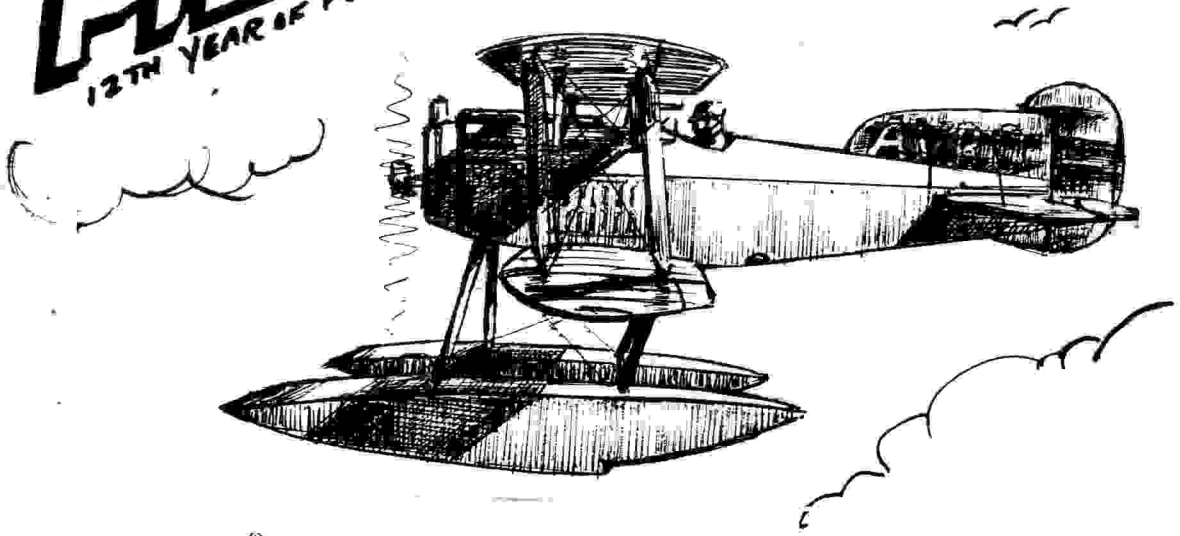
THE HANGAR PILOT

12TH YEAR OF PUBLICATION

ISSUE 97
NOVEMBER 1984
M.I.A.M.A.
AMA CLUB 986

INDOOR ISN'T FOR EVEYONE

ARMISTICE DAY ISSUE



AVRO 539/1, SCHNEIDER - 1919 - DESIGNED BY ROY CHADWICK WHO ALSO DESIGNED THE 504, ANSON AND LANCASTER.
THE 539/1 WAS FITTED WITH A SIDDELEY "PUMA" ENGINE OF 240 H.P. (SOMETIMES); WAS SURPLUS.
JERRY BOOKUS 1981

ANNOUNCING BIG ARMISTICE WEEKEND MEET (P.12)

P-NUT/PISTACHIO, KIT/PLAN SCALE, MANHATTAN/BOSTONIAN, EZB GLIDER, PENNY PLANE, CLASS 'A' ROG. NOV. 10-11 TAMPA MAC DILL AFB. 2PM SAT. WWII FLYING ACES MASS LAUNCH

"LIKE A LETTER FROM HOME" - WHELAN



THE HANGAR PILOT

Is published 8 (or 9) times a season for a bunch of middle aged guys who refuse to grow up. MIAMA (Miami Indoor Aircraft Model Association,) AMA Club 986, is the only active all indoor free flight club in AMA. Our Mottos: "It must be fun.", and "Indoor isn't for everyone." For $10.00 a year you will receive all copies. We solicit your contributions since we are always running out of material. Letters, plans, 3-views, articles, gripes, and Money to: Dr. John Martin Pres./Editor. 2180 Tigertail Ave. Miami, Fla. 33133 USA Phone: 305-858-6363 We want to hear from you!!! Send material!!!

Miami, Fla. Nov, 84

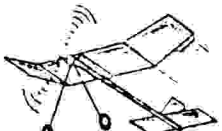
Dear Hangar Pilot:

No editorial column, just an occasional letter from Sunshine Sqdn. H.Q. - writ by hand.

Did you ever notice in the model magazines - after you've flipped through the 1st 50 totally boring pages of R/C this and R/C that - and you get into the back pages (one or two) of free flight stuff (Providing you're NOT reading Model Airplane News which has NO pages of free flight) - Have you ever noticed this? — Who seems to be having the best time, the most FUN? To be honest, the old crocks in the S.A.M. columns seem to be smiling and laughing most of all, and the photos of their activities reflect a variety of aircraft not often seen also the FLYING ACES, or Terry Simert's unofficial Vats events. We confess the MIAMA meets produce a lot of chuckles, especially pistache

(Letter from home Cont. on page 3)

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MEET 1 - CD MIKE ARAK - MIAMI-DADE S. 10/14/84

(2)

Meet number one almost never happened because the college had scheduled our meet for Saturday, and we showed up on Sunday during "Free Play" time. The basket, and volleyball players conceded us the extra time so the meet went from nine to five after all..Thanks!

Ever fly in a gym with the air conditioners on? This was a first for us, and a truly unique, and definitly unpleasant situation. We were told the conditioners were on a computer, and could not be shut off! Boy, what a struggle. Nothing, but NOTHING would fly. Times were about half to two-thirds normal. Planes were buffeted about in a scale gale.

Plenty of new models, and most of them remain untrimmed. Dick MacEntee and Dick Kelso have a fleet of new stuff that still need trim. Millard Wells had many new models, and his pean ut black and red 1934 Wedell-Williams racer was one of the few that bored through the breeze, and a low winger at that. Wee-Bee's are numerous. Arak won KitPlan with the Bill Gough model. Wells was third in Bostonianwith a clipped wing Wee Bee, and he has peanut and pistachio versions that all fly well.

We have had lots of interest in November 10 & 11 big 2 day meet at MacDill Air Base. Lots of time (Sat. & Sun. 9 to 5) to fly all 7 events. Many new faces including out-of-staters Jim Miller and Walt VanGorder of Ohio will be there. The Base has a new C.O.- Colonel Jimmy Cash who has no idea what indoor models, or modelers are all about so Hangar Pilots, let's show him some flying, and some etiquette an d decorum. Ten-hut! See inside back cover for all info on the Big Armistice Day meet.

MEET RESULTS

Peanut event:

1. Dick MacEntee Alco Sport 86.1 Static, Flight (57.2)(59.0) Total 144.2
2. John Martin Cessna AW 72 (47.4)(47.0) 119.2
3. Walt Everson Found 74 (54)(16) 109

Did Not Fly: Mac Entee Porterfield 56.8, Pistachio Alco 78.7
Kiefer Triplane 100.8, Arak Parnall Pixie 94.5 MartinDornier 212 78.0

KIT/PLAN
1. Mike Arak Curtiss Robin 90 (53.6)(53.7)
Wee Bee 92 (72.8)(74) 238
2. Dick MacEntee Alco Sport 87 (47)(46) 180

Didn't fly: Kiefer tripe 85 Everson Vagabond 90

Bostonian
1. John Martin Boston Komet 1.5 Charis. (68)(62) 185

Manhattan
2. Dick MacEntee Bost. 1.5 (53)(49) 167
3. Millard Wells Bost. Wee Bee 1.2 (55.3)(56.2) 156
4. Walt Everson Man. (1:54) 114

GLIDER
1. DON BAL (27.8)(27.4)
2 JIM STEWART (15.0)(16.0)

JR.
1. DAVID BAL (20.7)(18.3)
2. STEVEN BAL (17.5)(16.7)

ROG
1. EVERSON 4:27
2. ARAK 4:05
3. MARTIN 3:08
4 MACENTEE 1:27

PENNY PLANE
1. MIKE ARAK 3:38
2 CARL HEDLEY 2:45

EASY B
1. WALT EVERSON 4:49
2. JIM STEWART 3:18
3. DICK MACENTEE 1:52

(LETTER from page 1)

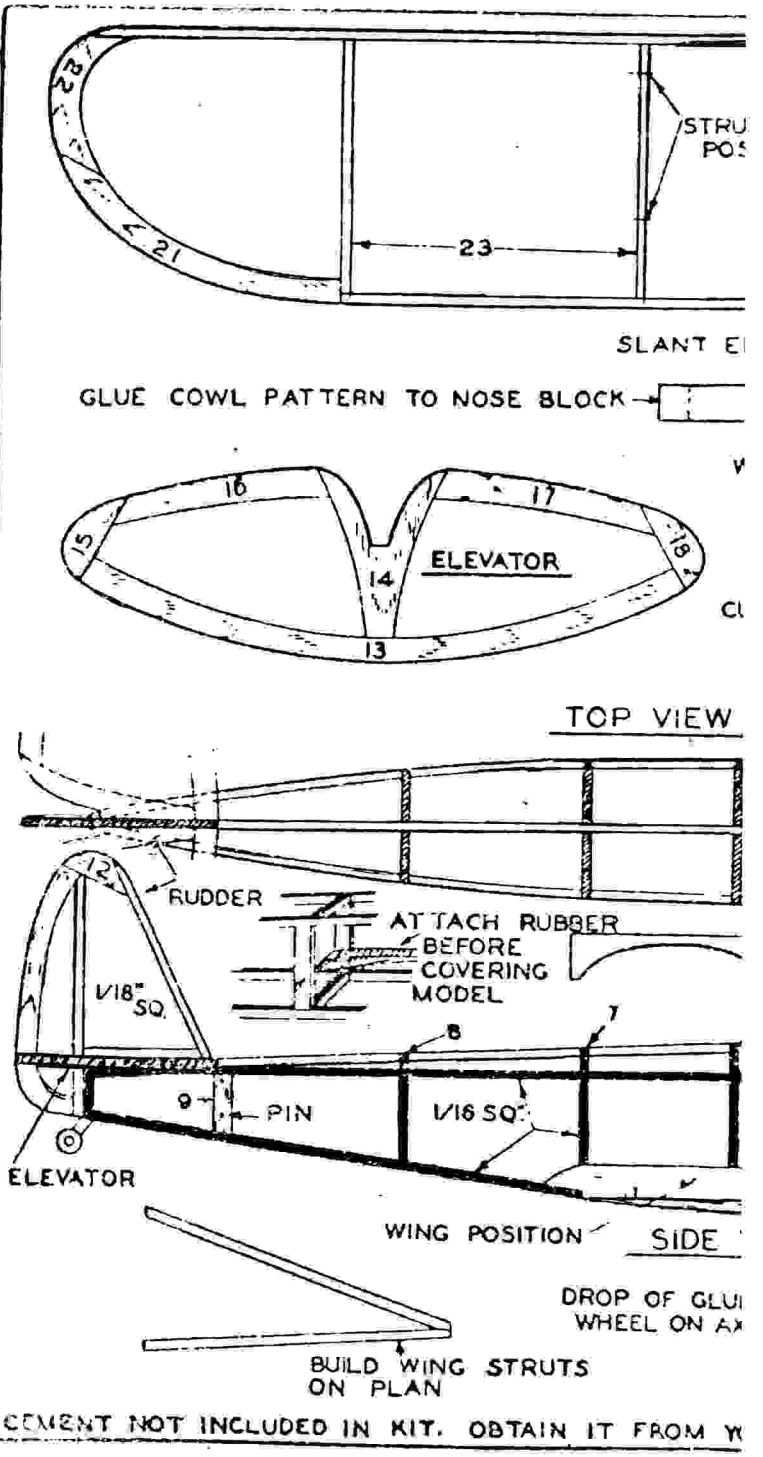
(3) This is a great contrast to R/C and FAI flyers. The speed and pattern and endurance merchants seem grim jawed and frowning - even "sport" R/C. Are you sure they're having fun? Lighten up.

Regards, Loc

A 5¢ SCALE MODEL

YEP, skysters, you read about 'em in Hannan's column and now you can build one. Here is a plan from a 1930's nickle flying scale model. It sure looks like the COMET foremat. There were at least a dozen planes (I have 6) & all had 10" span, and came complete except for glue, & banana oil. I built my share of these- obtainable at Fairchilds Drug Store in Freeland Penna. The Security Sport qualifies as a pistachio due to its 5 3/4" overall length I have other plans and will publish them if there is any reader interest. Anyone know more about them ?

CALL 305-858-6363 IF YOU ARE GOING TO MACDILL MEET!



LEST WE FORGET –

 ARMISTICE 1918

the bend in the lines of the front at that point, I saw that I could cut off the Boche on his return to his own territory. I had the altitude on him and, consequently, a superior position. I headed confidently to our rendezvous.

Guns began barking behind me, and sizzling tracers zipped by my head. I was taken completely by surprise. At least two planes were on my tail. They had me cold. They had probably been watching me for several minutes and planning this whole thing.

They would expect me to dive. Instead I twisted upward in a corkscrew path called a "chandelle." I guessed right. As I went up, my two attackers came down, near enough for me to see their faces. I also saw the red noses on those Fokkers. I was up against the Flying Circus again.

I had outwitted them. Two more red noses were sitting above me on the chance that I might just do the unexpected.

Any time one plane is up against four and the four are flown by pilots of such caliber, the smart thing to do is to get away from there. There is an old saying that it's no disgrace to run if you are scared.

I zigzagged and sideslipped, but the two planes on top of me hung on, and the two underneath remained there. They were daring me to attack, in which case the two above would be on my tail in seconds. They were blocking me from making a dash for home. I was easy meat sandwiched between two pairs of experts. Sooner or later one would spot an opening and close in.

For a split second one of the Fokkers beneath me became vulnerable. I instantly tipped over, pulled back the throttle and dived on him. As my nose came down I fired a burst ahead of him. Perhaps he did not see the string of bullets. At any rate, he flew right into them. Several must have passed through his body. An incendiary hit his gas tank, and in seconds a flaming Fokker was earthbound.

If I had been either of the two Fokkers above me in such a situation, I would have been on my tail at that very moment. I pulled the stick back in a loop and came over in a renversement, and there they were. Before I could come close enough to shoot, they turned and fled. I suppose that the sight of that blazing plane took some of the fight out of them.

It did not take any fight out of me. I started chasing all three of



The end of WWI as told by Eddie Rickenbacker

*ARMISTICE DAY 1918

(*NOW ARMED FORCES DAY

Ed was no Hemingway, but this account brings tears to my eyes; especially the last page. A powerful anti-war message!



them back into Germany. We were already three miles behind the lines, but I was annoyed—with them and with myself.

My Spad was faster. One Fokker began to fall behind. He tried a shallow dive to gain speed, but I continued to close in. We were only about a thousand feet up. He began stunting, but I stuck with him and fired a burst of about two hundred shots. He nosed over and crashed. I watched him hit.

All around the crashed plane, I saw flashes of fire and smoke. I was only about five hundred feet above the deck, and the Germans on the ground were shooting at me with all the weapons they had. I could see their white faces above the flashes. The air around me must have been full of flying objects. I got out of there fast and went home to report that I had blundered into a trap and had come out of it with two victories. I now had nineteen.

During the month of October the fortunes of war shifted both on the ground and in the air. From the air we could see the German ground forces retreating, sometimes in complete disorganization. Our bombers were carrying the fight into Germany, and large numbers of German fighters were pulled back from the front in an effort to protect the civilian population.

All along the lines the feeling was growing that the war was coming to an end. I took a 3-day leave in Paris and, for the first time, found the streets illuminated at night and unrestrained gaiety.



94TH AERO SQDN.

During the month of October, I shot down fourteen enemy aircraft. On the 30th I got my twenty-fifth and twenty-sixth victories, my last of the war. My title "American Ace of Aces" was undisputed. The last victory for the 94th Squadron came on November 10. The Hat-in-the-Ring Squadron downed 69 Boche planes, more than any other American unit.

On the night of the 10th a group of us was discussing the next day's mission when the phone rang. An almost hysterical voice shouted the news in my ear: At 11:00 the following morning, the war would end. Our mission was called off. For us the war ended at that moment.

I dropped the phone and turned to face my pilots. Everyone sensed the importance of that phone call. There was total silence in the room.

A GREAT PENNY PLANE ARTICLE FROM TOM HUNTER'S "WINDING STOOGE" NEBRASKA F.F 1010 EASTRIDGE DR LINCOLN NE 68510 (3)

JIM JONES OF MOUNT PLEASANT, MI WEIGHS IN WITH HIS "TWO CENTS WORTH," 3.1 GRAMS OF NOVICE PENNYPLANE, 3 GRAM MOTOR, POUNDS OF IDEAS . . .

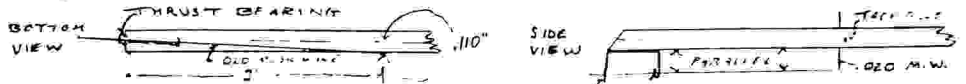
(The Stooge wrote Jim Jones about his Pennyplane wing. Jim wrote back a fantastic letter. Here it is)

There are two reasons for the wing design. First, a thin, tapered spar bends around a form more easily than a constant section; it bends just like the tip of a fly rod--much like a whip. But a real thin section like that doesn't have much strength, so I put two of them together around the end much like a long splice. This produces a very strong, constant thickness tip. Strength is needed there: pennyplanes must weigh 3.1 grams and they are usually hauling their own weight in rubber, so there is about 6 grams of weight banging against ceilings, walls, and floors, so a good rounded, laminated wing and stab tip is an asset.

The maximum wing area for a novice pennyplane is5" x 18", and 5" x 18" is 90 square inches. The wing area of my "Two Cents Worth" is only 78.6 square inches. This is 11.4 from the maximum allowed, and I am not yet convinced that it is a good trade-off. (It makes sense in Lincoln: remember how W. Erbach gave up lots of Easy B allowed area to have a strong wing for scraping the armory ceiling, and WON? --ed.)

It has been entered in three contests and it placed fifth, first, and fifth again. The times were 11.5 minutes, 8.5 minutes, and seven minutes, 20 seconds, respectively. I am going to build a rectangular wing(5 x 18), use the same airfoil, and run some tests. The wing will plug into the same sockets, and I will leave the stab exactly the same. If you print the plans (Don't miss pages 5 and 6! --ed), put a note in to the builder--if anyone decides to try it--to be sure to make that stab just like the drawing. The bridge type of construction makes for a very stiff stab, with hardly any additional weight: a flopppy flimsy stab can't do its job, which is the same as its name, STABILIZER.

The wing placement and CG are always peculiar to each builder's job. Mine (I have three) have the front wing-post 1 1/4" in back of the thrust bearing's front end. This is a must, so the wing can be forward far enough to give the builder a decent moment arm, and far enough in back of the front end to allow the prop to clear the wing L.E. with that 2° left t hrust--and speaking of thrust, here's a way to set up the right thrustline: Bend a piece of STRAIGHT .020" music wire, 4" long, so it has a 1/2" end at 90°. It will now look like a scale model of a weed chopper. At this point, we can dust off the old trigonometry. The tangent of two degrees is .0349207695, .035 rounded off, and 1/32 is close enough. Measure a point on that wire that is three inches from the bend. Multiply 3" x .035, and you will have .105". Now slip the thrust bearing over the straight end and put a small piece of masking tape at the 3" point, so it can't slip off. If your fuselage was a perfect .21" wide at this point, the job would be very simple--the 5/32" fuselage will be .221" wide across the diamond, so half of that will be .110" and this will work nicely. Set it up like this:



By using this method, the builder can also set up any up or down-thrust at this time. The "Two Cents Worth" uses only 2° left, which is very important: it will circle in tight left circles without winding in, and handles the high launching torque very nicely. Main thing is not to eyeball this2° side-thrust. "Measure twice and saw once." (Russian version is "measure 9 times to cut once," but Russians drink straight grain alcohol--ed.) (CONT. ON P. 7)

(6)

ALL OUTLINES ARE FAT ELLIPSES"

WING & STAB $\left(\frac{X}{a}\right)^2 + \left(\frac{Y}{b}\right)^4 = 1$

PROP $\left(\frac{X}{a}\right)^2 + \left(\frac{Y}{b}\right)^{3.33} = 1$

STANDARD ELLIPSE IS $\left(\frac{X}{a}\right)^2 + \left(\frac{Y}{b}\right)^2 = 1$ (REF.)

"TWIN ARCS" AIRFOIL - FRONT 40% IS ONE ARC REAR 60% IS OTHER

STAB - 3% THICK

℄ STAB

AIRFOIL HIGH POINT

℄ WING

WING - 5% THICK

CENTER RIB - WING

AREAS

WING 78.6 SQ. IN.
A/R 4.12
STAB 41.9 SQ. IN.
A/R 3.43 ..... 53.3%

PROP BLADE (ea.)
1.5" X 5.2" - 6.37 SQ.IN.
A/R 4.24 (12" DIA. 26"P.)

ALL RIBS - .028 "A" GRAIN 5.5 TO 6 LB. STOCK HOLD THE HIGH POINT & TRIM EACH RIB FROM BOTH ENDS. WING POSTS & WING SUPPORTS ARE 1/16" DIA.

PROP OUTLINE -- USE "C" GRAIN .025-.028 5-5.5 LB. STOCK - WEIGHT WHEN FINISHED -- WITH SHAFT 0.70g PROP SPAR IS .110" SQUARE AT ℄ & TAPERS TO .032" SQ. - 6½" LONG

DIAMOND FUS. 5/32" SQUARE NOTE GRAIN DIRECTION

2 LAYERS SILK & GLUE.

.020" MUSIC WIRE "PIGTAIL" THRUST BEARING

1/4" (MIN.)

DIAMOND BOOM. 5/32" SQ. TAPERS TO 1/16" SQ.

GRAIN

3/32" UNDER-CAMBER IN PROP

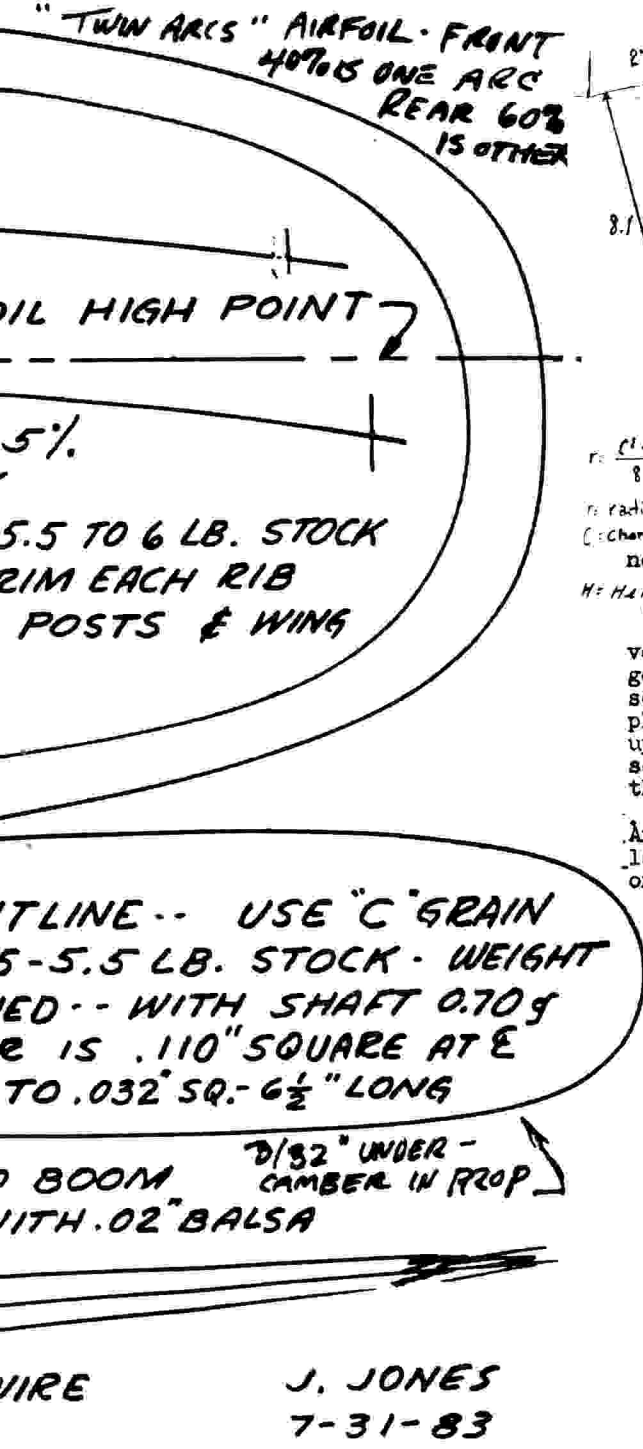
CAP FUS. TO BOOM GLUE JOINT WITH .02" BALSA

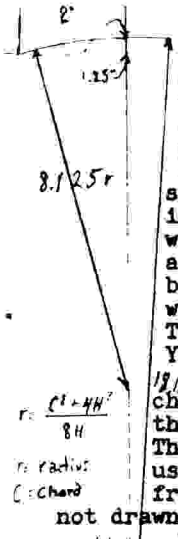
4 SIDES

.020" MUSIC WIRE

.020" BALSA

J. JONES
7-31-83





Now let me go over my twin arcs airfoil (as far as I know, I am the only indoor builder in the world who uses this type of airfoil). First determine your chord high-point--40% works well. Then decide how thick your design will be. A good choice for indoor models might be 5% for wings and 3% for stab. Then for a 5" chord the high-point will be 2" from the L.E. and the wing will be .25" thick at this point. The airfoil will look like this. You must figure the radius for the front part by using a chord of 4", as the rear half of the front radius is not drawn. Then figure the rear radius by using a chord of 6"--again, the front half of the rear radius is not drawn.

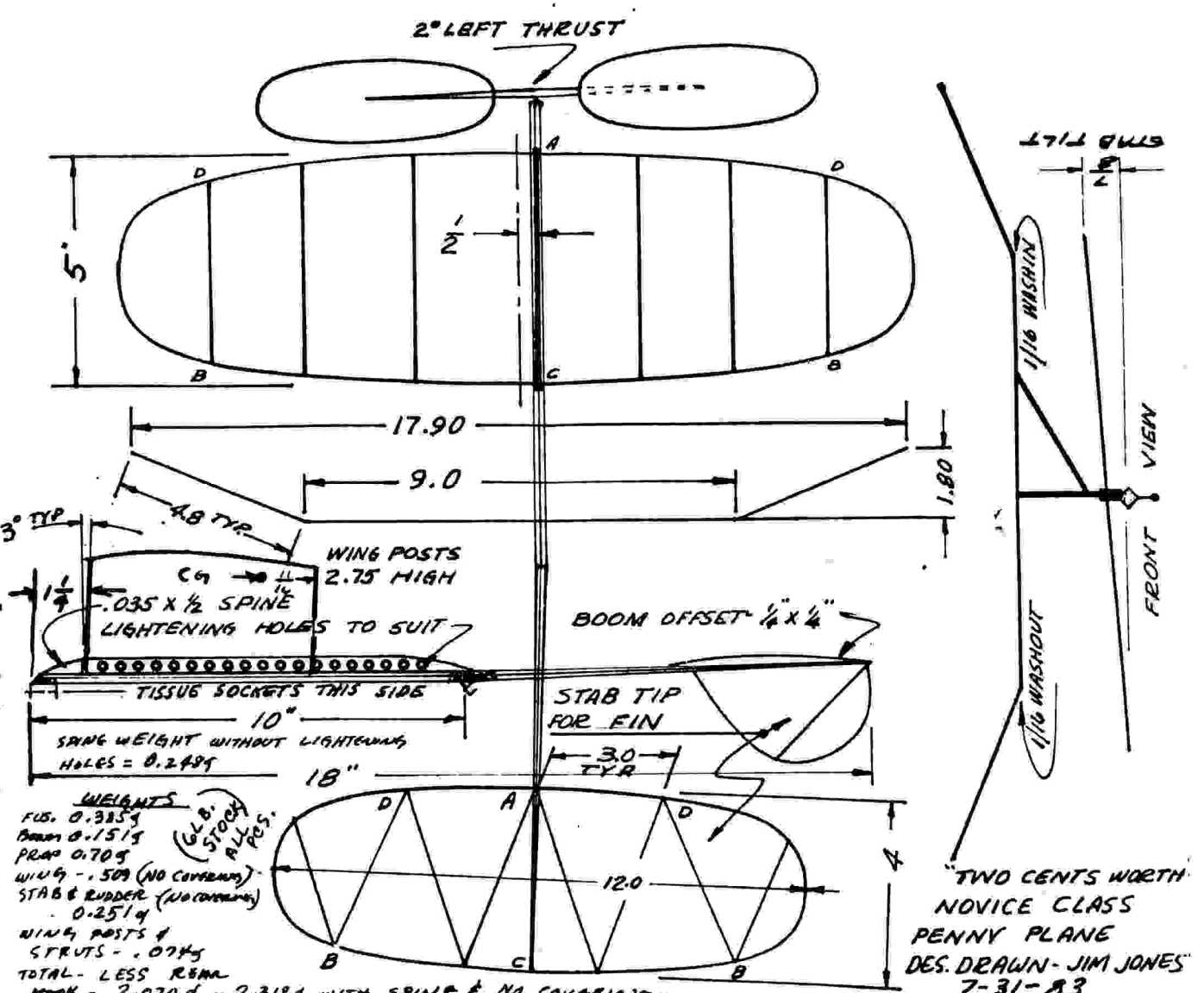
This results in a very high-lift, low-drag airfoil that handles the initial torque quite well, with very little tendency to stall out. It generates so much lift that it is very sensitive to incidence, so once the airplane is balanced out and flying, plug up the bottom of the wing-post sockets so that the wing will always be setting the same.

When building a wing with a "Twin Arcs" airfoil, make the template to the largest rib. Then mark the high-point on the template and transfer this point on each rib. When trimming the ribs to fit between the L.E. and T.E., hold the high-point and trim each rib from both ends. This will insure that the 40% high-point is maintained all the way along the wing.

I hope this clarifies the drawing and the reasoning behind the design.

The plans show a 26" pitch prop, but an 18" pitch prop should be built also. This permits a greater latitude in combinations of prop and rubber. For those who have a rubber stripper, .0005" difference in rubber-width can be the difference between climbing all the way or half way to the ceiling. If you don't have a rubber stripper, the lower pitch propeller allows a greater range with the rubber on hand: it is easier to change a prop than to strip, tie up, lube, and break in a new motor.

Jim



FRONT SPARS GO FROM A THROUGH D AROUND TO B, OVERLAPPED BY THE REAR SPARS AROUND THE TIP. Similarly, rear spars go from C through B around to D. Wing spars taper: .080" x .080" to .080" x .005. Stab spars taper from .06" x .06" to .06" x .005". Splice at A and C.

"TWO CENTS WORTH"
NOVICE CLASS
PENNY PLANE
DES. DRAWN - JIM JONES
7-31-83

6

"The war is over!" I shouted. At that moment the antiaircraft battalion that ringed our field fired off a salvo that rocked the building. We all went a little mad. Shouting and screaming like crazy men, we ran to get whatever firearms we had, including flare pistols, and began blasting up into the sky. It was already bright up there. As far as we could see the sky was filled with exploding shells and rockets, star shells, parachute flares, streams of Very lights and searchlights tracing crazy patterns. Machine guns hammered; big guns boomed. What a night!

A group of men came out of the hangar, rolling barrels of gasoline in front of them. Perhaps I should have made an effort to stop them, but instead I ran over and helped. We dumped them in an open place, and I struck the match myself. Up roared a bonfire that could be seen for miles. We danced around that blazing pyre screaming, shouting and beating one another on the back. One pilot kept shouting over and over and over, "I've lived through the war, I've lived through the war!"

Somebody emptied every bottle of liquor he could find into a huge kettle, and the orderlies served it in coffee cups, including themselves in. For months these twenty combat pilots had been living at the peak of nervous energy, the total meaning of their lives to kill or be killed. Now this tension exploded like the guns blasting around us.

We all ran over to the 95th Squadron. They had a piano, and somebody sat down and began banging the keys. We began dancing or simply jumping up and down. Somebody slipped and fell, and everyone else fell on him, piling up in a pyramid. A volunteer band started playing in the area outside. We ran outside again to continue our dancing and jumping and shrieking under the canopy of bursting rockets. Again somebody went down, and again we all piled on and made a human pyramid, this time bigger and better and muddier, a monument to the incredible fact that we had lived until now and were going to live again tomorrow.

In the morning orders came down that all pilots should stay on the ground. It was a muggy, foggy day. About 10:00 I sauntered out to the hangar and casually told my mechanics to take the plane out on the line and warm it up to test the engines. Without announcing my plans to anyone, I climbed into the plane and took off. Under the

low ceiling I hedgehopped towards the front. I arrived over Verdun at 10:45 and proceeded on toward Conflans, flying over no-man's-land. I was at less than five hundred feet. I could see both Germans and Americans crouching in their trenches, peering over with every intention of killing any man who revealed himself on the other side. From time to time ahead of me on the German side I saw a burst of flame, and I knew that they were firing at me. Back at the field later I found bullet holes in my ship.

I glanced at my watch. One minute to 11:00, thirty seconds, fifteen. And then it was 11:00 A.M., the eleventh hour of the eleventh day of the eleventh month. I was the only audience for the greatest show ever presented. On both sides of no-man's-land, the trenches erupted. Brown-uniformed men poured out of the American trenches, gray-green uniforms out of the German. From my observer's seat overhead, I watched them throw their helmets in the air, discard their guns, wave their hands. Then all up and down the front, the two groups of men began edging toward each other across no-man's-land. Seconds before they had been willing to shoot each other; now they came forward. Hesitantly at first, then more quickly, each group approached the other.

Suddenly gray uniforms mixed with brown. I could see them hugging each other, dancing, jumping. Americans were passing out cigarettes and chocolate. I flew up to the French sector. There it was even more incredible. After four years of slaughter and hatred, they were not only hugging each other but kissing each other on both cheeks as well.

Star shells, rockets and flares began to go up, and I turned my ship toward the field. The war was over.

(10)

HEY! SOME OF YOU PILOTS STILL HAVE NOT PAID UP FOR THIS SEASON BUT YOU ARE GETTING THIS ISSUE ANYHOW - SEND IN YOUR DUES YOU CULPRITS ABSOLUTELY LAST ISSUE!

BILL HANNAN'S.....Volume No. 2

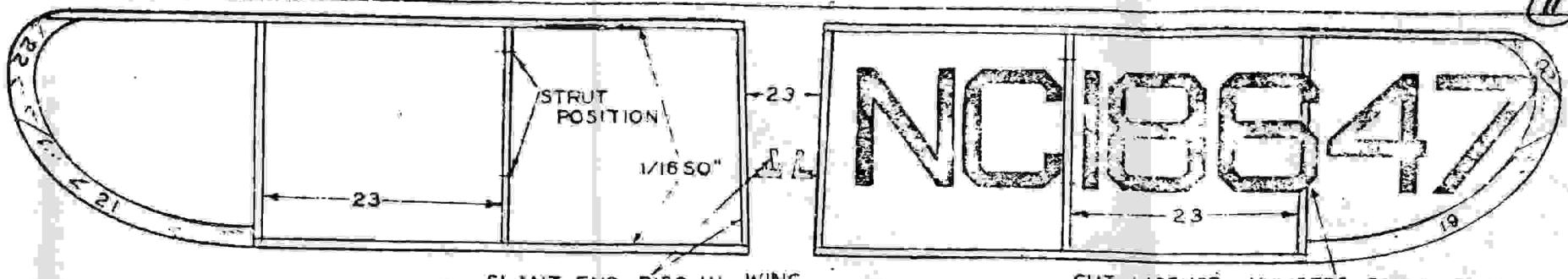
"SCRAPBOOK OF ....."

Another gem from the prolific pen and mind and heart of a real genius.

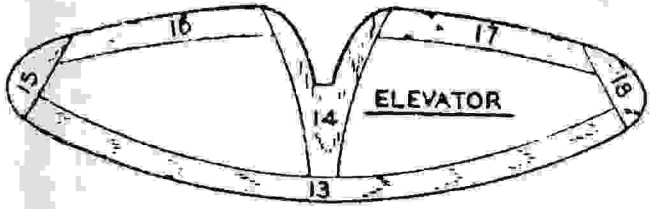
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GLUE COWL PATTERN TO NOSE BLOCK

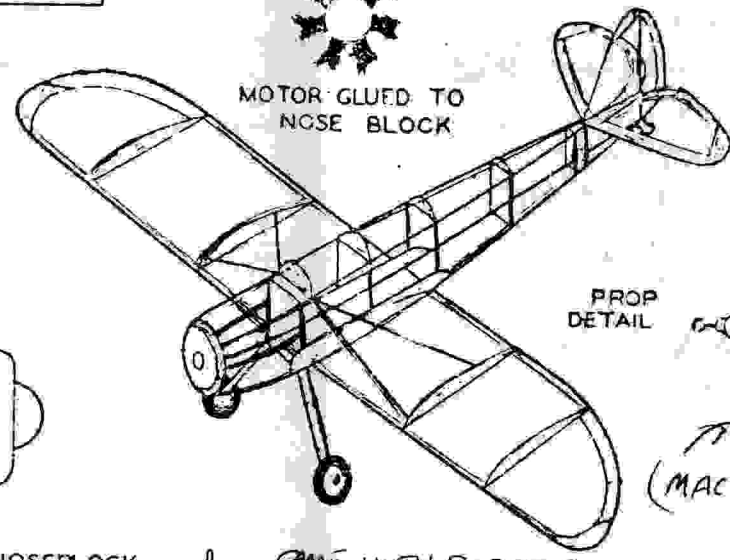


WINDSHIELD PATTERN



CUT OUT & GLUE TO NO. 5

MOTOR GLUED TO NOSE BLOCK

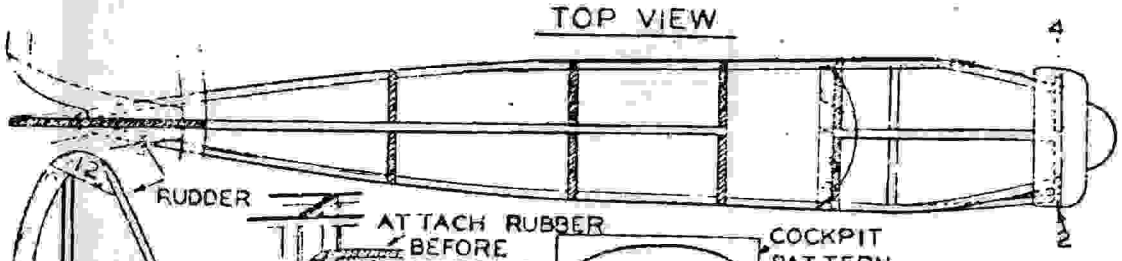


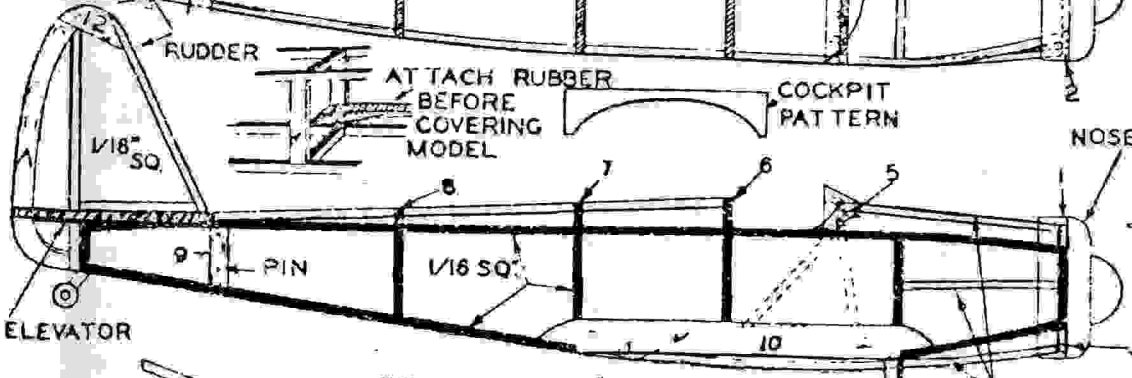
PROP DETAIL

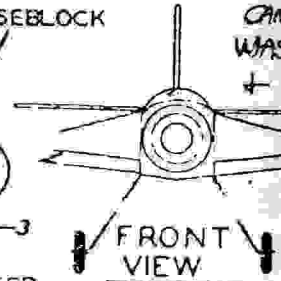


(MACHINED)

TOP VIEW







CAME WITH RUBBER, NOSE BUTTON WASHERS, PRE BENT NOSE HOOK + LANDING GEAR, TISSUE, STRIPS, PROP & NOSE BLOCK FOR ¢5

DIHEDRAL 1/2"

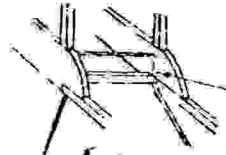


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BUILD WING STRUTS ON PLAN

DROP OF GLUE HOLDS WHEEL ON AXLE



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SECURITY SPORT

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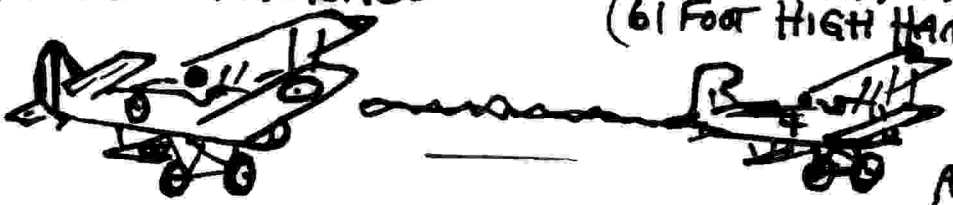
ARMISTICE DAY MEET

NOV. 10-11 TAMPA FLA.

MAC DILL AIR BASE

(61 FOOT HIGH HANGAR)

(12)



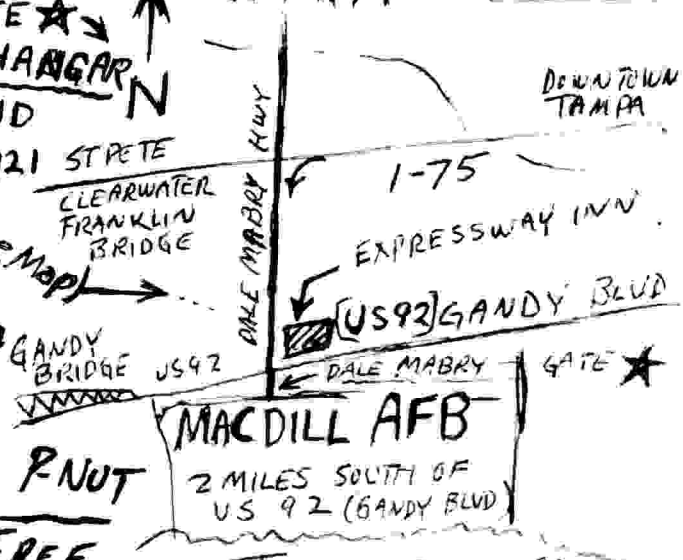
AMA AA

IMPORTANT: IF YOU ARE COMING CALL 858-6363 (305) BEFORE NOV 5. (MON)

YOU MUST PICK UP YOUR PASS.
THE BASE IS NOT OPEN TO PUBLIC.
STOP AT DALE-MABRY GATE ★
ASK FOR INFO TO GET TO HANGAR

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SAT. NITE - EXPRESSWAY INN SWAP MEET See Martin
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INDOOR

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The NATIONAL INDOOR MODEL AIRPLANE SOCIETY's face to the local 50 and around the world has been "INDOOR NEWS & VIEWS". INAV is now back on schedule.

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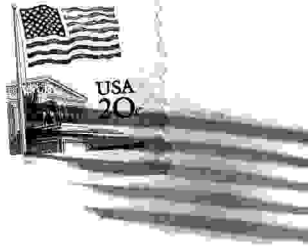
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Oct. 27	Jacksonville, Normandy Mall-Mall Show, A-6 event
Oct. 28	Jacksonville, Normandy Mall—Mall Show, Mouse Race
Oct. 28	Atlanta, Fulton Industrial Park. A FF, HLG, P-30 jr., .020 O.T. Replica, ½A Nostalgia, Peanut Scale, Coupe d' Hiver, O.T. Commercial Rubber, P-30, HLG.CD David Mills, 1113 Colquitt Ave., NE, Atlanta, GA 30307
Nov10 & 11	McDill AFB, Tampa, FL Indoor meet CALL 305-858-6363 BY NOV 5 IF YOU'RE COMING !
Nov. 17 & 18	S.A.M. 46 O. T. Contest C.D. Ron Sharpton, 1290 Country Road, Daytona Beach, FL 32019
Dec 9	Miami-Dade South, Indoor meet — C.D. DAVE LINSTRUM · CONFIRMED
Dec 29-30	Whitehouse Field, Jacksonville, FL King Orange International Control Line Contest-AAA CL CD Wilbur Hicks, 6030 Catona St. Jacksonville, FL 32210
Dec 29, 30, 31	Melbourne FL-AAA FF, King Orange International Free Flight Meet. CD Shirley Campbell, 1785 64th Terrace S. West Palm Beach Florida, 33415. 305-968-1045
Jan 12 & 13	McDill AFB , Indoor meet — TENTATIVE, TO BE CONFIRMED SOON
Feb 10	Miami-Dade South, Indoor meet - FIRM
March 9 & 10	McDill AFB, Indoor meet — SAME ABOVE
April 13 & 14	Miami-Dade South, World Inter-Gnats for Pistachio Scale, 2 Day meet featuring proxy flying.
May 11& 12	McDill AFB, Indoor meet. — SAME ABOVE

THE LATEST INDOOR NEWS INSIDE!
THE HANGAR PILOT
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