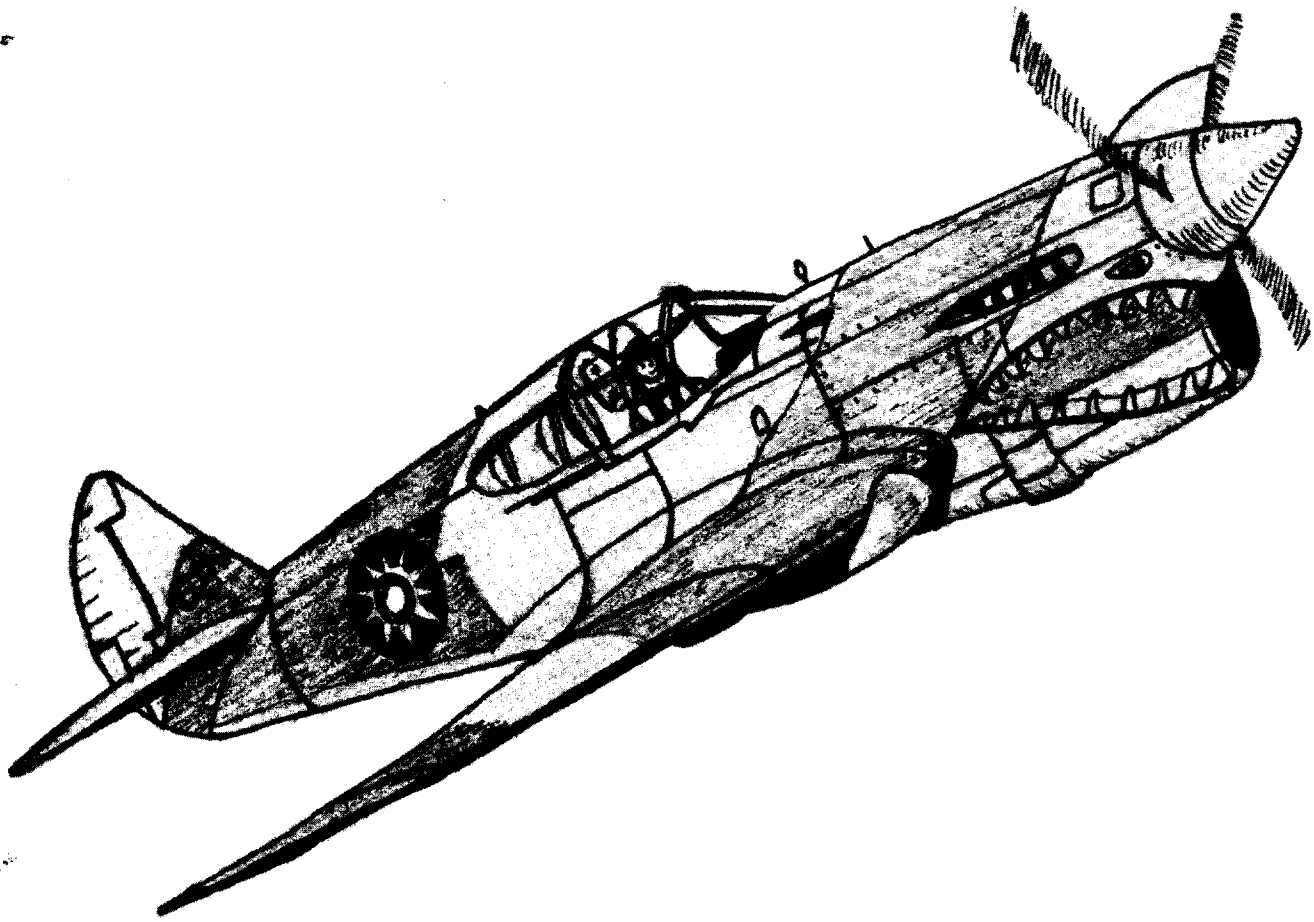
FLYING ACES

Club News

ISSUE #130-56 Nov./Dec. 1989

THIS ISSUE DEDICATED TO ANDY MEDOVITCH



THE 1990 FAC NATS MARK VII

HOST CLUBS:
ERIE MODEL AIRCRAFT ASSN.
DETROIT CLOUDBUSTERS

INFORMATION SHEET No. 1, FEBRUARY 1990

CONTEST MANAGER	CONTEST DIRECTOR	ASSISTANT CON. DIR.
Lin Reichel	Victor Didelot	Ralph Kuenz
3301 Cindy Lane	4410 Lorna Lane	14645 Stahelin
Erie, Pa. 16506	Erie, Pa. 16506	Detroit, Mi. 48223
(814) 833-0314	(814) 838-3263	(313) 835-7141

DATES: July 12th, 13th, 14th, 15th, 1990

TIMES:
Thursday July 12th; Registration and check-in, noon untill.
Friday July 13th; Flying 9:00 AM to 5:00 PM.
Friday July 13th; Scale Judging 7:00 PM -?
Saturday July 14th; Flying 9:00 AM to 5:00 PM.
Sunday July 15th; Flying 9:00 AM to 5:00 PM.

LOCATION: National Warplane Museum, Geneseo, New York.
Scale judging at State University of New York.

EVENTS:

Friday	Saturday	Sunday
Shell Speed Dash	Greve Race	Thompson Race
WW I Dogfight	WW II Combat	WW I Peanut Dogfight
Embryo Endurance	Golden Age Scale	FAC Scale
No-Cal Scale	Peanut--Hi-Wing Cabin	FAC Power Scale
Aerol Trophy Race	FAC Jumbo Scale	FAC Peanut,(no Hi-Wing cabin)

On Sunday we will fly Golden Age Military Biplanes mass launch. All Golden Age Military biplanes are eligible, including one of a kind, trainers and combat aircraft, providing they were designed for the military. Any biplane of any country is eligible. Biplanes that saw combat in World War Two are eligible provided they are in pre-war colors. (example, Gloster Gladiator)

Mass Launch event times;

Friday.....World War One Dogfight 1:00 PM (no peanut models)
Aerol Trophy Race 4:00 PM.

Saturday.....Greve Race 10:AM.
World War Two Combat 1:00 PM.

Sunday.....Thompson Race 10:00 AM.
World War One Peanut Dogfight 1:00 PM.
Golden Age Military Biplane 3:30 PM.

Both World War I mass launch events are for multi-wings only.
No qualifying flights for any mass launch events except for the race events.
No official flight times will be recorded after 5:00 PM on any day.

ENTRY FEE: $15.00 by June 15th, $20.00 after June 15th.

LODGING: Dormitory rooms and meals will be available at the State University of New York, Geneseo, New York. Cost is $161.00 each for double occupancy, $204.00 single occupancy. This includes a room for Thursday, Friday, Saturday and Sunday nights and;

Dinner,.....Thursday July 12th		Banquet....Saturday July 14th	
Breakfast.....Friday "	13th	Breakfast..Sunday "	15th
Dinner.....Friday "	13th	Dinner.....Sunday "	15th
Breakfast.....Saturday "	14th	Breakfast..Monday "	16th

6.

Nearby motels for the Flying Aces Nats, Mark VII. Reservations for these facilities must be made directly with the motel.

Geneseo Inn 4242 Lakeville Rd. Geneseo, NY 14454 (716) 243-0500	Super 8 Motel 1000 Lehigh Station Rd. Henrietta, NY 14467 (716) 359-1630	Holiday Inn 1111 Jefferson Rd. Henrietta, NY 14623 (716) 475-1510
Am. House Bed & Break. 39 Main St. Geneseo, NY 14454 (716) 243-5483	JJ Leisure Motel 6001 Big Tree Rd. Lakeville, NY (716) 346-2120	Conesus Bed & Breakfast 2388 East Lake Rd. Conesus, NY (716) 346-6526
Cedar Motel Route 15 East Avon, NY (716) 326-3630	Crest Hill Motel Routes 5 and 20 Avon, NY (716) 226-3450	Avon Inn 55 East Main Avon, NY (716) 226-8181
Stratford Motel 6076 Avon/Lima Rd. Avon, NY (716) 226-9908	Twin Swan Motel 5468 East Avon Rd. Avon, NY (716) 226-2286	Genessee Country Inn 948 George Mumford, NY (716) 538-2500
Microtel 905 Lehigh Sta. Rd. Henrietta, NY (716) 334-3400	Red Roof Inn 4820 W. Henrietta Rd. Henrietta, NY (716) 359-1100	Howard Johnson 3350 W. Henrietta Rd. Henrietta, NY (716) 475-1661

RESERVATIONS: To make reservations, send the attached registration form and a check, payable to Flying Aces Nationals, Mark VII, to;

Lin Reichel
3301 Cindy Lane
Erie, Pa. 16506

For advanced reservations (received by June 15th).

Contest Fee:.....$15.00
Banquet (for non-dormitory residents).....$16.00
Dormitory (double occupancy with meals and banquet)...$161.00
Dormitory (single occupancy with meals and banquet)...$204.00

We cannot guarantee dormitory lodging for reservations received after June 15th, nor can we refund cancellations received after June 15th.

Confirmation of reservation will be mailed to all entrants.

SANCTION: This will be an AMA sanctioned contest. You will be required to show a current AMA card or receipt of dues paid.

JUDGING: Judging for the scale events at the 1990 FAC Nats will be held on Friday evening, July 13th. If you do not arrive until Saturday your models will be judged then. This will be done at the judges earliest CONVENIENCE.

Judging scores for a model will NOT be posted until an official flight has been recorded.

Models must be submitted for judging in the form in which they will be flown, except for prop, rubber motor and trim tabs.

We have reserved space close to the dormitories as the judging site. All models that are submitted on Friday will be displayed on tables for all to see.

QUALIFYING FLIGHTS: Only race events will need to have qualifying flights as per FAC rules (see Shell Speed Dash). Qualifiers names will be posted on the public display boards. An official Timer must be used for qualifying flights.
If you are one of the qualifiers it is your responsibility to be ready on time at the launching site promptly when your event is to be flown.

AWARDS: Grand National Champion.
Engraved plaques through 5th place.
Earl Stahl Trophy (awarded at the banquet).
Special achievement (if warranted).

Award winners for Friday and Saturday will receive their awards at the banquet. Sundays winners, right after the contest closes right on the field.

THERMAL DETECTORS: Two mylar thermal detectors will be placed on the field for use by all contestants. No other thermal detectors of any kind will be permitted.

TEE SHIRTS: FAC NATS MARK VII tee shirts will be sold throughout the meet, as long as the supply lasts. We also expect to have FAC caps available too.

BUY 'N SELL: Tables will be provided Friday night during the scale judging period for selling kits, plans and other model supplies. If you intend to be a vendor, you must notify us prior to June 15th.

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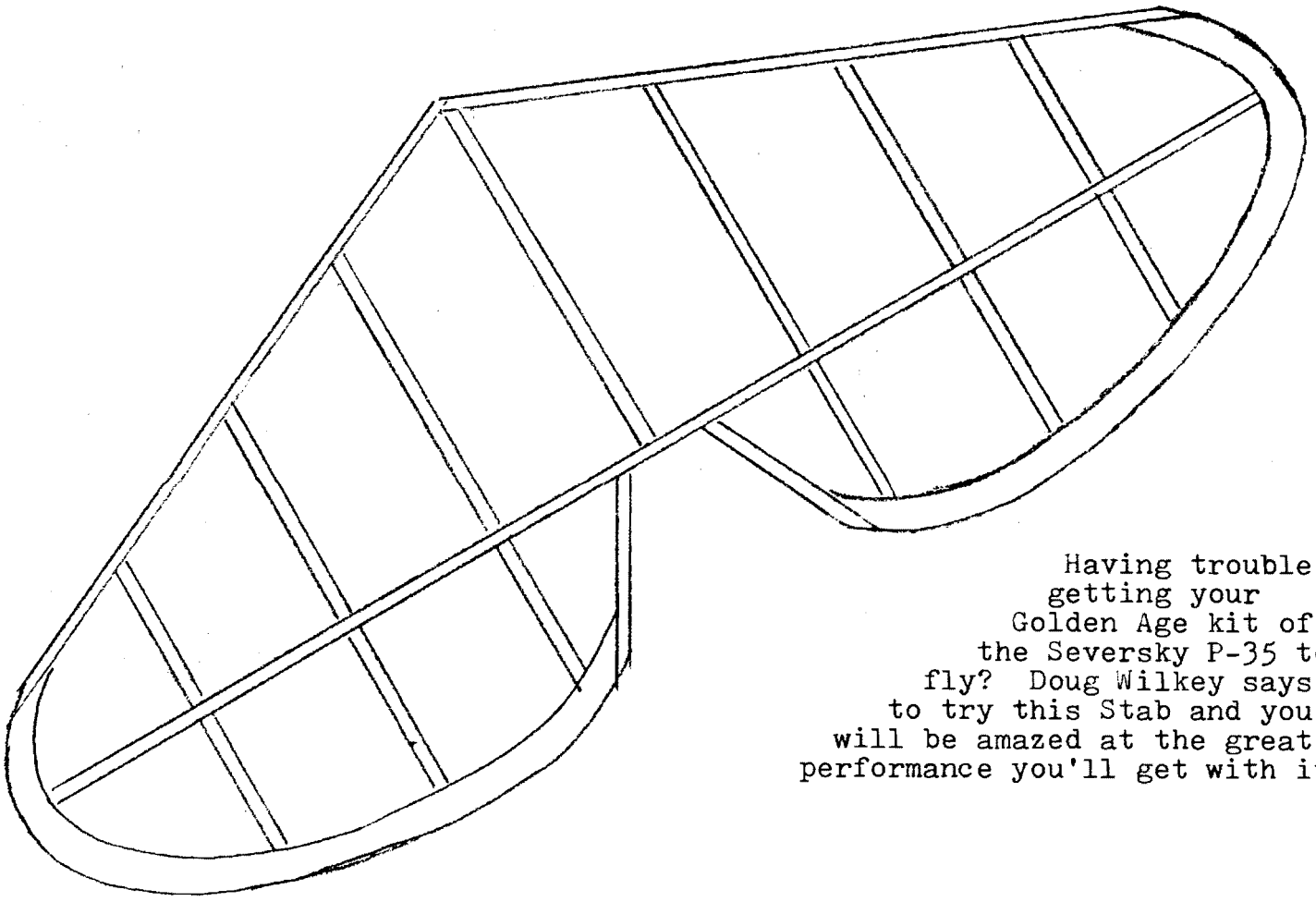


Having trouble getting your Golden Age kit of the Seversky P-35 to fly? Doug Wilkey says to try this Stab and you will be amazed at the great performance you'll get with it.

8.

REGISTRATION FORM

FAC NATS MARK VII

MAIL TO:
Lin Reichel
3301 Cindy Lane
Erie, Pa. 16506

NAME (S) 1._____ 2._____

AMA NO. 1._____ 2._____

ADDRESS 1._____ 2._____

I wish to make the following advanced reservations for the FAC NATS MARK VII.

_____ entry fees at $15.00 each.....$_____

_____ banquet tickets at $16.00 each (with no dormitory reservations).....$_____

_____ reservations for double occupancy with meals and banquet at $161.00 each.....$_____

_____ reservations for single occupancy with meals and banquet at $204.00 each.....$_____

TOTAL ENCLOSED.....$_____

Please note that we are unable to refund cancellations received after June 15th. If you plan to share a double occupancy with someone else, please indicate their name so we can direct the University to set up the proper room arrangements. _____

WAIVER: I (we) hereby release the National Warbird Museum, the State University of New York, the Flying Aces Club, the Detroit Cloud-busters Club and all persons connected with this meet from any liability whatsoever for accidents incurred while participating in this meet. I (we) also agree to abide by all FLYING and FIELD rules in force at this meet.

SIGNATURE_____

(parent/guardian if under 21)

It would be helpful to us if you would indicate with an X which events you plan to enter. This is not a commitment on your part, and you may change your mind at a later time. This will let us know where we may need extra help. If you care to help out in some way please let us know.

Shell Speed Dash _____	Greve Race _____	Thompson Race _____
WW I Dogfight _____	WW II Combat _____	WW I Peanut _____
Embryo Endurance _____	Golden Age _____	FAC Scale _____
No-Cal Scale _____	Hi-Wing Peanut _____	FAC Power Scale _____
	FAC Jumbo Scale_____	Military Bipes _____

FLYING ACE GONE WEST

FINAL TRIBUTE

TO

ANDREW MEDOVITCH, JR.

MARCH 14, 1935 - JANUARY 23, 1990

He saw the clear blue depth of summer sky;
And felt thermals in the lush warmth of their best;
And stood on meadows in grass waist high;
Dreamed, drew, built, and put to test.

From him fragile birds of sticks and tissue with
rubber hearts.
God's sun shown through them a stained glass
beauty bright;
That called out their colors and details of their
inner parts;
As high they soared overhead out of love
and sight.

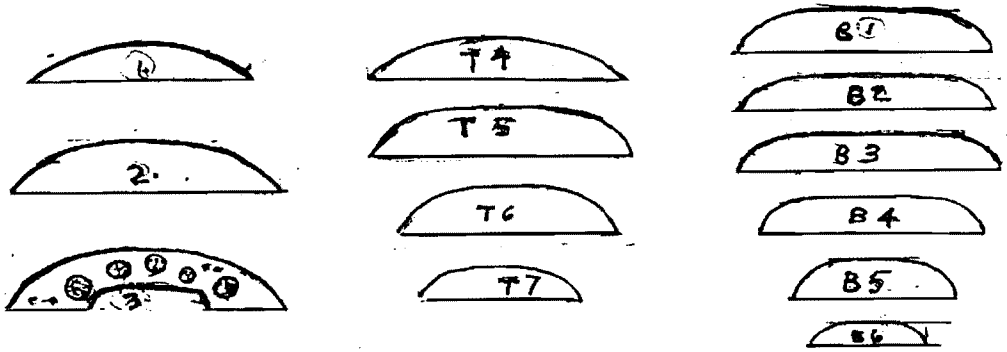
His dreams have risen far from his touch,
But ever closer to the touch of his Maker.
Though he aged, the happy child in him
lived and did much
And gave, and got, a life of warmth and joy
that beats any taker.

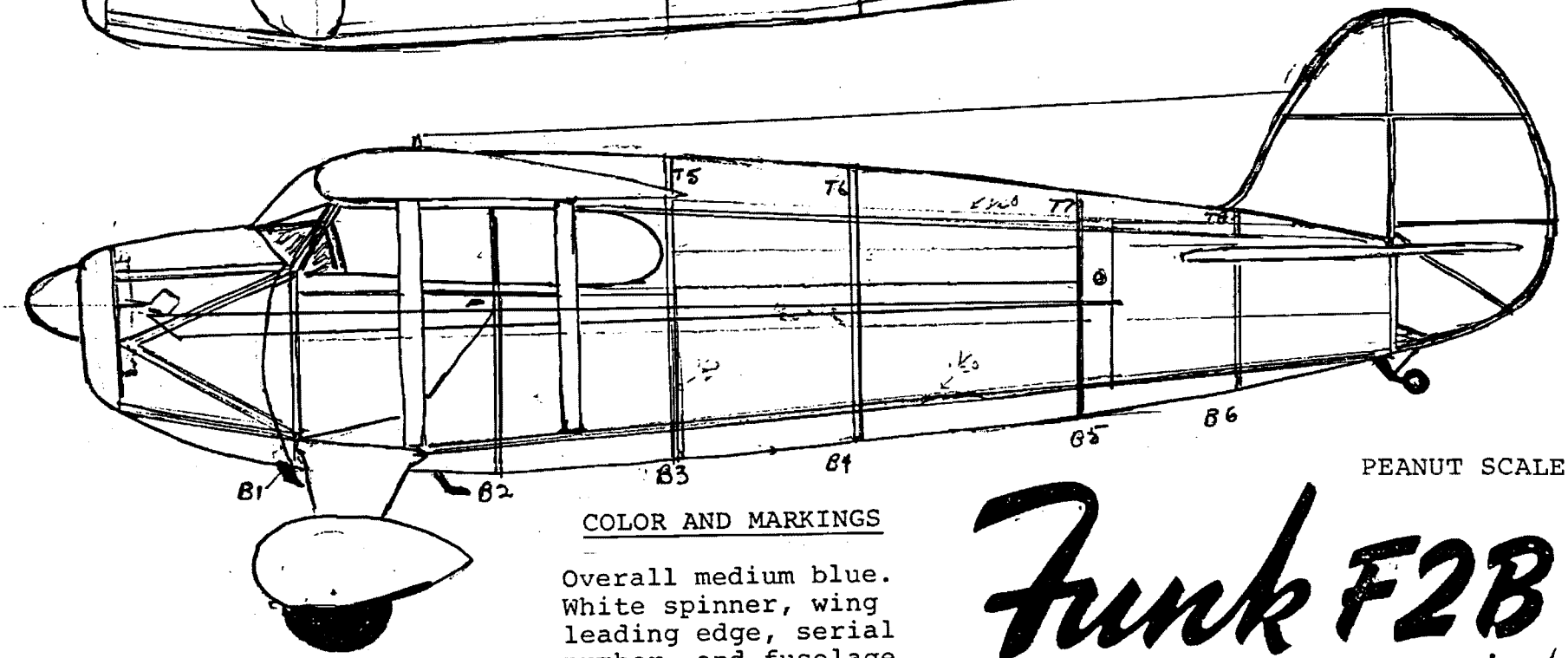
Dennis O.Norman
Cleveland Free Flight Society
January 25, 1990

ANDREW MEDOVITCH, JR.

(3-15-35 - 1-23-90)

A few weeks before his death, Andy sketched an Akron Funk F2B which he planned to build and fly in 1990. Andy also intended to share his plan and his rough drawings are presented here as a memento to his modeling friends.





PEANUT SCALE

Funk F2B

Drawn by Andy Medovitch

COLOR AND MARKINGS

Overall medium blue. White spinner, wing leading edge, serial number, and fuselage stripe.

December 30, 1989

Dear Sir:

There is an interesting story behind the device shown on page 8 of the Sept./Oct., 1989 issue (129-55) of the F.A. Club News.

During World War II, the Germans, anticipating a possible petrol shortage, developed plans for a clockwork motor to use in their fighter planes.

However, a mercenary stole the plans and passed them off to the Norwegians as a device to speed up and improve the production of goat cheese.

The Norwegians soon discovered that the device whipped the cheese into a soft stretchy product and, since they preferred their goat cheese to be in firm blocks, resembling industrial strength laundry soap, they abandoned the idea.

The Germans, however, had not forgotten the device. Smarting from losing World War I, they hoped to track it down and use it surreptitiously in gliders and "transports" to circumvent the restrictions of the treaty of Versailles.

They finally caught the mercenary and forced him to "squeal" by subjecting him to listen to continuous "oom-pah" music. This is why they occupied Norway in 1940.

Meanwhile, the Germans had captured some movie reels of Buster Crabbe as Flash Gordon and Buck Rogers and, thinking they were U.S. training films, accelerated their interest in rockets.

This is why today, at Mile Square Park, you see those of Scandinavian descent powering their stick and tissue models with brown, stretchy ersatz goat cheese, and those of German lineage using rocket propulsion.

I trust that this will help resolve the Flugsport Riddle.

Sincerely,

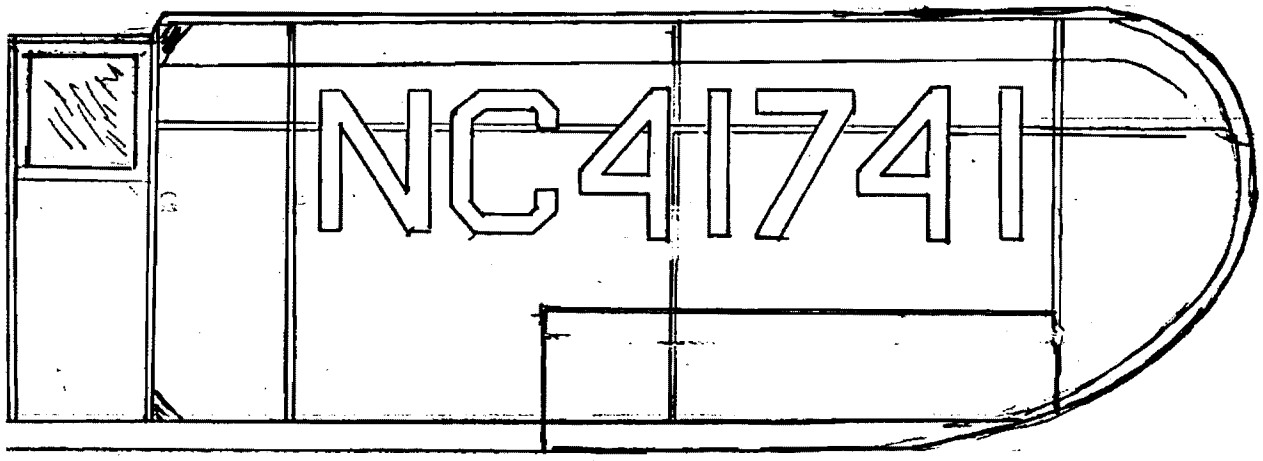
Bud Overn

Bud Overn

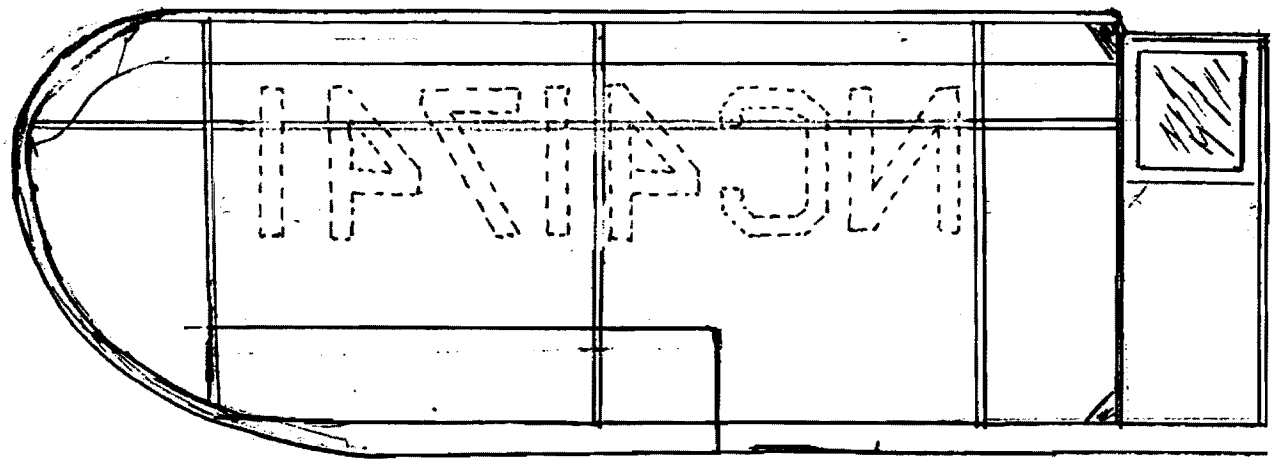
WANTED

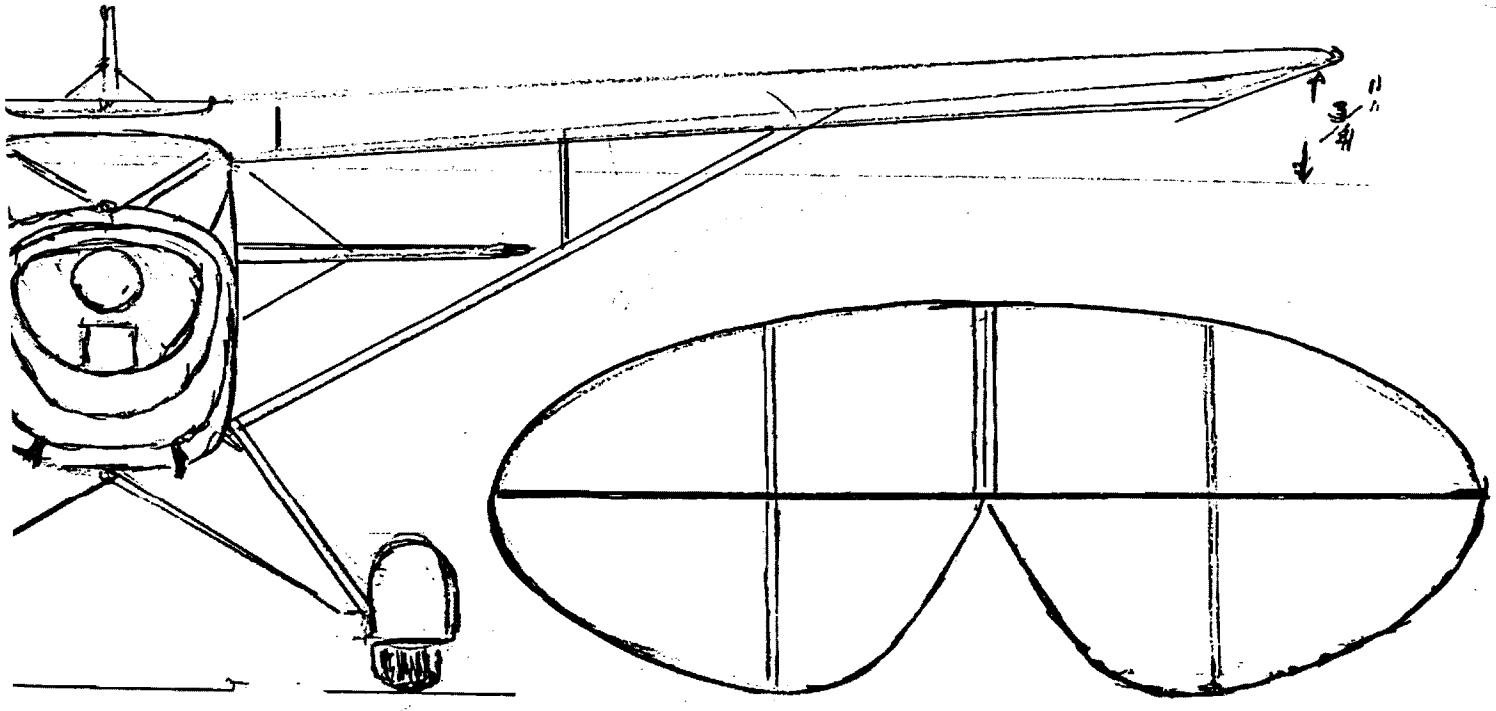
Flying Aces magazines prior to 1943. Stuart Duncan, 3901 Linda Lane, Annandale, Va.22003

12.



MAKE (4) WING STRUTS

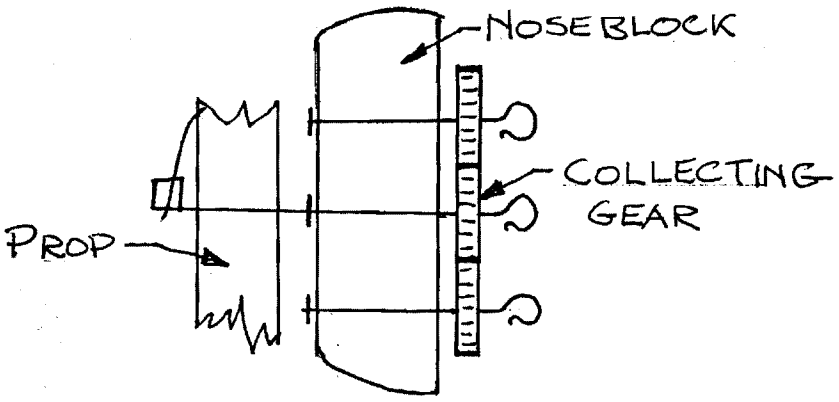




FUNK AIRCRAFT COMPANY
COFFEYVILLE, KANSAS

* * * Add-Up Gears * * *
Mumbo Jumbo #39 from the pen of the Glue Guru

Salutations, disciples! Today we shall ponder the workings and merits of add-up gears, the most popular of all scale rubber powered gear systems back in the heyday of British gear ascendency.



ADD-UP GEAR CONCEPT
3 MOTOR SYSTEM

Add-up gears consist of 2,3 or even 4 identical gears, each driven by its own motor. One of the gears (the collecting gear) is attached to the prop shaft and thus serves as a means of outputting the entire system power. All the other gears, in mesh with the collecting gear, act to transfer the torque and turns wound into each motor to the collecting gear. Given a 3 motor system, the collecting gear delivers 3 times the torque of any one motor to the prop, minus a small tax owing to gear inefficiency. As to RPM, the prop dimensions and delivered torque control RPM.

At first glance, the system seems puzzling. Why not simply put all the strands on one hook and be done with it? What on earth is all that machinery for?

The answer, and the rationale for the add-up system, consists of one major advantage and some minor ones. Let's start with the major advantage: putting all the rubber on one hook may give you more torque than your prop can handle; however, by dividing the motor into pportions, and adding the portions, the total torque achieved will be much less than the original one bunch value. How can that be? Are we saying that 4 strands geared to 4 additional strands gives less torque than 8? Yes, that's exactly what we're saying. But isn't that the same as saying that 4 oranges plus 4 oranges is less than 8? No it isn't. The key difference is that torque is "non-linear". What does that mean? Some things are linear, or straight line. If you double the motor crossection, you will double the motor weight. If you than double the motor length, you will double the weight again. This sort of a relationship is called linear. But when you double the motor crossection you do much more than double the output torque. For example, if you go from 4 strands to 8 strands (identical crossection) you will almost triple the delivered torque. With this sort of relationship, increasing the number of strands makes it likely that torque will "run away" and produce a quirky model, either zooming uncontrollably or torquing in to the left. On the other hand, by adding the torque of a 4 strand motor to an identical 4 strand motor, through gears, we get twice the torque of a 4 strand motor.

But if putting all 8 strands on one hook yields too much torque, why not cut it back a bit, to say 6? The catch: duration of any rubber model is controlled by the % total weight assigned to rubber. In cutting back from 8 to 6, we may well have solved the torque problem but at the price of lower duration capability. It would be better, from the duration point of view, to go with 8. Gears make this possible.

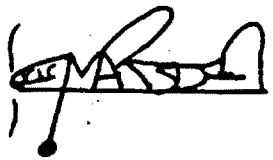
CARLEY C-12

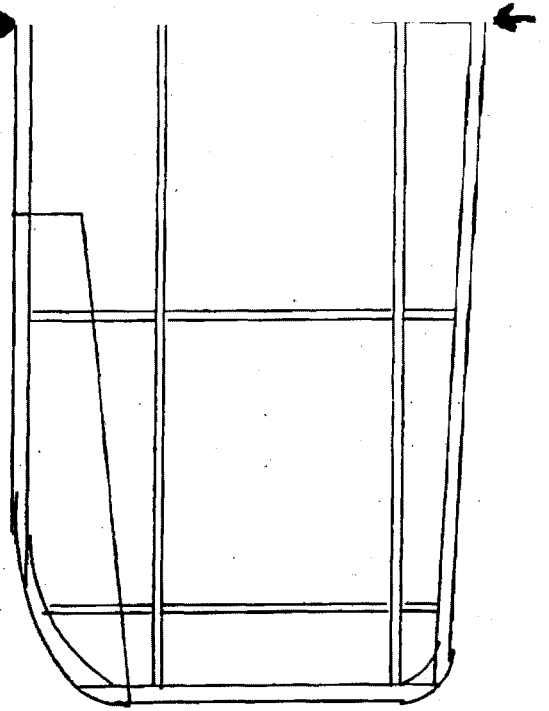
Built Holland, 1923

Span 24'7" Lgth 15'

10hp 'Indian' vee twin

PLAN BY
ERIC MARSDEN





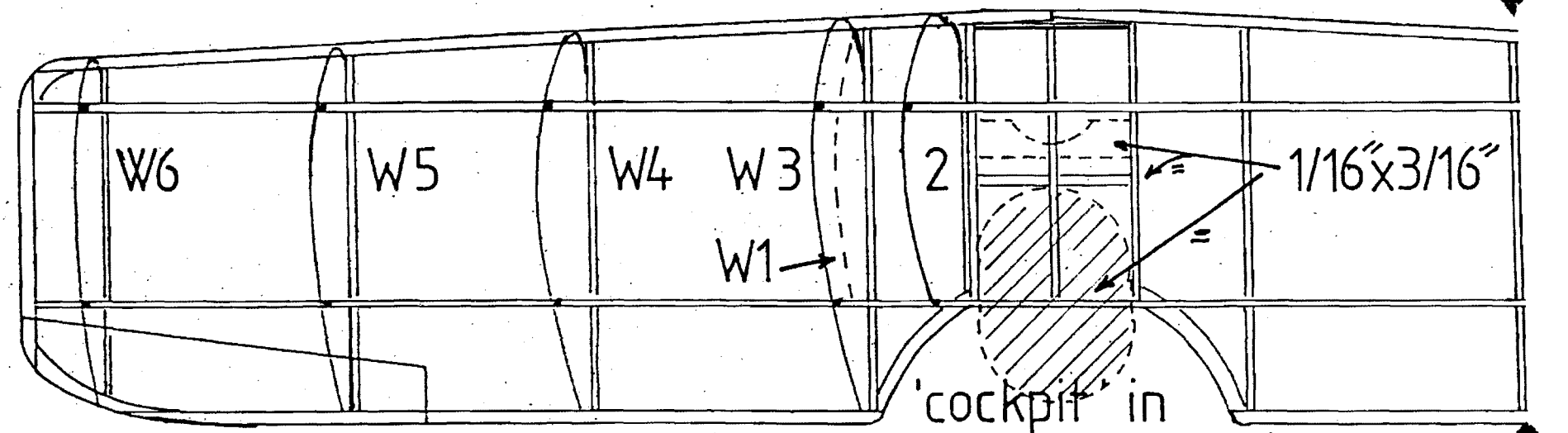
A/C RED Fus, '12' in WHITE - 1st a/c.

WHITE wings, tail, & registration panel.

H-NACB

on the 'Anzani' modified a/c

Reg. & 'H's in RED



'cockpit' in black tissue between spars

There's another way of stating the same argument, using turns instead of torque. Let's run through it. The handbook listing for turns per inch of a 4 strand quarter inch motor is 38. That of an 8 strand motor, same crossection, is 28. In other words, in moving from 4 to 8 strands, all on one hook, we lose 38 minus 28 or 10 turns per inch. When flight duration of a gentle cruise type is sought, those 10 turns are important. We can hold onto them by gearing two 4 strand motors together, retaining the original 38 turns per inch, at twice the torque, minus the gear losses.

In short, the main advantage of add-up gears is one of permitting more rubber energy to be employed without the ususal drawbacks of excessive torque and reduced turns. The examples above, using two motors, are just one form of an add-up gear system and do not make full use of these advantages. Three or four motors can lead to dramatic gains in overall energy, yet the gain offered is in a benign, gentle form.

What else can add-up gears do? If rubber scale models are to be made really large, say quarter scale, the amount of torque required may easily equal that of an 18 strand, quarter inch motor. Many of us will lack the strength or bravado to handle this sort of monster motor. With add-up gears, developing any desired level of torque is easy, for each of the motors is wound individually; strength has nothing to do with the outcome. To go really "big", I suspect add-up gears are a necessity.

The next advantage is one of limiting damage, given a motor burst. With each independent motor made small, the chance of a structural wipe-out is lessened.

Then there is the possibility of using an even number of motors(two,four,etc.) to cancel out the twisting load on the fuselage. While each motor in the set develops torque, its opposing twin creates a precisely balancing value of torque, effectively eliminating fuselage twist.

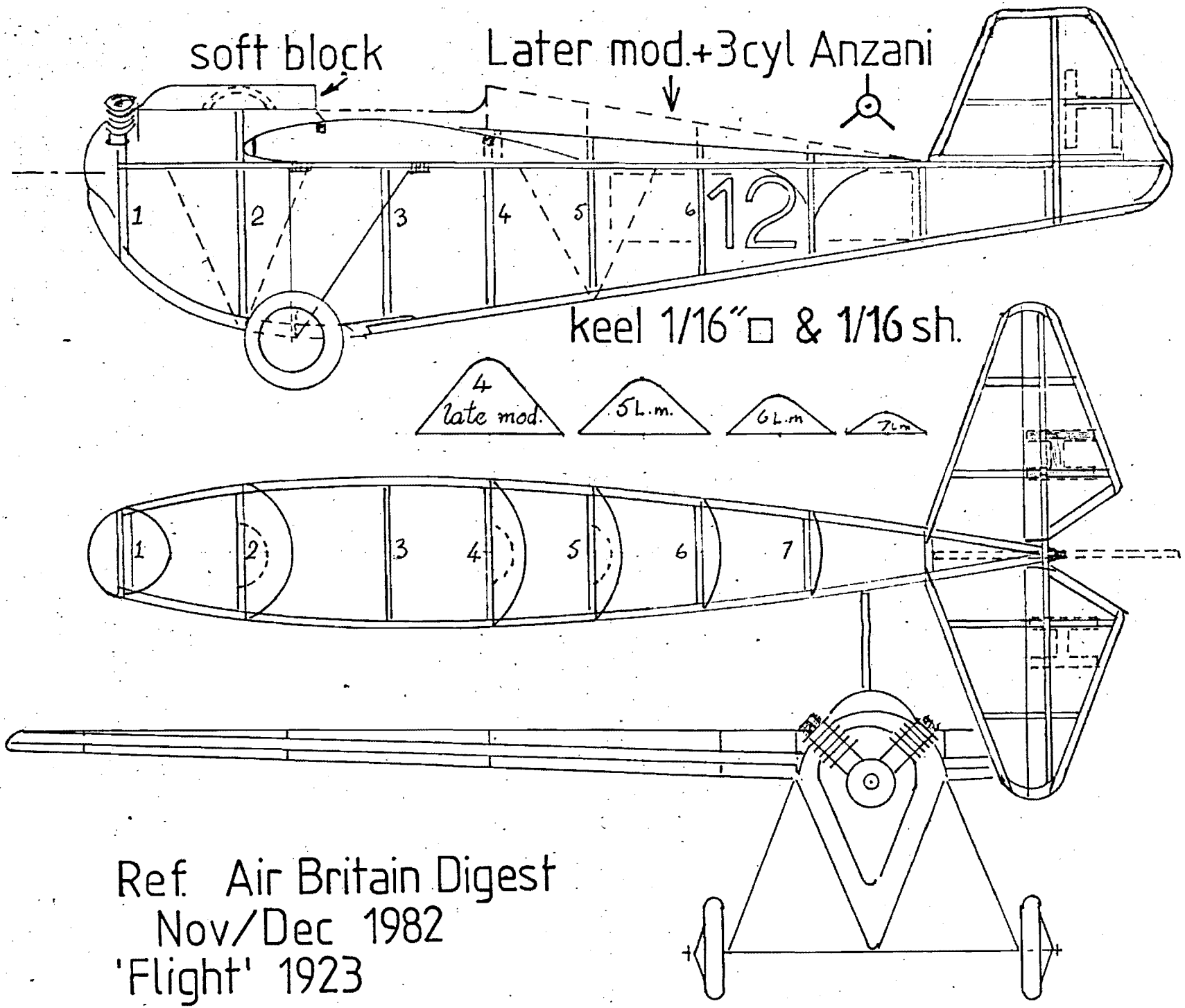
A final advantage is thrown in for the sake of completeness; I don't believe in it, but here it is anyway. No unwinding motor gives back as much energy as that initially pumped in. This kind of loss is called a hysteresis loss. Some modelers believe that hysteresis increases with the total number of strands on one hook. Intuitively this does feel right. One can picture a great deal of rubbing and chafing in multi-strand motors that would not occur in a two strand motor. Therefore some argue that it is better to add-up a bunch of two strand motors than to suffer the hysteresis loss of a single fat motor. The catch is that no actual proof of hysteresis loss reduction in this fashion has surfaced. At least, I know of none. On the other hand, gear box losses are certain; at least 5 to 10% of the transmitted energy will be eaten up by each gear in a system. Hence any net efficiency gain through add-up can only be rated as dubious.

* * * * *

From the strictly practical point of view, is there any profit in add-up? Let's put aside the special case of the monster model, where add-up is most likely essential, or the special case of peanuts where the tiny gear components would frustrate a watch maker. Let's consider a more typical FAC model with a span of 32" or so, a wing area of 180 sq in and a flying weight of 100 grams. Does add-up make sense?

I think it does make sense where the nose is long. if the nose is short, forcing the use of a short motor, it would seem better to drop in an additional small prop drive gear, converting the system into either a torque reducer (one motor) or a compound gear system (two or more motors). By doing so, the short motors can be made fat, to supply enough energy, and yet the resulting prop torque will be lowered to something reasonable. Those ancient plans I've been able to find for pure add-up (circa WWII British) all feature long nose models and three motors with gears each identically sized at about 5/8" diam. It's possible that such a combination is optimum.

But is the whole thing really worthwhile? It depends on your goals. There are easier ways to win a contest - build a super light ghost ship without a landing gear, swinging a huge prop. But if you want something closer to scale - look into gears. Taming <u>much</u> energy is something gears are good at, and the realistic, well-detailed model requires much energy. Processing the energy through add-up is a practical means of keeping that energy friendly.



Ref. Air Britain Digest
Nov/Dec 1982
'Flight' 1923

Contest Calendar

March 10,....Pax River Indoor Contest. D.C. Maxecuters. All the usual events. Contact Claude Powell, (301) 872-4105

April 1,.....Seventh Annual Indoor Contest. Cleveland Free Flight Society. All the usual events. Contact Russ Brown (216)382-4821 or Mike Zand (216) 524-3480.

April 29,....Erie Model Aircraft Assn. Indoor Contest at Edinboro, Pa. All the Usual events. Contact Lin Reichel (814) 833-0314.

June 30,.....Eastern U.S. Free Flight Champs at Galeville, NY. Contact Rich
July 1 Gorman (516) 221-7444.

July 13-14-15..FAC Nats, Mark VII at Geneseo, NY. Info in this issue.

June 4 thru 9..1990 Indoor World Champs, at Johnson City, Tn. Combined with The AMA Indoor Nats. Contact Tony Italiano, 1655 Revere Dr., Brookfield, Wi. 53005. #10 SASE

Oct. 16 thru 20..1990 AMA Outdoor Champs, NFFS Outdoor Champs, SAM 57 and Flying Aces contest. #10 SASE to USOC, 4760 N. Battin, Wichita, Ks. 67220

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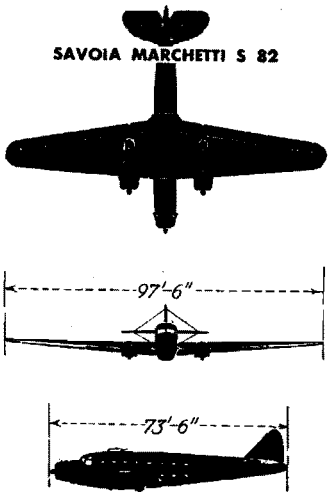
"I JUST GOTTA SAY IT, bud. This is a lousy flying field."

RLH/89

CARTOONS BY BOB HOWARD



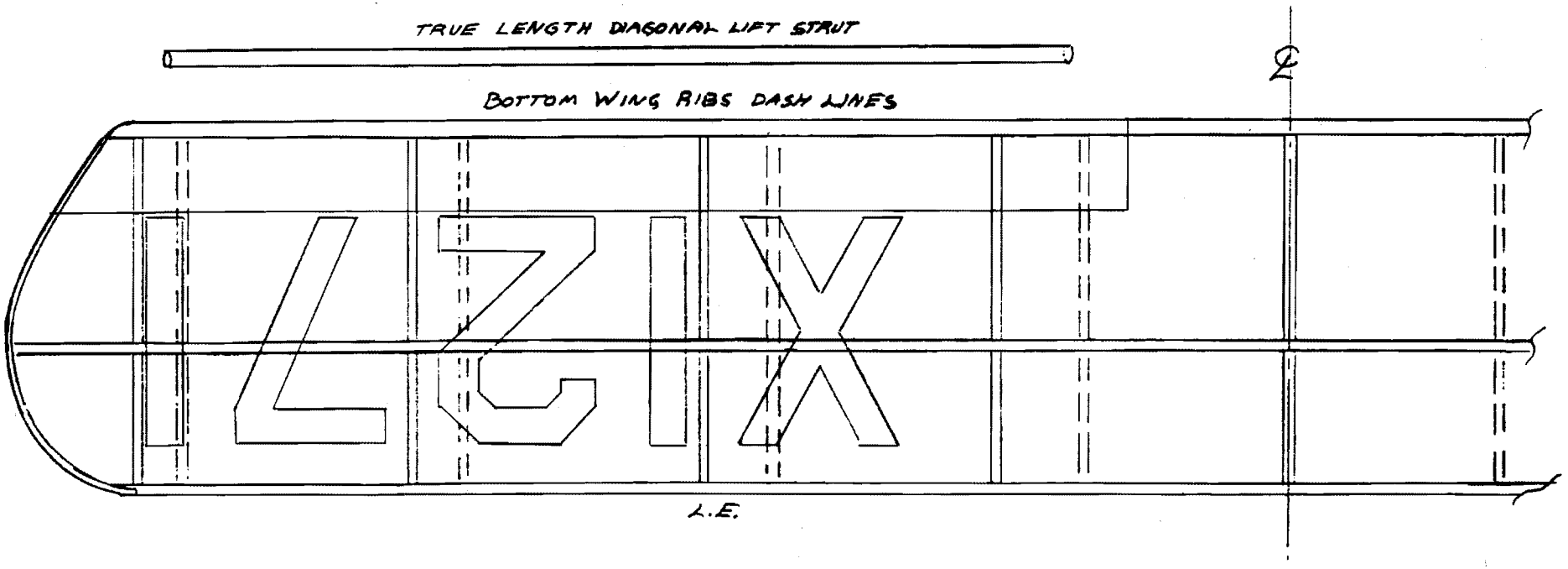
PISTACHIO SOUP

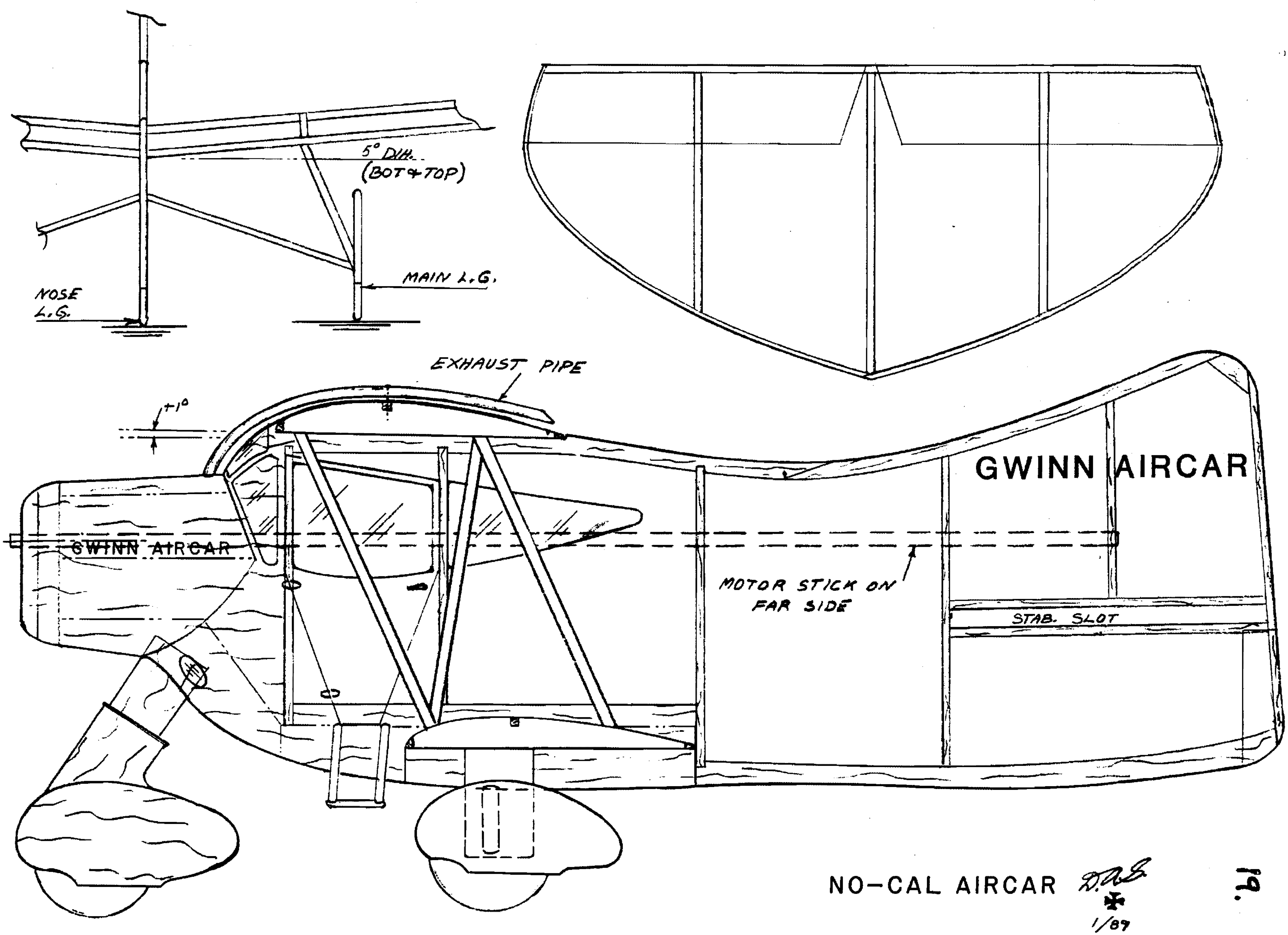
FRANK HAWKS' DEATH SHIP

by Mort Shuwary

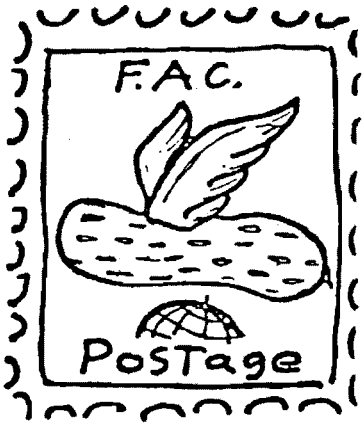
Yep gang, as strange as it seems, that skilled pilot, Capt. Frank Hawks, who set so many intercity records in a speedy Travel Air Mystery ship and flew his "Time Flies" at over 350 mph without any visibility forward made his fatal error in this little "put-put" with a control system set up like an automobile. The real bus was stall proof, and so is our slenderized model. When she gets in trouble, she simply settles down like a parachute! We reccomend a prop no larger than 5 inches in diameter with a chord of 11/16 as she wants to fish-tail with any prop of greater area. Our test model weighs in at just under ½ ounce with a 10 inch loop of 1/8 FAI and a bit of clay on the nose wheel for balast.

Color scheme of this little tyke was a true blue fuselage, landing gear, struts, and ladder. Wings and stabilizer were silver. Prop was natural wood effect (spruce). We used aluminum foil/paper for windows and landing lights (down there near the front wheel strut). Mount your prop on a hanger well out in front of the nose as she needs about eight degrees of down thrust. Flights are wandering and amusing, sometimes crabbing a bit. And if she slows up to stall....down she goes as flat as a pancake! But don't be fooled by her occasional playful antics....she can get up and go for a ride like a Stuts Bearcat as well! Why not give this li'l nimbus nipper a corner of your model hangar.




5° DIH.
(BOT & TOP)
MAIN L.G.
NOSE
L.G.
EXHAUST PIPE
+1°
GWINN AIRCAR
GWINN AIRCAR
MOTOR STICK ON
FAR SIDE
STAB. SLOT
NO-CAL AIRCAR
1/89
19.

Peanut & No-Cal Scale Postal Meet



Get in on the action Skysters. When you fly your Peanut and No-Cal models whether indoors or out, send those times in to GHQ. Even your flights in contests count. The contest is on now Clubsters and will end on April 29, 1990. Entries postmarked after April 30, 1990 will not be accepted.

There are four events, or wings. Which are Indoor Peanut, Outdoor Peanut, Indoor No-Cal and Outdoor No-Cal. Everytime you fly your model send in the time, the name of the model, the date, the wing you flew in and your name.

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 it in.

This contest is open to all FAC members everywhere. Winners get another notch on the "Kanone" list as well. We will also have plan prizes for the winners. Let's go Cumulus Climbers, into the air! BUILD-FLY-WIN--EF-CEE!!!

OUTDOOR PEANUT WING

PILOT	PLANE	TIME
1.Richard Miller	Lacey M-10	165 sec.
2.Mike Hines	Cougar	91 "
3.Paul Stott	Miles Hawk	45 "
4.Dave Stott	Fairchild 24	43 "
5.Jeff Briehl	Cougar	28 "
6.Darold Wilken	1927 Ercoupe	28 "
7.W. Leonhardt	Cougar	22 "

OUTDOOR NO-CAL WING

PILOT	PLANE	TIME
1.Jeff Briehl	Turboporter	70 sec.
2.Dan Briehl	Lacey M-10	67 "
3.Dave Stott	Gwinn Aircar	59 "
4.Walt Leonhart	Piper Cub	43 "
5. " "	Cougar	41 "
6. " "	Corben	28 "

INDOOR PEANUT WING

PILOT	PLANE	TIME
1.Russ Whitford	Maubousin	55 sec.
2.Mike Nassise	Fike	52 "
3.Bob Bender	S.D. 14 bis	50 "
4.Stan Fink	Hergt	47 "
5.Stan Fink	Euler D-1	44 "
6.Mike Nassise	Cougar	44 "
7." "	Ord-Hume	40 "
8.Dick Bielak	Sonerai	36 "
9.Tom Fennell	Stinson 125	20 "
10.Pedro Perez	JN-1	13 "

INDOOR NO-CAL WING

PILOT	PLANE	TIME
1.Frank Reese	Taylor Cub	347 sec.
2.Russ Whitford	Dayton-Wright	141 "
3.Bob Bender	Russ. STAL	126 "
4.John Ganser	Tipsey Jr.	116 "
5.Steve Whitford	Maule M5	95 "
6.Dick Delinsky	Spitfire	73 "
7.Ken McConnell	Farman 190	72 "
8.Mike Nassise	Vul. Vengeance	35 "
9.Roger Kleinert	Piper Cub	20 "

Jeff Briehl, Steven Whitford and Pedro Perez are Juniors. We will have seperate prizes for the juniors. Go get em, Kids!

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PHOTO PAGE

Top two...Av-10 Bronco and Cougar by Jane Schlosberg. Great looking models and they fly too. Jane took a first with the Bronco.Photos by hubby Bob. Middle...Don DeLoach launching his 54" Corben Super Ace. Very impressive in the air. Middle right...Darold Wilken's collection of models, hope they fly as good as they look. Photo by Darold. Bottom left...Paul Boyanowski's 54" Comet Taylorcraft on floats. A great flyer! Bottom right...Cessna Airmaster being launched by Jack McGillivray, another winner for Jack! Photos of Don DeLoach and the bottom photos by Hal Lorimer.