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DUES \$9.00 per year

D.C. MAXECUTERS ARE AMA
CHARTERED AND ARE AFFILIATED
WITH THE FLYING ACES CLUB

"INCLUDES BLUE FLIGHT-POTOMAC PURSUIT SQUADRON NEWS"

"MEETING AT COLLEGE PARK AIRPORT--THE NATION'S OLDEST"

MAX - FAX

JULY - AUGUST 1979

NEXT MEETING DATES: August 1, September 5, and October 3. 7:30 PM at College Park Airport.

CONTEST SCHEDULE

July 29-Aug 6 -- AMA NATS at Lincoln, Nebraska.

July 22 -- CFFS V.I.P. Scale Scramble at Lorain County CC--in Ohio. Call 216 439-2854 and ask for G-8 for more info.

August ~~1~~¹⁹ -- East Coast Champs at Johnsville. See Model Aviation for details.

Aug 25 -- D.C. MAXECUTERS LATE SUMMER FUN FLY -- at COMSAT-- and another FAC - AMA biggie--see add in this issue of MAX FAX.

Sept 79 -- D.C. MAXECUTERS SCHOOL YARD SCALE FUN FLY-- Hurst Bowers is CD--more later.

Sept 10 -- FAC Meet in North Carolina--check with Pat Daily for details.

Sept 79 -- R.C. Scale Contest at Bealton, Va.-- CD is John Preston-- see Model Aviation for more info.

Oct 7 -- G.H.Q. - FAC meet in Durham Conn. -- a real biggie with a D.C. Maxecuters WW II challenge.

March 80 -- SIXTH ANNUAL NATIONAL CAPITAL INDOOR SCALE CHAMPS-- more later

CLUB NEWS by Pat Daily

SO NOW YOUR A D.C. MAXECUTER! What the heck are the D.C. Maxecuters and just what does your outrageously high 9 bucks buy you when you join the club with the funny sounding name that most people mispronounce? Well first about what your dues gets you. It gets you a MEMBERSHIP in the world's finest and most select group of fun flyers (we may be a bit prejudiced, huh). YOUR 9 BUCKS DOES NOT GET YOU A NEWSLETTER SUBSCRIPTION OR ANY GUARANTEE OF SUCH, IT ONLY GETS YOU A MEMBERSHIP IN THE D.C. MAXECUTERS. Now, coincidentally we (me and a few other guys who don't know when to quit) do put out a newsletter called MAX FAX. This started out as a one or 2 page news sheet several years ago and put out at varying intervals. As a matter of fact we do have a club record that goes back to 1963 or so-- but I digress. All members of the the D.C. MAXECUTERS currently get a newsletter whenever we put it out (currently 6 or 7 a year). MAX FAX has become a right respectable publication and apparently is sought after by many "members" out side of the D.C. area.. Well to make a long story a little shorter, you will

OLD MAXECUTERS PLEASE PAY YOUR DUES IF YOU ISSUE HAS THE DUES CIRCLED IN RED AT UPPER RIGHT CORNER--SEND CHECK OR CASH TO PAT DAILY OR GEORGE LEFFLER -- WE NEED YOUR BUCKS!

CLUB NEWS

continue to get MAX FAX for as long as you pay dues and only as long as I or any other damn fool editor cares to take the time to put it out. Got that gang? You don't necessarily have to get MAX FAX for 9 bucks. But you will until we get too tired of it to care! Like maybe next month, I wish!

As for WHO are the MAXECUTERS. Well, originally a group of FREE FLIGHTERS from the D.C. area that have included some real stars in the past--i.e. Bill Biggee, Dan Belief, John Strong, John Sites etc. Over the last 7 or so years the club has slowly changed its interests with the addition on new members etc. to the point where the D.C. Maxecuters are now one of the more active FREE FLIGHT SCALE clubs in the world. Not to say we don't fly RC and build plastic jobs etc, cause we do, its just that we love Free Flight Scale!

The reason for this harangue is to sort of tell all you new members what to expect for your 9 bucks. You see, it costs us about \$1 per issue to print and mail MAX FAX-- and thats with no labor charges. The 20¢ for postage eats us up! The reamining \$3 goes to the treasury to cover costs for the FREE newsletters that we send out to some ofthe other clubs, magazines, etc and to cover contest operations and AMA club charter and so forth. So really you get a lot for \$9.

Now I wish to give a welcome to the following new guys: Lino Albi, Mike Midkiff, Antony Peters, Jim Pulley, Jim Miller, Dave Smith, Warren Hall, R.S. Zelina, R.F. Carbone, Dudley Prisel, Bill Poole, Jerry Vacchio, and Frank Renaut.

THIS ISSUE OF MAX FAX We see Max, the mysterious Maxecuter ace, running for home or is it looking for Fiats in his LOIRE 46 in Republican markings-- the subject of this month's construction article. Also a second part on laminated rings for fuselage formers from Stew, the Rubber Barron, Meyers MAD (Maxecuter Aeronautical Development) column. Also a couple of contest reports by Allan (HMFIC) Schanzle and Pat Daily. Some lovely photos by Tom Schmitt, Pat Daily's Loire 46. Also the assorted B.S. that normally is seen in these pages.

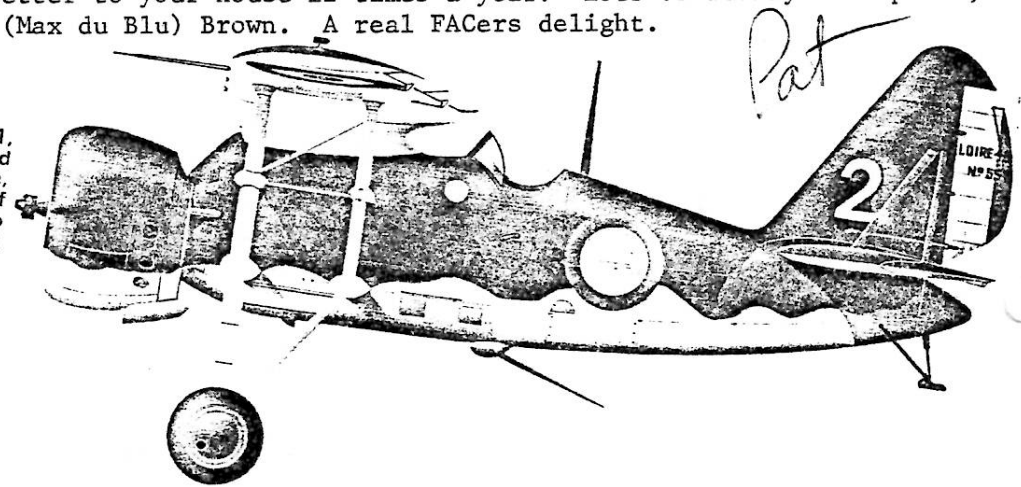
SORRY TO SEE YOU GO -- Jim Daily, Kathy and son Daniel are pulling up stakes and moving to Charleston, S.C. on July 20. Since he is my brother, I hate to see him leave, but all the Maxecuters wish you all well. I'm sure a southern Maxecuter, Dave Smith of S.C., will be anxious to look you up. Jim's real life job (yuk) of a Navy Doctor takes him away from us, but he promises to make our contests!

RUMOR --yes old rumor has it that the 1980 AMA NATS will again be at DAYTON. Also rumor has it that this will be the last AMA NATS, with smaller contests in regional areas in the future. If you ain't attended an AMA NATS, you better do it soon!

UPCOMING MEETINGS -- don't have any firm committments yet, but Prexy Allan Schanzle and Don Srull tell me that they are lining up the likes of Don Berliner and John Preston for slide shows for our fall meetings--so plan on attending these as the slides shows will be super.

CROSSWINDS -- just about the best darned newsletter (except maybe for MAX FAX) to come down the pike. Edited by Dennis Norman, 13885 Edgewater Drive, Lakewood, Ohio 44107. Ten bucks will bring this super newsletter to your house 12 times a year. Lots of really neat plans, ideas and bulls--t by Russ (Max du Blu) Brown. A real FACers delight.

(Right) The Loire 46 C1, which will be discussed in Part II of this feature, was one of the last of the parasol fighters to be adopted for French service, 60 being delivered from the beginning of 1936. The example illustrated is seen in the finish in which it served at the Cazaux school 1939-40



S.O.T.S. SCALE MASTERS SCRAMBLE --report by Pat Daily

This past weekend, July 14 and 15, 1979, seven fearless members of the D.C. Maxecuters Blue Flight made the long and hazardous journey to the home 'drome of the dreaded enemy Black Maria Squadron, also known as the S.O.T.S. (for Scale Old Timers Society), to do mortal combat and vie for the coveted kanonen at the S.O.T.S. Scale Masters Scramble. The seven Maxecuters consisted of Pat Daily, Stew Meyers, Allan Schanzle, Chris Schanzle, Don Srull, Rolfe Gregory (and able wife Nancy), and Jim Wray. The trip started out with a bang when Maxecuter President Herr Allan Schanzle, always known for his super detailed check lists, discovered that he had left his high flying Mig 3 and his Official Maxecuter shirt back in the home hangar. Old Allan didn't discover the missing plane until he was half-way to Philadelphia. This incident contrasts well with the events that took place at the home of Stew Meyers just before departing for Johnsville--i.e. when I arrived to pick him up he had just started the laundry so as to have something to wear! Anyway, we arrived late Friday nite and spent the wee hours of the morning devising a battle strategy that we were sure would put fear into the hearts of the FACers from the Black Maria Squadron.

Saturday turned out to be a great day for flying. Some of the real FAC brass hats from GHQ showed up in a battle scarred VW--they had to travel threw New York! Both Genrul Dave Stott and Major Bob Thompson were raring to have a go at the nifty trophies the Philly boys cooked up. Master builder Sal Alu, the Ozone Park Scout, arrived with a whole squadron of beauties. Max du Blu (Russ Brown) and Gordon Roberts made the long trek to represent the Cleveland Free Flight Society's best efforts. Several unassociated loners showed up with some pretty competitive stuff. And of course the dreaded Black Maria Flight of the SOTS were there in strength. All this heavy action was enough to make the lonely band of Blue Flighters faint with fear that Hung might not look kindly to us southern invaders.

Saturday's action proved to be quite nice for everyone that managed to get up-- old Hung was in rare form for about two hours before sudden thunderstorms came up late in the afternoon. All of the events except WW II COMBAT and the THOMPSON RACES were completed Saturday, with Sunday afternoon used to finish up the events.

Embryo Endurance proved that some of these FACERS know something about more that just scale jobs, as several of the little beauties seemed to stay up for a long time. If my memory serves me correctly, which it seldom does, I think Walt Eggert won Embryo. Walt was so busy as the C.D., I was surprised he had time to fly. I can't recall the other finishers right now-- will include all results' in this issue or the next one if I don't get them in time.

The Maxecuter battle plan worked well enough on Saturday to give Don Srull a first place in WORLD WAR I COMBAT with his DH6 over a cunning and fearless Bob Thompson and his super Brandenburg observation job. Later that day Jim Daily's proxy flown Fiat CR-32 managed to finish second in P-NUT SCALE to I believe first place winner. Jim's Fiat got highest points in Pnut static judging. Meanwhile the action in AMA Gas Scale was hot and heavy with Walt Eggert's beautiful Hermes Moth copping the first place, while Maxecuter Prexy Allan Schanzle finished in 2nd place with his nifty Cessna 150. Pat Daily's CO₂ powered Neiuport 17, a past MAX FAX plan, finished in 3rd place.

F.A.C. SCALE, the real biggie for tissue trimmers, was quite a show. Some real museum quality planes were entered--yet they flew! Sal Alu had some real beauties, and Allan Schanzle's twin entrants, a Me 109 and a Tiger Moth, both recieved perfect scale scores. Dave Rees entered a perfect scale Fike that was really nice to fly. F.A.C. was won by Pat Daily's Fiat G-50, the surprise winner of WW II COMBAT at last years FAC NATS, followed closely by Dave Rees Fike and Allan Schanzle's Tiger Moth. Meanwhile Allan Schanzle's Me 109 was judged the best scale ship of the meet. I don't have the data on Jumbo Scale, but I think Russ Brown's P-63 may have won it--more on this plane later. All in all, Saturday turned out well for the Maxecuters task force--but Sunday was a different story!

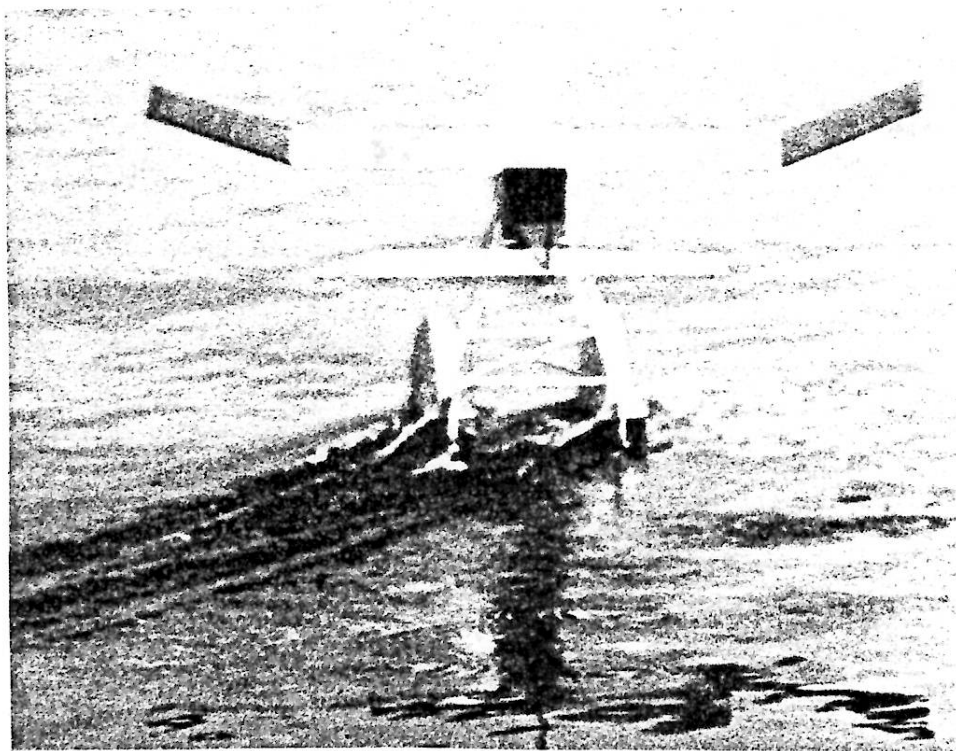
After visiting with several SOTS members at Bill Kalb's house, the Maxecuter gang went to a local watering spot to plot the strategy for Sunday's action. Sunday's weather again proved to have the blessing of almighty Hung. Several test flights indicated that

the first event of the day, WORLD WAR II COMBAT, would see some really hot and heavy action, especially since Pat Daily's FIAT G50 was really going well and Don Srull's sinister Heinkel 111 was flying like an angel. Well the WWII event really turned the tables for the Maxecuters as both Daily and Srull were out in the first heat--the field was all abuzz --the Black Maria Squadron had pulled off a perfect ambush--soon Stew Meyers' P51- a real winner--was knocked out with wing damage-- the Maxecuter's hopes were fading fast--then an almost mortal blow when Rolfe Gregory's P-51 went down-- this left only young, babyfaced, green behind the ears, Chris Schanzle to defend the Maxecuter's honor. Chris hung in there for a long time and managed a 5th place in WWII before being smoked. Meanwhile the Luftwaffen pilots Gordon Roberts and Bill Kalb, both flying TA-152 Foke-Wulfs teamed with George Meyers Japanese Grace to fight off allies led by fearless Billy Henn in a New Zealand marked Fairey Barracuda. The Russians were represented by the might P-63 Kingcobra of Russ Brown (aka Max du Blu), It seems that these lend lease P-63's , never known for mighty feats in the US Army Air Corps, have been cleverly (and deviously?) modified by those crafty little russkies to include a secret new air foil that strongly resembles the underside of a Wakefield wing--yes that's right UNDERCAMBERED! Anyway, the action turned out to be an all Pacific theatre finale with George Meyers' Grace up against Billy Henn's (also undercambered) Fairey Barracuda, with Billy winning when the 'cuda almost flew out of sight.

The Thompson saw a rugged two man Maxecuter team entered, led by Pat Daily's veteran SK-2 Toots and Stew Meyers smooth flyin Suzy. The oposition again put a strain on the Maxecuter strategy when Daily dumped the Toots on the first heat. Stew Meyers, however, at least polished our image by finishing 3rd in the race, even after three flight with a broken motor. The finale saw a nifty Pete, flown by George Meyers, up against the SK-3 of the senior Bill Henn. Bill Henn won with a flight of 17 minutes befor it disappeared OOS in a cloud--now that is really flying. Hung, with his appetite slaked, decided to call it a day shortly later and the rains came back to bring an end to a super contest.

On behalf of all of the D.C. Maxecuters and , I'm sure, for all of the contestants, we wish to express our thanks and a hearty EFF AAAA SEEEE cheer to those hard working tireless (but not gasless) SOTS for putting on such a nice contest--especially to CD Walt Eggert, event directors Bill Kalb, Dave Rees, Bob Leishman, Allan Miktarian, George Meyers, the super judges and all the volunteers including the ladies at the registration table, and all the contestants for a really nice time.

NOW HEAR THIS BLACK MARIA SQUADRON -- YOU HAVE NOT HEARD THE LAST OF THE FEARED D.C. MAXECUTERS BLUE FLIGHT WORLD WAR II COMBAT AND THOMPSON RACING TEAMS -- REVENGE WILL BE OURS AT COMSAT ON AUGUST 25.



Schanzle's "ducky" about to lift off--note turn and that water rudders have little effect.

D.C. MAXECUTER'S '79 SUMMER

FUN FLY

AUGUST 25
COMSAT FIELD

9A.M. TILL DARK



SOMETHING FOR EVERYONE !

- WW I
- WW II
- SPANISH FLY
- THOMPSON TROPHY
- FAC SCALE
- EMBRYO
- NO-CAL
- HAND LAUNCHED GLIDER
- CATAPULT GLIDER



AMA RECOGNIZED EVENT

FIRST PLACE TROPHIES AND PRIZES

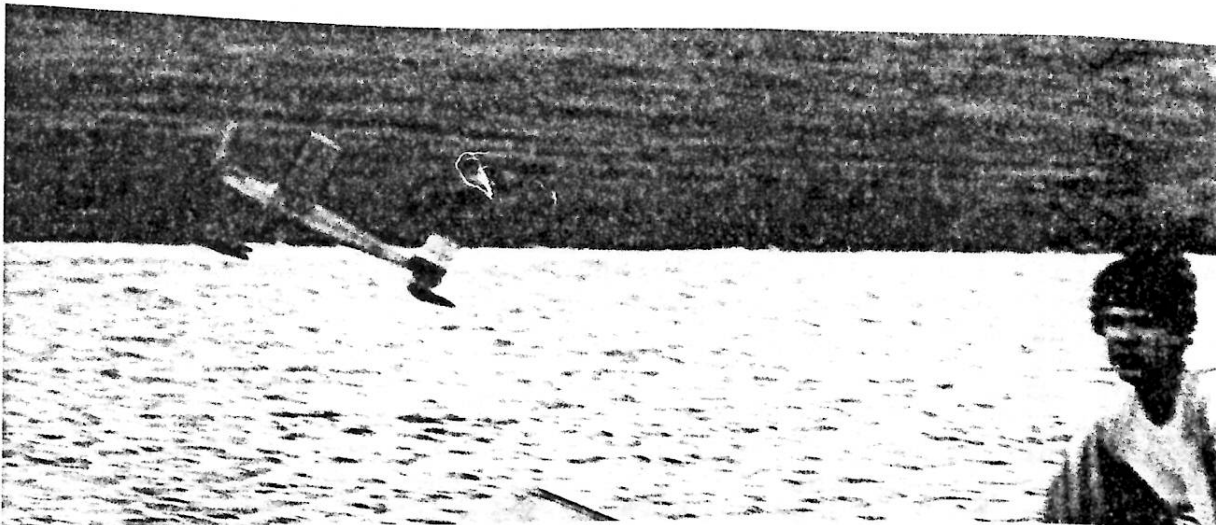
\$2.00 entry fee per plane
\$5.00 entry fee unlimited entries
Juniors free

→ CONTESTANT RAFFLE FOR RARE CLEVELAND
MASTER KIT! (donated by Claude Powell)

A SECOND CLEVELAND KIT (donated by Nick
Ropar) WILL ALSO BE AUCTIONED OFF!

PLEASE NOTE THE FOLLOWING:

1. THE CONTEST STARTS AT 9 AM.
2. THE FIRST MASS LAUNCH EVENT IS WWI AND WILL TAKE PLACE AT NOON
3. PLEASE DO NOT PARK ON THE GRASS AT COMSAT--PARK IN PARKING LOT
4. DO NOT LITTER THE FIELD--PLEASE!
5. RAIN DATE IS AUG 26



George Leffler's embryo hauls out and up
note the 3 float design

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THE MAXECUTERS FIRST R.O.W. EVENT

Allan Schanzle

R.O.W. may stand for "Rise Off Water," but on June 24th, it also translated into "Really Qbnnoxious Weather." The highest temperature that day was 64°F, but the winds were whipping up to 15 to 20 mph by contest time (5:00 PM). On the 12 acre lake we were using, that meant near white-cap size waves. Actually, several of us guessed that the waves were about 3 inches. For our typical 1 inch to the foot models, that made it tough. When was the last time you saw a seaplane take off in a 3 foot sea state?

But even under these conditions, the turn out was reasonable, although the success rate of R.O.W. was very low. Tom Schmitt came with a beautiful 26" model of Walt Mooney's Found Brothers aircraft. Although it never succeeded in getting off the water, I'll bet dollars to donuts that it would do so under more favorable conditions.

• Frank Renaut came down from the Baltimore area (with a few cohorts of the "Rubber Band" group) and tried a previously good flying rubber sport plane. His enthusiasm seemed to dwindle after breaking off a float on the first hand launch test flight, and then gulping a few quarts of H₂O on the first R.O.W. attempt. For some reason (freely translated "good 'ole Murphy") the nose section wanted to gander at the bottom of the lake, and with the prop turning about 15 rpm in the water, the model took aim for the middle of the 12 acres of liquid. Talk about feeling helpless - Gads. But everything turned out OK, cause Frank finally forked up 9 smackers for MAXECUTER membership, at which time the model started its return to shore. Hum.....was that our treasurer over there behind the trees with a Kraft transmitter, responding to direct orders from the H.M.F.I.C.? By the way, Frank's second hobby would no doubt give rise to a few eyebrows, and maybe something else. Check with him at our next get-together. Welcome to the Maxecuters, Frank.

Don Srull tried to R.O.W. his N.I.T. (Never In Thermals?) embryo design, but it also bit the water, belched twice, and was allowed to dry out for the remainder of the evening. I don't recall seeing his old Pietenpol even make an attempt. I guess he figured those two open cockpits were an invitation 'ole Murphy couldn't resist.

Joe Carter came out with a few gas powered sport ships. His first attempt with an .010 screaming was successful, although the run on the water was about 2 inches. It then pulled up vertically and flew well until the engine cut. His next attempt produced a broken crankshaft, 'cause when that sucker is turning over 25,000 rpm, it doesn't like to stop in one nanosecond just because the water got in the way of the prop. I don't remember any other successes with Joe's other planes.

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And then there's always George Leffler and his saga of lost embryos. True to form, his first attempt managed to leap off the water after a 1 inch run, climb to 80 feet, and follow the wind over trees - exit one more embryo, at 1 min. 23 sec. His other attempts with a backup ship went unsuccessful.

Yours truly built a set of scale floats which were added to a Peck Polymers "Praire Bird" embryo. After several dunkings, the cottin picker finally made it off the water after a run of about 10 to 15 feet. The flight duration was rather short (about 23 seconds) but it did its thing, and in a realistic manner. This was repeated several times, with the longest flight of 28 seconds. We then decided to go to the other side of the lake which was somewhat sheltered from the wind by nearby trees and a boat dock protruding 40 feet into the lake. The Praire Bird (or is this now a "Lake Duck") scooted up on the step, made an abrupt 120 degree left turn while still on the water, and took direct aim for the dock. Twenty or thirty so feet short of this hardwood structure, 'ole "Ducky" lifted off, and I figured that in 2 seconds the lake would be polluted by balsa splinters and tissue scraps. With Tom Schmitt screaming because he didn't get a picture of it, Ducky flew between the floor of the dock and its hand railing. Heavy sighs of relief - Murphy must have been looking elsewhere. Undaunted by knocking knees and a pounding pulse, and encouraged by the relatively calm sheltered water, we wound it up again. Would you believe, a repeat takeoff to the minutest detail? I sure hope Tom got some pictures, cause it even landed in the water. That was enough for me. I figure anytime I get the better half of Murphy in a 5 minute time span, it's time to pack it in, and so I did.

Our sincere thanks to Gerry Goldberg for letting us use his lake and supplying 2 sons and a canoe. I'll be there again, soon. This R.O.W. nonsense is addictive.

THANKS, BOB MIKESH

Allan Schanzle

The Maxcuters were honored to have Bob Mikesh, Curator of Aircraft Restoration at the Smithsonian National Air and Space Museum, give us a talk and slide presentation at the June 6th meeting. Just for the record, Bob is an old balsa and tissue F/F man who thought the world of model aircraft was now limited to plastic A.R.F.'s. He was pleased to see that some traditions are still maintained, as several club members brought their rubber powered replicas for display. And when you get to the Smithsonian, check over the model display. Bob built several of them.

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He began his presentation with a movie describing the process of restoration with primary focus on the P51 flown across the north pole. This was followed by a series of slides of aircraft in the Smithsonian collection, including the most recently restored Albatross D-5. A question and answer period followed, with considerable time spent on the last known remaining SPAD with original covering. All in all, it was a super evening, and it's nice to know that someone in his position appreciates the problems, and pleasures, of rubber powered scale models.

If you've got a yen for building a replica of one of the Smithsonian aircraft and want color documentation, drop me a note. I've acquired a list of color schemes including Munsell and Federal Standard numbers. Information on how to get color chips is also available.

Bob, on behalf of all Maxecuters, may I thank you for a most interesting evening, and I hope you can find time to attend our August 25th fun fly at COMSAT. Who knows, it may rekindle that modeling spark for next year's indoor scale contest in the hangers at Andrews A.F.B.



THE ROW GROUP-1 to r -Snull, Chris Schanzle, J. Carter
Allan Schanzle, Greg and George Leffler, Lino Albi's son
and Lino Albi

IMPROVED LAMINATED FUSELAGE RINGS

The 1/16 square cross section laminated basswood rings described last time, seem to be a little too flexible. While strong enough, they deflected, and split the tissue over the wing attach panel. Installing wing spar carry throughs cured this problem, but I thought there ought to be a better way.

Using this 1/16 square bass wood section as a baseline, I have investigated an equal weight, equal thickness balsa ring of rectangular cross section. Since basswood is approximately 2.5 times as dense as balsa, the balsa section is that much deeper.

Now a good engineering assumption is that the failure stress level (ultimate compression for our wood members) and modulus of elasticity are directly proportional to the density. Balsa has therefore 1/2.5 or 40% of the value of basswood for all three properties.

To compare the efficiency of the two rings, we want to check their relative strength and stiffness. The strength of a structural member is best described as the load it can carry before it breaks. The load (bending moment) our ring can take is proportional to the failure stress level, the width, and the depth of the section squared.

$$M \approx S_f \times w \times d^2$$

$$\text{For ring 1 } m \approx 1 \times 1 \times 1^2 = 1$$

$$\text{For ring 2 } m \approx .40 \times 1 \times 2.5^2 = 2.5$$

The stiffness of a structural member is the inverse of the flexibility or the load required to deflect it a unit distance. The stiffness is proportional to the modulus of elasticity, the width and the depth of the section cubed.

$$S \approx E \times w \times d^3$$

$$\text{For ring 1 } S \approx 1 \times 1 \times 1^3 = 1$$

$$\text{For ring 2 } S \approx .40 \times 1 \times 2.5^3 = 6.25$$

We find an equal weight, equal thickness balsa ring is 2.5 times deeper, and thus 2.5 times stronger and 6.25 times stiffer, than a square basswood ring. Therefore if you don't need the thin square section to clear rubber or for aesthetics you are way ahead with the deeper but equal weight balsa section.

This gain was due to the shape factor of the ring cross section. If we start out with a square section balsa ring and replace it with one of the same material and equal weight, but with a depth/width ratio of R, $R=D/W$, we now have a depth $D=\sqrt{R}x_a$ and width $W=1/\sqrt{R}x_a$, where a is the original depth of the square section.

The new ring is R times as stiff and \sqrt{R} times as strong as the original section with R=1. The limiting factor here is that if the section gets too thin, it will fail due to local crippling.

From our old 1/16 square balsa section with R=1, let R=4, now $D=1/8$ and $W=1/32$. These are reasonable sizes, and the section is now twice as strong and four times as stiff as the original 1/16 square balsa section. Think about that, next time you build a ring!

LAMINATED RING COMPARISONS

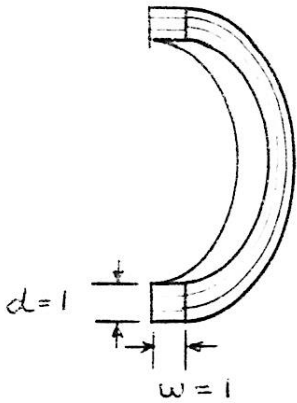
Equal weight rings of equal thickness

Ring 1 Basswood

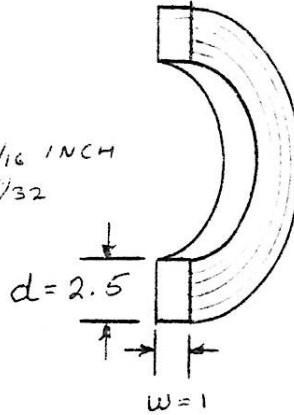
$$3 \times .02 \times \frac{1}{16}$$

Ring 2 Balsa

$$5 \times \frac{1}{32} \times \frac{1}{16}$$



UNITS $\frac{1}{16}$ INCH
 $2.5 = \frac{5}{32}$



- M strength factor
- S stiffness factor
- Sf failure stress
- E elastic modulus

$$M = 1$$

$$S = 1$$

$$R = 1$$

$$M = 2.5$$

$$S = 6.25$$

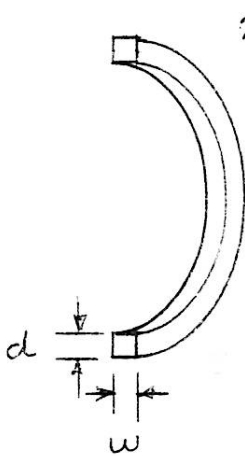
$$R = 2.5$$

$$M \approx S_f \times w \times d^2$$

$$S \approx E \times w \times d^3$$

$$R = D/w$$

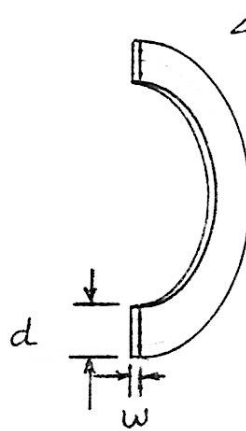
Equal weight rings of the same material



$$2 \times \frac{1}{32} \times \frac{1}{16}$$

$$d = w = a = \frac{1}{16}$$

$$R = 1$$



$$4 \times \frac{1}{32} \times \frac{1}{32}$$

$$M = \sqrt{R} = 2$$

$$S = R = 4$$

$$R = d/w$$

$$d = \sqrt{R} \times a$$

$$w = \frac{1}{\sqrt{R}} \times a$$

$$d = \frac{1}{8}$$

$$w = \frac{1}{32}$$

$$R = 4$$

Only half of complete rings shown.
 NOTE: With laminated rings the grain runs around them circumferentially. These formulae work for this or isotropic material, not sheet balsa where S and E vary with direction.

13 July 79
 Stew Meyer

THE LOIRE 46-- A PLANE FOR SPANISH FLY!

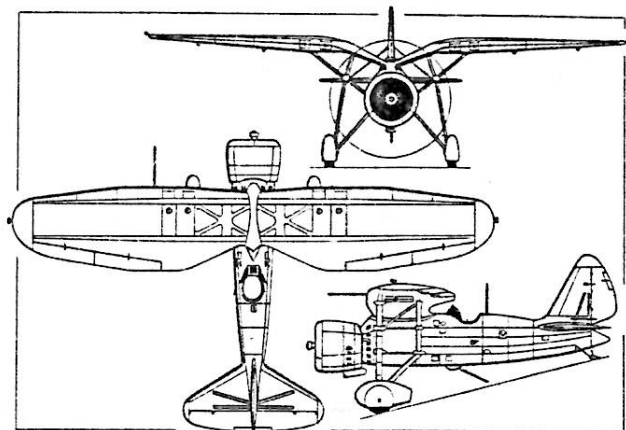
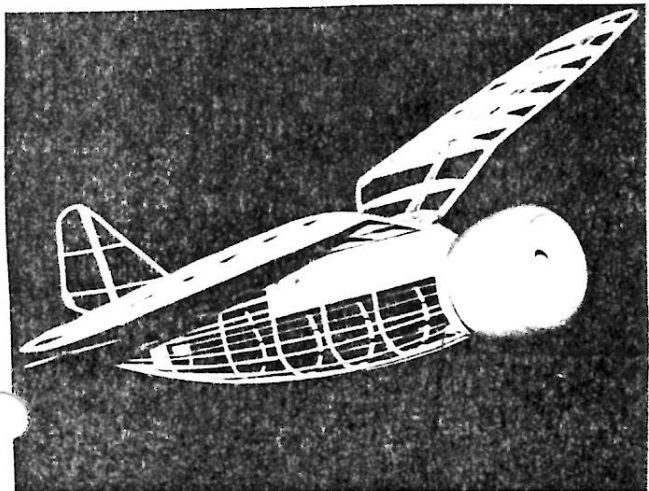
BY PAT DAILY

The Loire 46 was a gull winged job built by the Loire-Nieuport concern in the middle 1930's for the Armee' de l'Air. She first flew on September 1, 1934 and was fitted with 930 HP radial engine. Visibility from the cockpit left something to be desired, but the handling characteristics were excellent, except for a tendency to float on landings.

I scaled up my drawings from the original P-Nut Scale drawings published by Don Butman in the October 1977 issue of Model Builder. Additional references can be found in Air Enthusiast Quarterly vols 3 and 4 and in Ken Munson's Fighters Between the Wars 1919-39. Five of the Loire's were sold to the Spanish government before the hostilities started and they flew in Republican colors, which I chose for my Loire. These are basically a light sky blue undersurfaces and olive upper surfaces with red bands around the fuselage and wings. Also a tricolored rudder (red, yellow, purple -- from top to bottom)-- a similar color scheme is illustrated in Air Enthusiast Quarterly on page 95 of volume 3.

Building the model-- I used Stew Meyers' laminated former method for the first time when I constructed the fuselage. I cut the forms for the formers at 1/8 inch undersize from balsa and waxed the edges with paraffin and laminated the formers to a thickness of 1/16 inch from basswood or balsa strips, usually measuring 1/32 x 1/16 by several inches long. In some cases I used 1/64 x 1/16 balsa strips and used 4 laminations. These really only take a few minutes to make and are really superior to cut out formers. The upper and lower keels were laminated from 2 pieces of 1/16 sq so that the keel measures 1/16 x 1/8. The keels are held together with scrap balsa and are notched 1/16 inch deep on the insides at the appropriate locations. The formers are inserted and aligned before hot-stuffing in place. The upper front section of the fuselage is sheeted with very soft 1/32 sheet. The engine cowl is made up from several circular rings of balsa laminated together. Use your Dremel to hollow out the inside to about a thickness of 1/16. Construct the nose block and surround the opening with 7 Williams Bros 3/4" scale cylinders sliced in half to represent the front end of the 14 cylinder radial engine.

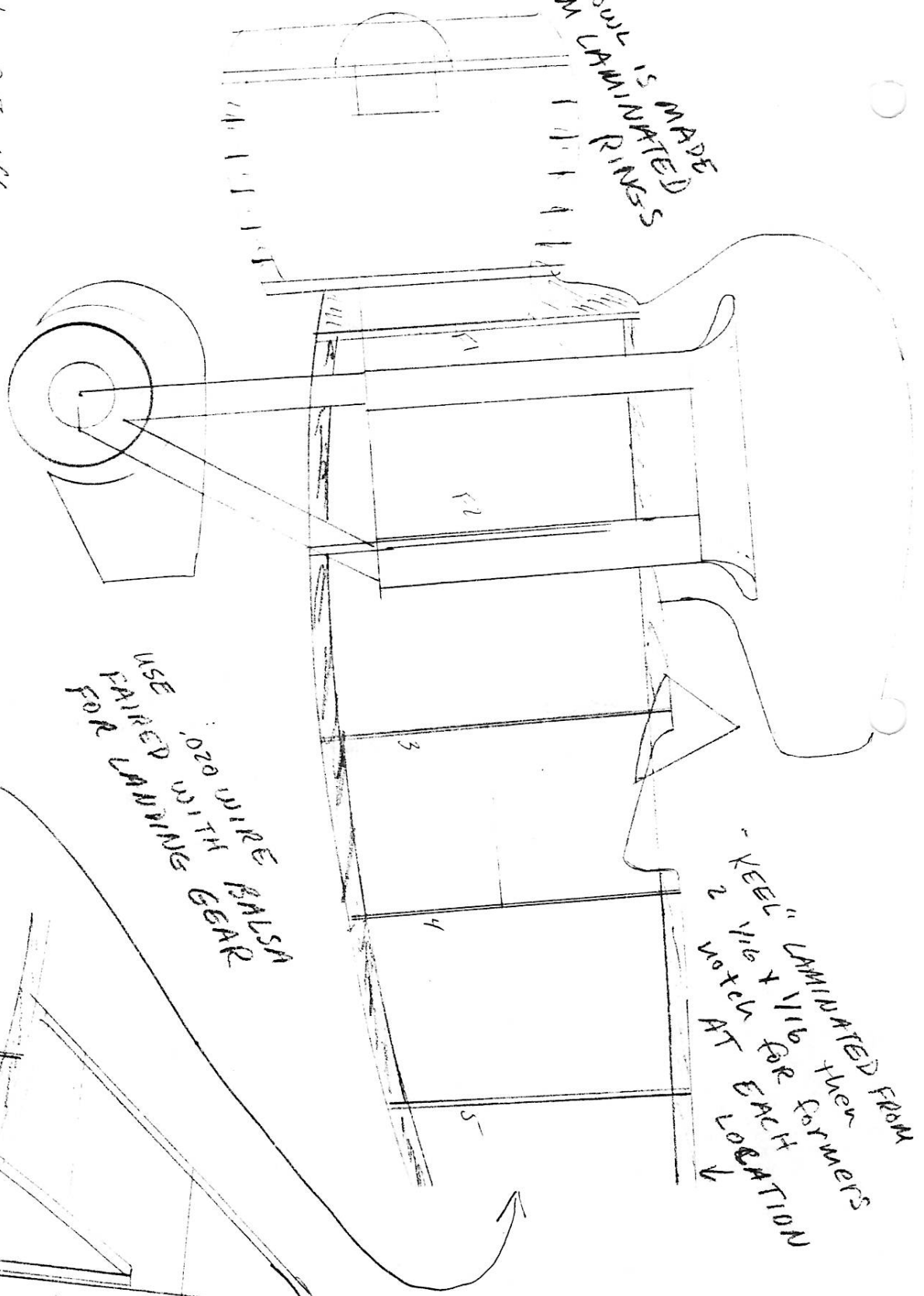
The wing leading and trailing edges and wing tips are all laminated and joined together. I used 2 pieces of 1/16 x 1/8 laminated for the leading edge. The trailing edge and wing tips were laminated from 3 pieces of 1/16 x 1/32 and joined to the leading edge. The ribs were cut from light "c" grain 1/32. Notch the upper and lower sides of the ribs for the spar locations after gluing them in place. I used a hard 1/16 x 1/16 square for the upper spar and a medium 1/16 x 1/8 lower spar. After wing is assembled, cut at the 4 dihedral joints and prop up parts on jigs of scrap balsa and glue wing together. Use triangle gussets at all joints. Consult front view for appropriate angles. Tail surfaces are laminated from 3 pieces of 1/32 x 1/16. I prefer adjustable rudder and elevator even if it adds a little weight. The landing gear wires are carried through the fuselage in aluminum tubing after the fuselage has had all the stringers (1/16 x 1/32) applied. Cover and Paint with floquil pigment in nitrate dope. I fly the Loire with 4 strands of FAI 1/8 rubber about 30 inches long with an 8 in prop (Peck Polymers)--best time in calm air is about 50 sec and in a thermal I got 1min 53 sec. A really neat plane and fun to fly--good luck.



The Loire 46, seen in production form above and prototype form below, represented a radical redesign of the Loire 45 illustrated on pages 212-213.

BONE OF DAILY'S LOIRE

COUL IS MADE FROM LAMINATED RINGS

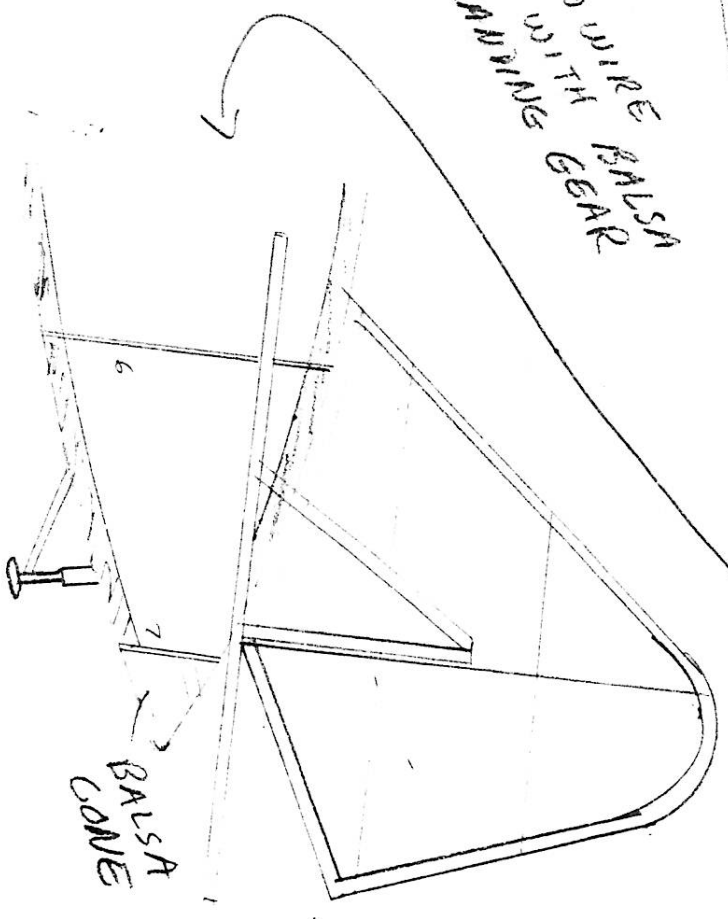


USE 2020 WIRE BALSAM PAIRED LAMINATES FOR LAMINATES GEAR

- "KEEL" LAMINATED FROM 2 1/16" x 1/16" FORMERS THEN NOTCH AT EACH LOCATION

LOIRE 46
by PAT DAILY

- A FRENCH FIGHTER FROM THE EARLY 30'S



BALSAM CONE

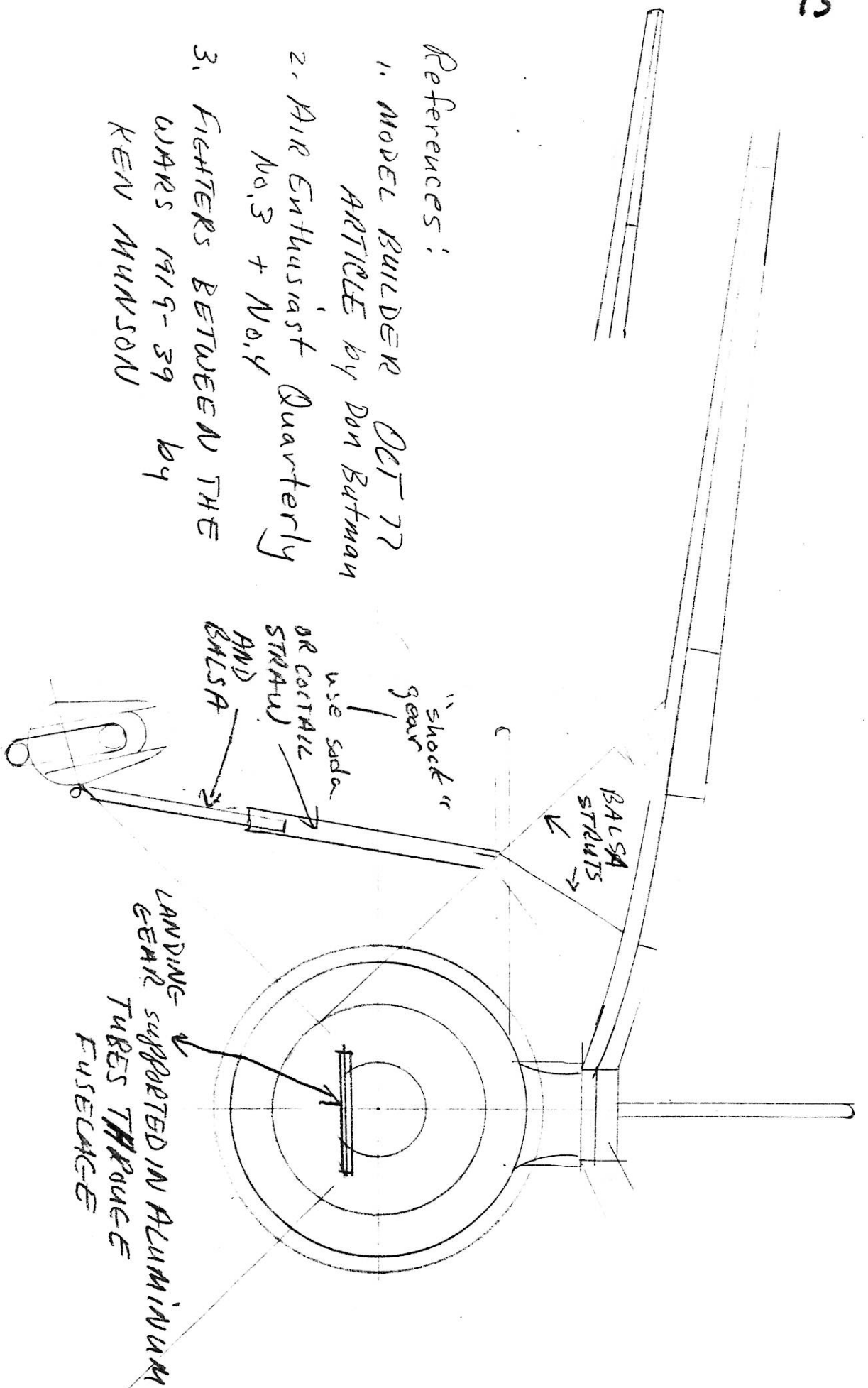
References:

- 1. MODEL BUILDER OCT 77
ARTICLE by Don Batman
- 2. Air Enthusiast Quarterly
No. 3 + No. 4
- 3. FIGHTERS BETWEEN THE
WARS 1919-39 by
KEN MUMFORD

ANOTHER D.C. MARCECITERS

DESIGN

- Best time 1:53 with 4 strands 1/8 FAAI, + 8 inch prop.



LE. LAMINATE 2 1/2 x 1/16

WING TIPS ARE ALSO LAMINATED

TOP SPAR 1/16 x 1/16 Position

Bottom SPAR 1/16 x 1/8

8

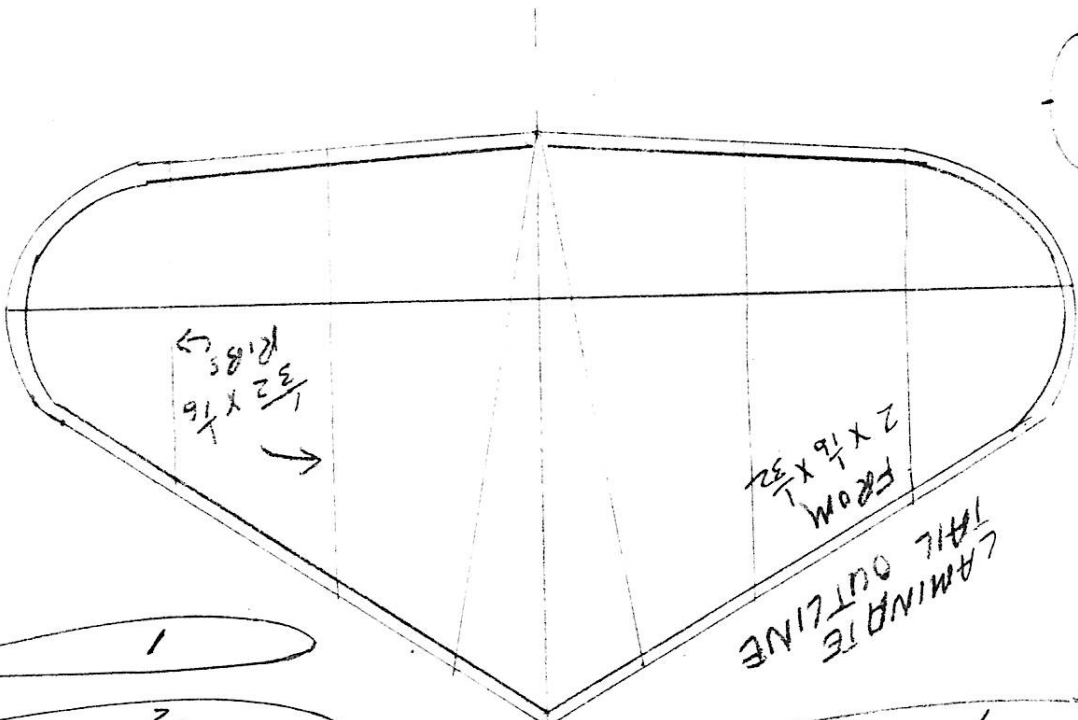
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4

3



1/32 x 1/16 Ribs

FROM 2 x 1/16 x 3/32

LAMINATE TAIL OUTLINE

1

2

3

4

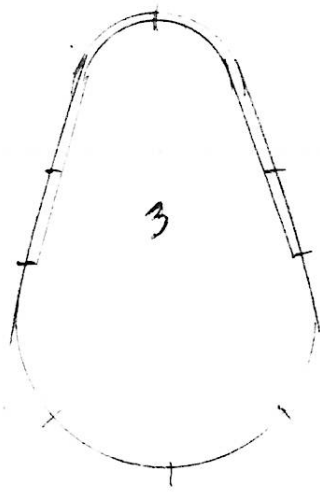
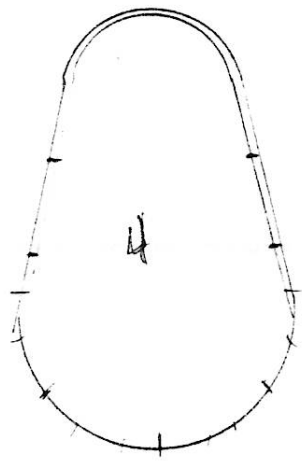
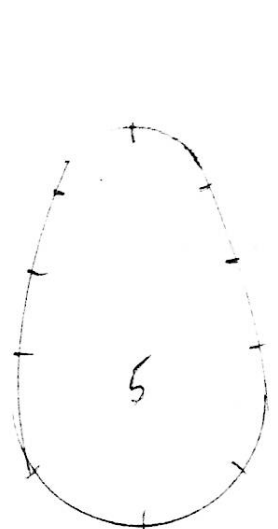
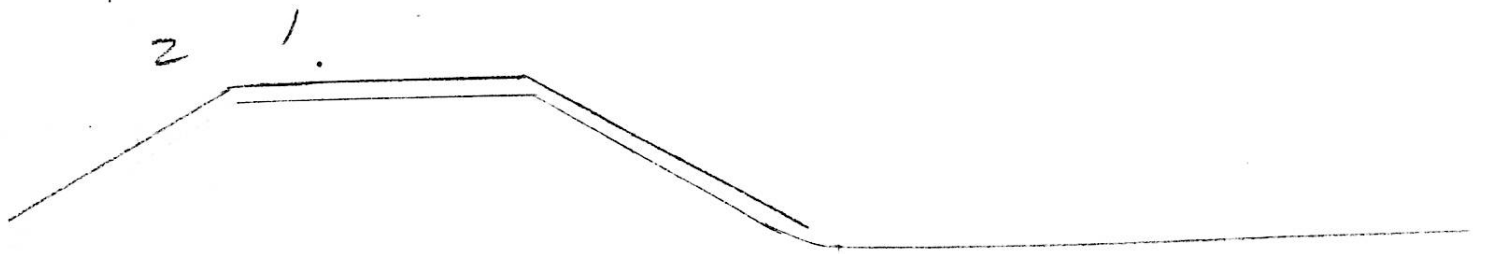
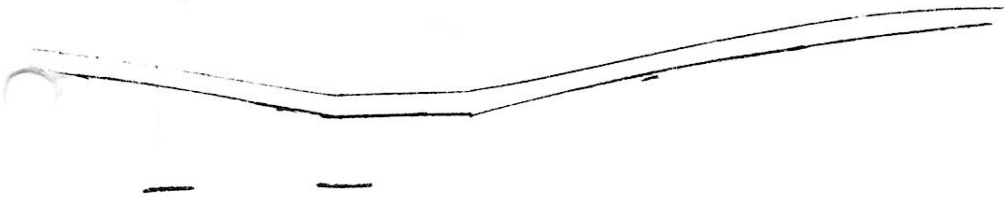
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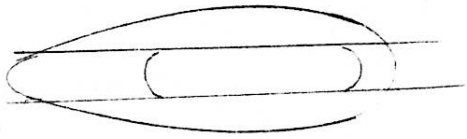
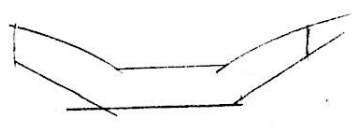
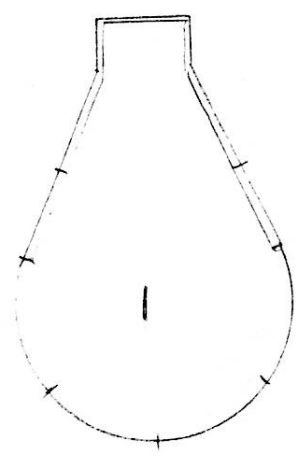
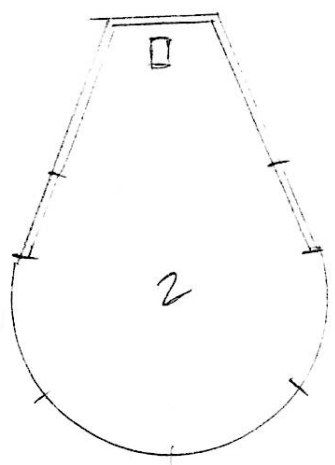
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Ribs of 1/32 "C" GRAIN



FUSELAGE FORMERS SHOULD BE CUT 1/8" UNDERSIZE IF YOU PREFER TO LAMINATE THEM -



3-20-55
CLASS

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Rockville, MD. 20853

