

## Allen H. Meyers

### **From Farm Boy to Airplane Designer & Manufacturer**

*Special Edition*

*by Nydia Meyers, PhD*

*(Mrs. Allen H. Meyers)*

*Tenth Commemorative Year for Al Meyers 1976-1986*

The Allen H. Meyers Foundation was formed by Allen H. & Nydia Meyers, in 1966. In 1976, Al Meyers passed away. It was the Bicentennial Year, when the whole country was reviewing its heritage and the pioneers who had pushed westward in covered wagons searching for land and work. It was at this time that Tecumseh, Michigan was settled. It was here in Tecumseh that Al Meyers was to do his life's work. He was a different kind of pioneer – one who helped to develop a new kind of personal transportation by building a better and safer airplane for the private pilot. Now it was possible to cross the country, from coast to coast, more quickly and comfortably.

Al Meyers is a special example of a passing era in United States history. He is one of the few remaining examples of the American legend – a poor farm boy who rose from the ranks. He was almost self-educated in his field, single minded of purpose, and to this was added a tremendous drive.

Allen H. Meyers was born in Allenhurst, New Jersey on September 4, 1908. When he was about nine years old, the family moved to a farm in upper New York state near Middleburg, at the foot of the Catskill Mountains. His mother and father were of Swiss origin, and this countryside must have reminded them of their homeland.

Al's father was a graduate mechanical engineer of ETH, in Switzerland, similar to MIT in the United States. Al cherished his father's engineering drawings and notebooks, more than 100 years old, done in the beautifully trained style of that period. Al was tremendously influenced by his father's early training, even if he rebelled at milking cows every morning at five A.M. Later as an adult, he had difficulty drinking milk.

He was an active, athletic boy: he, his brother, and sister walked five miles a day, each way, from their farm to the Middleburg school. He suffered from childhood asthma, and would often stop to catch his breath, as he sat in a snowbank during cold winter days in the mountains.

He learned to snowshoe and trap animals in order to help the family's meager income. Food was plain, mostly what they raised - meat, bread, fruit, and milk - no frills. He graduated from Middleburg High School in 1926.

Sometime during his boyhood he became fascinated with airplanes. His farm was just below a favorite skyway of early pilots. In the summer he would lie down in the fields to watch the marvelous machines fly by with their brave and daring pilots. Even though the family was isolated, stories of World War I flying captured the boy's imagination. The Charles Lindbergh flight sealed Al's will to fly.

Before he had graduated, he enlisted in the National Guard and took his summer's training at Plattsburg, New York, 1925-26. It was there he went up in an airplane for the first time as an observer, in a Consolidated Biplane, with a Liberty Engine.

After graduating high school, he taught for one year in a one-room schoolhouse. Each weekend he walked or snowshoed through the hills eight miles to be home for good food and friends. All this time, the plan for his life's work began to take shape. He wrote dozens of letters trying to find a college or school where he could study aviation. But aviation was still too young, and there was no organized curriculum available. He was offered a scholarship in forestry at Cornell University, Ithaca, New York. Although it was an hour and a great temptation, he turned it down in favor of apprenticing with the pioneer airplane builders such as Chance Vought, Glenn Martin of Baltimore, and Stinson Aircraft Corporation of Wayne, Michigan.

He began by working in metal as a "tin smith", and took flying lessons on Long Island, New York, at Curtiss Field, in 1928. There he soloed in a IN4, (OX-5 engine). Later he obtained his private pilot certificate. From 1928-1932, he logged 140 hours. His logbooks indicate a great diversity of airplanes flown. At the time, he lived at 4312 Falls Rd., Baltimore, Maryland. From his flying logbooks we find that he flew the following planes between 1928-1937:

Jenny	WACO 225
WACO 9	Curtiss Falcon
WACO 10	Meyers (OTW prototype)
Stinson JS	Simplex
Ireland	Stinson J6-9
Douglas Liberty 038	Stinson SR-5
Douglas Hornet 038	Rearwing JR
Consolidated (PT) J5	Taylor - Cub
Consolidated (PT) Hisso	Meyers - OTW #1
Trainer	Fleet - Kinner

On News Years Day, 1932, he flew the "Trainer" around Glenn Martin Field and Logan Field, testing stability and landing gear.

He bought a WACO-10 from Eleanor Smith about 1932, and used it for his personal training. Eventually he gave flying lessons with it. In his log book we can already read the formation of a basic concept in flying that was to guide his personal achievement and contribution to aviation. It was this: the airplane was not a gadget, a stunt object to show off, as in a circus, for personal glory. The airplane was to help free man, to give him personal mobility in a way not yet achieved. It would push progress in communication and transportation to levels not yet dreamed of. In the spring of 1932, he flew his WACO-10 750 miles, from Baltimore to Evansville, Indiana, and from his log we read that he was forced down by snow at least a half dozen times.

During the spring and fall, Al Meyers barnstormed in Tennessee and Georgia. In the summer, he covered the fairs of lower and upper Michigan. After his share of barnstorming and stunting, he left the field to those who had still to prove themselves.

Al Meyers used his airplane to travel, explore, make new friends, and to exchange ideas with people. He was a good listener, an avid reader, and learned much of his aviation theory in this way. His logbooks, from 1932-1937, make fascinating reading of his continuous cross country flight, at a time when navigational aids were meager, and most pilots were making small circles around an airport.

By the spring of 1933, Al Meyers was already instructing with the WACO-10 (OX-5), and all during that period he was evolving his own plane design. He was learning, from the WACO, how to improve a biplane. At the same time, he was earning money to finance his dream of building one. All these activities - instructing, cross country, barnstorming, working with airplanes on production - developed his image of a better personal airplane. About 1933-34, he began serious work to finalize the design and build his first plane, later to be known as the OTW (Out To Win).

He was working at Stinson Aircraft as a sheet metal worker. He wrote for and read every piece of information he could obtain on wing design, loading, weight and balance. He went to night school to learn engineering drawing and mathematics. He began the construction of the fuselage of his plane in a one-car garage in Wayne, Michigan. Later, he was invited, by Jimmy Keehl, to move into Paul Keehl's Foundry (the father's) during the fall of 1934, at Romulus, west of Wayne, Michigan.

His enthusiasm for building his biplane (like Tom Sawyer's fence) attracted friends and helpers. It was a time when the country was in deep economic depression; work was scarce. Opportunities and channels for creativity were meager. Many people found a chance to work in aviation with, and through, Al Meyers, some made it their lifetime work (Ray Betzoldt, Pard Beaumont Diver, Otto Meier).

Al, with the energy and self-confidence of youth, planned for the building, testing, and certification of his biplane in three years. The first test flight at the old Wayne County Airport was, in fact, well-documented by the Detroit News of May 10, 1936. After nine hours of testing time, he heard that his mother had been severely burned in a fire, in their farm home, in Middleburg, New York. Without hesitation, he took off in his newly tested plane from Michigan to New York to be quickly by her side. Plane and patient made it through the grueling test.

The OTW is a two-place biplane, with an oval shaped, all aluminum monocoque fuselage. The tail surfaces are made of aluminum. Both wings of equal span are wooden construction and fabric covered. The wing area is approximately 262 square feet, with a low wing loading of 6.5 pounds per square foot. The wide landing gear with its long struts and big tires, easily absorbs a student type of landing. The large number of bulkheads give the plane added strength, but no additional weight. This is why the OTW biplane makes a superior type of aerobatics trainer, rather than the conventional "barnstormer" of its time.

In 1939, the Meyers OTW received an Approved Type Certificate. CAA (ATC #736). It was also the first of two airplanes approved for the Civilian Pilot Training Program prior to World War II. Orders began to pour in from all over the country even before manufacture was started. Later it was one of two planes designated for aerobatic training in the military.

A group of Tecumseh, Michigan citizens and pilots especially Dr. Hammel, invited Al Meyers to relocate in the town. The plan was that he commence manufacturing the OTW airplane. He was encouraged by the promise that he would be given tax considerations until he became established. Furthermore, he had obtained a military contract to manufacture the OTW. More than 100 OTW's were manufactured. Most of the planes were used as World War II trainers. One of the largest training fields was in Minden, Nevada, elevation 5,000 feet. The earliest models were powered with 125 HP or 145 HP Warner "Scarab" engines. The later models were the 160 HP Kinner R-56 engine.

The reputation the OTW earned as an excellent aerobatic airplane makes it very much in demand today by antique buffs. At the present time more than 60 have been restored and are still flying. The Meyers OTW Club, a division of the Antique Airplane Association, makes frequent visits to the Al Meyers Airport to this day. Ev Payette, a photographer in Monroe, Michigan, is the club historian, and has the best collection of Meyers aircraft pictures.

All during World War II, Al Meyers was crystallizing a new formula for a personal plane. The great advances in fighter plane design, and aviation generally, gave him the concept, data, and tool possibilities. However, the abrupt end to war production orders necessitated a "bread and butter" product to help finance the development of a new model Meyers airplane.

The Meyers team put to work the "know how" with aluminum riveting, heliumargon welding, and functional design to start manufacturing an all-aluminum sports boat. The sales would help keep the plant going through the years of developing new models of the Meyers planes. In fact, Al Meyers used the hydraulic landing gear of a B-24 to help shape the first aluminum form of their boat. To this day the Meyers line of boats is recognized for its quality and safety features. They also produced Jeep cabs and Jeep winterization kits for the Army.

In this period, the low wing, two-place, all-metal Meyers 145 began to take shape. It would have retractable gear, except for the steerable tail wheel. It had a saucy, sporty appearance.

In the course of running tests for its Aircraft Type Certificate, Al Meyers put the first prototype through a series of spins. At one point, the plane went into a flat spin. There was no choice, he was obliged to jump clear of the plane. He wore only a World War II surplus parachute, and landed hard on a ploughed, dry, field near the Meyers plant and airport. His right ankle was shattered; the local medics put the pieces together, but said he might not walk again. They did not count on the purposeful willpower of the man. He made himself walk again.

Characteristically, he picked up the parts of his prototype, and in six months had built a new version, which eliminated the flaw in the design so that it finally earned its Aircraft Type Certificate.

Even while in production of the two-place Meyers, private aviation began to develop rapidly in still another direction - the private executive and the family size airplane.

Meyers used the experience gained in developing the two-place model to begin his next design, his more famous - the now classic, Meyers 200 - a low wing, four-place, with retractable, tricycle landing gear. A number of the components of the four-place Meyers are built of 41-30 steel, while other lifting surfaces are formed from aluminum to make it the most rugged, as well as swiftest, in its class.

Years of blood, sweat, and probably tears, went into perfecting the prototype until it gained its Aircraft Type Certificate. It finally went into production during the early 1960's as the Meyers 200 A model. Its performance, design, and workmanship created excitement and enthusiasm amongst pilots. Its design was so advanced that, to this day, it still is accepted as a modern concept aircraft.

Al Meyers and the group who had worked together to produce the Meyers 200 A model did not rest on their laurels. They listened to the suggestions of pilots and passengers on how to improve its performance. From this came the Meyers 200 B, C, and D. In the C and D models the ceiling of the cabin was raised for added height., and with it a larger swept-back windshield.

All Al Meyers airplanes were flight tested at first by Al Meyers, and later by Ray Betzoldt. Al would not release an airplane from the plant until it flew exactly as he would want it. His favorite slogan was, "Quality is remembered long after the price is forgotten." He once confided that he always prayed that no one would be hurt in a Meyers airplane because of something he might have left undone.

In the late 1960's and 70's, airplane racing was a favorite sport in the aviation world. Al Meyers, himself, did not approve of racing. He believed that the private airplane was not for showing off tricks, but had a more useful function - to transport people quickly and safely to their designations.

Nevertheless, he could not stop the private owners, who were delighted with the Meyers 200's speed, from challenging other planes to race. After an International Speed Race at Phoenix, Arizona came a telegram to Al Meyers, Tecumseh, Michigan, which reads as follows:

"Meyers 200 wins all events at Phoenix 100 mile, 2-pylon closed course race. First place was W.C. Brodbeck, in a Meyers 200 B. Second place - Mel Stickney, Meyers 200 B. Third place - Ken Worth, Meyers 200 A... Average speed-win overall competition. 198.87 mph. A world class record established."

The fame of the Meyers 200 performance spread throughout the United States and abroad. It also set a world's record in its class for around-the-world flight. Peter Gluckman, pilot. It won first place positions in every race it entered, but its real worth lay in the built-in safety of design for the plane and pilot.

Many years later, the Meyers 200 design was adapted to a new version, with turbo prop and pressurized cabin, called the "Interceptor 400" - calculated to go almost that fast at high altitudes. Yet very little change was necessary in that conversion, so sturdy and clean was the original model.

In 1965, North American Rockwell Corporation decided to add to its existing line of large commercial airplanes - the manufacture of a small personal or executive-type plane. After an extensive survey of the available private airplanes, and interviews with manufacturers and dealers, they offered to purchase the design and manufacturing rights of the "200" from Al Meyers.

It was with some reluctance that Al Meyers agreed to the sale. However, the growing cost of materials and labor for mass production required vast amounts of capital for investment which he, personally, could not raise. He accepted the offer with the expectation that the larger company would accomplish this. The Rockwell corporation renamed the Meyers 200, "Aero Commander 200," and set up manufacture under the Meyers Type Certificate at Albany Georgia. For the first time, Al Meyers was able to pay the mortgage on his land. Previously, all his funds had been in constant use to finance his production, prepare new models, and meet the payroll.

To this day, the true airplane devotees seek out the original Tecumseh-built Meyers 200. Many owners still come back to the Tecumseh plant for their overhauls, and special problems where the plant has been converted to an FAA approved repair center.

Characteristically, too, from the funds realized in the sale, Al Meyers and his wife, Nydia Meyers, set aside a portion to form the Allen H. Meyers Foundation, which supports grants-in-aid for students in the sciences and aviation.

From 1971 to 1976, Allen H. Meyers made the greatest of his life's efforts. Because of life-long hypertension, a condition developed which required surgery and blood transfusion. A stroke followed the surgery, and two months later, serum hepatitis set in. All of this left him with a weakened right side, and considerable speech loss. Without complaint, he worked at restoring his health with the same Will To Win (as he did for the first biplane, the Out to Win), which led him to complete the designing, testing, certification, and manufacture of three types of airplanes.

In 1974, Al Meyers was elected to the Pioneer Aviation Hall of Fame. Even though weakened by illness, he stood proudly to receive his citation. Later, he placed his own bronze plaque on the wall-sized, steel plate hanging in the Curtiss Aviation Museum. This roster of names includes Lindbergh, Amelia Earhart, Stinson, Rickenbacker, and many other aviation pioneers. His citation reads in part:

"As an individual, Allen H. Meyers designed and put into production, three airplanes, each an advanced concept in its time. Meyers put quality, integrity, and safety in his engineering. The pilot's welfare was at the base of all designs. Insurance Underwriters published that no student or instructor was killed in an OTW during the entire World War II training program. No corrections, 'Airworthiness Directives', were needed for the OTW (the biplane), the Meyers 145 (two-place airplane), or the Meyers 200 - the most efficient and fastest four-place, single engine, personal plane in the 1960's."

Note that all this was accomplished in thirty years.

All his life, Al Meyers was a young man in a hurry. He was working against time because time was not on his side. On March 15, 1976, Allen H. Meyers passed away in his sleep. His memory lives on in the Al Meyers Airport, the Allen H. Meyers Foundation, the planes he designed and built, and the hearts of the hundreds of pilots and plain folks to whom he brought the joy and inspiration of flying.

His resting place and monument are in Brookside Cemetery, Tecumseh, Michigan.

*By Nydia Meyers, Ph.D.  
(Mrs. Allen H. Meyers) 1986*

References: Most of this material was obtained from discussions with Al Meyers, coworkers, and his personal papers.

A file on Al Meyers' work and life is now in five museums:

1. National Air & Space Museum, Smithsonian Institution, Washington, D.C., 20560.
2. Bentley Historical Museum. University of Michigan, North Campus, 1150 Beal Ave., Ann Arbor MI 48109-2113.
3. Pioneer Aviation Museum, in the San Diego Aerospace Museum, 2001 Pan American Plaza Balboa Park, San Diego, CA 92101.
4. Experimental Aircraft Association Museum, (EAA), Whittman Airfield, Oshkosh, WI 54903-3065. His personal biplane, Meyers OTW, one of many manufactured at his plant in Tecumseh, Michigan is here.
5. Yankee Air Force Museum, Willow Run Airport, P.O. Box 1100, Ypsilanti, Michigan 48197.

Al Meyers received many awards from, among others, the Experimental Aircraft Association, and the OX-5 Aviation Pioneers Club. He was inducted into the OX-5 Pioneer Aviation Hall of Fame in 1974. In 1985, Al Meyers was designated Airman of the Year by the National Committee of the Yankee Air Force, Willow Run Airport.

Other reports are:

SPORTS PLANES ANNUAL, "Meyers OTW: Great Airplane, "Great Man", E. Payette and K. Smith, Winter, p.42, Winter Issue (1973)

AVIATION NEWS, "Allen H. Meyers Thoroughbreds", As Told by Gid Miller, September, Vol. 8, No. 9, p.27, (1976)

WHO'S WHO IN AVIATION 1942-43 p.290

A Directory of Living Men And Women Who Have Contributed To The Growth Of Aviation In The United States. Ziff-Davis Publishing Company, Chicago and New York

It is notable that Al Meyers had already founded Meyers Aircraft Company in 1936 at the age of 28 and was in Who's Who in 1942.