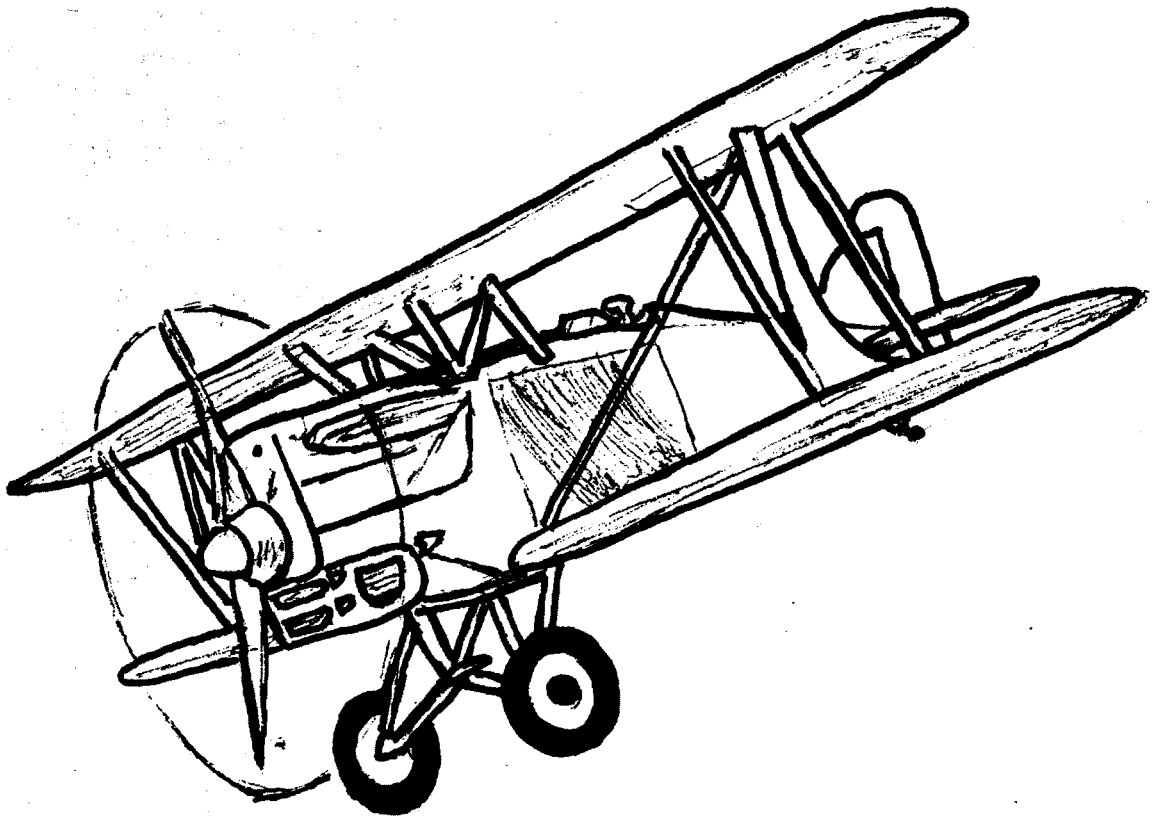
FLYING ACES

Club News

ISSUE #120-46 March/April 1988



The cover this month shows the Kawasaki 92 Japanese fighter as drawn by yours truly. It is the feature plan this month also. It was drawn by Ichiro Yamada and sent to us by Joe Wachter. We have been getting requests for old time plans and we are giving you one of them this time also. It is of the Consolidated PB-2A. This plan was done way back in 1939 by a current FACer, Herb Weiss. Hope you like the idea of old plans. However we will still be giving you plans that have not been published before as in the past. Carl Loehle sent us this plan and we hope he will send us some more! We wish to thank both Carl and Joe for their contribution to the newsletter.

Barry Moore of the Penn Valley Hobby Center, 837 West Main St, Lansdale, Pa. 19446 is offering his latest catalog free to members of the Flying Aces Club. This catalog normally sells for one dollar, but it is free to you if you mention you saw it here in the FAC News. Just send in your name and address to him, NOT GHQ!

Bob Schlosberg writes to tell us that the Cactus Squadron of Arizona is offering their T-Shirts for sale. They are gray background with 4 color logo in red, orange, yellow and black. The cost is $7.50 plus $2.00 shipping & handling. They come in size med.--large--X-large--and--XX-large for the fat ones. Please make checks payable to Bob Schlosberg, and mail to him at 7420 East Buena Terra Way, Scottsdale, Az. 85253.

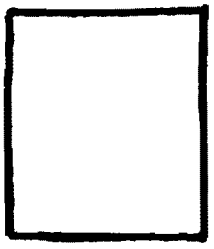
Diels Engineering, Inc. has another new kit ready to ship right now. It is a peanut kit of the Supermarine Sparrow and it sells for $7.00 plus $1.50 for shipping. They are also offering some of their decals and canopies for sale. To get one of their catalogs drop a dollar to them at; Diels Engineering, P O Box 101, Woodville, Ohio 43469.

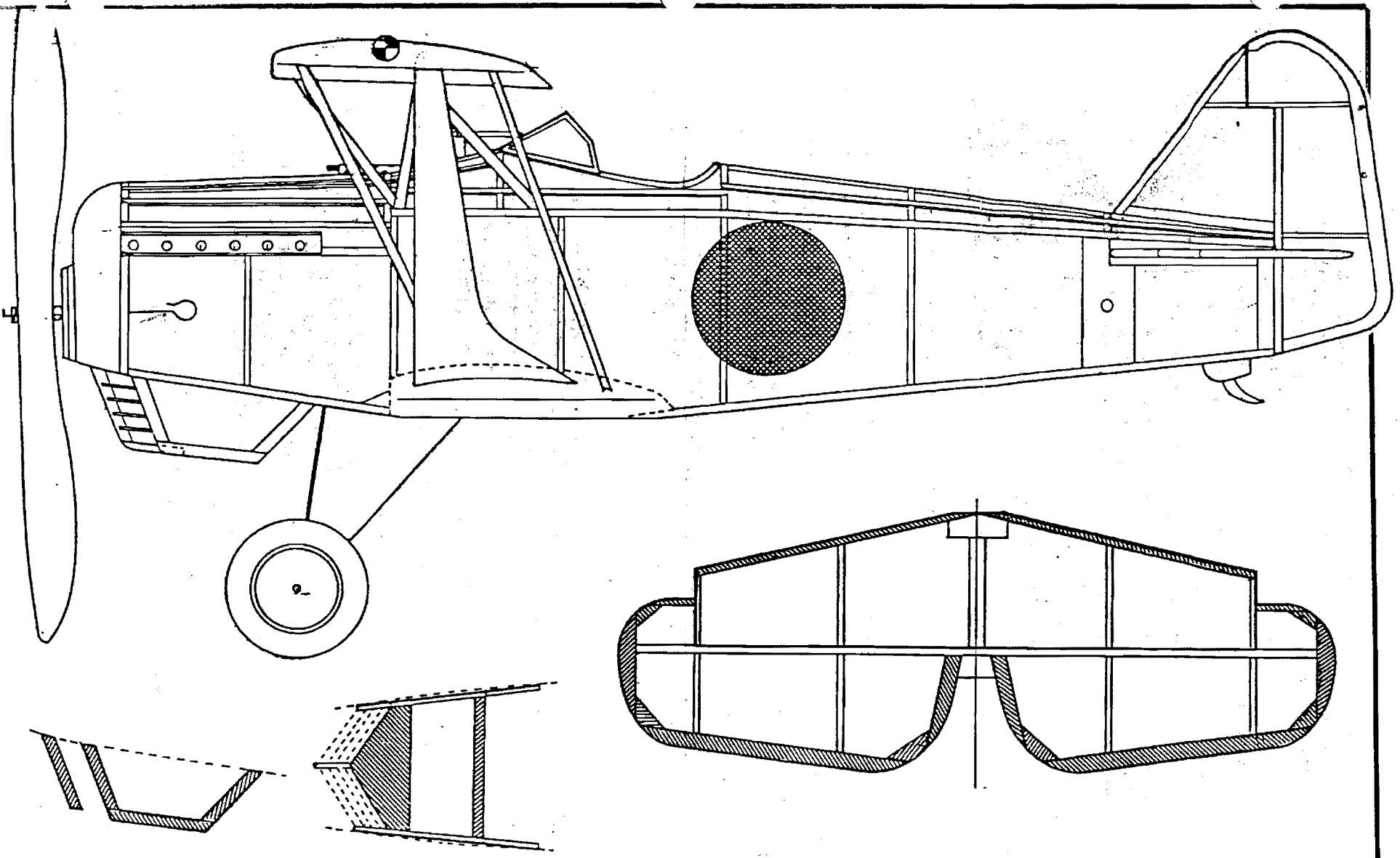
An excellent publication with much useful data, plans lists, hints, etc. can be had for $9.95 postpaid from Aircraft Data, Box 763576, Dallas, Tex. 75224. This should be a must for every model builders library. Tell him you saw it here.

Build--Fly--Win, EFF--AAA---CEEEE!!!!
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





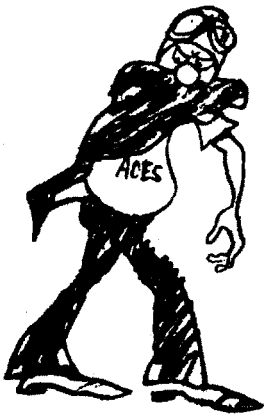
"KAWASAKI-TYPE-92-FIGHTER"

COMPLIMENT-OF-ICHIRO-YAMADA, OSAKA, JAPAN

THANKS TO JOE WACHTER

4. Dear Lin,

I took a look through the Kanone List and found to my horror that those bureaucrats in the bowels of the FAC Kanone Ministry had again been remiss in their duties. 87 lashes with rotten Pirelli for those cretinous, lazy descendants of Phineas Pinkham.



Enclosed you will find copies of the certificates awarded to yours truly in hard combat at several of our Midwinter Madness Meets. Note how the writer deftly goes to the meets where the competition will be weakened by the cold and other unfriendly elements before daring to fly. Note how the writer attends meets where other Skysters are laid up with colds, flu, heart attacks, jaundice, frozen up fuel filters and other ailments. Note how the writer goes only to meets that are poorly attended by the homeless. Note how the writer, with a couple of reliable models, picks upon hapless FACers like the dreaded Red Baron picked upon hapless Be2s.

That's the way to win in this quarter of the FAC! After all, I can get wins in none other!

Anyway, upgrade your Kanone List to 18 (eighteen) Luftsiege for this cowardly cur. Worry not... there will be none others before the Big Scrap in Geneseo.

Bob Thompson (A.K.A. Ted Scott)

PS: Despite my attempts to bribe other FACers with my secret formula for rubber lube, these certificates were awarded to me. I got them honestly. Really.

PPS: I expect my award of the Blue Max to be presented at the Nats. Anything else and I'll use the alcohol in the green soap for poisoning your offspring!

Editor's note;

Bob was given his Blue Max at the Nats although his threats had nothing to do with it (poison my offspring, indeed!). This is another case of the contest directors not sending in the results to GHQ. It is not fair to your contestants if you fail to send in a report to GHQ. All you need do is jot it down on a postcard, it takes about two minutes and costs you 16 cents, how easy can it be? (poison my offspring indeed....)

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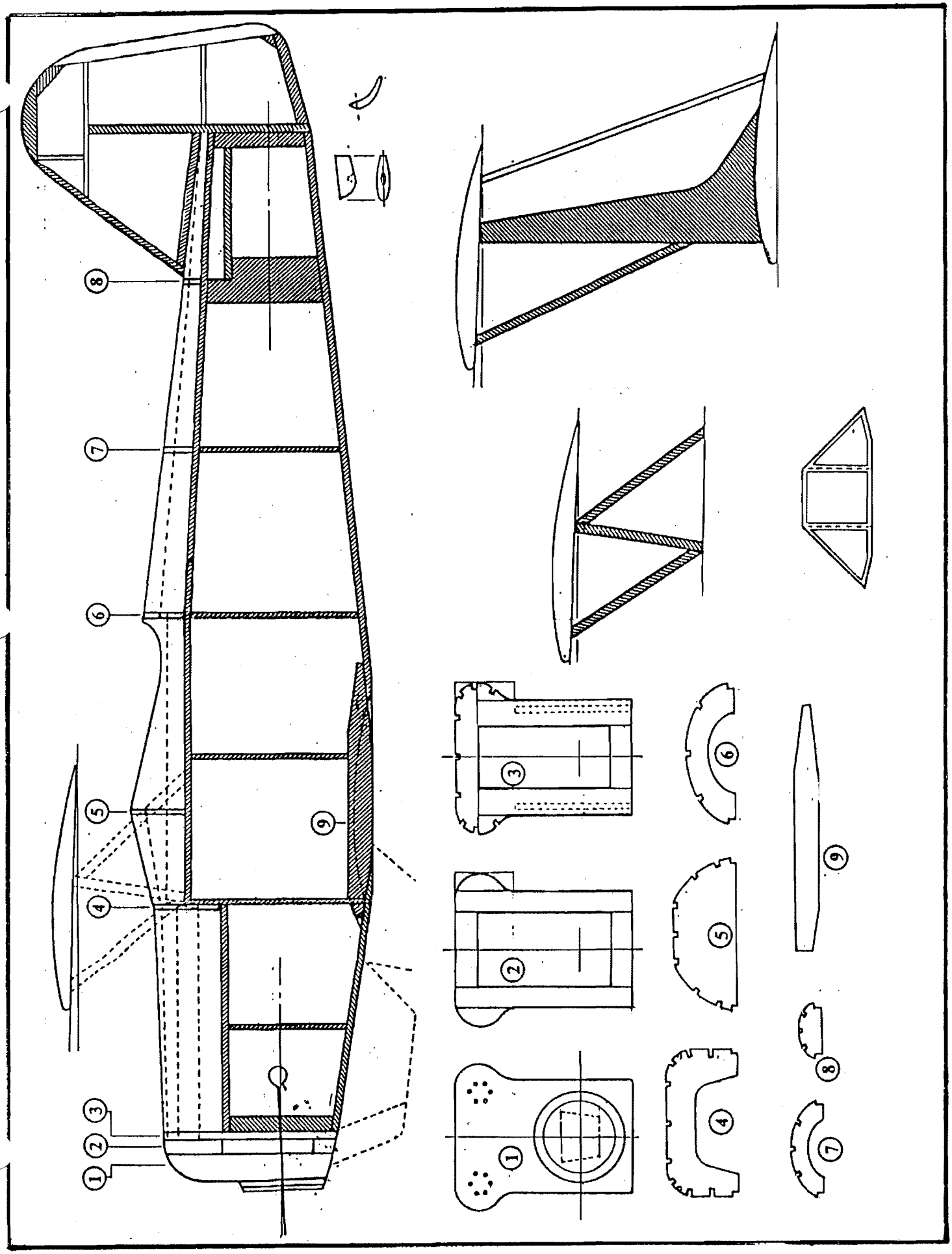
CONTEST CALENDAR

Sept. 18...19th Annual Midwest Scale Meet at Prangmore Aerodrome, McKean, Pa. Sponsored by the Erie Model Aircraft Assn. CD Vic Didelot, 4410 Lorna Lane, Erie, Pa. 16506 Phone (814)838-3263. events; FAC scale, FAC peanut, Hi-Wing Peanut, Embryo, FAC Jumbo, FAC Power scale, WWII mass Launch, HLG, Old Time Comm. rubber, Golden Age scale, Comet kit/plan scale, No-Cal Profile scale. Time 10:00 am till 5:00 pm.

Sept. 25...FAC Contest at WPAF Base. Contact Frank Scott, 4283 Honeybrook Ave., Dayton, Ohio 45415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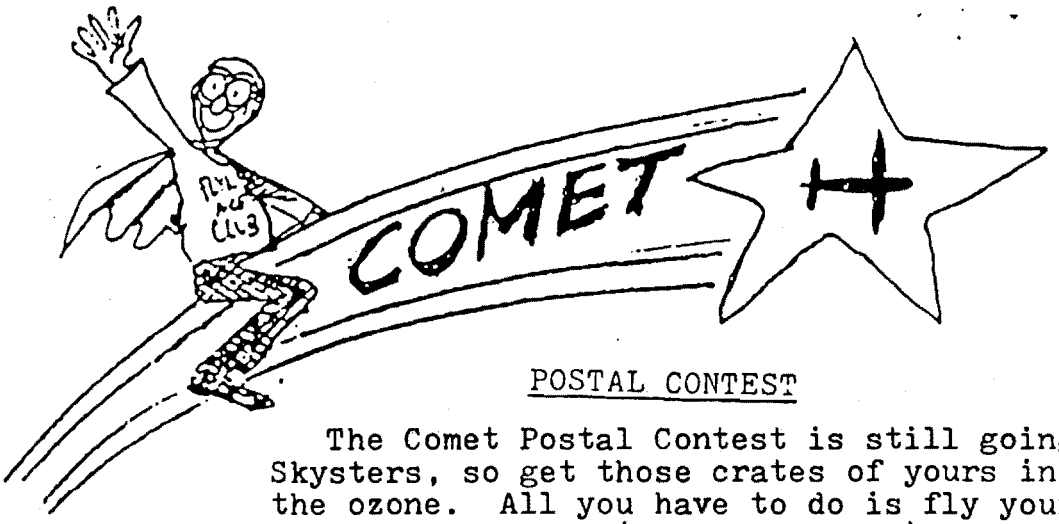
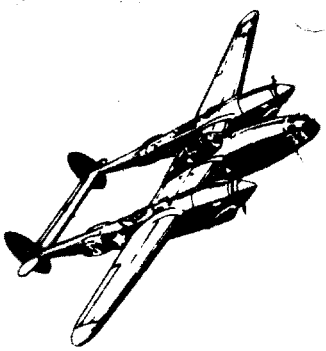


POSTAL CONTEST

The Comet Postal Contest is still going on Skysters, so get those crates of yours into the ozone. All you have to do is fly your Comet scale model (rubber powered), send in the time, date of flight and the name of the model to GHQ. Every time you better the time with that model, send in that time. You may enter as many times as you want with as many models as you wish. Models must be built from a current Comet kit or from an old time Comet plan.

Contest ends on October 30, 1988. Your flight times do not have to be from a contest. You may go out to fun fly and take your Comet model along and time your flights for the contest.

	PILOT	PLANE	TIME
1.	Phil Cox	Corbin Super Ace	153 sec.
2.	Terry Hoover	Curtiss Robin	89 "
3.	Gordon Roberts	Piper Cub	76 "
4.	Dan Briehl	Taylorcraft	66 "
5.	Dan McDonald	Taylorcraft	64 "
6.	Dave Stott	Great Lakes Trainer	62 "
7.	"Padre" Anderson	Mr. Mulligan	59 "
8.	"Padre" Anderson	Fairchild 24	58 "
9.	"Padre" Anderson	Puss Moth	56 "
10.	Mike Zand	Taylorcraft	40 "
11.	Bill Jennings	Piper Cub	34 "
12.	Dave Stott	Navy Racer	32 "
13.	Dave Stott	Curtiss Airmail Bipe	27 "
14.	Jack Swaney	Curtiss Helldiver	23 "
15.	Dave Stott	Hurricane	23 "
16.	Dave Stott	Aeronca C-3 (floats)	20 "
17.	Jack Swaney	Curtiss Jenny	18 "



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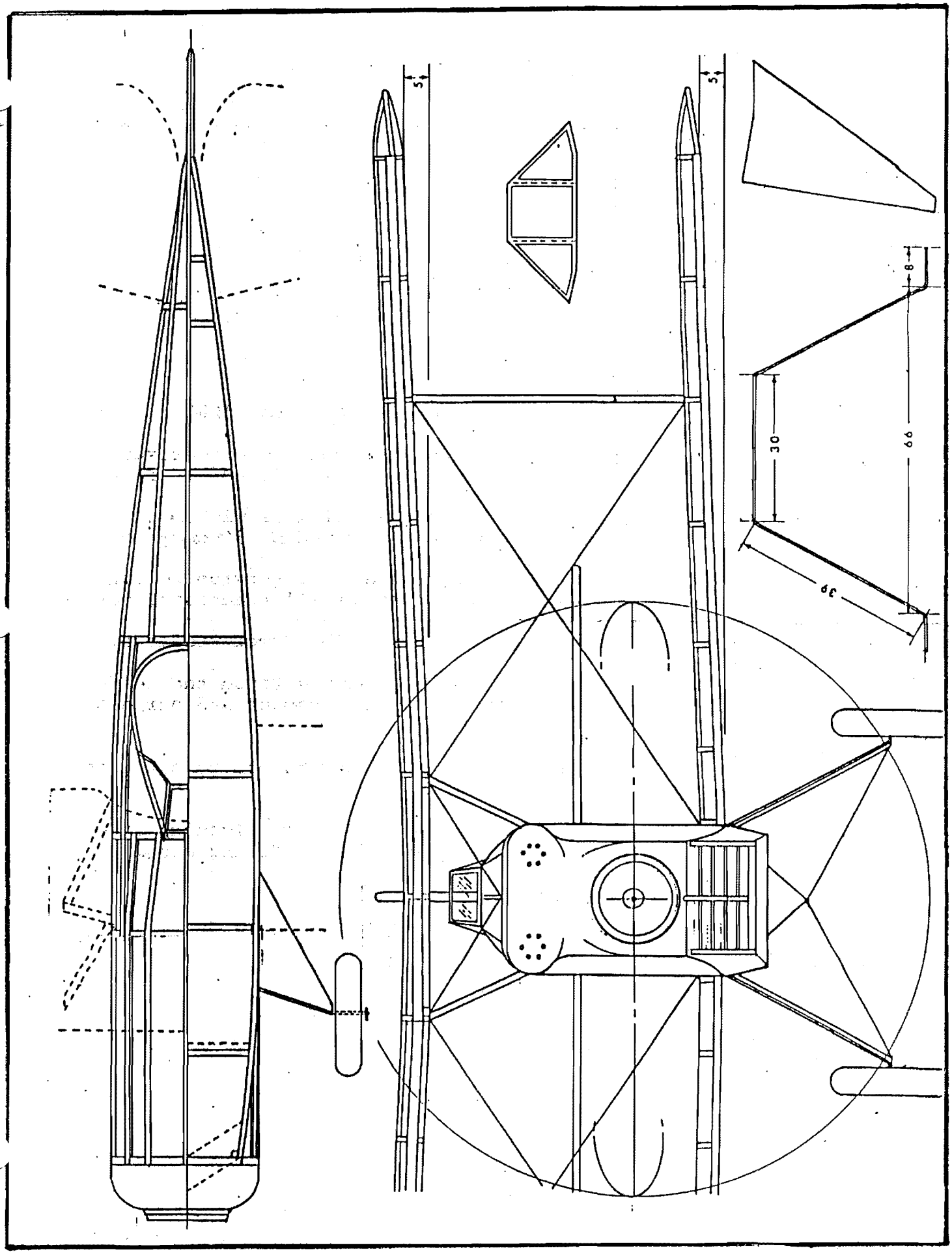
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8.

August 19, 1988

EDITOR
FLYING ACES CLUB G.H.Q.
3301 Cindy Lane
Erie, PA 16506

Dear Editor:

Comet will be 60 years young - this comming year 1989.

We've add another 110,000 sq. feet this year to our existing plane of 62,000 sq. feet; giving us a total of 172,000 sq. feet.

By the end of this month our new modern offices will be completed with the new installation of our new IBM #36 computer.

All this will allow Comet to futher our full service to our customers - which is part of the back bone of all successful companies.

Domestic and off shore sales are strong for Comet Products.

Let it be known, Comet has and will continue to be the leader in flying toys. We have earned a great deal of respect and pride over the past 60 years.

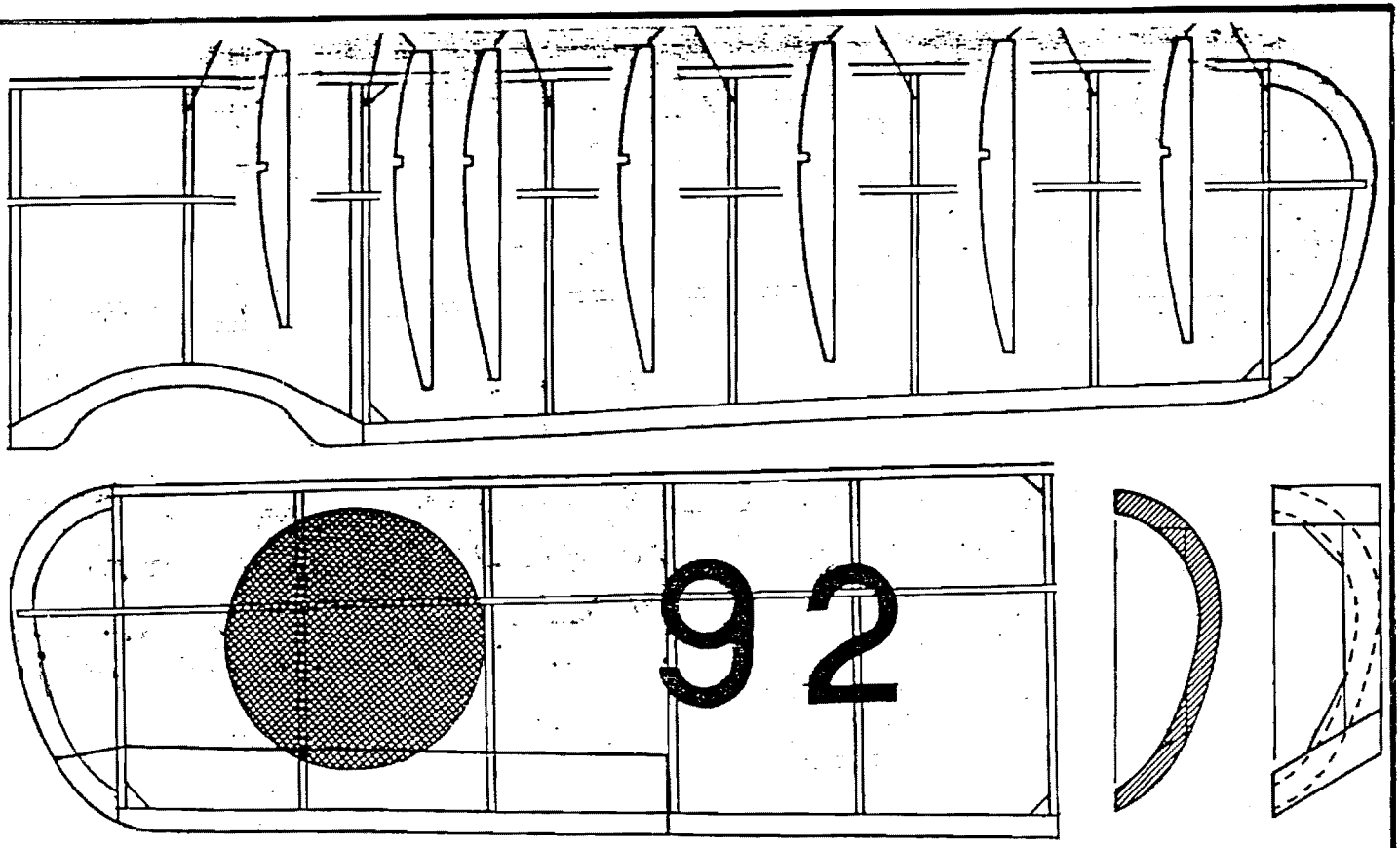
Quality and service has been and will continue to be our creed for the next 60 years.

Thanks for your attention to the error. We are looking forward to becoming more active in publications such as the flying aces.

Sincerely,

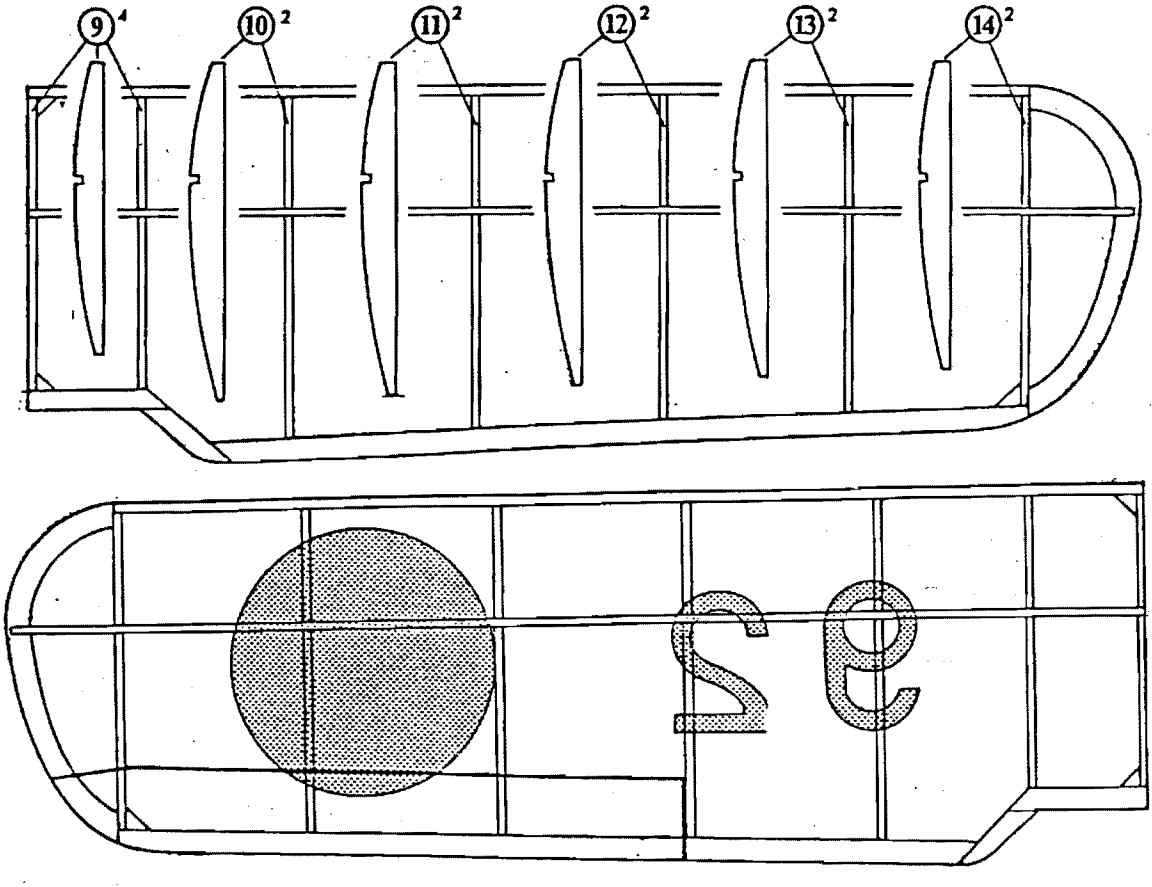
Terry Yuncker
V.P. Comet Industries

TY/gk



TOP WING ↑

BOTTOM WING ↓



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* * Reynolds Number and Wing Chord * *
Mumbo Jumbo #31 from the pen of the Glue Guru

Salutations, disciples! Today we shall ponder the practical import of Reynolds Number (Re hereafter) and its strange influence on wing chord choice.

Re describes the domain in which air flow occurs. A low Re, say a few thousand, implies a sticky sort of air, unenergetic and easily detached from any flying surface. This is poor stuff indeed, lending itself to feeble flight and miserable glide ratios. Large Re, say a few million, offers energetic air reluctant to simply slough off flying surfaces. Yes, good aerodynamics and stunning glides come with large Re.

Most of life's characteristics are continuous. We come to expect things to be better or worse in some continuous fashion, now sliding over to a bit better or perhaps to a bit worse; one task paying a bit better than another, today's meal not as tasty as yesterday's, etc.

But some things are discontinuous. To be hanged or married or to win a major lottery does not permit ready comparisons - one's life changes abruptly forever.

The striking thing about Re effect is that it too is discontinuous. Yes, large Re is always better than small Re. There are no exceptions. But should your wing achieve a certain value of Re, it finds itself in a happy valley where all is beautiful. A bit less Re and your wing cohabits with Peanuts and all the other miserable creatures of flight where, once the power stops, all is lost.

Naturally aerodynamicists have tried hard to nail down the magic value of Re separating the good from the bad. Much effort has been expended by countless wind tunnel workers to this end. And yet we remain somewhat uncertain of the precise value, for the wind tunnel itself tends to "hop up" the air under test, producing a somewhat distorted result when applied to ordinary air, of the sort found at flying fields. Converting "hopped up" air test data to mundane air is not simple. Hence we can not point to a specific Re threshold defining the border of the happy valley. Yet it can be said that for the sort of wings we fly, the magic Re value is somewhere between 40,000 and 60,000.

"So what?", you cry. The practical import is this: in choosing a design or a scale factor, it is possible to assure a certified position in the happy valley, long before construction. It is also possible, through sloth or ignorance of Re effect, to doom your model to a pitiful existence as a third rate flier. To gain certain entrance to Re Valhalla, it isn't necessary to perform any calculations - these are all given below. Rejoice quietly and read on.

Re depends on certain physical characteristics of air, easily found in handbooks, times the velocity of flight, times the wing chord length. Of these, the first is easily looked up, the second may be estimated from formulas already at hand (Mumbo Jumbo #5) and the last, wing chord, may simply be plugged in on a trial and error basis as we seek the chord that supplies entry into the happy valley. Let us do so, working in the feet per second system.

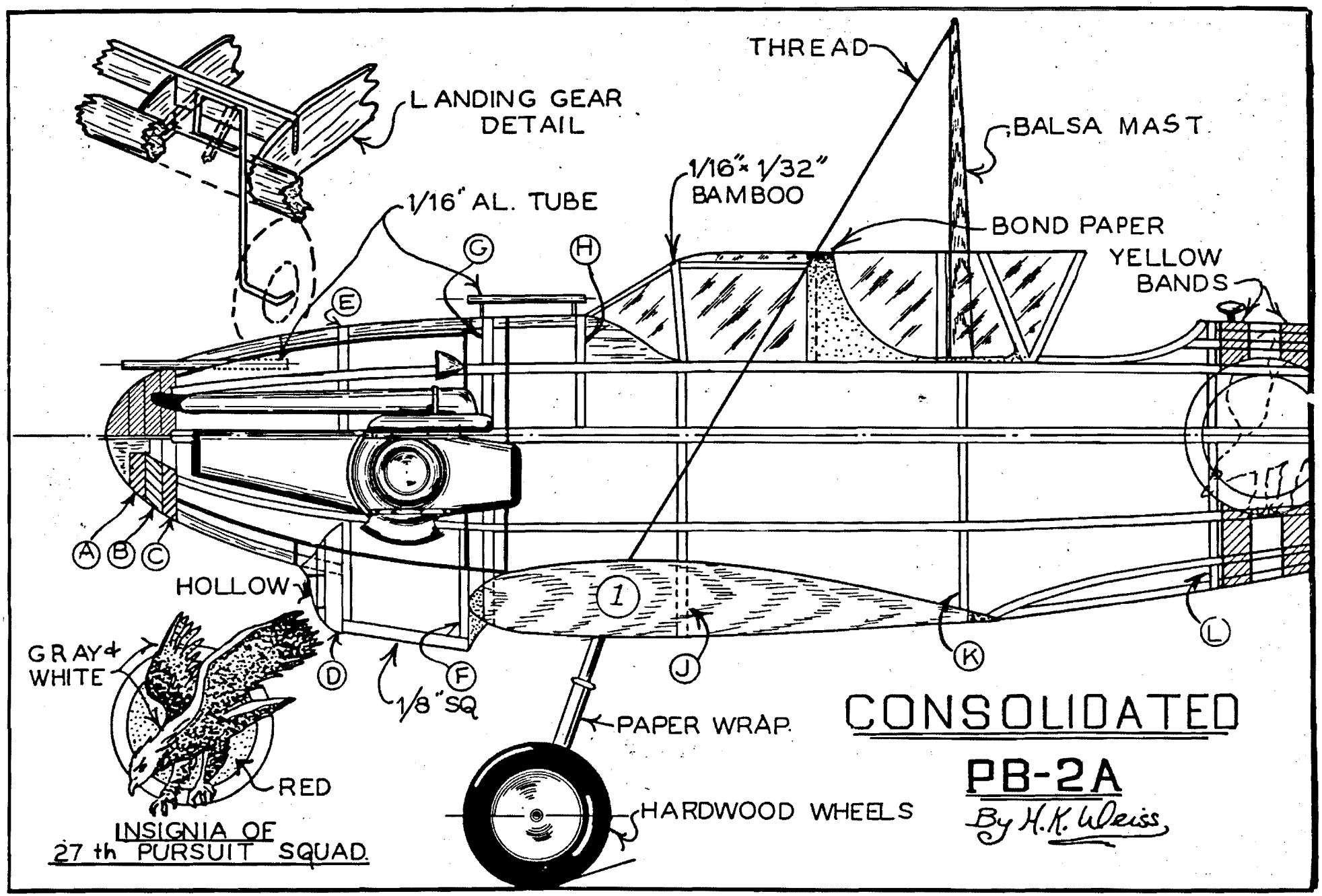
Our basic formula is Re = K x Vel(ft/sec) x Chord(ft)
For a nice day, air temp 68 degF, K is 6300. See Trivia Collector Section below. To estimate velocity, we will assume that the model has been trimmed to glide as slowly as possible, on the right side of stall. Using a conventional Clark-Y flat bottomed airfoil, and assuming a wing loading, ready to fly, of 0.75 grams per sq in, the glide speed can beshown to approximate 14 ft/sec.

Returning to our formula, we now have:

Re = 6300 x 14 x Chord(ft)
or Re = 88,000 x Chord(ft)

Or, in words, The Reynolds Number, in glide, on a real nice day, of a well trimmed model with a wing loading of 0.75 grams per sq in is equal to 88,000 times the wing chord length, where the chord is in feet.

We can now assemble the following table:


LANDING GEAR DETAIL
THREAD
BALSA MAST
1/16" × 1/32" BAMBOO
1/16" AL. TUBE
BOND PAPER
YELLOW BANDS
G
H
E
A
B
C
HOLLOW
1
D
F
J
K
L
1/8" SQ
PAPER WRAP
HARDWOOD WHEELS
GRAY & WHITE
RED
INSIGNIA OF 27 th PURSUIT SQUAD.
CONSOLIDATED
PB-2A
By H. K. Weiss

Chord (ft)	0.2	0.3	0.4	0.5	0.6	0.7
Re	17,600	26,400	35,200	44,000	52,800	61,600

As noted, the barrier to sweet flight is somewhere in the range 40,000 to 60,000; once beyond this somewhat uncertain threshold value, life is beautiful. The means of acting upon this information has much to do with your personality. If you are of the belt and suspenders type, go with a 0.7 chord. If you are willing to take a bit of a risk, it is a reasonable premise that a 0.5 chord will suffice to put you in the happy valley. No matter what your personality, there is very little chance of getting superior performance out of a 0.3 chord and none at all from a 0.2 chord.

As it is written: in rubber scale, real glides start with a six inch chord.

* * * * * * * * * *

"But what about Wakefield?", you sneer. "Those guys never use a 6 inch chord and yet, they get performance in spades!"

Wakefield fliers do well indeed with a chord of roughly 4½ inches. To an extent the small chord reflects the higher wing loading forced upon them by their rules. How? The high wing loading means a large gliding velocity. Returning to the Re formula, one can see that a given Re level can be achieved with a smaller chord, if the velocity is higher. That is exactly what Wakefield people do - they enter the happy valley through a combination of small chord and large velocity.

Why don't we? The difficulty is one of profile drag. Scale configurations have enormous drag values as compared to Wakefield models. To force a high drag fuselage through the air at an elevated velocity simply in order to improve wing action is a losing proposition. It is far wiser to hold the speed down and increase the chord.

It is well known that Fikes do well in competition; a result frequently credited to large wing area. There is indeed something to this. Yet most biplanes, despite an even greater wing area, have a pitiful glide. How come? It is true that there is some interference between the wings of a biplane, and that such interference does reduce effectiveness. However many biplane difficulties really originate in low Re values attributable to short chords. The concept of "splitting" the wings into two lifting surfaces, each with a high aspect ratio (short chord) is all very well in full scale design, where the basic Re will necessarily be in the millions; but for us, struggling to reach an Re of only 40,000 to 60,000 , any short chord concept is likely to be a loser, high aspect ratio or no.

Thus far, the arguments presented have all favored large chords and large Re. Performance, especially glide performance, has been treated as a "good" whose merit is beyond question. However, depending on the size of your home field, this may not be true at all. A superb glide in a small field will frequently lead to a treeing incident. A superb glide in any kind of field will frequently lead to an OOS flight.

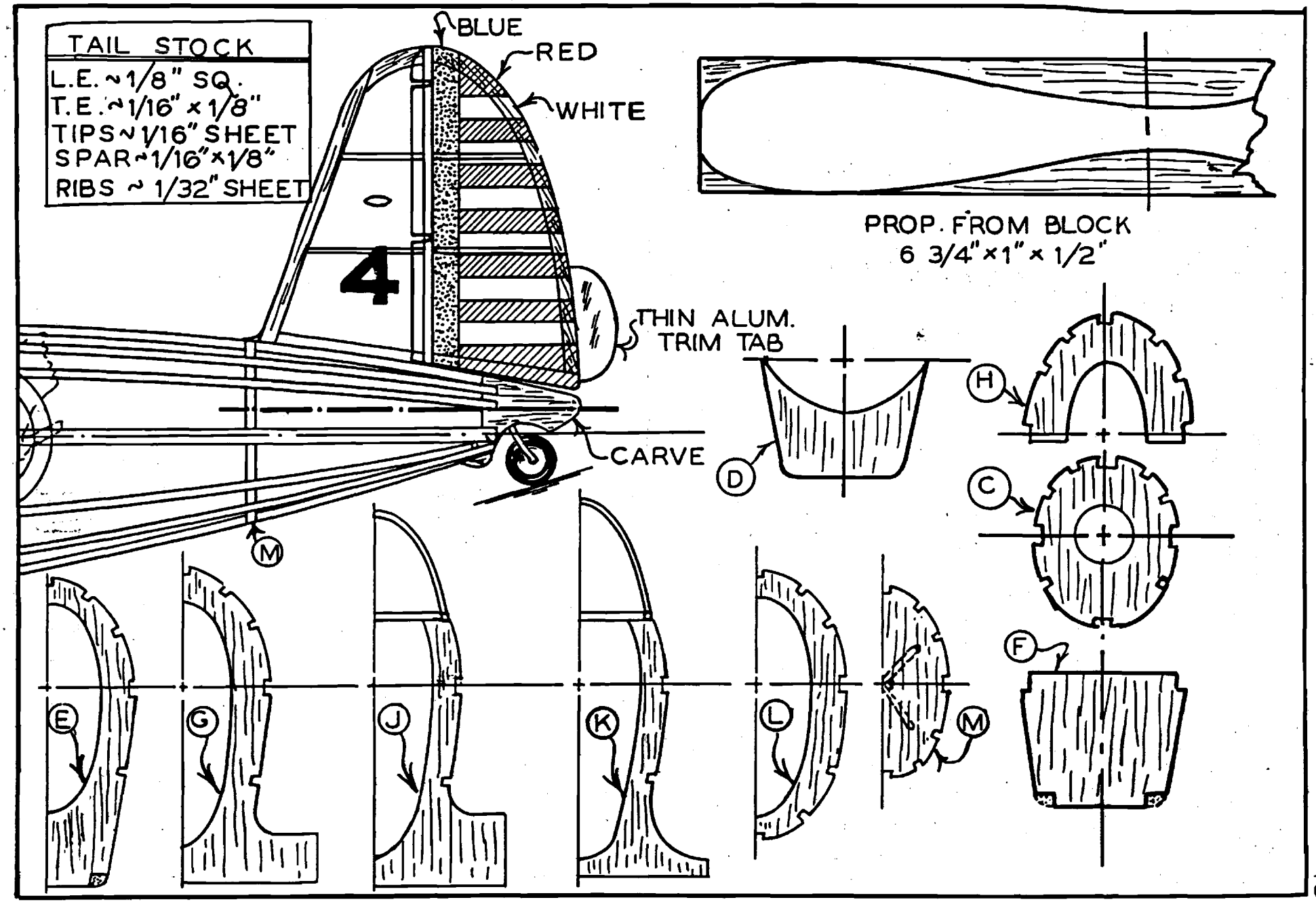
We've all read those tear-stained prose poems celebrating OOS flights. Perhaps you too are willing to make the ultimate sacrifice to achieve the stuff of myths. If so, fine, the large chord wing is for you. But if not ...

Yes, a case may easily be made for low Re chords as consistent with small field reality and anti OOS strategy. Indeed many small chord wings perform the useful function of acting as automatic DT's when the power stops. While the ensuing descent lacks grace, it sure cuts down on weeping and tree climbing. Thus, whether to seek the delights of the happy valley is a highly personal matter, well outside the domain of Mr. Reynolds and his numbers.

As it is written: in rubber scale, many real glides end with a six inch chord.

Trivia Collector Section

The value of K is the inverse of the kinematic viscosity of air, taken from Schlichting's "Boundary Layer Theory" as 160x10-6 ft^2/sec. As temperature varies, K will change slightly at a rate of roughly 10% per 40 degF shift.


TAIL STOCK
L.E. ~ 1/8" SQ.
T.E. ~ 1/16" x 1/8"
TIPS ~ 1/16" SHEET
SPAR ~ 1/16" x 1/8"
RIBS ~ 1/32" SHEET
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RED
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CARVE
PROP. FROM BLOCK
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14.

THE END OF ARNY BOLDFIELD

Dear Col. Reichel;

It is my sad duty to report the passing of Arny Boldfield. (7/4 08-7/4 88)

His early exploits with every type of gumband powered race car, boat and aircraft are legendary.

My personal memories of Arny will never be forgotten;

He was ahero on my block.
He tested and trimmed aircraft that I would never try to taxi.
He suffered many contusions--blackeyes and broken bones during my early years and had some hair raising experiences in close friends and associates creations.
He never complained--a man of steel he was.

Family members say the news of the demise of the Comet Model Co. was too much for his much realigned constitution.

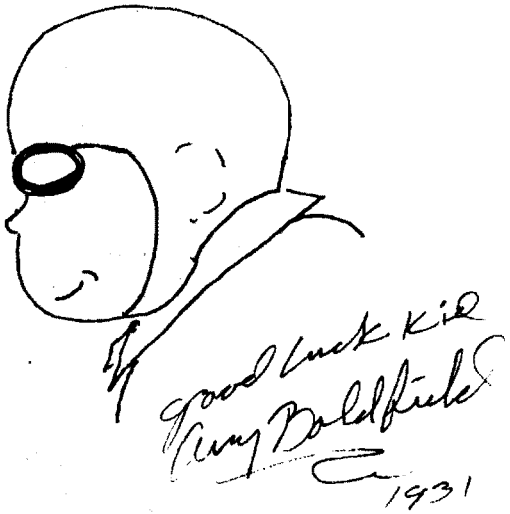
I myself will continue to use his single dimensioned effigy out of respect and to avoid the trauma of breaking in a rookie.

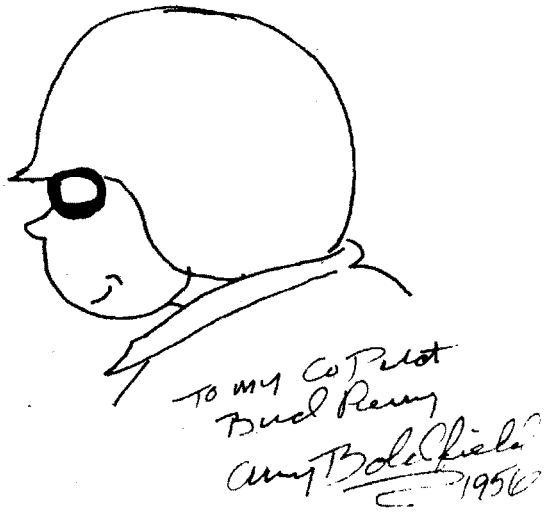
Enclosed is an early drawing, circa 1931, of Arny, along with one from 1956 just prior to semi-retirement.

Respectfully,
Bud Perry

P.S. There was a simple ceremony--his body was placed in a Sparky--the tail set aflame and glided from a hayloft.
May his soul rest forever----in Taft. Amen.

(ed. note; Too bad Arny was so hasty in doing away with himself, although I know the news about Comet Models was a shock to all of us, but the new news about Comet Models will maybe in some way make his demise worth it.)

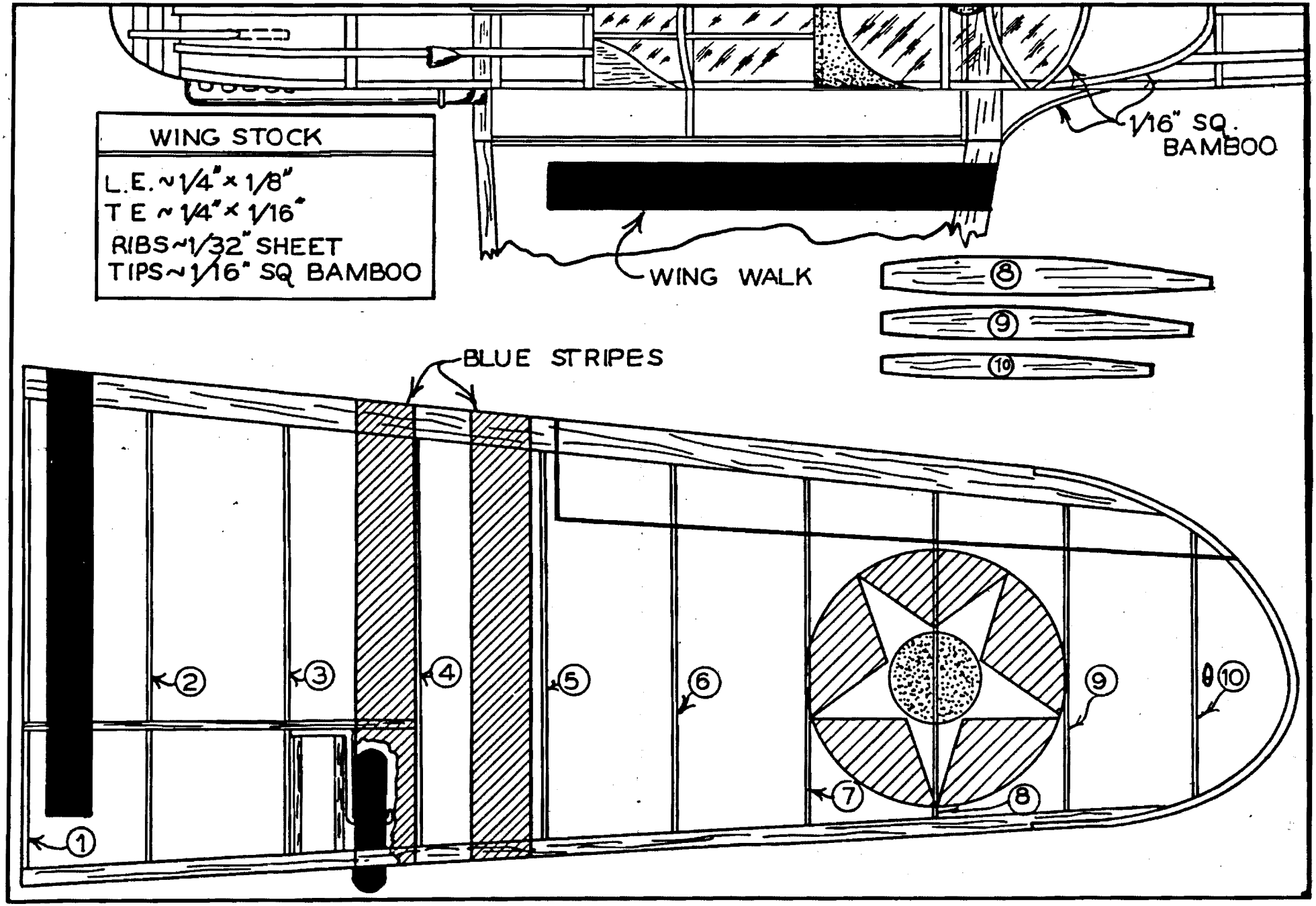




S.O.S.--S.O.S.--S.O.S.

Don DeLoach, 3428 Bryn Mawr, Dallas, Tex. 75225 is looking for some scale data on the Sonerai II racer. Someone please help!

Wayne Love, 108 Bush Gardens, Three Rod Rd., Alden, NY 14004 wants a good three view of the North American XA2J1 turbine Savage--not the AJ-1 Savage.


WING STOCK
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T E ~ 1/4" x 1/16"
RIBS ~ 1/32" SHEET
TIPS ~ 1/16" SQ BAMBOO
1/16" SQ. BAMBOO
WING WALK
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Dear Lin:

FAC Mark VI was another wonderful and memorable event. Each year it gets better with ever greater skill and fellowship being displayed.

So often we overlook making known, to the persons concerned, our appreciation for their efforts, accomplishments, and dedication to the task. FAC is a worthwhile organization giving inspiration and enjoyment to a large number of enthusiasts. I am sure it must, often, be a great burden upon you to keep things going. So, please accept my appreciation and admiration for doing such a fine job in keeping the great activity alive.

Allan Schanzle deserves accolades for the excellent job he and his associates accomplished. I have written him my thanks.

Further, allow me to express appreciation for the recognition and courtesies extended to me. I am honored to be a member of FAC.

Best wishes,

Earl

Earl Stahl

(Thanks for the kind words, Earl, but it was modellers like you that lead the way! Ed.)

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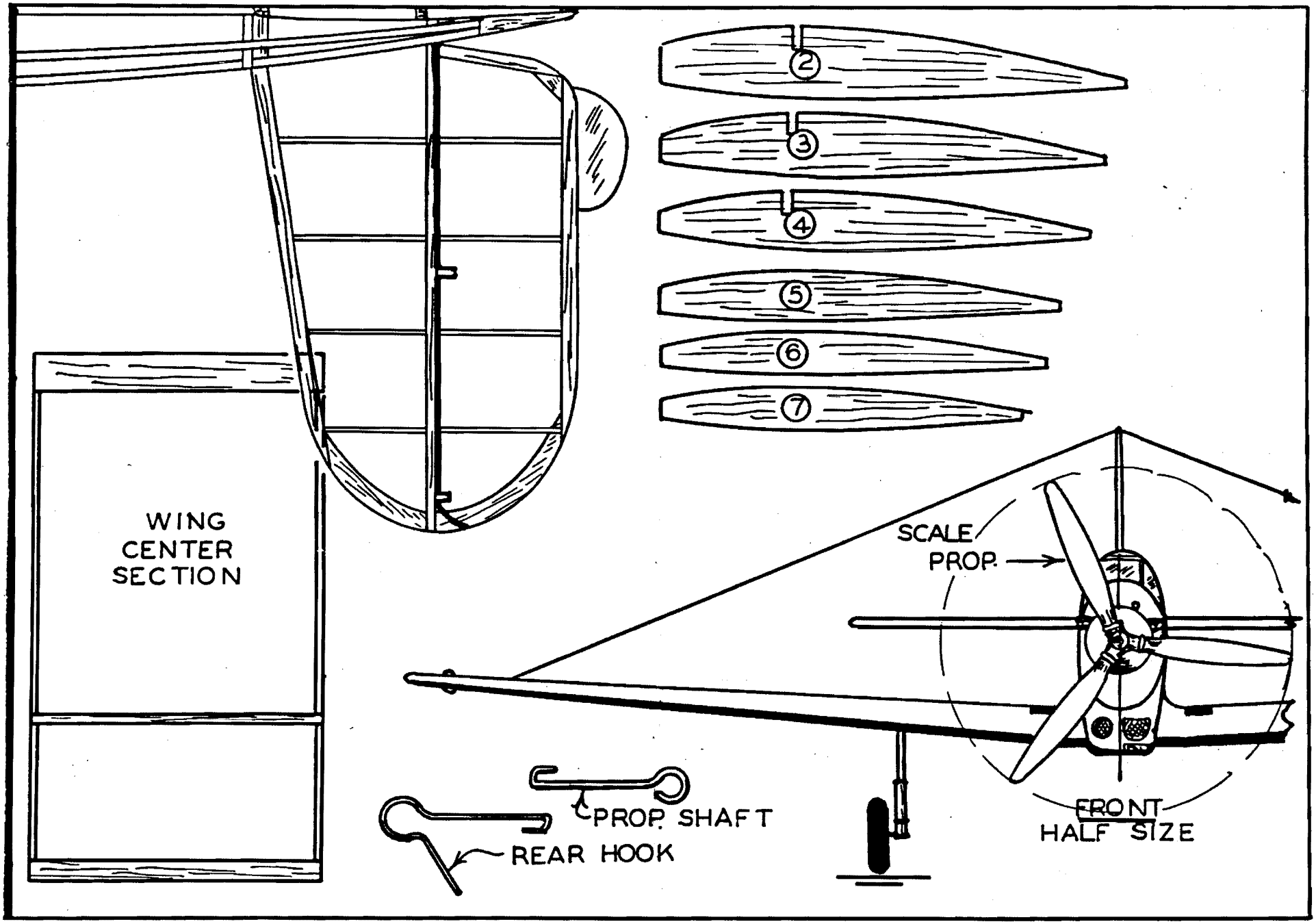
PRODUCT NEWS NOTES by Joe Wagner

Here's some good news for stick-and-tissue modelers. Excellent-quality model airplane dope is again available! ABC Hobby Supplies, P. O. Box 2391, Clarksville, Indiana 47131, sells Randolph dope by mail order, both nitrate and butyrate. This dope is non-brittle and fantastically strong. The colored dope is low-shrink butyrate, and is furnished either concentrated, for custom-thinning to a modeler's personal requirements, or in ready-to-brush form. "Retarder" (really a slow-drying thinner) and "Rejuvenator" (to re-plasticize old dope finishes) are also available.

For a complete list of colors and prices, write to ABC, or call the proprietor: Jim Correll (an old-time modeler who's still active in the game) at (812) 944-5557.

Here's more news, for FAC members who fly glow- and diesel-powered models. F.H.S. Supply, Inc., P.O. Box 9, Clover, South Carolina 29710, makers of Red Max model fuels, not only sell high-quality fuel at excellent prices: they offer a unique service. They will mix fuel to your own specifications, at the same price as their standard blends, and in quantities as small as one gallon. F.H.S. sells both glow and diesel fuel, with either synthetic or castor oil lubricant, or a blend of the two -- and their prices and delivery time are remarkably low.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URGENT!!!

To free-flight newsletter editors, and others.

Please read the following message. If you agree, then I urge you -- both as clubs and as individuals -- to copy it, sign it, and send it to both the AMA President and to your AMA District Vice President. Their addresses are in the back of every issue of Model Aviation. Just bellyaching doesn't hack it. What hacks it -- and the only thing that does -- is the vote of the AMA Executive Council. You put them in office; lean on them! And if your feelings are to have any effect on the 1989 Nats, do it right now!.

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To: My elected AMA representative.

In many instances, in recent times, the quality of the free-flight sites -- indoor and outdoor -- at the Nats has not measured up to the high standards one would expect of so prestigious a contest as the Nats. That is a problem that can be solved -- and can only be solved -- by having a separate Indoor Nats and a separate Outdoor Free-Flight Nats, distinct from the Radio Control and Control Line Nats, when circumstances make it impossible to have the F/F events at suitable sites. A Nats that combines all of these factions, while desirable in many ways, is a luxury we can no longer afford at the expense of unsuitable sites.

Whether the Nats is combined or separated, the National Free Flight Society and the free-flight community will continue to assist AMA in running Nats free-flight activities to the maximum possible extent.

You, as a member of the Executive Council, can make separated Nats possible. I strongly urge you, as my elected representative, to make it happen.

Sincerely,

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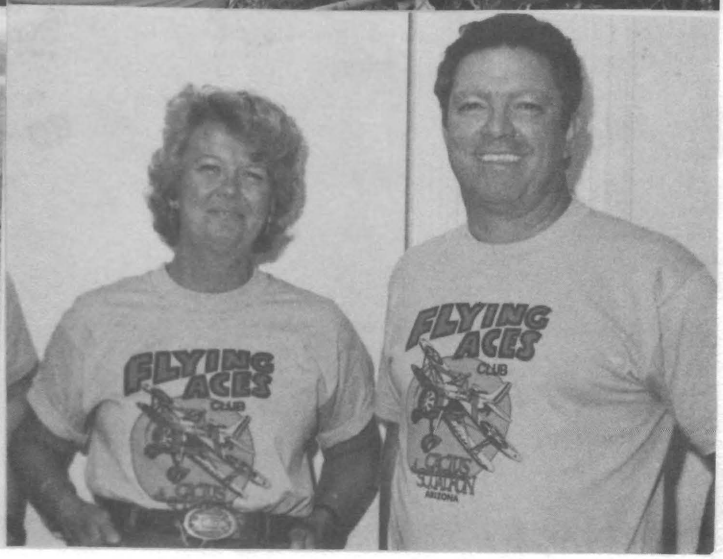
Or, perhaps even better, phone the President and your District Vice President. Or better still, phone and write. But do so right now if you expect it to have any effect on the 1989 Nats.

Sincerely,

Bob

Bob Meuser



Top to bottom,left
Walt Eggert and his neat Fokker Triplane.
Dave Stott about ready to go to the launch site with his Bristol Brandon.
Nice flying Grumman Avenger by Kevin Sharbonda.

Top to bottom, right
Marian Mann posting scores.
Bell P-39 being readied for flight by Jack Moses, Earl Stahl design enlarged.
Jane Schlosberg and Dave Smith modelling T-Shirts mentioned,th-is.

Photos of FAC Nats by Lin Reichel, T-Shirt photo by Bob Schlosberg.