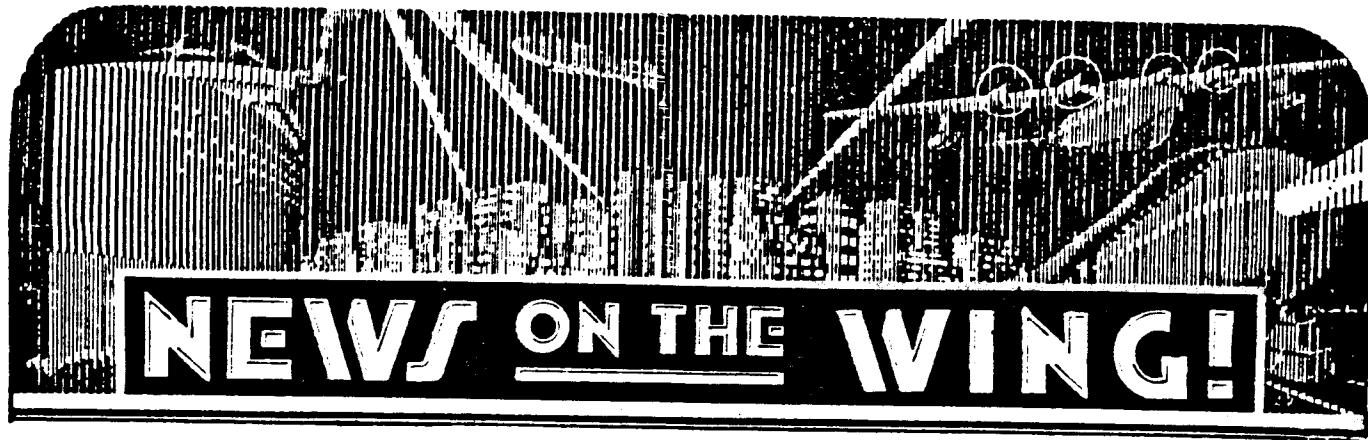


FLYING ACES

ISSUE #201-127 Sept./Oct. 2001

Club News





COVER STORY

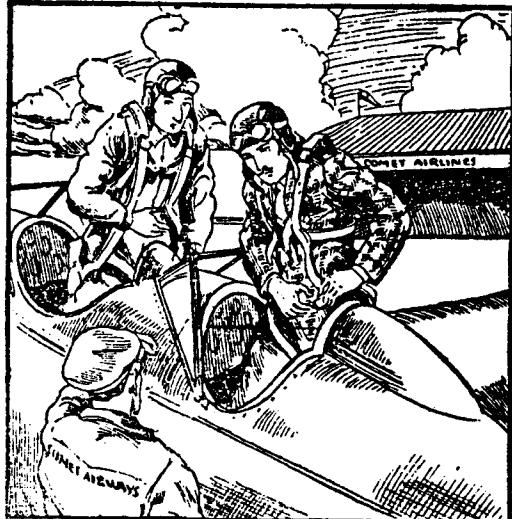
Story behind the cover; well, not really. The Cessna T-50 (AT-17, UC-78) did, however, help train the pilots who did the blasting. These 5-place ships were powered by 245 HP Jacobs engines. (Thanks to Bob Rogers for another fine cover drawing).

Thanks also to all others who contributed to this issue. The plans were from Nate Sturman (P-39 Aircobra), Carlo Godel (Stahlwerke R-11), Pres Bruning (Mitsubishi F1M2 Pete), Lloyd Willis (Ercoupe....This one from the newsletter of our squadron in Australia), and, finally the Comet plan of the Stinson Reliant from the FAC-GHQ files.

GHQ is looking for the address for Dale Smith. Apparently Dale moved and left no forwarding address. Last known address was; 2000 E. Mill Plain Blvd., Vancouver, Wa. 98661.

We have the results of the FAC Outdoor Champs included in this issue. Great contest! I want to congratulate everyone who helped to put this meet on, they did a real bang-up job!! It was really nice to see so many old friends as well as some new ones, Clubsters that were never at one of our contests at Muncie before. Everyone was treated to some great flying weather, especially on Saturday which was almost like flying indoors. Practically no wind and temps in the mid-70's. Sunday was almost a repeat except that the wind picked up but not to a point that it kept anyone from flying. Plan on being there next year.

Some exciting things are happening in the hobby. We have learned about Some new products coming out which should interest most of you. New Kits are coming out from Easybuilt Models, A.A. Lidberg and BMJR Models as well as a new book on Wedel-Williams aircraft by Robert Hirsch



The
FLYING ACES CLUB
is a society of unique individuals with a common interest that at times borders on a passion. It is our intent to preserve and promote the traditional building and flying of free flight stick and tissue model aircraft. Although competitive at times, the sharing of innovations, assistance and camaraderie is second nature to all who believe in the spirit of the FAC.

And you can get some really well drawn plans from Radek Gregovsky by sending for his catalog which you can get free of charge. But with the cost of postage it would be nice if you included a couple of dollars to help him out with those fees. He would appreciate it, I am sure.

We received the complete results of the BLUR Race which was held at the Non-Nats at Geneseo in July. They arrived too late to be included in the last issue so we have them in this one. On the subject of results, before I get letters, The FAC Outdoor Champs results show the bonus points added in with the scale points so please don't get confused. Don't know what happened!

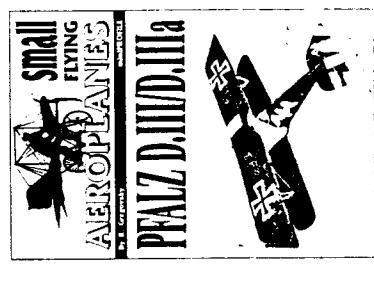
Till next time.....BUILD---FLY---WIN.....EFF---AAA---CEEE!!!!

Col. Lin Reichel, CinC-FAC

Philosophical thought for the day:

Food, shelter and model airplanes are the essentials....all else is luxury.

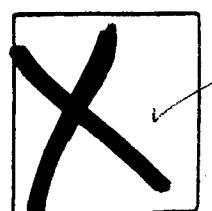
small FLYING AEROPLANES



PLANS OF MODELS 1:20 SCALE, RUBER AND CO₂ POWER

Radek Gregovsky, Svermovska 1371, 26601 Beroun, CZECH REPUBLIC

If the box on the right has the dreaded RED "X" in it, it is time to renew your membership which includes the newsletter. Cost is \$15.00 per year in the United States and Canada. Overseas the cost is \$20.00 per year. Six issues per year published every other month. This is your last issue under your old membership. Please make checks payable to "Flying Aces". Send to FAC-GHQ, 3301 Cindy Lane, Erie, Pa. 16506.



FAC OUTDOOR CHAMPS

Skysters,

A great weekend overall I'd say. Those heading south to Muncie drove out of rain on Friday to clearing Indiana skies that foretold the good weather of the weekend. Saturday was about perfect for us northerners, not too much sun, heat, or wind. Sunday brought some closer fitting isobars on the weather map and it did get gusty on us at times.

Once again, the work load of the meet was shared by the GHQ Squadron, The Calument Escadrille and the Cloudbusters. I think we all owe a big round of applause to this very compatible and hard working group. Chris Starleaf did a bang up job on procuring the engraved Trophy Mugs and the beautiful "T" shirts. Those "T" shirts show the artistry of our own Bob Bojanowski, a much appreciated talent.

This Flying Aces Outdoor Championships are a welcome tradition in each year's activity for this wonderful group. It will run again next year at about this time. Count on it.

Sincerely, Ralph Kuenz

FAC Scale	2001 Outdoor Champs	Fit #1	Fit #2	Fit #3	ScPts	Bonus	Hi time	Total
Dave Rees	1 Cant	58	56	61	89	35	60.5	149.5
Pres Bruning	2 Mitsubishi F1M "Pete"	32	70	71	78	20	65.5	143.5
Mel Roth	3 Dornier "Pfieff"	75	108	112	55	20	80.5	135.5
Mike Midkiff	Kyushu J7W1 "Shinden"	79			68	15	69.5	135.5
Phil Cox	Gadfly	64			63	10	62	135
Jim Miller	Voisin	45	56		66	30	56	122
Stu Weckerly	Martin MO-1	71	86	99	39	5	77.25	116.25
Bob Bojanowski	N.A. AT-6	46			67	10	46	113
Bob Clemens	Taylor Cub E-2	49	63	56	51	0	61.5	112.5
Mike Zand	Bellanca Trimotor	46	41	39	65	35	46	111
C. Schobloher	N.A. AT-6	59	50	49	52	10	59	111
Phil Cox	Neiuport 11	36			73	15	36	109
Mike Midkiff	Zeppelin	36	39		68	15	39	107
John Houck	Seversky P-35	44	50	62	42	10	61	103
Harvey Hopkins	N.A. OV-10 "Bronco"				63	25		
Bob Clemens	Fanman -450				57	5		
Jim Miller	Currie Wot				55	20		
Gordon Roberts	Curtiss SBC-4				51	15		
Bob McLellon	Henschel - 126				49	3		
Dick Hawes	Nieuport 12-C-2				43	15		
R.L. Butsch	Vultee V1-A				41	10		

O.T. Rubber	2001 Outdoor Champs	Fit #1	Fit #2	Fit #3	Total	Fly-off
Fred Wunsche	1 Miss Canada	120	120	120	360	282
Stu Cummins	2 Miss Canada	120	120	120	360	155
Gordon Roberts	3 Sprite	120	120	119	359	
Mike Zand	Victory	120	120	113	353	
Stu Weckerly	Korda Victory	89	120	120	329	
John Houck	Convertible	120	102	105	327	
Bob McLellon	Norseman	120	101	97	318	
Dick Hawes	Victoria Parker	120	116	65	301	
George Lewis	Miss Canada	75	120	104	299	
D. Crosby	Dyna Moe	93	120	65	278	
Ted Dock	Norseman	109			109	



DIME SCALE	2001 Outdoor Champs	Fit #1	Fit #2	Fit #3	Bonus	Total
Gordon Roberts	1 Wiley Post Biplane	97	87	45	298	
Jack Moses	2 Cessna "Alimaster"	120	120	53	0	293
Stu Weckerly	3 Wiley Post Biplane	68	115	45	282	
Pete Azure	Hawker "Hurricane"	55	81	116	30	282
Don Lang	Martin MO-1	120	68	65	15	268
Paul Boyanowski	Luscombe Corbin	69	120	67	0	256
D. Driscoll	Fokker D-7	101	34	60	15	210
D. Driscoll	Cessna AW	40	48	50	45	183
Phil Cox	Cessna C-34	61	61	57	0	179
Bob McLellon	Arado	48	50	59	0	157
R. Butsch	Cessna "Alimaster"	46	24	43	30	143
Norm Becker	Curtiss "Robin"	40	93	0	0	133
Ted Dock	Reawin "Speedster"	41	52	39	0	132
LaVon Kuehne	Stinson 105	36	29	31	0	96
Lin Reichel	Reawin "Speedster"	34	33	0	0	67
John Houck		47		0	0	47
Jimmy Allen	2001 Outdoor Champs					
Stu Weckerly	Fit #1	120	115	120	355	
Gary Schubert	Fit #2	47	109	120	276	
Jack Moses	Fit #3	71	83	120	274	
D. Driscoll	Special	79	63	53	195	
John Houck	Blue Flash	49	71	45	165	
Stu Cummins	BA Cabin	53	27	57	137	
Dick Hawes	Blue Bird	21		21		
Power Scale	2001 Outdoor Champs					
C. Starleaf	Fit #1	120	61.5	5	82.5	144
Dave Rees	Fit #2	120	60.5	10	82.5	143
Phil Cox	Fit #3	120	57.5	0	82.5	140
Mel Roth	SR-8	56	3	82.5	138	
C. Starleaf	Waterman "Gosling"	120				
Phil Cox	Fokker F-100	62.5				
Bob McLellon	Waco RNF	61.5				
Mike Zand	Grumman	56				
B. Phillips	Farmans	54				
	Monocoupe	47				
No Cal	2001 Outdoor Champs					
La Von Kuehne	Fit #1	1 Chambermaid	61	62	203	326
Ted Dock	Fit #2	2 Schlepp	37	77	192	308
Ron Hummel	Fit #3	3 Cougar	47	88	33	168
D. Driscoll	FW-190	36	27	52	115	
Don Lang	NA P-51	54	33			87

THOMPSON/BENDIX

2001 Outdoor Champs	1 Lockheed "Vega"	1	Lockheed "Vega"
	2 Howard "Mr. Mulligan"	2	Howard "Mr. Mulligan"
	3 Marcoux-Bromberg R-4	3	Marcoux-Bromberg R-4
Seversky P-35	Howard "Mr. Mulligan"		
	Marcoux-Bromberg		
Cessna CR-3	Cessna CR-3		
	Marcoux-Bromberg R-4		
2001 Outdoor Champs	1 Pearson "Mr. Smoothie"	1	Pearson "Mr. Smoothie"
	2 Rider "Jackrabbit"	2	Rider "Jackrabbit"
	3 Chambers "Chambermaid"	3	Chambers "Chambermaid"
	Pearson "Mr. Smoothie"		
	Chester "Goon"		
	Rider "Suzy"		
Folkerts SK-3	Folkerts SK-3		
R-4 "Firecracker"	R-4 "Firecracker"		
Floyd Bean "Special"	Floyd Bean "Special"		
Kiehl Rider R-2	Kiehl Rider R-2		
Chester "Goon"	Chester "Goon"		
Caudron	Caudron		
2001 Outdoor Champs	1 Whittman "Buster"	1	Whittman "Buster"
	2 Folkerts SK-3	2	Folkerts SK-3
	3 Whittman "Bonzo"	3	Whittman "Bonzo"
	Floyd Bean		
	Waterman "Gosling"		
	Cessna CR-3		
	Folkerts SK-3		
	Chambermaid		
	Hulbert "Hurricane"		
	Long racer		
BIPLANE Mass Launch	1 Curtiss SBC-3	1	Curtiss SBC-3
	2 Waco 2GC-7	2	Waco 2GC-7
	3 Laird "Super Solution"	3	Laird "Super Solution"
	Neluport		
	Fokker D-7		

2001 Outdoor Champs		#1 Fit	#2 Fit	#3 Fit	Bonus Total		
Embryo	R. Butsch	1 Tomahawk	120	93	120	5	338
Ron Hummel	2 Eaglet	120	120	97	0	337	
Stu Weckerly	2 Tomahawk	120	120	84	9	333	
Gordon Roberts	Debut 14	99	93	120	9	321	
Dick Hawes	Prairie Bird	102	120	66	9	297	
Dick Hawes	Boston Found Cruiser	53	116	120	5	294	
John Houck	Tomahawk	69	63	120	9	291	
Les Burdsal	Lancer	89	71	120	9	289	
Bob Clemens	Debut	120	53	91	9	273	
Mike Zand	Honey Bee	59	49	120	9	237	
Don Lang	Honey Bee	100	66	34	9	209	
Dennis Ruhland	Beat-up Bostonian	59	58	30	0	147	
Tom Sanders	Honey Bee	120	53	91	9	129	
LaVon Kuehne	Hornet	53	40	37	0	111	
Lin Reichel	Miss T' Sky	50	9	9	5	73	

WW - I	Jim Miller	2001 Outdoor Champs	1 Grain Kitten
Stu Weckerly	Stu Weckerly	2 Martinsyde S1	2 Martinsyde S1
Stu Meyers	Stu Meyers	3 Sopwith Camel	3 Sopwith Camel
Pres Bruning	Pres Bruning	Albatross D-Va	Fokker Eindecker
Bob Bojanowski	Bob Bojanowski	Fokker D-7	Fokker D-7
Bob McEllion	Bob McEllion	Fokker D-7	Fokker D-7
Les Burdsal	Les Burdsal	Fokker D-7	Fokker D-7
Mike Zand	Mike Zand	Fokker E-2	Rumpier C-2
Mel Roth	Mel Roth	Siemens Schuckert D-1	Nieuport 12 C-2

2001 Outdoor Champs	1 Grain Kitten
1 Tomahawk	2 Martinsyde S1
2 Eaglet	3 Sopwith Camel
2 Tomahawk	Albatross D-Va
Debut 14	Fokker Eindecker
Prairie Bird	Fokker D-7
Boston Found Cruiser	Fokker D-7
Tomahawk	Fokker D-7
Lancer	Fokker D-7
Debut	Rumpier C-2
Honey Bee	Siemens Schuckert D-1
Honey Bee	Nieuport 12 C-2

2001 Outdoor Champs		#1 Fit	#2 Fit	#3 Fit	Bonus	Total
1 Floyd Bean Special	120	57	5	82.5	139.5	
2 Waco SRE	78	69	15	69	138	
3 Waterman	58	61	3	58	119	
Farmar	54	55	49	5	107	
Buhl CA-30	35	70	15	35105		
Livingston Monocoupe	43	47	48	56	0	104
Andreason	43	37	36	60	15	103
Cougar	31	38	51	0	38	89
Volson Hydro		82	25			
Curnie Wot		72	15			
Laird LC-DE		72	15			
Laird LC-DE		69	15			
Long Racer		65	10			
Davis 2A		61	10			
Volksplane		60	10			
AQM-5 Zero		55	10			
Fike		54	0			
Huntington		47	5			

2001 Outdoor Champs	#1 Fit	#2 Fit	#3 Fit	Bonus Total
1 Nesmith "Cougar"	70	120	59	249
2 Piper Pawnee	81	79	68	228
3 Piper "Clipper"	85	105	48	218
Piper PA-20	59	83	56	198
Hollo	97	22	41	160
Piper Super Cruiser	43	38	43	122

Modern Civil	2001 Outdoor Champs	#1 Fit	#2 Fit	#3 Fit	Bonus Total
C. Schobloher	1 Nesiith "Cougar"	70	120	59	249
Les Burdsal	2 Piper Pawnee	81	79	68	228
Juanita Reichel	3 Piper "Clipper"	85	105	48	218
Phil Cox	Piper PA-20	59	83	56	198
D. Driscoll	Hollo	97	22	41	160
Mike Zand	Piper Super Cruiser	43	38	43	122

Double No Call	2001 Outdoor Champs	#1 Fit	#2 Fit	#3 Fit	Total
Les Burdsal	1 Turbo Porter	62	84	65	211
Joun Houck	2 Vought "Vindicator"	30	79	90	199
Ted Dock	3 Helio "Stallion"	40	40	40	40

THE 2001 BLUR RACE

Late Saturday afternoon at Geneseo saw the first running of the Bee Line Unlimited Race. Obviously not an activity for the timid, seven eager contestants, with knots in their rubber motors, wound as tight as those in the pit of their stomachs, tested skill and daring against one another and "FLUNG", vertically challenged cousin of great "HUNG", in an all out speed event to win the perpetual BLUR trophy this year. (Whew !).

Completing the course though several heats, the first winner of the BLUR trophy is Ed Pelatowski. Ed established a new 164.3 "Swoosh" course record. Those in the first five places hold framed certificates.

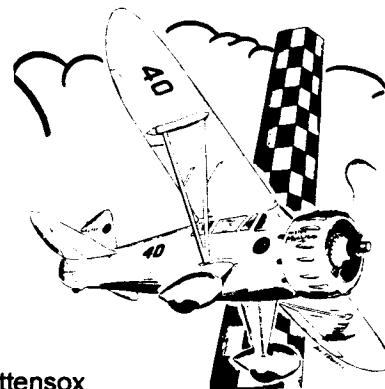
Note: "Swoosh" is a unit measurement of time and distance specific to BLUR activity. It factors in the variable and dangerous vertical components (referred to more commonly as "ups-n-downs") of horizontal thermal activity present in greatest magnitude at eye level on the course.

(*) = negative Swoosh with ground impact.

Race Results

1st - Ed Pelatowski	- 20" Folkerts SK-2 "Toots"
2nd- Ralph Kuenz	- 13" Folkerts SK-2 "Toots" (*)
3rd - Tom Nallen	- 18" Gee Bee Model "X" (*)
4th - Dave Nedzeilski	- 18" Pearson-Williams "Smoothie"
5th - Chris Starleaf	- 18" Rider R-4 "Firecracker" (*)

Look for updates and developments on BLUR activity in future newsletters. Rottensox



Golden Age	2001 Outdoor Champs Fit #1Fit #2Fit #3Fit Total	fly-off
Dave Rees	1 Nicholas Beastley	120 120 120 380 120
Paul Boyanowski	2 Float Taylorcraft	120 120 120 360 99
Gordon Roberts	3 Reawin "Speedster"	101 118 120 337
Marie Rees	Poterfield	120 75 120 315
Jack Moses	Interstate "Cadet"	93 102 120 315
Phil Cox	Alco Sport	120 95 71 286
Bob Bojanowski	Monocoupe	63 95 120 278
Mike Zand	Taylorcraft	71 85 120 276
Earl Brockmeir	Taylorcraft	50 94 120 284
Bob McEllion	Stinson SR-7	48 105 57 210
Mike Midkiff	Piper "Cub"	59 70 64 193
Dan Driscoll	Howard	55 43 63 161
Pete Azure	Stinson "Station Wagon"	98 53 151
John Houck	Reawin "Speedster"	75 67 142

O.T. Stick	2001 Outdoor Champs Fit #1Fit #2Fit #3Fit Total
George Lewis	1 Korda
Bert Phillips	2 Gollyrock
Fred Wunsche	3 Gollyrock

Jumbo Scale	2001 Outdoor Champs Fit #1Fit #2Fit #3Fit Total
Jack Moses	1 IS-4
Stu Weekley	2 Found 100 Floatplane
Les Burdsal	3 DH Hornet Moth
Bob Bojanowski	Monocoupe
Phil Cox	Waco C-8
D.S. Ruhland	Miles M-18
Pete Azure	Wildcat
D. Rees	Cant 1007
Mel Roth	Pilatus Turbo
C. Schobloher	Monocoupe
Jim Miller	Santos Dumont

Erie Daily Times	2001 Outdoor Champs Fit #1Fit #2Fit #3Fit Total
Stu Weekley	1 71 119 90 278
Gordon Roberts	2 56 115 98 269
Stu Cummins	3 120 83 72 255
George Lewis	84 82 75 221
Jack Moses	79 60 82 221
John Houck	90 74 53 217
Bert Phillips	119 51 39 209
Ted Dock	82 120 202
C Schobloher	58 69 71 198
Ed Fort	39 40 35 114
Dick Hawes	48

* * B-36 Jumbo * *

Mumbo Jumbo # 104 from the pen of the Glue Guru

Salutations, disciples! Today we shall ponder the bravery and wisdom of one Dr. Bill Harris of Hawaii, who entered a truly different Jumbo at the recent NATS.

Spanning a toothsome 39 inches, it had some six different props of 3 inch diameter, each acting in conventional pusher fashion to propel a model both handsome (silver tissue) and laden with bonus points, for his count some 45 were on hand.

Construction seemed conventional, with the usual enlarged tail-about 30 % larger than scale-and a C.G. in the usual place. A single motor drives all the geared together props. The motor contains 10 strands of 1/8 rubber, each about twice the length of the hook to peg distance.

The novelty is in the gearing, for Harris uses a separate gear set in the fuselage to drive a wire going out to each engine nacelle. Once there, power turns the corner via a mitre gear set to drive a prop shaft. In summary, the design requires a large bevel gear at the motor, 6 small bevel gears to carry power outboard, and then an additional 12 mitre gears to turn that final corner. Each gear represents a certain amount of weight and a fussy mounting. Rotating a 3 inch prop at less than a few thousand RPM will generate painfully little thrust and getting the requisite high RPM's out of the Harris rubber motor and gear arrangement requires much precision alignment.

Does it work? Yes and no. His best contest time to date has been 18 seconds. In a sense, never having qualified, the model is a failure. On the other hand, it does fly and I suspect that few of us are capable of doing as well with the full B-36 configuration. While the rules do accept one big prop on the nose as a solution of sorts, few of us view that sort of thing favorably, and some see it as

disgusting.

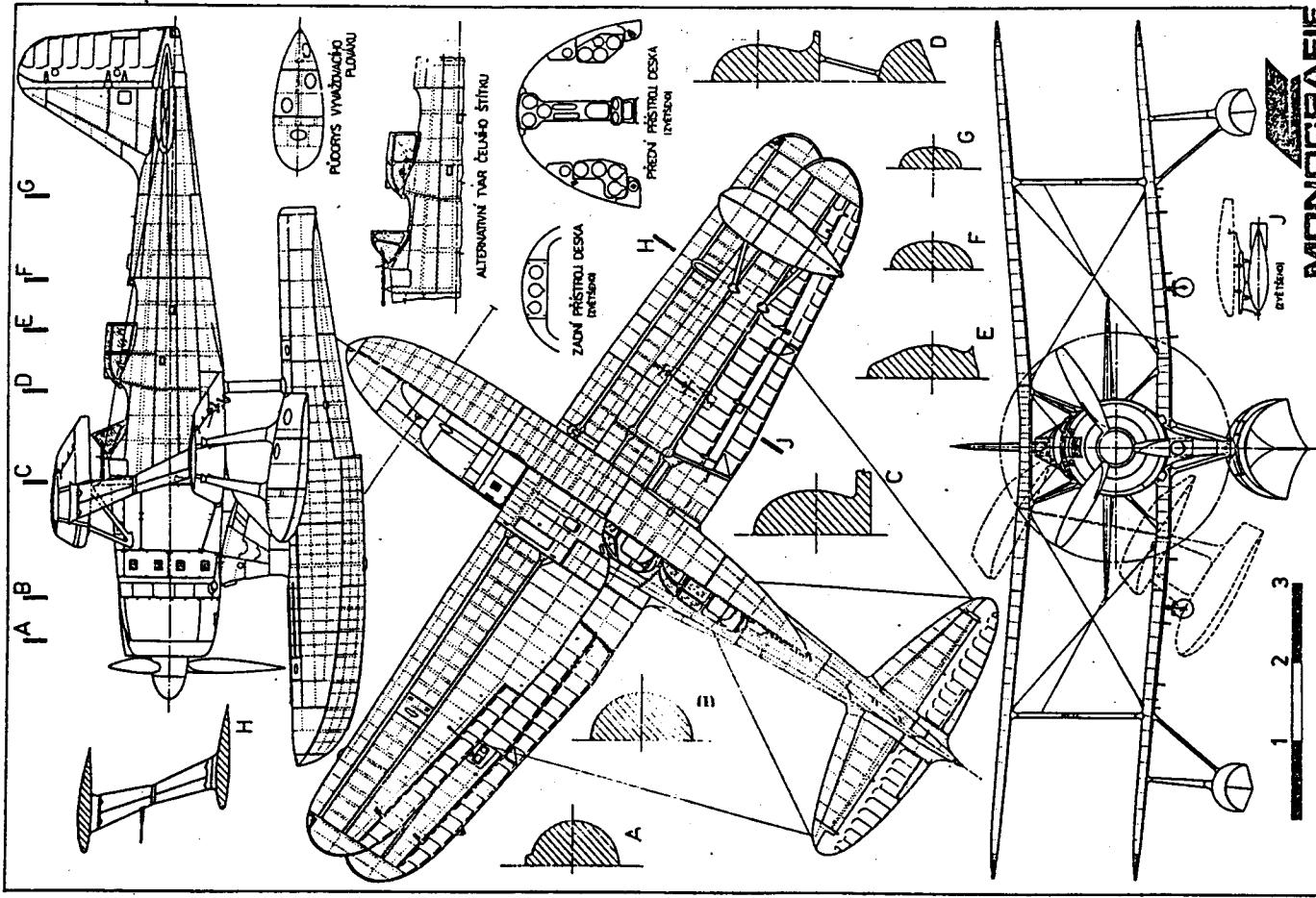
Can anything be done to improve the Harris design? Much of the flight time problem has to do with the model's wing loading which, with a ready to fly weight of 4 oz. and an extremely high aspect ratio wing implies a wing loading of well over the overweight threshold of 0.75 grams per sq. in. Much theory and bitter experience indicates that anything in this neighborhood is in trouble, and such is the case here.

Yet the Harris construction is not of the obese type; sturdy yes, but not *that* sturdy. We turn suspiciously to all those gears—at least 19—each held captive within a rigid mount. Throw in 6 drive wires and 6 prop shafts and we have the answer to the weight puzzle: too much gadgetry.

There are at least two other types of drive systems capable of powering a B-36. Each makes little use of gears and could be buried within a reasonably thickened wing. One uses connecting rods instead (a hollow 1/16 O.D. aluminum tube) to drive a bent music wire crank. This concept has been highly developed in connection with ornithopters, and rumor has it as light, not overly fussy over alignment, and capable of accepting high RPM's.

A second system might employ individual tiny balsa pulleys driven by light rubber bands. I've tried this idea at low RPM (maybe 1000) and found it light and non-slip. However, high RPM experience is lacking here.

The usual multiple rubber motor approach has too many problems—starting with achieving a balanced thrust—to make the prospect attractive. What is necessary is a low weight drive to bring power to remote nacelles. Can it be done? Harris hasn't quite brought it off. Will anybody succeed?



MONOGRAFIE

Mitsubishi F1M2 (Pete)

FAC Mosquito Squadron

7th Annual WINTER OUTDOOR CHAMPIONSHIPS

IN CONJUNCTION WITH

Florida Modelers Association

48th Annual KING ORANGE INTERNATIONAL

PALM BAY, FLORIDA

December 29th, 30th, & 31st, 2001

Once again the Mosquito Squadron, commanded by Steve Bacon, will conduct the 7th annual FAC WINTER OUTDOOR CHAMPIONSHIPS. In conjunction with the 48th annual FMA KING ORANGE INTERNATIONAL. There will be 16 FAC events with prizes being awarded through third place. There will also be a separate FAC high point trophy awarded to the overall point winner in FAC events.

GENERAL INFORMATION:

- > Flying will be from 7AM to 5PM each day except on Dec 31st when all flying ceases at 3PM.
- > All Mass Launch events will be flown at noon each day.
- > Scale judging will be conducted at the flying field and you are urged to present all models to be judged as soon as possible.
- > The current FAC rules will apply to all events.
- > Dime Scale will not be eligible for Golden Age.
- > Modern Production Scale is for factory built aircraft only; NO homebuiltts.

For further information contact Steve Bacon at (386) 788-7309 or Mike McKinney at (386) 254-5173

SCHEDULE OF EVENTS

Sat. Dec. 29th:

Sun. Dec. 30th

Mon. Dec. 31st

FAC Embryo Endurance

FAC No-Cal Scale

FAC OT Gas(ElecCO₂)

FAC OT Rubber

FAC Greve/Thompson Trophy

FAC Peanut Scale

FAC OT Stick

FAC Golden Age

FAC Modern Production

FAC WWII Mass Launch

FAC Rubber Scale

FAC Power Scale

FAC Dime Scale

FAC Jumbo/Giant Scale

FAC WWII Mass Launch

FAC Peanut Scale (High Wing)

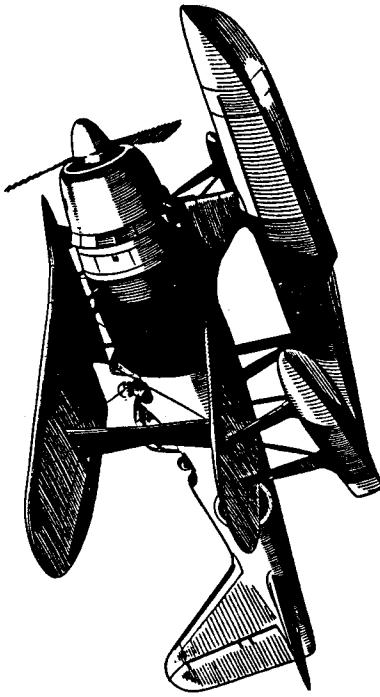
FAC T-SHIRT

We have this year's T-Shirts in all sizes at the present time. They are an ash gray color and have a Monocoupe on the front done in red. Drawing once again done by Bob Bojanowski our ace artist.

Sizes are; small, medium, large, x-large, xx-large and xxx-large. Cost is \$12.50 Postpaid. Send your orders to FAC-GHQ, 3301 Cindy Lane, Erie, Pa. 16506.

NAME _____
 STREET _____
 CITY _____

AMA# _____
 JR/SR _____ OPEN _____
 STATE _____ ZIP _____



All plans sent postpaid. FAC-GHQ, 3301 Cindy Lane
 Erie, Pa. 16506

FAC PLANS

AIRCRAFT	SPAN	DESIGNER	PRICE
Erie Times Modelplane	24"	Engstrom	\$3.00
Westland Lysander	25"	Studiette Models	4.00
Northrop Gamma	36"	Pres Bruning	5.00
Fairchild PT-19	24"	John Low	4.00
Curtiss Gulfhawk	24"	Doug Wilkey	4.00
Boeing P-26	18"	Doug Wilkey	3.00
Waco C-7	22"	Paul Bojanowski	5.00
Laird Solution	14"	Tom Nallen, Sr.	4.00
Waco "D"	24"	Pres Bruning	4.00
Lockheed Orion	24"	Tom Nallen, Sr.	6.00

WE WANTED WINGS

by Don. Campbell

A U.S. Navy recruiting ad recently appeared in "Flying" magazine, and its centerpiece was a Naval Aviator's wing badge. The ad invited qualified applicants to "win your wings of gold."

That set me to thinking, back to the 1930's, when commercial sponsors used the *win your wings* psychology on youngsters to coax their parents into buying products ranging from gasoline to breakfast cereal. Aviation related clubs were formed around real or imaginary pilot heroes, who charged around the sky in speedy airplanes, to "do good and right wrong."

This was aviation's *Golden Age* and interest in airplanes was at its peak. Each new speed, distance or altitude record was viewed by the public as a major event and made front page headlines. Shrewd business minds exploited aviation's glamour to the fullest by directing their advertising guns at air minded kids who wanted to be identified with flying.

One of the first promoters to cash in on this phenomenon was the Skelly Oil Company of Kansas. In 1933 Skelly introduced a radio program entitled "*The Air Adventures of Jimmy Allen*." The scripts were written by a pair of real life pilots named Bill Moore and Robert Burtt, and authentically portrayed flying technology and procedures.

The show was an instant hit and thousands of boys and girls applied for their bronze wing pins that identified them as **Jimmy Allen Cadets**. Earning the coveted wing pin was a matter of completing a five lesson course in aviation jargon and returning the forms to the sponsor's retail dealer.



Well advertised flying model contests were held in Skelly's region of influence and drew spectators in large numbers. These **Jimmy Allen Air Races**, as they were known, had one major requirement for participation, that is, each contestant had to build and fly a model airplane from an official Jimmy Allen Kit.



Jimmy Allen



"Speed" Robertson

Since the program was not in syndication, it was able to be sold to various radio stations around the country and the stations sold air time to sponsors on an independent basis. Richfield Oil Company followed the lead of Skelly Oil, and set up a program that was a duplicate of Skelly's. The Hi-Speed Gasoline Company became the local sponsor of Jimmy Allen in the Detroit, Michigan area, and various other products, including bread and shoes, were part of the sponsorship in other areas. Jimmy Allen's name gained household recognition over the next several years.



Hearst newspapers were the creators of another aviation sensation when they introduced The Junior Birdman Club to their readers. Beautiful (possibly the best looking of all the wing pins) gold colored pins with red, white and blue shields in the center were conferred on members. Ascending ranks could be earned by the more aggressive participants, and appropriate insignia were awarded. The local base for Junior Birdmen was the *Detroit Times* newspaper.



Model airplane contests were sponsored by the Hearst organization, with valuable prizes being awarded to winners. Attendance rivaled that of the **Jimmy Allen Air Races**.

Junior Birdmen differed from **Jimmy Allen Cadets** by not offering kits and supplies for sale. Instead, the *Birdmen* seal of approval was used by model airplane kit manufacturers to assure customers of the high quality of their products. Ads to that effect appeared in the popular model airplane magazines of the day.



The high level of interest in aviation created by Lindbergh's 1927 New York to Paris flight continued, un-abated, into the 1930's with seemingly endless strings of record breaking feats by Wiley Post; Jimmy Doolittle; Jack Knight; Captain Frank Hawks; Roscoe Turner; Art Goebels and Kingsford Smith. Ladies were also evident with Amelia Earhart; Jackie Cochran; Pancho Barnes and Louise Thaden grabbing headlines with their *hot flying*. Was it any wonder that youthful minds were held captive by the glamour and excitement of aviation?

Some of the *star* pilots gained financial support for their flying enterprises by lending their names to product endorsements, and by acting as commanders of the various aviation related clubs. Roscoe Turner's Cadets were sponsored by Heinz Foods (the 57 varieties number appeared on Turner's Thompson Trophy Racer). Captain Hawks and his Cadets were sponsored by Post Cereals. In both cases, members were given their wings after filling out a simple application and sending it to the sponsor with the proper number of box tops or product labels.



Skyrider Shoes; Peerless Models and Comet Models also made it possible to obtain attractive metal wing pins. In Comet's case, the pin was purchased directly from the catalog for ten cents. Peerless and Skyrider required a purchase from their product lines.



Flying Aces Magazine devoted several pages of each issue to its own Flying Aces Club and furnished a handsome bronze wing pin with ascending ranks. Members were encouraged to advance in rank by bringing in new subscribers to the magazine. Pretty tricky. Eh?



In 1938 the Kellogg's Cereal Company began sponsorship of the Howie Wing Cadet Club in conjunction with its radio program of the same name. Howie Wing was a fictitious airline transport pilot whose adventures reflected aviation's *state of the art* and drew heavily on current headline events for story content.

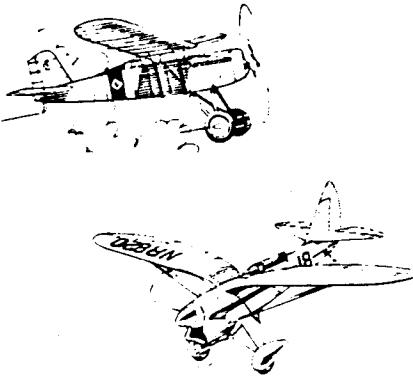
A chrome and enamel pin with stylized wings was given to club members along with a certificate of membership signed by Howie Wing and airmail hero Jack Knight.



The Club manual offered advice on operating a real airplane and included a chart of airplane nomenclature. The manual also acted as a catalog from which kits and supplies could be purchased. Of course, the proper number of cereal box tops were required in addition to the specified amount, of money.

Realistically, club members were getting their model airplanes at half the retail price when purchased from the catalog. We have identified the Megow Model Company as the supplier, so this wasn't a shabby deal at all.

In contrast, model kits offered by the older "Jimmy Allen Club" were produced by Country Club Aero of Kansas City, Missouri, and by George Wanner of Toledo, Ohio. Standard kits were re-named to correspond with airplanes being flown by Jimmy Allen and his pal "Speed" Robertson. Thus, the Country Club Sportster became a Jimmy Allen Bluebird when offered by Skelly or Richfield Oil. George Wanner's Scarlet Tanager also became a Jimmy Allen Bluebird when offered by Hi-Speed Gasoline.



Plans for both of these model airplanes and other Jimmy Allen models are still available through Old Timer Model Supply of P.O. Box 7334 Van Nuys, CA 91409. Bluebird plan is number 158 and Scarlet Tanager is number 505.

With all of this activity going on, you'd think there wouldn't be room for any more aviation type programs. NOT TRUE! The Ovaltine Company stepped in with a replacement for Jimmy Allen in the late 30's, when we were introduced to "Captain Midnight and his 'Secret' Squadron". The same team of writers who gave us Jimmy Allen also wrote the scripts for the Captain. Wing pins and other assorted premiums (including decoder pins) continued to be offered well into the 1950's.

Hop Harrigan was another *make believe* hero. He arrived on the scene during the war years of the 40's. Hop mainly concerned himself with fending off Nazi spies and such. His club offered a few premiums in spite of material shortages and included a rather *clunky* styled wing pin.



Street Smith Publications came closest to achieving the real meaning of *winning your wing*, even though, their Solo Club was not directed at the younger readers. The S&S magazine Air Trails offered membership in the Solo Club, whose stated purpose was "to recognize those people who had accomplished solo flight in a man carrying aircraft."

Solo Club

There are no dues. Once a member, always a member.

To obtain your sterling silver SOLO CLUB lapel wings and life membership identification card, comply with any of the following requirements and sign. Send with fifty cents to the SOLO CLUB, Membership Committee, Air Trails, 79 7th Ave., New York City.

Proof of Qualification as a SOLO CLUB Member

1. Dept. of Commerce license and number if held

2. F. A. 1. license and number if held _____

Or attach any of the following:

3. Evidence of military or naval air corps service.

4. A letter from your instructor testifying to your solo flight, giving his rating and license number.

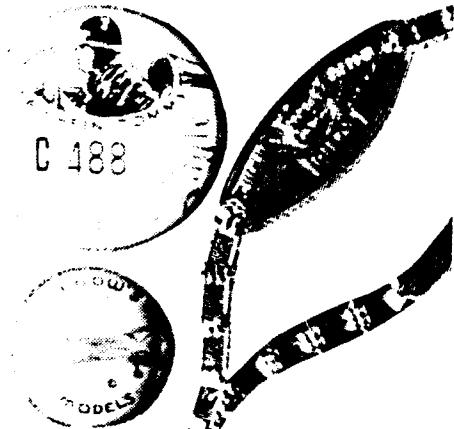
5. A notarized statement, preferably with witnesses, giving all details and data of solo flight and plane used.

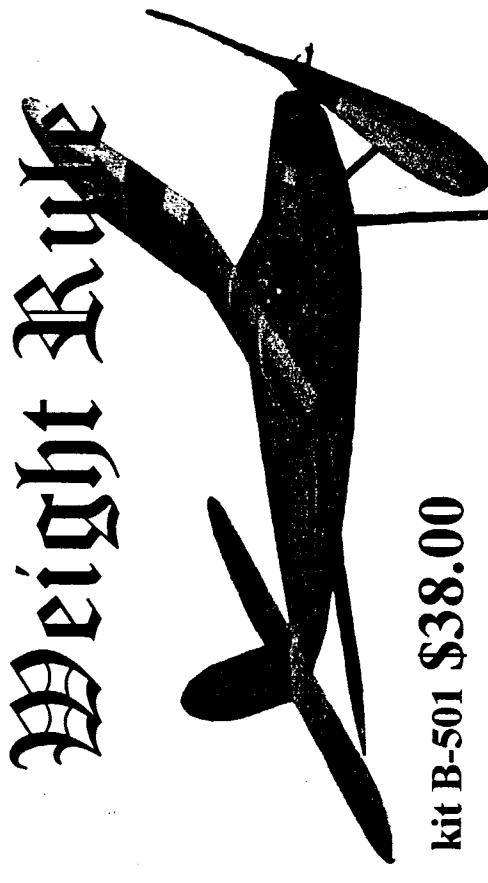
Applicants were given a neat little silver finished wing pin with an oversized numeral 1 in the center. The applicant was also listed on the Air Trails roster of club members, but that ended any further action by the magazine. No formal organization was ever developed. The member had his wings and *bragging rights*. What more was needed?



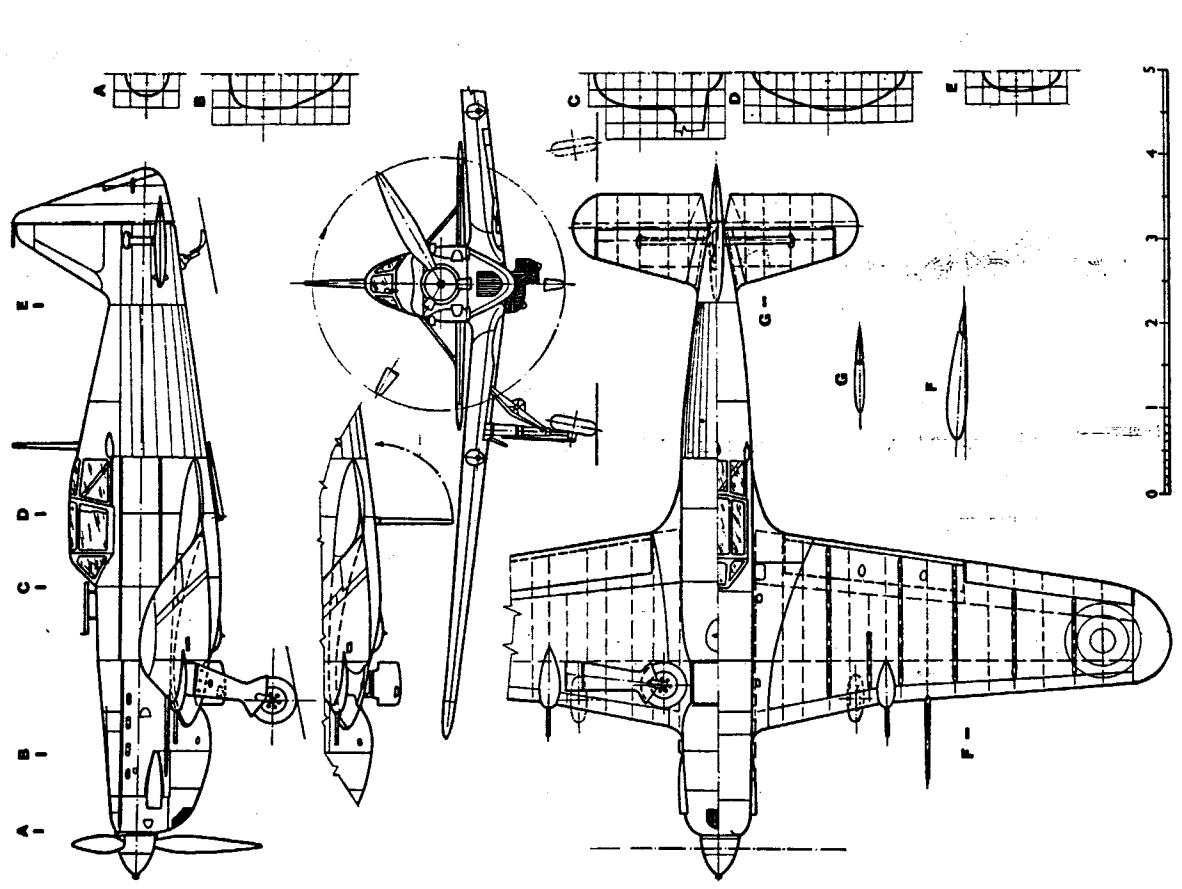
Sponsorships of aviation programs all but dried up in the post 1945 era (except for the already mentioned Captain Midnight series). TV had arrived on the scene around 1947, and with it came an adventure series featuring a flying rancher named Sky King. King flew a sleek, twin engine Cessna 310 named *songbird* in his efforts to defeat the bad guys and perform daring rescues. Your reporter is not aware of any wing pin offers from Sky King sponsors.

That about put a cap on radio's high profile, nationally sponsored aviation programs, and effectively eliminated opportunities for youngsters to "win their wings".





Morane-Saulnier M.S.406 C1



Wing Span 36" Area 138 sq-in.

- > Laser Cut Parts > Full Size Plans
- > Plastic Prop & Rubber Motor

The "Weight Rule" was designed in 1938 by Earl Stahl to compete against models built to the, then new, N.A.A. weight rule of three ounces per 100 square inches of wing area. At 138 sq. in. of wing area this model would have to weigh 4.14 oz. Today this model may be flown, without a weight restriction, in "old time rubber" events sanctioned by both the Flying Aces Club (FAC) and the Society of Antique Modelers (SAM). The FAC Old Time rubber rules require that the original model's fuselage cross section be maintained and the wingspan is limited to 36" with an area not to exceed 150 sq. in. The propeller specified on the original plan may be used or plastic propellers are permitted, not to exceed 1/3 the wingspan. The model must have fixed landing gear for a Rise-Off-Ground (ROG) takeoff. The SAM rules are the same except plastic props are not allowed and the original prop specified on the plan must be used. The BMJR Weight Rule may be built for either competition by using the 12" plastic prop provided in the kit or carving an original 15" prop shown on the plan. Both power configurations provide a super performing Old Time Rubber Model.

kit B-501 \$38.00

BMJR

BMJR Model Products

P.O.Box 1210
Sharpes, FL 32959-1210
321-537-1159 www.bmjrmodels.com

WANTED: Bumbling photo lab ruined my negatives. Need 35mm color slides of antique aircraft shown at Rheinbeck. Send me your slides, I will have duplicates made or buy them, your choice.
Otto C. Klein, 302 West Fifth St., Hermann, Mo. 65041.

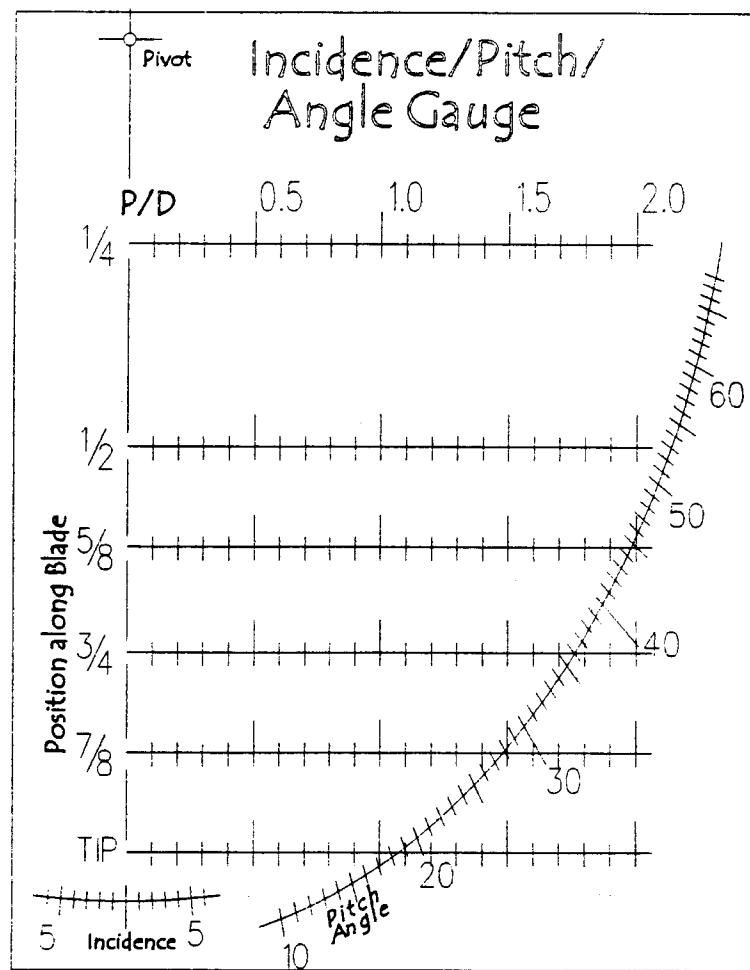
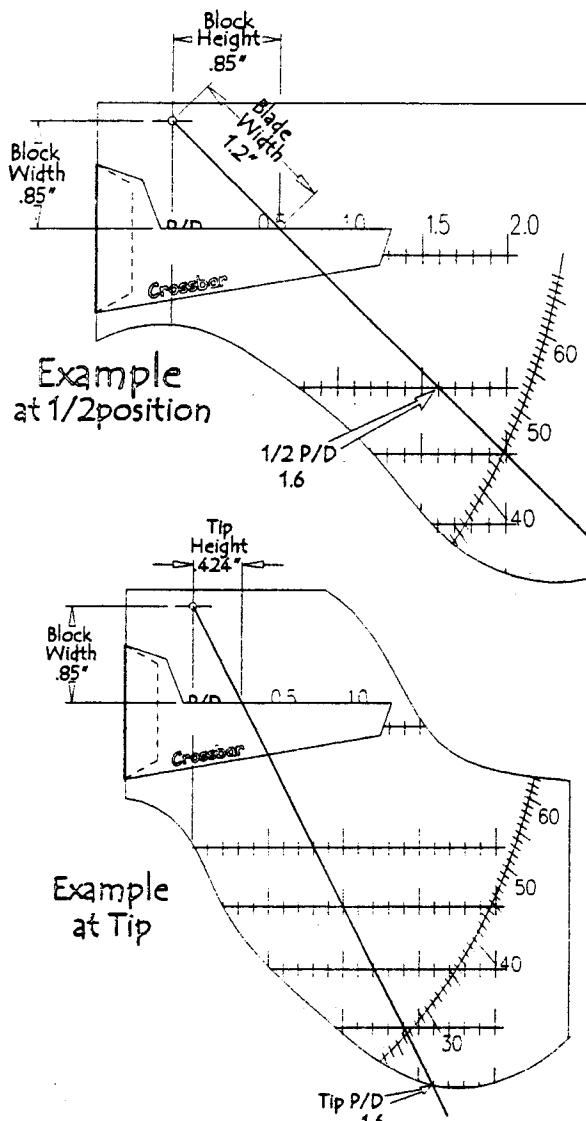
Working Up Prop Block Dimensions Using
A Modification of Hoffman's Pitch/Incidence Gauge
By Michael J. Heinrich

I made up Raoul Hoffman's Incidence/Pitch gauge after seeing it reprinted in the NFFS Digest (April '98); this elegant tool is handy for checking incidence of surfaces on your model, and the P/D scale is used as a referent for checking relative pitch of prop blades. With the addition of the protractor shown here and a sliding bar as shown below, the tool can also be used to derive dimensions for any prop block you need.

When used for checking incidence and prop pitch off an existing model, the tool is held up to the item being inspected and the fine wire passing through the pivot point functions as a plumb line. When making up prop blocks, the wire functions as a pivoting indicator. You also need a sliding crossbar, preferably of a clear plastic, that slides snugly along the long axis of the tool.

To make up a prop block, in this example a 7" prop with 11.2" (1.6) pitch and 1.2" blade width, start by establishing a basic block section: set the wire to cross P/D 1.6 at the $\frac{1}{2}$ -position station. Now slide the crossbar to the point at which it intersects the wire 1.2" from the pivot (blade width is equal to the hypotenuse of the pitch angle). This cross point gives you the width and thickness of the block at this position as well as the corresponding pitch angle for cross-reference. So you get a width of .85" and thickness also .85" (1.6 P/D at $\frac{1}{2}$ station gives you 45deg. angle). Now, leaving the crossbar at this place (your block will have the same width all the way out from here), move the wire to another position station— $\frac{3}{4}$, tip—and cross it with the chosen P/D (see how easy it is to fiddle around with washout and such?). The point at which the wire intersects the crossbar is the thickness of the block at that station. This procedure can be applied to any size prop.

I've saved myself a lot of calculating since I started using this gauge.

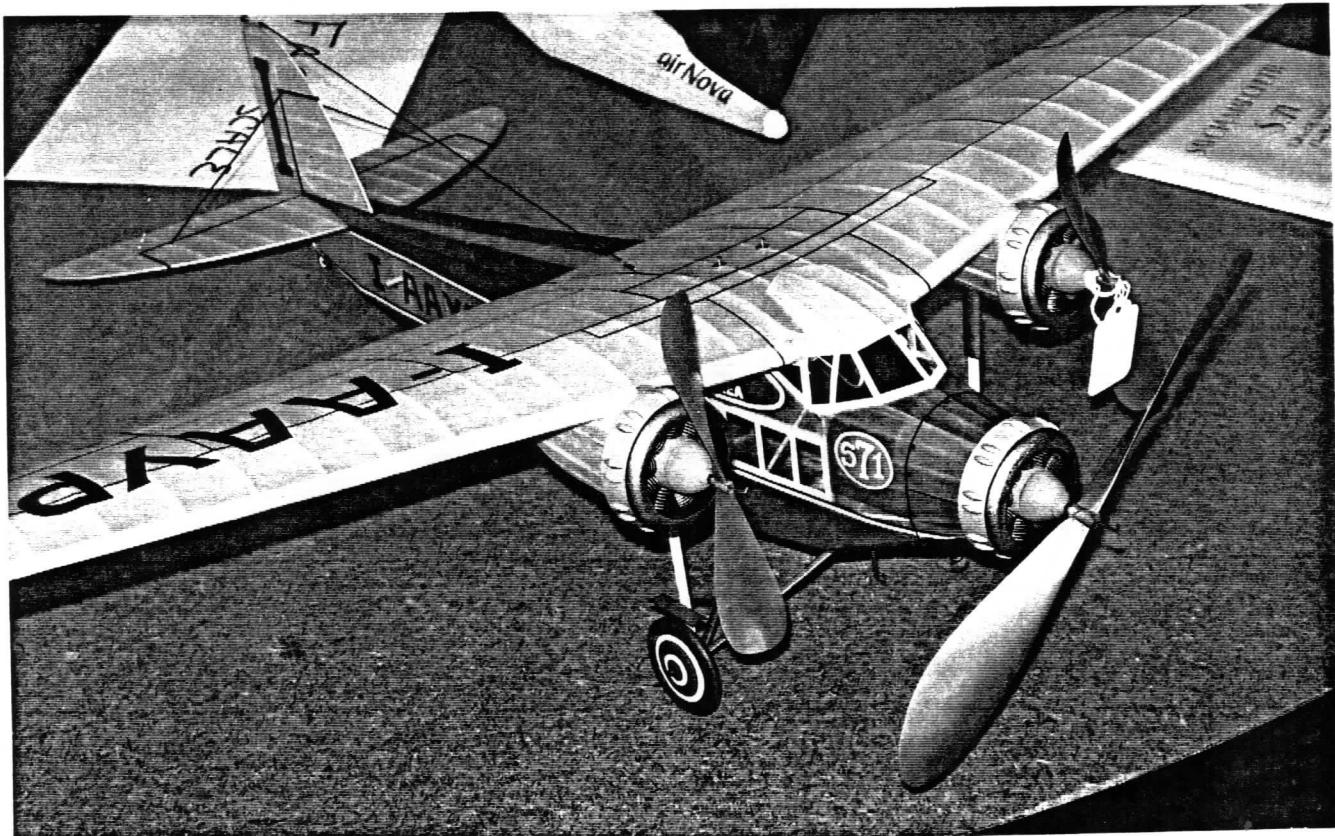




Top photo; Chris Starleaf winds his Fairey Barracuda for the World War Two event. Ed Bojan is assisting Chris.

Bottom photo; Chris Starleaf's beautiful SM-71 tri-motor, took first place in Flying Aces Scale at Geneseo this year.

Both photos by Bob Clemens.



Ken Willard's 1938
CAVU

Mini-XL for Free Flight or RC Park Flying



CAVU: What an interesting name for a model - it's a pilot's term meaning "Ceiling And Visibility Unlimited"!

The CAVU is from 1938 and was designed by Ken Willard who became well known in the 60s-70s for sport and amphibian RC designs. It looks like Ken was inspired by the Fairchild F-22, but things are simpler without those wing struts! CAVU was designed as an Elf single [.099 Cu in displacement] powered 42" wingspan model for free flight. The open cockpit adds a nice old time quality to the design.

Our smaller model can be flown in the FAC [Flying Aces Club], electric replica free flight event as it is drawn up to be just within the maximum size permitted [30" wingspan]. In this application, the model will work well with a Hilline Mini-6, running on 3 or 4 110 mah nicad cells. Some prop experimenting may be useful to maximize the climb. The Williams Brothers 5 1/2" prop, the 6" Tem Aero prop and other 5 1/2" to 6" props meant for rubber power will be worthwhile possibilities.

Other electric motors may also be tried and CO₂ motors up to about 300 size will also work well for sport flying. Fully illustrated details on installing a dethermalizer are included to lessen the chance of losing your free flight CAVU. As drawn, the top portion

of the body from the cockpit forward is easily removable for access to flight batteries, servos or the CO₂ tank. On my prototype model, the top hatch is secured by a pair of tiny Radio Shack magnets, operating in shear, at the rear of the cockpit. One could easily install a rubber band or wire latch instead, if desired.

The few body stringers are 3/32" sq. and are easy to handle. The CAVU shown in the pictures has been fitted with a 3 channel rc setup: a Hitec Focus II AM radio with rudder and elevator servos plus ESC/BEC [Electric Speed Control / Battery Eliminator Circuit], power by a VL HY50B motor [with either the VL 7.25 "X 4.5" or the TemAero 6" prop] and 8 - 120 mah nicad batteries. This setup provides motor runs of about 3.5 minutes, allowing climbs to about 250-300' - where thermals can stretch that flight time. The CAVU with this equipment is also suitable as a park flyer.

Information on purchasing the VL HY50B rc motor or the Hilline Mini-6 free flight motor and correct propellers is provided. In addition, instructions on making up the 8 X 110 mah nicad rc flight batteries from inexpensive sources are included. Printwood built-up wheels are provided, but you can also use turned balsa wheels from Aerodyne or real Texler air wheels.

CAVU model/kit specifications: Wingspan 30". Free flight model weight 3-3.5 ounces; RC model weight 6.5 ounces. Kit specifications: Detailed instructions, CAD drawn original printed as a crisp black line plan, Esaki Japanese tissue, wire, sticks, plywood and plastic.

See the CAVU in color at the website catalog:
<http://www.aalmps.com>

Price: \$27.95 plus 15% postage in US and Canada; add 30% for Europe and 40% for Pacific Rim destinations.
A. A. Lidberg model plan service, 1030 E. Baseline, Suite 105-1074, Tempe, AZ 85283
480-839-8154 aalmps@aol.com VISA and Mastercard accepted

Free Flight

What's free flight? A thrill, a challenge, a puzzlement.

It's other guys like you, the world around, striving for the same graceful beauty of flight. It's comradeship across all human barriers. It's bull sessions through the wee hours.

It's fierce competition...with the highest of sportsmanship.

It's a battle against Nature...her perversity...her law of gravity.

"Free as a bird" describes God's most unchained creation. Man's is a model airplane soaring birdlike in a thermal. You created it. Vicariously you soar with it...with its freedom.

Free flight is the mist of the dawning's calm as you test. It's the noonday Sun as your model thrusts for the heavens. It's the cool drink after a dusty chase.

It's the piercing scream of a peaking engine...the silence of the glide. It's sunburn and poison ivy and weariness to the marrow...made worthwhile.

It's skill in your fingers. It's knowledge learned for the knowledge alone.

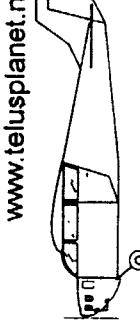
It's perfection sought...never attainable. A goal everlasting.

Free flight is all of these. Yet much more! I tell you this, and you may believe. But you cannot know...unless you know

Bob Hatschek, July 1962

PLANS

RUBBER - scale, no-cal, sport & old timer. Powered old timer & RC sailplanes. 130 models all illustrated. Catalog \$2.00. www.telusplanet.net/public/h_bvollk/.



re-0701



PHOTO PAGE

Air Mail

Hi Lin,

Many thanks for taking time out of your busy CinC duties to make the "FA Moth plan copies for me. I have two of that issue and both are missing the same two pages. It seems the "Moth" became a kind of cult classic in the next year or so judging by reader correspondence. I was about 10 at the time and had just started to cobble together models that flew a little after several years of solid model planes and boats (mostly Megows). My Moth went together just fine but, being a neophyte wire bender, I snapped one leg off at the fuselage. I centered up the remains to make a one-wheeler but it looked weird and the plane flopped over at rest. (Oh the memories). Being an innovative idea man even then, heh-heh, another complete gear was formed up and attached, reversed, further aft. Presto! World's first TRIKE MOTH!

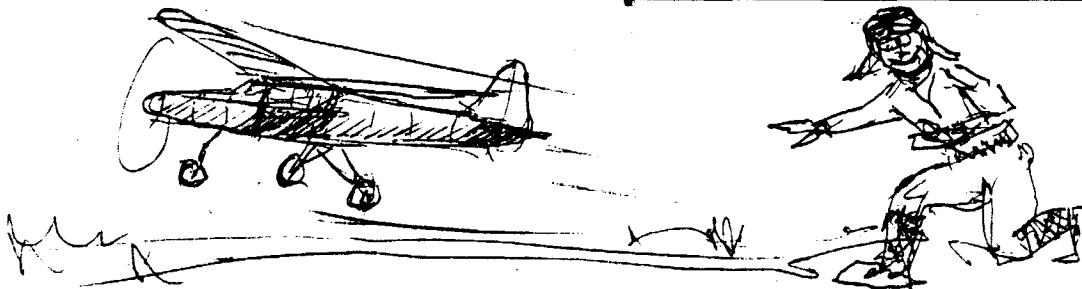
Left column; Al Lidberg has done it again, here is his pic of his latest plan for the FAC O.T. Electric Gas Replica event. This time Al has chosen the CAVU. Should be a good one. Ad in this issue.

Nate Sturman with his P-39 Aircobra, One of the feature plans in this issue. Should be an excellent flyer.

Jiro Sugimoto from Japan sent this photo of his Breda 15 built from plans in the FAC newsletter. Model weighs 4.6 grams!

Right column; Dan Giles, our newest member Sent this pic of his Earl Stahl design of the Grumman Wildcat. Should serve you well Dan!

Lloyd Shales photo of models waiting to be judged at Geneseo. Biggest models are Joe Barish's ME Gigant and Ed Pelatowski's Gyro Crusader, both multi-electrics.

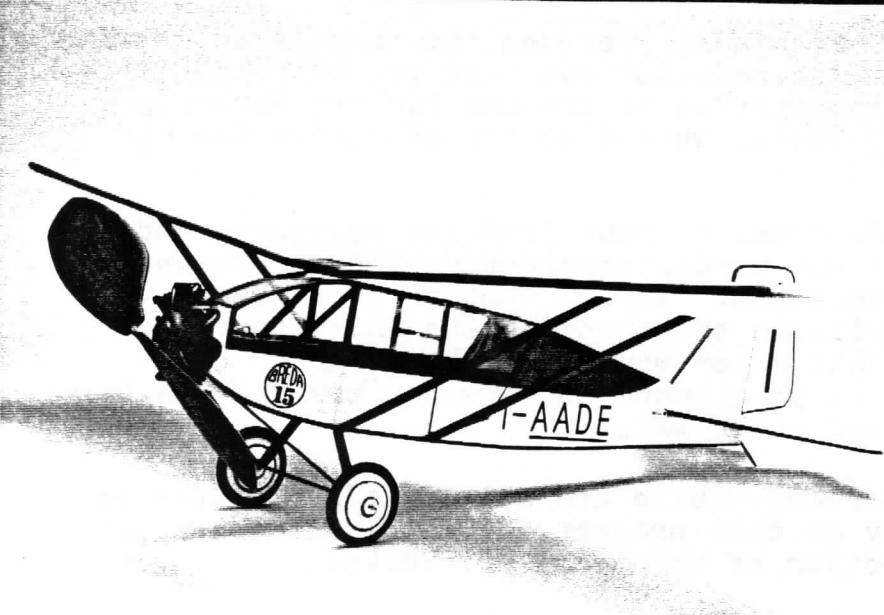
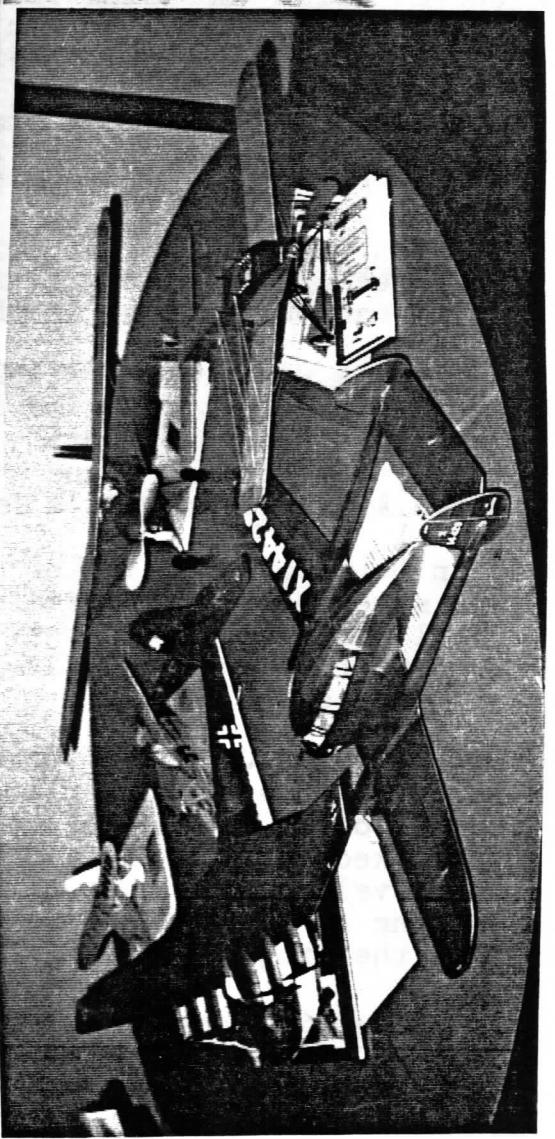
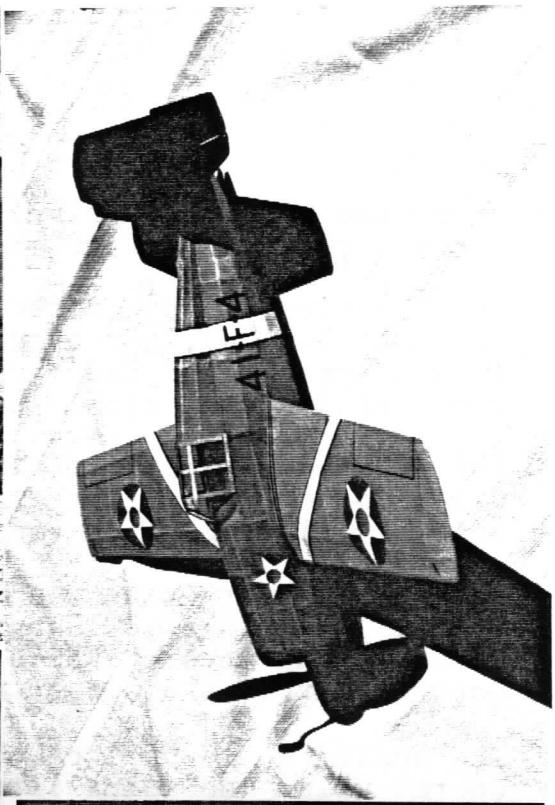
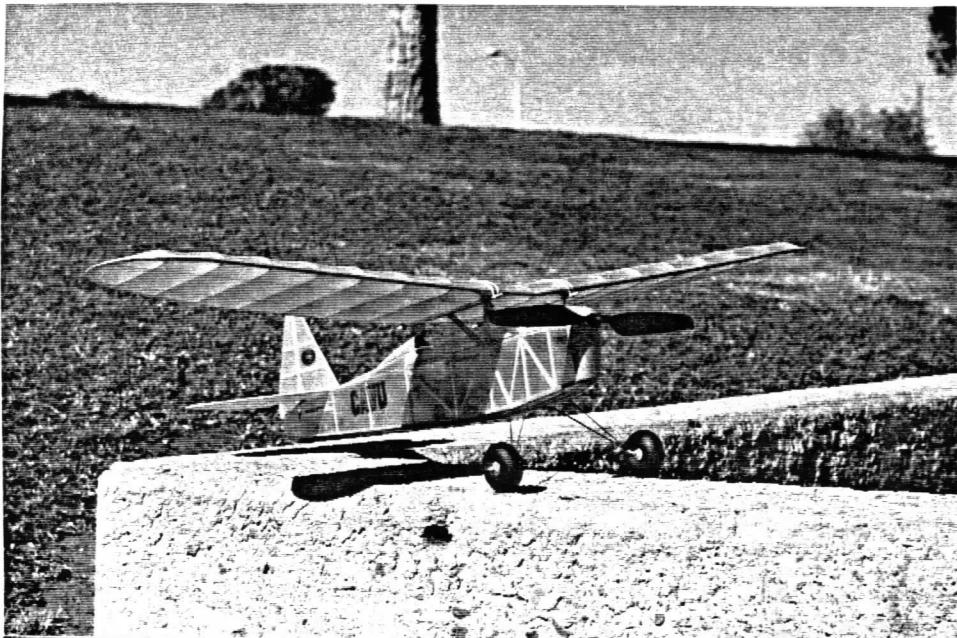


We always used that pathetic little loop of rubber supplied in the ten and twenty-five cent kits cause Fred Megow must know what he is doing, right? I had to use two 1/8" loops in a kind of heavy 24" Hurricane and I knew I had a tiger by the tail. It was all my little forefinger could do to crank the turns in. (1 to 1 winder) Underpowered was no problem at all since all our flying was on a wide, lightly traveled suburban street. It was necessary to stay under the overhanging maples. Flight path always the same. ROG from the macadam, left turn, tight climb to 15-18 feet. Several circles opening up as torque diminished, cruise down to power landing. Life was great especially when the landing was back on the street, prop ticking over. Winders lube, free wheeling and thermals were yet to be discovered but our safe little 30 second flights plus Phineas and the Griffon, who needed more?

Misconceptions; once you wound your plane it had to be launched in 10 or 15 seconds or something awful happened to the rubber. Hi-wingers always flew but low-wingers were a waste of time. Too top heavy and would probably turn upside down!

Cordially, John Winter





PLANES THAT NEVER WERE
by
Fran Ptaszkieicz

Among the many new designs being proposed to the U.S.A.A.C. in 1940, was a new light weight fighter which would be constructed of wood and metal.

This fighter was described as being extremely maneuverable and using a "Miller" L-510-1, eight cylinder, liquid cooled, in-line engine of 720 hp, it was anticipated the airplane would have a range of 960 miles at a cruise speed of 265 mph, with a possible maximum speed of over 300 mph.

The U.S.A.A.C. listened intently and then proceeded to give the Tucker Aviation Company of Detroit, Michigan, an order for a single prototype of this new fighter which was then assigned the designation XP-57.

Fuselage construction was to be of aluminum over a covered steel tubing frame. The wings would be made of plywood as well as the stabilizer, a metal saving attempt which was prevalent at the time on other aircraft. Control surfaces would be wood framed and fabric covered.

The engine would be located behind the pilot as in the Bell P-39 "Aircobra" which was going into full production at about that time. An extension shaft would then pass between the pilot's legs, connecting the engine to and driving an eight foot diameter two-bladed propeller.

The airplane would be a small one. Wingspan of 28'-5" provided a wing area of 120 square feet. Length would be 26'-7" and it stood a little over eight feet high from the ground to the top of its rudder.

Armament for this light weight machine seemed formidable, the possibility of three .50 caliber machine guns or one .50 caliber machine gun and one 20 mm cannon would be another choice.

Sadly, it was never possible to verify the Tucker Company's proposal with a prototype. Its claims of great performance would never be realized, as before the construction drawing's could be completed and a test model built, the company found itself in great financial difficulties and the U.S.S.A.C. withdrew its financing of the project.

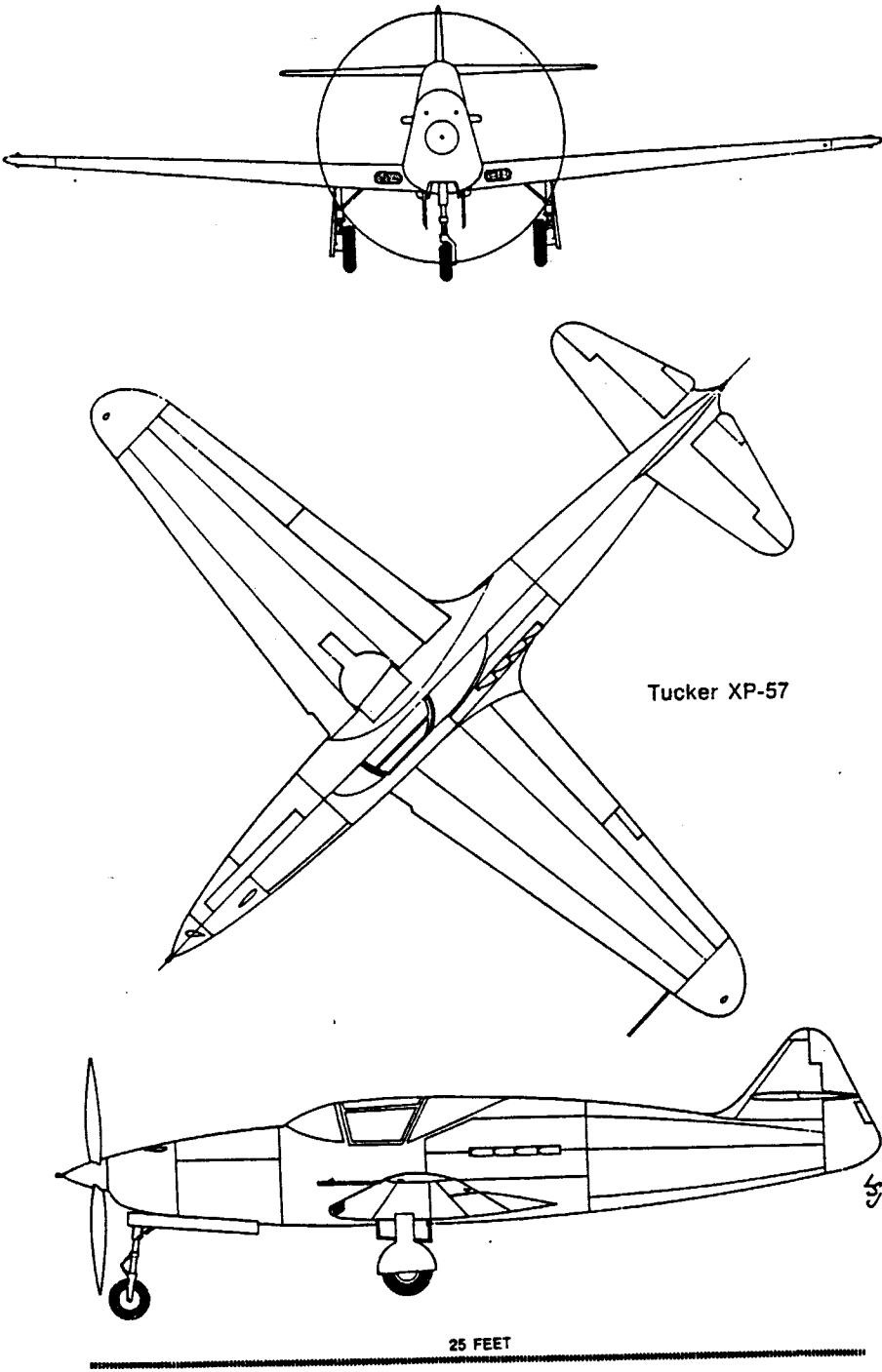
John Brown of Clifton Township, Michigan, provided the three view drawing and some side-bar information, also pointing out that the Detroit Historical Society has extensive documentation on the Packard Motor Car Company from whom, it was said, Tucker wanted to buy an engine for his proposed design.

According to John, the Tucker XP-57 was a fraud from the beginning and never intended to be built. It was a ruse apparently aimed at trying to shake some money out of the government. Tucker went to the Packard Co. and asked to purchase a four cylinder prototype engine which the company was developing at that time. This motor would then be used for taxi-testing of a well done mock-up in an attempt to convince the U.S.S.A.C. that the project was feasible and under way.

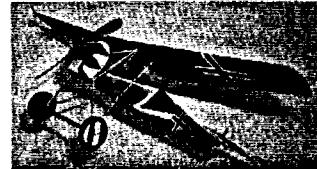
To those who remember the Tucker automobile and all of its problems as well as the attendant publicity on that project. This airplane project would have been under the direction of this same Mr. Tucker.

Another three view is available in a book, "The American Fighter" which also contain's a brief review of the XP-57 and it's related problems in an attempt to build the airplane.

Interest in the proposal by the military was generated by the fact that, while other American company's were in the process of designing and building larger and heavier fighter's, along came the possibility of a potentially effective and light weight airplane.



--NEW INTRODUCTION--
FF90 Fokker D8 (Scalecraft) 22" \$15



**easy
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models**
Books by Don Ross
Flying Models 19.95ppd
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Models \$14.95 ppd.

105 Old Time Rubber Powered Kits

FF11	Miss Canada Sr	36"	\$15
FF14	Baby Flea	24"	\$12
FF30	Baby Commercial	24"	\$11
FF31	Baby Hornet	30"	\$12
FF68	Jimmie Allen BA Parasol	28"	\$14

8 JETEX or Catapult scale kits \$12 ea.

JX02 Mig 15 16"

JX03 Grumman F9F Panther 19.5"

WWII Rubber Powered Kits

FF64	Curtis Tomahawk	24"	\$11
FF65	Grumman Wildcat	25"	\$13
FF66	P51 Mustang	28"	\$13
FF69	Grumman Avenger	28"	\$15
FF70	Vought Corsair	28"	\$13
FF71	P47 Thunderbolt - Razor	28"	\$13
FF72	Curtiss Helldiver	28"	\$13
FF73	Curtiss Hellcat	28"	\$13

Golden Age Rubber Powered Kits

FF24	Leopard Moth	22"	\$10
FF61	Tiger Moth	20"	\$11
FF80	Rearwin Speedster	36"	\$15
FF86	Freshman Embryo	18"	\$9

Electric R/C Kits

ERC16	Pilatus Porter	3ch	53"	\$65
ERC17	Catalina PBY	4ch	54"	\$79
ERC20	Spacewalker	4ch	54"	\$74

Shipping \$5 per order Catalog \$2 ppd.

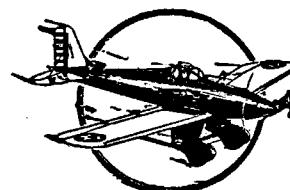
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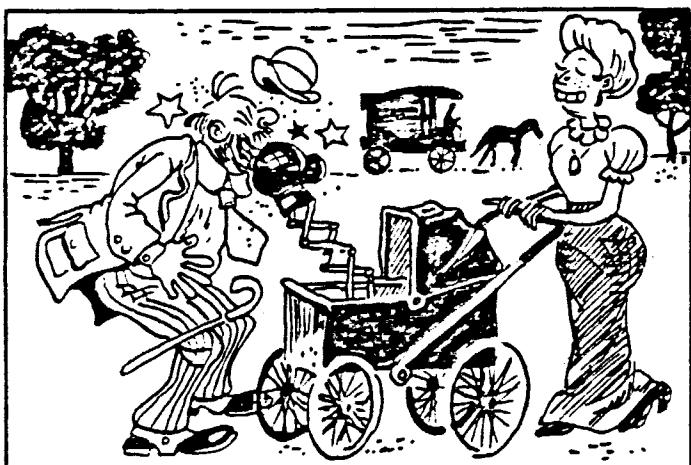
or your nearest hobby shop



Building Tip: Don't worry if you carve the prop backwards...just wind with the other hand!

They Had What It Takes

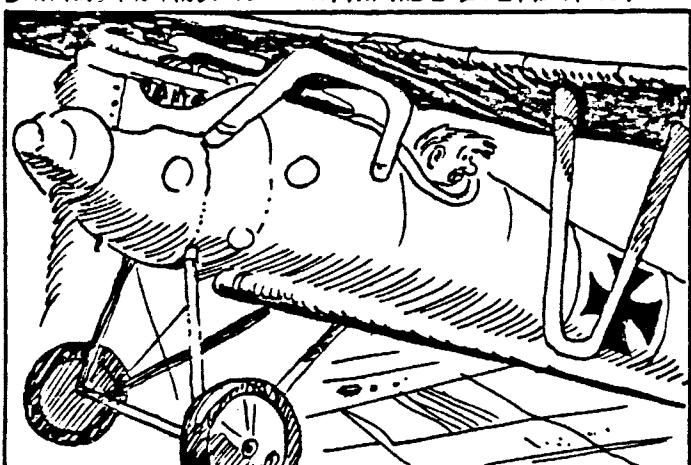
P. PINKHAM - THE BOONETOWN BAM



1. THE BAM WAS BORN IN BOONETOWN, IOWA, 1893, AND NAMED AFTER A DISTANT BUT ILLUSTRIOUS RELATIVE, THE HERO OF HUMBUGGERY, PHINEAS BARNUM. FROM THE BEGINNING HE DEVELOPED A PRECOCIOUS SENSE OF HUMOR, EMITTING HIS FIRST HAWWW! AT AGE 2½ MONTHS.



2. HIS EARLIEST AMBITION WAS TO BECOME A TRAVELING SALESMAN FOR THE CELEBRATED ACE NOVELTY CO. HE WAS ALSO INTERESTED IN THE NEWFANGLED "AEROPLANE" AND BUILT BOONETOWN'S FIRST MODEL FROM EXPLODING CIGAR AND LOADED DICE CARTONS.



3. WHEN THE GUERRE BROKE OUT, HE JOINED THE AIR CORPS AND SAW ACTION BOTH WITH AND AGAINST THE 8TH PURSUIT SQUADRON. HE WAS AN ACTIVE ESPIONAGE AGENT (USUALLY BY DEFAULT) AND LIBERATED 24 ENEMY AIRCRAFT, THROUGH ASSORTED SKULLDUGGERRIES.



4. A RARE GROUP PHOTO: FROM L. TO R., MAJOR R. GARRITY, LT. BUMP GILLIS, CAPTAIN HOWELL, G.T. GOOMER, AN UNIDENTIFIED ACK EMMA, AND SOME BLUMS FROM CHAMOUNT. LT. PINKHAM WAS A FAVORITE AMONG HIS TEAMMATES AS THE AFFECTIONATE EXPRESSIONS REVEAL.



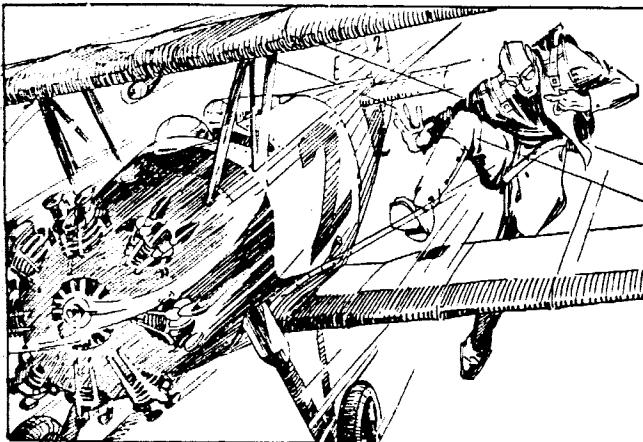
5. AFTER THE BIG FUSS PHINEAS AND AN OBSCURE WRITER NAMED JOE ARCHIBALD COLLABORATED ON THE PINKHAM MEMOIRS, WHICH WAS SERIALIZED IN THE PRESTIGIOUS FLYING ACES MAGAZINE, DOYEN OF THE AERONAUTICAL JOURNALS.



6. TODAY, MR. PINKHAM IS PRESIDENT AND CHAIRMAN OF THE BOARD OF ACE NOVELTY COMPANY, MEMBER OF CONGRESS, S.E.C., W.C.I.U., & F.A.C. IT IS HIGHLY RECOMMENDED BY OUR CONFIDANTE, J. ARCHIBALD, THAT YOU DO NOT ACCEPT CIGARS FROM MR. PINKHAM.

They Had What It Takes

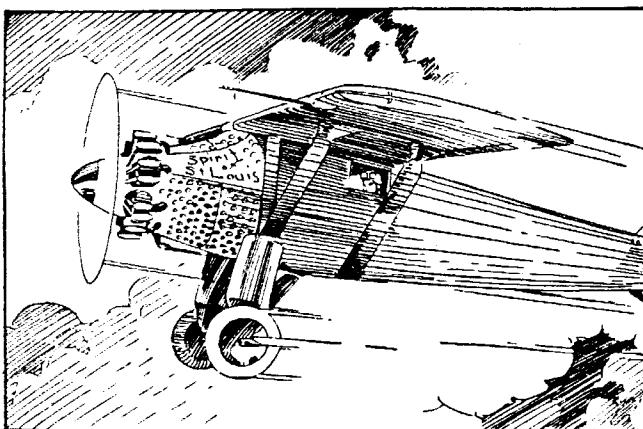
I—CHARLES A. LINDBERGH—THE LONE EAGLE



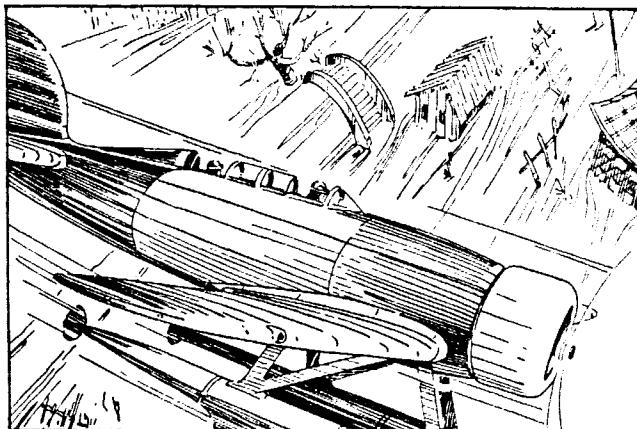
1—As a boy, Lindbergh was devoted to mechanics. One of his first contrivances was an ice boat run by an airplane prop turned by a motorcycle engine. After college, he learned flying, "barnstormed," and flew the air mail. Four times he qualified for the Caterpillar Club, his closest brush with death coming when his plane went out of control and he bailed out at 300 ft. His 'chute barely opened in time.



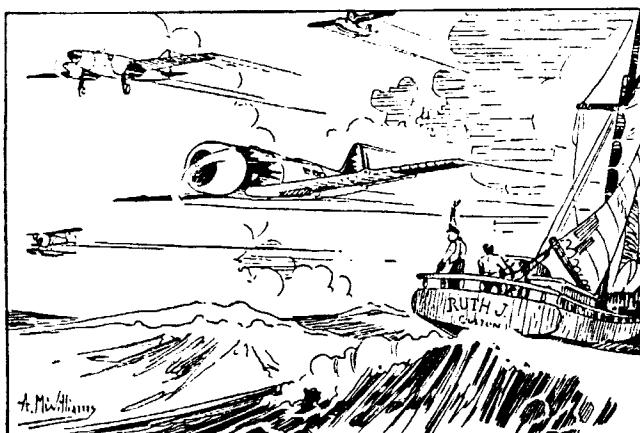
2—On the eve of his famed flight to Paris (May 20-21, 1927), Lindy remained at the field until midnight superintending the servicing of his Ryan, then retired to his hotel for two hours' rest. Returning to the field in a drenching rain, he checked the weather reports, then ordered the ship on the line at 4:15 a.m. As a misty dawn broke, the tanks were filled. He was ready to leave!



3—At 7:52 a.m. (May 20th) came the take-off—Lindbergh was on his way! He passed Halifax at 1:50 p.m., St. Johns, Newfoundland, at 7:15 p.m. Out over the ocean he roared into the fog and darkness of night. Morning brought dreaded sleet squalls, but at last he "raised" Ireland at 10:00 a.m., May 21st. Then came England, the French Coast, and finally LeBourget at 8:21 p.m. His history making flight was ended.



4—Numerous other famed flights were logged by Lindy, his daring Lockheed sky journey with his wife to the Arctic, Alaska, Russia, Japan, and China being outstanding. Arriving at Nanking during a terrible flood, they cruised about rendering assistance. Lindbergh also blazed South American air routes for P.A.A., then climaxed his work by laying out the great Trans-Pacific Clipper run.



5—To commemorate the tenth anniversary of Colonel Lindbergh's memorable New York-Paris flight, the French Aero Club is sponsoring a thrilling race over the same route to start this May 20th. More than \$100,000 in prizes are offered, and many renowned pilots have announced they will enter. Will American flyers retain the honors for this grueling run?



6—Colonel Charles A. Lindbergh, the Lone Eagle, has long been the idol of American youth, and a more worthy hero could not be found. His intrepid flight to France was the spark which launched our modern aviation industry on the way to its present heights. "Lucky Lindy" was a gross misnomer—for it was his superb flying ability that put him on top.

GUSSETS THEIR PURPOSES, FORM, AND APPLICATION RECOMMENDATION

DEFINITION: For the purpose of this article a gusset is a brace that forms a triangle or a shape with 3 sides, which may not be straight e.g. rudder and wing tip curves.

PURPOSE:

Some *conceptual* applications of gussets are to:

Strengthen an angular joint to resist shear stress,
Strengthen an angular joint to resist tension stress,

Assist dihedral bracing,

Oppose swaying in a non-triangular cell,

Assist in the transmission of torque from something like a spar to rib or cross member,
Brace outside corners and sharp bends against bending caused by tissue tension.

Of these applications, the bottom two were tested for their contribution in the reduction of warps and wrinkles.

The reason the word *conceptual* is used above is that what we think may be a good idea is not proven to be when tested in real situations. I tested the first conceptual application (**Torque transmission**) with 3/32 square members glued at 90 degrees and again with 1/16 square members configured in the same way. One member, we'll call the torque arm, was glued as a but joint to the other, which we'll call the torque rod. I clamped the torque rod on consecutive trials at 4, 3, and 2 inches from the glue joint. The torque rod was supported past the glue joint (on the end opposite the clamped end) so that it would not bend down when a load was placed on the torque arm. In all cases the torque was arm was bent to an angle of 10-degrees. This was an angle greater than any I anticipated a structural member, such as a spar, would be asked to take. In all cases the but joint did not break. The wood used was 10-pound density. It was assumed that lighter wood would be easier to twist and therefore the joint would hold. This was supported after testing the 1/16 square members using 6-pound wood. Now the above applies to a 90 degree joint with the torque arm of the same cross section as the torque rod. If these conditions are not met then a gusset may be needed. An example is using a torque arm of less cross sectional area e.g. (1/32X16th) or when it is glued to the end of the torque rod. Also if the angle the arm makes with the rod is not 90 degrees it may be hard to make a good joint. An application where these conditions (thin torque arm and angle other than 90 degrees) are met is the internal diagonal brace as in some stabilizer and wing structures. In this situation the joint of the arm with rod is critical and a solid gusset may be necessary. The gusset in this type of situation can be quite small and may be considered a fillet rather than a gusset. I don't know when one turns into the other.

It is well known that gussets in **outside corners** or curves in such places as wing tips can reduce or eliminate wrinkles. But exactly where do they need to be placed and what is the best shape for them. I have found that they need to be placed at the corners of any place where tissue is glued down to the corner members. So if the tissue is glued down for example through out the stabilizer to cross members and a center spar then gussets will be needed at all these joint. Other typical places are the wing roots, or dihedral joints, tail end of the fuselage, fin leading edge (vertical stabilizer) to its base, etc. Some times the gusset at the dihedral joint is serving not only as a brace against tissue tension but also a dihedral brace. As a result a flat triangle in the plane of the bottom of the wing would be inadequate. A surface that matches the top of the wing is also needed to brace against a lift load. The easiest way to provide both of these surfaces is to make a solid block and shape it to conform to the cross sectional shape of the wing. An alternate is to place in these corners a sheet that is thick enough to be shaped to match the rib.

How does this brace which forms a triangle reduce or eliminate wrinkles. It does it by preventing the edge to which the paper is glued from being bowed by the tension of the paper. Another way it may help is by preventing a cell say with 90-degree corners from deforming to a parallelogram with out 90-degree corners. (See Kris Starleaf's Yak-3 plans of how this could work on a rudder) At a corner the paper is pulling from both directions. The magnitude of the pull is a function of the grain orientation and length of the paper relative to the direction of shrink. Paper shrinks more at right angles to the grain, but the direction parallel to the grain is typically the longest so that magnitude of shrink is also important. With out a brace across the corner both members *may* bend and wrinkles are produced. The reason *may* was used in the previous sentence was that the amount a stick bends is determined by its dimensions, load and stiffness. One or both sticks may be stiff enough to resist the stress. It is amazing how little the sticks have to bend for a wrinkle to show up. For some appreciation of this take a wing etc. and squeeze it from the leading edge to the trailing edge, and notice how soon the wrinkles show up.

So we know where we need to place one, but what guides it size? The size is a function of the members strength that needs bracing and the force applied to it. I don't have an equation for all situations, but the following experimental data and analysis of plans may be useful. I made three 2-inch squares of 1/16 square, 6 pound wood. One had gussets starting at 1/3 of the span (.66 inches) and running across the corner and down the vertical member the same distance. This was done in all 4 corners of the square. The second one was the same but the distance from the corner that the gusset started was 1/6 of the span, and the third was 1/12 of the span. The paper was Japanese tissue in all three cases. The frames were covered on both sides with the paper grain running in the same direction on both sides. It had been pre shrunk once before being applied to the frames.

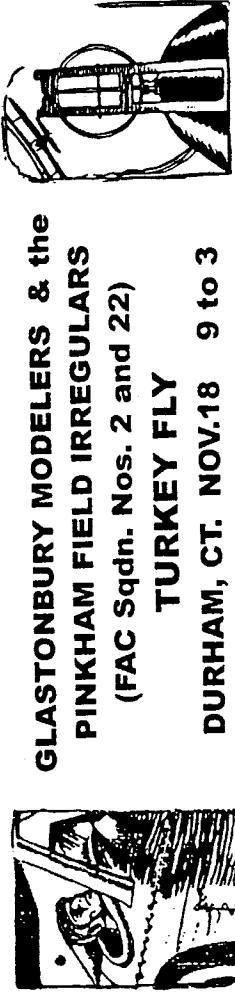
After the frames were covered, but not doped, they were all exposed to a fine mist and allowed to dry. The sample with 1/12 the span had the most wrinkles. The sample with the braces at 1/6 the span was fine, no wrinkles, and the same for 1/3 the span. I have since looked at other structures and found that some times those with 1/6 the span had wrinkles. When I look at plans you see all kinds of spacing, but some of the builders who are frequent winners brace at about 1/4 the span. That seems like a safe distance. Braces at 1/6 of the span may be a little risky. Even though all the wood strips in a structure are stripped from the same plank, they can vary a great deal in how stiff they are.

Since tissue may not pull equally hard on both members in a corner, it may be possible to have an angle other than 45 degrees for the bracing member. Joint angles other than 90 degrees, such as where the fin leading edge meets the bottom of the fin, may also require different treatment.

Frequently on plans the gusset is shown as a solid piece with the grain running at 45 degrees to the 90-degree corner members. I have tested a solid gusset versus just having a stick running across the inside of the corner. (Now I suppose we have another language problem — is this stick a gusset or a diagonal brace?) Any way I found the stick is as strong as the solid gusset and lighter. This stick does not need to be of the same cross section as the members forming the corner (the typical specification laid out on some plans). In stead of it being 1/16th square it could be 16 by 1/32nd and then it could be twice as long for the same weight. Thus giving more security. With the short distances typically involved buckling due to compression is not an issue. For other reasons twisting of the corner brace is not an issue either.

I also investigated the merits of having a gusset with concave radiused corners by talking to a Ph.D. civil engineer. His opinion was that a gusset should be a straight line.

Hope this helps you build stronger lighter models with fewer wrinkles. If any of you have additional data I'd be happy to hear about it. My email address is donsmiller@olympus.net My regular address is Don Miller, 835 Jackman, Port Townsend, WA. 98358.



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TEN LITTLE PILOT BOYS

Ten little Pilot Boys, one shot a fancy line:

Fifth Columnists were listening and there were nine.

Nine little Pilot Boys, one had a heavy date:

The girl was paid by Germany and then there were eight.

Eight little Pilot Boys, one used a phone to Devon:

The line was an open one and then there were seven.

Seven little Pilot Boys, one thought his drinks he'd mix:

He talked too much when he was tight, then there were six.

Six little Pilot Boys, in a West End "dive":

One showed off to a new-found friend, then there were five.

Five little Pilot Boys, discussing fighter lore:

One discussed it much too loud, then there were four.

Four little Pilot Boys, one posted oversea:

Sent a p.c. to his home, then there were three.

Three little Pilot Boys, on talked about a 'do':

The news was passed across to France, then there were two.

Two little Pilot Boys, eager for some fun:

One spoke about his next day job, then there was one.

One little Pilot Boy, his mother's favourite son:

She showed his letters to her friends, then there were none.

Ten little Pilot Boys, have gone into obscurity:

For paying no attention to that vital word Security.

All the little Pilot Boys are wiped clean off the map:

Because some people will not learn to shut their b---y trap.



EVENTS

1. Peanut: No scale judging, no max., total of 3 flts.
2. No-Cal: No max., total of 3 flts.
3. Embryo Endurance: Card table take off, max of the day.
4. Victory models: Must be per plan, no max., total of 3 flts.
5. Legal Eagle: No max, bring your plan for compliance check.
6. Goodyear Midget Racers: Mass launch at 12:00
7. Flying Aces Sport: 25" span max, no max, bonus if from old Flying Aces magazine.
8. Jimmy Allen: New this year. FAC rules, max of day.
9. Pinkham Field Stick: No max, fly all day, highest single flt. wins.
10. Catapult Glider: 16" span limit, AMA flite rules, max of day.
11. HLG: 16" span limit, AMA flt. rules, max of day.
12. Old Time HLG: SAM rules, best 3 of 9, max of day.
13. Catapult Jet: FAC rules.
14. Ten Centers: 20" span limit, fly per FAC Old Time Kit Scale rules.

This means you can enter 3 models of different spans and configurations. Check your FAC rule book. We want to give it a try, gang. How about it, Skysters? You have only one ten center? Head for the workbench, Wingster!

NOTES

\$3.00 Entry fee. Do not park on the grass. No entry fee for those under 21. Time each other. Enter your times in the book on the sign-up table. Official catapult only for glider events. Pinkham Field Stick is for solid stick and non-scale profile jobs. Each event must have at least 3 participants to become official, so watch the entries and try to save the weak ones. We don't want to drop any events. We want everyone to be happy! For Ten Center, FAC OTKS flight rules will be enlarged and displayed. You can fly them all you want, all day long. Easy goin'. First and second place certificates. Prizes for our younger flyers. Kamones for FAC events. Be sure to sign up on address tables in order to get the Squadron Bulletin, which will give results of this meet and notice of future meets. And, sometimes other good stuff. That's where your three bucks goes. See you on the Field of Honor!!

Paul Stott, C.D. stottip@aol.com

4304 Madison ave., Trumbull, CT 06611

(From the book "Pilot Officer Prune" by Tim Hamilton with permission to reprint).

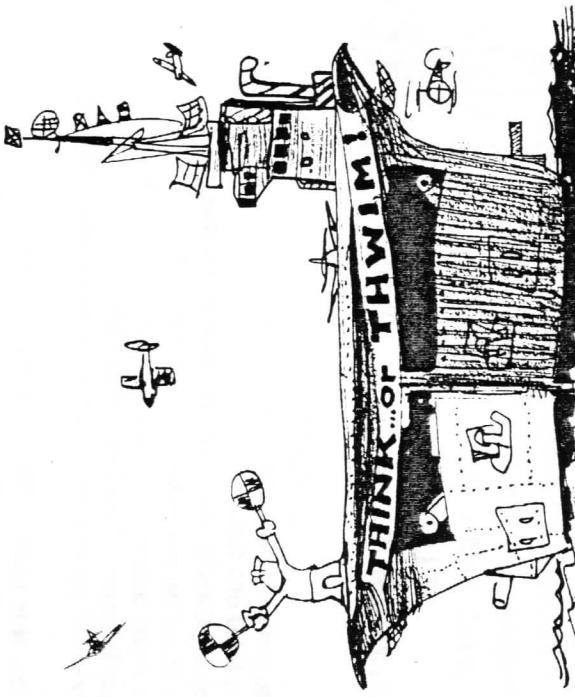
SUMMER POSTAL CONTEST

We will have two events/wings for you to enter this flying season. They are Golden Age Civil, no span limit, and Peanut Scale. Enter as many times as you want with as many models as you want. Every time you better a score with a particular model you may send that score in. Times from contests also count.

The contest starts now and ends on October 28, 2001. Entries postmarked after Oct. 30, 2001 will not be accepted. Send all times to; FAC-GHQ, 3301 Cindy Lane, Erie, Pa. 16506.

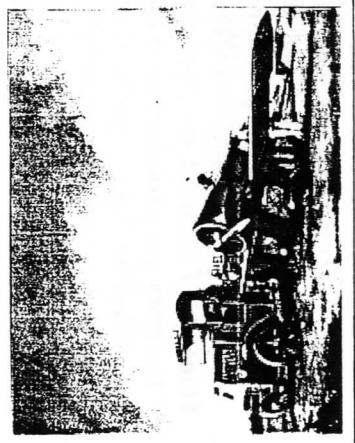
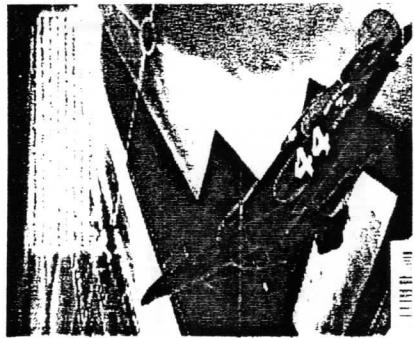
BUILD--FLY--WIN....EFF--AAA--CEE!!

What's happening here? Only two entries. Where are the entries? The times reported are from Doc Martin in Golden Age Civil with 298 sec. With a Waco "E" and Lin Reichel in Peanut Scale with 41 sec. With a Cougar.



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by
Robert Hirsch & Barbara Schultz



Available October, 2001

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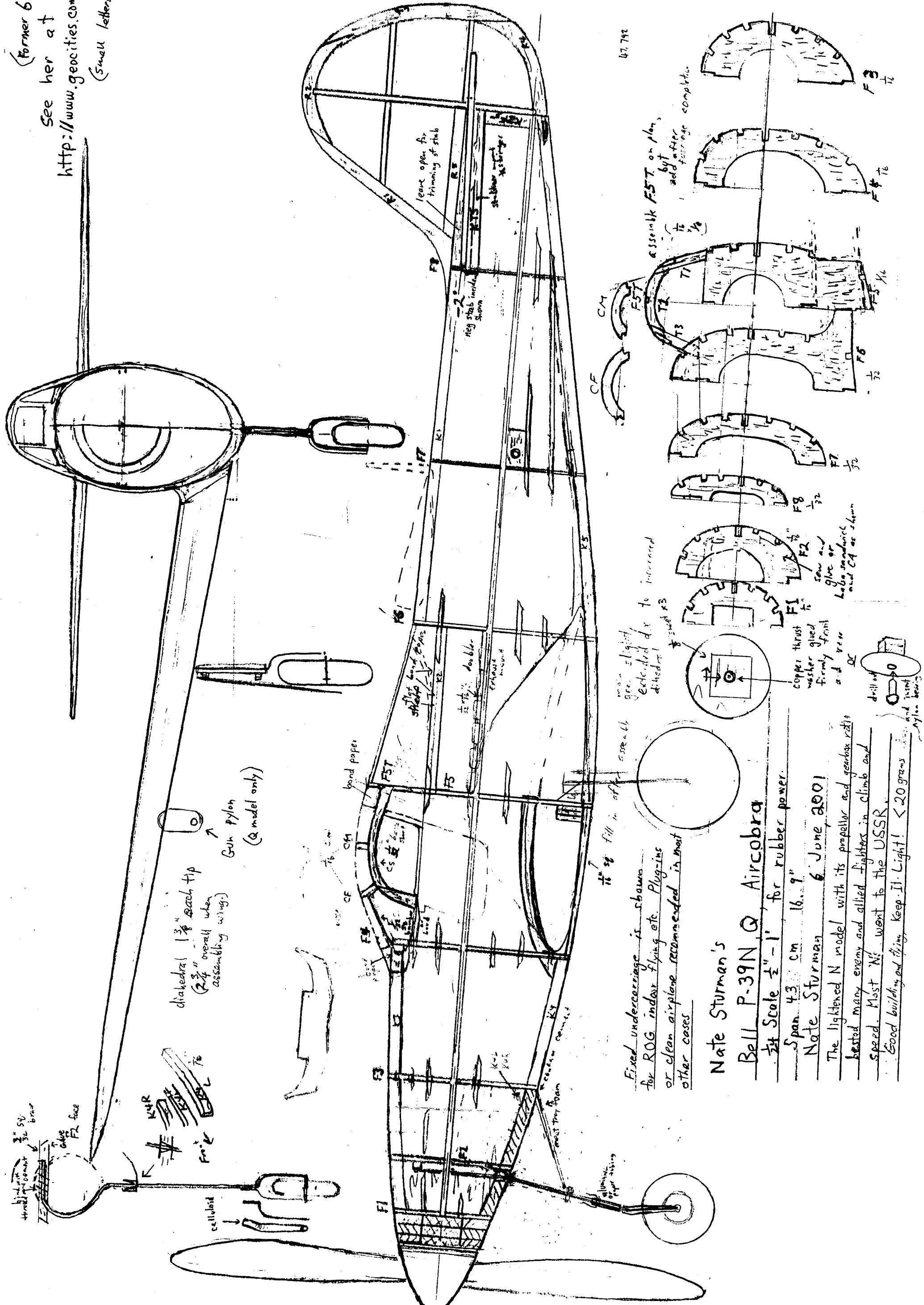
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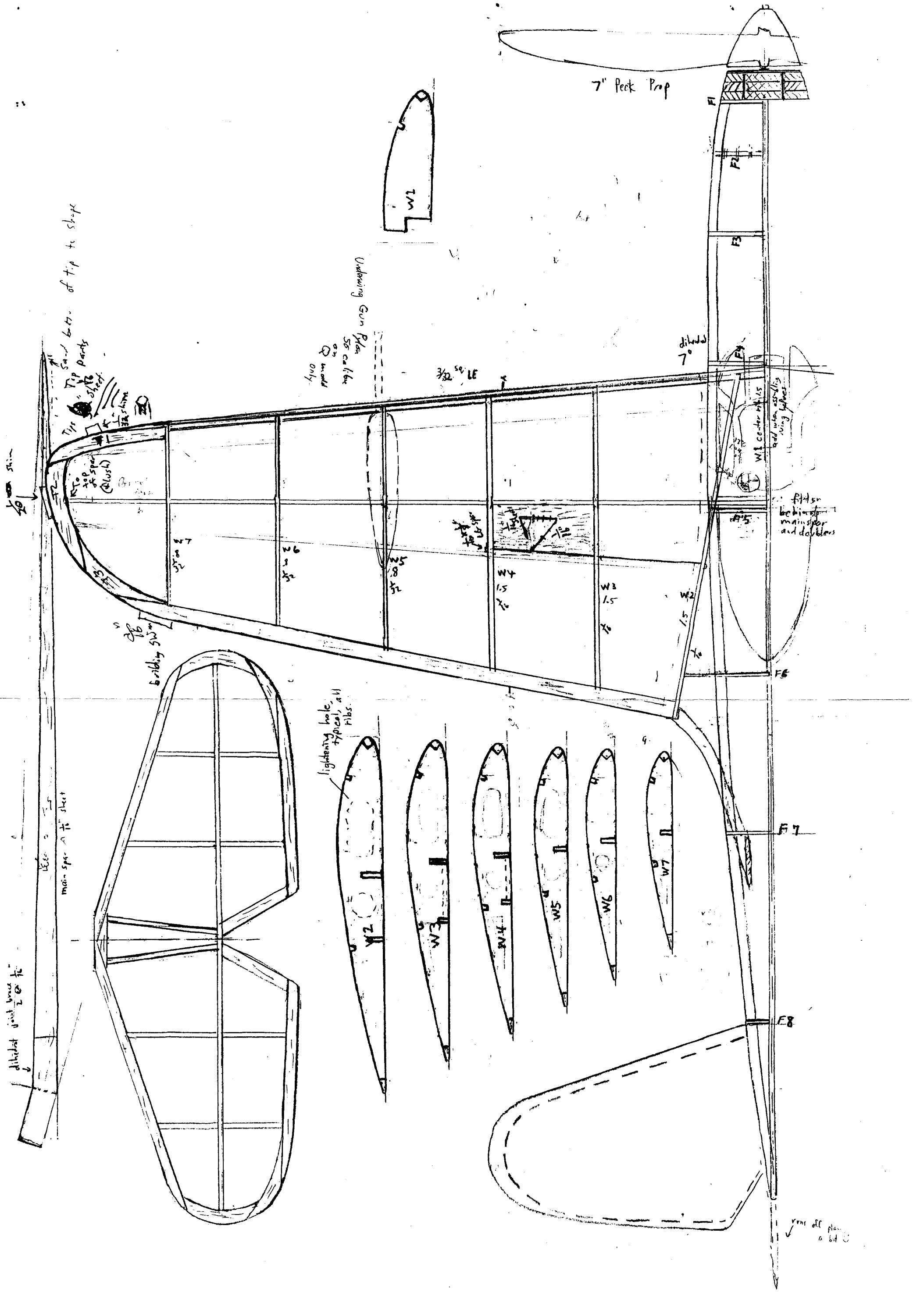
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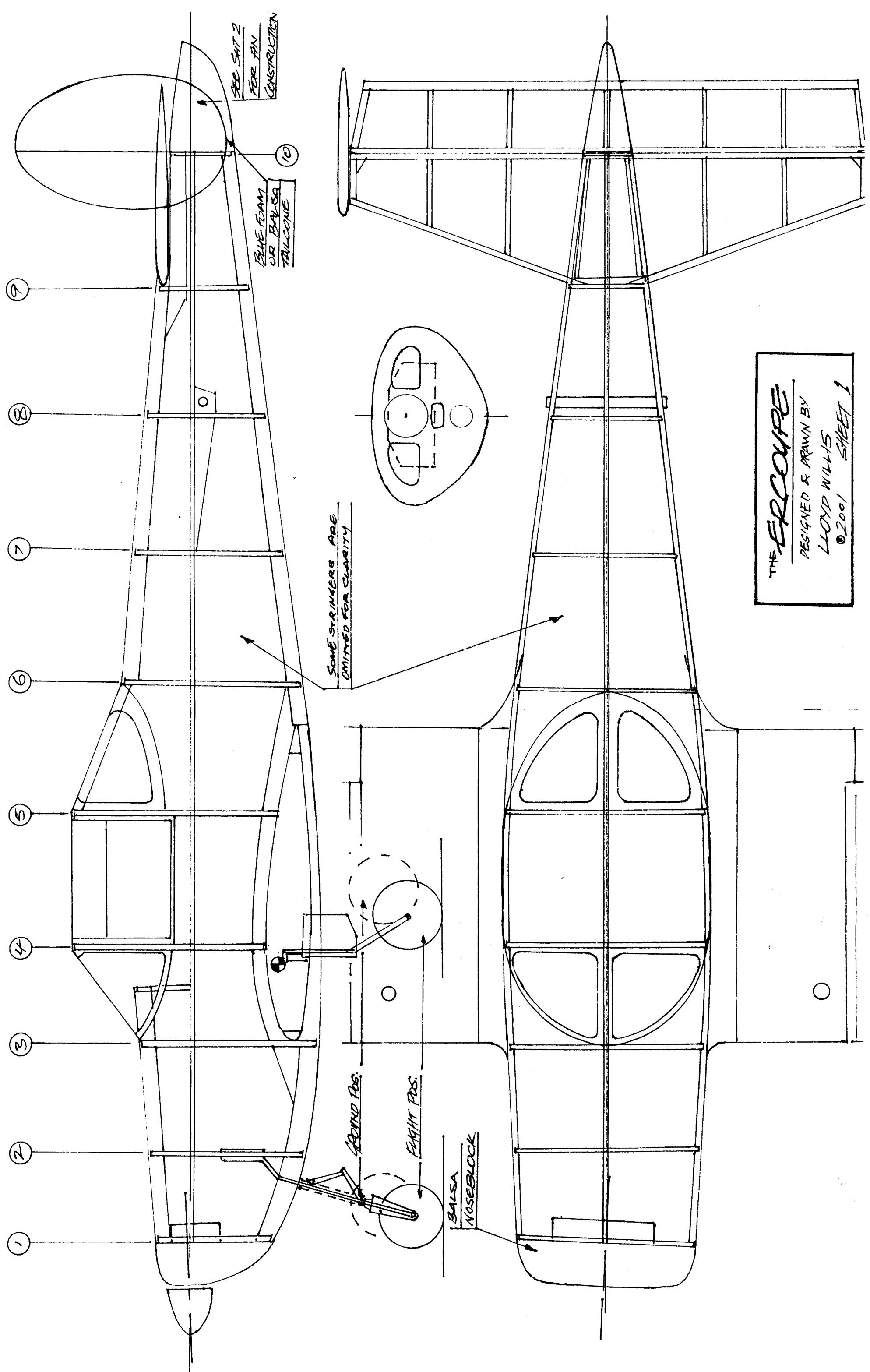
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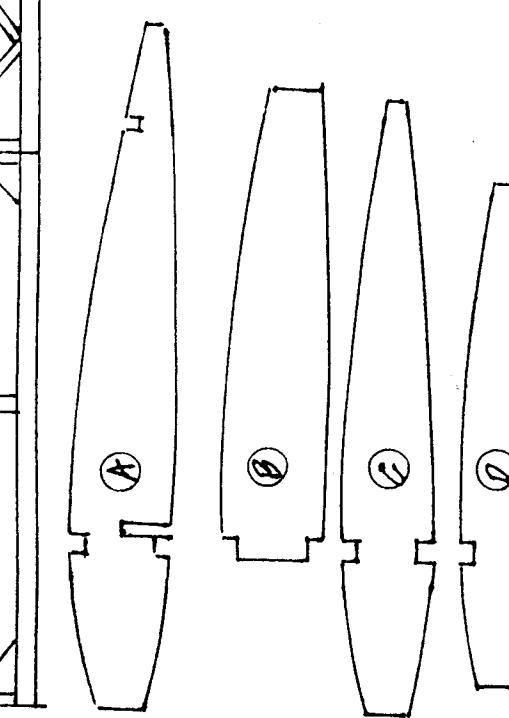
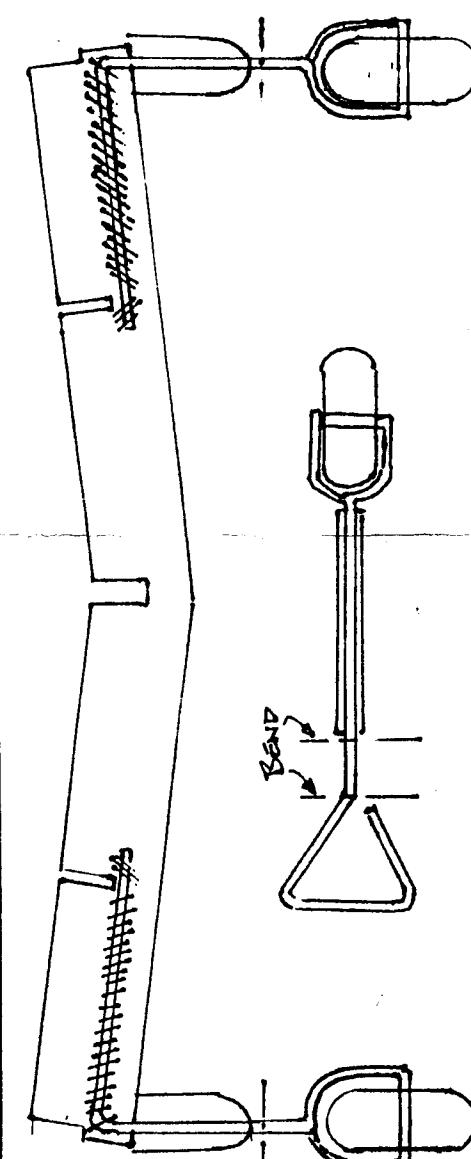
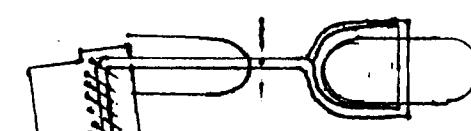
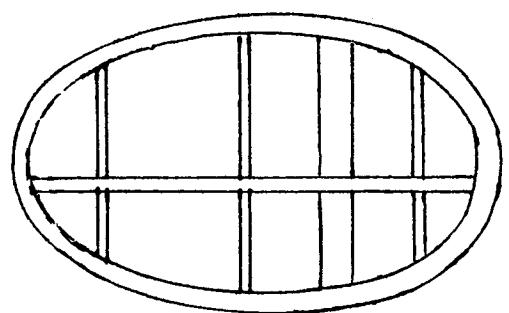
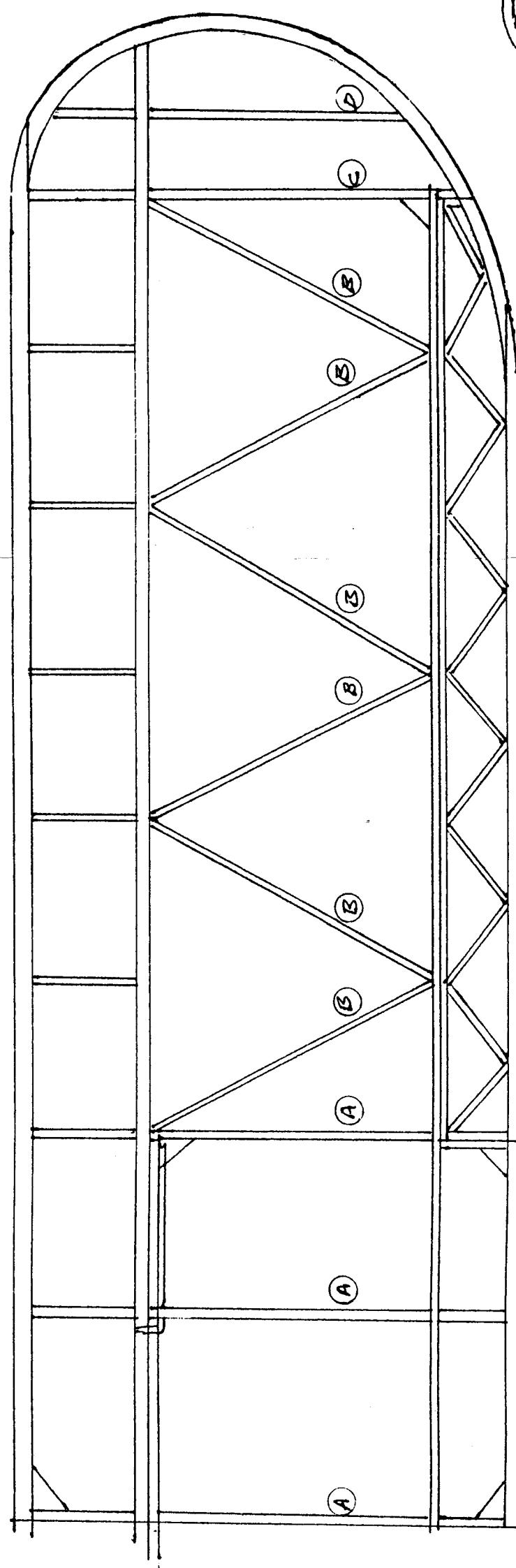
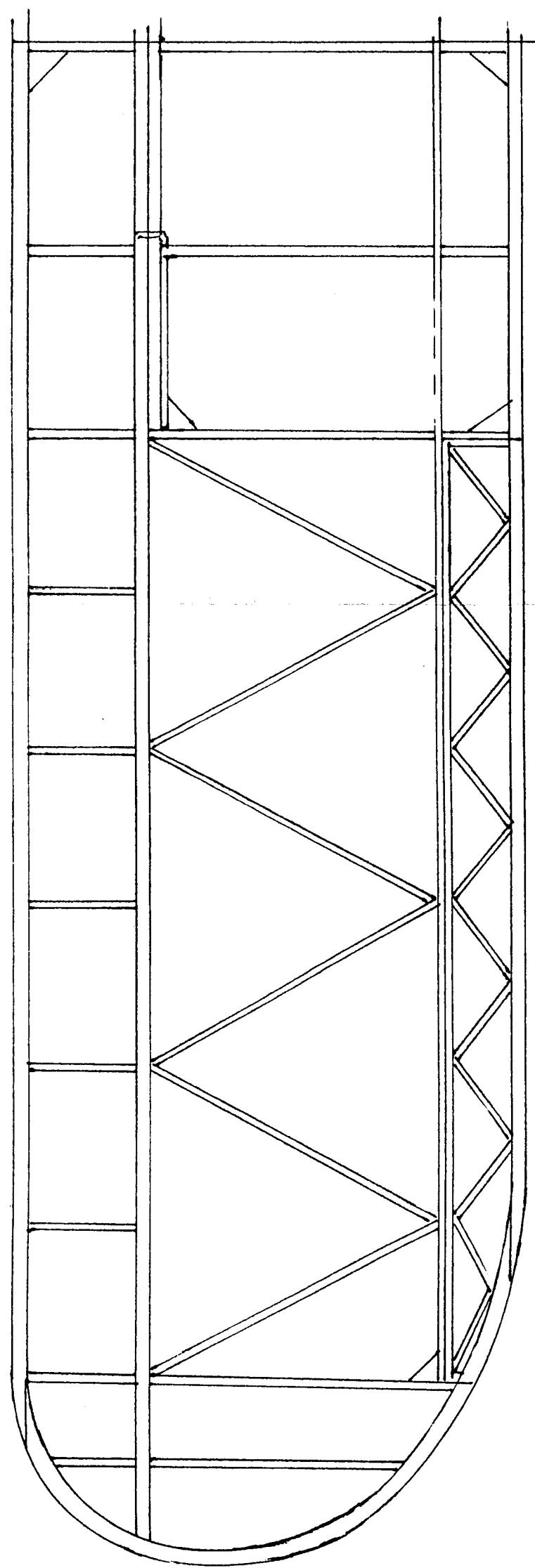
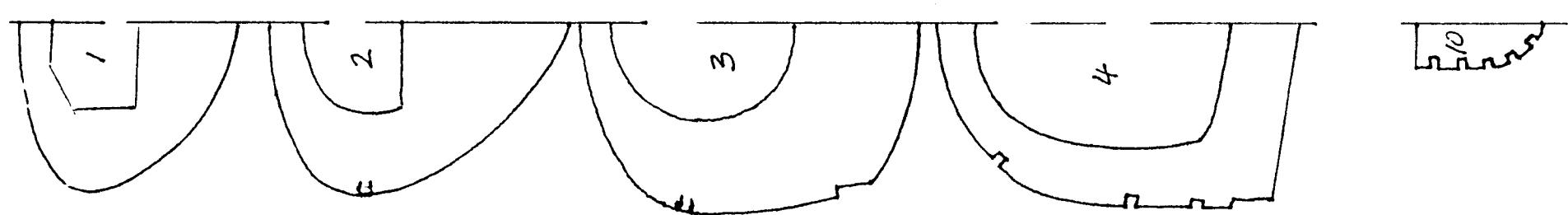
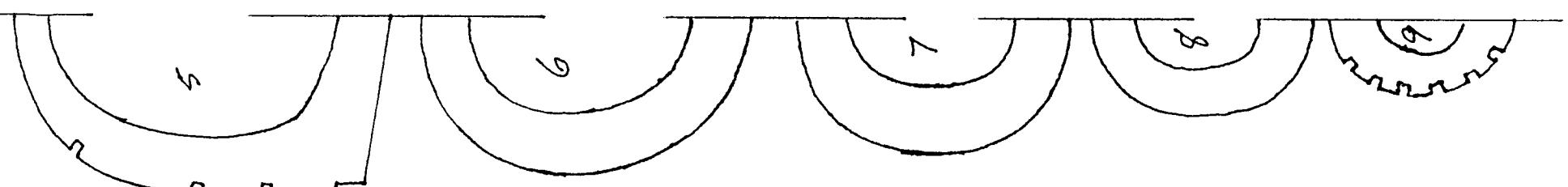
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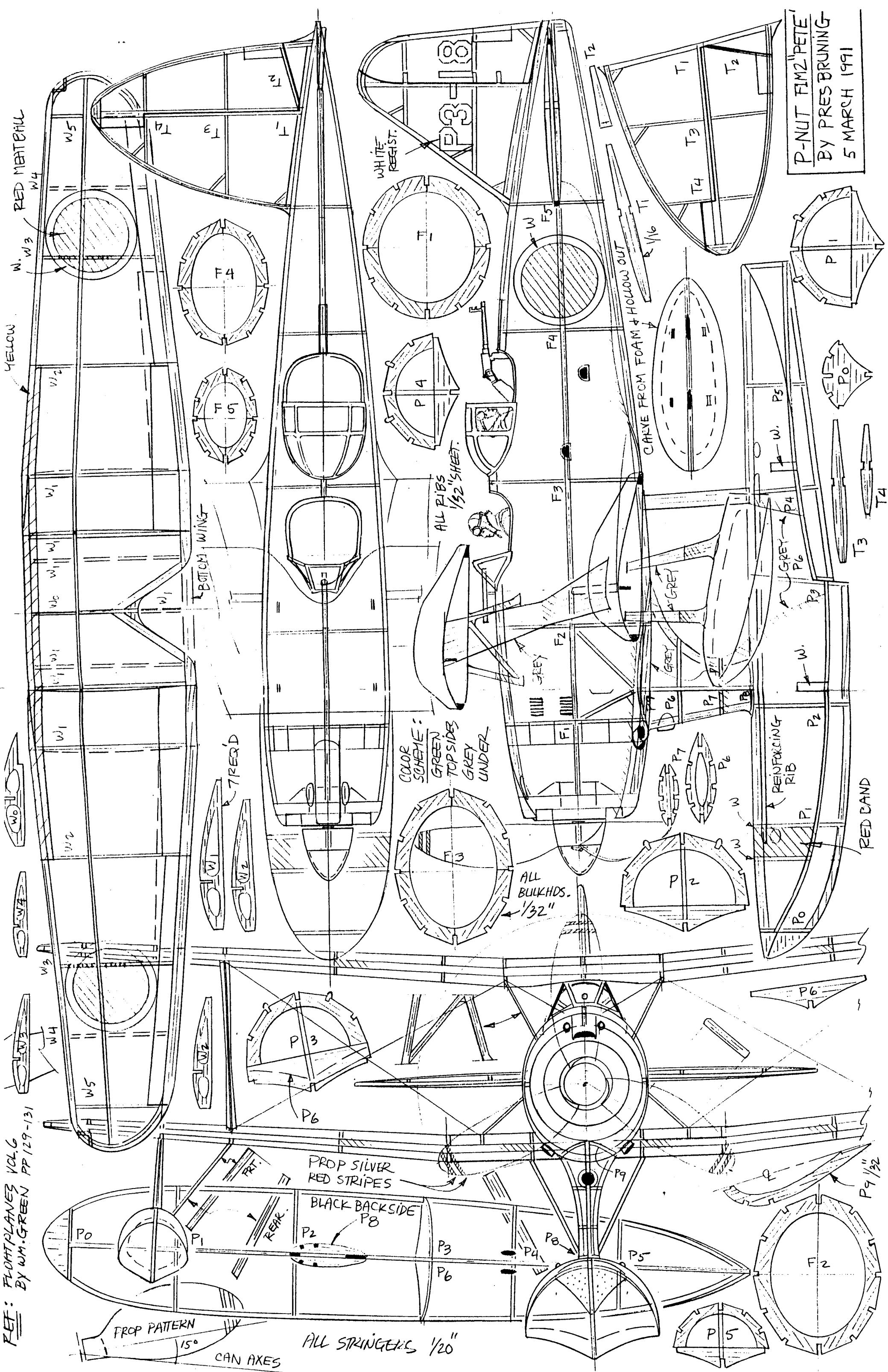


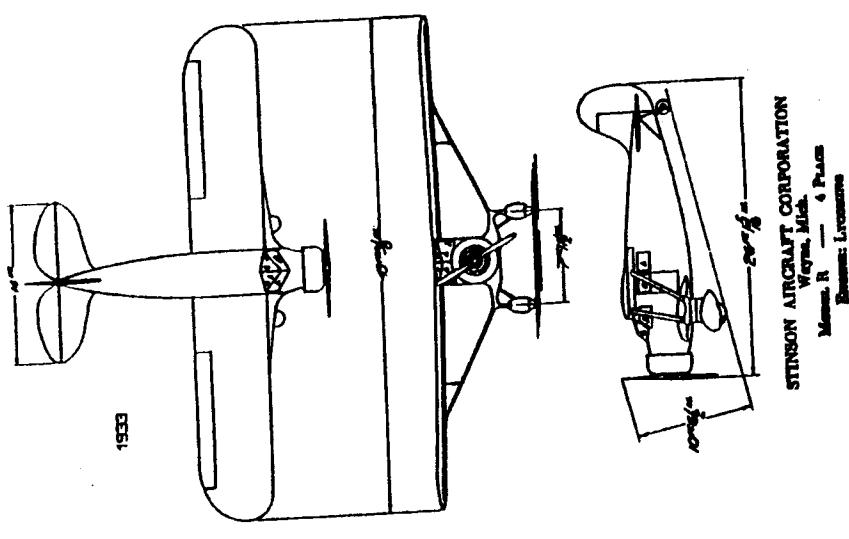






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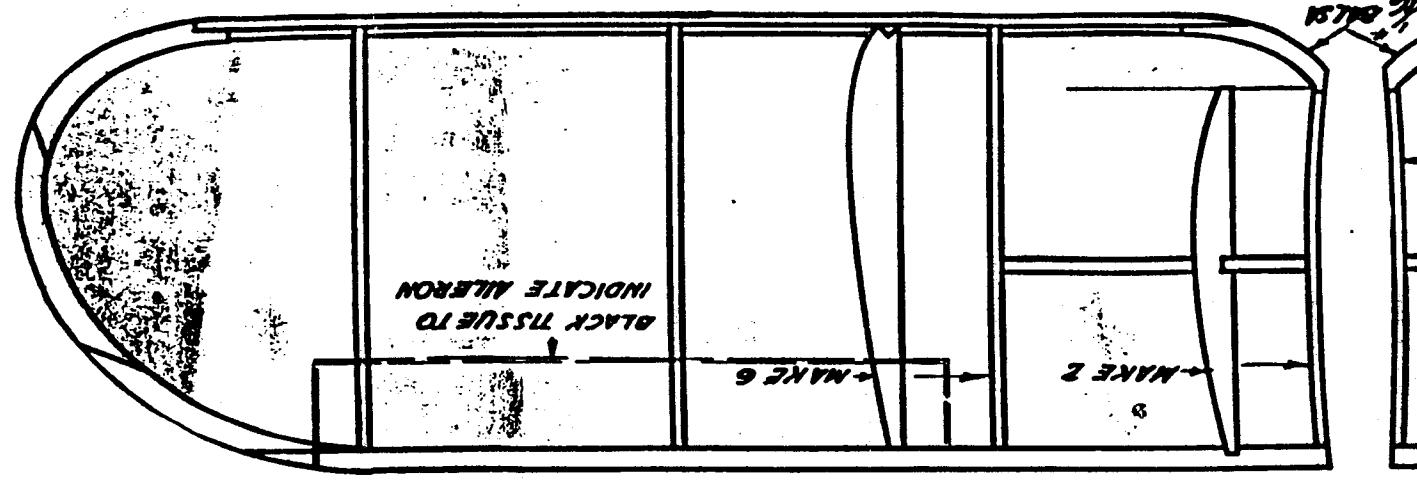
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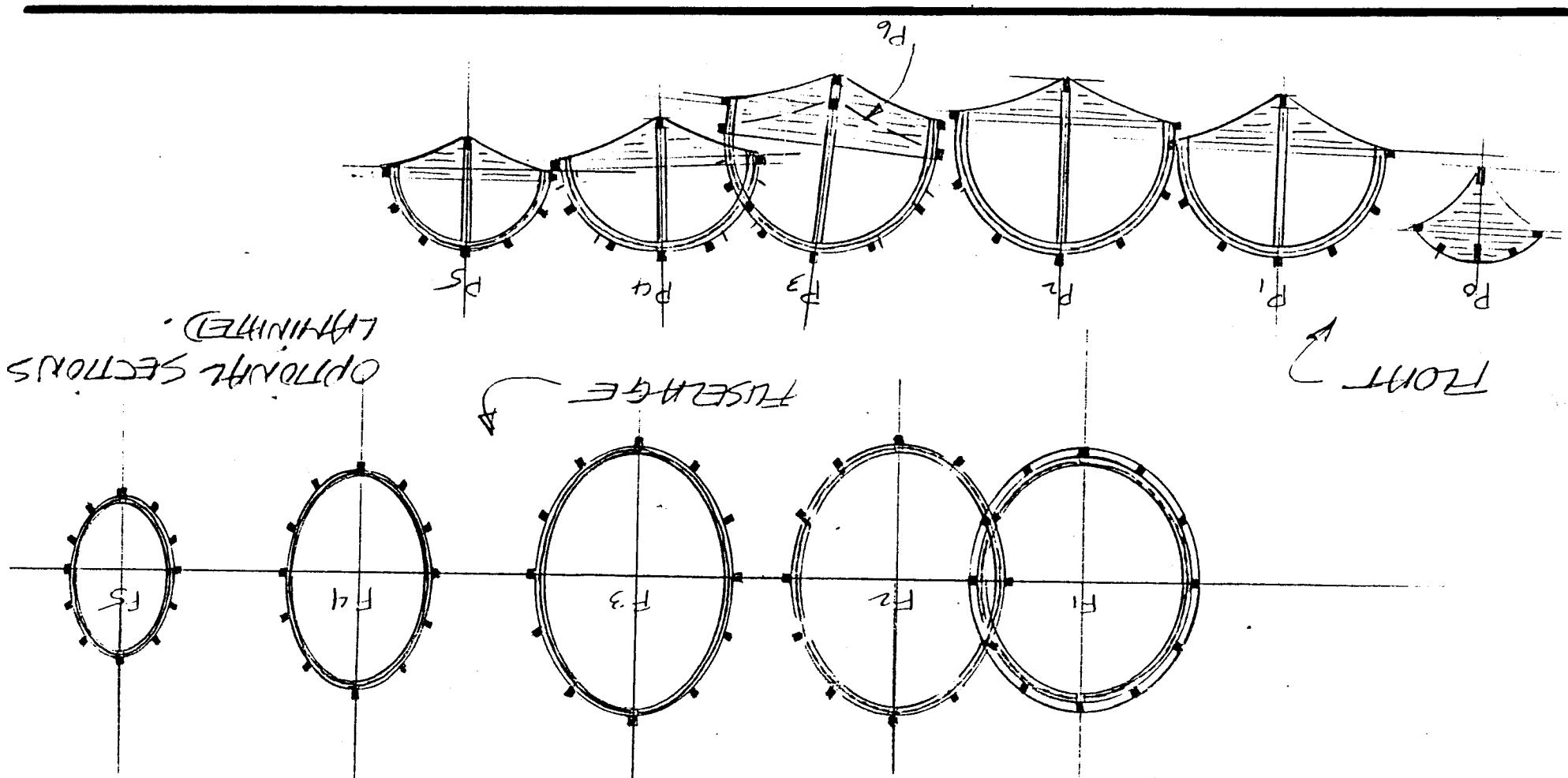
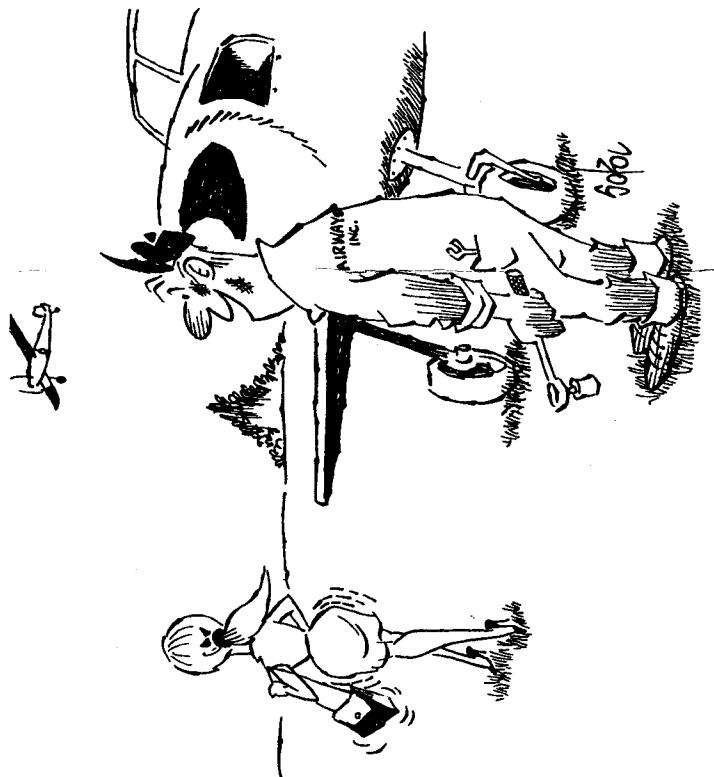
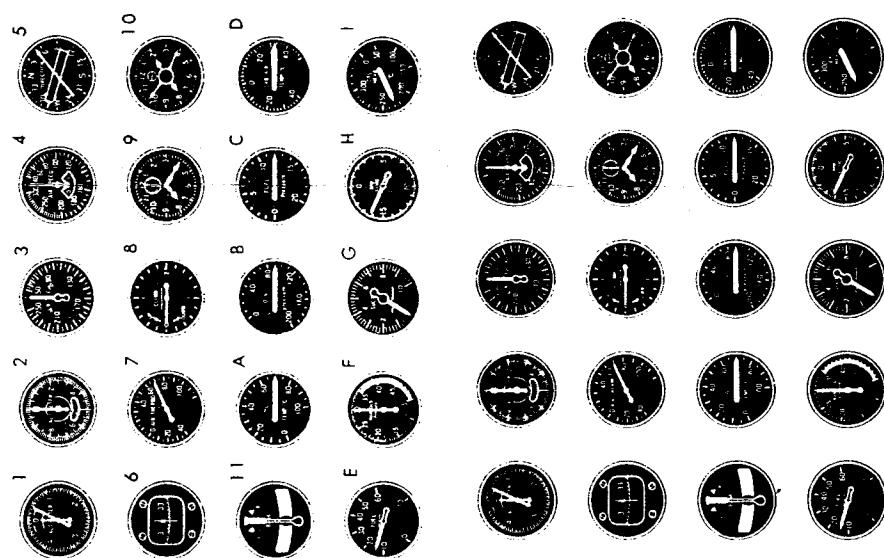
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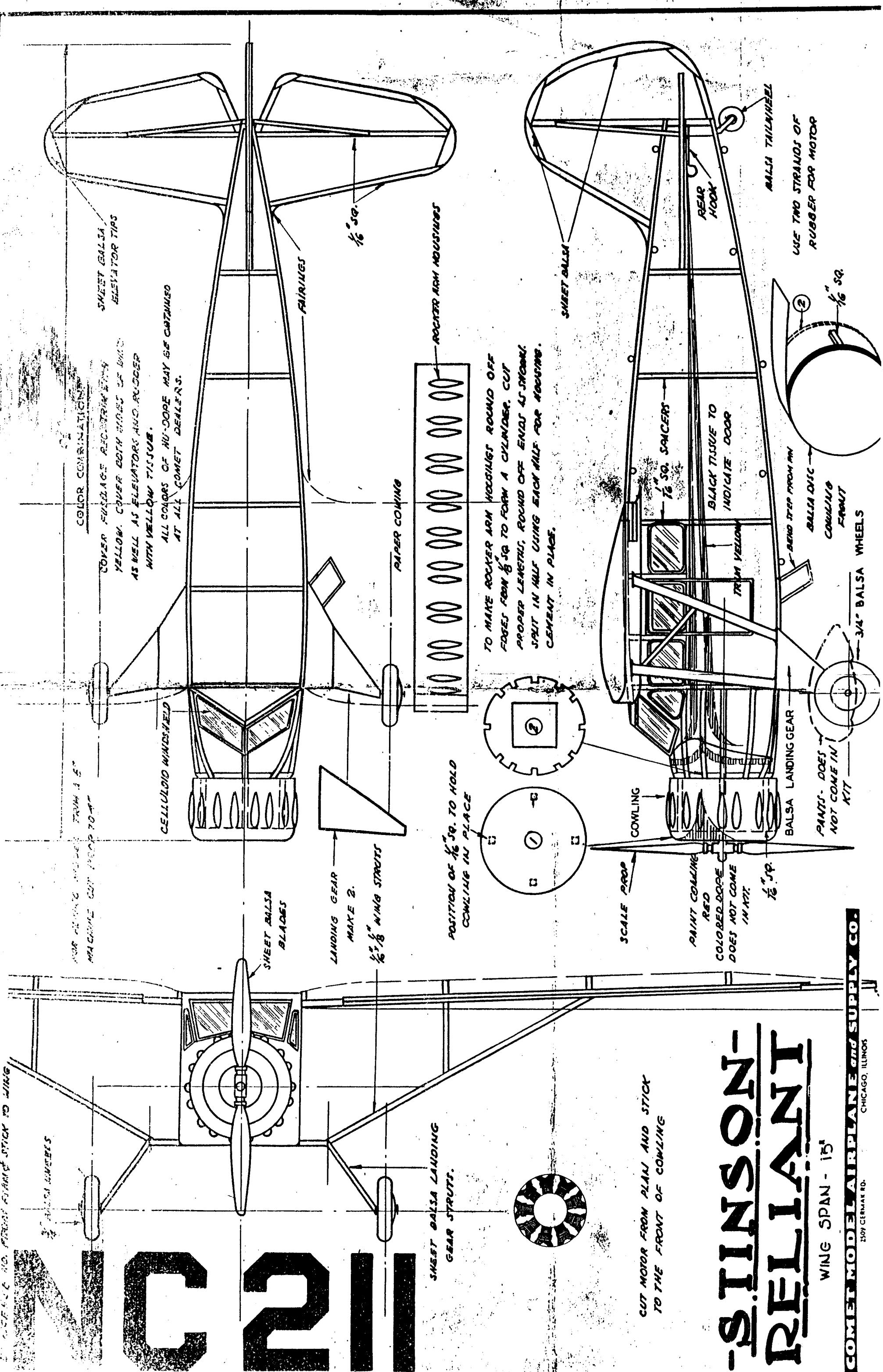
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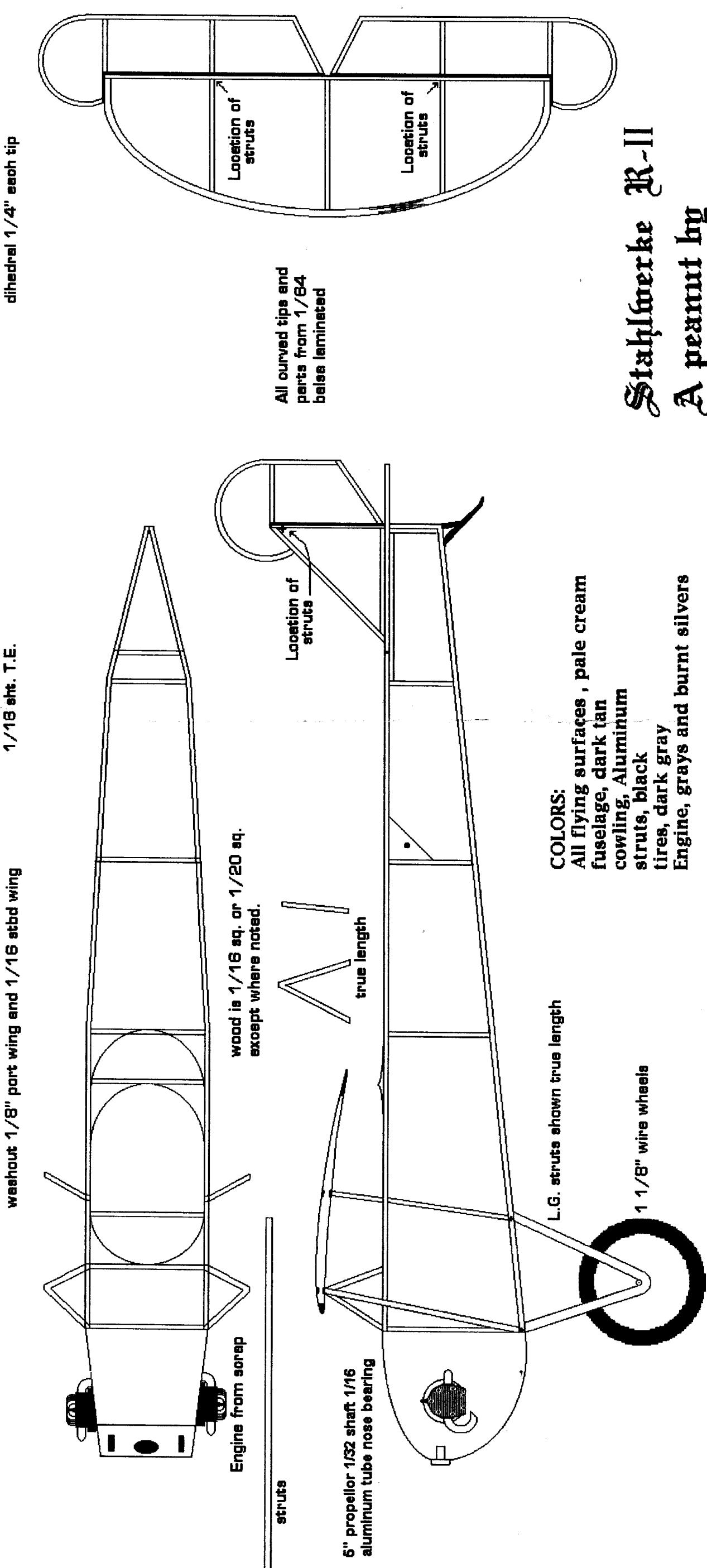
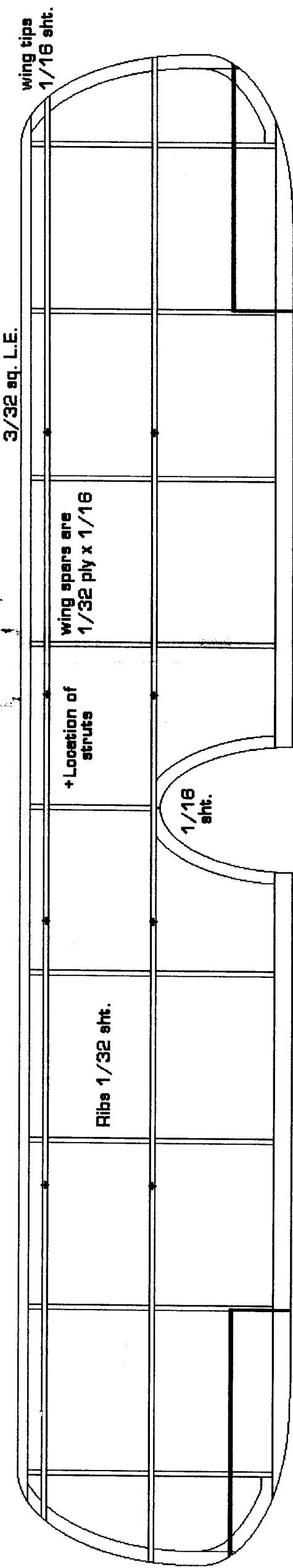
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