ISSUE 104
NOV. 1985
MIAMA. CLUB986

THE HANGAR PILOT

13TH YEAR OF PUBLICATION

MIAMI INDOOR AIRCRAFT MODEL ASSOC. MIAMA

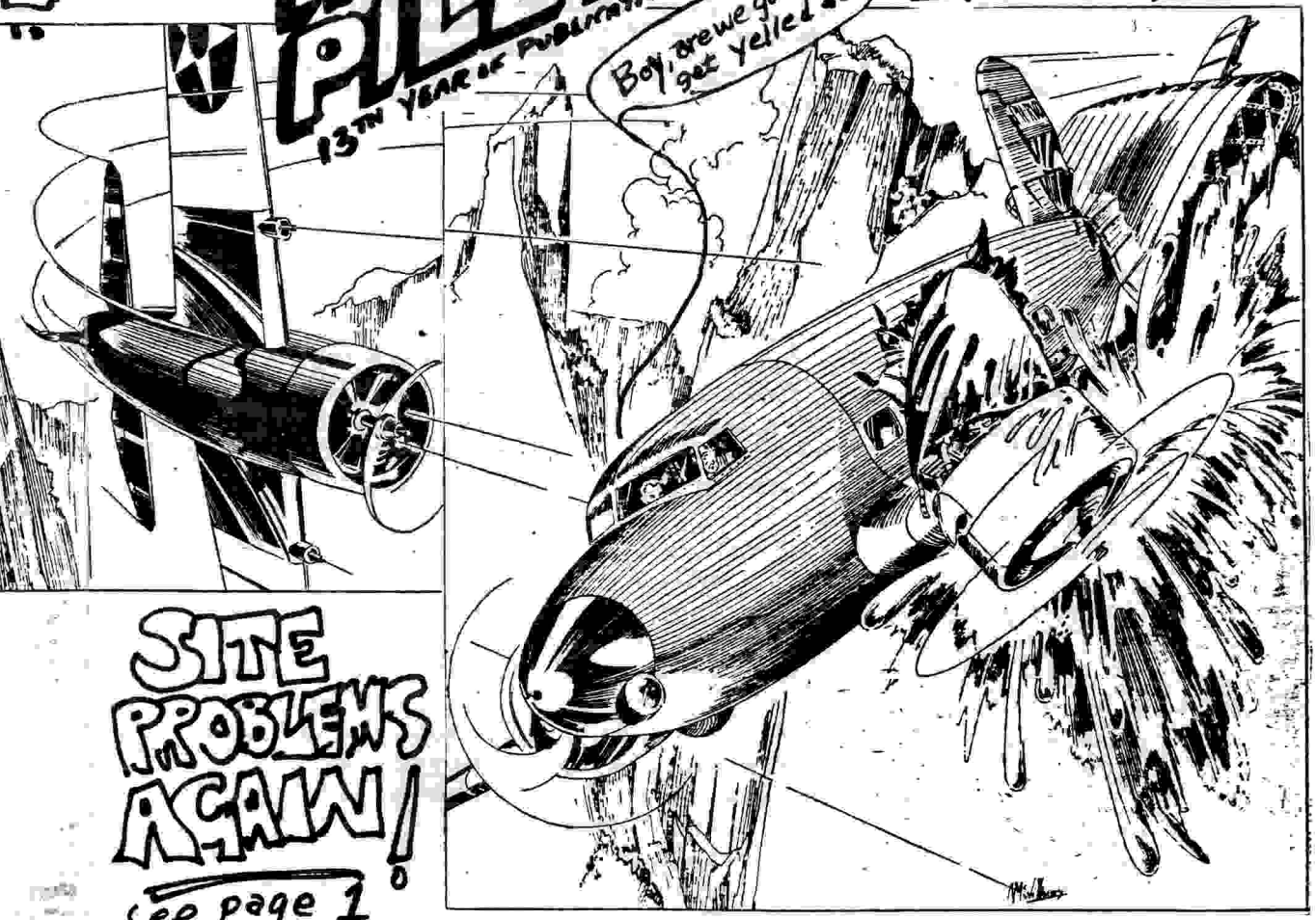
REMARKABLE

INDOOR ISN'T FOR EVERY-ONE!

WHAT'S ON

NOSTALGIA ISSUE

Boy, are we gonna get yelled at!



SITE PROBLEMS AGAIN!

see page 1

Executing a daring renversement, Buzz Benson dived his speeding Brewster full upon the charging Douglas, pressed his heavy-caliber gun trips as he came. That salvo was too much for the renegade transport. Its left wing shivered, then wrenched back with an ear-splitting screech. From the shattered tanks, there fountained a flood of fuel.

COVER BY ALDAN Mc WILLIAMS - FLYING ACES 1937

NEWS

MIAMI DADE S. COLLEGE

NOV. EVENT CANCELLED - CALL 305 858-6363 FOR NOV. EVENT (IF ANY)

"LIKE A LETTER FROM HOME" - WHELAN

(1)



THE HANGAR PILOT

Is published 8 (or 9) times a season for a bunch of middle aged guys who refuse to grow up. MIAMA (Miami Indoor Aircraft Model Association, AMA Club 986, is the only active all indoor free flight club in AMA. Our Motto: "It must be fun.", and "Indoor isn't for everyone." For $10.00 a year you will receive all copies. We solicit your contributions since we are always running out of material. Letters, plans, 3-views, articles, gripes, and Money to: Dr. John Martin Pres./Editor. 2180 Tigertail Ave. Miami, Fla. 33133 USA [illegible] We want to hear from you!!! Send material!!!

SITE PROBLEMS CAUSING MEET PROBLEMS!!! Last year our indoor season was based on four meets in the center of the state so that every one could compete. This year started out like that too, but now we have problems. MacDill hangar #5 is in use, and not available for our meets until further notice. Two years ago we counted 5 meets out of eight that were scheduled, most of them in Dade county. We are not sure, at this time, how the remainder of the indoor season will be completed. On Oct. 20 we flew at Miami/Dade South College. Not even all the Dade LOCALS were there. We can't expect our friends from Tampa area, and even further north to drive all the way to Miami to fly in a 26½ foot high gym after being spoiled by the lovely 61 foot high hangar #5 at MacDill. Only Rick MacEntee is that fanatic! We want to finish the season so all indoor flyers have a chance.

THE GOOD NEWS: There are several prospects of flying atexcellent sites in Jan. of 1986. (1) Goodyear blimp hangar in Pompano Beach. 98 feet high, same as West Baden. OUTSTANDING SITE !! Eight years of flying without problems at Opa Locka have not convinced some Goodyear executives that we would not cause problems for them if we are allowed to fly there. They are worried that other clubs will ask to use the hangar. Nonsense, just tell them that Goodyear has ALWAYS supported model activity since the 1920's.
(2)Cat.I site at Maimi Jai Alai fronton. Smooth ceiling and a good chance for setting national records.
(3) Orlando airport has a maintainance hangar about 55 feet high owned by Delta Airlines. Ellis Oglesby, Tony Becker, and Col Phil Bayly are working in the Tampa area for a good site there. We ask that all Hangar Pilots keep their eyes open for possible sites. Meanwhile, keep flying at home, and at the places listed on the back cover.

We are also looking for a ROW site. An INDOOR POOL with diving tower...a YMCA type enclosed pool with high ceiling for indoor ROW meet...wear your bathing suit. FIND US ONE!

HELP! HELP! HELP! HELP!

MEET 2 OR FLY IN 1 ? (2)

Here are the results of a very sparse turn out at Miami Dade South College on Oct. 2 1985. This is going to be a funny season!

PEANUT EVENT:	Plane	Static Pts.	Flights (2)	Av.	Total
1. John Martin	Polish canard	77.7	78.0 71.4	(74.7)	152.4
2.Mike Arak	Alco Sport	85.8	47.2 48.8	(48.0)	133.8
3.Rick MacEntee	Ganagobie	80.3	41.4 57.8	(49.6)	129.9
X John Martin	Ambrosini207	86.0	48.7 40.0	(44.3)	130.3
4.Millard Wells	Eastbourne	70.0	1:00 59.2	(59.6)	129.6
Wells	Cessna 152	76.0	Did not fly.		

KIT/PLAN SCALE EVENT:	Plane	Static	Fly#1	#2	Total
1.John Martin	Drzewiecki Canard	83.0	65.7	55.9	204.6
X WELLS-BRISTOL BIPLANE - 83.2 - NO FLIGHT					
2.Rick MacEntee	Beach Staggerwing	86.5	38.5	36.0	161.0

GLIDER: 1.Don Bal (31.1)(30.0)

Junior: 1.David Bal (28.1)(28.5)
2.Steven Bal (23.0)(23.3)

Class A ROG: 1.Mike Arak 4:24
2.Walt Everson 3:37
3.Millard Wells 3:36.8
4. John Martin 1:30

RESULTS COMPLETED ON PAGE 16



GOOD BYE TO ROMAN SZYMULA

OUR MANY-TIME STATE INDOOR CHAMPION, AND GOOD FRIEND LOST HIS FIGHT WITH LUNG CANCER ON SAT. OCT 26 1985. HE WAS 53....
HE WILL NOT BE FORGOTTEN!
WE EXTEND OUR SYMPATHY TO GLORIA + HIS THREE FINE CHILDREN + FAMILY



HEY IS THERE AN "X" HERE?

THAT IS BECAUSE YOUR MEMBERSHIP RAN OUT LAST ISSUE AND YOU ARE GETTING THIS ISSUE BECAUSE WE LOVE YOU ♡, AND DO NOT WANT TO LOSE YOUR CHARMING COMPANY. THIS IS A FREE COMPLIMENTARY ISSUE. KINDLY SEND $10.00 TO 2180 TIGERTAIL AVE, MIA. FL 33133 M.I.A.M.A. ALSO INCLUDE COMMENTS, ETC.

AUG. 1937 FLYING ACES

(3)

The Flying Ace Moth

For a neat cabin job which will stay in the air with the best of them, get yourself a load of this F.A. Moth, a ship which is strictly Herb Spatz' own design. His original model has stayed aloft three full minutes. So go to work, modelers, and see if you can put together a duplicate that'll beat Herb's time.

o o o

By Herb Spatz

WELL, fellows, again this month FLYING ACES presents a real winner, both for looks and for all around flying and soaring ability. This model of mine has already flown for three minutes. In addition, the ship is exceedingly simple to construct, so work patiently and you'll have many more hours of enjoyment ahead of you.

FUSELAGE

THE first step is to join Plates 1 and 3 at A-A. The fuselage is constructed of 1/16" sq. medium hard balsa, excepting the longerons and such members as are marked otherwise on the plan. These are 3/32" sq. medium balsa. Make sure that the longerons all have the same degree of hardness, or the body won't be straight. Build both sides and don't use too much glue—just enough to keep the members together. When the sides are made, glue in the top members, the size of which can be obtained by doubling those on the plan. Be sure to get these straight.

Cut formers 1-4 from 1/16" sheet balsa and affix in their respective places. Cement the 1/16" sq. stringers in place and put in the two windshield pieces. Next, take a block of ½" by 1¼" by 1¼" balsa and cut it down to fit the nose. Run a piece of 1/16" O.D. aluminum tubing through it and cement. The rear motor mount pieces of 1/16" by 3/16" are glued into the body as in Plate 3. The crosspiece of 1/16" by ⅛" is cut to fit in the notches between the mount pieces. The rear hook of .028 music wire is looped around the crosspiece and cemented securely. The entire unit is then cemented into place between the mount pieces.

TAIL AND LANDING GEAR

OUR rudder (Plate 3) is composed of 1/16" sq. balsa for the rudder post and ribs. Details are on Plate 3. The stabilizer is built as shown in Plate 2, the rib shape being obtained by sanding the ribs down from the spar as shown in the cross section given on the drawing.

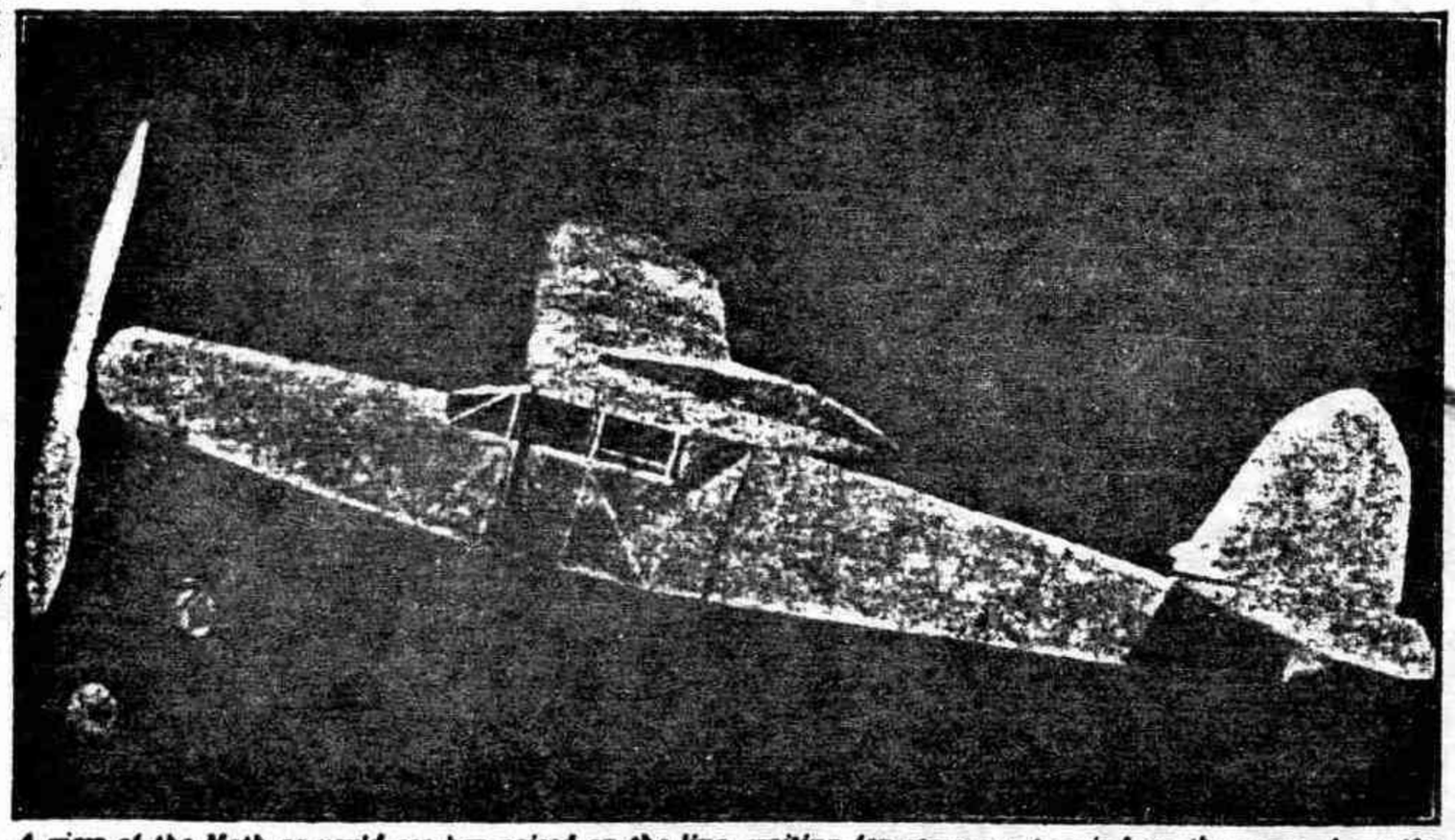
The landing gear is bent from .034 music wire. The front struts are 4½" long. The axle is bent on the front struts. The latter are bound to the body at station 3 and cemented. The rear struts can now be formed. The angle the front struts should have can be obtained by checking with the plans. The rear struts can now be measured from station 4 to the axles, then bound and glued in place. Slip a pair of 1⅜" diameter wheels on the axles and bend the ends back.

MOTOR AND WINGS

THE prop is carved from a block of ¾" by 1⅛" by 8½" balsa. Any measurements desired may be obtained by doubling the dimensions on the plan (Plate 1). Cut away the shaded portions on the plan and carve very carefully. Sandpaper the prop as smooth as possible. A free wheeling device should be used for maximum efficiency, the builder choosing one of his own liking. The prop shaft is bent from .028 wire and slipped through the noseblock after several washers have been slipped on. For power use 4-6 strands of ⅛" flat rubber.

For the wing, join Plates 2 and 3 at P-P. Lay out the leading and trailing edges. Make 14 ribs of 1/16" sheet balsa and put them in the proper places. Cut out the tips and put them in. The side of the wing shown is the right. To make the other side, take a sheet of white paper and place it under the plan. Then take a sheet of carbon paper and place it black-side up under the sheet of paper. Then trace.

Before putting in the spar, crack the leading and trailing edges at the center section (shown on Plate 2). There should be 1½" dihedral at both tips. Glue in the spar. Shape the leading and trailing edges to conform with the airfoil. Sandpaper them smoothly.



A view of the Moth as you'd see her poised on the line, waiting for some one to wind up the prop. A pretty classy looking job, isn't she! From this photo it isn't hard to imagine her soaring away through the air on one of her long flights.

ASSEMBLY AND FLYING

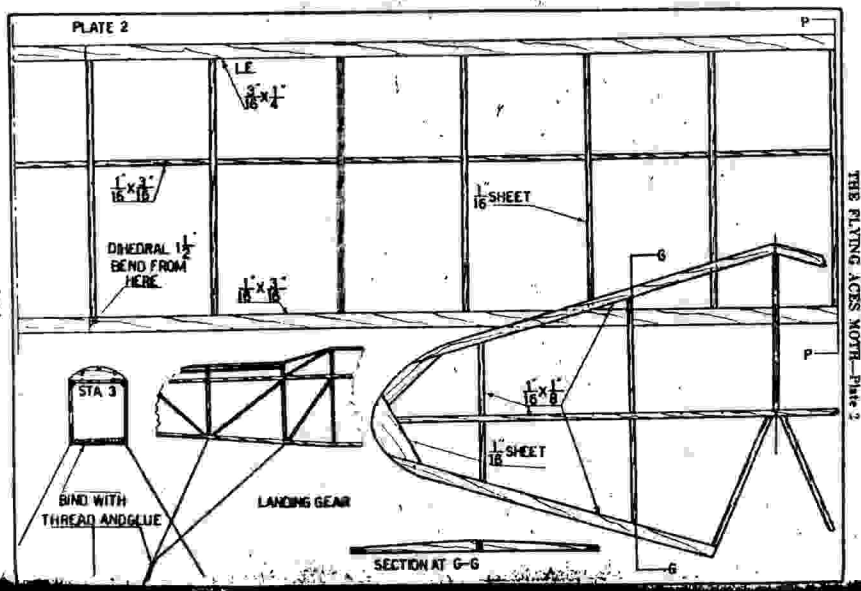
COVER the body and wing in sections. The tail group may be covered in two pieces each. Use dope as the adhesive. Cover the cabin with cellophane. Pin the surfaces down and spray everything with water to shrink the paper. The builder may use his own discretion as to what color he will paint his model. The original was colored yellow and green.

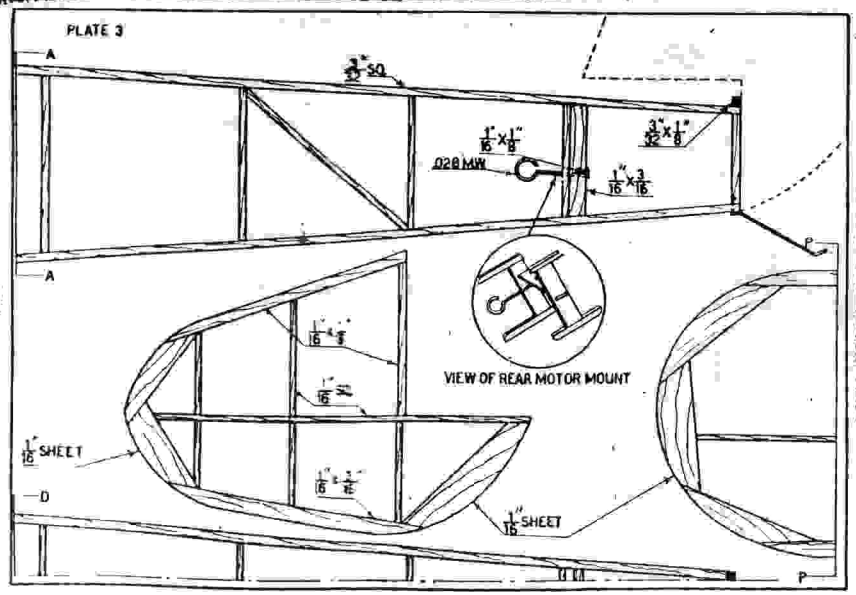
After everything is dry, give the ship two coats of dope. Glue the rudder to the rear of the body, put on the wing and stabilizer with small rubber bands, and place an incidence block beneath the stabilizer

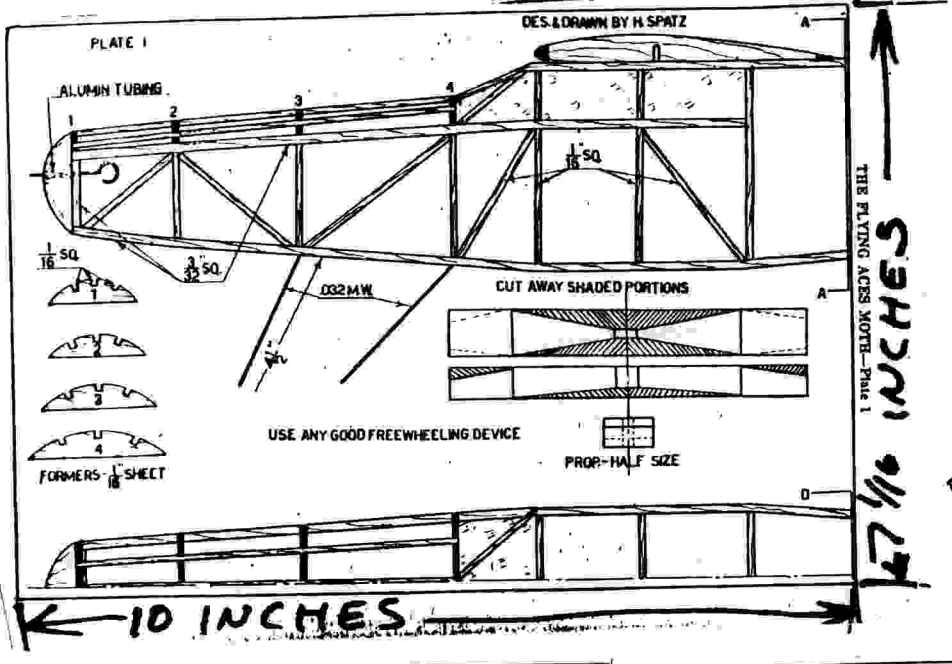
(Continued on page 96)

HERE IS A REAL NOSTALGIA FEATURE. IN MY OPINION THIS MOTH WAS THE MOST POPULAR MODEL PLAN EVER PRESENTED. MANY YEARS LATER THE MAIL WAS STILL FULL OF REFERENCES TO IT. OTHER MODELS IN ITS CLASS - ① BABY R.O.G. ② GOLDBERG'S CLIPPER & ZIPPER ④ ③ EHLING'S DELTA DART ④ KORDA'S WAKEFIELD. ANY ONE ELSE WANT TO COMMENT? THE ORIGINAL MOTH HAD A 25" SPAN SO SCALE THESE PLANS ACCORDINGLY. PROP CARVED FROM A BLOCK 3/4" x 1 1/8" x 8 1/2" "FREEWHEELING." POWER - 4 TO 6 STRANDS OF 1/8". IT WOULD MAKE A GOOD P-30, OR EVEN A FINE PISTACHIO "MODEL OF A MODEL" AT 8 INCH SPAN. ALSO A SAM CONTESTANT. LET US KNOW IF YOURS FLIES AS WELL AS ALL THE PAST COMMENTS TO FAM. THE MOTH CAN ALSO BE SCALED TO A FINE EMBRYO ENDURO.

EFF-AAY-CEE!

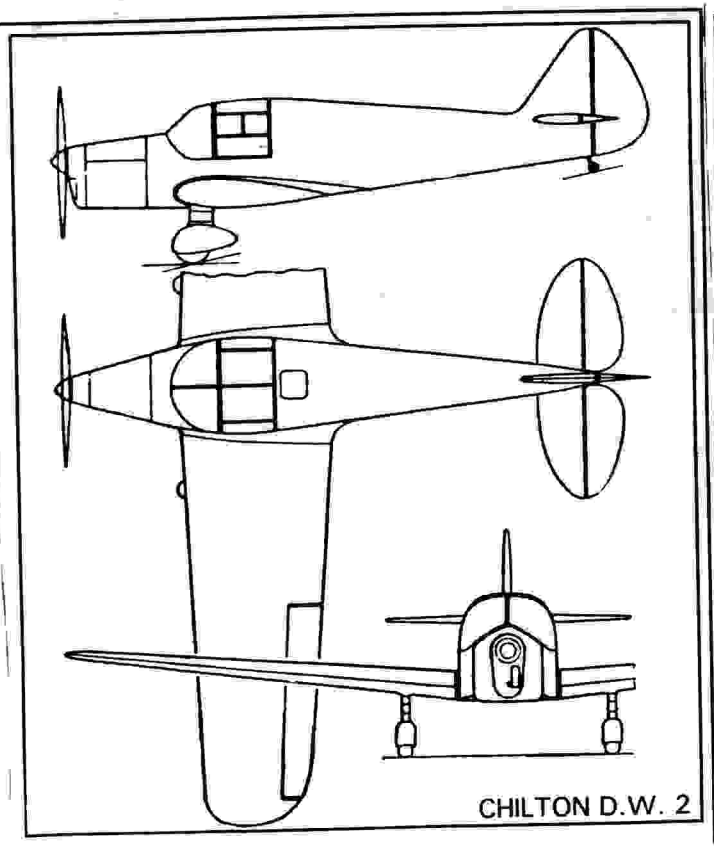






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Ages are as of July 1 of the current year. Please circle applicable fees.

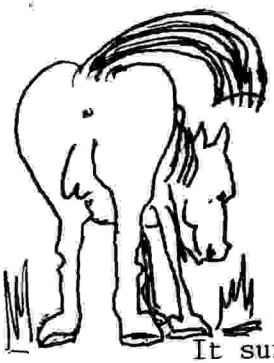
New member **Renewal** **Address change**

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FROM THE HORSES MOUTH!

AND OTHER ORIFICES : By S. Fox

CALLING ALL LOCAL MODELERS ..WE NEED YOUR HELP. Here is a first. We invite you to come to Homestead Air Base to a fly-in on Sun. Jan.26 1986 from 9 to 5. The Base Gym there is Cat.I 23 feet 3 inches with a relatively clear ceiling. It surely is no reason to drive many miles to Homestead for "just another gym". BUT there may be a possibility of a "MacDill Type" hangar available to us if we get some recognition there. The purpose of this fly in is to give a demonstration to the kids of the post DYA youth club..Maybe some new juniors? So we ask you to bring out all your planes to demonstrate to the kids from 1 to 2.. Build a WWIIpeanut for a mass launch at this time.. always a crowd pleaser. Also a mass launch R.O.G. event.Any unusual stuff is also welcome..autogiro,ornithopter, etc. We hope that this demo will lead to bigger and better things there.

This may be rude, but how come the U.S. team wins F1-D time after time, and we finished 17th in A-2 Glider, 3rd in F1-C power, and a snappy 11th in Wakefield. Thank goodness for indoor,guys.

*Jim Stewart is still recovering from a series of operations. At least he is getting a little building time at home. Get better,Jim.

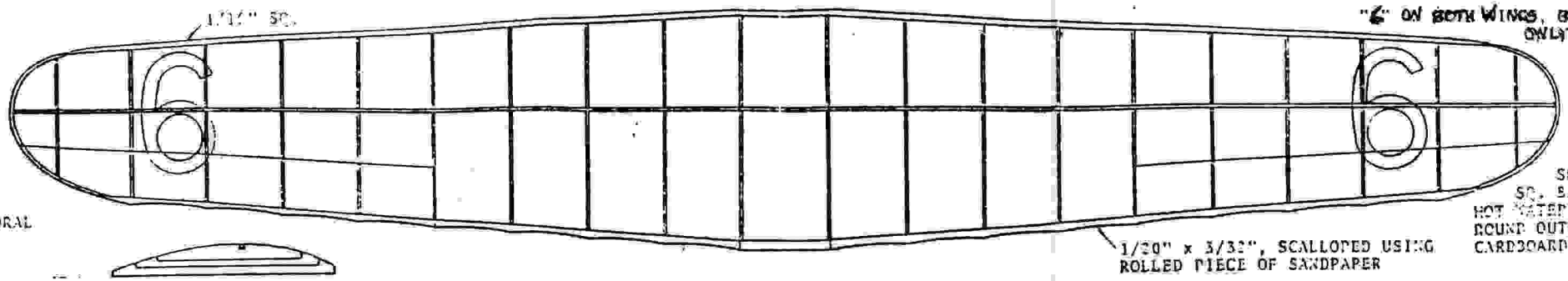
FAC FIASCO: Doc went all the way back to Philly for his high school class reunion.(Don't ask which one). Lucky me! The reunion date corresponded with a Flying Aces meet Sept. 29 at Warminster,Pa.! So I put Butch Hadland's Hughes Racer and my Ambrosisi207 in the box in anticipation of flying fun the day after the reunion. The sad thing is I didn't get to fly. I was the victim of the OTHER God "Hung". I was up to 4 AM reminiscing with my old buddies, and dragged myself out of bed about noon. Then I got lost on the way to Warminster.. Not exactly a household word like Miami. I got to the meet as the awards were being passed out. I put up one flight each with models that had traveled thousands of miles. At least I got in a little socializing with Doug Barber,Geo.Meyers, Bob Leishman. and others in the Phila. area. Darn that God HUNG!



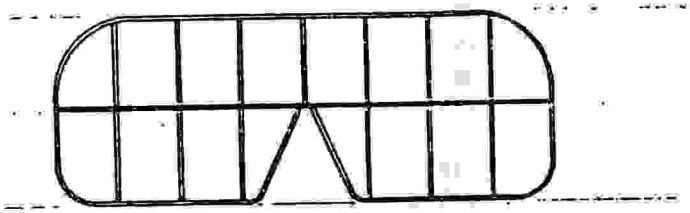
ANOTHER SAD ANNOUNCEMENT: WE JUST HEARD THAT JIM STEWART DIED TUE. NOV. 5 AFTER A SERIES OF OPERATIONS TO CORRECT BLOOD CLOTS. HE WAS 42. SO LONG, JIM, YOU'LL BE MISSED!!

(1)

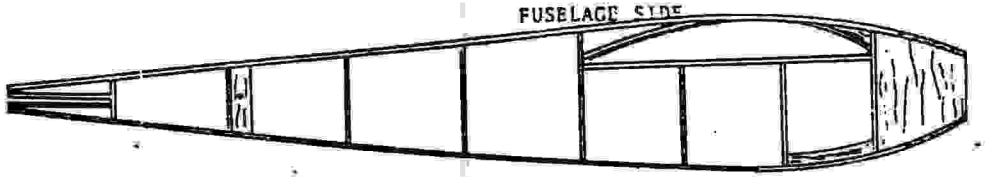
OUR LYMPNE SPONSOR
A 'MUST' FOR ALL SCALERS



TYPICAL WING RIBS: 1/50".



STABILIZER: 1/32" SQ.



1/20" SHEETING TOP, SIDES, AND BOTTOM OF NOSE

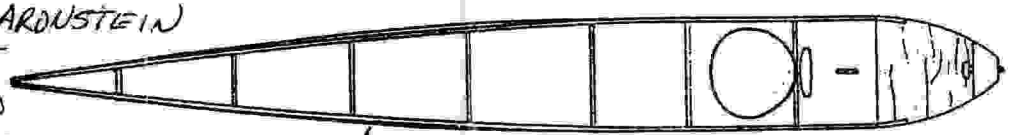
USE 1/20" SQUARE AND 1/32" SHEET UNLESS INDICATED

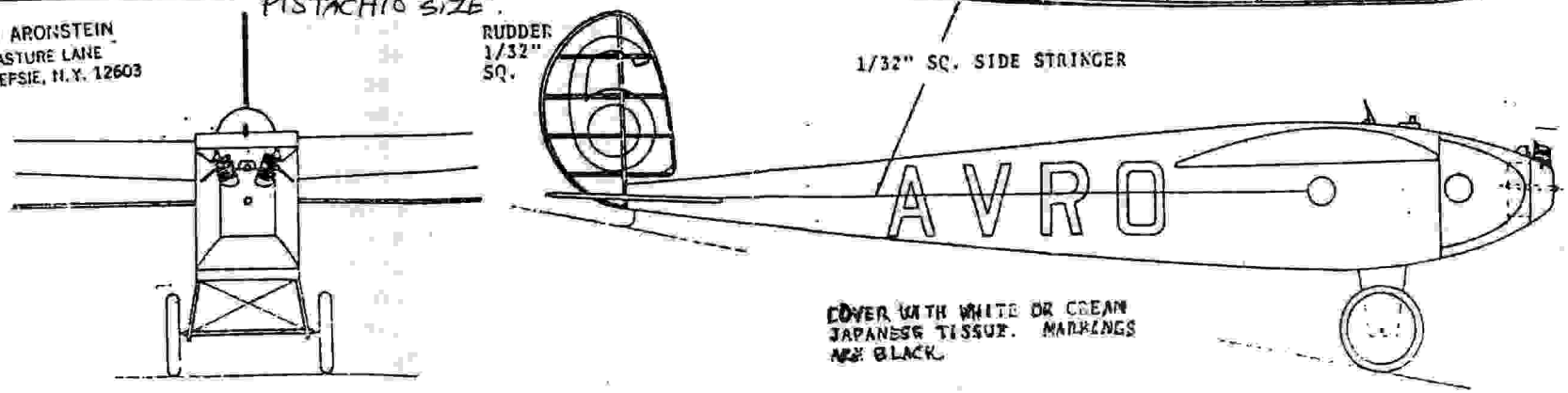
SUBMITTED TO HANGAR PILOT BY DAVE ARONSTEIN

AVRO 560
LONG INDOOR
©1985 DAVID ARONSTEIN

IT IS A PEANUT LYMPNE AIRCRAFT WE REDUCED TO PISTACHIO SIZE.

DAVID ARONSTEIN
50 PASTURE LANE
POUGHKEEPSIE, N.Y. 12603





SPECIAL: LYMPNE AIRCRAFT 3-VIEWS
COMING NEXT ISSUE OF HANGAR PILOT



ANNOUNCING:

BUTCH HADLAND'S PROXY MODEL PLANE CONTEST

THE 1986 LYMPNE TRIALS

(8)

FOR MODEL AIRCRAFT BETWEEN ½" & 1" TO THE FOOT, POWERED BY EITHER RUBBER OR CO_2.

ALL TRIALS 1924, 25 & 26 AIRCRAFT ARE ELIGIBLE & THE 3 VIEWS & COLOUR DESCRIPTIONS AS DESCRIBED IN 'AEROPLANE MONTHLY' ARE ACCEPTABLE FOR DOCUMENTATION.

THE CONTEST WILL TAKE PLACE IN SEPTEMBER 1986 & THEREAFTER ANNUALLY. THE VENUE WILL BE EITHER OLD WARDEN OR CARDINGTON. OR WATFORD LEISURE CENTRE.

MIAMA TYPE RULES WILL BE UTILISED WITH, (IF INDOORS) A PRECISION * ELEMENT TO ADD TO THE SCALE & FLYING SECTIONS. MODELS MAY BE HAND LAUNCHED OR IF R.O.G'd, THE 10 SEC. BONUS WILL OPERATE.

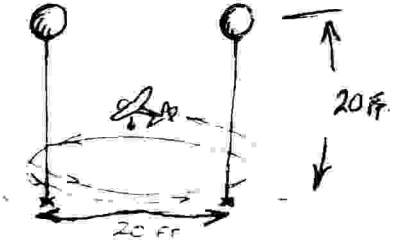
IT IS ANTICIPATED THAT A TROPHY WILL BE AWARDED, TO BE HELD FOR ONE YEAR, & THAT SUBSTANTIAL PRIZES WILL BE DONATED. THERE WILL BE A MIAMA TROPHY TOO.

(WE ASK OTHER CLUBS & COLUMNS TO COPY)

ALL PROSPECTIVE ENTRANTS ARE ASKED TO DIG OUT ALL THEIR 'AEROPLANE MONTHLYS', SELECT THEIR FAVOURITE LYMPNE TRIALS AIRCRAFT & START BUILDING. SEPTEMBER 1986 WILL ARRIVE SOONER THAN YOU THINK!

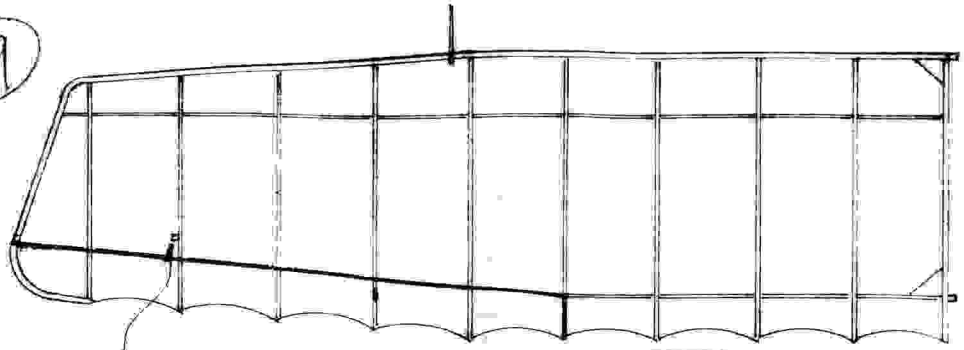
Butch Hadland

* 2 LAPS AROUND THE BALLOONS - TIMED - FOR 3RD ELEMENT - HAND LAUNCHED OR R.O.G.

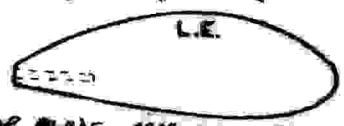


BUTCH HADLAND
26 TITHE BARN DRIVE,
WINDSOR RD., BRAY,
BERKS. SL6 2DG.

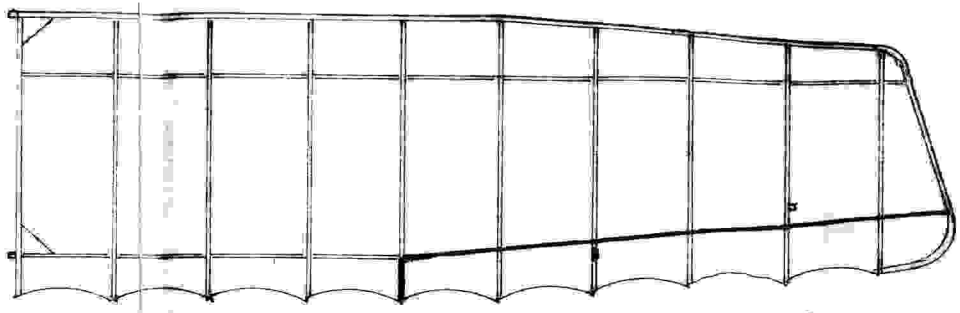
TEL. WINDSOR 855359 OFFICE
0628-72402 HOME



SKID MOUNTING POSITION



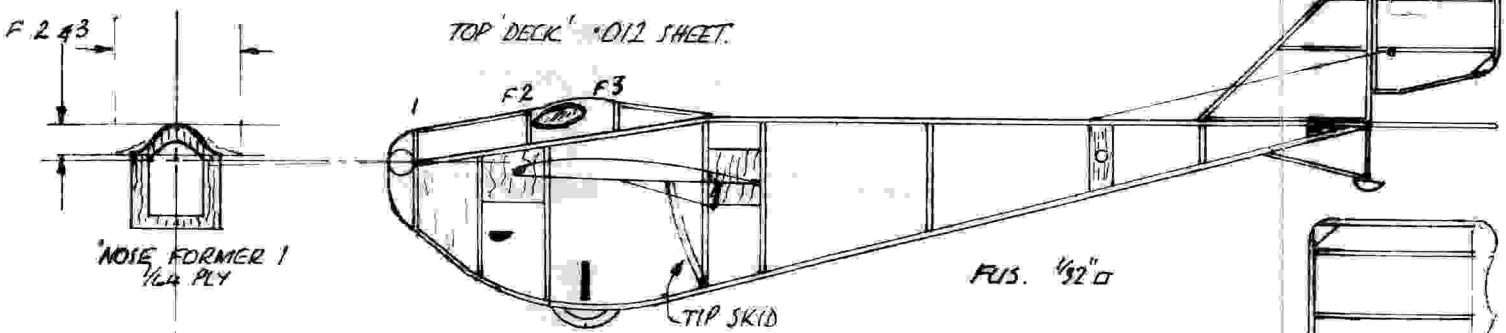
PROP BLADE .020" SHEET. ROBH AEROLAND (15")
2" DIA. JAR — DIA OF PROP. 3½"-3⅝" | PITCH ANGLE 30° AT 1" RADIUS.



WING LE & TIP LAMINATED 2 x 1/64" x 1/32"
SPARS .024" □. NO T.E!

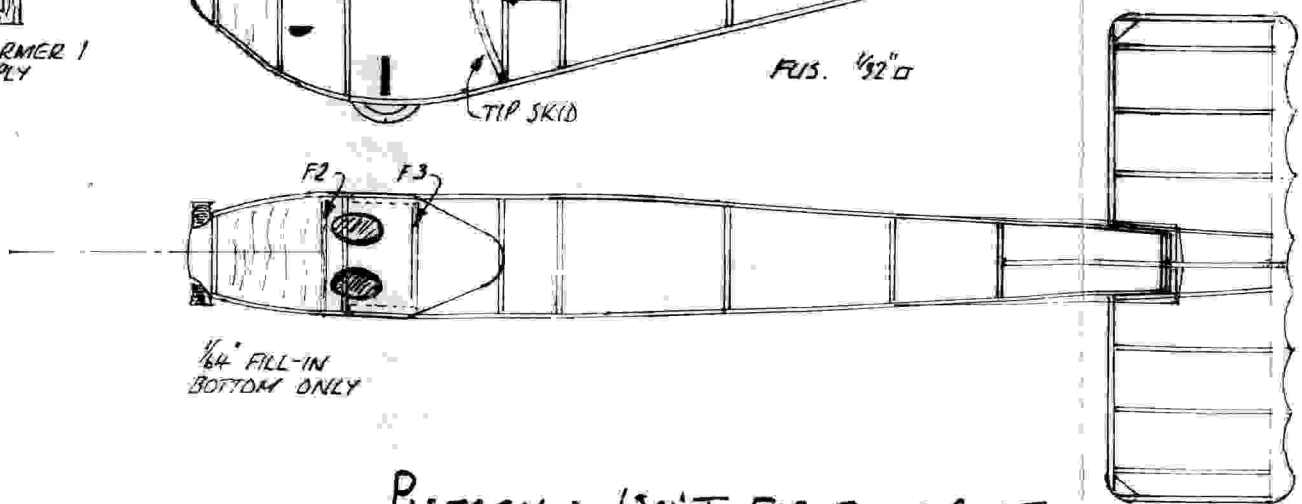
3/8° DIHEDRAL

REF. AEROPLANE MONTHLY MARCH 85





TYPICAL RIB .020" 'E' GRAIN



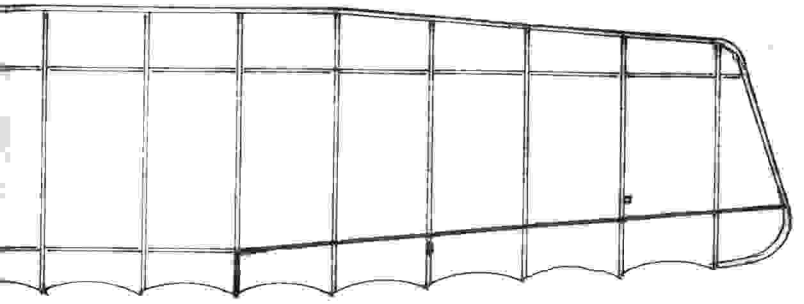
FIN & STAB.
1/32" □ SANDED.
TE 1/8" x 1/32" LIGHT

PISTACHIO ISN'T FOR EVERYONE

HANDLEY-PAGE SAYERS MONOPLANE

GRAPENUT TO 6" LENGTH RULE.

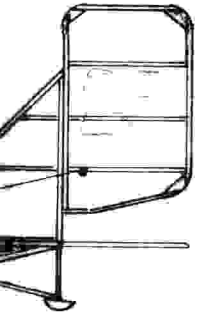
by Butch Hadland



TIP LAMINATED 2x 1/64x 1/32"
4" □. NO T.E!

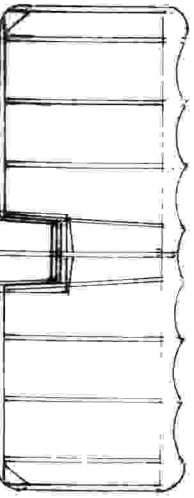
3/8° DIHEDRAL

REF. AEROPLANE MONTHLY MARCH 85





TYPICAL RIB .020"C' GRAIN



FIN & STAB.
1/32" □ SANDED.

TE 1/8"x 1/32" LIGHT

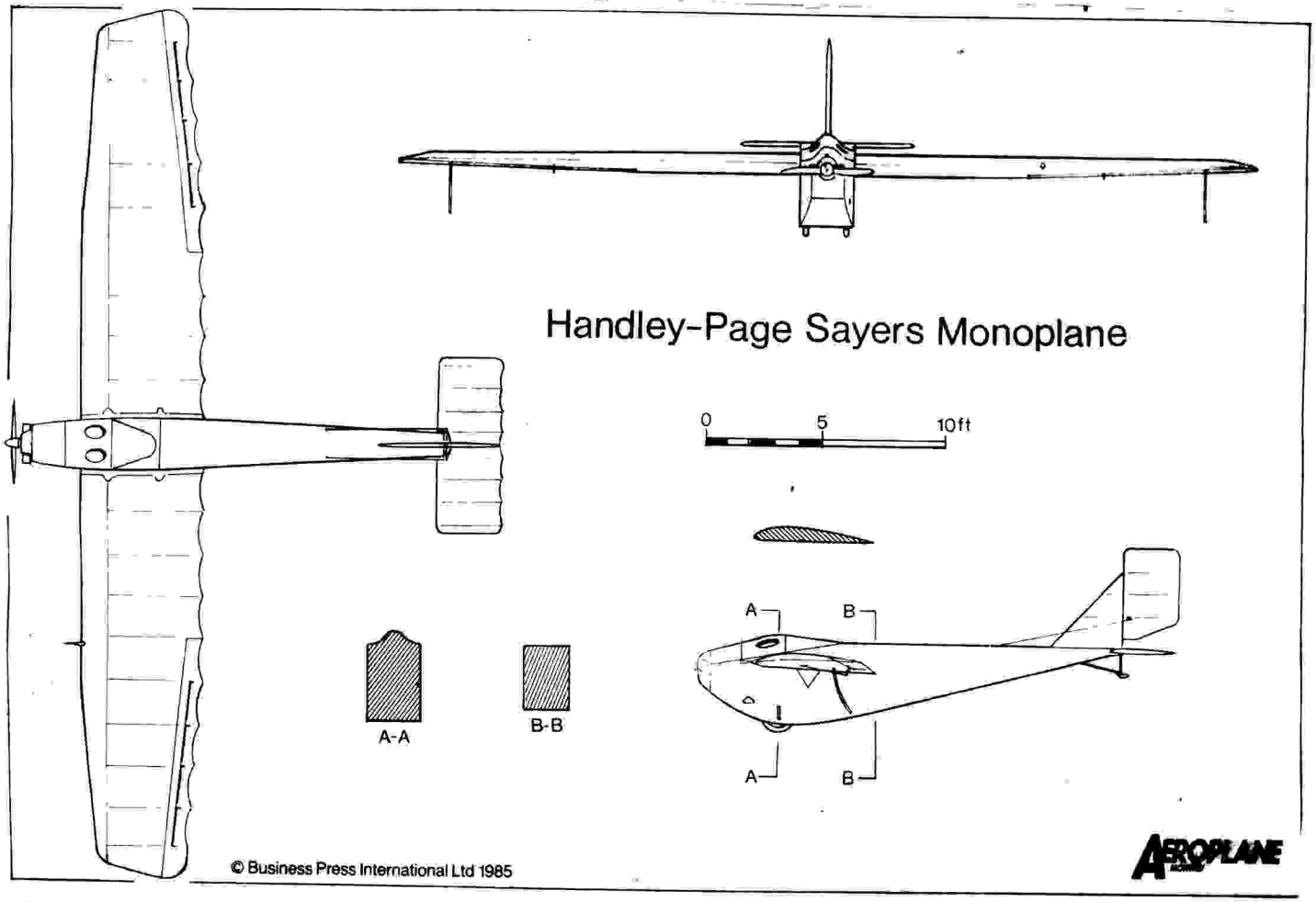
HANDLEY-PAGE SAYERS MONOPLANE

GRAPENUT TO 6" LENGTH RULE

by Butch Hadland

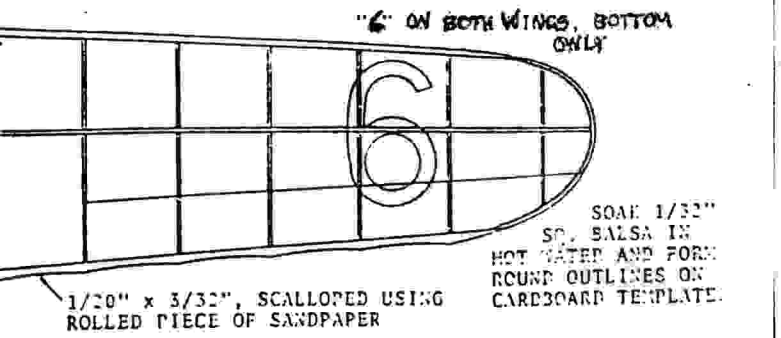


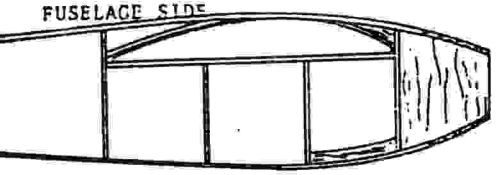
Left, *looking as though it is pitotless the H.P. Sayers No 25 is in fact being flown by Gordon Olley at Lympne on October 11, 1923.* **Right,** *the H.P.-Sayers No 23 seen during abortive bungee-assisted take-off attempts at Cricklewood early in 1923.*



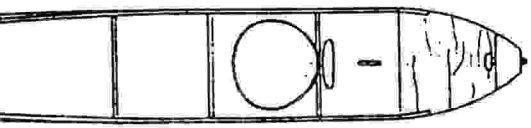
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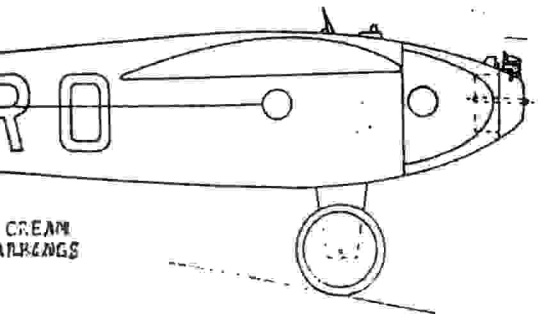




ARE AND 1/32" SHEET
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AEROPLANE MONTHLY

12

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AN HISTORIC DOCUMENT CONTRIBUTED BY TONY BECKER - PHILADELPHIA PENNA. 1931

(13)

Directions for Making a Baby "R. O. G."

Reprinted from *The Evening Bulletin*

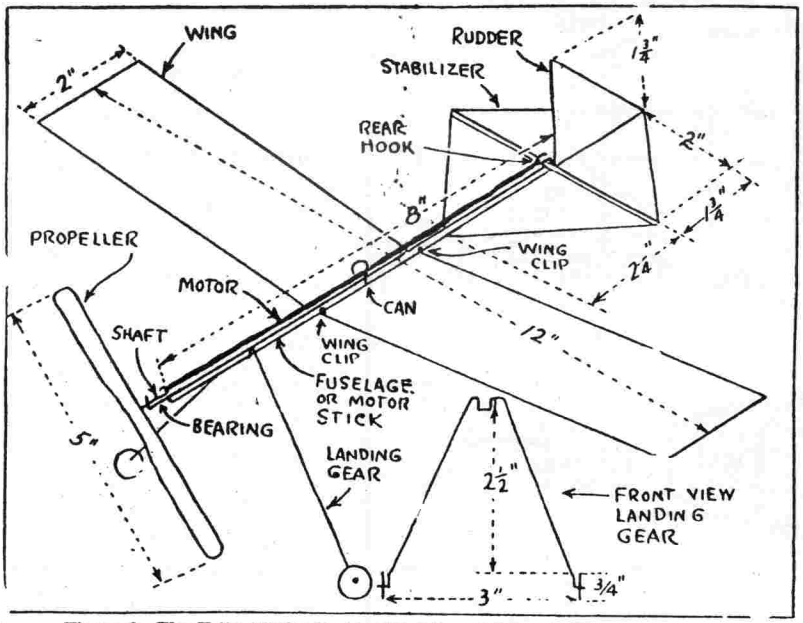


Figure 1—The Fritz "Baby R. O. G." (rise off ground) Tractor Monoplane.

THESE materials are needed to build this "Baby R. O. G." (rise off ground) tractor monoplane, which is an easy model for boys and girls to make in preparing to enter the contests of the Philadelphia Model Aeroplane Association.

1 fuselage, balsa, 1-16 x ⅛ x 8 inches.
2 wing spars, balsa, 1-32x 3-32 x 12 3-16 inches.
1 propeller, balsa, ⅜ x ½ x 5 inches.
2 wheels, balsa, 1-32 x ¾ inch diameter.
4 hubs, balsa, 1-32 x 3-16 x ¾ inch.
5 wing ribs, bamboo, 1-32x1-32x2 ins.
2 rudders, bamboo, 1-32 x 1-32 x 1¾ in.
1 stabilizer, bamboo, 1-32 x 1-32 x 4 in.
1 thrust bearing, steel, ½-inch brad.
2 washers, glass or metal, bead or spangle.
1 covering, Japanese tissue, 7 x 12½ in.
1 empennage, silk thread, No. 50 or finer.
1 motor, rubber, .045 square, 16 inches long.
2 drams cement and two drams banana oil for assembly
1 propeller shaft, piano wire, .016.
2 wing clips, piano wire, .016.
1 landing gear, piano wire, .016.
1 can, piano wire, .014.
1 S-hook, piano wire, .014.
1 rear hook, piano wire, .014.



Victor R. Fritz

There are twenty-five steps in making the "ship."

1. Be certain that you understand the entire drawing (Figure 1) before starting.

2. Cut a strip of balsa for the fuselage.

3. Sand it with No. 00 sandpaper to the desired shape, and taper at both ends, as shown in Figure 2.

Figure 2—Fuselage

4. Shape the thrust bearing from

BACK IN 1931 THE A.M.L.A. HAD OVER 400,000 MEMBERS - AND ALMOST ALL WERE TEEN AGED!

PROBABLY MORE BABY ROG'S WERE BUILT THAN ANY OTHER MODEL. ALL THOSE KIDS ARE NOW IN THEIR 60'S!



Fig. 3—Bearing

a ½ or ¾ inch brad with a hammer and piece of iron, bore hole for propeller shaft with centre punch and drill, and bend as shown in Figure 3.

5 Place a drop of cement on the top side front end of the fuselage. Place the thrust bearing so that it just clears the end of the fuselage and tie in



Fig. 4—Bearing on Fuselage

place with two strands of silk at the front and the rear. This silk thread is cemented to the fuselage. (Figure 4).

6. Shape the rear hook (Figure 5,A) from .016 or .014 piano wire. Cut out the rear end of the fuselage to receive the stabilizer and rudder, as shown at B, or it may be left square as at C.

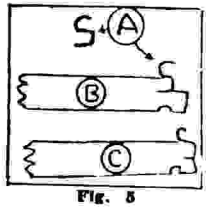


Fig. 5

7. Cement the rear hook in place.

8. Shape the can from .016 or .014 piano wire.

9. Cement the can (Figure 6) to the

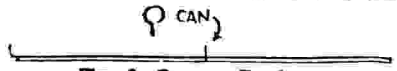


Fig. 6—Can on Fuselage

centre of the fuselage.

10. Split two pieces of bamboo 1-32 by 1-32 by 1¾ inches for the rudder.

11. Cement the two pieces of bamboo onto the rear end of the motor stick, one perpendicular, and the other horizontal a few degrees to the left of parallel with the motor stick (Fig. 7).

When fastening the rudder pieces to the motor stick, sharpen the ends of the bamboo and stick sharp end into the balsa, then cement.

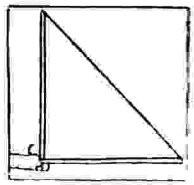


Fig. 7—Rudder

12. For the stabilizer split a piece of bamboo 1-32 by 1-32 by four inches and cement to the bottom of the fuselage directly beneath the vertical rudder member. Lay off a point 2¼ inches from the rear end of the fuselage (at A in Figure 8). Tie a piece of fine silk thread

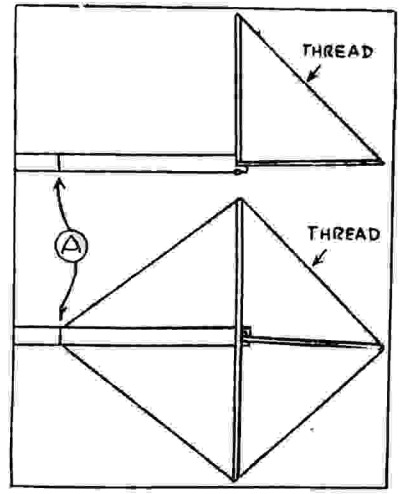


Fig. 8—Thread Outlines of Rudder (above) and Stabilizer (below)

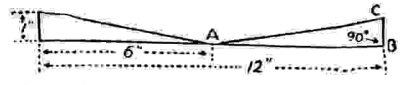
at this point and make a thread outline. Also connect the two outer ends of the rudder with the same silk.

13. Cover the right side of the rudder with Japanese tissue. Be sure there are no wrinkles in the tissue; if there are, iron them out and let the tissue cool. Cut a piece of tissue 1-4 inch larger than required. Paint the bamboo and thread with banana oil or bronzing liquid and then place the tissue, allowing the paper to project past the sides and at the same time keeping it taut. Trim off the extra tissue and paint the edges of the tissue with banana oil. This will fasten the rudder covering securely.

14. Cover the tail or stabilizer in the same manner.

15. Calculate the length of the wing spars.

(An easy method for finding the length of the wing spars is to lay out the triangle accurately, full size, and measure the hypotenuse.



Lay off a straight line A-B, six inches long, and at one end erect a perpendicular

VICTOR FRITZ WAS TO THE PHILA. MODEL AIRPLANE ASSOC. WHAT MERRILL HAMBURG WAS TO A.M.L.A. WE WHO LIVED IN PHILA. FRED MEGOW, BILL BROWN, MAXWELL BASSET ET. AL READ HIS MATERIAL IN THE BULLETIN EVERY SATURDAY (+ BUCK ROGERS

line B-C, one inch long. Connect the ends of those two lines, A-C, and form a right angle triangle. The length A-C is the length of the wing spars, which is the length of the hypotenuse of a right angle triangle having a base of six inches and an altitude of one inch. Calculate the length of the hypotenuse.

$$\text{line } AC^2 = AB^2 + BC^2$$
$$= 6^2 + 1^2$$
$$= 36 + 1$$
$$= 37$$

The square root of 37 is 6.08 plus, or about 6 3-32 inches, which is the length of AC.

To insure the same dihedral angle on both the leading edge and the trailing edge, cut them together in one piece twice the width of one wing spar. Find the centre and cut half way through with a razor blade (Figure 9).

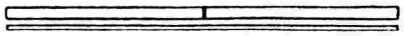


Fig. 9—Wing Spar

Place a drop of cement in the cut and bend, forming the dihedral angle. Place one half of the wing spars on a flat surface holding it stationary with a weight of some kind. Block the other half of the wing spars so that the end is 2 inches above the flat surface (Figure 10).

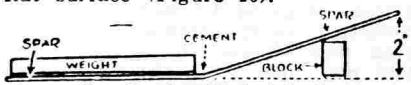


Fig. 10—The Dihedral Angle

16. Cut the wing spar strip down the centre, forming two wing spars (Figure 11).

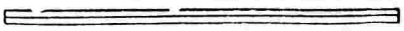


Fig. 11—Cutting the Spars

Split five ribs of bamboo 1-32 by 1-32 by 2 inches. Cement them at equal intervals to the spars. The ends of the bamboo ribs can be pointed and inserted into the balsa or they can be butted and cemented in place (Figure 12).

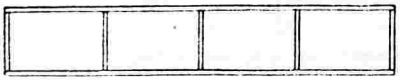


Fig. 12—Forming the Wing

Cover the top of the wing in the same manner that you covered the empennage (tail surface), starting at the centre rib, tip ribs and then the spars.

17. Shape the wing clips (Figure 13) from .016 piano wire.

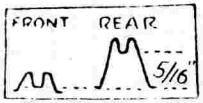


Fig. 13—Wing Clips

18. Cement the small wing clip to the leading edge, and the large wing clip to the trailing edge.

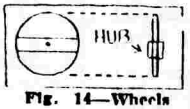


Fig. 14—Wheels

19. Construct the landing gear from .016 piano wire. For shape see main drawing (Figure 1). The wheels (Figure 14) can be made from thin stiff card board or balsa wood.

All metal fittings as wing clips and landing gear must fit the fuselage tightly.

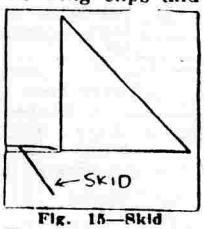


Fig. 15—Skid

The skid is a piece of bamboo 1-32 by 1-16 by 1 inch, which is cemented to the rear of the motor stick, as shown in Figure 15.

20. Place the landing gear, which may be either stationary or removable.

21. Carve the propeller as explained in the next lesson in this book.

22. Bend the propeller shaft (A in Figure 16) from .016 wire.

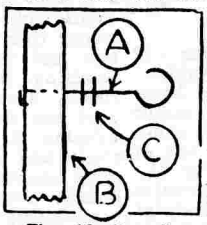


Fig. 16—Propeller Assembly

23. Cement the propeller shaft (A) to the propeller hub (B) so that the propeller will screw in the air. Put on washers (C).

24.—Bend "S" hook (A in Figure 17) from .016 or .014 piano wire.

25. Measure the distance between the propeller shaft hook and the rear hook. Cut a piece of rubber (.045 square) ¼ inch greater than twice that length and tie the ends together. Fasten the "S" hook to the rubber motor (B) where it is tied by bending one hook closed. Use something like thin tubing (C) to prevent the wire

HELP PROMOTE INDOOR - PARTICIPATE IN MIAMA FLY IN + DEMONSTRATION TO THE YOUTH GROUP AT HOMESTEAD AIR BASE

SEE "HORSES" ARTICLE PAGE 6

"S" hook and propeller shaft hook from cutting the rubber motor. Thin rubber tubing is excellent.

Place the propeller shaft through the bearing and attach the rubber motor, hooking the "S" hook to the rear hook.

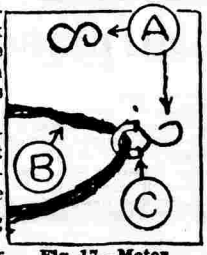


Fig 17—Motor Attachment

Place the wings on the fuselage, being sure the leading edge is to the front. Place the landing gear.

Now you are ready for a trial. Hold the ship at an angle of about 30 degrees to the floor and let go. If the ship dives, move the wing up nearer the propeller. If the ship noses up and settles back on its tail, move the wing back nearer the tail.

If the ship slips to one side in flight, warp the wing up a little on that side. This can be done by gently warping with the fingers. If the ship glides to a three-point (two wheels and skid) landing several feet in front of you, the ship is ready for a trial flight.

Wind the propeller counter clockwise 75 times and launch. Place the ship in the air, and let the propeller pull it forward. Do not throw the ship.

Wind the propeller counter clockwise until there is a double row of knots in the rubber. Then place the ship on the floor or a table, permit the propeller to turn and release, and see the ship roll across the floor, take off and climb to the ceiling in circles to the left.

In making this R. O. G., remember the position, size and shape of the rudder and stabilizer can be changed or designed differently, as can be the shape of the wing tips.

The landing gear also can be designed to suit the builder.

A coat of banana oil or bronzing liquid will strengthen the balsa wood.

How to Cut Balsa Wood

Tools required to cut and sand balsa wood to the desired size are a knife, razor blade, metal rule or steel scale, flat surface and a piece of No. 00 sandpaper.

1. Place the balsa wood on a flat surface.
2. Lay off the desired size (measure accurately).
3. Place the steel scale where you wish to cut.
4. Hold it in place while you cut along the steel scale with your knife. Cut through the balsa wood only as far as the knife will slice without forcing it. Repeat this operation until the piece is severed from the strip or board. The balsa wood will probably split if you cut through in one slice rather than making repeated cuts.
5. When the piece is cut to size get a small block and wrap a piece of No. 00 sandpaper around the block and sand lightly.

Should the balsa wood be real rough, plane it smooth and level.

Be careful not to crush the piece of balsa while sanding it.

BOYS AND GIRLS JOIN THE

PHILADELPHIA MODEL AEROPLANE ASSOCIATION

Sponsored by PLAYGROUNDS ASSOCIATION OF PHILADELPHIA, THE AERO CLUB OF PENNSYLVANIA and THE EVENING BULLETIN

Boys and girls of the various playgrounds, recreation centres, boys' clubs, settlements, Boy Scouts, Girl Scouts, schools and other community groups in the City of Philadelphia, in Chester, Delaware, Bucks, Montgomery counties in Pennsylvania, and Camden, Gloucester, Burlington, Salem, Cumberland, Ocean, Atlantic and Cape May counties in New Jersey, are eligible for membership.

How to Join

The Philadelphia Model Aeroplane Association is an organization made up of clubs known as chapters of the Association. In order to become affiliated in this great game of model aeroplane construction and flying, you can get additional information or guidance by applying to C. H. English, Director of the P. M. A. A., at the Playgrounds Association office, 1427 Spruce Street, on Saturday mornings or at the Supply Store, 1428 Manning Street.

OCT 2 RESULTS - CONT.

EASY B - RICK MACENTEE 3:09

NOV. PENNY - WALT EVERSON 1:49

BOSTONIAN - 1. JOHN MARTIN 162.8
2. RICK MACENTEE 147.9
3. MIKE ARAK 82.0

U.S. billed for paper airplanes

(17)

In Herald Wire Services

WASHINGTON — Congressional probers said Wednesday that they had discovered $109 million in questionable charges by seven major defense contractors — including bills for yacht clubs, country clubs, a disco dancer, giveaway calendars, tickets to the Houston Ballet and the costs of the World Paper Airplane Championship.

The 14 auditors for the House Armed Services Committee said their inquiry provides clear evidence that billing the Pentagon for unallowable costs is an industry-wide practice.

And because it is impossible to examine each of the millions of bills the Pentagon gets each year, the auditors said, the actual total may be significantly larger.

Rep. William Nichols, D-Ala., chairman of the panel's investigations subcommittee, said the auditors' findings show that controversial billings submitted by the General Dynamics Corp. are not "an aberration" as claimed by Defense Secretary Caspar Weinberger.

The auditors, using previous Pentagon audits of the seven companies, reviewed a year of billings for various years by each of the firms and found that two companies exceeded General Dynamics in questionable billings, Nichols said.

General Dynamics was questioned on $15.3 million of its bills, but the questioned billings of McDonnell Douglas Corp. totaled $31 million and Boeing Co. bills totaled $29 million.

The four other companies with large questioned billings are Rockwell International, $12.3 million; Sperry Corp., $9.9 million; Newport News Shipbuilding and Drydock, $7.1 million; and Textron Corp., $4.9 million.

More than half the questionable costs — 67 percent — eventually were disallowed by Pentagon contract officials, while 37 percent were paid.

But Williston Cofer, a committee staff member, said that because Pentagon negotiators have no standards for dealing with such expenses and often hammer out settlements, "it is advantageous for the contractor to submit every possible expense."

Cofer added that the auditors found no evidence of criminal activity in the submission of questioned bills. He said there are many "gray areas" in federal acquisition regulations.

The House committee will hold hearings next week on legislation providing penalties for the submission of unallowable costs.

FAME LIMPS OFF

(SORRY - ONLY IN ENGLAND)

AT LAST they've pronounced Fame completely lame and killed off the series.

It won't be forgotten, though. It will long be remembered as the most overworked format in television.

When it first started, they sang: "We're going to live forever." I didn't realise at the time they were going to try and do it on my telly.

Now if I want to see a pile of porky thighs prancing around in a meaningless exercise I'll have to go and watch a rugby league match.

FROM LONDON SUN

THE ICONOCLAST

GM to diesel: Drop dead

Oldsmobile's decision to drop both the 350-cu.-in. V8 and the impressive 263-cu.-in. V6 is a heavy blow to diesel advocates. But the numbers just weren't there for General Motors accountants. Diesel sales dropped even faster than the price of gasoline. At the end, Olds' engine output was running about one-tenth of capacity. That's costly when you have a whole plant devoted to V6-diesel-engine output. (Besides, Olds has a new gasoline engine, code-named 4-83, that it wants to produce in the diesel plant.)

Other diesel sales have plunged, too. In 1975, Mercedes-Benz diesels represented as much as 78 percent of its total sales. Last year they comprised 50 percent of all Mercedes sold. Another poor diesel performance is at Lincoln where the BMW-built turbo diesel was not even welcomed at its introduction last spring. It's more than likely that Ford would now like to wiggle out of its contract with the German maker.

Career women are a loving bunch

By PATRICIA McCORMACK
United Press International

More than 40 percent of the nation's career women would like to make love twice a day, but only half manage a sexual encounter once or twice a week, according to a Savvy magazine study.

Psychologist Srully Blotnick, who conducted the survey, said, "Women like the idea of starting and finishing the day in a warm and emotional way. The reality is that many of them don't have sex that often. They say they're lucky if they have it twice a week."

The survey of 1,128 respondents appeared to shatter the myth that female executives are either too tired or too busy to enjoy sex.

The respondents were asked, "Ideally, how many times a day or week would you like to have sex." Forty-four percent said twice a day, and 12 percent said they wanted sex three of four times a day. Twenty-six percent said once a day and 18 percent said less than daily.

Blotnick said one in the 18 percent group, "an airline publicist married to a pilot," surprised him by saying she was satisfied to have sex with her spouse only once every six months.

The survey showed 50 percent of the respondents managed to have sex just once or twice a week. The survey showed 18 percent made love three or more times a week and 30 percent just two or three times a month.

The survey also found 67 percent of the female executives fantasize about sex — compared to only 19 percent who said they fantasized 20 years ago.

The report also showed the more successful a woman is, the more likely she is to hug and kiss her partner in public. Women who bring in more than $75,000 a year are twice as likely to show a public display of affection, the survey showed.

Savvy's "Sex and Success" survey of executive, professional and entrepreneurial women ranging in age from 25 to 45, with a median income of $39,000, will be published in the October issue.

EDITOR'S NOTE: I BELIEVE THE ABOVE ARTICLE IS A HOAX. SURELY THERE IS NO PSYCHOLOGIST NAMED SRULLY BLOTNICK AND NO SUCH WOMEN HE DISCRIBES. GOTTA GO NOW - I'VE GOT A DATE WITH A CAREER WOMAN. JOHN



Tailspin Tommy, by Hal Forrest; © 1938 The Bell Syndicate

They were the people's heroes as the skies opened wide, the barnstormers and mail pilots and parachute jumpers and, later, after Lindbergh, another generation of racers, ocean-hoppers and globe-girdlers. Everything the aviators did was page-one news through the 1930s, and their names became familiar household words: Amelia Earhart, Wiley Post, Frank Hawks, Roscoe Turner, Amy Johnson, Laura Ingalls, Charles Kingsford-Smith, Italo Balbo, dozens of others — even some of the commercial pilots, notably Capt. Eddie Musick, master of Pan American's famous China Clipper.

The comics were full of aviator heroes, too, in these air-happy times, of course, and the tramp pilot/airplane strip emerged as a distinct sub-genre. The list came to include the likes of Smilin' Jack, Scorchy Smith, Sky Roads, Flyin' Jenny, Flying to Fame, Ace Drummond, Barney Baxter and, later, after World War II, such as Bruce Gentry and Steve Canyon. Those were the inheritors. They all owed a massive debt to a single pioneer, the first of the airplane strips and one of the earliest adventure-continuity features — Hal Forrest's Tailspin Tommy.

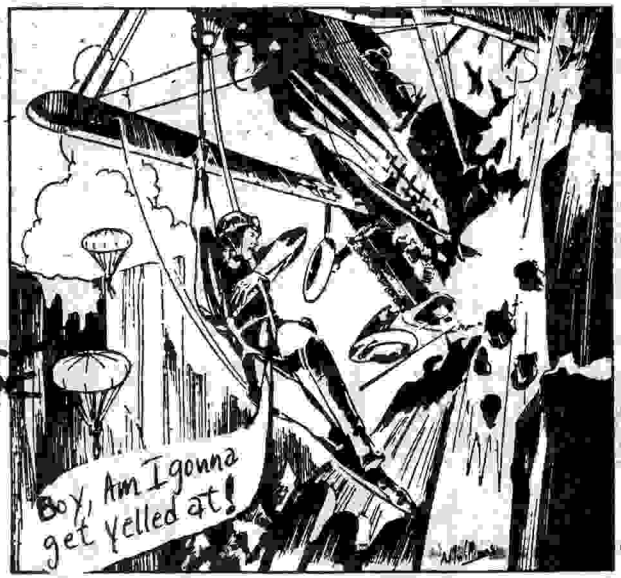
Tailspin Tommy first appeared in May 1928 as the archtypical seat-of-the-pants air bum, and through the '30s Tommy did everything flyers did in those days. At one time or another he flew the air mail, ran bootleg liquor, stunted for Hollywood, raced in speed derbies, tested secret government ships and roamed restlessly around the world, endlessly getting mixed up in banana-republic revolutions, chasing border bandits or falling into the hands of wild-eyed warlords.

For a brief period he sedately settled in as a transport captain — this page, from March 13, 1938, represents this period of Tom's career — but he got itchy again before long. He was soldier-of-fortuning somewhere in the Balkans when America went to war. Most other airplane strips were obliged to become military strips when that happened. Tailspin Tommy, his popularity waning way down by this time in any case, merely disappeared.



WHAT'S ON:

* Nov. 16+17 Melbourne Fla. SAM MEET
CD BOB NOLAN 57 DOUGLAS AV. DUNEDIN 33528
NOV 17 MIAMA ... CANCELLED MEET
M/D SORRY... COLLEGE 9-5
* DEC 15 MIAMA INDOOR MEET
M/D SOUTH, SAME AS ABOVE, 9-5
* DEC 28, 29+30 - BIG KING ORANGE
MAC DILL AIR BASE - DON'T MISS!
RON SHARPTON 1290 COUNTRY ROAD
DAYTONA BEACH FLA. 32019
* JAN 26 - HOMESTEAD AIR BASE
MIAMA FLY IN - 9-5 DEMO - 1-2



It would have been all over with MacDuff had he hesitated another second. The very first sweep of his parachute dashed him against the rocks. And virtually at the same instant, the blazing Douglas smashed into the mountainside.

THE HANGAR PILOT

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