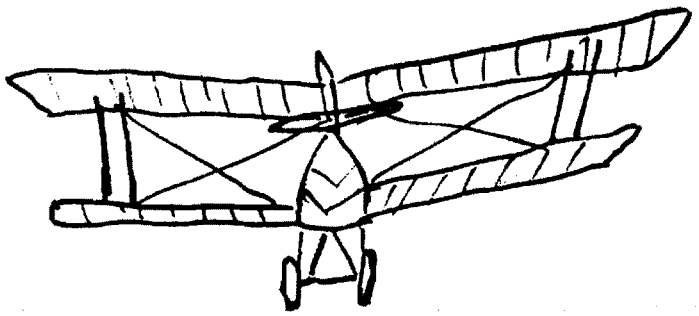
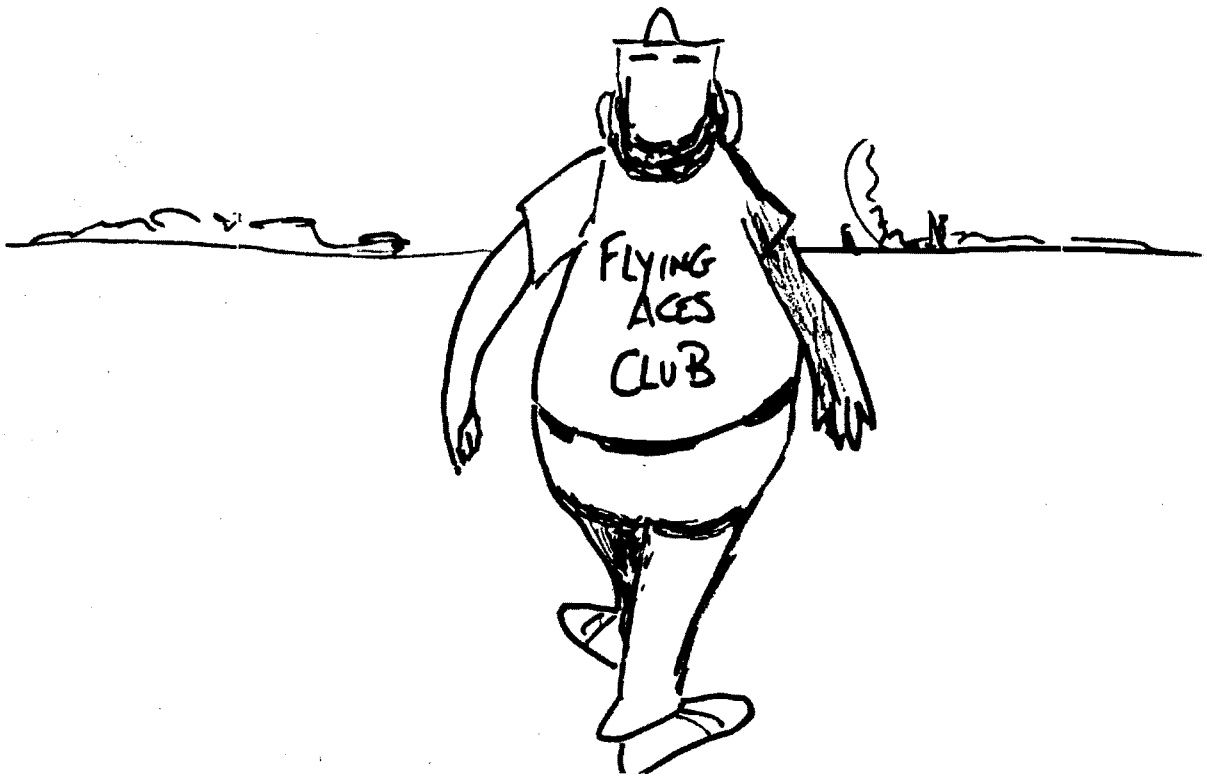
FLYING ACES

ISSUE #123-49 Sept./Oct. 1988

Club News





NEWS ON THE WING!

Hey Skysters! Doesn't that cover drawing tell it all? Bob Rogers has captured the real reason why we dabble in this hobby with this sketch. When Bob sends one of those big brown envelopes to GHQ he always has a drawing on the front of it. We save them for some possible future use. While looking for a cover subject we came across this and said, "Why not?" Keep-em coming Bob.

I know we all just recovered from the last FAC Nats, but I would like to say a few words about the next one in 1990. There seems to be a rumor going around about where the next FAC Nats will be held. Rumor has it that it will be held in Oshkosh, Wisconsin, wrong! GHQ has not awarded the nats to any club or individual for 1990. In fact, GHQ is going to coordinate the whole thing and because it is now such a big undertaking that it is too big for any one club to take it on without a tremendous amount of work. I have already gotten aproval from three clubs to take part and we will try to get some more so as to spread the work load as much as possible. We have had invitations from three locations and we are looking at possibly three other sites as well as Geneseo, New York, the site of the last two nationals.

Now for some real good news for 1989. The National Free Flight Society has invited the Flying Aces Club to participate in the United States Outdoor Champs during the week of June 18, 1989, at Lawrenceville, Illinois. This we heartily accepted to do. The Flying Aces will do their thing on Thursday and Friday, une 22 and 23. The events are tentative right now, but it looks like we will have the following; Embryo Endurance, FAC Peanut, Hi-Wing Pear, FAC Scale, Jumbo Scale, WW I, WW II, Greve Race, Thompson Race and Golden Age. Keep tuned for additional updates on what looks like a great contest.

If you have any rules proposals, they should be sent to GHQ as all rule changes are made by the GHQ staff. We will read and consider all proposals.

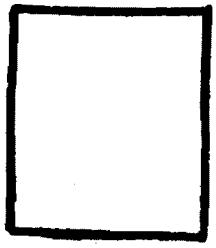
We have been asked for a ruleing on the elegibility of the Ambrosini SaI-207 for World War Two mass launch events. Since only thirteen aircraft were built and none saw any combat we have to say that the aircraft is not eligible.

Our feature plan this time comes from Ralph Kuenz. Ralph took Earl Stahl's Hawker Hurricane and reduced it and modified it somewhat and came up with a real beauty of a plan. She should make a fine addition to your fleet. We also have another plan from Tom Nallen, Jr., this time it is a No-Cal of the Boeing F4B-4. It is not up to the 16 inch span limit, but if you enlarge it 40-50% you will be close to the maximum span allowed. If you don't favor the motor tube, use your own method to power this little gem. Either way, this little Skinny-Minnie, decked out in prewar, shipboard colors oozes character.

Lt. Col. Lin Reichel CinC-FAC

If the box on the right has an "X" in it, it is time to renew your subscription. Cost is NINE DOLLARS per year in the United States and Canada. Overseas cost is TWELVE DOLLARS. Six issues, published every other month. This is your last issue under your old subscription. Send to;

FLYING ACES NEWS
3301 Cindy Lane
Erie, Pa. 16506



Airmail Pals

Dear Lin,

I am both pleased and impressed by your July/August cover and Monocoupe feature and plans. There is much can be said about this subject, but I wish to just touch base.

Yes, the plans do seem to have been by Doug Rolfe and I suspect strongly that Adrian McInnis is Doug in disguise (perhaps not) because he often did boats and planes for multiple sources (models) and in these cases seems to have favored not using any by-line--for example newspaper features paid for by Union Carbide (Doug called for their batteries).

I knew Doug very well over a period of years. He came out of the upper midwest where he hung around with "poorly funded" pilots and old timers. Ned Kragness knew him from those days. The Fawcett brothers who later owned a multi-million dollar publishing giant on West 44th St. in New York, later bought by CBS or someone like them, published True, Mechanix Illustrated and many others, and had a huge business in paperbacks. I did something (quite a few designs and books) for them. In Doug's early days the Fawcetts were local busboys. Doug was immensely talented and always in high demand.

The Fawcetts introduced Mechanix Illustrated in the 20's. I remember it came with a wire puzzle (first issue). Doug did numerous homebuilts for them and these subjects (Pietenpol, a couple of Corbens, the Longster, others) were reprinted in two or more Fawcett Manuels. EAA has them today. I know Srull has copies, as does Bowers. Mine were given to Hurst for the Museum. The plans are well detailed, precise and complete, and all would make wonderful fliers. I note that you guys have never picked up on two or three of hem--you should!

The Monocoupe you show is a remarkable model for 1932--it impresses me now. I never heard Doug mention a model or saw one at his home. He was, nevertheless, the superior in scale-like engineering and structures to the few great names of the day. A design of this quality and thought--obviously it would fly well, was in a class by itself. It would be years before anything published would come close to it. My own first scale efforts (I started in '27) to be published came in '35 and were prehistoric in their relative value. Not gifted like Doug and some others, I was forced into simplicity and quick building, so by chance was more "modern" by today's standards. I seem to assume again this design was Doug's. You see I had him draw Hank Cole's immortal Smoothie Wake (was that it?) for Air Trails. Srull and Tom Schmitt often rave about that plane and Doug's presentation--a wonderful cutaway and full-size parts. I was not aware he knew anything on the subject (then) but he could do anything.

Doug was known (in our field) mostly for his many year's rendition of the feature of that name in Air Progress and, after that mag's demise, in Air Trails. Air Progress stopped due to the wartime paper shortage; its paper was given to Air Trails instaed so it could expand--to my good fortune. Postwar, in Al Lewis' day, he revived Air Progress--still with Street and Smith, and continuing, with Air Trails (renamed American Modeler and a few disastrous other things in between) with Conde Naste who bought Street and Smith to eliminate fashion magazine competition. Doug did much for the reborn Air Progress, a wonderful magazine during the 50's and 60's. It is a too long story to recount the terrible things that befell it--it was sold nice again. You see, a profitable magazine is not enough in a big house; it is a question of which mags make the most.

continued next page....

Doug's right hand shook terribly when he drew. As he lowered a pen to the paper, it vibrated so you could barely watch, then steadied for a second or two as a line was made, then shook again as he raised the pen from paper.

Doug had one leg. He lost the other propping a Jenny (barnstorming). His brother was killed while flying three passengers over Havana--the wings collapsed. Other bad things never deterred him from actively drawing. A pro's pro and a man who never talked of what must have been a fascinating past.

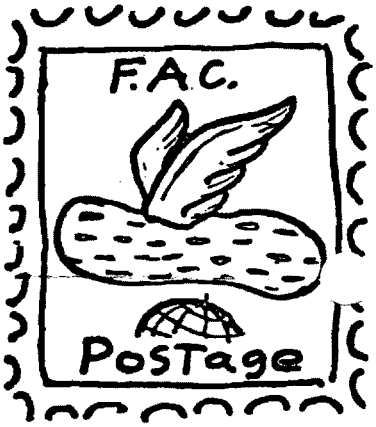
Much later he wrote me from Mexico asking that I do his obit. I was never up to that! I can say these few things now....do look up those home built projects.

Bill Winter

(ed. note; Thanks Bill for filling us in on a lttle bit of history and we are going to look into those those home built projects and try and present them in the newsletter. If you can supply us with more articles of this nature, please send them in to GHQ. This sort of thing should be preseved somehow).

****

Peanut & No-Cal Scale Postal Meet



Get in on the action, Clubsters, things are heating up already! Contest lasts until April 30, 1989. Entries postmarked after May 1, 1989 will not be accepted.

There are four events or "Wings". They are as the standings below are listed. Every time you fly your ship send in the time to GHQ, along with the name of the model, the date you flew and the "Wing" you flew in.

Enter as many times as you wish with as many models as you wish. Every time you better a score with a particular model, send in the score.

This contest is open to all FACers everywhere. If you fly in a contest then that time will also be recognized. Winners get another "notch" on the "Kanone" list as well. We will also have some prizes for the winners. Let's go Clubsters, get in on the fun! BUILD...FLY...WIN!!! EFF--AAA-CEEEEE!!!!!!!

INDOOR NO-CAL

Pilot	Model	Time
1. John Marett	Citabria	225 sec.
2. D.Slusarcyzk	Spitfire	218 "
3. D. Niedzielski	Fike	181 "
4. C. Slusarczyk	Stormovik	160 "
5. "Padre"Anderson	J-3 Cub	81 "
6. D. McDonald	Ord-Hume	72 "
7. Roy Biddle	SweePea	25 "

OUTDOOR NO-CAL

Pilot	Model	Time
1.Dave Stott	Bellanca Yo-50	43 sec.
2.Walt Leonhardt	Corben Sup.Ace	30 "
3. " "	Piper J-3	29 "

INDOOR PEANUT

Pilot	Model	Time
1.Vic Peres	Fike	70 sec.
2.Larry Loucka	DH-6	67 "
3.D.Niedzielski	Fike	63 "
4.D.Slusarczyk	Lacey	62 "
5.Padre Anderson	Piper Vagabond	50 "
6.Vic Peres	Fokker D-7	42 "

OUTDOOR PEANUT

Pilot	Model	Time
1.Carl Loehle	Lacey (WOW)	431 sec.
2.Eric Anderson	Fike	114 "
3.Dave Stott	Fairchild 24	55 "
4.Walt Leonhardt	Nes. Couger	23 "

MEMORIES AND A MOTH

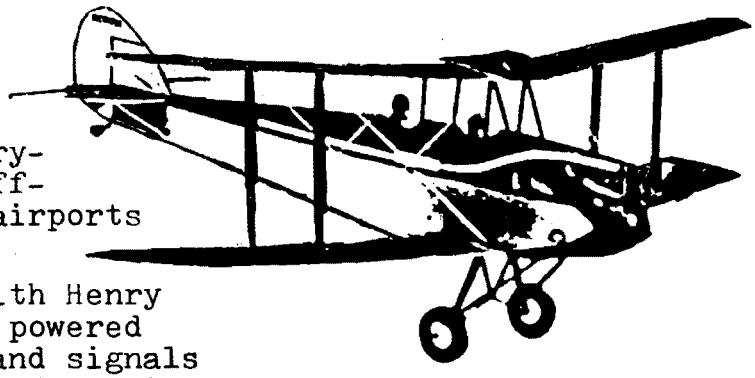
by Ed Heyn
Major USAF (Ret)

Part Two

Now began the hard work. For many months I labored through lunch breaks, evenings and weekends to fully restore my pride and joy! Each part was completely inspected, cleaned, repainted or replaced as required. The motor was overhauled till it ticked over like the proverbial sewing machine. Even those who had originately scoffed at my grandiose project now looked enviously at my sporty looking biplane. Although at that time there were several open cockpit biplanes based at the airport. The Moth, with it's perky lines and smooth flying characteristics, soon became the favorite of all who flew it.

How can I adequately describe in mere words my fabulous flying machine? Technically speaking, it was a DeHavilland 60-GM (M for metal fuselage) Gypsy Moth, an English designed sport plane of which about 150 were made at Lowell, Mass. during 1928--1929. Go power was provided by a British built four cylinder air cooled inline engine of 85 HP which rotated in the opposite direction from Yankee slags. The narrow open cockpits gave accomodations for the pilot in the rear seat and one passenger in the front seat. The engine, except for just above the clacking and jiggling open rocker arms, was enclosed in streamlined cowlings which faired into a slender fuselage at the rear of which were typically rounded DeHavilland tail surfaces. The top wing was mounted on a toothpick-like cabane section which also supported a corrugated aluminum gas tank which had a tendency to leak and drip gas onto the hot exhaust pipe with a rather loud "hiss". The wings were braced with RAF wires and paralell wooden interplane struts. By extending a collapsable strut between sockets in the root ribs and pulling two pins, each wing cellule could be folded back along the fuselage for storage. The rudder, top of fuselage, struts and cowlings were black while the rest was in silver. The registration number on wings and rudder was NC-929M.

In flight the Moth was everything a pilot could desire. Playful and kittenish, it was light on the controls and responded eagerly to my slightest whim. "We" spent many happy moments gayly cavorting over the countryside, playing tag with fleecy white puffball clouds, or just flying to nearby airports for chats with other pilots.



One lunchbreak I was taxi-ing out with Henry Ciavaco following me out in his Kinner powered Bird biplane. After a few impromptu hand signals we made a formation takeoff and later a formation buzz job at ten feet over the Canton Reservoir. A CAA inspector happened to be in the administration building watching the show. After we landed he had some caustic comments for us, but at least he went away laughing. One maneuver I tried in the Moth for the first time was a simple loop. The ceiling was about 2500 feet and the loop was larger than I expected. There I was flat on my back doing an inverted stall in the clouds. I popped out and recovered but a cloth cushion that was in the front seat was now stuck in the cabane wires between the cockpits. Without a chute I had to half stand in the cockpit and work it out and under me. This is how we learn about flying.

Yes, I still remember how nice it was to feel the wind in my face, the wide open sky above, the whistle and moaning of the rigging, the slap-slap of the external rudder cables against the fuselage, to feel the heat and hear the steady blat of the exhaust pipe a few inches from my left shoulder. With few other aircraft, except possibly the P-51 and F-86, have I felt such a close kinship as I did with the Moth.

CONTINUED NEXT PAGE.....

There are other stories to be told. Maybe some day. In early 1942 I enlisted as an aviation cadet and in the summer of 1942 I was invited to go to California to start Air Corp pilot training. With no one to store or watch over the Moth for me, it was reluctantly sold, but memories linger on. A photo of Moth NC-929M was published in volume NO.3, July 1987 of the Skyways Journal.

THE END

****

Have you rib slicers seen the latest kit from Diels Engineering yet? Here is one fine kit! Quality wood and tissue and beautiful decals. Of course we are talking about the kit of the Curtiss SBC-4. This just might be the best one yet. Dave also has available a kit of the Supermarine Sparrow that should make up into a fine flying model. The Curtiss SBC-4 is in ½ inch to the foot scale and the Sparrow is a peanut size. The price for these kits is $11.95 for the Curtiss and the Sparrow is $8.00 plus $1.50 for postage for each kit. Dave has other kits in his line of scale models as well as decals and canopies to go along with his many plans. Send him a dollar for his latest catalog, you won't be disapointed. Send to; Diels Engineering, Box 101, Woodville, Ohio 43469.

The 1988 FAC Nats Mark VI video tape is now ready and if you have a VCR you will want this tape to view over and over. It is almost as good as being there. There is also a tape of an interview of Bob Thompson and Dave Stott telling how the Flying Aces Club got started. Very interesting viewing for both tapes. Both tapes run about an hour each and you can get yours by sending $19.95 plus $3.00 postage for each tape to Dean McGinnes, 1503 Clairdale Lane, Lakeland, Fla. 33801.

Don DeLoach, 3428 Bryn Mawr, Dallas, Tex. 75225, Has a few T-shirts left from the "Lone Star Sector" contest and they would like to make them available to you clubsters. The cost is $10.00 postpaid and they have an illustration on them of the XP-55 Ascender. Send your money to the address listed above.

Chet Kowalik has an RC receiver available for trade. Chet says that it is a Beacon Electronics Co. receiver. He wood like to trade it for a couple of Cleveland 3/4 inch scale kits. The receiver is worth about a hundred dollars, as it is still in the original box with all the directions. Anyone interested can get in touch with him at this address, Chet Kowalik, 4727 Stanley Ave., Warren, Mi. 48092.

We have an S.O.S. for some info on the Wibault 170-C1 Trombe. If anyone has it will they please send acopy to; Terry Hoover, 165 Chestnut St. Winnepeg, Manitoba R3G-1R5 CANADA

GHQ is looking for the addresses of some FACers that have moved and did not leave a forwarding address with the post office. If you can help locate them we would appreiate it as their newsletters have come back to GHQ. Their names and <u>former</u> addresses are; R.B. McKenna, 1620 Artesia Blvd. #26, Redond Beach, Ca. 90278, David Williamson, 245 King St. W. Park Rd. S., Oshawa, Ont. L1J-2J7 CANADA, Tim Pivonka,DDS, 665 Med. Det., Camp Page Dental Clinic, APO SF 96208 (Korea), Bill Caldwell, 2416½ McKinney Ave., Dallas, Tex. 75201.

How Did You Get That Nice Color?

How many times have you asked the above question of another modeler? Has anyone ever asked it of you? Read on and maybe you will be on the receiving end of that question someday.

I have never been able to locate a decent looking piece of light tissue colored O.D., aged muslin, creme, gray, silver, and the list goes on and on. If such a color is in somebody's inventory, it is usually a very heavy tissue, almost like wrapping paper. What to do? Color your own!

I have had some recent experiences that might be worth your reading time and prevent you from making the same mistakes that I have already made.

I own a number of spray making devices. The first one I bought was the cheapest spray gun made by Badger, the Mini Spray Gun. Later on I felt the need of a better gun and bought a Type H set from Paasche. I have even purchased the L-shaped mouth sprayer that Mark Fineman wrote about in one of his articles. Cans with paint under pressure have also been used but you are limited to the color that comes in the can.

Unfortunately, the most expensive spray device, the Paasche, does the best job for me. The Badger Mini Gun spits out some fairly large droplets which detract a bit from a nice paint job. The same is true of the L-shaped mouth sprayer. Spray cans do a fair job if the paint color is what you want.

There are all kinds of paints and if you have read Model Builder you should know that Fernando Ramos has touted Floquil paints highly. They are good and you can get a variety of colors, mostly those used by railroad modelers. A little bit goes a long way so thin it down. A heavy coat also makes the tissue brittle.

Polly-S is a water soluble paint that has been successfully used by modelers. So far I haven't tried spraying it on tissue but I know it goes on wood and small tissue areas in a neat fashion. The word I get is to use denatured alcohol as a thinner when using it in a spray gun.

Tamiya has an acrylic paint that has some interesting colors. I have some O.D. on hand that I intend to try on a P-51-B I'm building. I'm not sure about what to thin it with so I bought some Tamiya thinner just to be safe.

Humbrol enamels have some great military colors and I have a stock on hand to be used some time in the future. No experience here but I have read the literature and the warning is clear-be careful! First of all, fumes are dangerous and explosive and enamel dries rather quickly so you have to stay pretty close to the area you are spraying and clean up fast upon completion to prevent dried paint from fouling your equipment.

The best(?) has been saved for last. I have been using craft shop acrylics and find the colors are quite varied. The brand name is Keepsake and it is made by M. Grumbacher, Inc. I bought mine in a local craft and garden center named Franks. The acrylics are water soluble and can be easily thinned to a light spraying consistency. Mixing different colors presents no problems either. Cleaning

up after spraying is a snap but don't delay the clean-up job. Once the acrylic dries it can foul small orifices as it dries hard.

Some colors I have on hand for various models will give you an idea of the versatility of these paints. Constitutional Parchment Light is a good match for unbleached muslin. Picket White will make that Lacey sparkle. Carolina Wheatfields Light should duplicate the creme color of the Chambermaid or the undersides of the Bristol Scout. Savannah Coffee Deep with some green and black added might make a passable color for the SE-5A.

I have made a number of rectangular frames using what ever wood is available. I have made some frames using ⅛ x 1/8 balsa strips. 3/8 x 3/8 also works very well.All have angular reinforcements in the corners to maintain the shape when the tissue is water shrunk. I try to size my frames so that I can use as much of the tissue as possible without wasting much. Two common sizes that I have are 11 7/8 x 17 5/8 and 20 x 15.

A few words about tissue should be said. You are all aware that tissue comes in a variety of weights. The lightest is the pre-WW II superfine tissue that can't be found anymore. I think the closest you can come from the regular modeling sources is Oldtimer Models. The Japanese make a tissue sold in the better art stores called Gampi. Even this comes in various weights. The best I have seen weighed .0042 grams per square inch. After spraying it with a light coat of gray (for a WW II naval aircraft) it weighed .0057 grams per square inch. Compare that to the normal good tissue that weighs about .008 grams per square inch. This translates into a saving of close to ½ gram when covering a peanut.

Attach the tissue to the frames by using rubber cement (or dope if you prefer). Paint over the tissue on the frame with rubber cement solvent. If the tissue should pull away from the frames while drying, you will get wrinkles like Grandma Moses.

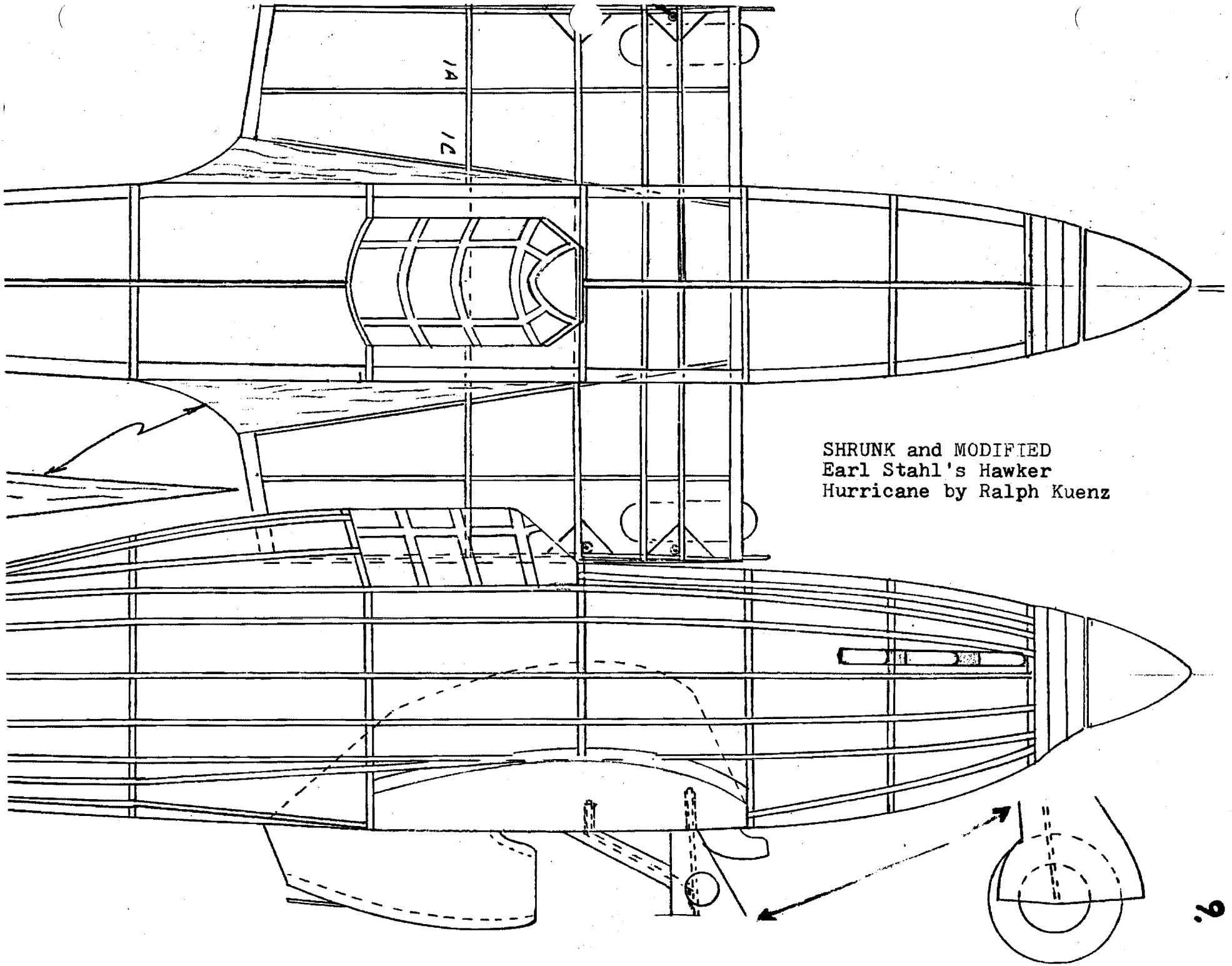
Thin the acrylic with water (at least 50-50). Spray going across the tissue covered rectangle with a light overlap. Use a very light coat. Turn the frame on its side and spray going cross grain to the first coat. Let it dry and cut from the frame. I store my sheets between 2 fairly large pieces of cardboard. The tissue is always flat and smooth when I cover.

The good thing about acrylic painted tissue is that when you adhere it to the model using dope on the framework and thinner, the color doesn't run. Those of you who use thinned white glue don't have this problem, Which reminds me, I covered a Heinkle 100-D No-Cal with O.D. tissue using RIT dye. Any water on this tissue causes the color to run so beware of RIT dye and white glue or dew from the grass. DISASTER!

Now, after reading this, some of you will say that you will just stick to models that can be covered with the standard colored tissues. It sure saves a lot of time, work. money, and it looks almost as good. With a model covered like that, no one ever asks, "How did you get that nice color?". An old time modeler once told me, "No one can tell how neat the model is when it's at 500 feet". The answer to that is that they are always judged and admired at arm's length.

I'm sure I have just scratched the surface of this subject. Wouldn't it be great if this article encouraged modelers with more experience and skill to respond?

Jim Miller



SHRUNK and MODIFIED
Earl Stahl's Hawker
Hurricane by Ralph Kuenz

'6

10.

19 November 1988

Dear Lin,

Here's another item that's probably worth printing in FAC News:

FURTHER DOPE ON RANDOLPH'S by Joe Wagner

In an earlier issue of FAC News I mentioned the availability of genuine Randolph aircraft dope from ABC Hobby Supplies, P. O. Box 2391, Clarksville, Indiana 47131 [Phone (812) 944-5557].

Since then I've used both Randolph's nitrate and butyrate dopes, and have further news to relate about them. First, although all Randolph's color dopes are butyrate, they're of the low-shrink variety, and can be brushed on over clear nitrate with no problems.

Second, you can apply Randolph's white dope over red without any pink bleedthrough! To accomplish this rather difficult objective, the pigments used in Randolph's various shades of red dope had to be more expensive than the cochineal or synthetic dye used in most red paint. That means ABC must charge more for red dope than for other colors; but I think the extra color stability is well worth the surcharge.

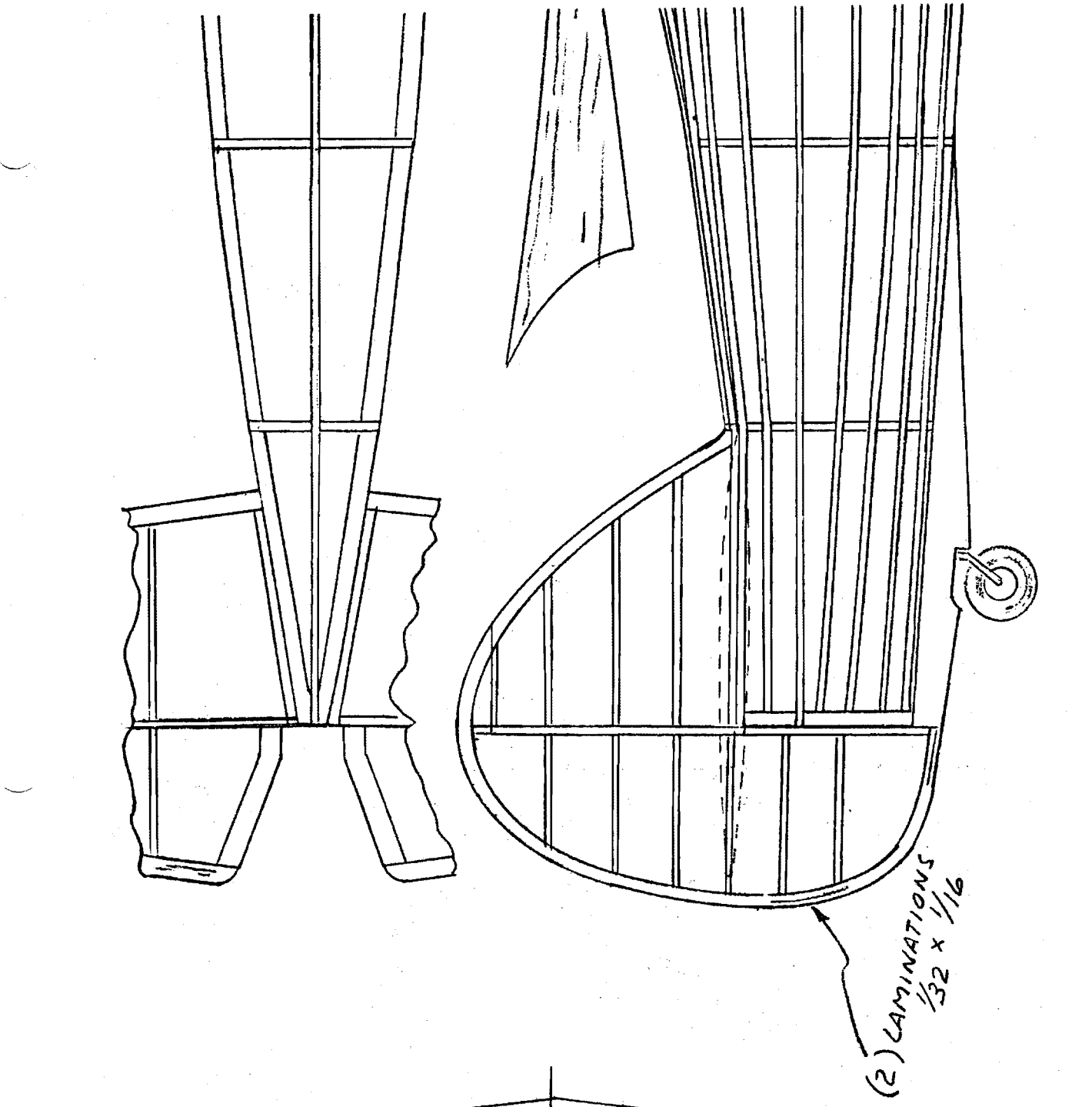
Third, Randolph's "Retarder", which is really a slow-evaporating solvent, makes an excellent all-round thinner for both nitrate and butyrate dope. Its slow drying rate permits more flow-out for brushed finishes; and it also makes an ideal solvent for covering removal.

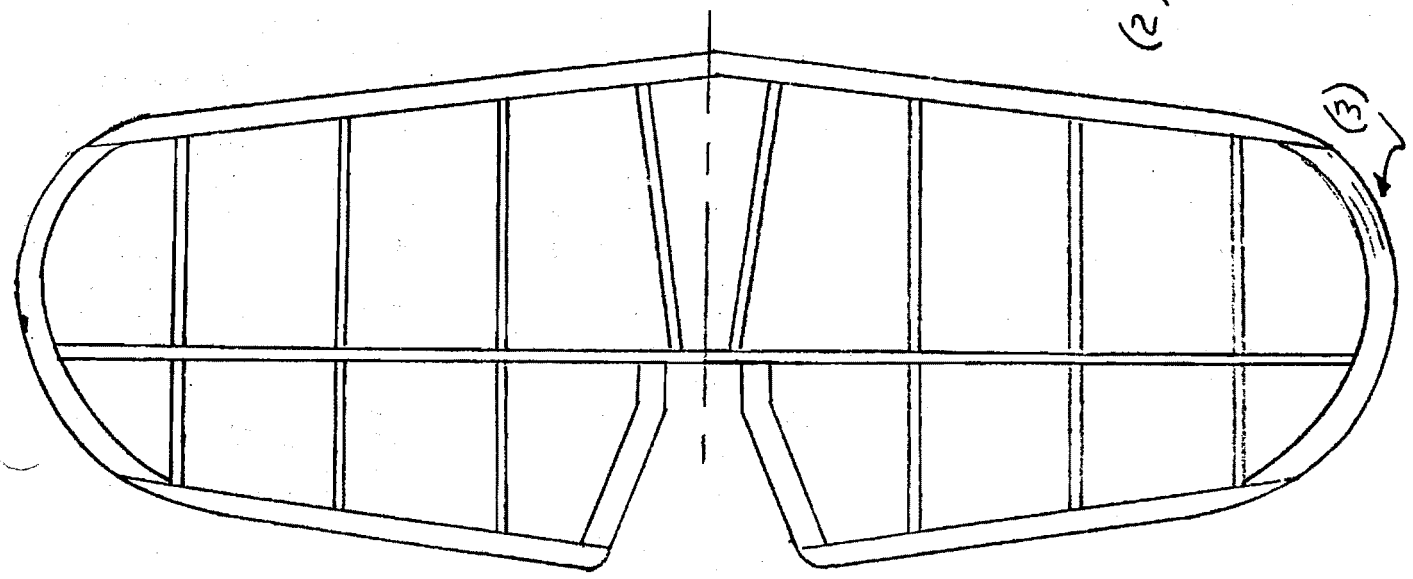
Slow evaporation has two major benefits. First, you don't need so much because the solvent action is long-lasting. Second, the reduced quantity necessary means not so much fumes as standard thinner produces. Retarder is only slightly more expensive than regular thinner, and I like it so much I think I'll use nothing else to thin my Randolph dope. After all, fast drying has no particular value in model airplane doping that I'm aware of....

Sincerely,

Joe

JOE WAGNER
135 WAUGH AVENUE
NEW WILMINGTON, PA 16142
(412) 946-2281


(2) LAMINATIONS
1/32 x 1/16


(3)

* * * Prop Wash Spin * * *

Mumbo Jumbo #34 from the pen of the Glue Guru

Salutations, disciples! Today we shall ponder the strange rotation known as prop wash spin; a study requested by an alert reader of the Others' journal, a magazine engaged to print the following message of one Duke Fox, a purveyor of engines. The quotation is exact, but limited to prop wash matters.

"Not everything we are told is so. For example: we are often told 'It is motor torque, and gyroscopic action, that causes an aircraft to turn left when power is applied.' I suspected these forces were insignificant, and that the spiral propwash pushing on the rudder was the overriding force at play - so I devised a little test. Take a Northern Pacific type rubber model. Assemble and fly. It will fly in left turn circles. Now cement the stab in with CyA and then extend the rudder slot from top to bottom. Put the rudder on facing down. It will fly in right turn circles. Replace the rudder with a longer parallel sheet that you can slide up or down, and you will be able to find a position where the top forces and the bottom forces are balanced, and the model will fly straight. Conclusion - the 'authorities' were just plain wrong."

I can not identify the woefully ignorant 'authority' who so grievously misled Mr. Fox, but I suggest that the Northern Pacific model be returned to the 'authority's' playpen immediately, before his distraught mother calls the police. Certainly those of us who shave have long been aware of the spiraling nature of prop wash, Still it is true that little has been said about prop wash rotation as compared say, to torque. Here Mr. Fox's disillusionment is more solidly based. Why the muted approach to prop wash spin? For that matter, why the spin at all? And if there is a clear spinning tendency, why don't we make positive use of it, say to control the violent left turn at launch? What goes on here?

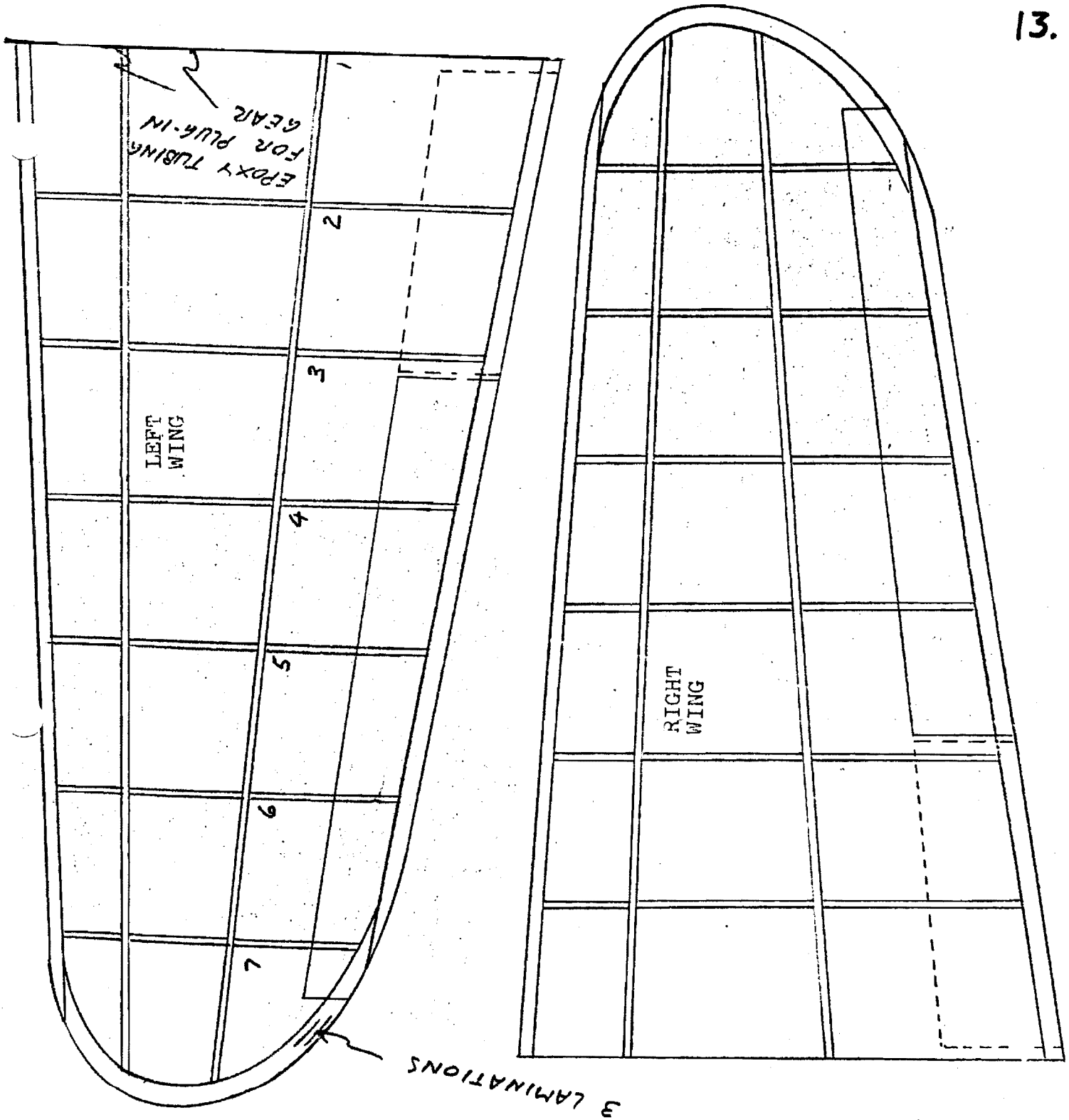
The purpose of the prop is to create prop wash. Thrust is directly proportional to the change of speed each bit of air experiences in passing through the prop disc. In other words, the greater the change of speed, the greater the thrust; or, the stronger the prop wash, the greater the thrust.

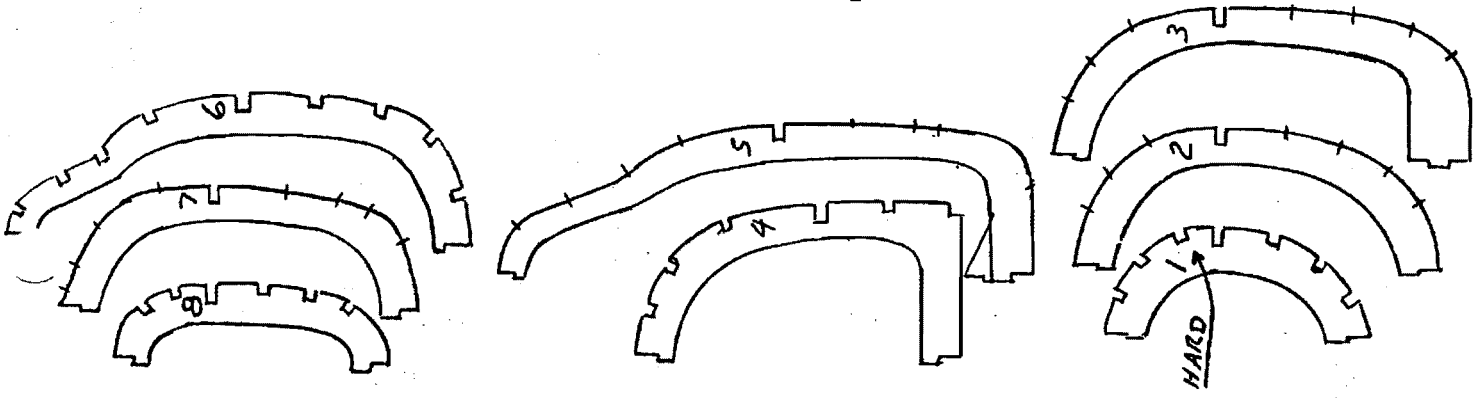
There is a price to be paid for thrust and that price is drag. Much of that drag is reflected in entrained air, caught up in the wake of the revolving blades. If ever you have stood on a highway, while a trailer truck whooshed by, you have experienced an enormous volume of entrained air representing air drag. Rotating prop blades are much more efficient than trucks, so the entrained air volume is small - but it's there.

The entrained air moves in the same direction as the prop blades - a circular path. When combined with the basic, straight back, thru-disc flow, the result is a mild spiral. The spiral can be quite real in its effect; the evidence of Mr. Fox is consistent with a number of full scale studies. For example, an early cleaned-up McDonnell lightplane was found, in actual wind tunnel tests (NACA Tech Rept #690 dated 1940) to experience considerable left yaw, quite independent of torque, owing to prop blast impinging on the left side of the vertical tail. With the prop removed in a simulated glide, there was no yaw. This result is exactly what one would expect from spiral prop blast considerations.

Yet we make little practical use of the spiral nature of prop blast. Why not? There are two catches here: blockage and diffusion.

In Mr. Fox's case, there is no fuselage except for a thin stick. In most of our models, there is a fairly fat fuselage, acting to sorely confuse the flow patterns received at the vertical tail. Next, we employ a truly ferocious amount of power, and a correspondingly large amount of right and down thrust. In short, we force the prop blast to move, in some unknown angular fashion, across the fat fuselage before arriving at the vertical tail. The result of all the blockage is great uncertainty concerning the disposition of the prop blast - especially the spiral aspect of prop blast. Here the matter of blockage is critical. The very same NACA wind tunnel tests noted above, showing a large spiraling effect on a cleaned-up (big fillets) light plane, demonstrated a cut to about half the effect on a dirty (no fillets) version of the same airplane. Where the configuration is of the bird-cage variety (Douglas


EPOXY TUBING FOR PLUG-IN GEAR
1
2
3
4
5
6
7
LEFT WING
RIGHT WING
3 LAMINATIONS


6
7
8
5
4
3
2
1
HARD

YO-31A observation plane, replete with guy-wires and pylons) a barely discernible spiral prop wash effect is experienced at the vertical tail. In short, unless the fuselage crossection is either mighty small (Mr. Fox) or mighty clean, the spiral effect tends to disappear.

How can that be? Where does it go? This introduces the second catch - diffusion. Entrained or wake air is highly unstable. It is quite content to break down into tiny vortices that so chafe upon one another as to attenuate or die very quickly. What actually arrives at the vertical tail may not be one big spinning flow, but rather thousands of microscopic spinning flows, each rapidly dying in transit. Such flows, still embodying the remains of the initial spin when considered in total, no longer have a powerful sense of direction. They act merely to increase the turbulence level sensed at the vertical tail; the spin has degenerated into noise. What was once a clear sense of direction has become dither.

I suspect that this is the case for most scale models.We do not attempt practical application of prop wash spin because the effect is usually too weak and uncertain to warrent exploitation. Yet our models turn left under power anyway, for torque has nothing of the uncertain about it. As it is written: in scale, beware of the torque that you know, rather than of the prop wash spin you may never know.

But aren't there models reflecting significant prop wash spin? Yes! The gods favor something really clean with a minimal fuselage crossection and little or no thrust line offset. If you suspect your model to qualify, try a small " sub-rudder" of clear plastic. If it produces a profound effect, you've got an extra means of countering torque. There definitely are such models; the ancient literature describing Wakefield contains several such discoveries.

Pending such a discovery, stick with torque as the cause of 'torquing in'. As for gyroscopic effects, all known computations indicate that only high revving gas and glow models are subject to this phenomenon. That's just as well, for we've got enough trouble in rubber scale without it. As it is written: those who live by rubber power shall die by rubber power.

"RUBBER POWERED MODEL AIRPLANES"
by Don Ross

168 pages covering rubber powered models from the simplest stick to contest types. Every aspect of modeling is covered both from the "How To" and the "Where From". Simple, fully illustrated instructions for Construction, Covering, Props, Rubber, Winding, Flight Trim and even a whole chapter on "Design Your Own" including Conventional, Biplane, Canard and Flying Wing.

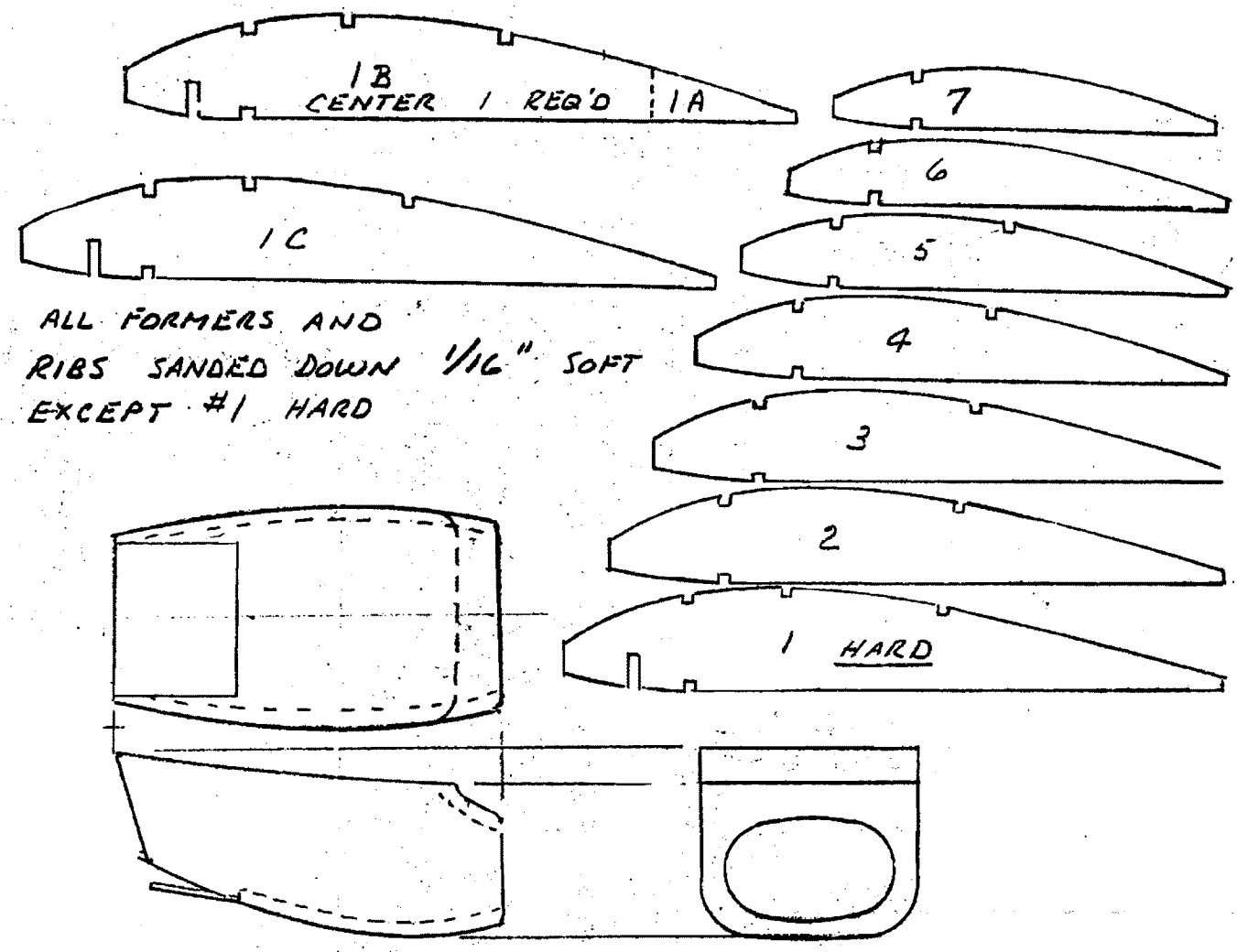
Scores of pictures and sketches clearly descibe techniques from beginner to expert including many hints to aid construction, scale appearance or flight.

The book includes 3 fully detailed plans and enough material to take the new modeler from beginner to better than average competitor in gradual, understandable steps. It includes technical material useful to the serious modeler and is useable by parent or teacher to instruct or help an individual or group.

The Appendix lists over fifty sources for plans, kits and materials as well as modeler's organizations and publications.

The book is available through; Motorbooks International, Box 1, Osceola, Wis. 54020, 1-800-458-0454.

Single copy retail order; $12.95 + PP $3.95 max for one or more.



MORE COMMENTARY ON HUNG

(i.e. The possibility of the existance of Anti-Hung)

by The Padre

When Hung's favors are sought and not found, free flighters are tempted to adopt a rather schizoid philosophy of life, i.e. for every advantage there's a disadvantage, for every thermal there's a wind shear, and if there is a Hung--there must surely be an anti-Hung.

If creation's goal is self-neutralization, if our Creator's design is ultimate void, this route is the right road.

However, I'm not certain about the existance of either Hung or anti-Hung.

Hung may exist, but experience affirms that dead air certainly exists. After numerous flights in this medium I testify that Hung is out there, somewhere, but unlike our Creator, he is not everywhere present. He is never indoors - but anti-Hung lurks in ventilators.

Author's note: "Commentary" is in reponse to judges who question my habit of launching indoor models while on one knee.)

(Editor's note: The author has no indoor Kanones.)

****

THE GRIFFON IS ALIVE & WELL, AS ALL FAC MEMBERS KNOW! WHAT ISN'T WELL KNOWN IS HOW MR. KEEN LOST THE BLACK BULLET LAST YEAR...

by BOB ROGERS

IT WAS A DARK & STORMY NIGHT. OUR HEROES HAD LEFT GRAYLANDS TO INVESTIGATE REPORTS OF A RUSSIAN TRAWLER SNEAKING UP THE HUDSON...

MY WORD, BARNEY! OUR ENGINES HAVE QUIT COLD!!

BEGORRAH! SURE AND THERE'S A LIGHTED STRIP AHEAD—BEST CALL IN A MAYDAY

OUT OF GAS! BARN, YOU REALLY MUST LAY OFF THE O'DOUL'S DEW

CHEE, BOSS-AT MY AGE, I'M LUCKY TO REMEMBER ME RELIEF TUBE

Conoco

OH DRAT, I'LL HAVE TO GET AN IFR CLEARANCE— IT'S BEEN A LONG TIME SINCE I FOOLED WITH THAT. WELL, I'LL ASK THEM TO CLEAR US TO NOVA SCOTIA—WHEN WE GET PAST THE MONTAUK LIGHT, I'LL SNEAK OUT AND BACK TO GRAYLANDS

WE'D BETTER GET OUT OF HERE FAST BEFORE THEY REALIZE I GAVE THEM A BOGUS N-NUMBER...

THE CLEARANCE COMES THROUGH—

"BLACK BULLET, NOVEMBER-ONE-OH-TWO-GOLF, CLEARED TO NOVA SCOTIA VIA THE ONE-TWO-ZERO-DEGREE RADIAL FROM IDLEWILD VOR TILL INTERCEPTING THE TWO-FIVE-TWO DEGREE RADIAL OF HAMPTON VOR TO HAMPTON. THE ZERO-NINE-SIX-DEGREE RADIAL OF HAMPTON TILL INTERCEPTING THE TWO-SIX-SEVEN-DEGREE RADIAL OF NANTUCKET, CONTROL CORRIDOR ELEVEN FORTY THREE. FLIGHT PLAN ROUTE: MAINTAIN FIVE THOUSAND FEET. AFTER TAKEOFF, A LEFT TURN TO TWO HUNDRED NINETY DEGREES. CLIMB TO EIGHT HUNDRED FEET. LEFT TURN TO ONE HUNDRED SIXTY DEGREES FOR TWO MINUTES THEN A LEFT TURN, RADAR VECTORS TO THE ONE-TWO-ZERO RADIAL OF IDLEWILD. CROSS THE TWO-FOUR-ZERO-DEGREE RADIAL OF IDLEWILD AT OR BELOW TWENTY FIVE HUNDRED FEET. CROSS THE ISLIP LOCALIZER AT FOUR THOUSAND OR BELOW. INTERCEPT THE TWO-FIVE-TWO-DEGREE RADIAL OF HAMPTON AT FIVE THOUSAND. CONTACT THE TOWER FOR TAKE-OFF CLEARANCE".

EGAD! THE ONE-TWO-ZERO RADIAL FROM IDLEWILD.. NO, TO THE HAMPTON VOR.. WAIT A MINUTE. I'M TO EXECUTE A RIGHT TURN- OR DID HE SAY LEFT TURN? BLAST! BE A GOOD FELLOW BARNEY, AND GET US A CAB...

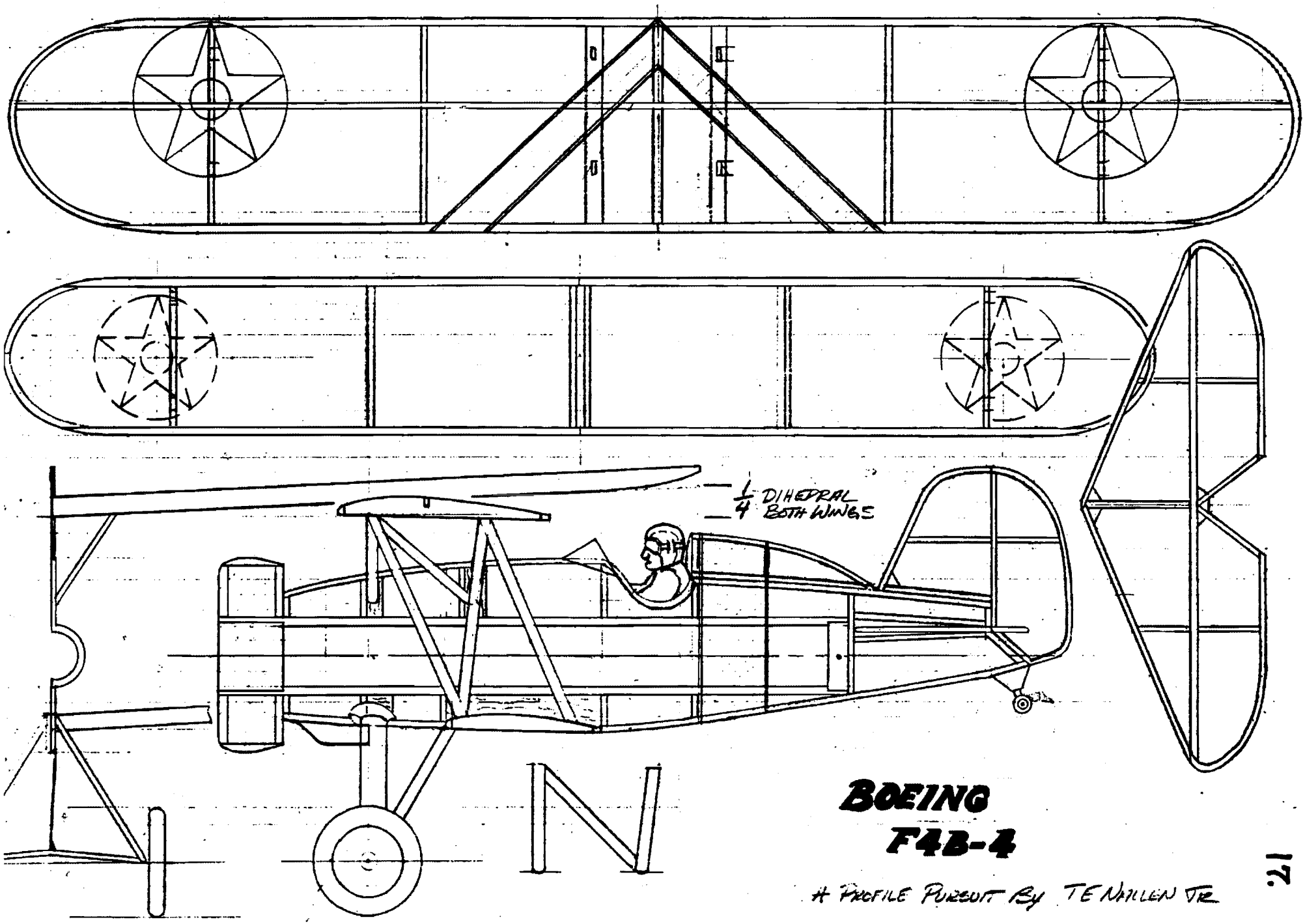
RIGHT, BOSS. AND SAY-YOU'D BETTER TAKE OFF THE CRIMSON MASK

MYSTERY PLANE ABANDONED ON LAGUARDIA TAXIWAY

NEW YORK (AP)-A STRANGE AIRPLANE OF 1930ISH, BAROQUE DESIGN, IT'S ENGINES STILL TICKING, WAS ABANDONED ON LAGUARDIA LAST NIGHT.

TWO ELDERLY MEN HAD MADE AN EMERGENCY LANDING. AFTER REFUELING, THEY REQUESTED TAKEOFF INSTRUCTIONS, THEN ABRUPTLY LEFT THE AIRCRAFT.

AUTHORITIES IMPOUNDED THE PLANE. A SPOKESMAN FOR THE FBI, DRURY LANG SAID, "THEY WERE PROBABLY CARRYING DOPE IN THIS WEIRD CRATE. AND I DON'T MEAN THE KIND THEY USED TO PAINT J-3'S WITH".



BOEING F4B-4

A PROFILE PURSUIT BY T E NIELSEN JR

A TRADITION BEGINS....

...when an event is identified with an object.

The object: the fish-like tie presented at the FAC Nats Mark VI awards night by Ross Mayo, outgoing president of the Erie club.

In fact, this presentation is much more than some inside shin kicking.

The Event: A guilt trip, triggered by an article in FAC News, #115-41, "The Flying Fische". In it, F.S. Bilder, noted obscure A.C. historian, refers to one Ross Mayo, a home aquarium maintenance person, who makes house calls in Erie, Pa. Even though the names are polar opposites, Mr. Mayo verbally attacked Mr. Bilder at the Erie club's 25th anniversary, the night of the blizzard of '88. After Mr. Mayo's attack, he confessed to the Padre that the Fische article hit a nerve. The Erie club's leader had allowed the excessive demands of his new and growing home aquarium to lure him away from the building board. Shame!

With hindsight, the true meaning of the Mayo-Fish tie tradition crytalizes. This is not the first time an innocent bystander got it.

Consider the Adam-Eve affair in Genesis.

To Summarize:

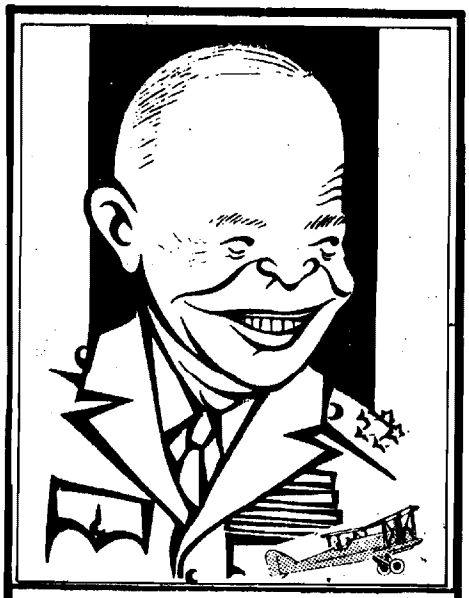
1. Fish have great biblical significance
   A. Jesus told Peter where to catch them
   B. Jonah was eaten by one
   C. Early Christian graffiti-persons drew them on walls
2. Fisherpersons tend to exaggerate the dimensions of would-be prey.
3. Ross Mayo keeps them in his home.

So, the Mayo Fish Tie is the object which commemorates the event of building board time. This worthy FAC discipline should be commemorated at least biennually. To this end, I gladly contribute the object. The event will be provided by you stick and tissue, rubber-twisting believers.

Let the tradition begin.

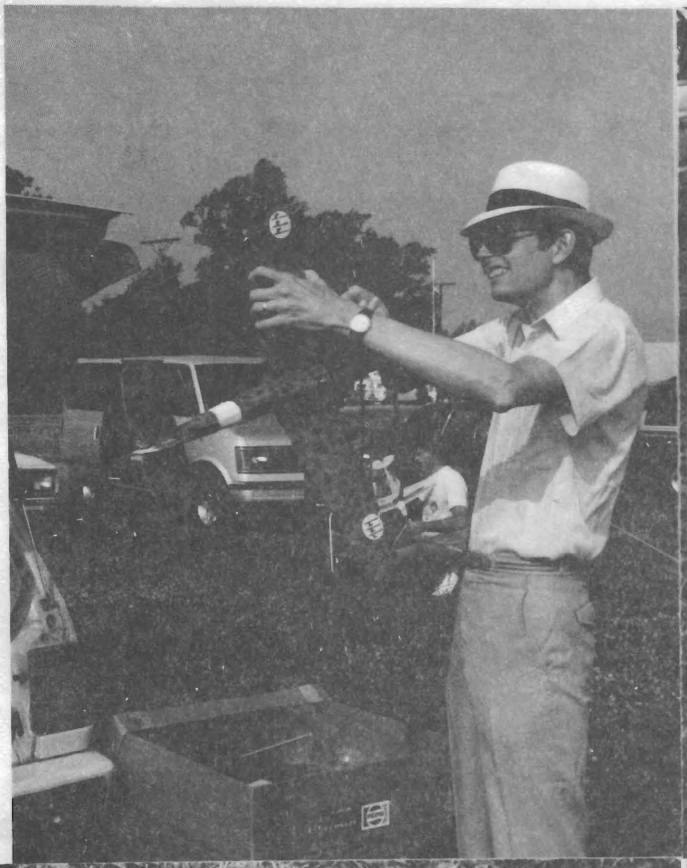
The Padre
1988 Fish Tie Awardee

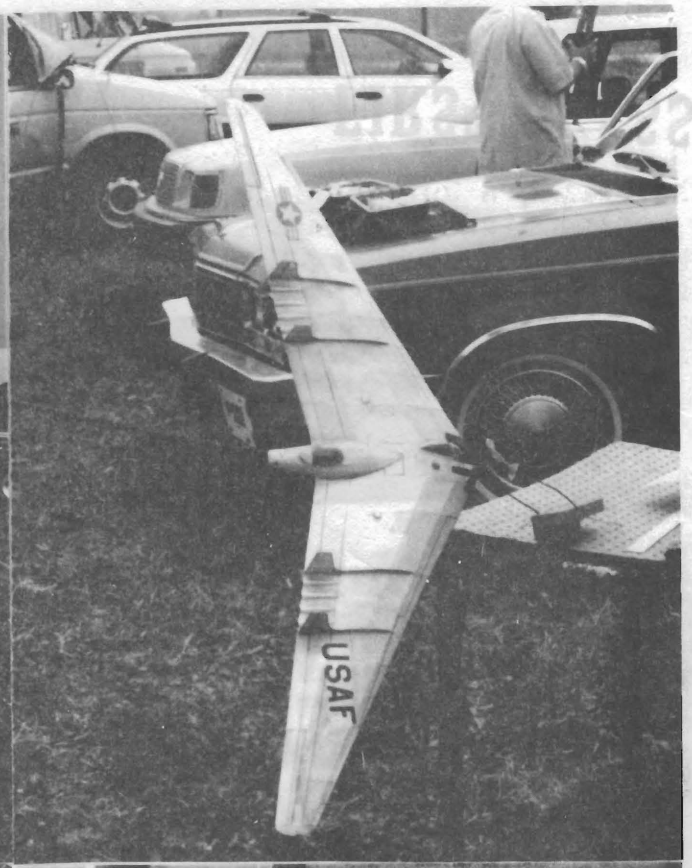
****

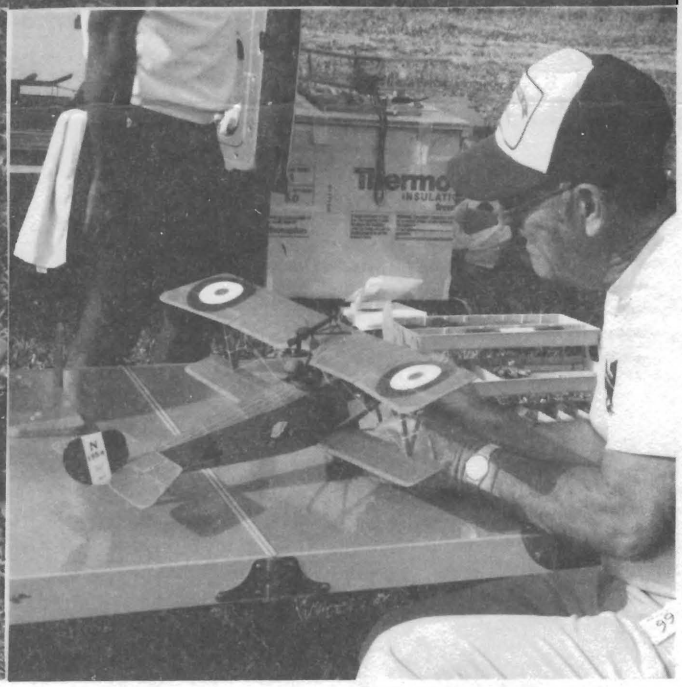


Dwight D. Eisenhower was the first President to hold an airplane pilot's license. It was issued to him in 1939. He learned to fly when he was a lieutenant colonel on Gen. Douglas MacArthur's staff in the Philippines.

Sent in by Joe Wachter







More photos from the FAC Nats, Mark VI. These photos are by Eddie Rowe from Endicott, NY.

Top photos; Dave Rees preparing his great Cant Z-1007, for flight. The Northrop flying wing by Vance Gilbert, and fly it did!

Bottom photos; A Vultee Vengeance and a P-47 built by Eddie Rowe, both from Comet kits.

Phil Cox checking out his Nieuport for the Big Scrap!