who cannot believe that he is really a master. He always has the look of amazement when he wins and never counts on it. Perhaps his greatest triumph in winning the 1941 Nationals championship was his biggest surprise.

Hank at that time was up to his neck in defense work between the 1940 and 1941 Nationals; he did not have a chance to unpack the crates. Not every model he flew in 1941 had been flown since the previous Nationals. Yet Hank racked up place after place in a number of events. At the banquet after the meet, no one was more surprised than Hank in receiving the National Championship trophy.

On the flying field, no one has ever heard Hank get mad at anyone other than himself when things do not pan out right. Any model builder who knows him will tell you that there are no secrets that Hank will keep from you on model building and flying, but you must ask to get the answer.

Hank's professional career has always been tied in closely with model building of some sort. His first job was with Berkeley Models as a draftsman. With the outbreak of World War II, he went

to Lyme, Connecticut, where he worked on specialized projects of a classified nature. One of these projects involved the first supersonic flight made in the United States. The flights were made by miniature planes milled from solid steel and shot from especially bored riffles. Still other projects involved early boundary layer flow experimentation and smoke tunnel experiments.

The entry of the United States into the war found Hank joining forces with many of the scientists in the area to form a special team of glider experts. They were all employed at the Pratt-Reed Company, which converted from making piano movements to Waco cargo gliders. The group undertook to design and have accepted by the armed forces a two-place advanced trainer glider. After the war, the group continued experimenting and developed a number of personal gliders as well as a full-scale amphibian airplane.

Since the war, Hank has had a number of interesting jobs, including master model making for many of the leaders in aviation. Today he is a master model maker for Kenyon Instrument Company in Connecticut, builders of miniature gyros for hand stabilizing of cameras and field glasses.

Hank is still an active model builder, flying Radio Control nearly every Sunday, regardless of the weather. He recently built a high altitude automatic homing RC job. Right now he is flying low-wing single-channel [models] that will do almost everything, including retracting the landing gear. His thoughts for the future are many, but mostly in Radio Control. He thinks automatic homing and pylon racing are the real future for advanced model builders. He only wishes that he had more time for model building.

Henry Struck passed away on March 11, 2002. Below is the obituary that ran in the Lyme, Maine, newspaper.

## **Henry Struck**

Lyme

Henry Struck, of Rockland, Maine, formerly of Lyme, nationally renowned designer, builder and contest flier of model airplanes, died March 11 in Rockland after a long illness.

He was born in New York City on Sept. 11, 1916. He graduated from high school in Astoria, Queens, and attended City College of New York. He married Noreen Murphy of Old Saybrook on Jan. 4, 1947. They resided in Lyme for 54 years. He was a resident of the Knox Center for Long Term Care in Rockland, Maine during his illness.

Mr. Struck is credited with being one of the most prolific and innovative model airplane designers in the great growth era of model airplane design and research. His passion for aviation began in his youth, when he began his model design and competitive flying in New York in the 1930s. He was the winner of numerous national championships and awards throughout his career.

In 1950, he set the world speed record for free flying gas-powered models. This model, as well as an example of his Berkeley Models design for the rubber-powered Flying Cloud is included in the Smithsonian Air and Space Museum collection. Fifty Struck designs were published and 45 were produced as kits. His New Ruler was one of the most popular and widely built designs in the 1940s. His designs were produced by Berkeley Models and others, and appeared in various publications. He was also the author of many articles on model planes and aeronautical research.

He was an inducted member of the Halls of Fame of the Academy of Model Aeronautics, the National Free Flight Society, and the Society of Antique Modelers. He was a member of the AMA Contest Board for over 25 years and the RC Prophusters.

In addition to his model career, he was a private pilot and worked in experimental aircraft design. He held memberships in the Aircraft Owners and Pilot Association and the Experimental Aircraft Association.

Mr. Struck moved to Old Lyme during World War II to work on research for Roger Griswold and Pratt Reed, and continued on for Luddington-Griswold, and others following the war. Later, he owned and operated Ken-Lab, designing and manufacturing gyrostabilizers for the photographic industry, until his retirement.

Besides his wife, he is survived by two daughters, Susan Struck Cash and her husband Donald Cask of New London, and Christine Bartlett and her husband William, of Union, Maine; six grandchildren, Miriam Bragan, Jethro Denman, Natalie Denman, Samantha Bartlett, Josiah Bartlett, and Ethan Cash; and three great-grandchildren.

A memorial service was held at Grassy Hill Congregational Church in Lyme. Memorial donations can be made to Knox Center for Long Term Care, second Floor Activities Fund, 22 White Street, Rockland, Maine, 04841, or to the Academy of Model Aeronautics, 5161 East Memorial Drive, Muncie, Indiana, 47302.

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## **AMA History Project**

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