



The AMA History Project Presents: Autobiography of EARL F. STAHL

Modeler starting in 1928

AMA #280564



Written & Submitted by EFS (03/1997); Transcribed by NR (06/1997); Edited by SS (2002), Updated by JS (10/2008)/(02/2009), Reformatted by JS (02/2010)

Career:

- 1939: Earned a place on the American Wakefield team
- Helped organize the Aviation Club, being elected president several years
- Placed second in the International Admiral Moffett finals
- Model construction articles were published in five magazines
- Career at NACA/NASA spanned 41 years

Honors:

- 1985: National Free Flight Society Hall of Fame
- 1989: Model Aviation Hall of Fame
- 1990: Society of Antique Modelers Hall of Fame
- 1995: Kits and Plans Antiquitous Hall of Fame
- 1996: Flying Aces Club Hall of Fame

“To have participated in America's romance with aviation - the thrill of flight, its expanding promise for the future - has been a treasured opportunity.” Earl Stahl, March 1997



*Modeling Pioneer Earl
Stahl
with Piper Pawnee Brave*

As an enjoyable hobby, as an exciting career, aeronautical activities have favorably affected my life. Those of us commencing life's journey during the first half of the 20th century were continually exposed to evidences of the wonder of the unfolding *Air Age*. Newspapers were filled with the stories; it was a time when aviation events were exciting and earnestly talked about.

My earliest recollections include many diverse aeronautical topics. Although only age seven, I recall the dismay expressed in our neighborhood in early September 1925 when the Navy's pride, the giant airship *Shenandoah*, broke apart in mid-air and then fell to earth in nearby Ohio.

Around that same time, I was treated to an all-day trip of about 80 miles to Bellefonte, Pennsylvania to see the pioneering coast-to-coast de Havilland DH-4 mail planes. They would land at a converted farm field to refuel, or in bad weather seek haven while

traversing the notorious “Hell Stretch” of the Appalachian Mountains. Then there is the clear memory of the time my mother took me on the trolley to the end of the line. From there we walked a mile or more to witness a performance of the stunting biplanes and daring wing-walkers of the Gates Flying Circus.

Shortly after conquest of the Atlantic by Lindbergh, Chamberlin and others, periodicals began to publish aviation features for youngsters. Over 50 newspapers in cities large and small, including my town, Johnstown, Pennsylvania, regularly had model plane topics along with construction drawings and instructions written by Merrill Hamburg of the Model Aviation League of America.

To many of us they were our first exposure to model planes that would fly. I constructed at least three from that published series. Around October 1927, at age nine, I built the elementary Baby Rise off Ground (R.O.G.) model. Some time later, that success was followed by a three-foot wingspan Twin Pusher that flew well. Of the various full-scale aircraft they depicted with three-view drawings for construction of display models, I hacked out a small, solid U.S. Army Curtiss Hawk P-1, which was finally dressed-up with olive drab and yellow enamel.

Our high school encouraged activities clubs that met regularly as one-hour classes. I helped organize the Aviation Club, being elected president several years. One of the adult advisers I recruited was an early plane owner in that part of the world. He arrived at meetings in a splendid white aviator's flying suit and white helmet with goggles. Heady stuff!

Later, during the warm season I flew with him on weekend barnstorming ventures. My task was to sell tickets for passenger rides; also, I had to gather (always in an aviator's helmet) the pitifully meager voluntary collection for the featured, crowd-drawing parachute jumper. That flying activity to fields at near-by mining and farming communities netted me rides in OX-5 powered Challenger C-1 biplanes, a de Havilland Gypsy Moth and Curtiss Robin.

The Police Department of Johnstown sponsored an area-wide model-flying club providing a meeting room and facilities for mimeographing newsheets. I was elected first president and co-director of contests. To help some get started, we distributed blueprints of several of our well-proven models. In late summer of 1939, we staged a successful regional outdoors endurance contest for various classes of rubber-powered models. Some of the local participants still recall that famous Cleveland modeler, Dick Korda, attended.

Magazines played an increasingly important role in popularizing model plane construction and flying. Several publications focused almost exclusively on full-scale aircraft – *Aero Digest*, *Popular Aviation* – offered welcome but meager attention to models. A banner day for me was when a real model airplane magazine, the second issue of *Model Airplane News*, appeared on the rack of our tiny mom and pop grocery store. My dad furnished the 15-cent cost, but I bought every issue thereafter for at least five decades until the publisher forsook some traditional categories of the hobby such as rubber-powered, Free Flight models.

By the middle 1930s, a powerful stimulus to sustaining enthusiasm about the nation was the regular publicity and competitive activities promoted by rival newspaper chains, particularly those sponsored by publishing giants Hearst (Junior Birdmen) and Scripps-Howard (Junior Aviator). At airports and parks about our region centered on Pittsburgh, outdoor events were held by competing papers for endurance and speed while in winter the traditional indoor models were flown in an armory. Prizes were sometimes trips to their national finals where local winners would pit their skills and luck against those from other major regions.

I experienced much satisfaction in preparing for those area and national fly-offs. In the process, much was learned about design, construction and, particularly, trimming and flying models in varying venues and atmospheric conditions.

Beginning in 1935 and continuing until they were terminated by events of World War II, I attended the Nationals sanctioned by the National Aeronautics Association. Those premier, exciting affairs were magnets for large numbers of youths – average age likely 18 or 19 – who in large numbers engaged in spirited competition in both outdoor and indoor events. It was at the 1936 Nationals that formation of the American Academy for Model Aeronautics was announced. I promptly joined what is now known as our AMA, and still have in my files a copy of the Academy's magazine, *Model Aviation*, volume one, number one distributed in 1935.

Despite being an enthusiastic, determined Nationals contestant, I never won top place in any major event, yet always made a respectable showing. One year I placed second in the International Admiral Moffett finals, and in 1939 earned a place on the American Wakefield team. Unable to attend the finals for that premier international event in New Jersey, my model was to be flown by proxy Ted Just. The rubber motor catastrophically failed while being wound for the first flight. With the model being mostly destroyed, we were listed dead last on the final tally.

With persistent interest in full-scale aircraft, flying scale models increasingly became the focus of my design and construction efforts. My first scale flyer was a George D. Wanner Co. British aircraft, a Leopard Moth. An award won at some contest, it was one of the few kits I ever assembled; it was both attractive and a competent flyer.

Shortly thereafter, I came upon outline drawings of the Rearwin Speedster aircraft; it was being readied for marketing to sportsman pilots. While the few planes completed wore not a commercial success, they had ideal proportions for a model with racy lines of exceptional eye-appeal. I fashioned a flying scale version applying some of the knowledge acquired from contest type models. It was a superb flyer so I built two more. A picture, of one was sent to *Model Airplane News*. This brought an invitation for a construction article from editor, Charles Grant. That is how the long list of magazine articles I am prominently identified with commenced.

Despite being somewhat stressful to meet schedules I had set, preparing the articles was real fun. As might be supposed, payment for the inked plans, text, and photographs never matched the

time and effort required to produce an adequately tested, easily duplicated model. So I should explain I could devote time to such endeavors since I worked only part of each day on a pioneering, airmail pick-up system serving over 100 small communities of six mid-Atlantic states. Stinson reliant SR-10s were mostly used to deliver and pick up on-the-fly mail and small express packages. That tiny airline, All American Aviation, gradually grew into giant US Airways. I was one their early employees.

The model construction articles were published in five magazines. I was always given complete freedom of subject, subject selection, size, and manner of construction of the craft, format of presentation, etc. No article was ever rejected. Since there was so little feedback reaching me, I developed a feeling the construction articles were viewed with indifference by readers.

For decades after I stopped submitting them, it was my belief the models had been forgotten, but in recent years, I have learned that was not true. As many have reached retirement and have reflected on early pleasures, it has been revealed that there were a large number of youngsters who built and enjoyed success with published subjects. Some have stated those models were their first to fly well. Others have related they flew some until they almost wore out or were lost. This experience taught me a lesson – now when I read a good book or enjoy a magazine article, I write authors a brief note expressing appreciation for their efforts. Many have responded with word of thanks, some pointing out they seldom receive encouragement from readers.

In recent years, there have been questions by some regarding the scale accuracy of a few of my designs. My response is, except for the widely acceptable practice of increasing dihedral and, sometimes, enlarging tail surfaces to help create a stable, Free Flight model, the designs are as accurate as the sparse information available in wartime circumstances permitted. First awareness of new planes often came from full-scale aircraft publications. *Aero Digest*, the foremost aviation magazine of that time as well as its competitor, *Aviation*, often had three-view drawings of new crafts. Rarely, requests to their manufacturers would garner drawings and black and white photographs.

Aero Digest in March of each year published a thick annual edition with more than 100 tiny three-views of civilian and military aircraft plus a small photo and various specifications. In the absence of data direct from a manufacturer, those editions were absolute treasures, but the tiny plans with less than two-inch wingspreads were a challenge. Remember, this was years before enlarging photocopy machines so if one could not afford expensive Photostat or other photographic processes, increasing the outline shapes to desired model size had to be done manually. Such considerations, of course, compromised the goal of exact accuracy, but it was the best we had.

In recent years, a few businesses have played a role in re-popularizing various designs. Since copyrights owned by publishers may have expired, small industries and individuals have kitted several of the models, but a larger number have offered photocopies of the original articles, or in some instances redrawn the plans. I have had no involvement in that activity, nor have I objected

to the practice.

One of the surprising occurrences has been the number of flying contests staged for Earl Stahl designed models. In England a chapter of the Society of Antique Modelers has sponsored annual events for two classes, low-wing and high-wing models. One year British Aerospace Military Aircraft Division sanctioned a Blackburn Skua model contest commemorating the 50th anniversary of the first flight of their dive-bomber that saw service in World War II. The Earl Stahl Skua from *Model Airplane News*, June 1942, was the designated design to be flown; 20 international contestants participated. In the United States, as well, numerous clubs have conducted events for models built from published plans.

Entering the U.S. Army Air Corps in fall 1942, my military activity was centered on celestial navigation instruction to prepare bomber crews to fly missions to distant Pacific targets. Once the end of the war was imminent, because of my model design, construction experience, I was sent by the Air Corps to NACA's Langley Research Center to build wind tunnel models. Early on I constructed mostly dynamic models (representing scale shape and weight characteristics) for Free Flight in several wind tunnels. Among models built were those of pioneering supersonic aircraft, the X-1 and X-3.

Other projects included a wide range of military types including the early Air Corps and Navy jet fighters. Among the extremely unusual subjects were the vertical rising, tail setters by Lockheed, Convair and Ryan, a concept that proved impractical.

My career at NACA/NASA spanned 41 years. After seven years of model making, I participated in operation of large supersonic wind tunnels engaged in a broad range of aeronautical and space research. During the final 12 years, I was chief of operations support for the entire research center. Our organization had responsibility for the technical support to prepare test objects (models, actual vehicles), participate in tests, operate and maintain wind tunnels, laboratories, and simulators for the vast range of aero/space research continually in progress.

As happens with many during years of pursuing a career and raising a family, hobby model activities were at a diminished pace. Flying light aircraft became a primary interest. Being a private pilot most of the adult years afforded an opportunity to fly many types of general aviation aircraft. At various times Luscombe, Cessna and Culver planes were owned. Home built aircraft were of particular interest so at one time an effort was made to improve their safety by reviewing the official records of circumstances contributing to specific accidents. The causes of such events were reported in a dozen or more magazine articles.

In retrospect, one can conclude the effort had little or no favorable impact since light planes continue to be involved in the same kinds of incidents for the same repetitious reasons. Along the way at various times, magazine articles were prepared on model and full-scale aviation history. When *World Book* was updating their encyclopedia after World War II, I prepared their model aviation feature.

Looking back on this lifetime of romance with an aeronautical hobby and career provides feelings of excitement, reward, and satisfaction. It has been a privilege to have been along on such a memorable journey!

*(signed) Earl Stahl
March 1997*

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