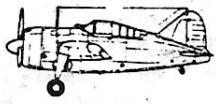
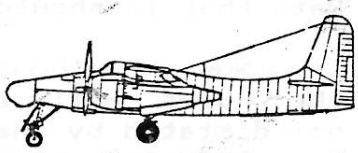

Northrop F2T-1


Seversky XNF-1


Brewster F2A-3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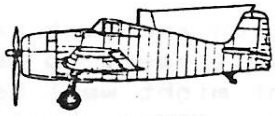
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MAX-FAX


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THE NEWSLETTER OF THE D.C. MAXECUTERS

MAY/JUNE 1983

MEMBERSHIP

Dues for membership in the D.C. Maxecuters is $8.00 per year for residents of the U.S.A., Canada, and Mexico, and $11.00 for all other countries. Your mailing label indicates the year and month of the last issue of MAX–FAX for your current membership. A red mark in the box below is a reminder that your current membership is nearing its end. Send a check, payable to D.C. Maxecuters, to the Treasurer.

DUES REMINDER ☐

MEETINGS

The D.C. Maxecuters hold meetings on the first Wednesday of every month at the College Park Airport, the oldest continuously operating airport in the world.

PRESIDENT

DAN DRISCOLL
2000 S. Eads St., #301
Arlington, VA 22202

SECRETARY

TOM SCHMITT
11014 Marcliff Road
Rockville, MD 20852

TREASURER AND NEWSLETTER EDITOR

ALLAN SCHANZLE
20008 Spur Hill Dr.
Gaithersburg, MD 20879

UPCOMING EVENTS

AMA NATS: July 24-31 1983 - Westover AFB, Mass.
FAC EVENTS AT AMA NATS: July 29 1983 - see club news.
1983 SUMMER FUN FLY: Sept 10 1983 - see flyer in this issue.
EVERY FRIDAY NIGHT: Fun fly at COMSAT followed by a sandwich at Roy Rogers.
May 20: Friday night contest for F.A. Moth.
June 17: Friday night contest for 13 inch peanut.
July 15: Friday night contest for CO2 scale and H.L. glider.
August 19: Friday night contest for scale biplanes.

CLUB NEWS
Allan Schanzle

LET'S START with a comment on the response by you folks with regard to a contest sponsored by the Smithsonian (March/April 83 MAX-FAX). I got notes from four non-locals, all of them supporting the idea. But four plus maybe 10 locals will not be nearly enough for the Smithsonian to become involved. I suspect a minimum of 30 individuals would be required. Anyone else interested?

NEXT ITEM concerns another note regarding qualifying flights for FAC scale events. From Lin Reichel, came the following:

"I thought I would clear up a point on Dave Rees' article in your newsletter on qualifying flights in FAC. Nowhere in the rules does it say you must qualify before scale judging. It is only in contests like the FAC Nats that it should be used."

Now how 'bout that, folks. How come none of us FAC judging experts know the rules well enough to realize that a qualifying flight is TRADITION, and not dictated by the rules? Good Grief.

FROM DICK SPURGEON, in old Philly, came the following comments:

The Earl Stahl Event: Earl's designs feature simple construction and capture the essence of the full-scale aircraft with modest detailing. It seems to me that his models are ideal as Beginner Scale and that the event might well be routinely featured for this reason. But, if that be the reason, there should be a limitation that construction is not to be modified -- this to reduce the expert's edge. Scale judging could be limited to fidelity to original drawings, with points for workmanship and finish conforming reasonably to that prevalent for the type; e.g., a U.S. military aircraft of the '30's would be expected to have proper military colors and perhaps some squadron insignia but needn't be the aircraft Lt. Speeddart flew at 3:21 p.m. on December 32, 1932, while patrolling the water reservoir south of Salt Lick, Nevada.

One Type Contest: How about a contest in which all the entries are models of the same plane, to the same scale, using the same kind of power. Objective: Develop a truly definitive best-model design of one particular aircraft. General rule: No scale deviation, particularly no tail surface or dihedral deviation; minimum airfoil section deviation allowed in order to go to more stable section to compensate for a too-small stabilizer; pendulum control permitted; washout permitted; permit some fill-in-between the struts if needed for CLA postion. No deviation on surface finish, i.e., no stick ar tissue if the prototype was metal. Scale documentation package to be provided by a sponsoring club.

Various clubs could sponsor a design and the contest for one design could run for two years so that competitors can "borrow" the best from the first year for a super second-year model. First year judging for any model is on flight time and flight characteristics as related to the original. Expected pattern could be described at least qualitatively. Time over 45 seconds (one minute?) doesn't count. Second year judging could go a more conventional route except for the limit on flight time. Each year a new aircraft is selected and its contest runs two years.

Expected result: New and refined construction techniques and some clever aerodynamic designs. The proposed restrictions may be too stringent -- perhaps deviations are just heavily penalized -- but some sort of contest based on the same design, size and power source, and virtually no scale deviation sounds like fun for the creative and skilled in our ranks. The two-year life cycle, incidentally, fits well with two-year FAC Nats cycle.

If any of you out there would like to comment to Dick, his address is 364 W Allens Lane, Philadelphia PA 19119.

Dick also sent a few photos of a most unusual scale model-the Westland Hill Pterodactyl Mark V. You'll find one of his pictures on the photo pages. His model is CO2 powered and was build primarely to test the stability of the configuration. It uses scale surfaces and outlines, variable incidence lower wing, adjustable rudders and ailerons, no wing struts or outriggers, and profile fuselage aft of the nose. It spans 24 inches and weighs a lead-sled 2 1/4 ountes on 85 square inches in the main wing which uses a stable NA 23013 section. Flight is rock steady, spirally stable, and rather fast. He's planning to build a fully detailed version, and would like to add to his reference material before doing so.

So far, he's used the following:

Aeroplane Monthly July 1973
Janes All the World's Aircraft - various
Copies of pages from a book whose title I believe is Westland Aircraft or similar. Would appreciate proper citation if known.
Am reviewing microfilms of Flight but this is tedious and any specific references would be appreciated.

Can anyone help him out for additional info?

THE FRIENDLY POSTMAN also brought a letter from Jim Miller in Cincinnati Ohio.

"I hope you can find some space in the next MAX-FAX to tell any of your readers that I will once more sponsor a No-Cal Profile scale event at the Gran Prix of Peanuts at West Baden. We usually fly sometime during the time the 24 hour peanut contest is going on. Entry fee is $2.00 per airplane. Fly as much as you want. FAC rules will be observed. No condensor paper. Last year I was very generous and awarded three trophies but only had five entries. This year I get smarter! One trophy for the first five entries. Two trophies if there are at least seven entries. Three trophies if there are at least 10 entries. Warn the guys that there have been some really good times made in the past few months so don't plan on winning with some junk. Last year the Canadians were tough."

In addition, Jim sent in the following hint.

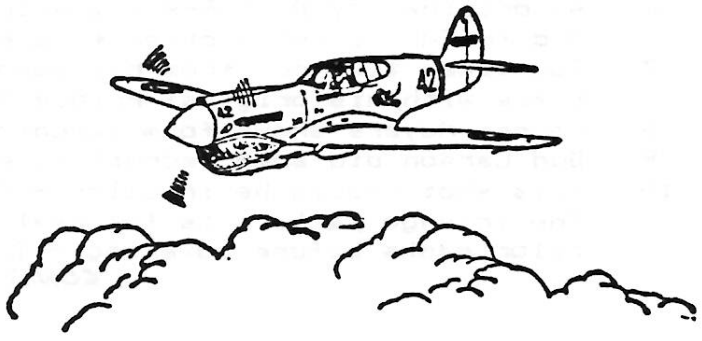
"I have a problem storing the many model mags I get. I have bought some of those file binders advertised by Model Builder but the price is rather high ($5.95). I found a cheaper way to go. My school library stores magazines in cardboard files that are good enough for most of us guys who keep our magazines in the basement. The company that sells these folders is Demco Inc., DeForest, WI 53532. I bought 25 (the minimum order) for about $23.00. The cardboard is not corrugated but the pressed type. Each box will hold about a year and a half of Model Builders. They store standing up and you can take individual magazines out at will. I think someone out there might find this useful. Maybe not."

NEXT, A NOTE arrived from Harold Howard, which will only benefit the local boys, but it should be of interest to those of you who play with those greasy gas engines.

"I have kept the two R/C clubs I belong to supplied with glow fuel for the last year or so. It cuts the cost for them by about 50% and makes it possible for me to feed a couple of 60's.
"I buy in bulk & break it down in gallons. Usually the club member supplies his own container, but if need be I will give him one.
"Red Max, 10% Nitro, 5% of the lube castor, the remainder synthetic. Runs anything from .049 up. I use it for both .049 and 60's and fly summer and winters in temperatures down to 25 degrees with excellent starts. $8.50 per gallon."

If you're interested, contact Harold at 309 H N. Acorn Ct., Dale City VA 22193, phone 703-670-5206.

MARK FINEMAN sent some information about a really smashing neat idea - rubber stamps for aircraft. A sample is shown here. There are currently about 50 aircraft to choose from-homebuilt, traditional high wingers, and WW-II. Contact George Ardwin at Aerostamps, 60 Ely Ave, Box 56, Sabina Ohio 45169. These are really neat, folks.



AS NOTED IN the "Upcoming Events," there will be a day (July 29) of FAC events at the AMA NATS this year. The specific events are: FAC Scale (rubber), Embryo, WWII, GHQ Peanut, Thompson, Greve, Shell Speed Dash, Aerol (if needed), No-Cal, and a new event, Scale Towline Glider (anything you can tow up). This ought to be a great day, so plan on an excursion to Westover AFB.

IF YOU'VE BEEN wanting but not finding a well-constructed balance or scale, look no further. Paul Gaertner demonstrated an all-metal one-hundred gram scale at the March contest, where it generated much interest. Smallest weight increment is one gram. Paul's tests made at mid-range gave plus or minus one-half gram consistency.

This scale is made by Hamilton specialties of Braintree, MA and is not widely distributed. Arrangements have been made for a single purchase of these little gems at wholesale.

To buy one, send a check for $9.00 and your name and address to Paul Gaertner, 122 Georgetown Green, Charlottesville, VA 22901. UPS will be used for shipping unless you say otherwise.

Your order should be received by Paul before June 1, 1983.

WELL NOW, lets get to the meat of this issue. The feature plan is a Sopwith Triplane by Ned Kragness. If this scares you for rubber power, a CO2 ought to be just perfect. Tom Schmitt again presents us with two pages of magnificant photos, mostly from the Andrews AFB Indoor Contest. Allan Schanzle continues with his discussion of construction hints for "monster" rubber scale, and another yarn about a WW-I Ace (Ernst Udet) has been lifted from the July 1931 issue of MAN. Finally, Len Wieczorek, up Bridgeport Conn. way, sent in another 3-view of the Vought V-143. This one is from an advertisement by Vought, and it shows the short, stubby fuselage and is called the V-143, not the V-141 as discussed in the last issue of MAX-FAX. Oh well, a typical scale lovers delight - conflict in documentation.

ONE FINAL NOTE. Please notice the new address on page 1 for the editor.

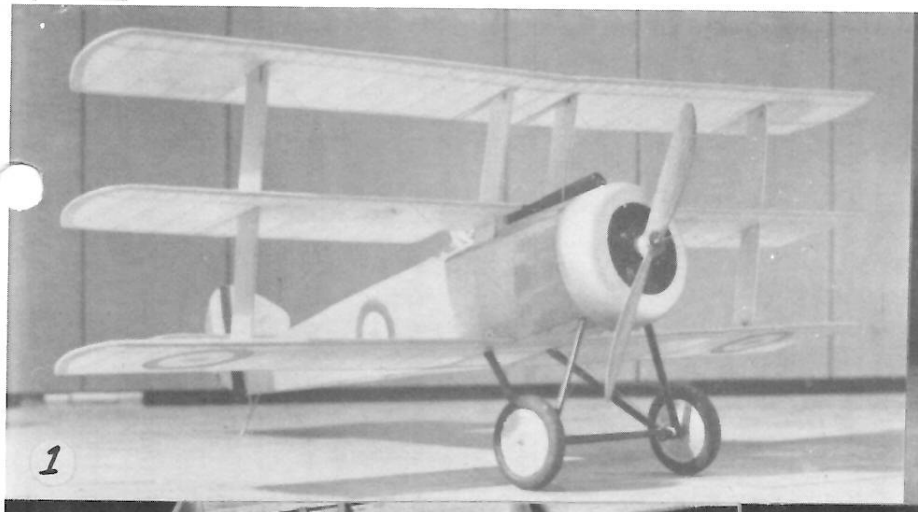
PHOTO PAGES
Tom Schmitt

1. Our feature plan of this issue - a Sopwith Tripe. Model and photo by Ned Kragness.
2. A cute CO2 Westland Hill Pterodactyl Mark V by one of our members up Philadelphia way. Model and photo by Dick Spurgeon. Dick is searching for more reference material. If you can assist, his address is 364 West Allens Lane, Philadelphia, PA., 19119.
3. More construction hints from our local monster masher. See Allan's article this issue for his jumbo PT-19 wing root construction.

MAXECUTER'S 9th ANNUAL CAPITAL INDOOR SCALE AIRCRAFT CONTEST

4. Don Srull, our FAC judge hard at work with Paul Gaertner's Handley Page Gugnunc documentation; a pretty model which hopefully will be presented as a future MAX-FAX plan.
5. Randy Kleinert launched his great flying Hellcat in Navy Scale Event for 3rd place.
6. An original by Dave Rees, a Nicholas Beazley NB-3 1st in Golden Age and 3rd in FAC Scale; another future MAX-FAX plan.
7. Don takes time out from his judging chores to win 1st place in Navy Scale with his original Prince Victoria PV-7.
8. George Meyers shows form lauching Cessna C-34 in Golden Age.
9. Bud Carson did some recruiting with his hot air balloon demonstration.
10. This shot should be in color - Pat Daily's very pretty Fokker D-VII. The lozenge pattern is for real - hand sprayed tissue through individual color masks before covering - TERRIFIC !

CONT. ON PG 8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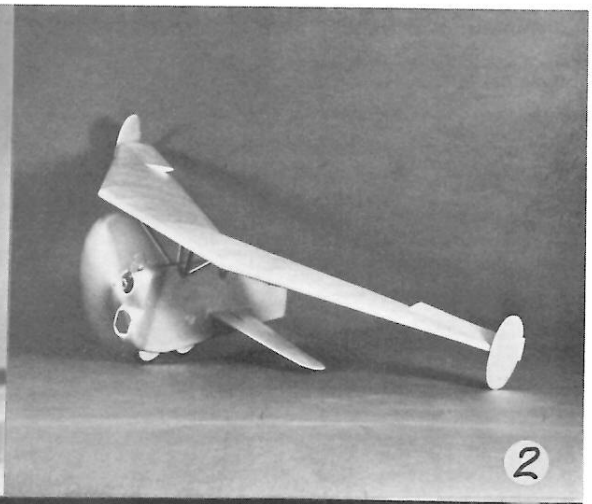
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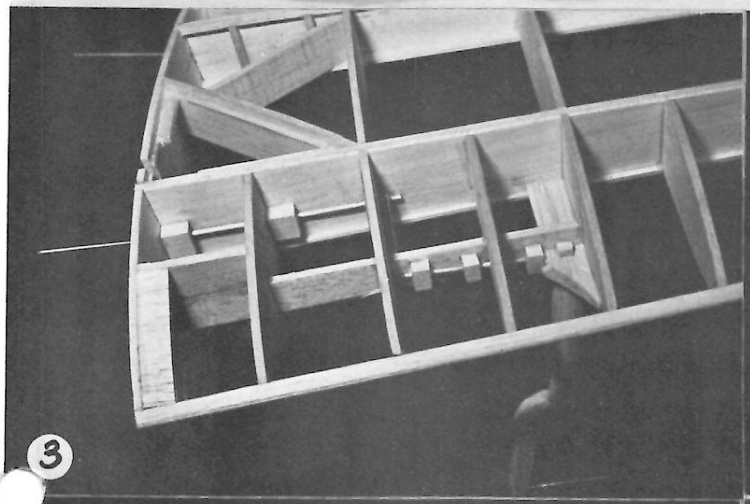
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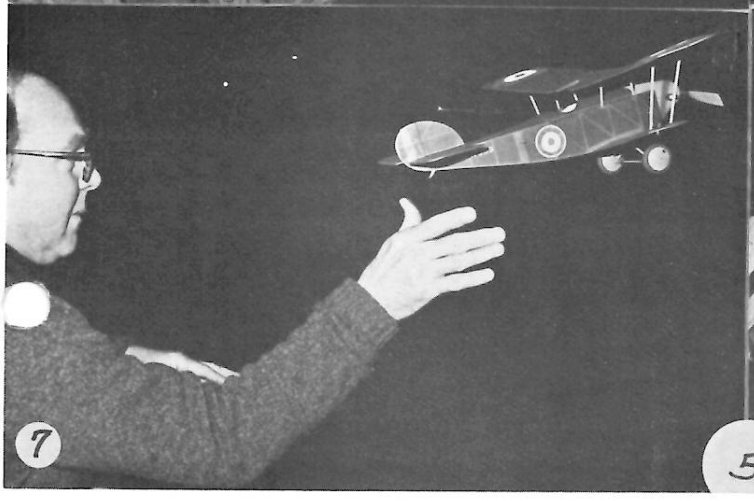
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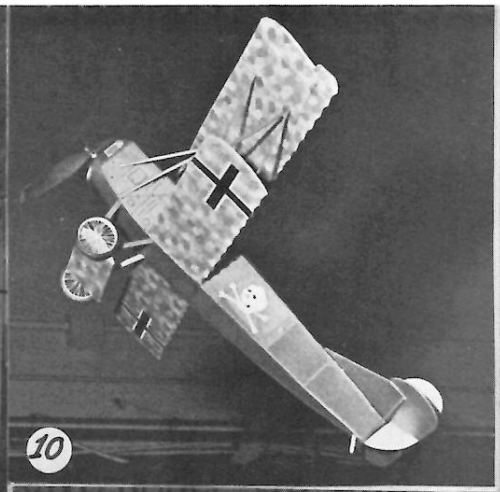
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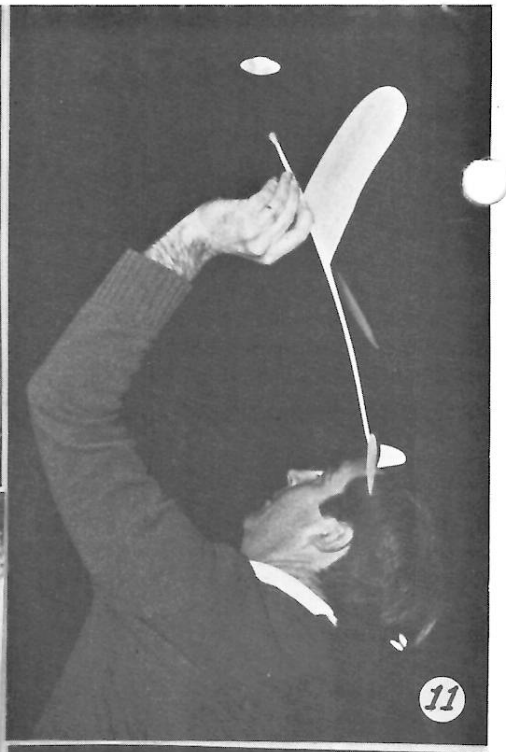
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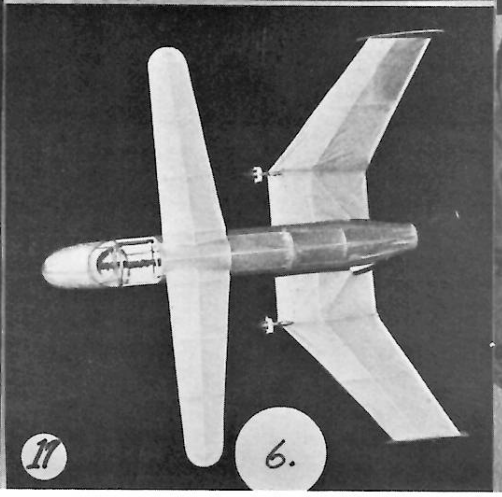
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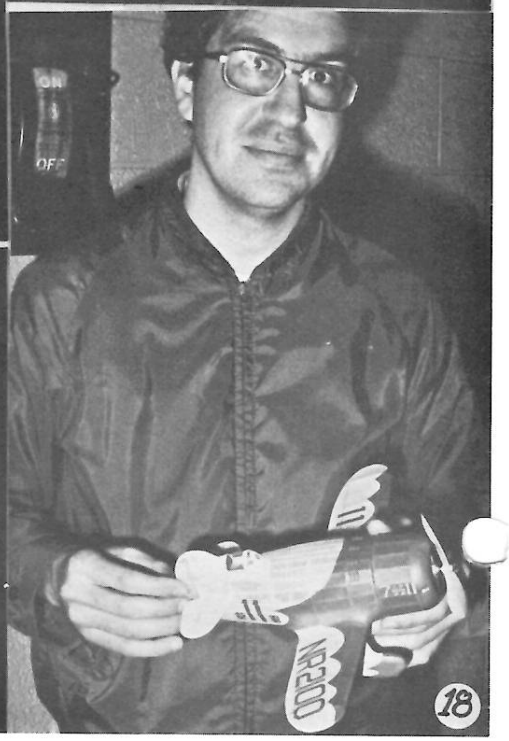

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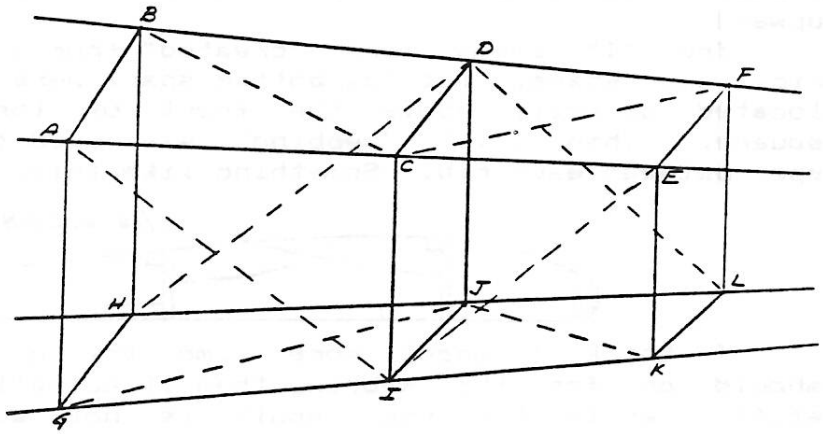
DESIGN AND CONSTRUCTION OF LARGE RUBBER SCALE MODELS
PART 2: FUSELAGE STRUCTURE
or
How Your Fuselage May Get "Torqued-Off"

Allan Schanzle

When you build 'em big, it takes lots of rubber to get these hummers up in the air. And lots of rubber means lots of torque, which means lots of forces on the fuselage heretofore ignored. Ya say ya don't believe it? Tell you what ya gotta do. Take an old 24" span model that you're willing to sacrifice for balsa kindling. Load it up with 3 loops (6 strands) of 1/4" FAI and wind it up. Hook the rubber on the prop, and if it's still in one piece, watch the stab tilt relative to the wing. That's torque at work, twisting the fuselage. The PT-19 uses (thus far) 6 loops (12 strands) of 1/4" FAI. There is so much torque resulting from this motor that my simple 4 to 1 hand drill will only let me put in 60% of the maximum turns. At this point, it's almost impossible to turn the handle of the drill, and the gears begin to sound like your 16 year old kid just shifted the old standard transmission on the 68 Ford for the first time. Ugg - grind me another pound, honey. The sound is about as bad as fingernails on a blackboard.

In other words, you gotta design the fuselage to take lots of torque. The doped tissue we use on smaller models handles the torque forces quite well, but don't plan on the tissue doing the job for large models. Use diagonal balsa strips on the sides, top, and bottom. It's best to arrange them in opposite directions, as shown on the figure.

For example, on the top, use a brace from B to C, while on the corresponding bottom section, go from G to J. Once you build in these diagonal braces, try to twist the fuselage. You'll be impressed with the torsional strength.



But I hear someone out there saying, "What if I choose to build an oval shaped fuselage?" I have two suggestions: 1. Don't. 2. But if you insist, build a box structure like shown above (to give torsional strength) and add curved formers to give the oval outline.

So much for the general structure. How about wood sizes? The four main longerons were made by laminating two pieces of 1/8" sq. to give a 1/4 x 1/8 cross section. All uprights, cross, and diagonal braces were 1/8 square. Why 1/8 inch square rather than, say, 3/32 square? Simple; I had a whole bundle of 1/8 strips and little, if any, of 3/32. Once again, "supply" overrides logic and analysis. Sorta like the old saying that if you can't dazzle 'em with technical competence, overwhelm 'em with B.S.

If you choose a low wing model, like the PT-19, or any other design where the wing intersects the fuselage, thus eliminating the capability for building in diagonal braces, be sure to sheet with balsa in these areas to absorb and transmit the torque. Somehow, I doubt you can "overbuild" the wing/fuselage junction. One wing tip landing and I bet you'll see what I mean.

Another technique that has worked well in the PT-19 concerns the rear mote* peg. Don't count on a single piece of aluminum tubing doing the job. Select 3 telescoping sizes of aluminum tubing, the largest being 3/16 or 1/4 inch outside diameter. If you telescope them and then Hot Stuff these three dudes together, you'll get considerable strength with minimal weight. I've

seen no signs of bending in the PT-19, which used the above method.

And what do you intend to use to hold this motor peg? I'm sure I overbuilt this portion of the model, because I sandwiched a piece of 1/16 plywood between two pieces of 1/8 sheet balsa.

Finally, be sure to have a huge opening in the front end. Twelve or 16 strands of rubber make big knots. How big is huge? Well, let's plan ahead just a tweek. If you're going to build a model this size, surely you plan c using a winding tube. If you don't, well, just ask Leon Bennett wha happened to his 7 1/2 foot Moth Minor when 24 strands of FAI went ka-bluey. There's lots of energy in that much rubber. So plan on a motor tube. The largest rocket motor tube I found at the local hobby shop was 1 1/4 inches. Would you care to guess the size of the opening in the front of the PT-19? Yep, 1 1/4 inches.

DESIGN AND CONSTRUCTION OF LARGE RUBBER MODELS

Allan Schanzle

PART 3

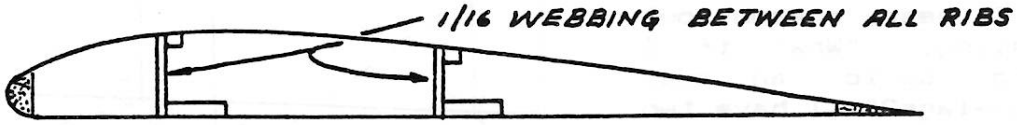
WING STRUCTURE

or

If stresses get too high, you can kiss it goodbye.

Those bass wood "I" beams I mentioned in part 1 showed tremendous strength, and I figured I sure could use that design characteristic in the wings. But the milled-out bass wood products were all much too small for this wing. It became obvious that if I wanted to use "I" beams, I would have to make them. But what the heck-it's just a little more wood, a few more bucks, a couple more hours of work, and another quart of ambroid. Onward and upward.

The "I" beams were "created" from a traditional wing structure, i.e., ribs and spars. But the bottom spars were 1/8" x 1/2", while the top spars, located directly above the front of the bottom spars, were simply 1/8" square. Then 1/16" "webbing" was used to join the top spar to the bottom spar between each rib. Something like this.



I think I spent more time trying to figure out which way the grain should go for the webbing than it actually took to install the bloody fool stuff. While the end result is not actually an "I" beam, (more of a "channel"), it sure does stiffen up the wing. And oh yes - the grain - I used "C" grain to compensate for my inevitably wrong choice, which was to have the grain run span-wise rather than vertically.

The only other item worth mentioning for the wing (except the landing gear and wing plug-in designs, which will be covered in the next issue), is the use of some additional spars to help transfer loads from the root rib to the spars when that inevitable wind gust tosses this monster onto a wing tip. See photo page for details.

PHOTO PAGES

11. Randy Kleinert goes for the moon in Hand Launch Glider Event.
12. Paul Herman with a Good launch of his Peanut Cub.
13. Another Peanut by Paul, his fine flying PT-19.
14. Jerry Persh and his Flyline Howard, a little too fast for hangar flying.
15. Paul Spreiregen keeps an eye on his Pennyplane in the turbulent hangar air.
16. Glen Simpers and his Bostonian entry, the Woburn Express.
17. A Miles M-35 pusher canard by Quintin Aspin.
18. Tony Avak and his Gee-Bee, a Gene Dubois kit; tricky flyer. It is regretful that photos of Tony's electric powered, R/C airship were difficult to print; Tony could do everything with the ship but make it say hello.

CONTEST RESULTS FOR F.A.C. SCALE

NAME	AIRCRAFT	STATIC					FLIGHT (SECONDS)				TOTAL PTS.	PLACE
		CONST 0-30	COLOR 0-20	WORK 0-12½	BASE	TOTAL	1	2	3	FLIGHT POINTS		
DUDLEY PRISEL	HEINKEL 112 B0	27	18	11.5	10	66.5	55	55	55	55	121.5	2
DAVE REES	N.B.-3	25	18	10	10	63	21	29	52	52	115	3
RANDY KLEINERT	FAIRCHILD 22	22	14	8.5	—	44.5	26	22	—	26	70.5	9
ALLAN SCHANZLE	POLIKARPOV R5	24	19	10.5	15	68.5	30	—	—	30	98.5	5
BILL BELL	FOKKER D-7	24	12	10	15	61	20	21	23	23	84	7
BILL BELL	CURTIS HOLDEN	18	14	10	—	52	24	30	23	30	82	8
MIKE MOSKOW	REARWIN SPEEDSTER	18	12	10	—	40	21	—	—	21	61	11
GEORGE MEYERS	BLERIOT	25	19	10	30	82	41	36	—	41	123	1
PAT DAILY	CURTIS F6C-3	28	18	10.5	15	71.5	24	30	29	30	101.5	4
PAT DAILY	FOKKER D-7	27	19	11.5	15	72.5	22	—	—	22	94.5	6
BILL BELL	J2 CUB	15	15	10.5	—	40.5	26	27	27	27	67.5	10

CONTEST RESULTS FOR PEANUT SCALE

NAME	AIRCRAFT	STATIC RANK	FLIGHT TIMES (SEC.)				FLT RANK	TOTAL RANK	PLACE
			1	2	3	BEST			
DAN DRISCOLL	F4U CORSAIR	7	21	23	—	23	8	15	9
DAVE REES	CONTESTOR	4	28	37	55	55	1	5	1
PAUL HERMAN	ANDREASON	8	41	—	—	41	3	11	7
PAUL HERMAN	PT-19	6	31	—	—	31	5	11	6
RANDY KLEINERT	CONTESTOR	3	21	41	38	41	3	6	2
RANDY KLEINERT	ANDREASON	9	23	25	33	33	4	13	8
RICH HENSEL	SPERRY MESSENGER	2	21	17	27	27	6	8	5
MIKE MOSKOW	FOKKER D-8	10	25	—	—	25	7	17	10
GEORGE MEYERS	GADFLY	5	48	34	—	48	2	7	3
TONY AVAK	NIEUPORT 11	1	21	25	21	25	7	8	4

CONTEST RESULTS FOR PENNY PLANE

NAME	AIRCRAFT	FLIGHT TIMES (SEC.)					BEST	PLACE
		1	2	3	4	5		
GLEN SIMPERS	X-1	151	—	—	—	—	151	4
DAVE REES	C.B.-1	85	118	91	—	—	118	6
PAUL HERMAN	C.B.-2	82	132	155	—	—	155	3
PAUL SPREIREGEN	C.B.-3	103	97	126	—	—	126	5
PAUL SPREIREGEN	EASY-BEE	42	57	43	—	—	57	8
DON SRULL	C.B.-4	165	179	—	—	—	179	2
ROLF GREGORY	PENNYPINCHER	135	181	190	177	—	190	1
BILL CLARKE	C.B.-5	59	—	—	—	—	59	7

CONTEST RESULTS FOR GOLDEN AGE

NAME	AIRCRAFT	ROUND ELIMINATED										PLACE
		1	2	3	4	5	6	7	8	9	10	
FLIGHT A												
DAVE REES	N.B.-3											1
RANDY KLEINERT	FAIRCHILD 22	SCRATCHED										
ALLAN SCHANZLE	POLIKARPOV R-5	SCRATCHED										
BILL BELL	J-2 CUB		X									
PAUL GAERTNER	HANDLEY PAGE GUGNUNC	X										
MIKE MOSKOW	REARWIN SPEEDSTER				X							3
GEORGE MEYERS	CESSNA C-34		X									
PAT DAILY	CURTIS GOSHAWK					X						2
CLAUDE POWELL	MARTIN T4M	X										
ROLFE GREGORY	CORBEN JR. ACE			X								

CONTEST RESULTS FOR NAVY SCALE

NAME	AIRCRAFT	ROUND ELIMINATED										PLACE
		1	2	3	4	5	6	7	8	9	10	
FLIGHT A												
DUDLEY PRISEL	F4U		X									
DAVE REES	SUBMARINE SCOUT	X										
RANDY KLEINERT	HELLCAT					X						3
TOM SCHMITT	WILDCAT	SCRATCHED										
BILL BELL	F4U			X								
DON SRULL	PV-7											1
GEORGE MEYERS	MARTIN MO-1						X					2
PAT DAILY	CURTIS F6C-3	X										
CLAUDE POWELL	MARTIN T4M				X							

CONTEST RESULTS FOR WW-I

NAME	AIRCRAFT	ROUND ELIMINATED										PLACE
		1	2	3	4	5	6	7	8	9	10	
FLIGHT A												
DAVE REES	ALBATROS		X									
RANDY KLEINERT	SE-5	X										
BILL BELL	FOKKER D-7				X							3
DON SRULL	PV-7					X						2
GEORGE MEYERS	FOKKER D-7											1
PAT DAILY	FOKKER D-7	X										
TONY AVAK	NIEUPORT 11			X								
ROLFE GREGORY	NIEUPORT 11		X									

CONTEST RESULTS FOR NO CAL

NAME	AIRCRAFT	FLIGHT TIMES (SECONDS)				PLACE
		1	2	3	TOTAL	
RANDY KLEINERT	COUGAR	–	–	–	–	–
TOM SCHMITT	WATERMAN	35	45	72	152	4
PAUL SPREIREGEN	LACY M-10	80	70	62	212	2
PAUL SPREIREGEN	OLD IRONSIDES	67	69	52	188	3
DON SRULL	MACCI	111	122	92	325	1
PAT DAILY	O-46	–	–	–	–	–

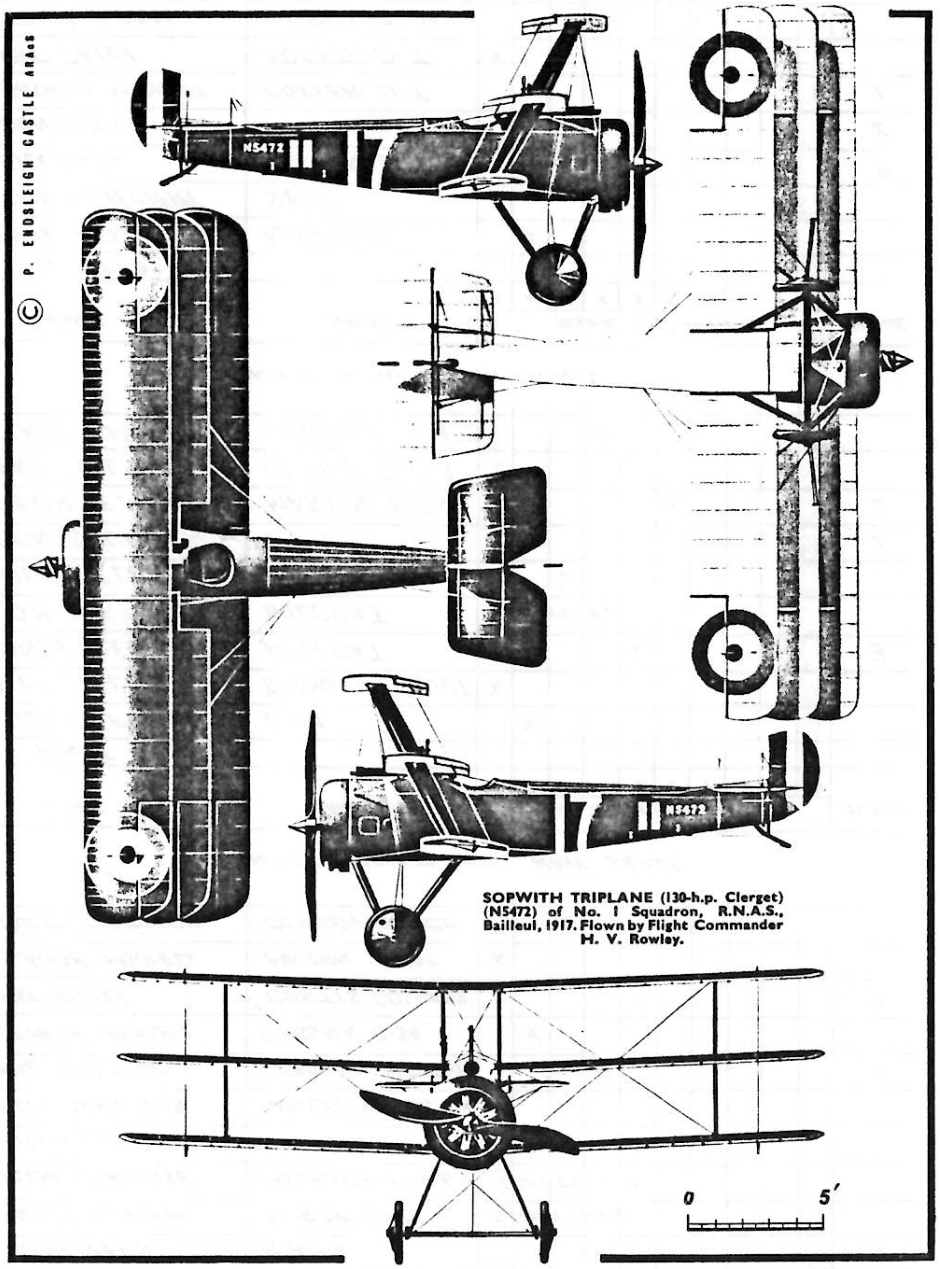
CONTEST RESULTS FOR BOSTONIAN

NAME	AIRCRAFT	FLIGHT TIMES (SEC.)					BEST	PLACE
		1	2	3	4	5		
GLEN SIMPERS	WOBURN EXP.	–	–	–	–	–	–	–
DUDLEY PRISEL	TEA-CRAFT	32	28	35	56	23	56	2
TOM SCHMITT	HARVARD SQUARE	64	70	75	–	–	75	1
PAUL SPREIREGEN	FOUND	41	43	43	–	–	43	3

CONTEST RESULTS FOR HAND LAUNCH GLIDER

NAME	FLIGHT TIMES (SECONDS)							PLACE	
	1	2	3	4	5	6	TOTAL		
GLEN SIMPERS	29	33	33	31	32	32	98	1	
RANDY KLEINERT	27	33	26	26	29	27	89	2	
BILL CLARKE	28	27	26	25	25	23	81	3	

10.



SOPWITH TRIPLANE (130-h.p. Clerget) (N5472) of No. 1 Squadron, R.N.A.S., Bailleul, 1917. Flown by Flight Commander H. V. Rowley.

Ernst Udet of Germany

By O. H. KNEEN

ERNST UDET, who came out of the World War with sixty-two victories, second only to von Richthofen on the German side, was only eighteen when he won his first victory. There was probably no younger war pilot. He had a most remarkable control of his plane at all times, no matter how heated the flight above the clouds, and many were his narrow escapes from death or capture. He is believed to be the first war pilot to save his life by parachute.

Probably Udet's most thrilling experience occurred when he was forced to jump for his life. He had been sent up, shortly before a heavy bombardment, to fight a French plane that had been flying low over the German lines. Suddenly, as Udet started toward the lines from his airdrome, the shells began screaming through the air.

They dug up the earth and their explosions filled the air with "bumps" and smoke as Udet cruised over the battleground looking for the French plane. Above the barrage he pursued his adversary. Finally the Frenchman turned his plane, as Udet began pouring shots into it—and the French machine suddenly banked, and began flying directly into Udet's machine-gun fire!

As the machine passed, the German ace saw the observer's seat vacant. Assuming that he had been killed or wounded, and had fallen to the cockpit floor, Udet dived at the unprotected side of the French plane, shooting hot pellets of death.

Instantly the observer arose, however, and let out a stream of fire that caught the German with the whole burst! Udet's machine was riddled and plunged into a dive that seemed headed for death. All controls were jammed. Udet tugged frantically but in vain, as he plunged headlong toward the leaping earth.

With death staring him in the face, the German ace grabbed his parachute, a crude device carried on the seat as a cushion. The terrific rush of the dive flung him violently back against the cockpit and stunned him. When he tried to jump, his parachute caught on something.

The next moment, when his tumbling plane was hardly a thousand feet from the ground, he managed to fight his way out, though he was dashed against the structure several times. He leaped—the parachute opened—and he landed safely, though slightly stunned.

But when he came to, he found that he had dropped squarely into the middle of a terrific Allied barrage! He kicked loose from the cumbersome silken folds, and ran toward the German lines. Stumbling across craters and hillocks, knocked off his feet, thrown into the air and struck by flying rocks and clods, he was bruised and cut all over. With the blood flowing freely, he kept on and finally dropped behind a ridge upon several astounded German infantrymen. What a place to meet an aviator!

Udet left immediately after the bombardment and a gas attack had passed, got through to a town and sent a call to his squadron. His plane having been reported down in the midst of the barrage, he had a difficult time convincing his mates that he was alive. He was given a great welcome.

Early one morning Udet came upon a French machine just as it was about to shoot down a German from the rear. Dashing to the rescue, with two bursts he sent the French attacker into a spin. However, some distance below, the downed machine straightened out and began to glide toward the French lines. Udet dived after it in an effort to catch it before it could land.

SUDDENLY the French plane veered around and its pilot made a desperate attempt to ram Udet's machine. Having only gliding speed, this attack failed. As he glided by, the Allied pilot shook his fist at the pursuing German. His ramming attempt made him land badly, and the machine rolled over several times, smashing completely.

Udet himself landed, (for this was in German territory) and ran up to the plane. He found that the downed pilot was W. B. Wanamaker, an American flying with the French, and that he was considerably injured in the crash.

Udet himself is probably the only pilot who won a victory by ramming an enemy plane—and lived to tell the tale. Collisions in midair are nearly always fatal, or were until parachutes came into general use.

He was flying with some escort planes, at about two thousand five hundred feet, on August 8, 1918. Suddenly an English plane swooped down from the sky straight at Udet, who banked and circled till he was above the attacker. The latter then dropped into a steep dive, Udet on his tail. At about one thousand feet the English pilot suddenly Immelmanned, coming up almost on a level with Udet, and roaring straight at him.

He is probably the only pilot who rammed an enemy plane—and lived to tell the tale!

Udet kept his course, thinking his opponent would swerve. This time the maneuver did not work—usually the man who swerved was raked with gun-fire by the other. However, this Englishman also held to his course. Neither would yield. Shooting wildly, they came together with a terrific rending. Udet was tossed about by the impact, and saw the English plane break clear and fall toward earth. The wheels of the German machine had smashed the other's wings, but in spite of this, the English plane leveled off and landed, totally wrecked. Udet also landed, though with much uncertainty, not knowing whether his undercarriage would hold or not.

Udet had many miraculous escapes. Once three English Sopwiths forced him down to about three thousand meters, where he leveled off and found that his guns were jammed, his windshield gone, and his gas tanks pouring gasoline into his lap. He shut off the spark and started a glide to his base. He barely scraped over the buildings at his field, but could not turn into the wind, and had to land with a breeze on his tail. The crash tipped his Albatross over on top of him.

Once, forced to land while confused in a fog, he found that he had landed on British territory! British soldiers started for him, but did not realize he was a German till Udet suddenly took off again. He "hedgehopped" almost over their heads, with their bullets pinging through his wings. Clearing a group of huts, he knocked off a tin smoke-stack with his undercarriage.

By this time machine-gun bullets sang all around him. But he staggered over a group of trees and landed inside his own lines—with a dead motor!

Udet's largest day brought him four victories. All through the final months he fought with von Richthofen's famous Jagdstaffel, as coveted an honor as for a Frenchman to fly with Fonck's Cigognes. He was the only ace of Germany's five premier aces to emerge from the war alive.

Unlike most war pilots, Udet continued stunt flying after the war, and today at the age of thirty-three he is one of the daredevils of the motion pictures.

D.C. MAXECUTER'S '83 SUMMER FUN FLY

Sept 10

9⁰⁰ to 6⁰⁰

AMA SANCTION
#693

CONTEST DIRECTOR
Allan Schanzle
8311 Exodus Dr.
Gaithersburg MD 20879

301 840-9883

EVENTS

FAC SCALE:
Judging starts at 11:30 AM. Qualifying flight must be made by this time. 1983 FAC rules.

BILL WINTER COMMEMORATIVE:
Build a Bill Winter design (see MAX-FAX, Nov/Dec 1982) and enter it in FAC Scale. Winner will be the highest FAC score for a Winter design. Same plane is automatically entered in FAC Scale and Winter Commemorative. Best of three official flights will be used for both events. One plane is eligible to win both categories. Qualifying time as above.

FAC POWER SCALE:
For electric, CO_2, and gas power. Rules as per FAC scale. NO tank restrictions. Time restrictions as above.

MASS LAUNCH:

THE RACES	1:30 PM.	A single launch for all racers.
WW-I	2:00 PM.	Biplanes only.
WW-II	3:00 PM.	Combat WW-II aircraft only.
GOLDEN AGE	4:00 PM.	Any aircraft built from 1920 to 1935 and any plane not designed for military use from 1935 to 1940. PLANES ELIGIBLE FOR THE RACES EXCLUDED.

FLYING ACES MOTH:
Built from plans in JAN/FEB 1983 MAX-FAX. Depending on the number of entries, this will be run according to the EMBRYO rules or a single mass launch.

TRANS-COMSAT SPEED AND NAVIGATION RACE:
Two events for a single mass launch. For all scale models with at least 40 FAC points, excluding bonus points.

H.L. GLIDER:
As per AMA.

CATAPULT GLIDER:
Must use MAXECUTER launching pole. AMA H.L. scoring.

THE SOPWITH TRIPLANE
Ned Kragness

This model could become an alignment nightmare without an assembly plan to assure accurate rigging.

Notice that the center section struts are part of the fuselage structure just as they were in the full size airplane. On this account, fuselage accuracy in the forward part is extremely critical. It's not hard to do; just be meticulous.

The wings require lots of ribs which are rectangular when installed and which acquire airfoil shape by cutting and sanding after assembly. Note that paired wing ribs provide slots for the center section and outboard struts. These slots must all be exactly the same distance from the aircraft centerline. Build all three wings as single pieces - the middle and lower wing cut-outs will be done later. The covered center wing will be assembled to the center section struts in one piece and its leading and trailing edges cut away after alignment is known to be correct. A similar procedure is followed when assembling the lower wing to the fuselage. More advice on this later.

Build all of the subcomponents separately. Assemble the landing gear onto a 1/16 sheet balsa dummy fuselage bottom, and paint it, rig the axle with rubber band, set aside for later installation. Build, cover and decorate tail surfaces and wings. Make all struts, install rigging wire loops and make scarf cut (using new blade), recement to permit measurment etc., and later separation with thinner for insertion in wings and recementing after installation.

The fuselage should be complete, covered and decorated before notching the underside for spars, leading edge, trailing edge, etc.

The lower wing is the first item to be mounted. Insert the outer struts in their slots, but do not cement. Second, slip the center wing (still in one piece) onto the outboard struts and pin or tack cement the butt ribs to the center struts. Third; slip the upper wing into place on the 4 struts. All the wings are now in place but movable and twistable. Your first step is to tack cement (using Ambroid) an approximate alignment. Start with the lower wing, getting 1 degree of washout at the tips and the struts paralell to the center section struts and all strut leading edges in a straight line. If this step is well done the rest is easier.

Proceed to locate the top wing making sure it is at the correct incidence at the center struts and is parallel to the bottom wing. Tack cement to the outboard struts with about 1 degree washout at both tips: no twist!

The center wing is now located midway between the upper and lower wings - parallel to both.

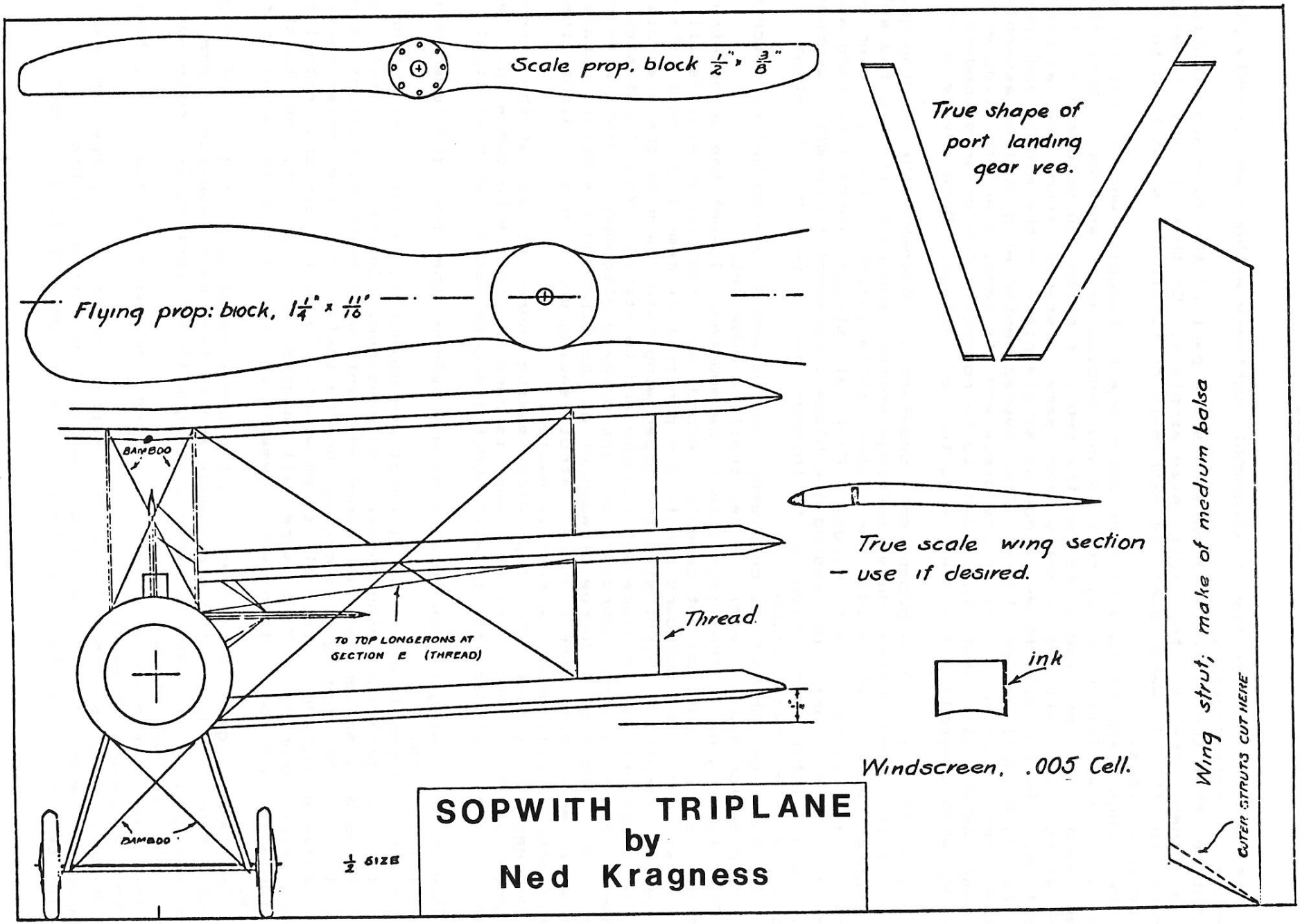
At this point there is no dihedral and cementing is only firm enough so that it holds still for being checked and measured. Go over it carefully and where necessary, soften the tack-cemented joints with thinner, correcting one at a time. The rigging filament can now be installed in the center section first pulling dihedral into all three wings. Recheck again and install the landing wire bracing. Make sure all angles are correct, no twist or misalignments and only then work cement in to firm up the strut to rib joints.

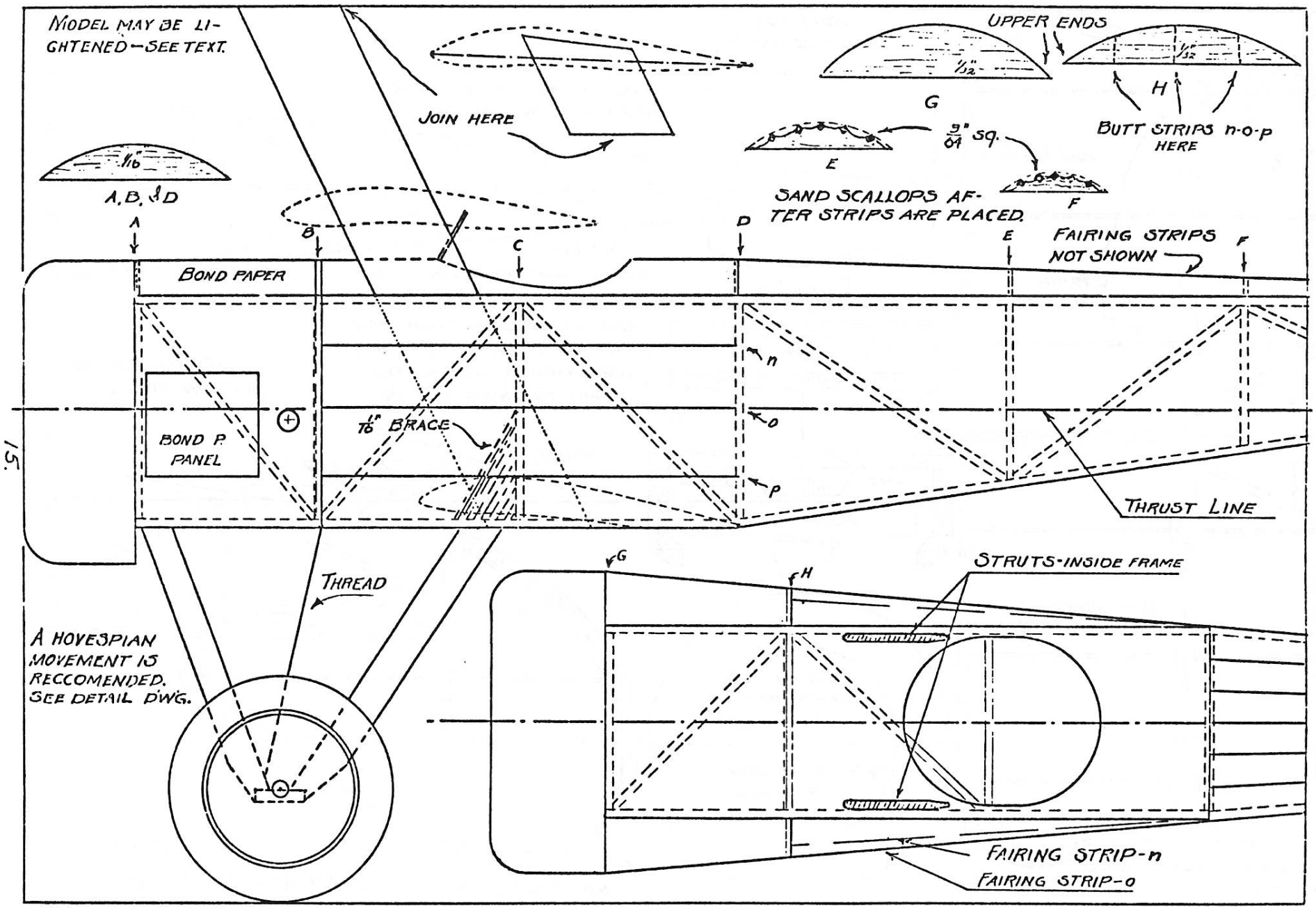
The landing gear is removed from the dummy fuselage bottom. 1/64" slots for ply tabs are cut in the strut ends and in the lower fuselage. Cement in place using 1/64 ply tabs and when dry rig with filament pulled quite snug. A low twang is about right.

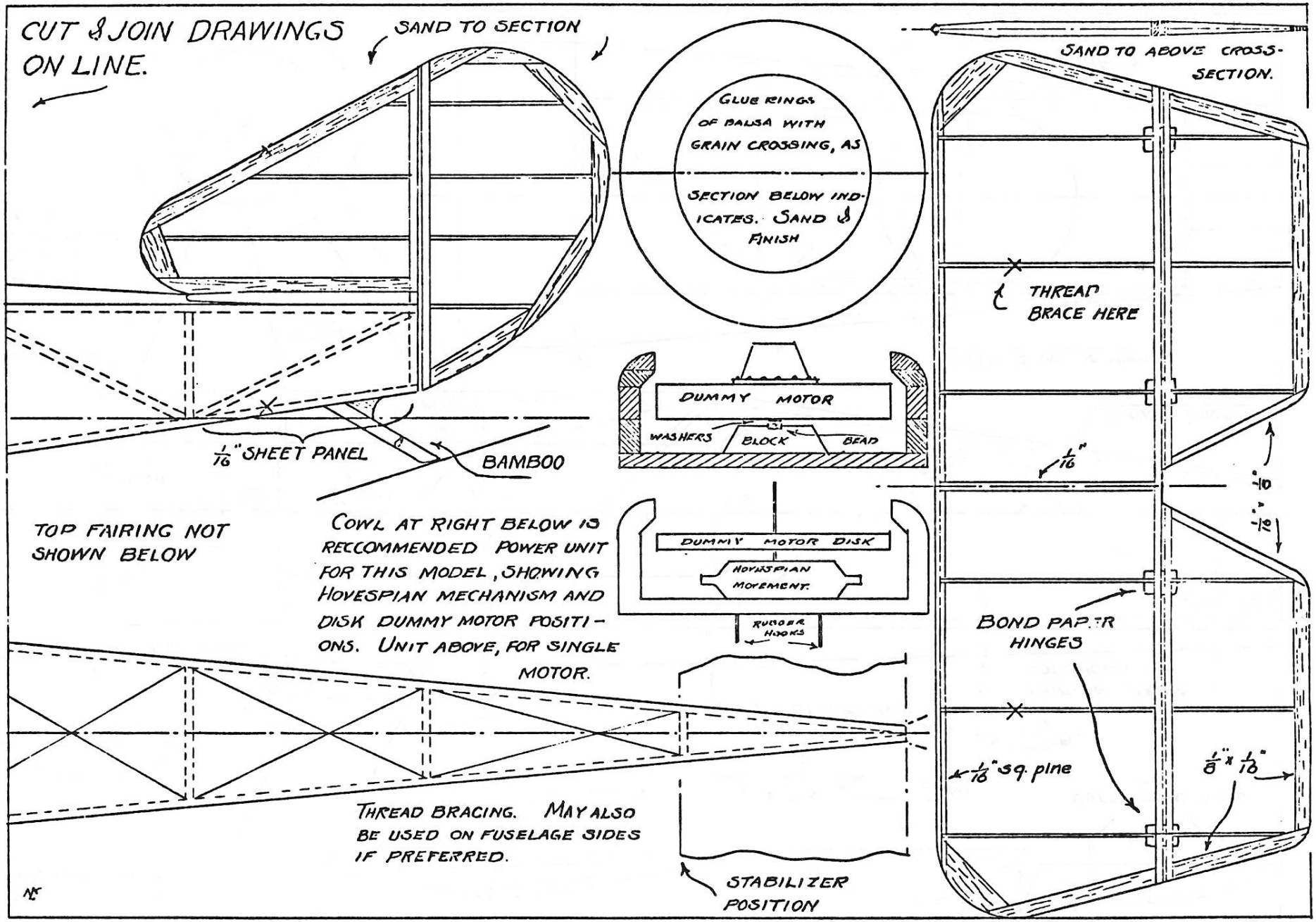
The tail surfaces are now installed along with the tail skid, taking care that alignment is exact.

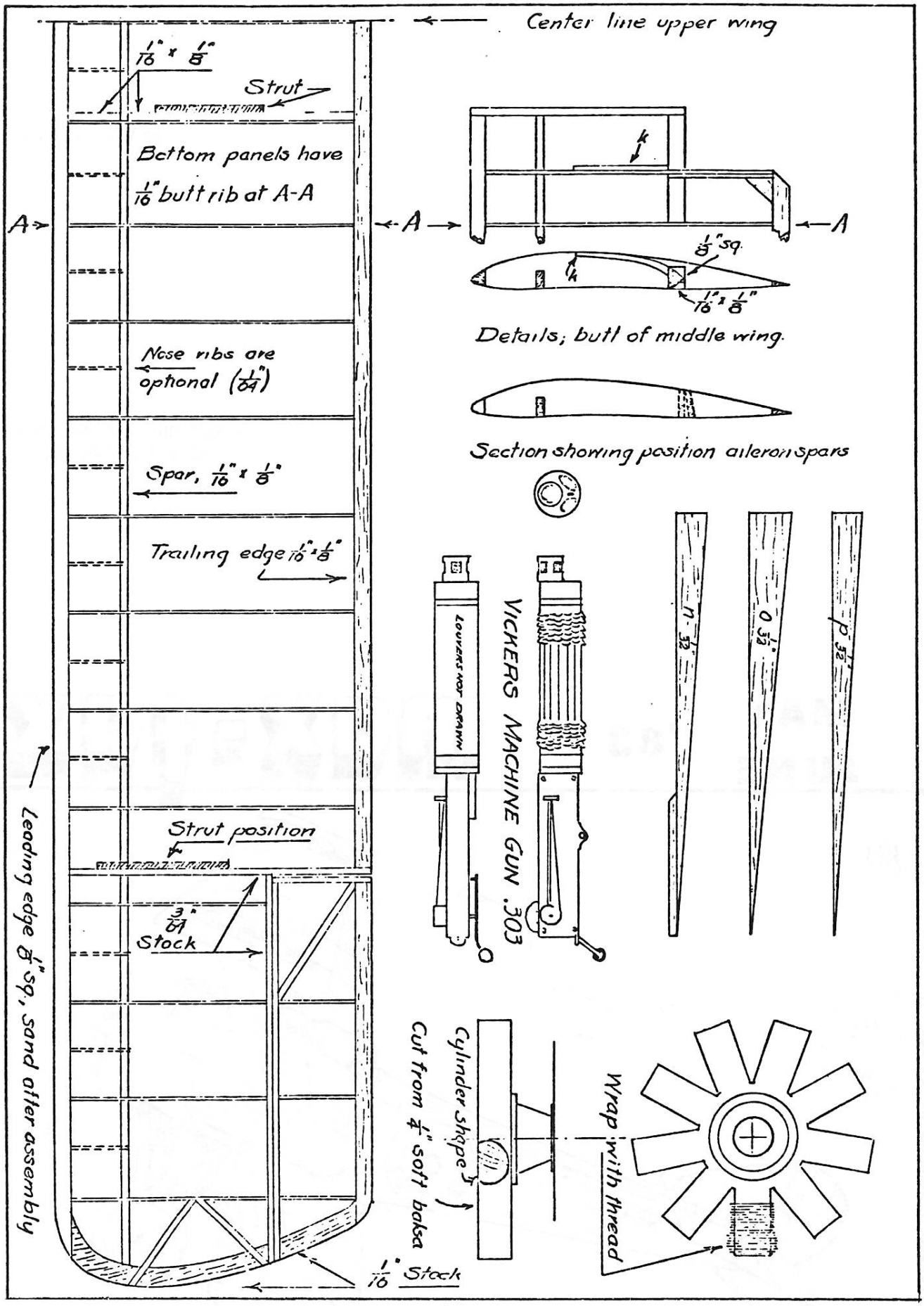
Wheels, gun, windshield, pilot, rubber moter and propeller are now installed. The model photographed weighed 1.83 oz. without rubber.

The center of gravity should be near the center wing leading edge.


Scale prop. block 1/2" x 3/8"
True shape of port landing gear vee.
Flying prop: block, 1 1/4" x 11/16"
BAMBOO
TO TOP LONGERONS AT SECTION E (THREAD)
Thread
BAMBOO
True scale wing section — use if desired.
ink
Windscreen, .005 Cell.
Wing strut; make of medium balsa
OUTER STRUTS CUT HERE
1/2 SIZE
SOPWITH TRIPLANE
by
Ned Kragness


MODEL MAY BE LIGHTENED—SEE TEXT.
JOIN HERE
UPPER ENDS
1/2"
G
1/32
H
BUTT STRIPS n-o-p HERE
3/64" sq.
E
F
SAND SCALLOPS AFTER STRIPS ARE PLACED.
1/16"
A, B, & D
A
B
C
D
E
F
FAIRING STRIPS NOT SHOWN
BOND PAPER
n
o
p
BOND P. PANEL
1/16" BRACE
THRUST LINE
THREAD
A HOVESPIAN MOVEMENT IS RECCOMENDED. SEE DETAIL DWG.
G
H
STRUTS-INSIDE FRAME
FAIRING STRIP-n
FAIRING STRIP-o


CUT & JOIN DRAWINGS ON LINE.
SAND TO SECTION
SAND TO ABOVE CROSS-SECTION.
GLUE RINGS OF BALSA WITH GRAIN CROSSING, AS SECTION BELOW INDICATES. SAND & FINISH
THREAD BRACE HERE
DUMMY MOTOR
WASHERS
BLOCK
BEAD
1/16" SHEET PANEL
BAMBOO
1/16"
1/10
1/10
TOP FAIRING NOT SHOWN BELOW
COWL AT RIGHT BELOW IS RECCOMMENDED POWER UNIT FOR THIS MODEL, SHOWING HOVESPIAN MECHANISM AND DISK DUMMY MOTOR POSITIONS. UNIT ABOVE, FOR SINGLE MOTOR.
DUMMY MOTOR DISK
HOVESPIAN MOVEMENT.
RUBBER HOOKS
BOND PAPER HINGES
1/16" sq. pine
1/8" x 1/16"
THREAD BRACING. MAY ALSO BE USED ON FUSELAGE SIDES IF PREFERRED.
STABILIZER POSITION


Center line upper wing
1/16" x 1/8"
Strut
Bottom panels have 1/16" butt rib at A-A
A
A
A
Nose ribs are optional (1/64")
Spar, 1/16" x 1/8"
Trailing edge 1/16" x 1/8"
Strut position
3/64" Stock
Leading edge 1/8" sq, sand after assembly
1/16" Stock
1/8" sq.
1/16" x 1/8"
Details; butt of middle wing.
Section showing position aileron spars
LOUVERS NOT DRAWN
VICKERS MACHINE GUN .303
n 1/32"
o 1/32"
p 1/32"
Cylinder shape
Cut from 1/4" soft balsa
Wrap with thread

FIRST CLASS

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max-fax

MAY JUNE '83