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Editor: Stew Meyers

2012-4 (JUL-AUG)



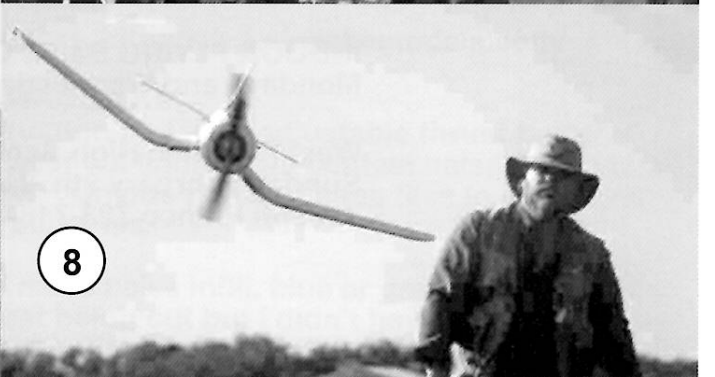
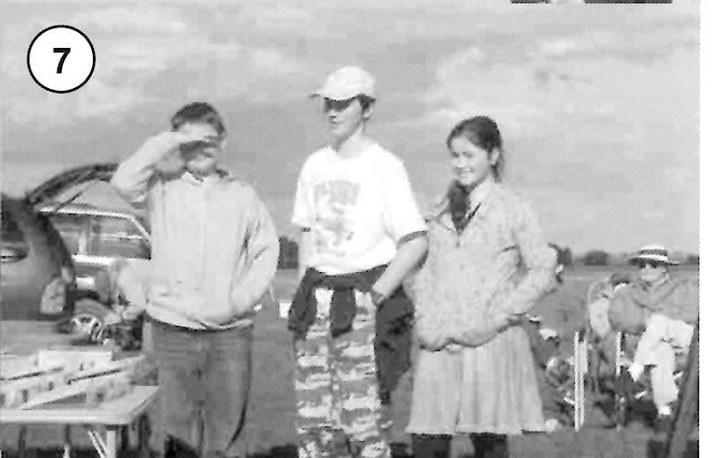
EARL STAHL ISSUE

COMING ATTRACTIONS

National Building Museum Flying Fun
Two Dates Sundays 1/6/2013 and 4/7/2013
10:30 am to 4 pm Indoor Micro R/C and Free flight
Contact Glen Simperts grfreeflight@hotmail.com
301-834-2896

INDOOR FLYING Bauer Community Center
Mondays and Wednesdays 12:45 to 2:15 pm

West Potomac High School Fun Fly
Sunday February 9th 8 am to 2 pm
Joseph Franco 703-718-2574



MaxFax 2012- 4 (Jul-Aug 2012)

Stew Meyers Editor

Earl Stahl Issue

Well, I have finally gotten around to putting out another issue. News of the death of Earl Stahl has changed the focus of this issue. I was fortunate to talk with him on more than a few occasions. He subscribed to Maxcutters and came to contests until the last few years. Everybody seems to have built one of his designs. I have included a listing of all his designs and where to get them and a list of current kits. A copy of his *Albatros DV* from the Feb. 1945 MAN is representative of his plans. I thoroughly enjoyed building one of these. We also have plans for the *Jr Miss* from the Dec. 1942 MAN. The Fall WaWa contest results are included.

The rest of the issue is devoted to Earl and his models. We are fortunate to have an autobiography that Earl wrote for the KAPA KOLLECTOR, which is included here.

Cover photo: Earl Stahl holds Lindsey Smith's P-51 built from his plans. Lindsey Smith photo.

PAGE 2 PHOTOS

By Tom Hallman unless noted

1. The WaWa management Team: Sue Houck, Tom Hallman, Mark Houck, Louise & John Houck.
2. A great launch of John Houck's *A2D Sky Shark*. It placed second in contra rotating .
3. Vance Gilbert brought his date, *Jenny* to the contest and took second in Jumbo.
4. Early round of the BLUR before it got too dark for a good photo. S. Meyers photo
5. Greg West with his *Smilin' Jack X-13* which grabbed him his first Kanone and put a smile on his face.
6. Doug Beardsworth demonstrates the concentration method of launch. (The tongue is an essential element.)
7. Three Canadian Juniors had fun at the meet: Kendrick Gosselin, Luke Kondrat, and Maria Kondrat. S. Meyers photo
8. Ronnie Gosselin trimming up his F4U racer for the BLUR well enough to come in second.

Earl Fred Stahl, Yorktown, Va., died Oct. 16, 2012, at age 94. He was born and raised in Johnstown, Pa.

He is survived by his wife of 60 years, Lil; and their daughters, Jeanne E. Stahl and her husband Daniel Elliott, Terri Cuthriell and her husband Michael and Gail Hoilman and Timothy; grandchildren, Seth Hoilman, Shelby and Bryce Cuthriell, and Verity Elliott. He is also survived by his sister, Ruth M. Stahl, of Johnstown, Pa.

He served in World War II as a U.S. Army Air Corps Celestial Navigation Instructor.

Earl worked at NACA/NASA for 42 years, retiring in 1986 as chief, Operations Support Division. In that role he was awarded the NASA Exceptional Service Medal for "leadership in the management of technical support to the Langley research effort assuring effective utilization of the center's diversified research facilities."

Since his youth Earl Stahl was a freelance author and graphics illustrator of model airplanes, sport aviation, and aviation history for various magazines, journals, and World Book Encyclopedia. He remains internationally known for creating and illustrating construction projects for flying model airplanes. Many of his publications continue to be reproduced for competitions in the USA and Europe. In recognition of the "enduring and distinguished achievement in the art of free flight model aviation," he was inducted into the halls of fame of five national hobby organizations

WaWa Report

We had really good weather at WaWa this year. It was a bit windy, but no rain and the temperature was moderate. It warmed up on Saturday to the extent that everybody shed coats and sweaters. Sunday was bit cooler but not bad for this time of year. I had a great time as usual, even if I bombed out in the second round of every mass launch. It was great to have time to talk to guys I don't usually see outside of the chaos of Geneseo. Wally was the Grand champ. He is intense. I enjoy flying against him at home. It's a challenge to beat him, but I also like to help him hone his ships in a less hectic environment. Ditto Dave Mitchell.

It's hard to believe that Greg West only now has won his first Kanone. He flies very neat stuff and gets in some great flights. It all came together for him in the Fiction Fliers this time. For his persistence, he won the WaWa Balls of Steel. Andrew Ricci was awarded his well deserved Blue Max. Don DeLoach came out from Colo for a day and won WWI. He held a nice seminar on Prop carving at the motel.

A debt of thanks goes to the Hallman-Houck team for putting on this contest. There were 35 registered contestants.

EARL STAHL: MASTER OF SCALE DESIGNS - A CONTINUING STORY

BY EARL F. STAHL

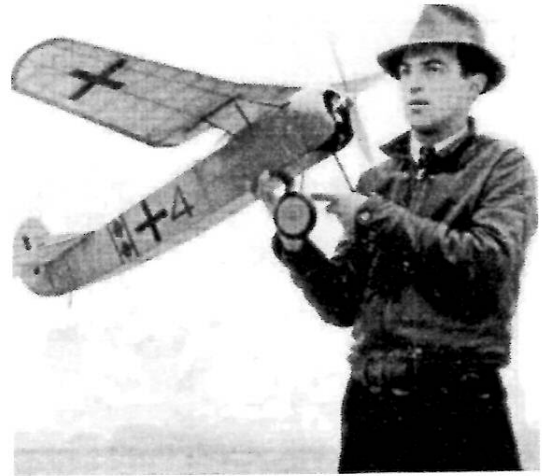
To have participated in America's romance with aviation-the thrill of flight, its expanding promise for the future-has been a treasured opportunity. As an enjoyable hobby, as an exciting career, aeronautical activities have favorably affected my life. Those of us who commenced life's journey during the first half of the twentieth century were continually exposed to evidences of the unfolding Air Age. Newspapers and radios were filled with the stories; it was a time when aviation events were exciting and earnestly talked about.

From childhood I have had a fascination with planes. Shortly after conquest of the Atlantic by Lindbergh, Chamberlin and others, periodicals began to publish aviation features for youngsters. Over fifty newspapers in cities large and small, including my town, Johnstown, Pennsylvania, regularly had model airplane topics along with construction drawings and instructions prepared by Merrill Hamburg of the Model Aviation League of America. To most of us they were our first exposure to model planes that could fly. At age about ten, I constructed about three from the published series, including, an elementary Baby R.O.G. and a three-foot wing span twin pusher that performed extremely well. Mr. Hamburg tossed the bait and I was hooked!



1936 (L-R): Earl Stahl with Weight Rule Contest Model (*MAN*, June 1938) predecessor; Stan Varner; Ted Just with his Boehle; Wes Smith; Frank Horvath with Henry Struck design.
Via J. Alaback

Our high school encouraged activities clubs that met regularly as one-hour classes. I helped organize their aviation club, being elected president several years. One of the adult advisors I recruited was an early plane owner in that part of the state. During the warm season I would fly with him on weekend barnstorming ventures. My task was to sell tickets for passenger rides (\$1.00). Also, I had to gather the pitifully meager voluntary collection for the featured, crowd-drawing parachute



Earl Stahl with his elegant free-flight gassie Fokker D-8.

jumper. That flying activity to tiny fields near farming and mining communities netted me rides in now ancient Challenger C-1 and de Havilland Gypsy Moth biplanes and a Curtiss Robin.

Magazines played an increasingly important role in popularizing model plane construction and flying. Among the earliest were those publications focused almost entirely on full-scale aircraft, the most prominent being *Aero Digest* and *Popular Aviation*. They sometimes offered scant but welcomed 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 fifteen cent cost, but I bought every issue thereafter for at least five decades when the publisher abandoned pillars of our hobby including 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*). In our region, near Pittsburgh, outdoor events were staged by their competing papers for endurance and speed while in winter indoor models were flown at an armory. Prizes were sometimes trips to their national finals where local winners would test 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 locales and atmospheric conditions.

Beginning in 1936 and continuing until the events were terminated by our involvement in World War Two, I attended the "Nationals" sanctioned by the National Aeronautics Association. Those premier, exciting affairs were magnets for large numbers of youths, average age likely eighteen or nineteen, who engaged in spirited competition in both indoor and outdoor events. It was at the 1936 Nationals that

formation of the American Academy of Model Aeronautics was announced. I promptly joined what is now popularly known as AMA.



This photo appeared in the Johnstown, PA, Tribune, 11 July 1938. (L-R) Ted Just with original design Class C; Art Eck with original design gassie; Earl Stahl with his Class D outdoor model (MAN, Feb 1944). Via J. Alaback

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 renowned international event, my model was to be flown by proxy, Ted Just. The rubber motor catastrophically failed while being wound for the first flight. That model, the "Gypsy," published in Flying Aces, September 1942, was totally destroyed.



Earl Stahl with his Interstate Cadet (MAN, Jan 1941), Bell P-39 (MAN, Jun 1941) and Stinson 0-49 (MAN, Jul 1941). Via E. Stahl

With persistent interest in full-size aircraft, flying scale models increasingly became the focus of my design and construction efforts. My very first scale flyer had been a George D. Wanner Co. de Havilland Leopard Moth. That was one of the few kits I ever assembled; it proved to be attractive as well as a competent flyer. Shortly thereafter I came upon outline, three-view drawings of the Rearwin Speedster, a plane being developed for marketing to sportsman pilots. Although it did not become a commercial success, it seemed to have ideal proportions and exceptional eye appeal for a model. So I fashioned a flying scale version applying

some of the know-how acquired from contest type models. It was a superb flyer so I built two more. A picture of one sent to Model Airplane News brought an invitation for a construction article from editor Charles Grant, and that is how the long list of magazine articles I am identified with commenced.



Earl Stahl's MiG-3 (MAN, Jan 1943) Now available as an Easybuilt kit.

Once my first flying scale article on the Rearwin Speedster was received at Model Airplane News, its editor, Charles H. Grant, wrote requesting that I do another. My suggestion that the Fairchild 24 would be a good subject was accepted. It was followed in fairly rapid succession by a French Caudron, Waco E, Spitfire, and on and on.

Bill Winter, an editor at Air Trails, soon wrote asking that I do something for their magazine. In reply, I stated I felt a loyalty to Grant, who got me started. In his terse manner, Bill wrote: "A freelancer, you aren't under exclusive contract to Charlie. He will continue to buy your stuff." With that enticement I designed and tested the new Fairchild PT-19 for A. T. Once that article appeared at news stands, Grant wrote a testy letter of surprise and disappointment, but asked for more; we remained long-time friends.

Although it had not been my goal to devote so much time to originating model after model, I did find designing, building, testing, and then drafting plans genuine fun. Those flying scale replicas were created applying some of the know-how acquired from free flight, contest type models. That may have contributed to many builders finding them to be excellent flyers. A dominant consideration was to keep each model as simple yet realistic as practical so they could be successfully duplicated by others.

With the passage of time, there have been questions about the authenticity of some of those old designs. My response remains: the widely accepted practice of increasing wing dihedral and enlarging some tail surface areas to help create stable free flight models existed then and remains valid today. Beyond that, shapes were kept as authentic as the sparse information typically available during those impending-then real-global, war-time circumstances permitted. In contrast, the information explosion these days is making obtainable much more data on a host of aircraft than was available, at least to me, under those earlier conditions.



Earl designed, built, and photographed this Curtiss P-40, published in *MAN*, Oct 42.

North American "Apache" semi-scale.

Earl with his CAP Aeronca Chief, c. 1942.

First awareness of new aircraft often came from full-scale aircraft publications. *Aero Digest*, the premier aviation magazine of that time, along with its competitor *Aviation*, sometimes had outline drawings of new craft. A bonanza came in March of each year when *Aero Digest* published a special edition with more than 100 tiny three-views of civilian and military aircraft, accompanied by a small photo and specifications. When in my judgement a good model subject appeared, I would write to the manufacturer requesting data. Occasionally, that would bring a larger three-view as well as excellent photos. Accordingly, when there was an absence of response from the manufacturer, those special issues were absolute treasures; however, the tiny plans with wing spans of about two inches offered a challenge. Remember, this was decades before cheap copies from enlarging photocopy machines were just around the corner. So, if one could not afford expensive photostat or other elaborate reproduction processes, increasing outline shapes to desired model sizes had to be done manually. Such considerations, of course, compromised to some extent the goal of exact accuracy, but it was all we had.

I would first lay out the models in simple, single-line form on large tablet paper. Magazine page sizes usually dictated for me the fuselage length, and, thus, the overall size. Once the prototype model was built, photographed and tested, detailed, inked drawings were made. As was clearly evident, I had no training in drafting; with time and experience, I like to think my graphics improved.

Unlike many builders now, I did not try to duplicate colors or exact markings of a specific plane. My objective was to use colors that I had learned would photograph reasonably well using the commonly available black and white film. I had best results with subjects covered with red and yellow model tissues, so, no sand and spinach or olive drab for my war-time Spitfire, Hurricane, and P-40 Curtiss Hawk. They were red.

Photos to illustrate the articles never matched my expectations. I used a Weltafihn-pack camera with ground glass for the stills and a 35 mm. Kodak Retina for action. The only guy in our home town who would tackle my processing orders for enlargements was "Thumbs" Salinger. He seemed to specialize in water marks. I criticized his prints. He retorted I gave him almost nothing of quality to work with.

In these ramblings I have focused on the dominant rubber-powered flying scale models. There were others, among them a two-part article about constructing a gasoline engine powered Fokker 13-8 published in *Model Airplane News*. That 57" span plane attracted many builders; some of those D-8s are still flown, now with radio control. *Flying Aces* magazine published two fun models: High Climber and a low-wing Hurricane that gained much popularity. That non-scale Hurricane, a craft of simple structure with excellent flight capabilities, was designated the "One Design" model for a mass-launch event one recent summer in eastern New York state. Reportedly, there were numerous outstanding flights, some soaring away in the embrace of "Hung."

As might be supposed, payment for inked plans, text, and photographs never matched the time and effort expended to produce an adequately tested, easily duplicated model. In the environment of a waning depression and war-time wage freezes, payments from *Flying Aces* were sometimes as little as \$25. *Model Airplane News* \$100, *Air Trails* \$150. Later, a single article in widely circulated *Mechanix Illustrated* netted more than \$600. So, perhaps, it should be mentioned that time could be devoted to such ventures since I worked parts of each day on a pioneering airmail pickup system serving more than 100 small communities of six mid-Atlantic states. A fleet of Stinson Reliant SR- IOCs was used to deliver and pickup, on-the-fly, mail and small express packages. That tiny airline was All American Aviation which gradually grew into giant US Airways. I was one of their early employees.

My model construction articles were published in five magazines. I also prepared and had published a construction article on a late model Spitfire for the magazine *Air World*. I was always given complete freedom of subject selection and manner of construction, as well as format of presentation. No article was ever rejected. Early on, since there was so little feedback of information reaching me, I had the feeling articles were viewed with indifference by readers. For decades after I stopped submitting them, I believed the models had been forgotten, but during the last twenty or so years, I have learned that is not true.

In recent years a few businesses have played roles in repopularizing various of the designs. Since copyrights, all owned by publishers, may have expired, small industries and individuals have kilted several of the models, while others are offering photocopied or redrawn



Earl with his Grumman Wildcat (*Air Trails*, Nov 42).

Stinson Voyager.

Dynamic models of McDonnell XF-88 for spin recovery tests in a Spin Tunnel. Note the removable tail sections with the horizontal stabilizer at various height positions.

plans. I have had no involvement in that activity, nor have I objected to the practice.

Today, when meeting modelers, a frequent question is: "Which of those old models was the best?" I cannot say; they were conceived at different times and tested under widely variable weather conditions. A better query might be: "Which ones did others find fun in building followed by satisfaction when flying?" Again, I can't be sure. However, more than half a century later as a spectator at contests or fun-flies, I continue to see Rearwin Speedsters, General Skyfarers, Interstate Cadets, Taylorcraft 0-57s, and Fleet Canucks fly as gracefully and very often for much longer durations than the originals. Other contestants have campaigned with possibly more challenging subjects such as the Grumman F4F Wildcat, Waco E, Miles Magister, and Blackburn Slam, all demonstrating favorable performances. My all-time favorite, in a class I called semi-scale, was the North American Apache (prototype of the P-51 Mustang). Aside from deletion of the belly radiator and notched wing leading edge (near where it mates with the fuselage) it was a realistic appearing, stable, long duration flyer. Unfortunately, I have never seen anyone else's fly as well as the original. I suspect that is because their planes seemed significantly heavier from use of paints for fancy color schemes as well as additions of more details.

Preparation of model construction articles wound down in anticipation of entry in the Army Air Corps in Fall 1942. My military activity was centered on celestial navigation instruction using little known Link synthetic trainers to prepare bomber crews to fly missions to distant Pacific targets. Once successful end of the war was imminent, because of my model plane design and construction experience, the Air Corps sent me to NACA's Langley Research Center to build wind tunnel models. Early on I constructed mostly dynamic models (those representing scale shapes as well as weight characteristics) for free flight testing in several unique wind tunnels. Among models built were those of pioneering supersonic aircraft, the X-1, D-558-2, and X-3. Other dynamic models included the early Air Corps and Navy jet fighters. There were some extremely unusual subjects such as the tail-setting, vertically-rising

proposals by Lockheed, Convair, and Ryan, concepts that proved impractical.

Upon discharge, I was invited to stay at Langley; thereafter, my career at NACA/NASA spanned 41 years. After seven years of model making, I participated in a broad range of aeronautical and space research. During the final twelve years, until retirement, I was Chief of Operations Support for the entire research center. Our organization was charged with responsibility to train and provide technician support to prepare test objects (models, actual vehicles), participate in tests, operate and maintain wind tunnels, laboratories, simulators for the vast range of aero/space research continually in progress.

As happens with many 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 my adult years presented opportunities 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, but, although started, I never got mine near completion. Like someone said: "70% done and 80% to go."

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 afforded such a memorable journey.

EARL STAHL KITS (FOR FREE FLIGHT OR MICRO R/C)

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- ◆ Taylorcraft 0-57 32"
- ◆ Fairchild PT-19 23"
- ◆ Fleet Canuck 26"
- ◆ Howard GH-1 24" / 32"
- ◆ MIG 3 22" / 33"

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"JUNIOR MISS"

This fine-flying outdoor commercial job is just the thing for your Fall program

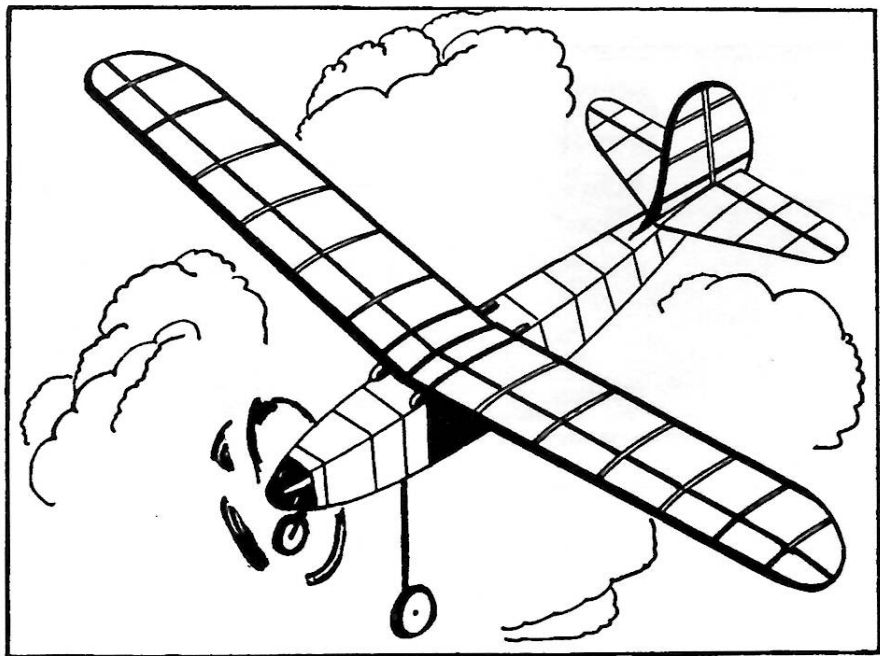
by Ralph Tekel

"JUNIOR MISS" has been designed in response to the many letters from beginner-modelers who were desirous of constructing a simple craft of dependable flying qualities. The plans appearing on the next page have been drawn in half scale. In order to make a full size working plan either one of the two methods to enlarge the plans may be used. The first is to have the plans "blown up" twice size by photostating which can be done at little cost. By spreading a piece of tracing paper over the plan it is a simple matter to proceed with construction. The second method is accomplished by using a scale rule and doubling every portion of the plan and transferring it to a working drawing. A flat table, T-square and a curve or two will also be necessary. The use of a sheet of transparent paper over the work drawings is suggested so that parts of the plan will not stick to the wood.

FUSELAGE AND TAIL SURFACES

SELECTED lengths of medium strength $3/32$ " sq. balsa is used for the longerons as well as the compression members and cross braces. After laying down one side with the aid of small pins to hold them in curved positions where necessary, a second side may be built simply by placing a sheet of transparent paper on top of the first side and proceeding as before. When both parts are ready assemble the body with the cross-braces, positions of which are shown in the top view layout. Note the positions for the pine anchor in top and side views. The anchor is braced as shown in the side view. The inner gusset is a piece of hard sheet balsa cemented firmly in place.

Small pine braces cut to triangular form are cemented in position as shown after a hole is bored to accommodate $1/8$ " dia. dowels. These dowels serve to retain the wing in position when attached with rubber bands. An additional brace strengthens the "N" strut—where the landing gear leg rests. The tail end of the fuselage is also braced with a piece of hard balsa to strengthen the converging longerons. Add the sheet balsa skid and wing mounts. The nose plug is carved to shape as shown. To the attaching side is added a frame composed of four pieces of



Here's the author's sketch of the original "Junior Miss" which flew out of sight.

$3/32$ " sq. lengths and arranged so that when the plug is inserted into the mouth of the fuselage it fits snugly. A hole to accommodate the prop shaft is bored. Cement eyelet bearings in each opening.

The landing gear is bent to shape from .038 music wire to the design shown. The upper piece is cemented to the cross brace with a generous application of cement and reinforced with a binding of strong thread after which another application of cement is spread over it. The propeller shaft is shaped from wire of the same size. Using a free-wheeling device or a stationary shaft one is optional. Carve the propeller from a hard balsa block. Pine may be substituted if desired. Note the air-foil section shown in the propeller template. This should be worked out in the carving.

The tail surfaces are of simple construction. Use hard balsa of the dimensions listed and cement all joining parts well. The rudder frame is assembled as shown. Round off the leading edges and taper the trailing edges with sandpaper. Note the manner in which the rudder frame is designed.

WINGS, COVERING, ASSEMBLY

SINGLE SPAR and wide spaced ribs make the wing construction simple. All ribs are cut from $1/16$ " sheet and notched to accommodate spars whose dimensions are given. By making a tracing of the right wing and turning it over, the other half of the wing may be constructed at the same time. Round off the leading edge and taper the trailing edge to match the curve of the typical ribs shown. The extreme ends of the spar, leading and trailing edges should be tapered to meet the tip which is cut to shape from $1/16$ " sheet balsa.

The inner ends of the wings have double ribs. By this it is meant that the ribs are twice thickness of the other ribs. Each one is slanted inward before actually cementing it fast so that when both wing panels are raised, they will have dihedral angle measuring $2\frac{1}{2}$ ". When so, apply cement between both center ribs generously as well as upon the spar joinings themselves, and press both panels together. "Prop" blocks raising the extreme wing tips to the correct height must be placed in position and allowed to remain there until the wing unit hardens.

Fine tissue is used in covering all the surfaces. Use banana oil for the adhesive and do a careful job. Both sides of the tail surfaces are covered. The portion of the fuselage where the rubber strands are attached is left uncovered to facilitate matters.

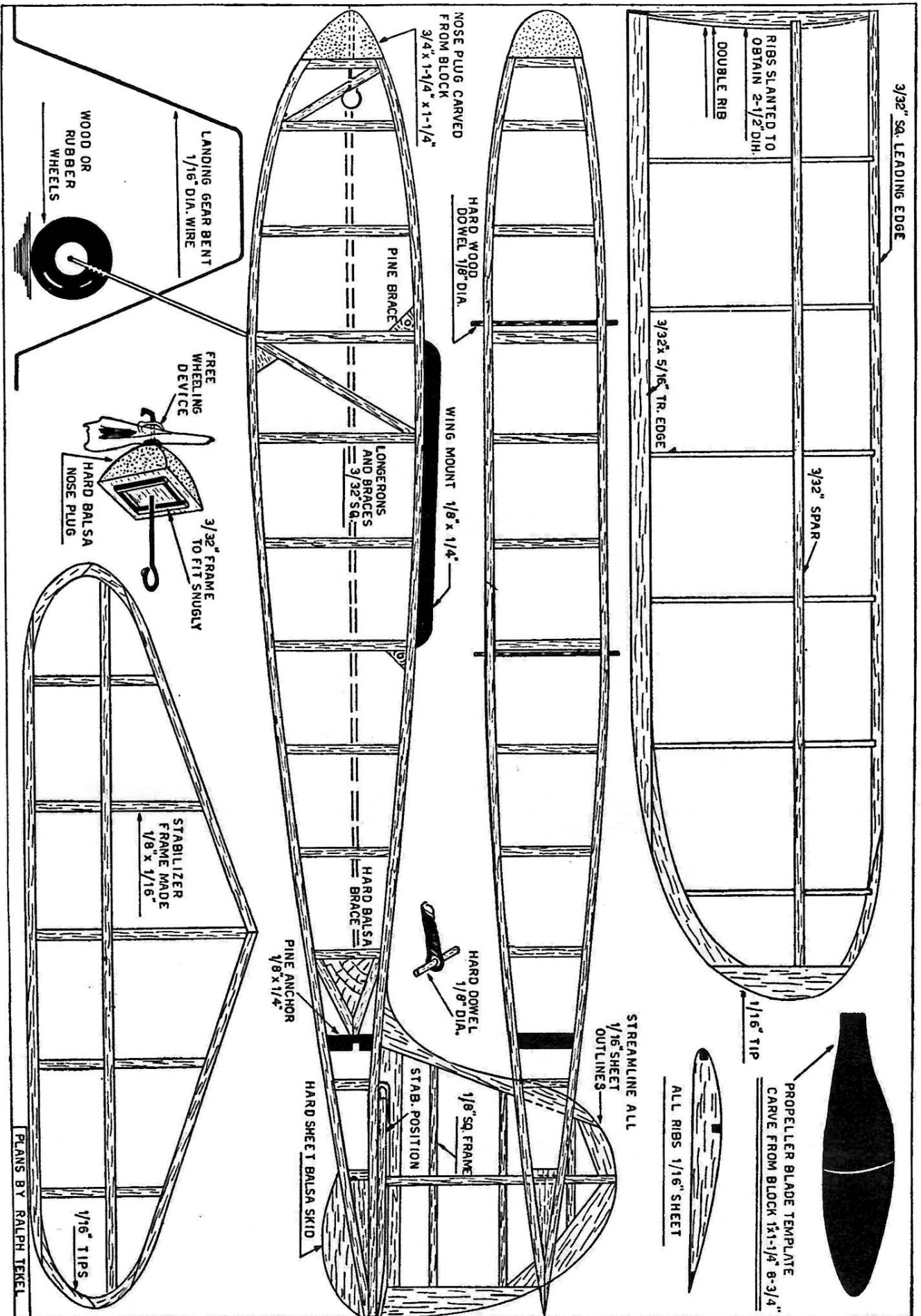
Six strands of $1/8$ " flat rubber are used. Strands should be measured so that there is a two inch slack when the rubber is wound out. Power strands should be inserted into the fuselage before covering. Water shrink all surfaces and allow to dry thoroughly before brushing at least two coats of dope over all.

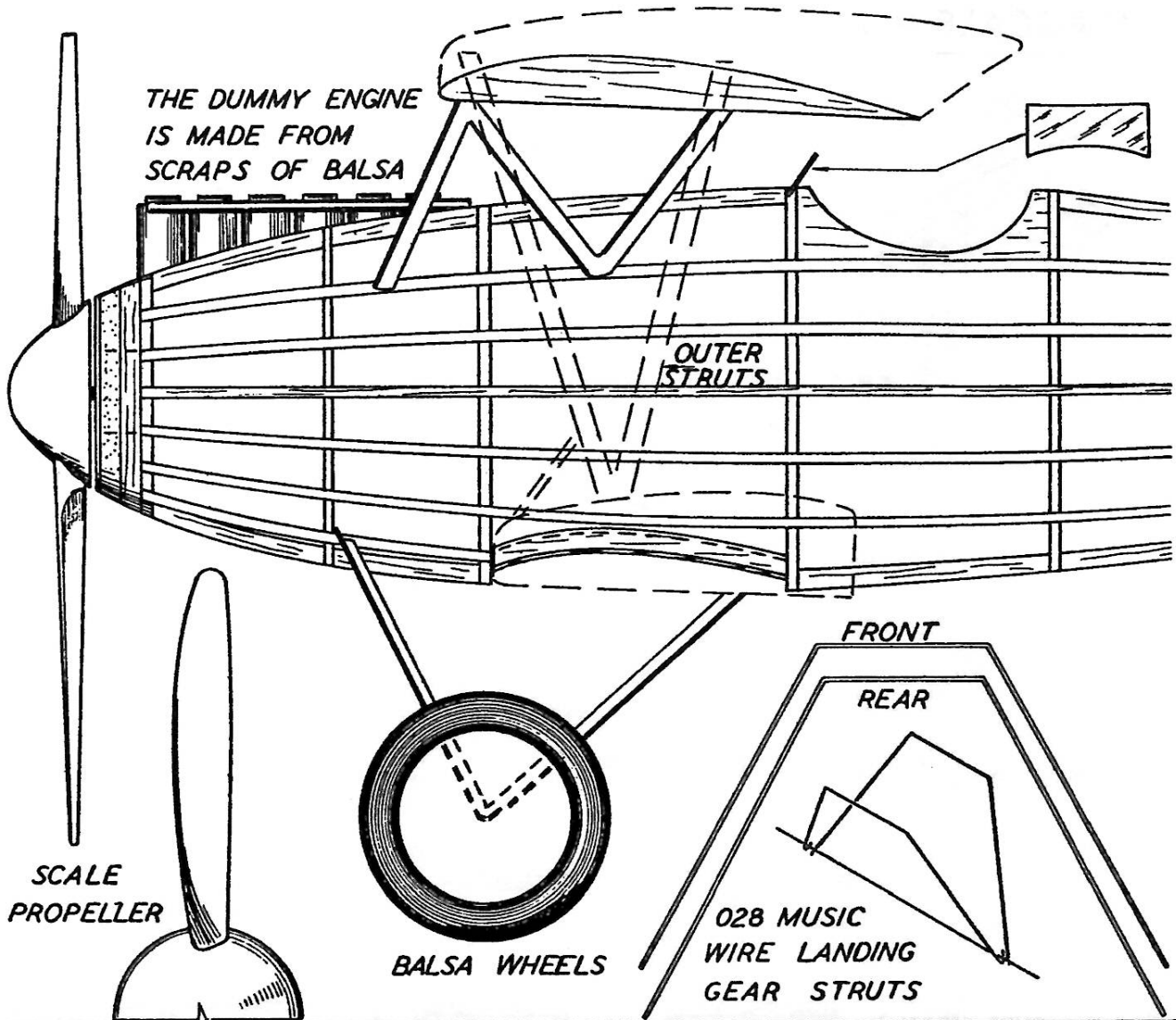
The horizontal stabilizer is cemented in the position shown and the rudder directly above it. The space shown between the rudder and the stabilizer is a bit exaggerated on the side view. The rudder should be cemented flush to the surface of the stabilizer at perfect right angles. Using flat rubber attach the wing securely to the wing mounts by looping them around the pine dowels.

The propeller may be hand wound or winder-wound. In the latter case it should be pulled out once again its normal length. Follow the same method of testing and adjusting as has been done with your previous outdoor models.

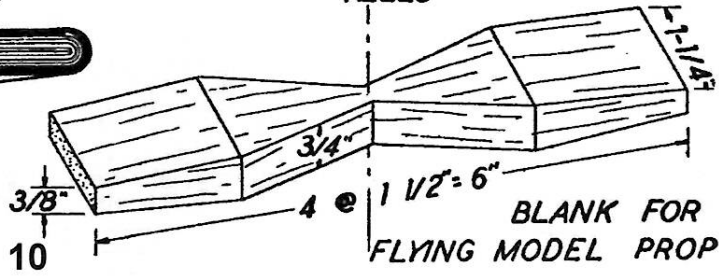
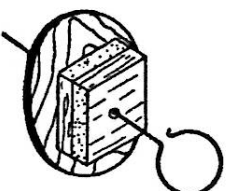
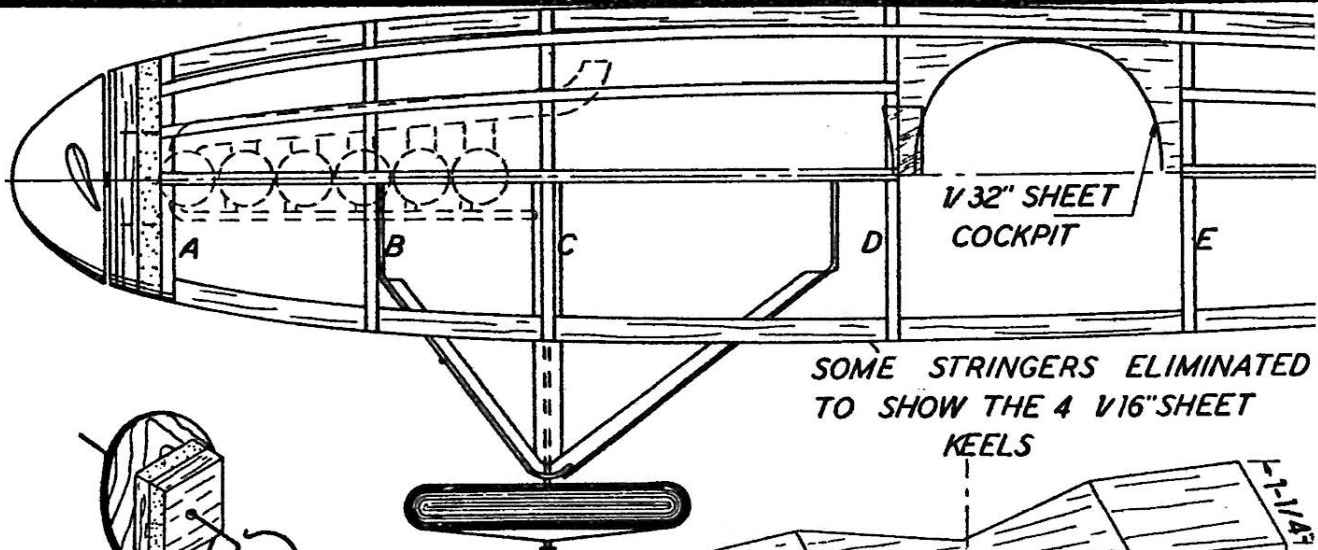
THE END

HALF-SCALE PLANS FOR "JUNIOR MISS" OUTDOOR JOB



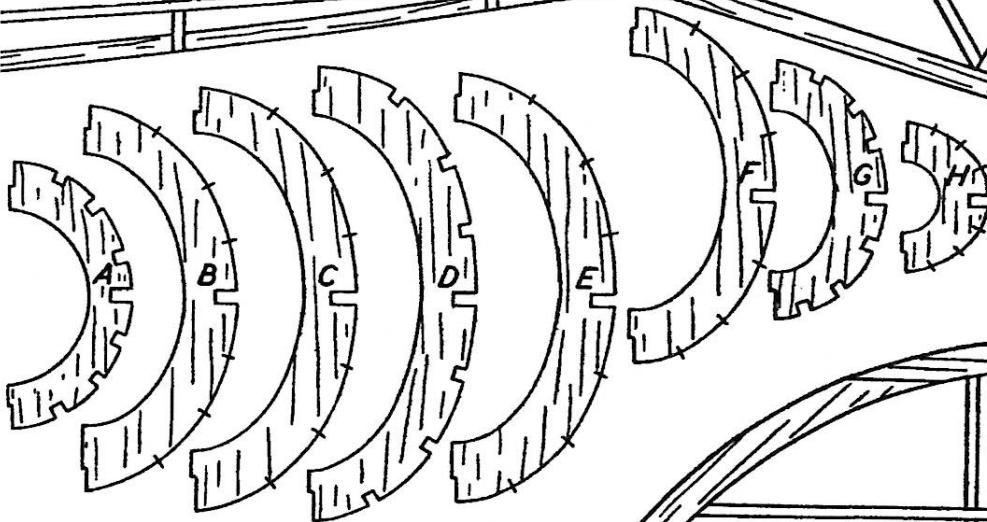
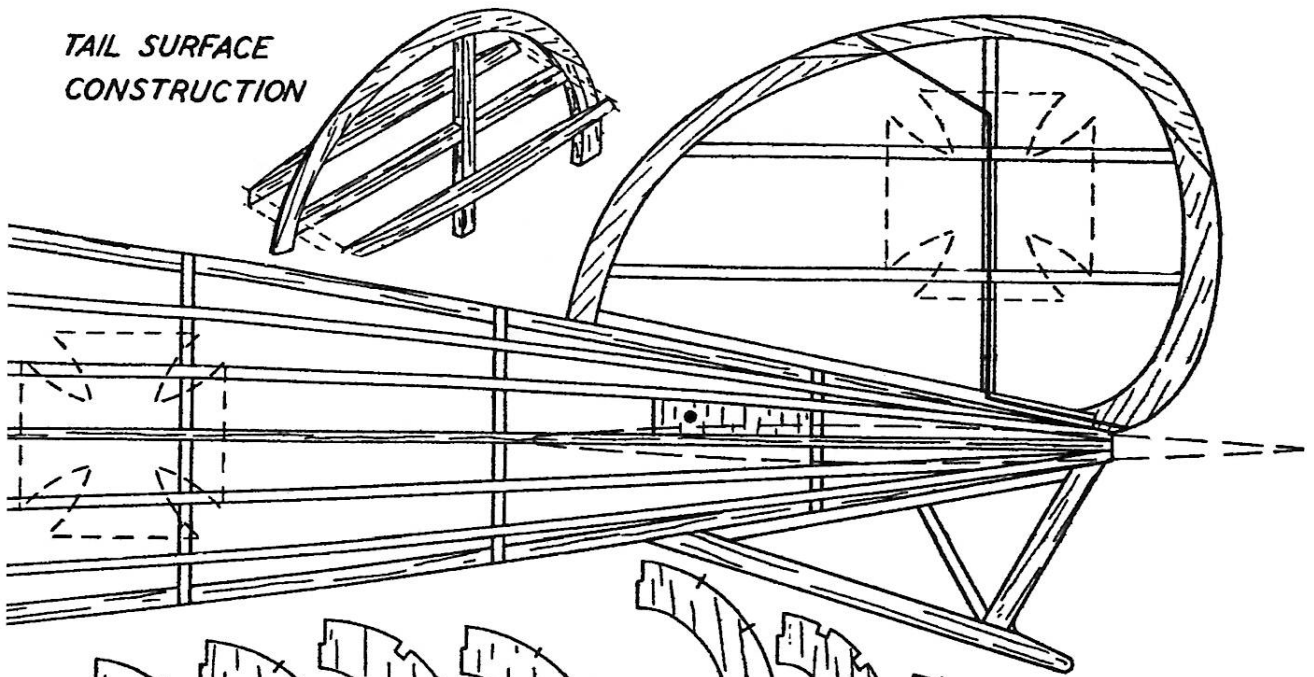


Albatros D.V



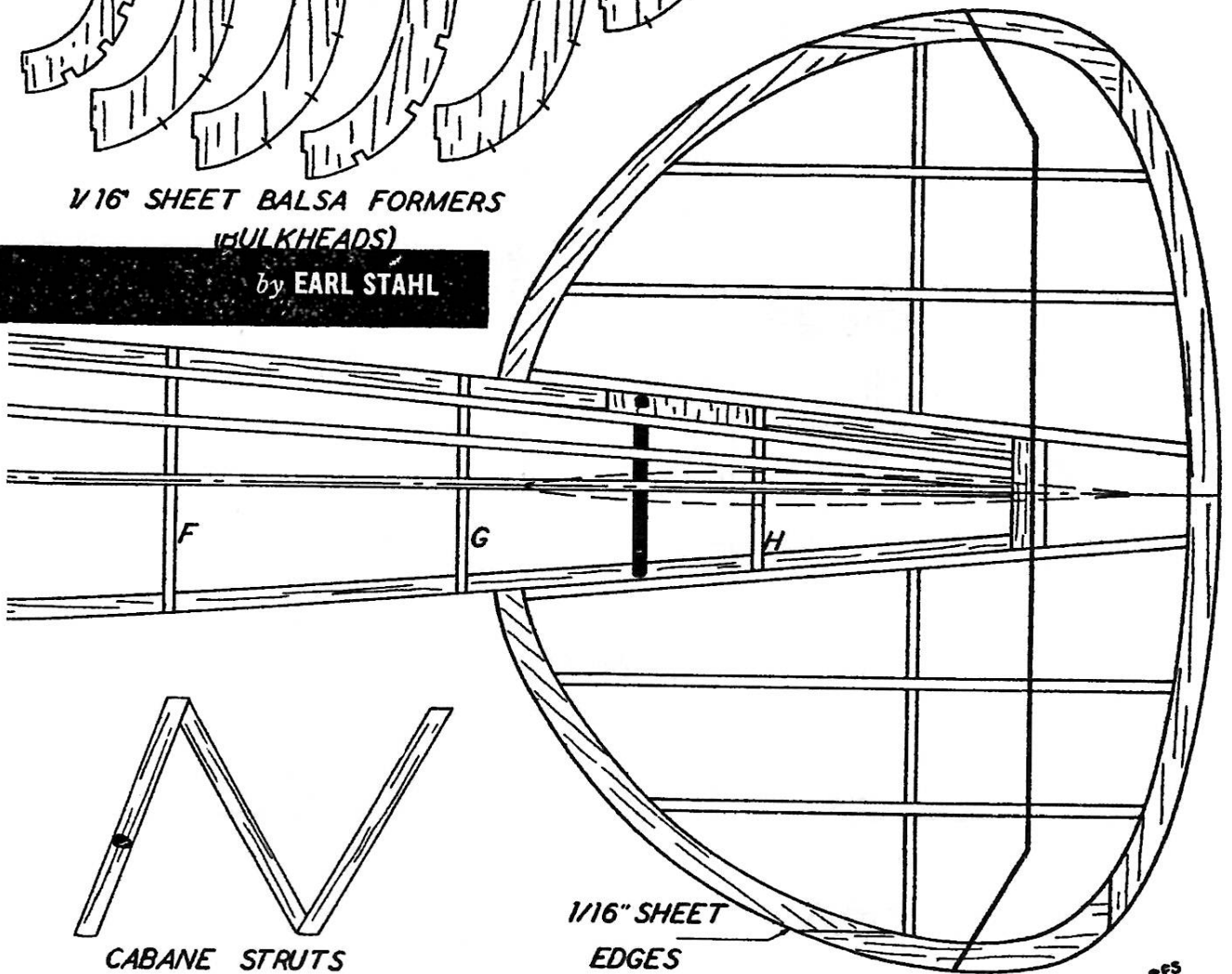
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**TAIL SURFACE
CONSTRUCTION**



**1/16" SHEET Balsa FORMERS
(BULKHEADS)**

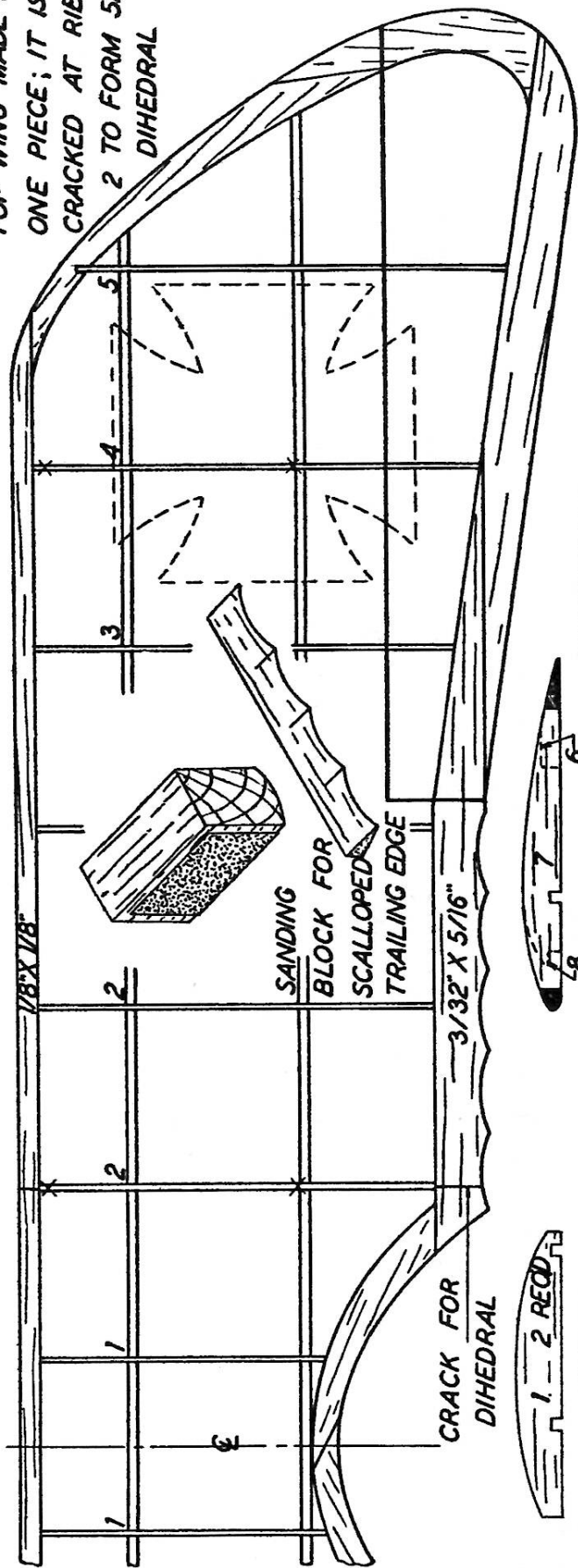
by EARL STAHL



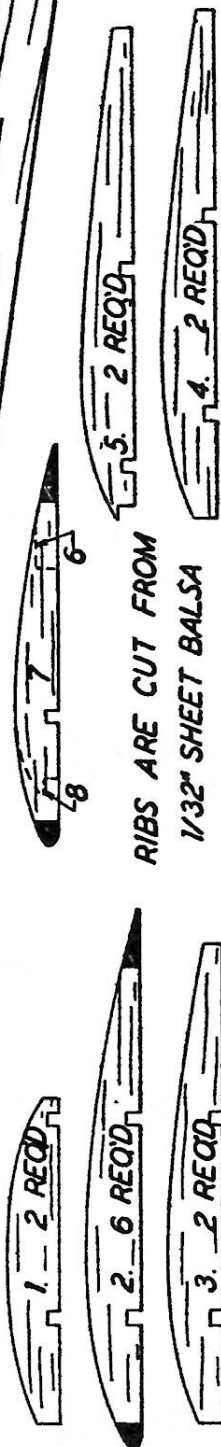
**1/16" SHEET
EDGES**

CABANE STRUTS

TOP WING MADE IN ONE PIECE; IT IS CRACKED AT RIB 2 TO FORM 5/8" DIHEDRAL

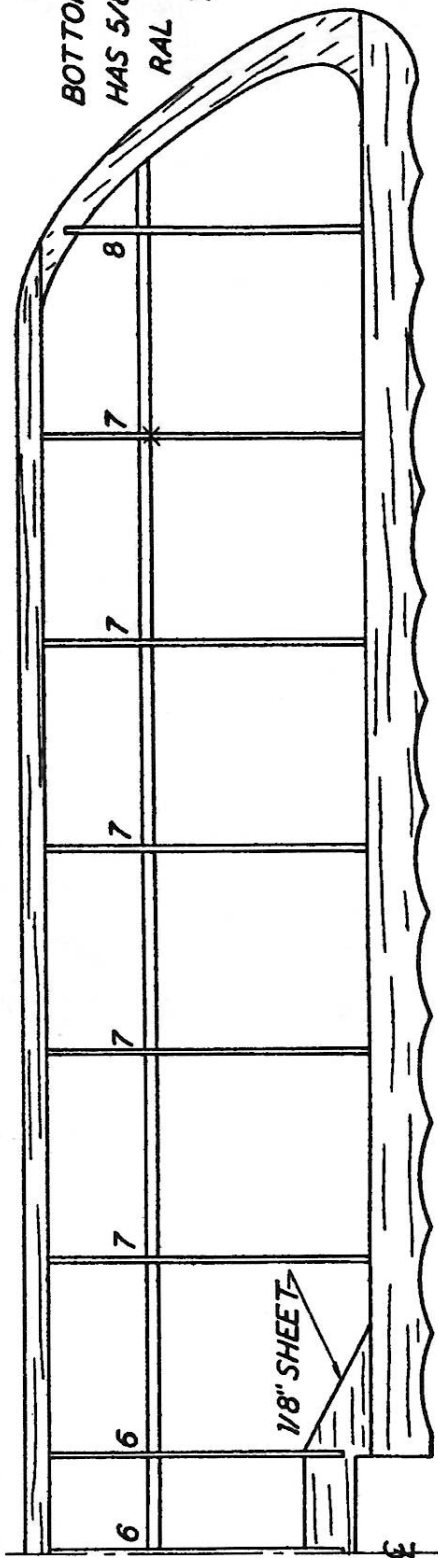


TIPS ARE CUT FROM 3/32" SHEET



RIBS ARE CUT FROM 1/32" SHEET BALSA

BOTTOM WING HAS 5/8" DIHEDRAL AT EACH TIP





Today's Messerschmitts and Focke-Wulfs, outstanding fighters of the Luftwaffe, have their counterparts in the notorious Fokkers and Albatrosses of the German Imperial Air Corps of the first World War. During the early part of the struggle little was

heard of Albatros planes, but in 1916 their fast, shark like bodied fighters made their appearance and amassed considerable destruction on Allied air power. It was in an Albatros that Germany's top ace, Baron von Richthofen, scored most of his 80 confirmed victories.

Perhaps the best known of the Albatros scouts was the D 3 of 1916 17 and the later model D 5. The D 5 had a 225 hp water cooled Mercedes engine and a speed of 140 mph was credited to it. This was remarkable speed for a fighter of that day and somewhat alleviated the plane's disadvantage of reduced maneuverability caused by its considerable weight. The operating ceiling was more than 18,000 ft. and it could attain the first 10,000 ft. of altitude in 13 minutes. Useful load of the craft was 517 pounds.

Most unique feature of the ship was the advanced aerodynamic and structural characteristics of the fuselage. Sleek and shaped like a fat cigar, the body was of three ply wood construction. Except for the exposed cylinders of the engine, this presented clean, unbroken lines to the slipstream and undoubtedly contributed to the overall efficiency of the craft. Wing and empennage were of conventional wood and cloth construction. Wingspan was 29 ft.. 8 in.; and length of the plane 24 ft.

In remarkable contrast to the withering volume of fire power spewed from the eight gunned P 47's, or cannon and rocket firing Typhoons of this war, the Albatros mounted two Spandau guns of small bore synchronized to fire through the whirling propeller blades. Likewise there was no protection for the pilot since his plane had no armor plate nor self sealing fuel tanks. Indeed, so extensive has been the progress in improving planes that the fighter pilot of today, fearless as he is in combat, would scarcely consider it safe to even fly an Albatros or similar World War I plane around the air field.

Interest among model builders in these old planes has always been great so we take considerable pleasure in offering a trim little flying scale model of the famous Albatros D 5a of 1918. Proportions of the prototype make it ideally suited for reproduction in the form of a flying miniature. If carefully constructed from the plans and instructions presented here, the builder will find he has a model that is not only an excellent flyer but a picture when on display.

Conventional construction methods are employed throughout but be sure to follow the plans closely and read the written instructions. Balsa wood is preferable but white pine may be substituted if the lighter wood is not available. Colorless model airplane cement is used as adhesive to join the parts.

Construction of the two wings is a good start. Ribs are shown full size and the number of each type indicated

should be cut from 1/32" sheet; note that three of No. 6, ten No. 7 and two No. 8 are needed. Cut the ribs with accuracy and sand them smooth. The trailing edges and tips are cut from sheets of 3/32" thick stock. It is not difficult to reproduce the scalloped effect found on the trailing edges of the real ship's wings. Make a sanding block as shown in the sketch and lightly sand the wood to the required shape. Only the right half of each wing is shown. It is best if a whole wing plan is made so the parts may be assembled right over it. Leading edges are 1/8" sq. strips and the spars are hard grade 1/16" sq. Assemble the parts carefully using pins to hold them in place until the cement hardens. The lower wing is cracked in the center and the tips raised 5/8" for correct dihedral. Tips are raised the same amount on the top wing but the dihedral breaks are at the first No. 2 rib from the centerline; remember to cement the breaks firmly. Be sure to shape the edges and tips carefully so a neat covering job can later be made.

The manner of fuselage construction calls for the use of four keels cut to shape from 1/16" sheet. To obtain their patterns trace the top, bottom and side outlines of the body. Bulkheads, likewise 1/16" sheet, are cut in accordance with the patterns given. Cut only the notches shown leaving the others to be cut as a later operation; however, their position should be marked as reference.

Pin the top and bottom keels to position over the side view and cement half of the bulkheads in place. Attach a side keel and then, when dry, remove the structure from the plan and add the remaining bulkheads and keel. Stringers are 1/16" sq. stock. Attach the ones nearest the side keels first, cutting notches as required. Always attach stringers to corresponding positions on each side at the same time to prevent pulling the body out of line.

Between formers C and D, where the wing fits in, curved pieces are cut from 1/16" balsa sheet and shaped so as to make the fuselage sides fit to the curvature of the wing. Other items to be assembled to the fuselage are the piece of 1/32" sheet between formers D and E which has the center removed and thus forms the cockpit and the small blocks of very hard sheet stock in the rear which anchor the rubber motor.

The nose block, just forward of bulkhead A, is made from two pieces of 1/8" sheet cemented cross grain. Cut out the center of the nose plug, then roughly carve to shape before cementing to the nose for final finishing by rough and then fine sandpaper.

Few details are required to outline the method of constructing the tail surfaces. Study the plans and note that both the stabilizer and rudder are made in like manner from 1/16" thick stock of the indicated width. Make flat frames of both (the stabilizer is made in one piece), then when the cement has set, remove from the jigs and attach the soft 1/16" sq. strips to each side of each rib. These are trimmed to the streamline shape indicated and the edges are tapered to conform to the rib shape.

Select a very hard balsa or soft white pine block of correct size for the flying propeller. Drill a tiny hole for the shaft, then cut out the blank as shown. A right hand prop is to be carved. Cut away the back face of the blank first until it is as desired, then cut away the front until the blades are

of the proper thickness. Reduce the depth of the hub about a third, and neatly round the tips of the blades so an effective unit will be had. With first rough and then fine sandpaper, smooth the propeller to a finish. Shape the spinner from a soft block of balsa and then notch it to fit over the prop hub. Before the spinner is attached permanently the type of free wheel gadget, if any, to be used should be considered and provisions made for it. Apply several coats of clear dope with light sanding between each to smooth and harden the surface.

The removable nose plug is shown in perspective. A disc of 1/32" plywood forms the front portion and the back is laminated squares of 1/8" sheet. Fix the line of thrust by cementing washers to the front and back of the plug.

For the propeller shaft use .040 music wire. A loop into which a mechanical winder can be hooked should be bent on the front of the shaft. Place several washers on the shaft, between the propeller and nose plug to reduce friction.

Like most all old time planes, the Albatros has a landing gear which incorporates a spreader bar type axle. A sturdy reproduction of the undercarriage is made from struts bent from .028 music wire. The front and rear struts are shown full size on the plan, while the axle is simply a straight length of wire 4" long. Bend them from .028 wire and attach the front one to former B by sewing with needle and thread about the wire and right through the wood. Since the rear strut is attached to the trailing edge of the lower wing it can not be placed until the parts are covered and partly assembled.

Lightweight wheels can be purchased or may easily be made from laminated discs of 1/8" sheet balsa. Washers or bearings should be attached to each wheel so they will revolve freely and accurately.

Work over the entire structure with fine sandpaper to properly prepare for a neat covering job. Regular colored tissue or silkspar is used, and thinned dope or banana oil is the adhesive. Use individual pieces of tissue for each flat section of wings, tail surfaces, tips, etc. In covering the fuselage it will be necessary to use numerous small sections of tissue in order to work around the curved parts without wrinkles; the tissue must be lapped neatly to assure a neat job. Lightly cover the parts with a spray of water to tighten the tissue. The flying surfaces must be supported level so they will not warp while drying.

Assemble the various units in this manner: Fit the lower wing into the recess and cement it fast; if the fuselage has been made with accuracy it will automatically have the correct incidence. The upper wing is supported entirely on struts. Make the cabane struts from very hard balsa and shape the cross-section as shown. Now to assure the correct incidence for the top surface I suggest that a cardboard jig be made to aid in achieving the utmost accuracy. Trace the outline of the top keel and the wing's exact position on the cardboard, then cut it out so the bottom edge of the pattern will rest on the model's top keel and the top will have a recessed notch into which the wing will set. Using this jig to assure the correct incidence, cement the cabane struts from the stringers to the ribs.

Junction of the struts is indicated by an "X" on the wing plan. Outer wing struts are shown in broken lines; they are of approximate length but must be fitted accurately by the "cut and try" method. Incidentally, when attaching the struts be sure to cut away the tissue at the junction to assure a solid fit. Rudder, sub rudder and stabilizer are cemented fast at the exact Positions shown; be careful to align them properly. Any wrinkles in the covering should again be moistened with water and permitted to dry before the entire model is given a coat or two of clear dope.

The landing gear should now be finished. The rear strut is sewed to the front of the notched trailing edge section. Front and rear struts as well as the axle are best joined by solder but thread wrappings, firmly cemented, will prove satisfactory. To attain the scale width of the struts, 1/16" thick balsa splints may be cemented to the wires. Wheels should be colored before they are attached to the axles by a drop of solder.

Numerous other minor details may be added without impairing the model's flying capabilities. The Mercedes engine can easily be represented by cylinders of balsa made from scraps; exhaust stacks and rocker boxes are likewise made from scraps. The engine unit is colored black. A tiny windshield cut from thin celluloid to the shape shown will enhance the appearance. Scale model fans will note that the shape of the real propeller is given as well as the enlarged flying model one. Control surface outlines are simply thin strips of black tissue doped to the covering. The black German crosses are cut from tissue and attached to the covering.

Finished weight of the model will determine the amount of power required to fly it. Six strands of 1/8" flat brown rubber should be right for the average ship. It is best to lubricate the motor with a mixture of glycerine and tincture of green soap before placing it within the fuselage; incidentally, wipe off the excess lube otherwise it will make unsightly splashes on the sides. Hook the strands to the prop shaft and then drop the other ends through the fuselage. It may be necessary to remove a small section of covering in the rear in order to gather the strands into position to be held by the removable bamboo pin.

First flights are best made over a field of soft grass, but if none is available try rise off ground tests with but a few turns. In all probability the model will be slightly out of balance so add a small weight to the nose or tail as the case may be. Off setting the thrust line will control the amount of circle in either direction and by tilting the nose plug down (small sliver of wood between top of nose plug and nose block) a tendency to stall may be eliminated. As correct balance and stability are attained, power may be gradually increased. For maximum performance stretch the rubber motor out the nose and store up power with the aid of a mechanical winder. Good luck!

VICTORY

Scanned from MODEL AIRPLANE NEWS
February, 1945

Earl Stahl Plans

Name of Model	Wingspan(inches)	Published in*	KITS
Albatross D-5	17-1/2	MAN 2/45	
Blackburn Skua	25	MAN 6/42	
Boulton-Paul Defiant	36	AT 7/42	X
Caudron C-371	22	MAN 4/40	
Cessna 195	33	MAN 4/50	
Curtiss P-40	24	MAN 10/42	
Curtiss Ascender XP-55	22	MAN 7/45	
Fairchild PT-19	23	AT 12/40	X M
Fairchild 24K	29	MAN 2/40	X
Fairey Barracuda	20	MAN 10/44	
Fleet Canuck	26-1/2	MAN 3/44	M
General Skyfarer	29	MAN 11/41	X
General Skyfarer	31-1/2	MB 6/75	
Globe Swift	20	MAN 1/47	X
Grumman F4F Wildcat	19	AT 11/42	
Hawker Hurricane	26	MAN 9/41	
Howard GH-1 (DGA-15P)	24	MAN 8/42	M R
Interstate Cadet	30	MAN 1/41	X
Luscombe 10	23	MAN 9/46	
Messerschmitt Bf109	21	MAN 11/40	
Mikoyan MiG 3	22-1/2	MAN 1/43	Z M
Miles Magister	27	MAN 2/42	
No. Amer. Navion	30	AT 8/47	X
P-51 Mustang D	25-1/2	AT 6/46	X
P-51 Mustang	32	AT 3/42	
P-51B Mustang	23	MAN 5/44	
P-39 Airacobra	22	MAN 6/41	
Rearwin Speedster	28	MAN 1/40	M
Seagull SO3C-1	23-1/2	MAN 12/41	
Spitfire	27	MAN 8/40	R
Spitfire IX	17-1/2	AT(?) 11/46	
Stinson Voyager	30-1/2	MAN 6/48	
Stinson 125	31	AT 7/45	
Stinson O-49	31-1/2	MAN 7/41	X
Taylorcraft O-57	32-1/2	MAN 4/42	M
Vultee Vanguard	23-1/2	MAN 10/40	
Vultee XP-54	18-1/2	MAN 5/45	
Waco Cabin "E"	21	MAN 7/40	X
Navy Troop Glider	28	MAN 4/60	
Schweizer Tg2 Glider	30	MAN 12/42	
Fokker D-8 OR 23 Gassie	57	MAN 6-7/41	X
Emeraude 1/2A Gas	26-1/2	MAN 4/60	
Class D Contest Model	41	MAN 2/44	X
Gypsy Wakefield	44	FA 9/42	X
Hi-Climber	30	FA 8/39	X
Hurricane	32	FA 7/40	X
Weight Rule Model	37	MAN 6/38	

* AT=Air Trails MAN=Model Airplane News MB=Model Builder FA= Flying Aces
Plans for all of these are available as free down load PDF's from
<http://www.theplanpage.com/>

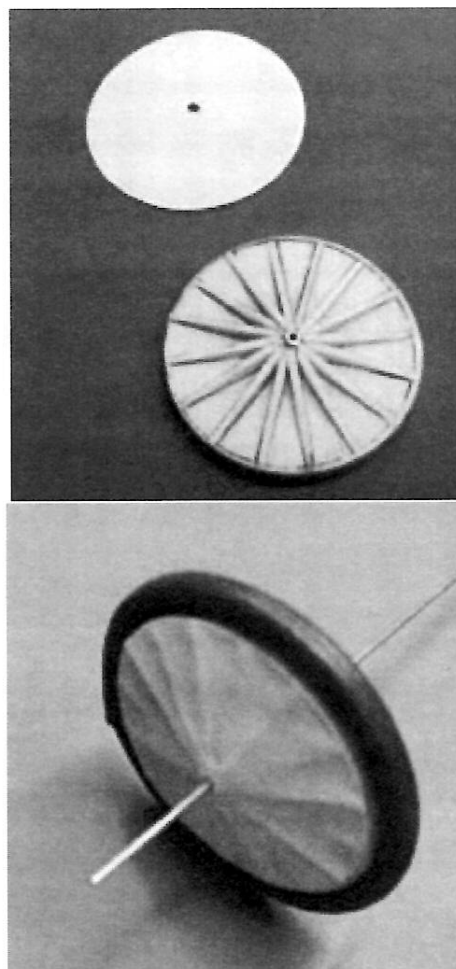
Currently available kits:

X Plans and Parts available from Bob Holman Plans www.bhplans.com

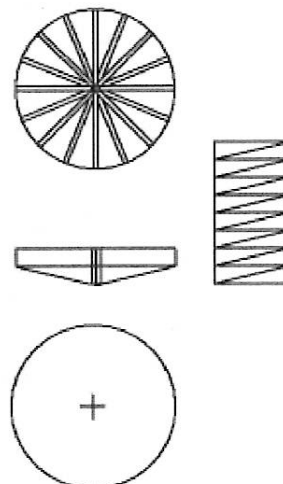
R Lazer cut kit available from Rockytop Models <http://www.rockytopmodels.com/>

Z Lazer cut kit available from Easy Built Models <http://www.easybuiltmodels.com/>

M Kit available from Micro RC Models <http://www.modelkraft.co.uk/>



To dress up a WWI wheel, glue 1/32 balsa wedges to the disk with white glue. Use cyano to glue them to the aluminum tubing hub. Then coat a slit paper disk with white glue and attach it to the wedges. This will form a nice cone and the paper will sag between the wedges simulating spokes.



Saturday events**Wawayanda 2012****35 registered contestants****FAC Scale (11 flyers)**

1. Tom Hallman Pulqui
2. Pete Kaiteris Me 109Z
3. Don DeLoach Corsair

- 151.5 (best flt 120)
151.0 (best flt 62)
148.5 (best flt 108)

World War 1 Mass (14 flyers)

1. Don DeLoach Bristol Scout Final Flight 115
2. Frank Rowsome Fokker DVII 101
3. Wally Farrell Martinsyde Elephant 96

FAC Peanut Scale (4 flyers)

1. Dave Mitchell Beech B-17
2. Ed Pelatowski Fletcher FL-23
3. John Stott Baby Pursuit

- 138.5 (best flt 73)
120 (best flt 75)
108.5 (best flt 45)

Golden Age Racers (14 flyers)

1. Andrew Ricci Mr. Smoothie
2. Wally Farrell Mr. Smoothie
3. Don DeLoach Cessna CR-2

Embryo (12 flyers)

1. Don DeLoach Embryomatic
2. Jim Hemmel Swallow
3. Wally Farrell Debut

- 109 120 104 (9) 342
120 97 98 (9) 324
120 71 109 (9) 300

Fiction Flyer (5 flyers)

1. Greg West Smilin' Jack X-13
2. Wally Farrell Booth Ranger
3. Tom Hallman Smilin' Jack X-13

Nocal (10 flyers)

1. Ed Pelatowski A-6 Intruder
2. Wally Farrell Cardinal
3. Mark Fineman Extra 400

- 118 127 95 340
334
98 103 103 304

Simplified Scale (7 flyers)

1. Mark Houck Cessna Cardinal 103 95 86 0 bp 284
2. Vic Nippert Super Ace 101 71 96 10 bp 278
3. Wally Farrell Cessna 140 120 80 74 0 bp 274

Goodyear Racers Mass (5 flyers)

1. Mark Fineman Gray Ghost
2. Dick Gorman Sonerai
3. Wally Farrell Pogo

BLUR Race (11 flyers)

1. Doug Beardsworth Sea Fry
2. Ronny Gosselin F4V
3. Pete Kaiteris Jack Rabbit

Golden Age & Modern Civilian (7 flyers)

1. Vic Nippert Piper J3
2. Don DeLoach Moth Minor
3. Mark Fineman Turbo Stallion

- 120 120 120 360
120 120 72 312
69 120 189

Half Wakefield (3 flyers)

1. Dave Mitchell Half Wake
2. Dick Gorman Half Wake
3. Bob Bard Half Wake

Sunday events

Wawayanda 2012

Jumbo Scale (7 flyers)

1. Tom Hallman	MiG-DIS	170.5	(best flt 90)
2. Mark Fineman	BN-1	162.5	(best flt 88)
3. Vance Gilbert	Jenny Twin	136.5	(best flt 38)

Power Scale (4 flyers)

1. Tom Hallman	Airco DH-2	202	(best flt 120)
2. Walt Farrell	BeechStaggerwing	184	(best flt 115)
3. Ed Pelatowski	MiG-DIS	169	(best flt 98)

Modern Military Mass (5 flyers)

1. Tom Hallman	Pulqui
2. Walt Farrell	Mig-15
3. Dave Mitchell	DH 108 Swallow

Dime Scale (5 flyers)

1. John Stott	Ong	74	102	120	0 bp	296
2. John Houck	V-143	91	75	50	10 bp	226
3. Dick Gorman	Staggerwing	54	53		15 bp	122

Low Wing Military Trainer (4 flyers)

1. Walt Farrell	Miles Magister	60	117	79	256
2. Mark Fineman	T-28	50	50	69	169
3. John Houck	AT-6	67	44	50	161

World War 2 Mass (19 flyers)

1. Andrew Ricci	F6F-5 Hellcat	Final flight	160
2. Walt Farrell	Judy		107
3. Mark Fineman	P-63		61

Contra Rotating Prop Mass (5 flyers)

1. Tom Hallman	Koolhoven FK-5501
2. John Houck	Sky Shark
3. Doug Beardsworth	Mustang "Red Baron"

Catapult Jet Scale (6 flyers) score includes scale pts

1. Vic Nippert	B-57 Canberra	33	28	26	104
2. Walt Farrell	Lightning	40	23	22	101
3. Mike Kaiteris	F9F8 Cougar	19	14	11	63

2-Bit + 1 OT Rubber (9 flyers)

1. Vic Nippert	Achilles	103	120	84	307
2. John Stott	Skokie	70	120	66	256
3. Bob Bard	Supreme Traveler	48	120	71	239

Flying Horde (25 flyers)

1. Dick Gorman	Beech Staggerwing	Kendrick Gosselein - model flattened in car
CBEAPFOA	Greg West	High Point Junior Flyer Maria Kondrat

2012 Grand Champion Walt Farrell

Junior Miss

Dan Driscoll

About 10 years ago, I was thumbing through some old Flying Aces magazines when I came across the "Junior Miss" in the December 1942 issue. There was nothing particularly noticeable about the design; it was very similar to several designs from that period. However, I had never heard of the model and didn't recall ever having ever seen one built. I once mentioned it to Dave Stott, and he said he had been looking at the plan for years but had never gotten around to building it. I needed a new FAC OT Rubber Fuselage model, so why not the Junior Miss? I figured I would probably be the first person in the last 50 years to build one. The Flying Aces article and plan are in this issue.

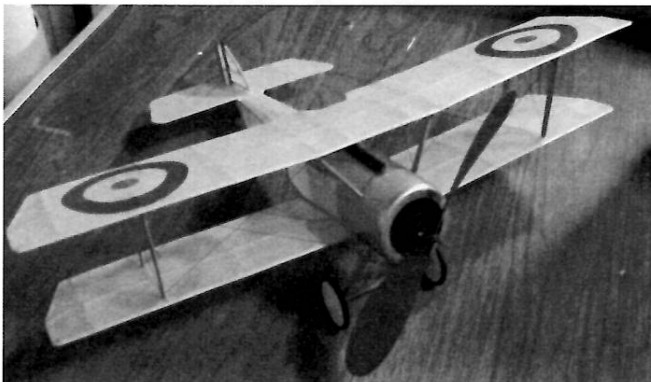
I started construction by taking the half size plan to Staples and enlarging it to full size. Closer inspection of the plan showed several problems. The wing rib pattern was too short to fit the wing plan chord. I redrew the rib pattern to fit the wing plan. The landing gear pattern didn't seem to be workable, so I redrew it so the upper portion would fit in a balsa sandwich. The plan shows 1/16" wire for the landing gear, but the article says to use .038" wire - take your choice. I located the rear motor anchor tube behind the upright in front of the pine anchor.

When construction started, several other minor problems came up, but a little cutting and fudging made very thing fit. This was especially true with the wingtips. The stab rudder assembly lends itself to an easy DT configuration and I used a button timer.

The 30" wingspan allows for a 10" prop, and I used an old wide blade Paulownia. I would expect that a 9 1/2" plastic prop would work fine. My finished model weighed 46.5 grams without rubber, and I fly it with 132" of 3/16 rubber in two loops braided. I usually put in about 1600-1700 turns. Some nose weight and down thrust was needed.

So, how does it fly? After getting it trimmed out, it consistently does 100-120+ seconds. At the recent FAC Nats, this was good enough for second place in OT Rubber Fuselage; four seconds behind the winner.

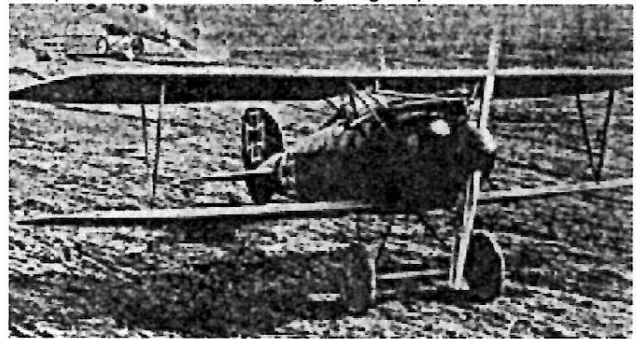
And lastly, who is/was Ralph Tekel, the designer? I could find nothing on him except another article and a three view in Flying Aces. No other model designs surfaced. I would like to hear from anyone who builds this model or has any information on its designer.



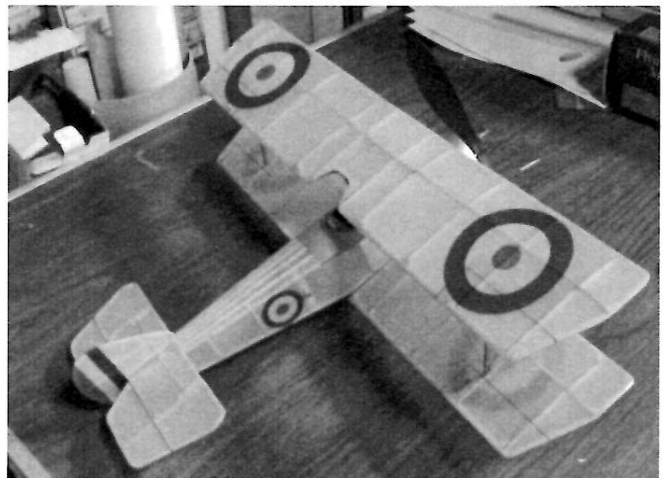
Here's a bit more of the text from Earl's Feb 1945 MAN Alb DV article.

"Prior to the outbreak of World War I much discussion was rampant as to the military value of aircraft. Obvious as it may now appear in the light of subsequent events' few foresaw the amazing development of air power or the neck to neck race for air supremacy that was to start in 1914 and extend through two bitter wars.

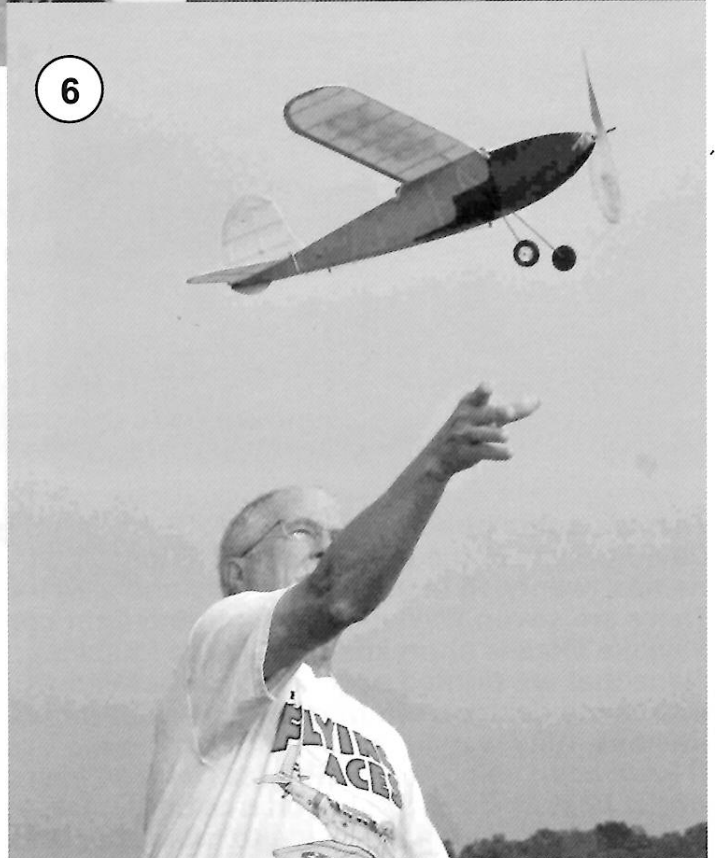
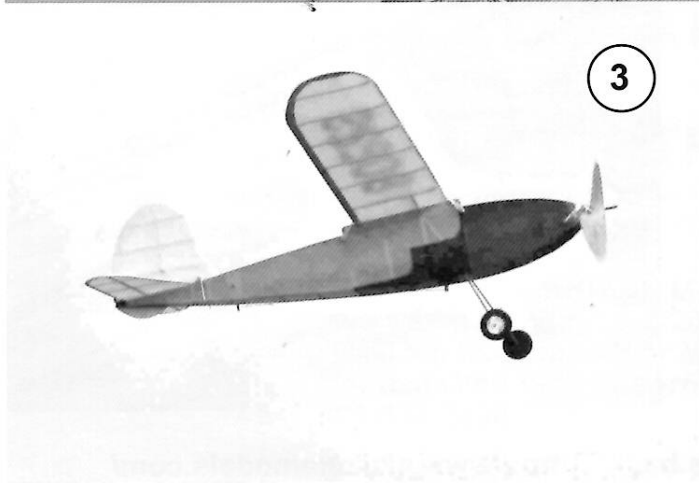
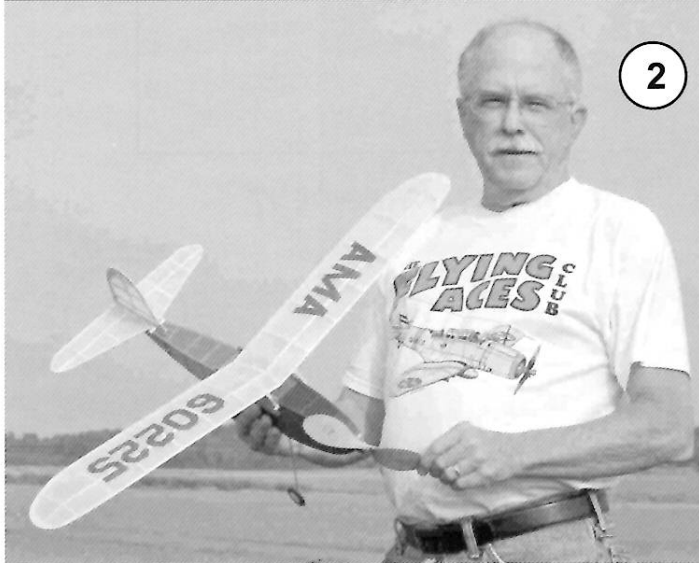
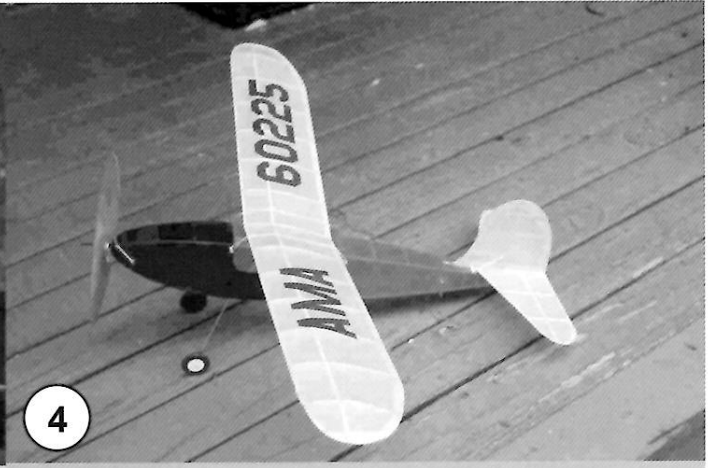
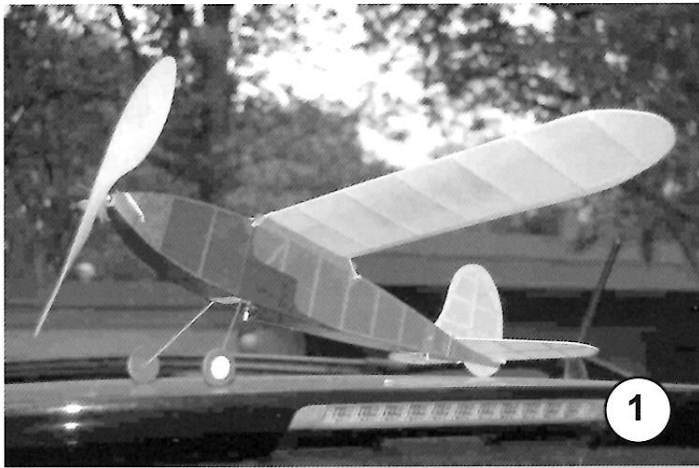
In the first war no overwhelming advantage was ever attained by either side through progress of design or production. If at any time a machine of exceptionally high performance appeared, it was not long before the other side copied and improved on its best features. This holds true even today, for while the Luftwaffe has been dealt a severe lashing, largely through numerical superiority of the Allies, no one who has met their aircraft in combat will concede that they are possessed of inferior fighting capabilities.



In other days German fighter planes plagued Allied pilots over the Western Front. Here's a model of one of their best"



Skylake
Models.com
Sopwith Pup
16" SCALE MODEL KIT #105
© COPYRIGHT 2009
David Collins



Dan Discoll's Junior Miss.

Photos 1&4 by Dan
The rest of the photos were taken by Pat Daily.

Max-Fax 2012-4 (Jul-Aug 2012)



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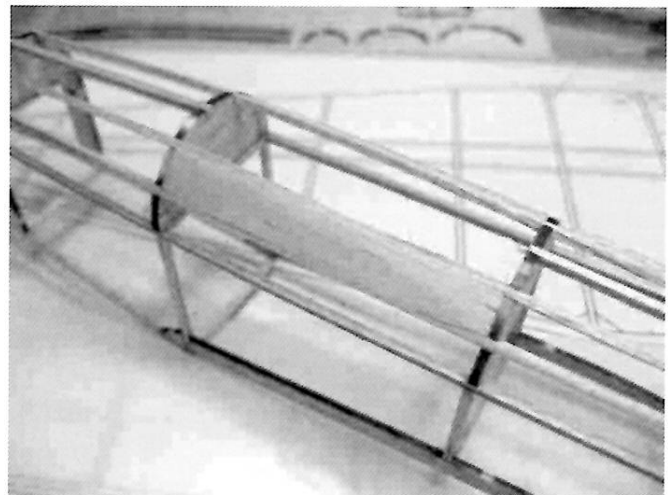
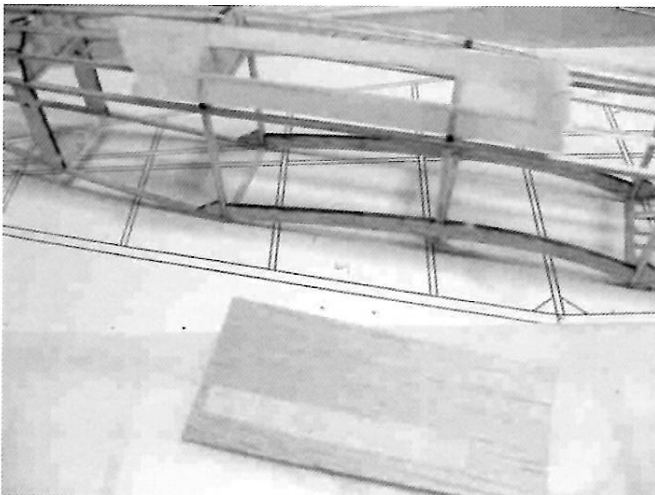
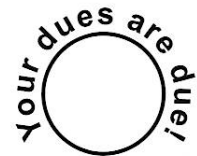
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There is some good news, SKYLAKE MODELS is back! <http://www.skylakemodels.com/>
David Collins is the designer/proprietor.

He has twenty 16 inch span models and a 24 inch WACO YKS.

There are seven WWI models featuring light construction and K&P adjustable thrust buttons. Skylake Models short kits contain the following: * Laser cut lightweight contest balsa. * Full-size plans that are printed not copied for better accuracy. * Unique printed tissue files in PDF format with many designs offering several different color schemes.

He has a nifty way to do the fill in method....

"I have been using this method for over 20 years to make balsa infill, blue or green masking tape works best as it contrasts better with the balsa sheet being cut but I didn't have any. When you cut the pieces angle the blade to make a beveled cut and the pieces will fit right in perfectly every time."