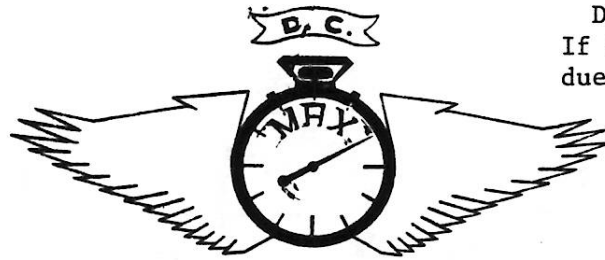


PRESIDENT & SENIOR EDITOR
ALLAN SCHANZLE
8311 Exodus Dr.
Gaithersburg, MD 20760
(301) 840-9883



DUES: \$9.00 per year
If this is circled in red your
dues are due! Please pay up!

D.C. MAXECUTERS ARE AMA
CHARTERED AND ARE AFFILIATE
WITH THE FLYING ACES CLUB

MAXECUTERS

"MEETING AT COLLEGE PARK AIRPORT - THE NATION'S OLDEST"

"INCLUDES BLUE FLIGHT-POTOMAC PURSUIT SQUADRON NEWS"

MAX - FAX

MAY-JUNE 1980

next meeting dates: July 2, no August meeting, Sept 3, Oct 1, - 7:30 PM at College Park Airport

CONTEST CALENDAR:

Aug 8-10 - 2ND FLYING ACES CLUB NATIONALS - Wright Field, Dayton, Ohio

Aug 10-17- AMA NATS, Dayton, Ohio

Aug 30 - Eastern States Champs- Johnsville, PA.

SEPT 6- D.C. MAXECUTERS LATE SUMMER FUN FLY--COMSAT FIELD--SEE FLYER IN THIS ISSUE OF MAX FAX.

Oct- F.A.C. GHQ Fall Contest at Durham, Conn.

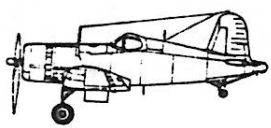
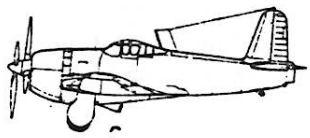
BY PAT DAILY

Well gang, this is the last MAX FAX old uncle Patty will be doin for you. Seems like the last several years have passed all too quickly and now the U.S. Navy wants me to move--at least for a little while. The editorship will pass over to Allan Schanzle's direction and, as it stands now, each future issue of MAX FAX will be put together by a volunteer-- it will work out ONLY IF YOU TAKE A PERSONAL INTEREST IN IT! Did you know that MAX FAX has a circulation of 125 or so--not bad for a dinky little free flight oriented club! Well, the reason for so much interest and activity is because of a regular newsletter--if you guys drop the ball the club will eventually fold-- I know I sound like I'm preaching but its true. So, be sure and give Allan a hand and sacrifice a little of your building time to make it more enjoyable for everyone! Speaking of Allan, he has computerized your mailing labels and if you will note, the numbers in the upper right include when your are to pay your dues followed by the month and year when you last paid your dues--remember it costs the club close to \$.75 or more to send you an issue of MAX FAX--so we can't afford any free loaders--you will be warned the issue prior to the date your dues are due and also on your last issue-- if you don't pay up, you will be automatically dropped!

Enough preachin'-- this issue of MAX FAX is a special one for me-- Jerry Wagaman, that fantastic artist who donated a beautiful club painting that will be on display at all MAXECUTER contests, has also prepared a super set of plans and cover art on the Elias Aircoupe for us, Stew Meyers gives us a further report on laminated formers and jigs for super fuselages, Rolfe Gregory spins another tail in C.A.V.U., Tom Schmitt's super photos and profile plans for a Waterman Aerobile are included, along with a few notes from President Allan, a contest flyer and some reprints from the local newspaper. A really well rounded issue, I'd say!

ANOTHER WARNING--remember last issue when Don Srull warned us about possible rip offs, well it seems that long distance Maxecuter Jim Miller has ordered some items from Aircraft Model Products, PO BOX 318, Scituate, Mass. and has been unable to get the material or his money refunded--so BEWARE.

Well I'm fast running out of room- I'd like to say that it has been very enjoyable and rewarding to be your newsletter editor for the past several years and I will miss it-- anyway I'll keep in touch-- take care!



MAXECUTERS

D.C. MAXECUTERS SUMMER '80

FUN FLY



DATE: SEPT 6 (rain date SEPT 7)

LOCATION: COMSAT FIELD

TIME: 9AM till dark

ENTRY FEES: \$2 per plane
\$5 unlimited entry
Juniors (under 16) free

EVENTS AND TIMES

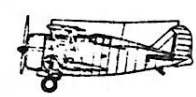
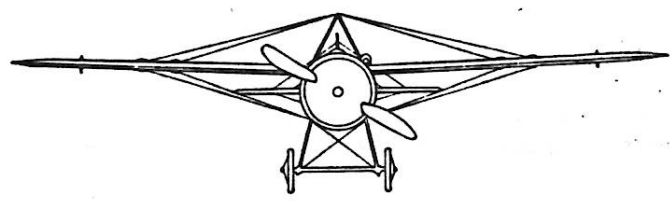
CONTEST DIRECTOR:
ALLAN SCHANZLE
840-9883

* NOTE: ALL MASS LAUNCH
EVENTS WILL ADHERE TO
THE 40 POINT MINIMUM
FOR APPEARANCE AND SCALE
JUDGING

THE DECISIONS OF THE
JUDGES WILL BE FINAL

1. F.A.C. SCALE - must present plane for judging by noon or earlier--need to make at least one official flight for judging.
- * 2. WORLD WAR I COMBAT --1 PM
- * 3. WORLD WAR II COMBAT -- 2 PM
- * 4. THOMPSON-GREVE RACES -- 3 PM - any Thompson or Greve Racer including MR MULLIGAN OR PAGE NAVY RACER
- * 5. Golden Age -- 4 PM - any plane 1920-1935
- * 6. Battle of Britain Combat-- any plane in Battle of Britain 5PM
7. EMBRYO ENDURANCE
8. Catapult Glider
9. Hand Lanuch Glider

F.A.C.



NOTES ON FUTURE MAXECUTER CONTESTS

Allan Schanzle

At the April meeting, The Maxecuters voted to include the following two rules, which will be enforced starting with the results of our summer contest.

RULE #1: Any plane that has won 1st place in a particular scale event (including mass launch) cannot be entered by the same individual in that same event for the next 5 years. This includes the exclusion of a second model which duplicates one which has already won a 1st place.

The intention here is to encourage the building of different aircraft as well as to give everyone a reasonably fair chance. Note that if you won 1st place with a Spitfire in FAC scale, then you cannot enter a Spitfire in FAC scale for the next 5 years. You can, however, enter that Spitfire in any other event for which it is eligible.

The second rule relates to the enforcement of the 40 point minimum for all mass launch events.

RULE #2: A minimum of 40 FAC scale points (30 points for 16 year olds and younger) will be in effect for all mass launch events. This minimum is exclusive of any bonus points. The event director will make a cursory evaluation of all planes entered prior to the first round and request the scale judge to evaluate any plane he feels might not meet the minimum standard. If the FAC scale judge is not present at the time of the request, the event director will appoint a substitute judge.

The purpose here is two-fold. First, we want to maintain a certain reasonable standard for the mass launch events, and secondly, the event directors will be exposed to the concept of scale evaluation. This should make more individuals qualified to judge scale events. And believe me, based upon my personal experience at judging four AMA scale events at the '78' NATS, judging will make you a better builder as well as learning how to present documentation.

So don't forget. If you enter a mass launch event at our contest, you had better be prepared to present some documentation. No documentation, no 40 points.

YOU HAVE BEEN WARNED !!!

NEWS FLASH!

Almost all of you know, or have heard of, Dr. Paul E. Garber of the Smithsonian Institution. I have today, June 2, 1980, just returned from a reception at the Silver Hill Preservation, Restoration and Storage Facility, in Suitland, Md., where Paul was honored for his completion of 60 years service with the Smithsonian, by the dedication of that facility as The Paul E. Garber Facility, National Air and Space Museum. I don't know of a more knowledgeable, more dedicated or finer gentleman than Paul Garber. The honor is long overdue. I only wish they could have named the whole Air and Space Museum in his honor!

4

D.C. MAXECUTERS ON NATIONAL T.V. !!!

Allan Schanzle

On the evening of Friday, May 9th, the D.C. Maxecuters held their weekly fun fly at COMSAT, but this time we had the pleasure of hosting a T.V. crew from the local CBS affiliate, Channel 9. They were there to video tape a typical model airplane flying session for the Saturday noon T.V. show, KIDS WORLD, to be shown, I am told, on June 7th or 14th.

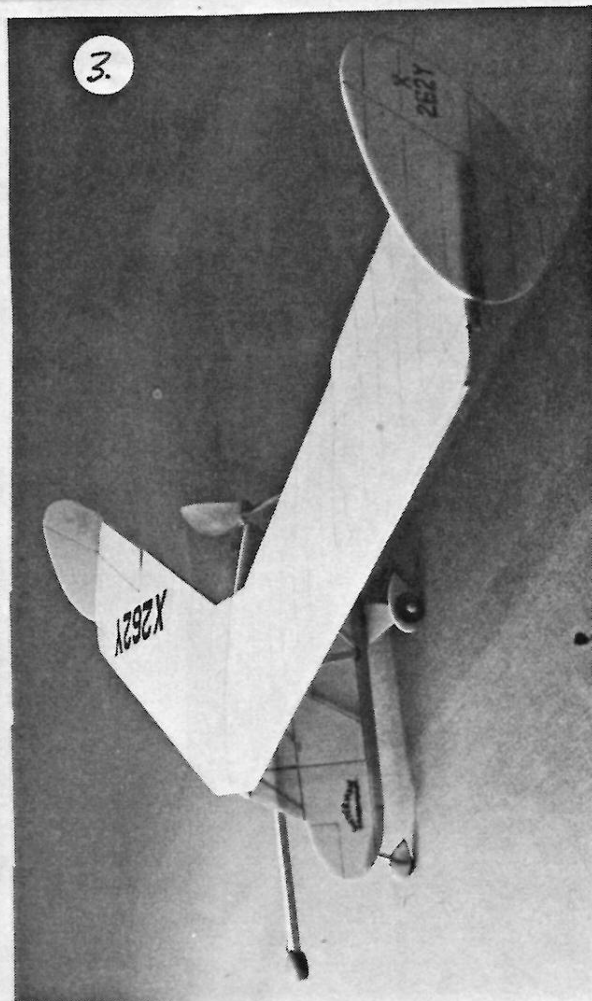
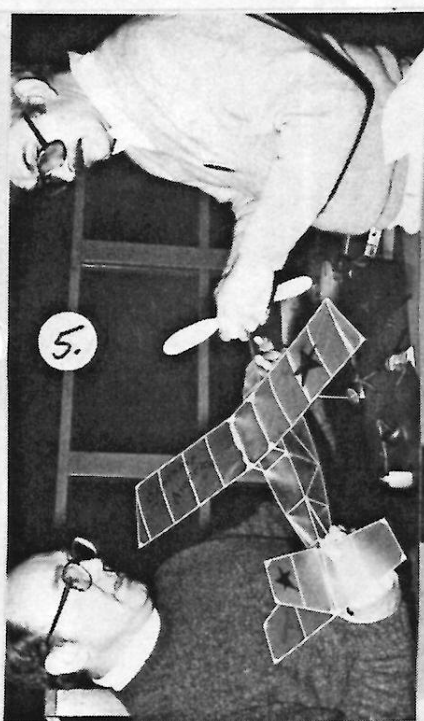
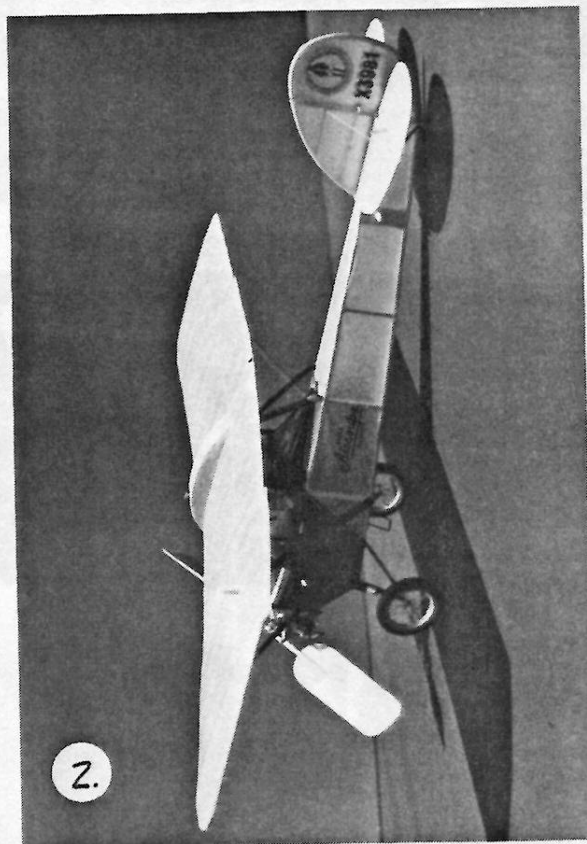
Chris Schanzle will be the host for this 5 or 10 minute national exposure to our hobby of model aircraft. They taped sport and scale rubber ships as well as hand launch gliders and my R/C Q-Tee, but I will guess the hit of the show will be the mass launch of nearly 20 aircraft-everything from H.L. gliders to AMA Darts to sport and scale rubber planes. The launch sorta looked like someone took a stick and swatted a bee hive. We had kids from everywhere- they musta come out of the gopher holes at COMSAT. Even with the cold weather, it was fun. The wind calmed down around 7:30 and gave everyone a chance to fly what they brought.

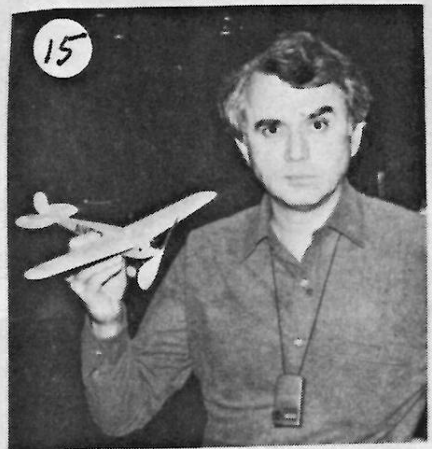
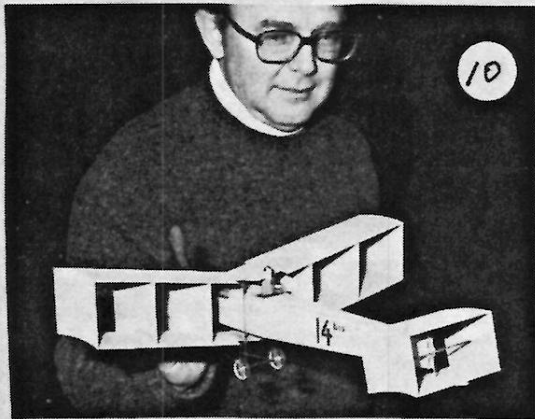
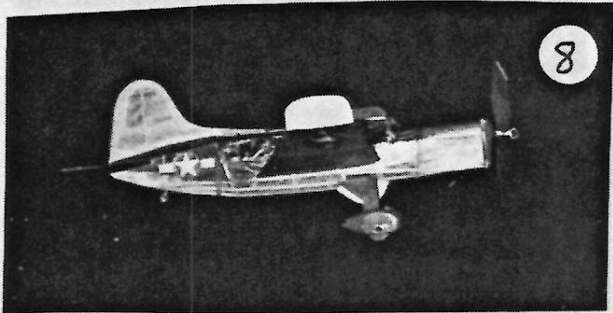
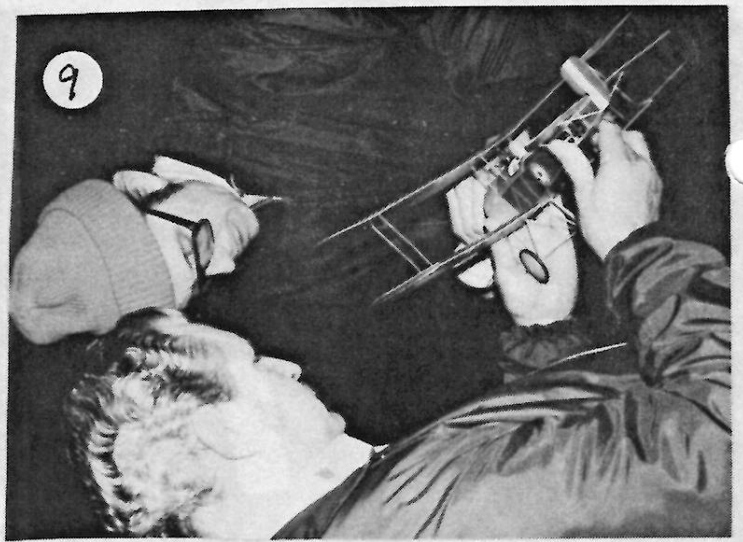
A special thanks to Channel 9, WDVM, for giving us a chance to show our hobby on National T.V.

PHOTO PAGE -- more super photos by Tom Schmitt and Pat Daily

1. & 2. Elias Aircoupe (photos by Jerry Wagaman) subject of this month's construction article. Check out that engine detail--a superb P-NUT.
3. Waterman Aerobile by Tom Schmitt--also subject of this month's construction article--a real unusual profile, eh?
4. John Preston and visitor judge Rolfe Gregory's Siemens at winter contest.
5. Rolfe and pretty wife Nancy prepare "Killer Stinson" for battle.
5. Pat Daily winds Starship America as Don Srull holds--plane was totally destroyed!
7. Photo of the super Maxecuter Painting by Jerry Wagaman--black and white doesn't begin to do justice to this beautiful banner--will be on display at all Maxecuter Contests.
8. Nick Ropar's super flying Curtiss Seagull P-NUT from Mooney plans.
9. Fred Ewing and Dave Rees prepare Dave's nifty Bristol Scout for flight- a beauty.
10. Don Srull and his Santos Dumont--has since built a Jumbo version to strike fear into the hearts of FACers everywhere.
11. John Majane and his fine flyin Flyline Velie Monocoupe- Tom Mann eyes it enviously.
12. Mike Escalante- a top notch junior with his scratch built Siemens- a superb performer. Mike and his brothers Eric and David are becoming real threats in junior competition.
13. President Allan Schanzle awards another top notch junior, Kirk Nazarian, a prize for his excellent performance.
14. Tom Mann's nifty Navy Torpedo bomber (Douglas Devastator) with Paul Spreiregen's pretty Fairchild in background.
15. Bob Clemens from Rochester and his exquisite AVRO 560. Bob and his pretty wife came a long way for the contest and we sure enjoyed their company.
16. Dudley Prisell and his beautiful Fairchild complete with weathering and exhaust stains.
17. Bill Clarke plots his strategy for hotly contested Penny Plane event.

DON'T FORGET THE BIG SECOND F.A.C. NATS IN DAYTON IN AUGUST OR THE MAXECUTERS LATE SUMMER FUN FLY IN SEPTEMBER -- start building now!





Stu's Brew

JIGGING LAMINATED RING FUSELAGES

I have just finished reading FERNANDO'S article in MODEL BUILDER for the third time; Gee does he ever go about it the hard way. I know he claims that he hates to build wings and loves to build fuselages but spending that much time on unnecessary jigs is ridiculous.

The problem with building a fuselage light enough to fly well is that it often is not stiff enough to go together straight. The laminated keels that I favor to go with my laminated fuselage rings are far too prone to take a dog-leg shape. Fernando's elaborate jig will work but there are simpler ways to solve the problem. Since we are only trying to make the structure stiff enough to add formers with out warping we can do with a much lighter jig that can be built in place and cut away later on. This temporary structure will allow adding most of the stringers, if not all, before it is removed.

On my first P-47 I spaced the formers with the rings around them out on a dowel but on the second I found this was unnecessary. The easiest thing to do is simply pin your laminated outline back down after you have notched it for the former rings. Then between the former positions lay across a few pieces of 1/16 x 1/8 scrap balsa. Let these extend about an inch beyond the largest fuselage dimension. You will be using these extensions as the jig.

Now you have defined the profile shape of the fuselage. However these keel pieces are not very stiff laterally. The way around this is to glue a stiffener to those extensions just outside the profile outline. 1/8 x 1/4 works nicely here. Now you have a frame that is stiff enough to hold the desired shape. PAT only used one strip on his Hurrybox on the bottom, sort of a stand. I suggest another one on top would make it a lot stiffer and maybe even some large vertical pieces joining the upper and lower frames outside the profile.

The former rings should have soft balsa locator blocks on them. Simply Hot-Stuff a strip of 1/16 sq. on the outside and carefully notch it on each centerline. Note that on the vertical centerline we only have a block on one side to allow sliding the ring into the framed profile notches. The side blocks however are on both sides to form a notch since the side keels are glued on separately.

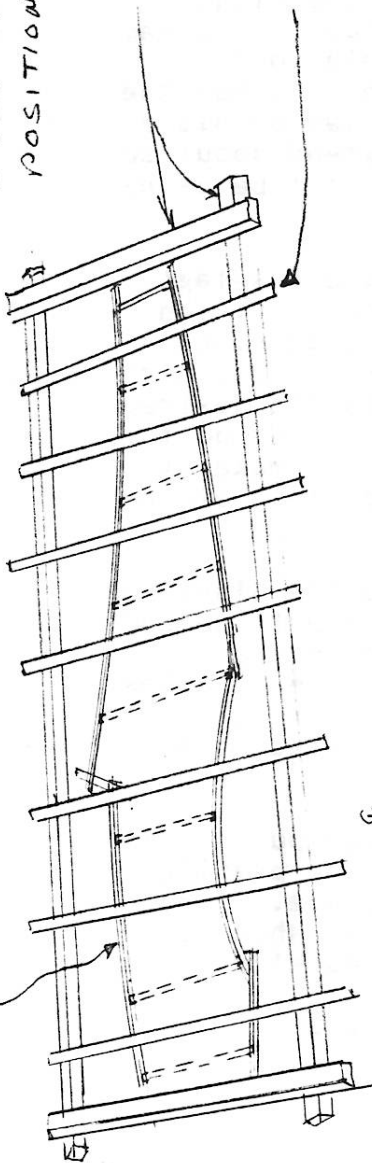
Have you cut your notches accurately? Simply put it all together and check. The rings should slip into the profile and the side keels should also slip cleanly in place. If not make a few adjustments with emory board and shims. When you get it right put white glue in all the notches and slam it together.....it should be perfect.

.....STEW MEYERS

RING FUSELAGE JIGGING

SEM
JUNE '80

FUSELAGE PROFILE KEELS — LAMINATE OVER PLANS FROM 1/16 SQ NOTCH INSIDE 1/16 SQ AT FORMER POSITIONS



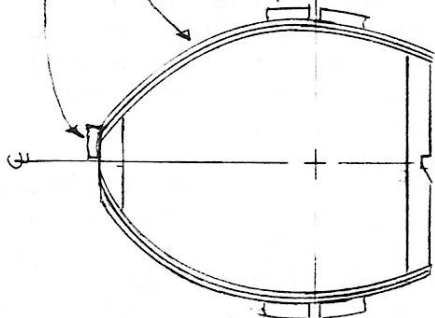
HARD Balsa FRAME TO STIFFEN PROFILE

SCRAP CROSS BRACES SPOT GLUED TO PROFILE KEEL

SOFT Balsa ALIGNMENT BLOCK ONE SIDE ONLY

3 LAMINATIONS 1020 X .63 BASS WOOD

SOFT Balsa STRIP FOR SIDE KEEL ALIGNMENT TYP. 2PLS NOTCHED TO ACCURACY HERE COUNTS! SAND DOWN AFTER ASSEMBLY



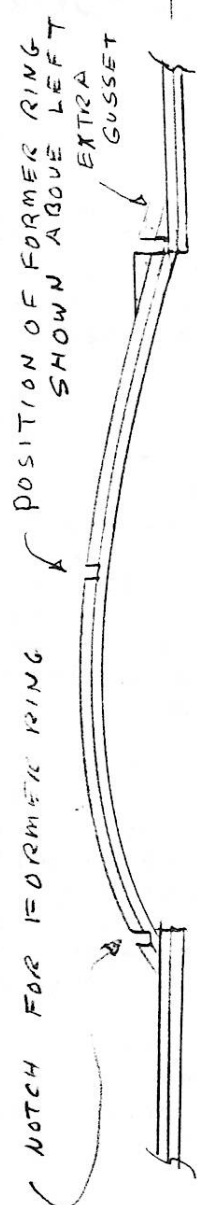
NOTE NOTCH TO ALLOW KEEL TO FIT FLUSH.

OTHER FORMER RINGS FEATURE AN ALIGNMENT BLOCK ON THE BOTTOM AS WELL AS TOP.

NOTE SLIGHT BEVEL OPPOSITE ALIGNMENT SIDE TO ALLOW SLIDING INTO PROFILE KEEL.

FUSELAGE RING FWD OF COCKPIT
FLAT TOP FOR COCKPIT
FLAT BOTTOM FOR WING

PLANKING
STRINGER
BLOCK REMOVED FOR PLANKING



FULL SCALE PROFILE KEEL

SHOWN THRU WING CARRY THRU TO SHOW CONSTRUCTION DETAILS

TWO PIECES OF 1/16 SQ. LAMINATED. IN FRONT NOTCHED FOR FORMER RINGS

A G AFTER ASSY.

WING RIB AND FUSELAGE PANEL LINES
ILLUSTRATED BELOW - BLACK INK

LIGENCE NUMBERS ARE
REPEATED ON BOTTOM
OF LEFT WING (BLACK)

4 1/2" PLASTIC PROP
TRIMMED
TO ≈ 4"

ANOTHER D.C. MAXECUTER
ORIGINAL PLAN

WING RIB (TYP)

TOP VIEW
REAR LANDING GEAR
STRUT (FOAM)
AXLE - .015 MW
PANTS (FOAM)

≈ 6° WING INCIDENCE
RELATIVE TO THRUST ⚡

MOTOR STICK
1/8 SQ Balsa

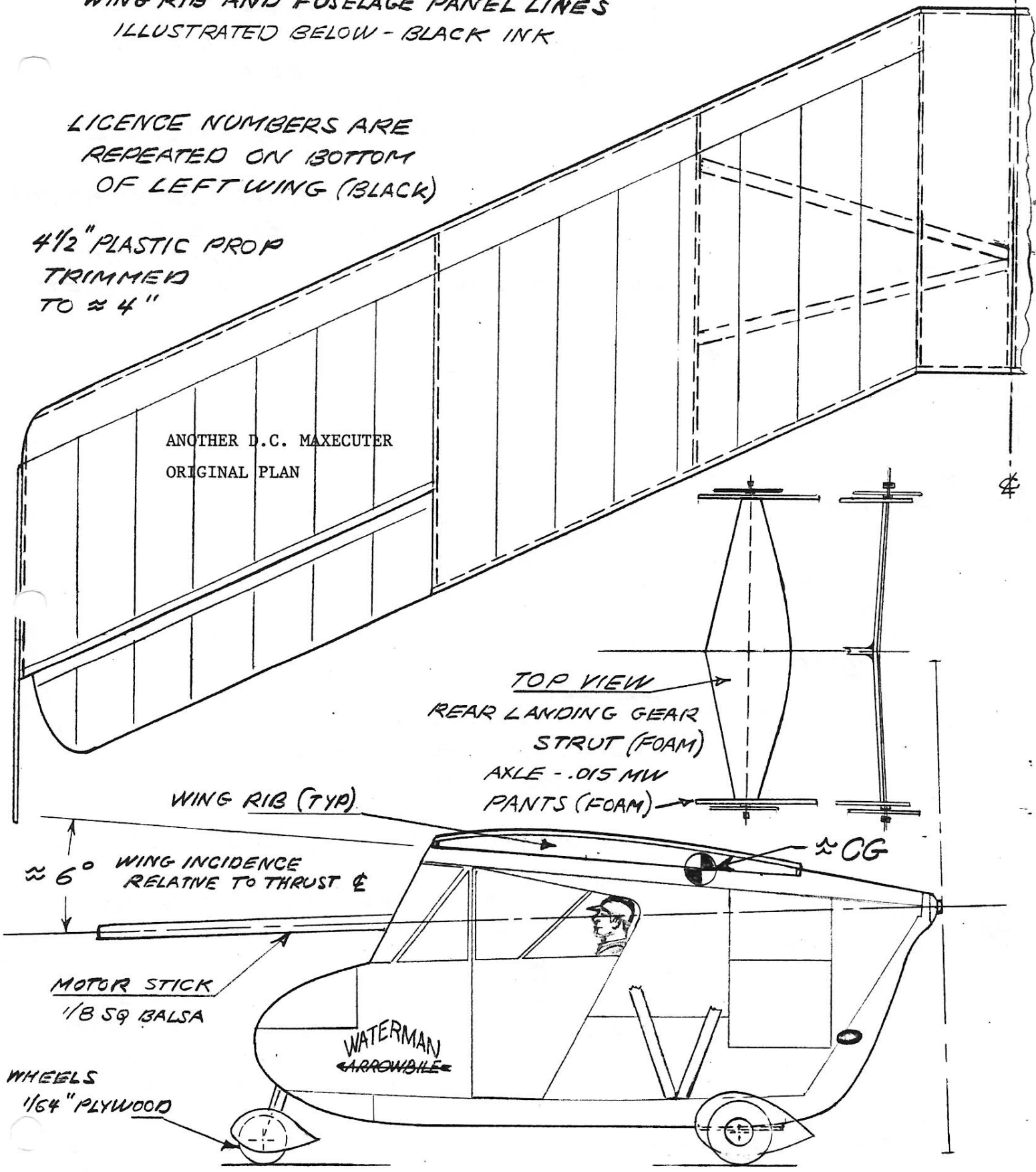
WHEELS
1/64" PLYWOOD

≈ CG

WATERMAN
ARROWBIBLE

PROFILE WATERMAN ~~ARROWBIBLE~~

TOM SCHMITT 4/80



WING & FUSELAGE STRUCTURE

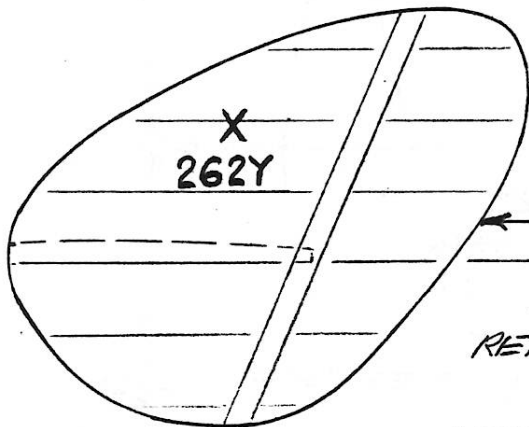
- ALL SURFACES 1/16" FOAM OR 1/32" Balsa
- WING SPARS 1/16" SQ. Balsa
- WING RIBS 1/16" Balsa
- WING STRUTS 1/32" x 1/8" BASSWOOD

3/8" DIHEDRAL EACH WING TIP
 ~ 3/16" ELEVON
 DEFLECTION
 FLYS TO LEFT

ANOTHER D.C. MAXECUTER
 ORIGINAL PLAN

X 262Y

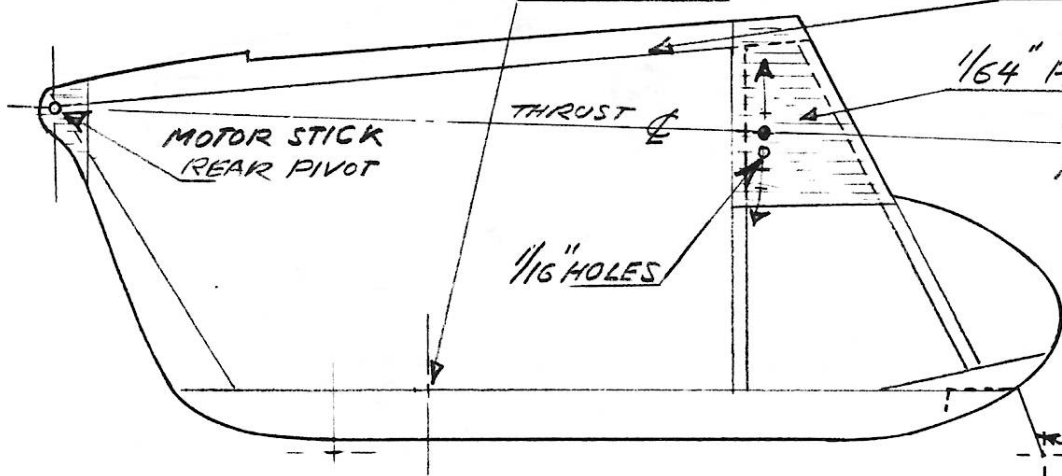
WING STRUT
 POSITIONS



LEFT FIN
 & RUDDER

LICENSE NUMBERS (BLACK)
 REPEATED ON RIGHT FIN

WING STRUT POSITION 1/16" Balsa DOUBLERS (TYP.)



1/64" PLYWOOD FORE & AFT
 DRILL FOR 1/16" ALUM. TUBE.
 MOUNT 1/16" TUBE (2) IN
 1/8" SQ. MOTOR STICK
 (HOT STUFF) FOR
 THRUST LINE
 ADJUSTMENTS

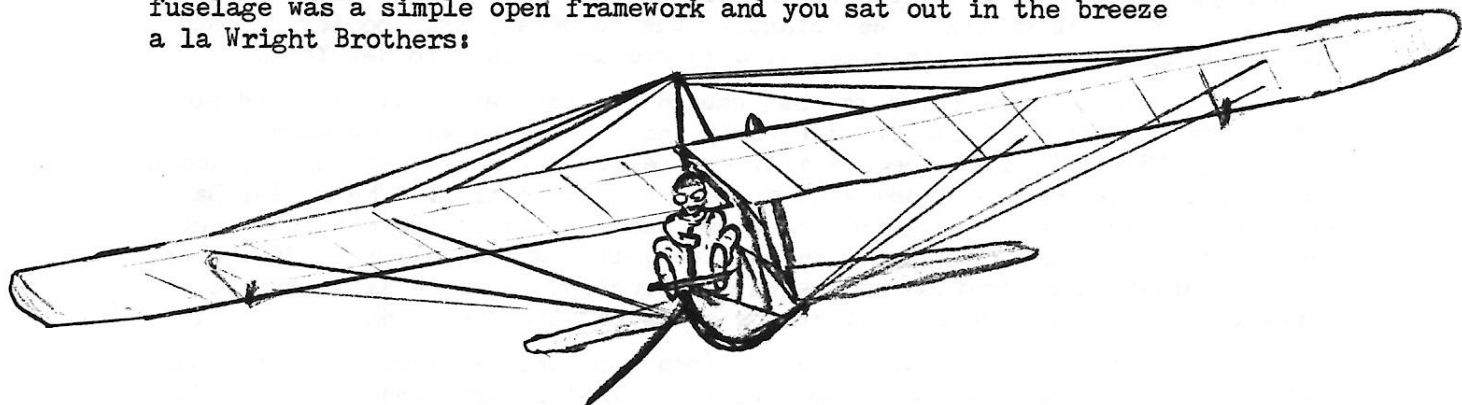
.015 MW NOSEWHEEL
 AXLE

REF.: MEGOW 30" WS RUBBER MODEL PLAN &
 HISTORICAL AVIATION ALBUM VOL III by PAUL R. MATT

C. A. V. U.

(Ceiling And Visibility Unlimited)
By Rolfe Gregory

A Cessna glider? You have got to be kidding! No, I am not kidding. Along about 1930 or 1931, Cessna built primary gliders. Not only Cessna but so did Eaglerock and Waco. They were rather crude affairs. The fuselage was a simple open framework and you sat out in the breeze a la Wright Brothers:



My longtime friend Woody and I had just turned 14 when two men, a Mr. Goodier and a Mr. Smith, recently moved to our home town from New York state, wanted to start a glider school and club. They had a brand new Cessna glider, a large field leased near town, little money and big ideas. A club was formed but, at our age, the fees were just too steep. But we hung around so much and with such hungry looks, they finally took pity on us and treated us almost like paying members. At least they let us fly the glider some.

Darwin Smith, "Smitty" (what else?) was the instructor. He was a much older fellow of twenty, had almost 50 hours flying time and an unlicensed OX-5 Waco 10. He assured us that he expected to get himself and the Waco licensed, sometime soon. Neither event was to take place. He said he would teach me to fly and when I turned 16 I could get my license. He gave me my first airplane ride and my first 30 minutes of dual in the Waco.

Glider flight (ground?) instruction consisted of asking how much you weighed, then showing you where to hold the control stick while being shot into the air and, finally, cautioning you to keep your feet on the rudder bar when landing until the glider stopped, unless you wanted a broken leg!

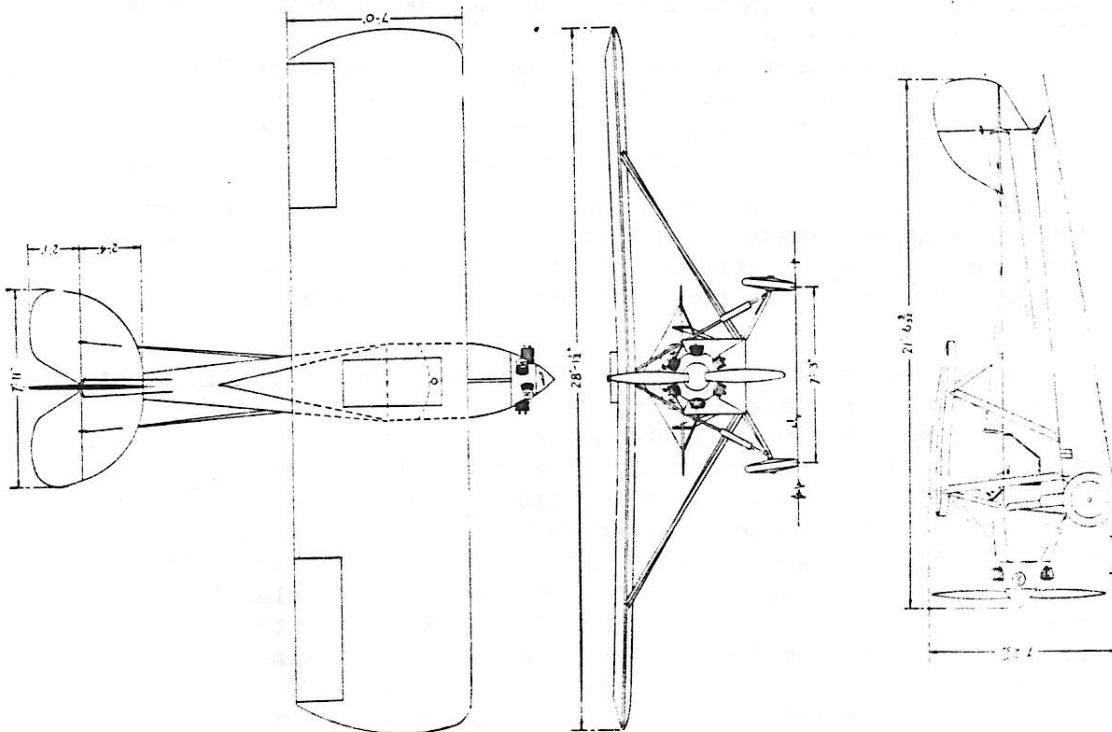
Flying consisted of catapulting the glider into the air, sling-shot fashion, by means of a rubber shock cord rope about 200 feet long, having a ring at its center for engaging a tow hook on the nose of the glider. Three or four men grasping each end of the cord would first walk, then run, stretching the cord outwardly in a "V" formation. At the proper moment, the instructor would shout, "let go", one or two men sitting on the ground and grasping a short rope tied to the tail of the glider would release it. Instantly the glider would shoot upward at a steep angle to possibly 100 feet (leaving your stomach back on the ground) and then gradually level off as the shock cord tension relaxed and the ring dropped from the nose hook - almost exactly as R C gliders are now towed up. If you had never been off the ground in any kind of flying machine before, as in our case, you were scared half to death - though you'd never admit it. Actually, you were back on the ground almost before having a chance to really get scared, and everyone would be running up shouting, "Hey boy, how'd ya like it?" "Great, wasn't it!" Yeh, sure!

Woody had a total of 13 flights and I had a magnificent even dozen before the school and club closed, after only a few months of operation, unfortunately, on a very sad note.

One hundred feet of altitude soon became too tame and instead of hand towing, we graduated to towing by automobile, using longer shock cord for greater altitude and much longer flights, including some left and right turns. One beautiful clear day, the instructor, "Smitty", was being towed up, in the Eaglerock as I recall, when, at probably less than 100 feet, the glider nosed over and dived straight in. "Smitty" didn't look to be in bad shape, just looked as if asleep but he didn't wake up. He had died almost instantly of a broken neck. Reluctantly, the co-owner, Mr. Goodier, closed the operations, sold the other two gliders and moved back to New York.

We never knew for sure what caused the accident. It happened so quickly it was anyone's guess. But Woody and I believed we knew what happened. "Smitty", like Woody and I, was relatively short and those gliders appeared to have been designed with 6½ foot pilots in mind. The rudder bar was pivoted much too far forward and there was nothing to prevent your feet from slipping off and downward. We believe Smitty's feet slipped off the bar from the upward acceleration and, with no structure to brace against, his upper torso pivoted forward against the stick causing the glider to dive in.

I never flew a glider again. Woody, on the otherhand, got the bug. When World War II came along, he got into the Glider Corps and flew Waco CG-4's. After the war, he bought a Bowlus sailplane but flew it only once before a friend borrowed it and bashed himself and the sailplane to oblivion against a mountain. Although Woody's love for gliders continued, and he always wanted to try hang gliding, I don't think, after that, he ever flew a glider again.



G. ELLIS & BRO., INC.
 Buffalo, N. Y.
 AIRSPORT
 2 PLACE
 ENGINE: KINNER

EDITOR'S Note: This set of plans and instructions are one of the very best I have ever seen--we are indebted to Jerry Wagaman for this fine effort and the accompanying cover art that goes with it. Thanks!

ELIAS AIRCOUPE EC-1
BY JERRY WAGAMAN

Wary of the Fike and Lacey without having built either, yet aware of the advantage to be gained from a wing of low aspect ratio, I set off on a search for a more interesting and off-beat aircraft possessing this feature. My search ended with the 1928 edition of Aircraft Yearbook, wherein I found a three view of the Elias Aircoupe. In addition to the wide chord, this little airplane possesses a lot of personality and considerable potential for external scale detail.

The Aircoupe was designed by Joseph Cato of the A. J. Elias and Brothers Company of Buffalo, N.Y., a company founded in 1881 as one of Buffalo's first planing mills. In 1920 the company entered the young field of aviation and manufactured a variety of aircraft for the Army and Navy including a bomber of 96 foot wingspan. The Aircoupe appeared on the eve of the depression and may have been one of a kind. In 1933 the depression drove the company in the hands of receivers.

Specifications for the prototype Aircoupe are as follows: weight, 800 lbs.; wingspan 28 feet; power plant, 80 hp Anzani; two place; end fuel consumption, 4 gal. per hr.. Unusual features included a steerable tail skid, interchangeable rudders and elevators and a removable cabin.

An inquiry to the Buffalo and Erie County Historical Society resulted in the acquisition of an excellent three-quarter front view photo of the Aircoupe (cost: \$6.00 including postage in early 1977). It proved invaluable in the designing of the model. As evinced by the plans, my intent was to achieve a maximum of scale detail. If this isn't your cup of tea, but you find the design appealing, you have only to eliminate and simplify. The false ribs and separate control surfaces can be eliminated and the number of ribs reduced, structural members in the tail surfaces can be reduced, and such externals as control horns and cables eliminated as can certain engine details.

FUSELAGE

Simple box construction with a cabin. Notice that lower fuselage longerons break in towards the firewall forward of the upper longerons. This accounts for the appearance of down thrust on the side view. When front of fuselage is assembled you will have no built-in down-thrust. Indoor 1/20" stock is used throughout excepting the sheeting over the forward section which is 1/32". The landing gear is formed from .015" wire and installed with a small drop of epoxy joining the wire at the axle. These are covered with struts cut from 1/32" basswood, sanded to streamline shape and with a channel carefully cut out of the underside to set flush over the wire. The shock strut is made of 1/16" dowel with the shock cylinder of wrapped bond paper. Do not install this strut until the fuselage is covered, doped and colored. The firewall is cut from 1/32" plywood.

WING

The thin airfoil dictated the choice of lightening holes over sliced ribs. I believed the four spars would provide greater strength than two sandwiched between sliced ribs. Exercising a little care in assembly, the 1/32" sq. spars, although appearing flimsy, worked fine for me. Even after many flights, they remained unbroken. I sacrificed a fraction of a gram in opting for the separate control surfaces. I prefer them for the additional realism and ease of flight adjustments, spot glueing them initially then glueing them permanently once the model is fully adjusted. In addition, you avoid the strained structure and wrinkled covering that can result from warping fixed surfaces. Should you prefer the fixed surfaces you have only to disregard the separation indications on the plans and build accordingly. This applies to the tail surfaces as well. Wing tip templates are cut from 1/16" sheet or illustration board. The wing is built in the conventional manner with the lower spars added after the wings are removed from the board. Cant the root ribs out 2 degrees for a flush fit when joining the two panels.

TAIL SURFACES

Cut contour templates as you did for the wing tips and form the outer laminated structure. When dry remove template and complete structure.

MOTOR

Cut the engine support from 3/32" hard scrap. The cylindrical crankcase from soft scrap balsa cut and sanded to 1/2" diameter. Round front end according to plans. The six cylinders are 3/8" Williams Brothers with all but 1/16" of the base cut off below the bottom most cooling fin. Cap the top of the cylinder with a circular disc of card stock. Valve lifters are cut from 1/64" plywood, their mounting posts from scrap basswood. Cylinders are glued in a staggered manner around the crankcase (see plans for correct order). Cut cylinder head studs (one each side of cylinder) and valve stems from .015" wire and glue to cylinders, rocker arms and crankcase. If you care to go overboard as I did you can add spark plugs and ignition wires. Spark plugs were made with small pins dipped into white paint, snipped off at the proper length and the point inserted under the top most fin with a minute drop of epoxy. Incidentally, I used epoxy sparingly throughout the engine assembly, realizing the shocks it would eventually be heir to. It has remained intact after many hard landings. Ignition wires are made in the form of a "y" from thread, glued to the plugs (two to a cylinder) and routed down to the back of the crankcase. Exhaust collectors are made from 1/16" dowel sanded down to about 3/64" diameter. Crankcase bolts are short pins. Nose plug is cut from 3/16" hard stock with a washer carefully epoxied to the rear for a true turning prop shaft. A Peck/Polymer thrust bearing was used in the front.

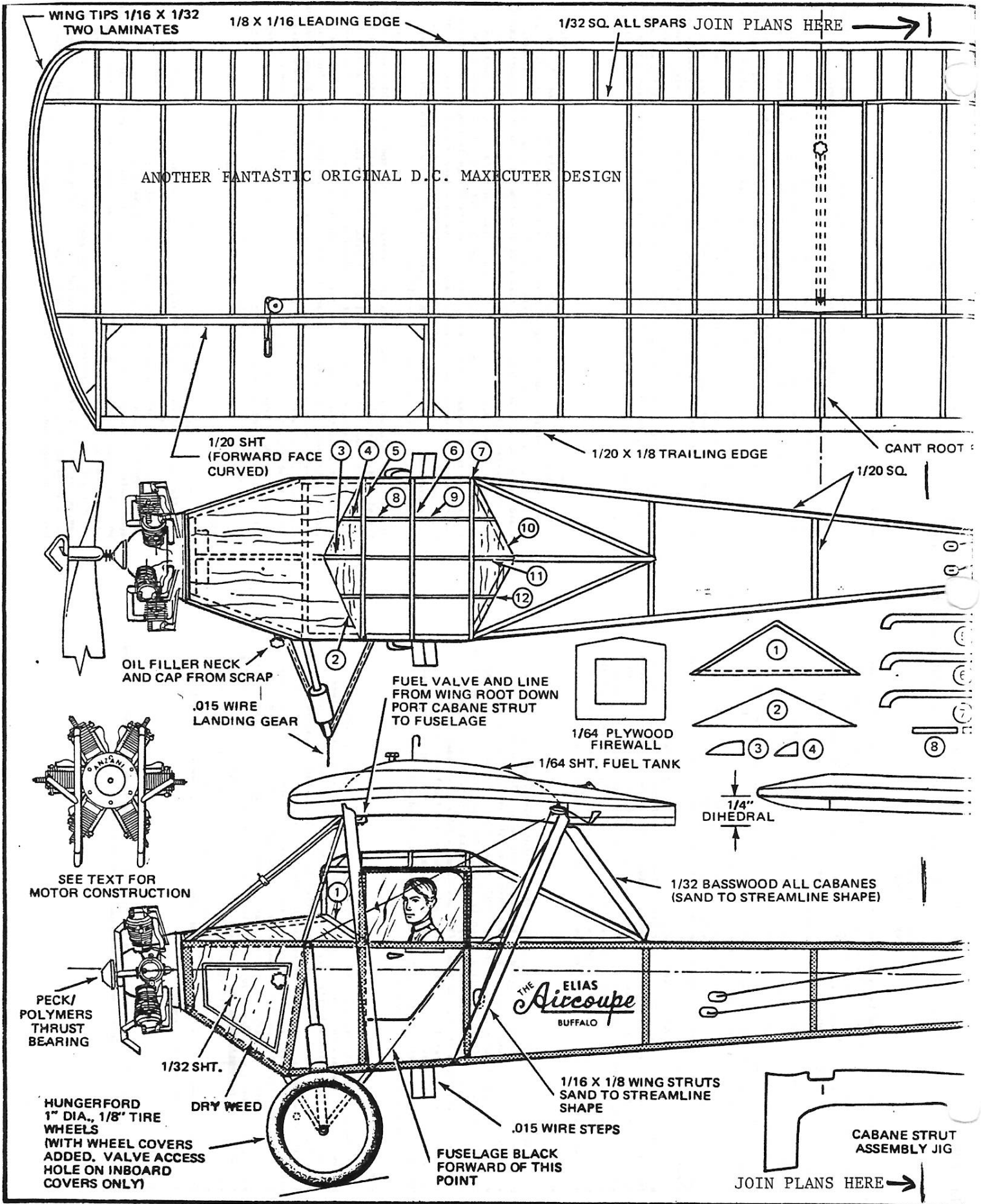
COVERING

Install the pilot on a scrap piece of 1/32" sheet and glue to the underside of the top longeron. Cover all parts with super-lite yellow tissue and dope before assembly. The ship's name, along with manufacturer's name and city on the fuselage sides are accomplished by pre-stretching sufficient tissue on a frame of illustration board, water sprayed and doped. The tissue is then removed from this support, taped over the design and the script name "Aircoupe" is carefully traced in ink with a crow quill pen or fine rapidograph pen. The words Elias and Buffalo are then added using transfer type, gothic face, 8 point and 6 point respectively. This tissue is then applied to the fuselage frame making certain that the design is properly positioned. The registration numbers on the rudder are applied in a like manner, using 24 point bold condensed face. Finally, give these details a light coat of decal protector. The convertible cabin is covered with dampened tissue. You will find the aft tapered section difficult to cover without wrinkling.

The original aircraft was painted yellow excepting the forward fuselage and cabin which were black. See side view for color demarcation. All struts are black with the bottom portion of the shock cover silver. One final bit of trim detail is the circular design on the rudder. Amusing now but no doubt considered appropriate in the late twenties, it consists of a swashbuckling pilot in jodhpurs, boots, helmet, goggles and flying jacket. This was painted with thin acrylic washes on light bond paper. The choice of colors here is largely conjecture. I painted the helmet and jacket brown, jodhpurs tan, boots black, wreath surrounding the pilot green and the background light blue, the scarf white, of course. Fuel tank and filler cap, oil filler neck and cap, cylinders below the cooling fins, engine crankcase, rocker arms and tail skid are silver. Gray thread is used on all cables and flying wires. Yellow 1/32" tape was used to define the cabin doors against the black.

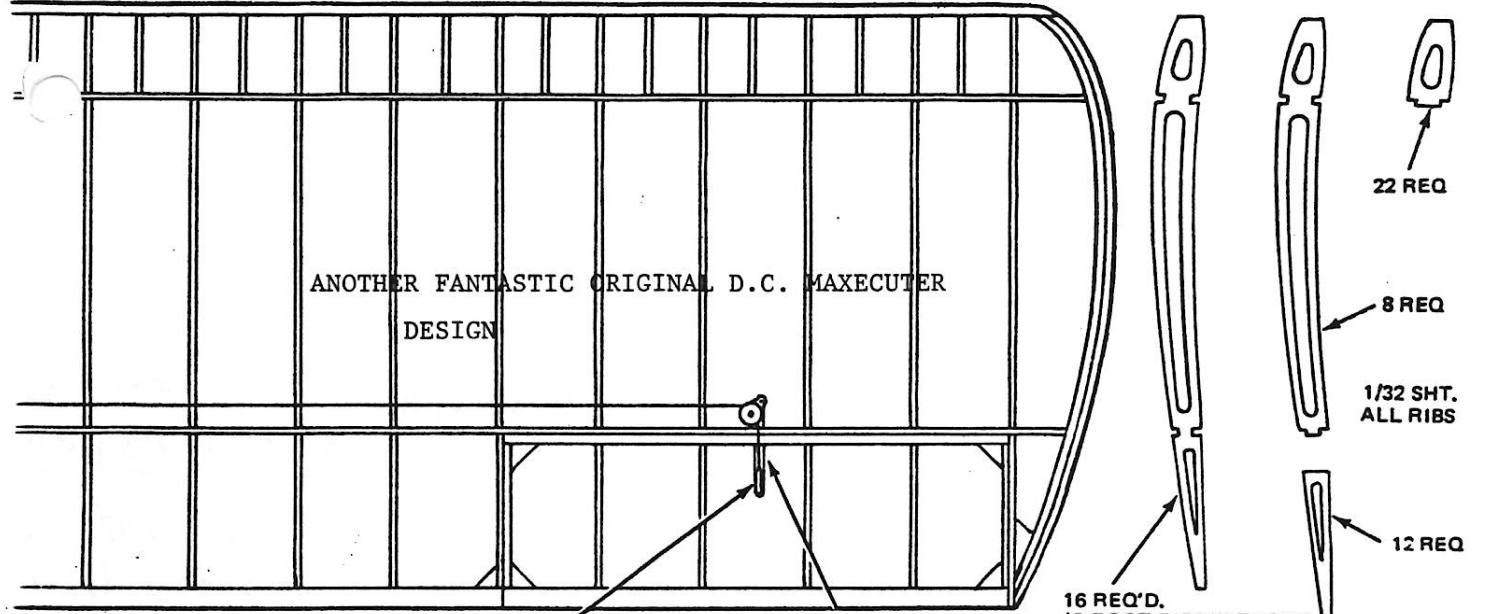
ASSEMBLY

To facilitate the assembly of the cabane struts I cut a jig from sheet balsa with the shape conforming to the bottom wing contour and the cabin top with two slots cut out to accommodate the cabanes where they join at their tops. This is taped temporarily over the cabin, centered over the fuselage and perpendicular to it. Forward cabanes should attach at the forward spar and rear cabanes should attach at the rear spar. After horizontal and vertical fins are glued to fuselage, attach bottom struts which are formed from 1/32" x 1/40" balsa. Glue wing onto cabanes and when dry add wing struts formed from 1/16" x 1/8". Sand all struts to a streamlined shape and paint black before installation. Add landing gear shock strut, oil filler tube and cap, steps and fuel valve and line and tail skid. Flying wires and control horns can also be added at this point. Do not affix control cables until flight adjustments have been completed. You can form your own wheels of laminated balsa.

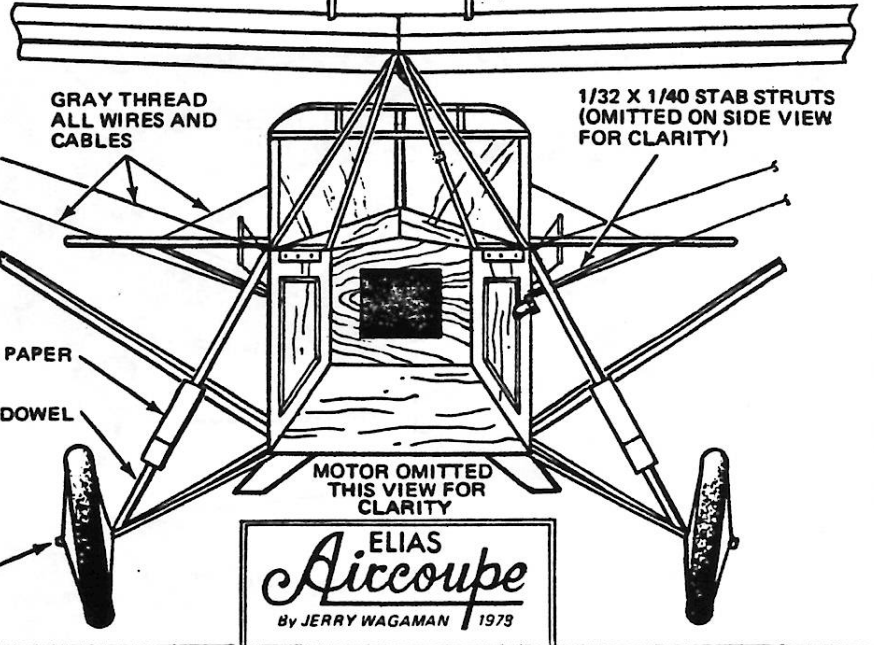
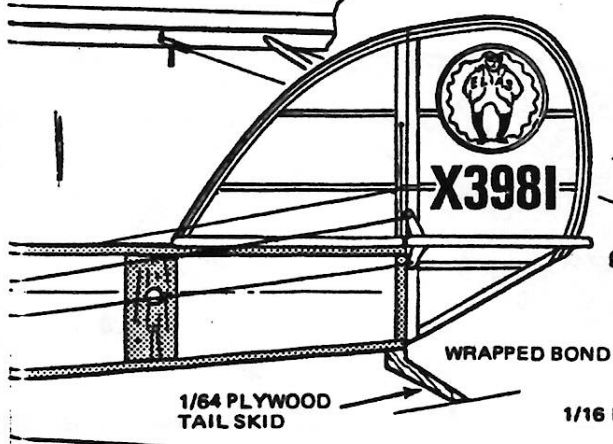
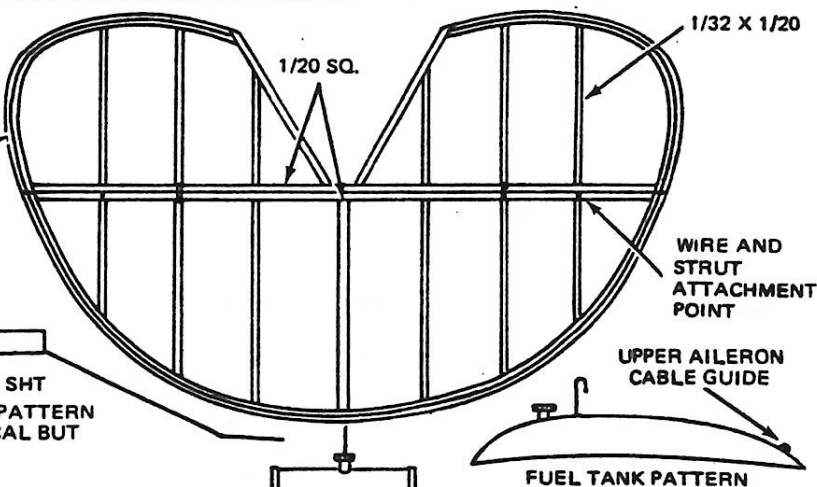
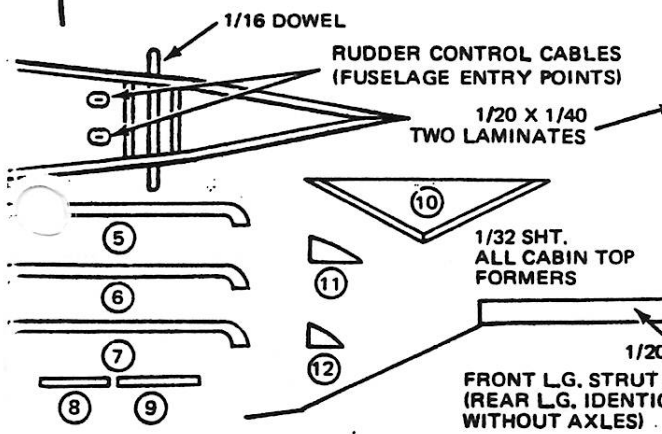


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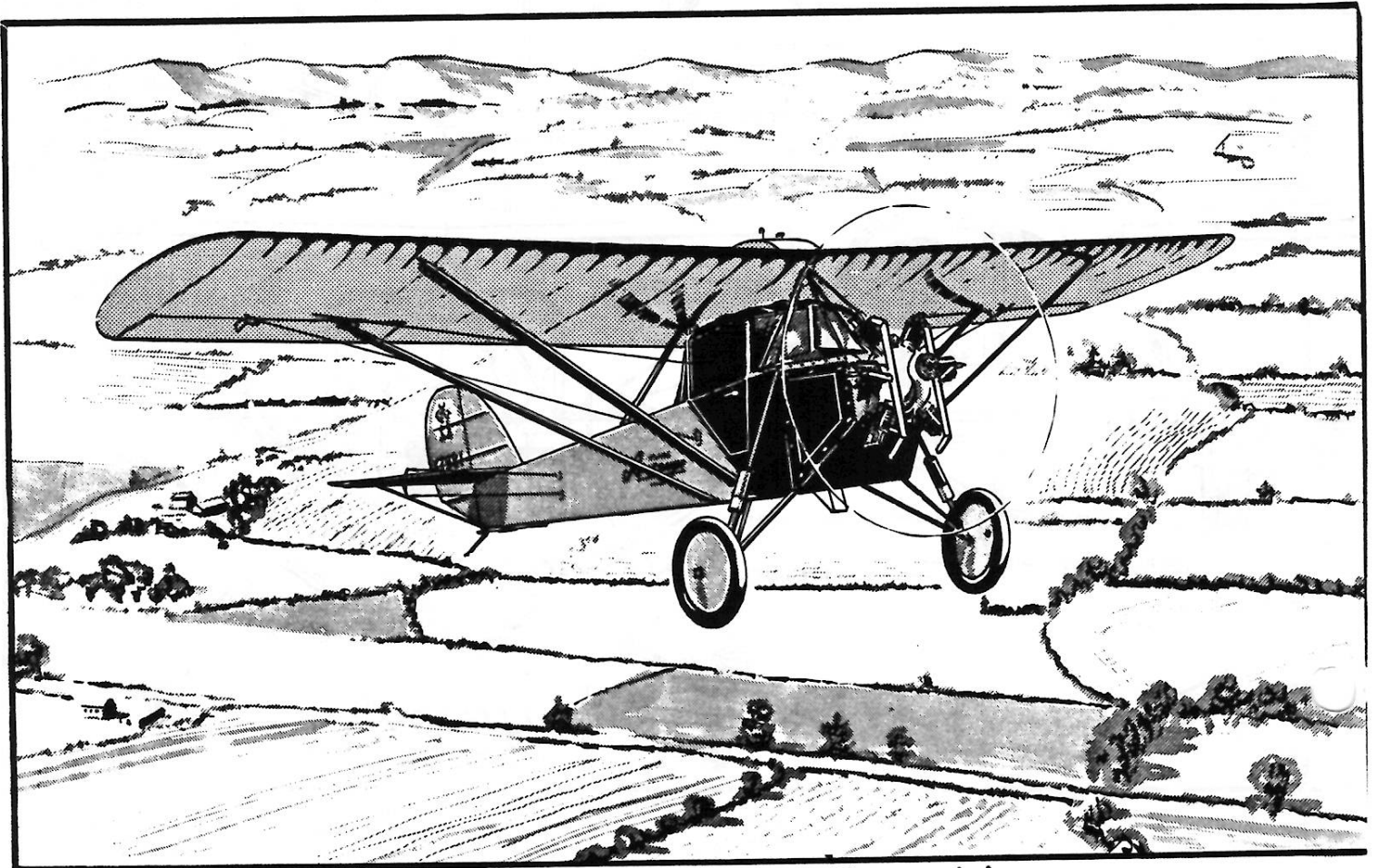
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