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BLUE FLIGHT- POTOMAC PURSUIT SQUADRON, F.A.C.

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

"MAX FACTS" OCT, NOV, DEC 1977

MEETING DATES--Dec 7 and Jan 5--try to attend

CONTEST SCHEDULE

November 18	D.C. Maxecuter P-Nut and Walnut Scale Indoor Contest at Kennedy High.
December 3	ERIE, PA. Indoor meet--check Model Aviation for details.
December 16	D.C. Maxecuter Hi-Flyer Contest at Kennedy High--see last month's Max Facts for the obstacles, I'm sorry, I mean the RULES by Da Shanz HMFIC.
January 28-29	D.C. Maxecuters-M.A.S.S. Indoor Contest at Andrews AFB. This contest will be a biggie! Should have a notice in this issue on events.
June	G.H.Q. F.A.C. Meet in Durham Conn. Let youknow dates later--hope to have a WW II skirmish between tem and the D.C. Maxecuters.
July	Schoolyard Scale Contest
August	Summer Fun Fly

CLUB NEWS by Pat Daily -- MERRY CHRISTMAS AND HAPPY NEW YEAR --

Well those dates above are sure to keep a lot of you diehards busy bending balsa all winter. We hope to confirm the dates on the summer events as soon as possible. As many of you already know, we have discussed the contest schedules at our last two meetings and have made the following decisions: We decided to limit our official Maxecuter contests to one large indoor contest, preferably at Andrews AFB, in the winter. We have scheduled it for Jan 28 & 29 1978 and this will be our 4th annual event there. It sort of becomes traditional doesn't it? In addition to our one large indoor meet, we will have our annual club OHLG and Catapult Glider contests in the summer months. These have become traditional and very successful, thanks to Bill Clarke's hard work along with that of John Sites. We also will have one R/C schoolyard scale meet in July, similar to the one we had this year. These seem to be catching on, so we will continue in that vein. And finally, we will have the late summer fun fly in late August with the Thompson, WW I, WW II, and Embryo and OHLG events that was so successful this year. We could schedule other contests based on the club members desires, but these 4 planned events will become annual contests, so plan on them and start building now.

In this issue of MAX FACTS we will have some nifty plans for a Curtiss XP-55 thanks to Allan Schanzle's super magazine collection, a review of the Fokker DVIII by Stew Meyers, C.A.V.U. by Rolfe Gregory, and a review of Jim Jones neat balsa stripper. In addition there is a request for trim articles by Paul Spreiregen, and the assorted palaver that usually fills these pages. Cover art by "MAX" the mysterious Maxecuter ace shows a Fokker DVIII flaming a--could it be, is it possible -- it is!, its a LACEY! One for our side!

CLUB NEWS continued

BULL SESSIONS-BULL SESSIONS-BULL SESSIONS---yes clubsters, they are back again by popula demand. You veteran Maxecuters know what fun we have had the last two winters when we meet a various clubster's homes and shoot the bull, spin the prop, and bend a few elbows all in the name of modeling. Well gang, they have started up again. Old man winter is upon us, or will be soon, and the evenings are awfully short--too short to fly outdoors, so its time to start up the sessions again. Actually, the first session was held on Nov. 4 at the home of Paul Spreiregen and his lovely wife Rosehellen(? my spelling is bound to be off). Anyway it was a delightful evening with several Maxecuters and their wives attending. The next two sessions are scheduled as follows: December 9 at the FLYLINE MODELS FACTORY with Hurst Bowers hosting--bring your own beer! See map in this issue of MAX FACTS on how to get there. The January session will be held on January 6 at the home of Pat Daily. See map in this issue. Both sessions will begin at approximately 7:30 PM. Bring your own beer, old plans, slides, movies, magazines etc and relive aviation history!

SMITHSONIAN MOVIES-- The aerospace museum has been showing old WW I aviation flicks on Thursday evenings at 7:30 and they will continue through early December. They are lots of fun and FREE! They hope to continue with a Golden Age series of films in the spring--more on this later.

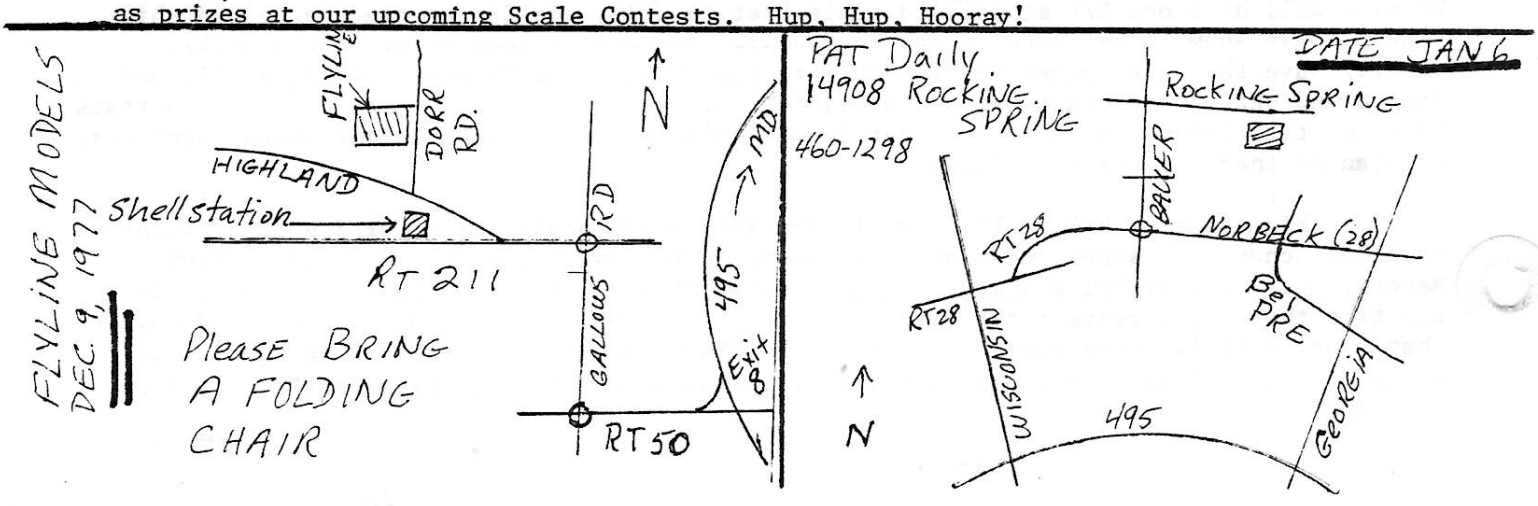
MAXECUTER ELECTIONS--as you can see by the letterhead, we have elected Stew Meyers and re-elected Ray Rakow to the coveted posts of Pres and SEC-Tres respectively. Congarats fellows!

F.A.C. News--just got a newsletter from the G.H.Q. gang and they have started their postal contests up again. Have two "wings"--outdoor and indoor, both have a P-NUT and a NO-CAL division. Simply fly your entry anywhere and anytime and send the results to G.H.Q. at 66 Bankside Drive, Bridgeport, CONN. 06606. Then whenever you better that time with that plane, send them an update. Contest lasts till May 78.

CLUB NEWSLETTERS -- Dennis Norman's CROSSWINDS recently put in a pitch for MAX FACTS subscriptions and we can at least do the same for him. CROSSWINDS is a nifty newsletter put out by the Cleveland FF Society and caters to rubber and FF scale and sport events and is well worth the $4 dues. For more info see Pat Daily or write to Dennis Norman 13885 Edgewater Dr.,Lakewood Ohio 44107. This is a really class newsletter and no self-respecting free flight scale man can be without it!

Bob Peck, of Peck Polymers, is also editing a newsletter from the San Diego area entitled Scale Staffel, I believe. I don't have the address handy while I'm typing this, but if you are interested contact Pat Daily for it.

MANY THANKS AND OUR EVERLASTING GRATITUDE GOES TO WALT MOONEY (the old Perfessor) and to Joe Fitzgibbon of GOLDEN AGE for so generously donating plans and similar items to be used as prizes at our upcoming Scale Contests. Hup, Hup, Hooray!



C. A. V. U.
By
Rolfe Gregory

As most of the Maxecuters know by this time, the Smithsonian is showing a gaggle of old aviation movies at the Air and Space Museum on each Thursday night. Last Thursday, the film was "Wings", the first Oscar winner, with Charles Buddy Rogers, Richard Arlen and Clara Bow. The really big one coming up, not on a Thursday but on a Wednesday, Nov. 9, will be Howard Hughes' "Hells Angels". This is a must for dedicated modelers or historical nuts because of the flying scenes. And besides, Howard Hughes took it off the market many years ago and no one has had a chance to see it for a long time - at least 25 years. The airplanes used, in most cases, were real World War 1 airplanes, not fakes. For example, I remember the Fokker D VII's were the real McCoy.

The showing of these films reminds me of how many old time movie actors became interested in flying, no doubt due to their exposure to airplanes because of their rolls in early aviation movies. Among them were Jimmy Stewart, Wallace Berry, Robert Taylor, Brian Ahern, Tyrone Power, Ben Lyon, Dick Powell, Edgar Bergen and Charlie McCarthy too! Many of these actors went on to become long time, excellent pilots, some of whom I had the good fortune to meet. One, I remember, was Richard Arlen, whom I met during one of his several trips to the Luscombe factory to ferry new airplanes back to California.

Once we had two days of real excitement at the Luscombe plant in 1940, when our sales force, always looking for publicity, set up a group delivery flight of about a dozen new airplanes. A group of movie stars was to fly the planes to California! In the group, as I recall, were: Jackie Coogan, Roger Pryor, (Roger who? - he was a Confederate general in the civil war, wasn't he?), Nancy Carroll, Faith Bennett, and others. (O.K. Junior, if you live long enough, someone is going to say to you, one of these days, "Ali McGraw, Jack Nicholson, Marie Osmond, Robert Blake, - who the heck were they?"). Anyway, although they are has-beens today, and some are dead, they were well enough known then.

The local citizens of Trenton, N. J. and the area mobbed the airport, especially the high school kids - half of the student body must have cut classes that day. They were going ape getting autographs. Some of those giving autographs weren't even movie people or connected with the flight group. I was asked for my autograph and, though I tried to explain who I was, the kids didn't believe me, so I ended up signing several autograph books.

The flight of all the new planes got away without a hitch, and it was a beautiful sight to see them take off, one after another, and watch them until all disappeared from view. The rest of the day seemed dull by comparison! Except for one delay, when they had to wait for one plane which got thoroughly lost somewhere over Texas, they all reached California without any problems. That plane was flown by Jackie Coogan. Coogan must have learned to navigate somewhat better later on because he got into the Air Corps during W.W. II. Though he was far from being an ace, I understand he did a creditable job - at least he lived through it to play the part of the uncle in that nutty T.V. series, "The Adams Family". Come to think of it, he still owes me 4 bucks. He borrowed my car to go to lunch one day, at the Luscombe plant, and cracked the vent window by hitting it with his fist when it didn't open readily. He told me to get it fixed and send him the bill - which I never did.

I don't know what the whole thing proved, except maybe that these characters could learn to do something besides "play-acting", and, of course, it gave Luscombe employees a couple of days of little work and great excitement. In a later C.A.V.U., I hope to tell you about another couple of days of excitement for Luscombe builders when Warner Brothers actually shot a movie at the Luscombe Airplane Corp., and gave employees a chance to be "play-actors" themselves!

OPERATION TRIM

In the interests of improving the flying performance of our justly famous models, the club is embarking on a survey of trim methods. We'd like you to describe the trimming of your better model aircraft so that we can see what techniques are in use. Mostly, we'll be able to see if there are any consistant systems for particular types of models.

My own collection of information is summarized as follows:

1. "Straighten Up and Fly Right" This is an old article I've saved for many years. Its about trimming outdoor rubber contest models. It advises right turn for power and glide. This means, for the prop, right thrust and downthrust. For the tail it means either right rudder or elevator tilt. Some wash-in on the inside wing may also be helpful, depending on the tightness of the turn. Some stab wash was used on Korda's Wakefield.

2. Walt Mooney Pamphlet (Peck Polymers) Mooney advises left turn for P-Nuts, which means wash-in for the left (inside) wing to avoid loss of climb during the power burst due to excessive banking. His reasoning is that left turn cuts excessive climbing in low ceiling situations during power burst. He also says that for flat wings (Lacey or Fike) a right turn may be better.

3. Fred Hall Hall advocates right turn. This counteracts torque and can eliminate the need for any washing in the wing. His reasoning seems to be the opposite of Mooney's. It may be that Hall can do this because his models are ultra light and his power bursts are not great, relatively speaking. So he might not need excessive offsets on his prop thrust. This is sheer conjecture. Hall seems to use large fan-like props. His models seem closer to indoor endurance jobs.

Anyway, we'd like your wisdom. If you'd like to contribute to our survey. you might find the following format useful -- or make your own. Please return it to me, and I'll try to analyze it and summarize it in a future article.

1. Your general comments.
2. Type of Model -- parasol, mid-wing, low-wing, bipe, no-dihedral parasol, etc etc.
3. Your general trim preferences for particular types.
4. Prop trim (thrusts).
5. Wing wash-in or wash-out.
6. Prop diameter and pitch. (Do you warp a higher angle of attack into your prop just before launch ?)
7. Decollage (realtive angles of attack between wing and stab).

Please return information to:

Paul Spreiregen
2215 Observatory Place NW
Washington DC 20007
tel: 337-2887 (AC 202)

MAKE THAT STERLING PEANUT FLY

AFTER reading Herr Doktor Schanzel's long and involed set of rules on Hi-Flier restrictions, I am afraid I lost my initial enthusiam. My bag after all is modification of structures for lightness and efficiency- all neatly precluded by the rules. How do you reply to a set of instructions written like a Luftwaffe Technical Directive? Why of course you get another kraut to write a contradictory set.

Here then are my IdFlieg instructions on how to make a sterling peanut D-8 fly. Note there is one small change, you may follow these at your option, they are instructions to lift flight restrictions, not impose them.

Let's take a close look at the D-8 and see where we can improve it. The wing is fine, I would only add a 1/16 square piece along the inside of the bottom of the strut attach rib. Since this model has a very short nose moment we need to lighten the tail-- make it all from 1/20 square soft balsa. Most of the modifications to the fuselage and tail are shown on the accompanying marked up print. Afew more construction notes are given on a separate sketch page. Be sure to use pinned struts and light weight WWI wheels.

Naturally you will only use non-shrink nitrate dope sprayed on and a light fog of Floquill-Nitrate for the touch of color. And do add a pilot.

PINNED STRUTS are made by drilling a longitudinal hole in the end of the strut and hot stuffing in a short length of .015 music wire. Lately I have been using soft #28 steel wire and a #80 drill. However for peanuts a drill made from .009 music wire and soft .008 wire as the pin works even better. The Vee's for the cabine struts and under carriage are made over a true length layout with a piece of soft wire bent in the Vee angle pinning these togeather. Then a drop of hot stuff. Try it , it works. The other ends are then drilled. Don't glue the pins in yet. Drill the longeron where you want to attach the strut. Spot glue the jig in place. Sand the strut ends to the correct angle, redrill the hole and hot stuff the pins in place in the strut only. Now make the third tripod cabine member. Pin the lower end. Glue the top into the tripod and drill the upper end for the wing attach pin. This tripod can now be removed at will as an alighned unit. After covering and finishing it will be glued in with ambroid. Not Hot stuff, after all you might want it to come apart again with out removing a piece of the longeron. The rear and u/c struts are similarly pinned.

LIGHT WEIGHT WWI WHEELS can easily be made in less than an hour. These weigh .3 grams each compared to .2 grams for the $6.00 Fulton Hungerfords and 2.0 grams for the non-scale Sterling kit wheels.

Draw a 3/4 inch dia. circle on a pice of 1/8 balsa, locate the center and drill out to 1/8 dia. Cut out the circle slightly oversize. Hot stuff a short (one inch) length of 1/8 dia. dowel perpendicularly in the hole. Mount this in a Dremel tool and sand to the final contour. Stiffen the edge with hot stuff or ambroid and wax with a crayon when dry. Cut a small notch in the edge 1/64 deep. Cut a strip of soft 'a' grain balsa 1/8x1/32x11 and soak in water.

Hot stuff one end in the notch. Trim to the contour of the form AND wrap it around the form under tension. Locate the end for a slight overlap after four wrapsand trim it off. Brush the outside with wite glue and rewrap under tension. Hot stuff the end-it works under the white glue and water like "liquid plumber". Now bake this for 20 minutes @ 200 degrees F.

Cut a 3/4 inch dia. circle from medium hard 'c' grain balsa. Again cut slightly oversize. Mount a 5/16th length of 1/16 O.D. aluminum tubing perpendicularly in the center. Spot it with hot stuff. Spin it on a 1/32 wire. If you like the track, build up the hub joint with baking soda and hot stuff. Not too much mind you we are building a light weight wheel.

By now the tyre has cured. Mount the 1/8 shaft in your trusty dremmel, or twirl it like mad between your fingers. After tapering the overlap sand the out side round, then sand the corners to the 1/8 dia tyre cross section with an emory board. Cut the inner and off the form and pop the tyre off.

Now with sandpaper wrapped around a 3/8 dia dowel and held diagonally across opposite inside rims of the tyre, rotate the tyre. This will sand the inside coutour very nicely. Make a swipe around the inside to remove any wax that may be left. NOw check to see if your 1/32 balsa disc fits inside of the tyre. If it does not, mount the 1/16 tube in the dremel and touch lightly to an emory board until it does. When it fits hot stuff it dead center in the tyre. Paint the tyre black with nitrate floquill. Make a set of bond paper covers, paint them and glue in place. A cutting compass made from a #20 über blade in a bow compass works fine here.

FLOQUILL-NITRATE DOPE is the answer to light weight color. Take a small jar of Floquill lacquer and let it sit, all the pigment will settle to the bottom. Pour off the thiner and replace with nitrate thinner. Add two ball bearings or shot about .10 or so in dia. as an agitator. Replace the cap and shake it. you will find the pigments go into solution much faster than they did with the original Floquill DiSol solvent.

You can now use this as a lacquer to paint small parts. It dries in a matter of ~~if~~ minutes compared to hours for regular floquill. However there is a drawback, it will chalk and rub off. Not bad for exhaust stains or delicate parts which are not subject to being handled. Now if you add about 10 to 20 percent of this nitrated floquill to a low shrink nitrate dope that has been thinned about 50% for spraying, you have a superior covering, light weight, colored dope.

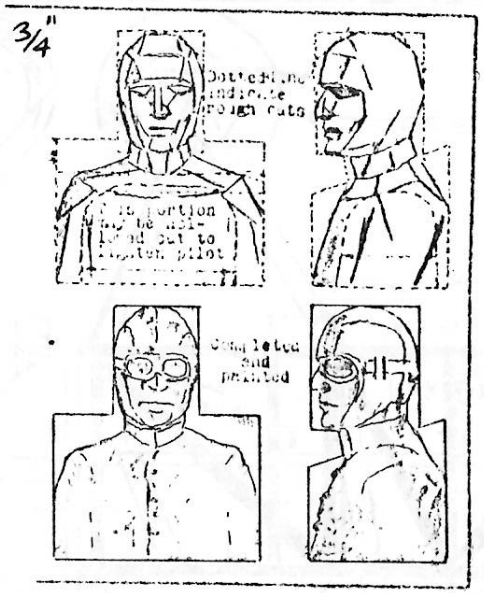
Since floquill is available in many neat colors from depot buff(old fabric) and depot green(olive drab) to such goodies as grime, rust, and engine black, you can mix almost any color you want. A light dusting with this floquill-dope will give a nearly opaque finish with very little increase in weight. Since all floquill colors except silver are matte finish, all the colored dope will also be matte finsh, and the higher the percentage of floquill the duller the matte. You can make a gloss finish by over spraying with a wet coat of clear dope. Naturally you are adding the weight of another rather heavy coat of dope.

I usually try to only mix as much colored dope as I expect to use in a weekor so, since the pigments tend to settle out. Some subtle change seems to occure after several weeks where by you can't get the pigments to go completely back into solution.

I find the new Badger 350 spray gun, which is a direct steal from Pashe works fine. These are currently on sale at squadron shop for $19.50. A trick to keep them working with pigmented paint is to ocassionally scrape the tip of the nozzle with your left little finger. Why your little finger? So if you handle the aircraft with your thumb and fore finger you won't leave a painty print.

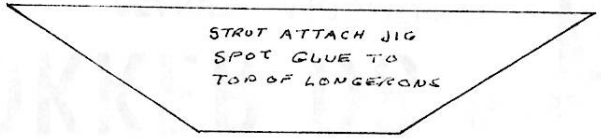
PILOTS FROM POLYSTYRENE- The time has come when we all agree that a scale job sans pilot looks out of control and definitely out of scale. Profile pilots seem to be in vogue, but exxcept for profile jobs, I feel they are profane. You can carve one from expanded polystyrene that will weigh nexxt to nothing and look real nifty. Carving a pilot is really no more difficult than carving an air scoop etc. except that critics are a little more sure of what the item should look like. Exxpanded foam (Koppers Dylite) works well and is free in packing material. It can be cut with a fine fret saw or sharp knife. Cut the rough templates and start hacking. Remember, you can always cut away material, but not add it back--sogo slow, thin slices with a slight sawing motion seem to work best..Use water based paints and glues with foam. I like Poly S paint and R/C 56 white glue best. With small pilots, it is best to mount them on a toothpick or dowel so as to have something to hold while you carve and paint Dennis Norman likes to shape pilots by pressing with pin heads, but I find the material too springy to work well in this manner. Maybe he uses regular open core foam.

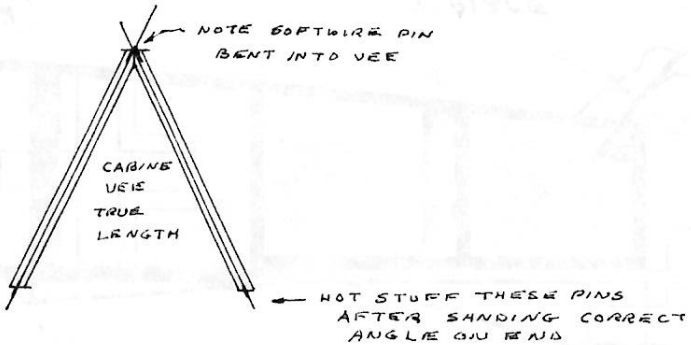
Stew

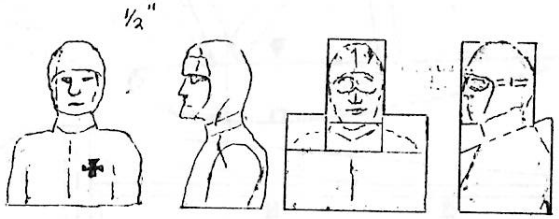


GENUINE CLEVELAND PILOTS

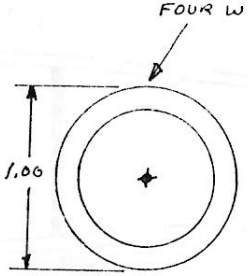
STOLEN FROM E.T. PACKARD

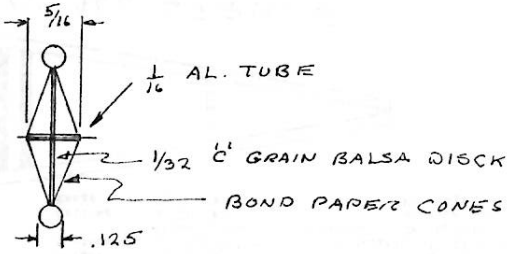


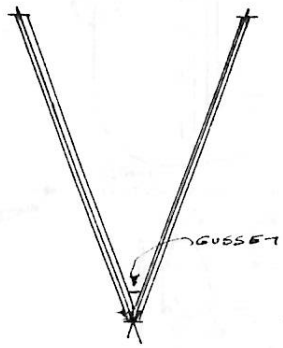




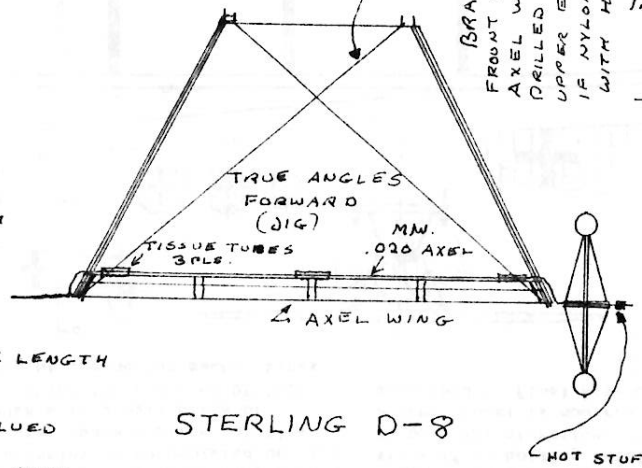
BRACE WIRES IN PLANE OF FRONT STRUTS - HOT STUFF TO AXEL WING - PULL THRU HOLES DRILLED IN FORMER #2 HOT STUFF UPPER END UNDER TENSION - IF NYLON USED, CAN TENSION WITH HEAT.



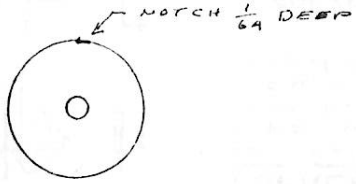




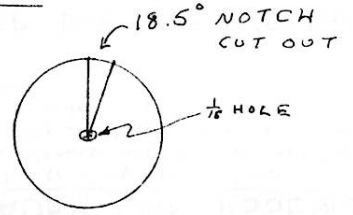
UNDER CARRAGE TRUE LENGTH



LIGHT WEIGHT WHEELS



3/4" DIA TYRE FORM



13/32" DIA PAPER CONE PATTERN

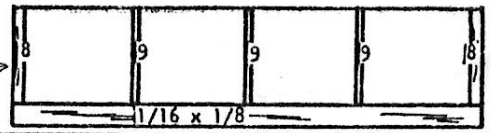
OUTER TISSUE TUBES GLUED ONLY TO 1/16 SPAR
INNER TUBE GLUED TO AXEL AS WELL

STERLING D-8

7

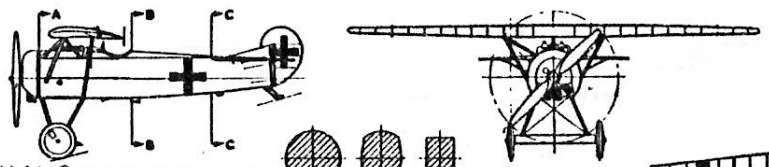
covered white. COVER BOTTOM OUTER PANELS OF WING using 1 piece for each panel: Cover top of wing in 3 pieces; center section and outer wing panels. If any problem of wrinkles is encountered on tips or center section, use separate pieces of tissue. COVER STAB AND RUDDER with single piece of tissue for each side. COVER TOP & BOTTOM OF FUSELAGE using one piece of tissue for each. Sides

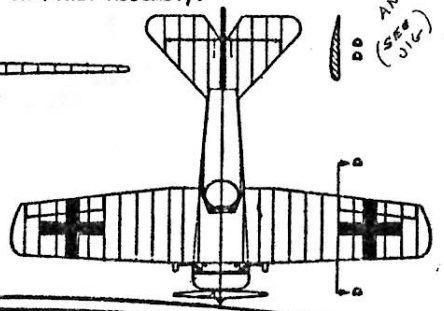
low to dry in same manner. Check that wing and tail surfaces are free of warps before assembling. Warps can be removed by holding over steam (from boiling kettle) and twisting gently in opposite direction. Hold until cool and check again. Model is now ready to be assembled as described in Final Assembly.



SPREADER BAR ASSEMBLY

Cut 1/16 x 1/8 trailing edge to length and pin to plan. Do likewise with 3/32 sq. leading edge. Cement ribs #8's and #9's in place as shown. Cut 1/16 sq. spar to length and cement into nothces in top of ribs.

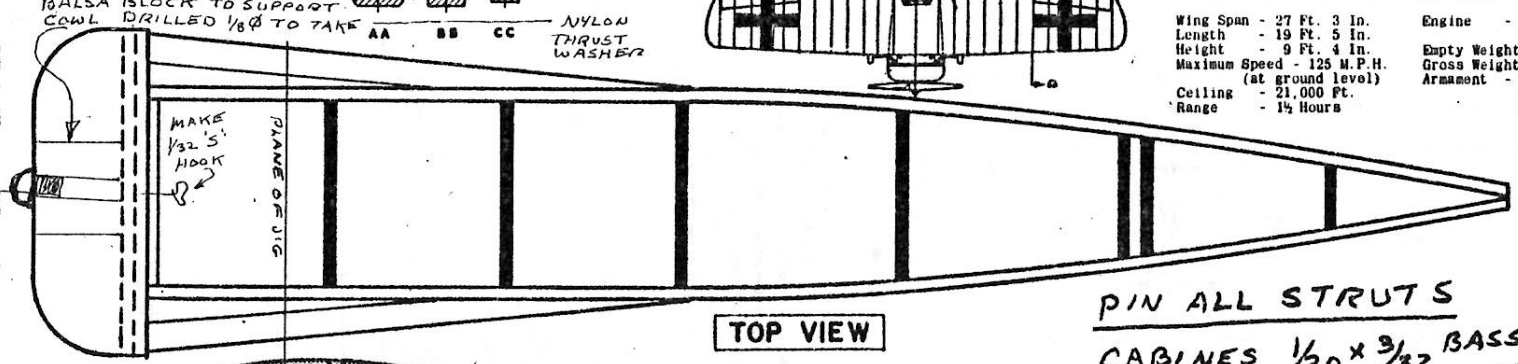




BALSA BLOCK TO SUPPORT COWL DRILLED 1/8Ø TO TAKE NYLON THRUST WASHER

FOKKER D-8 SPECIFICATIONS

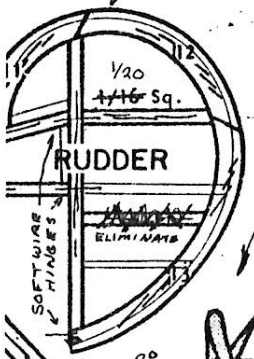
Wing Span - 27 Ft. 3 In.	Engine - Le Rhone 110 HP, Oberursel 140 HP
Length - 19 Ft. 5 In.	
Height - 9 Ft. 4 In.	Empty Weight - 891 Lbs.
Maximum Speed - 125 M.P.H. (at ground level)	Gross Weight - 1,331 Lbs.
Ceiling - 21,000 Ft.	Armament - Two Spandau Machine Guns on Fuselage
Range - 1½ Hours	



TOP VIEW

2° RT

SOAK A SOFT 1/20 SQ STRIP & MOLD AROUND CARD BOARD FORM



PIN ALL STRUTS

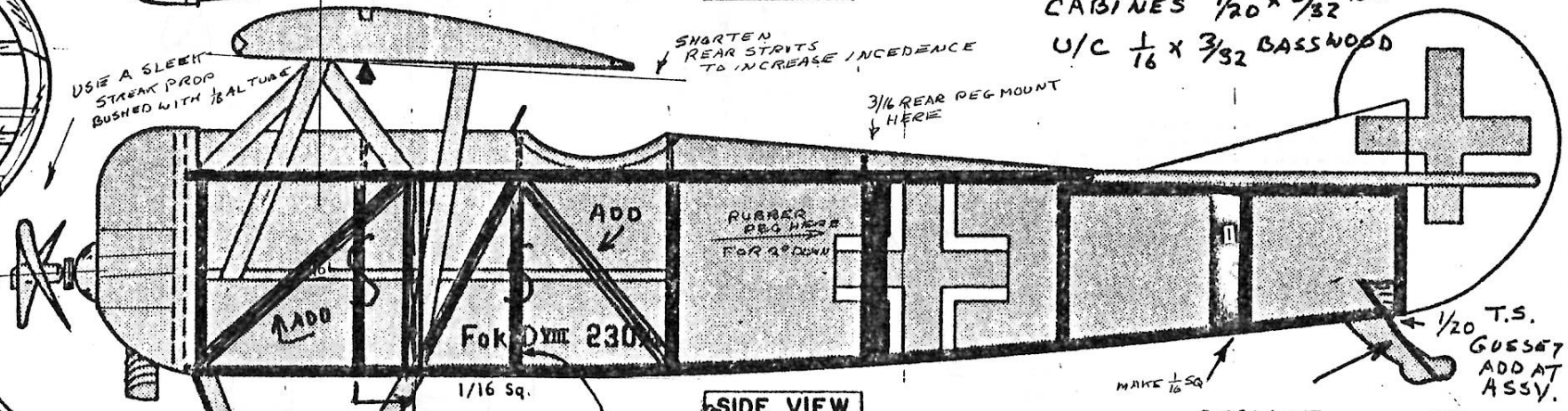
CABINES 1/20 x 3/32 BASS WOOD

U/C 1/16 x 3/32 BASSWOOD

SHORTEN REAR STRUTS TO INCREASE INCIDENCE

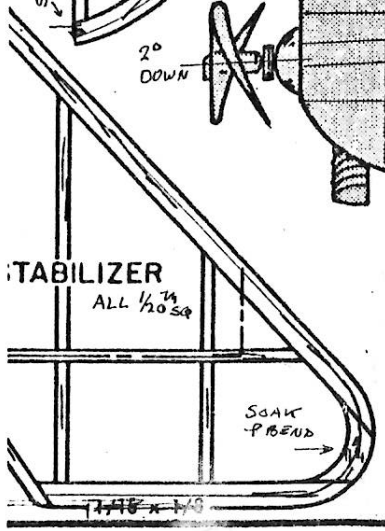
USE A SLEEK STREAK PROP BUSHED WITH 1/8 ALTUBE

3/16 REAR PEG MOUNT HERE



SIDE VIEW

REPLACE BALSA TAIL SKID WITH THIN BAMBOO 1/32 x 1/20



USE LT. WHEELS

FOKKER D8

KIT P-1

MODIFIED

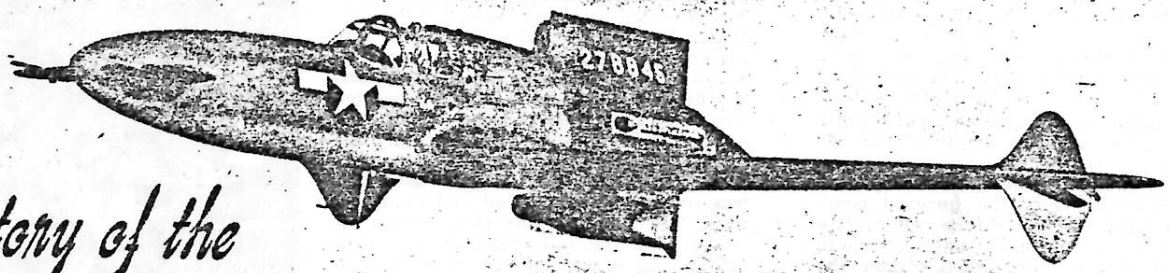
PEANUT SCALE

RUBBER POWER

THE HOBBY INDUSTRY OF AMERICA PROMOTES ACHIEVEMENT

Sterling Models Inc.

RIAM67M30



Story of the CURTISS XP-55 ASCENDER

TRY everything!" might well be the motto of the Air Technical Service Command of the Army Air Forces, which is charged with the development, production and delivery of our flying war weapons. Seemingly every possible avenue of research has been or is being explored energetically in the endless search for "better" tools of destruction.

A few weeks ago many of the results of this forward looking policy were revealed to the public, serving as an indication of the countless directions in which ATSC explored. Probing deep into such complex design ideas as the flying wing, pusher, remote drive, jet propulsion, light moulded woods, the canard and dozens of other such ideas still under development, our scientists sought all possible answers to the one simple question: "Will it work and will it be better than what we have?"

Since the Army undertakes no production, the construction of these fantastic designs was portioned out to private industry. Although the basic idea was ATSC's, much of the detail design and research was provided by hardworking engineering staffs.

To explore the possibilities of the canard type aircraft, ATSC awarded a contract to Curtiss-Wright Corp. for the design and construction of a plane embodying the principles of this "tail first" arrangement.

The chief advantage claimed for the canard type design is that it is stall-proof. This quality is achieved by setting the forward wing at a higher incidence than the main wing. This causes the front wing to stall first, thereby losing its lift and lowering the nose of the airplane. However, there are serious drawbacks to this idea. Since the rear (or main) wing, or at least a portion of it, must operate in the downwash of the front wing, its effective angle of attack is decreased, thereby prohibiting it from reaching its maximum lift coefficient. Add to this the decalage between it and the front wing, and it becomes obvious that the main wing cannot reach its angle of maximum lift, thereby increasing its landing speed considerably.

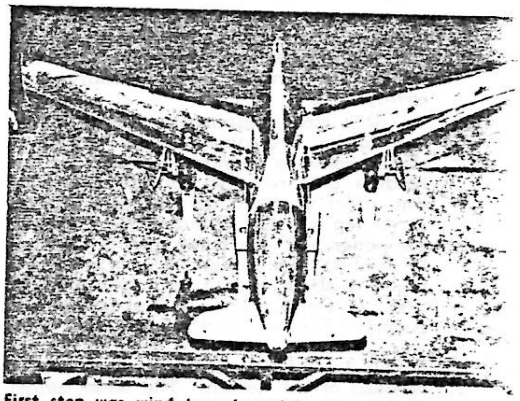
PLANE ON THE COVER

However, the XP-55 *Ascender* has no front wing, but instead has a controllable surface with a large travel. The fact that this front surface is not fixed precludes longitudinal stability, and obviously the *Ascender* cannot be flown "stick free" as can a stable airplane. The arrangement however can provide sufficient longitudinal controllability to insure stable flight.

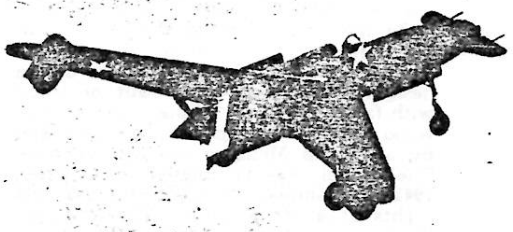
The downwash from the elevator results in a decreased angle of attack over the central portion of the main wing, thereby decreasing its lifting ability. This might be compensated for by incorporating a twist in the wing so that the entire wing might operate at a comparable angle of attack, but since the downwash angle from the elevator varies widely the idea is impractical.

With the engine located at the rear of the fuselage and concentration of weight in this aft region, it becomes necessary to provide considerable sweepback to the wing in order to bring the aerodynamic center in proximity to the center of gravity. Although sweepback provides

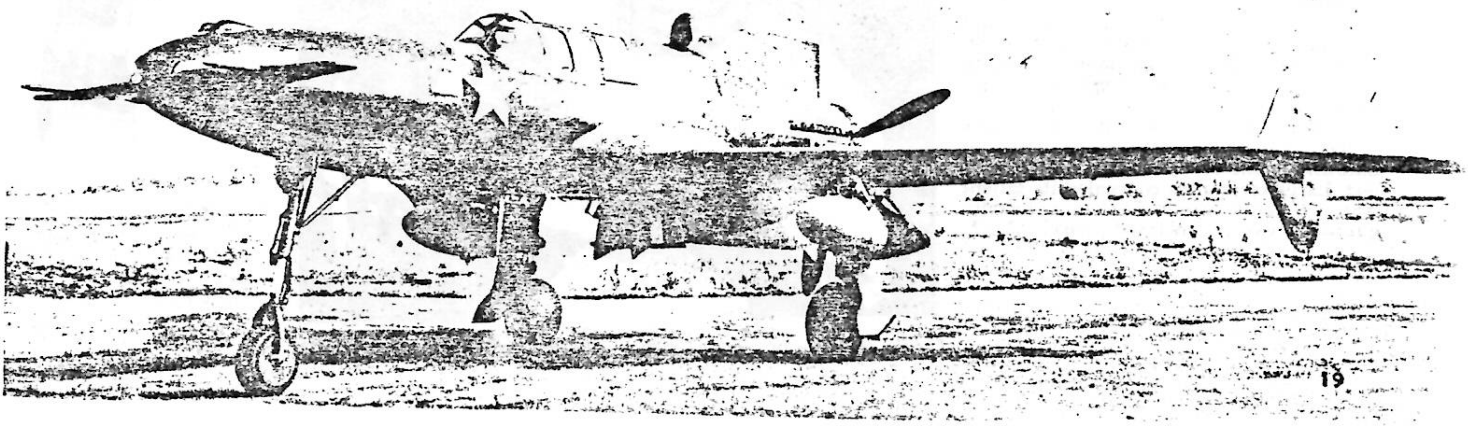
(*Turn to page* 66)



First step was wind tunnel model. It weighed 600 lbs., mounted electric motor, was ¼ scale.



Striking view of *Ascender* reveals characteristic shape of main components. Below, details of landing gear and auxiliary tanks under wing.



additional directional stability, its use lowers the maximum lift coefficient of the wing and increases the drag coefficient. In addition, sweepback provides a larger center of pressure travel thereby making longitudinal stability more difficult when conventional airfoil sections are used.

Elimination of the conventional fin and rudder with its large "volume" on the longitudinal axis of the plane impairs directional control, although stability may be preserved. Only the forward component of the side load on the rudders are effective in setting up a yawing moment, whereas in the conventional tractor the total side load is effective. Location of the rudders near the wing tips also introduces inertia loads hampering the rolling moments produced by the ailerons.

Thus, obviously, the design of a canard type aircraft is a difficult job requiring great compromise and extensive research in order that the widely varied factors, each with inherent disadvantages unto itself, be integrated into a single successful airplane having performance and fighting abilities superior to conventional planes in service, both friendly and enemy.

With a clear impression of the difficulties to be overcome at the outset, it should come as no surprise to thoughtful readers that research on the *Ascender* was under way long before Pearl Harbor. First step was the layout of the principal components of the plane and the setting forth of its basic design. This was undertaken in the spring of 1941 by the Engineering Department of Curtiss-Wright Airplane Division in St. Louis, Mo. Next was the construction of a wind tunnel model to conduct tests on the fundamentals of the design. The wind tunnel model was to ¼ scale and of all metal construction. It weighed 600 lbs. and included a three-phase electric motor to run the scale propeller providing "power on" tests. The model was sent to M.I.T. where more than 600 tests were run during the summer of 1941.

On the basis of these tests a full size flying model was built in order to test stability and general performance of the design. The model was built of wood with fabric covering. Wings were of plywood construction; power was provided by a 275 hp Menasco aircooled engine. The model was completed in October, 1941, and shipped to California for test flights at a secret base. The first test flight was made December 2, 1941, and 5 days later the Japs struck Pearl Harbor.

During the spring of 1942 flight tests on the model were conducted. This first design was provided with a second seat so an observer might be carried to record the readings of the maze of test equipment carried. Various arrangements of control surfaces were tried. Numerous shapes and sizes of fins, rudders and control surfaces located in widely varying positions featured these months of experiment.

A continuous stream of reports and engineering analyses flowed back to St. Louis where the first airplane was being built in accordance with results of these tests.

On June 26, 1943, the first airplane was rolled from the hangar, unpainted and unfinished but ready for its first engine test. Large tarpaulins concealed its salient features as it was rolled to a heavily guarded, canvas-enclosed area. A. E. Honey, Superintendent of Experimental, peeled the tarpaulins back and the XP-55 was revealed to the sunlight for the first time. The big Allison engine burst into life and careful readings were taken. The following day the plane was weighed and the next few days saw it being painted and final installations being made.

On July 7 the work of disassembly began as it was made ready for transport to Scott Field. There on July 10 the plane was completely assembled and ready for tests. That day it was rolled from the hangar and the radio equipment tested. On July 11 it was taken out for its first taxi tests while veteran fliers from overseas lined the runways in amazement.

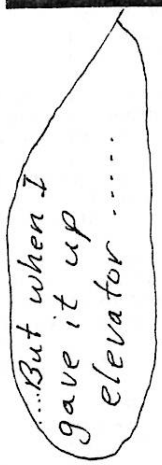
On July 13, 1943, Test Pilot Harvey Gray taxied to the end of the runway, turned the plane around, revved up the engine and released the brakes. After a short run the Curtiss XP-55 nosed into the air like a homesick angel on its first trip into the blue. Back on the ground the plane and pilot were deluged by Scott Field officers and enlisted men who were full of amazement at this strange bird which flew like a rocket, yet handled like a child's tricycle.

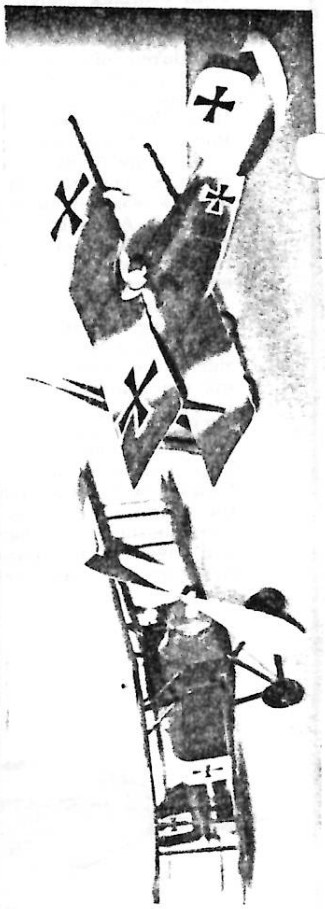
In August and September test flight followed test flight. In October, a second XP-55 *Ascender* was completed and more test flights made. In April, 1944, *Ascender* No. 3 took to the air under the control of Major E. W. Leach, Wright Field test pilot. And since then, hundreds of hours of time have been chalked up for the strange canard-type fighter planes and thousands of pages of engineering and flight test data recorded.

The enormous difficulties of the canard type have been outlined and it was to survey the possibilities of surmounting these difficulties that the Army Air Forces had the three XP-55 fighters built. In no other way could the exact, definite data be obtained concerning the merits and demerits of the type. The *Ascender* was not designed and built with the idea that thousands of them would be sent against the enemy. But they may yet fight in the guise of another, more advanced design of the canard type built upon the broad principles and applications of engineering features developed from the construction and test of the Curtiss XP-55 *Ascender*, a sturdy trial-horse of "things to come" in the air.

VICTORY

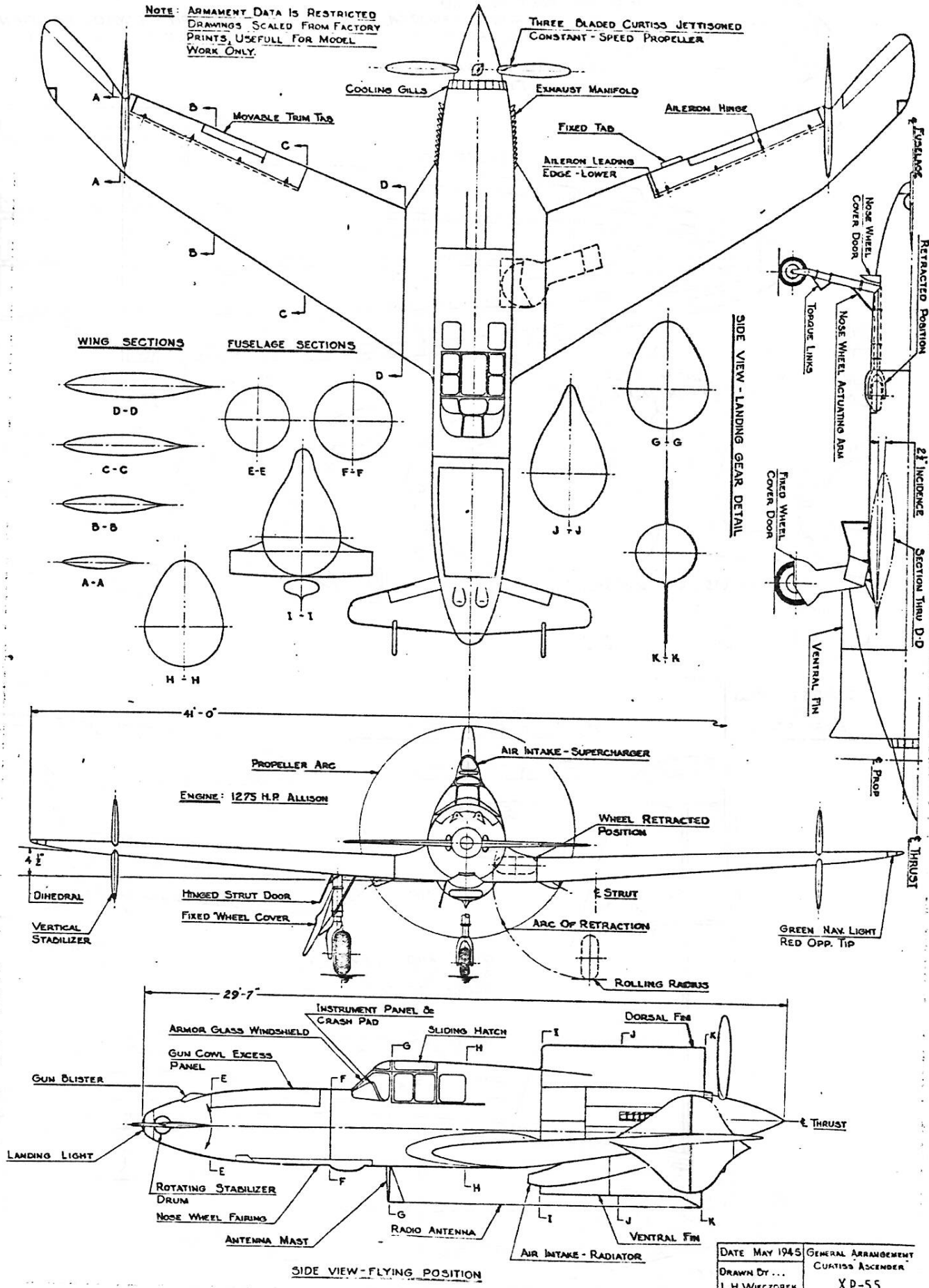
Hurst Bowers & Original Flyline Monocoupe

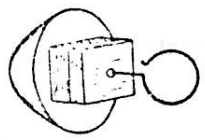




- Albatross DII's by Daily (1eA) & Meyers -

Allan Schanzle's Bie Hughes Racer

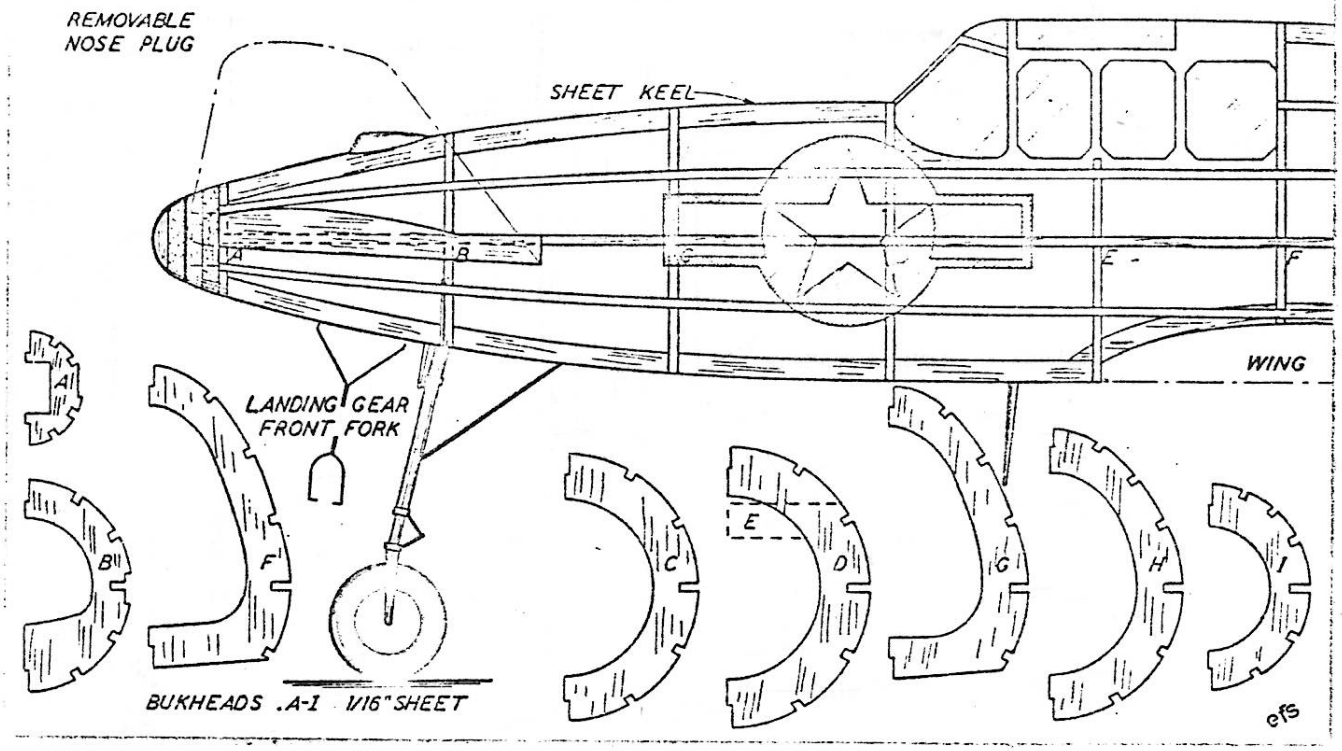

NOTE: ARMAMENT DATA IS RESTRICTED
DRAWINGS SCALED FROM FACTORY PRINTS, USEFULL FOR MODEL WORK ONLY.
THREE BLADED CURTISS JETTISONED CONSTANT-SPEED PROPELLER
COOLING GILLS
EXHAUST MANIFOLD
AILERON HINGE
FIXED TAB
AILERON LEADING EDGE - LOWER
MOVABLE TRIM TAB
WING SECTIONS
FUSELAGE SECTIONS
D-D
C-C
B-B
A-A
E-E
F-F
G-G
H-H
I-I
J-J
K-K
SIDE VIEW - LANDING GEAR DETAIL
NOSE WHEEL COVER DOOR
RETRACTED POSITION
TORQUE LINKS
NOSE WHEEL ACTUATING ARM
2½° INCIDENCE
FIXED WHEEL COVER DOOR
SECTION THRU D-D
VENTRAL FIN
41'-0"
PROPELLER ARC
AIR INTAKE - SUPERCHARGER
ENGINE: 1275 H.P. ALLISON
WHEEL RETRACTED POSITION
4½°
DIHEDRAL
VERTICAL STABILIZER
HINGED STRUT DOOR
FIXED WHEEL COVER
STRUT
ARC OF RETRACTION
GREEN NAV. LIGHT
RED OPP. TIP
ROLLING RADIUS
29'-7"
INSTRUMENT PANEL & CRASH PAD
ARMOR GLASS WINDSHIELD
SLIDING HATCH
DORSAL FIN
GUN COWL EXCESS PANEL
GUN BLISTER
LANDING LIGHT
ROTATING STABILIZER DRUM
NOSE WHEEL FAIRING
ANTENNA MAST
RADIO ANTENNA
AIR INTAKE - RADIATOR
VENTRAL FIN
SIDE VIEW - FLYING POSITION
DATE MAY 1945
DRAWN BY ... L. H. WIECZOREK
GENERAL ARRANGEMENT
CURTISS ASCENDER
XP-55



REMOVABLE NOSE PLUG

REAL AIRCRAFT HAS NO DIHEDRAL IN FRONT ELEVATOR, HOWEVER MODEL REQUIRES THAT AMOUNT SHOWN BE INCORPORATED FOR PROPER STABILITY

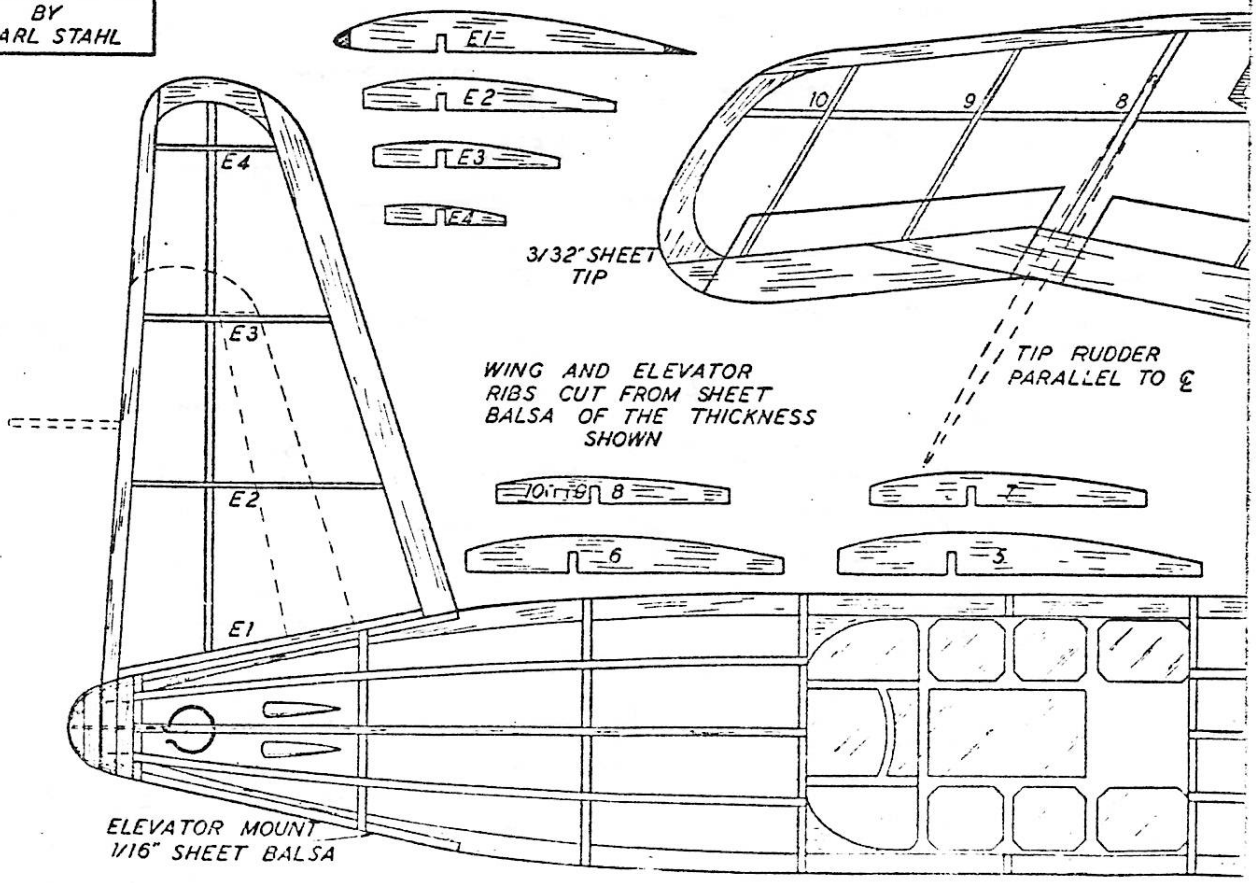
COCKPIT ENCLOSURE THIN CELLULOID; STRUCTURAL DETAILS DARK TISSUE



efs

CURTISS XP-55

CURTISS XP-55
BY
EARL STAHL



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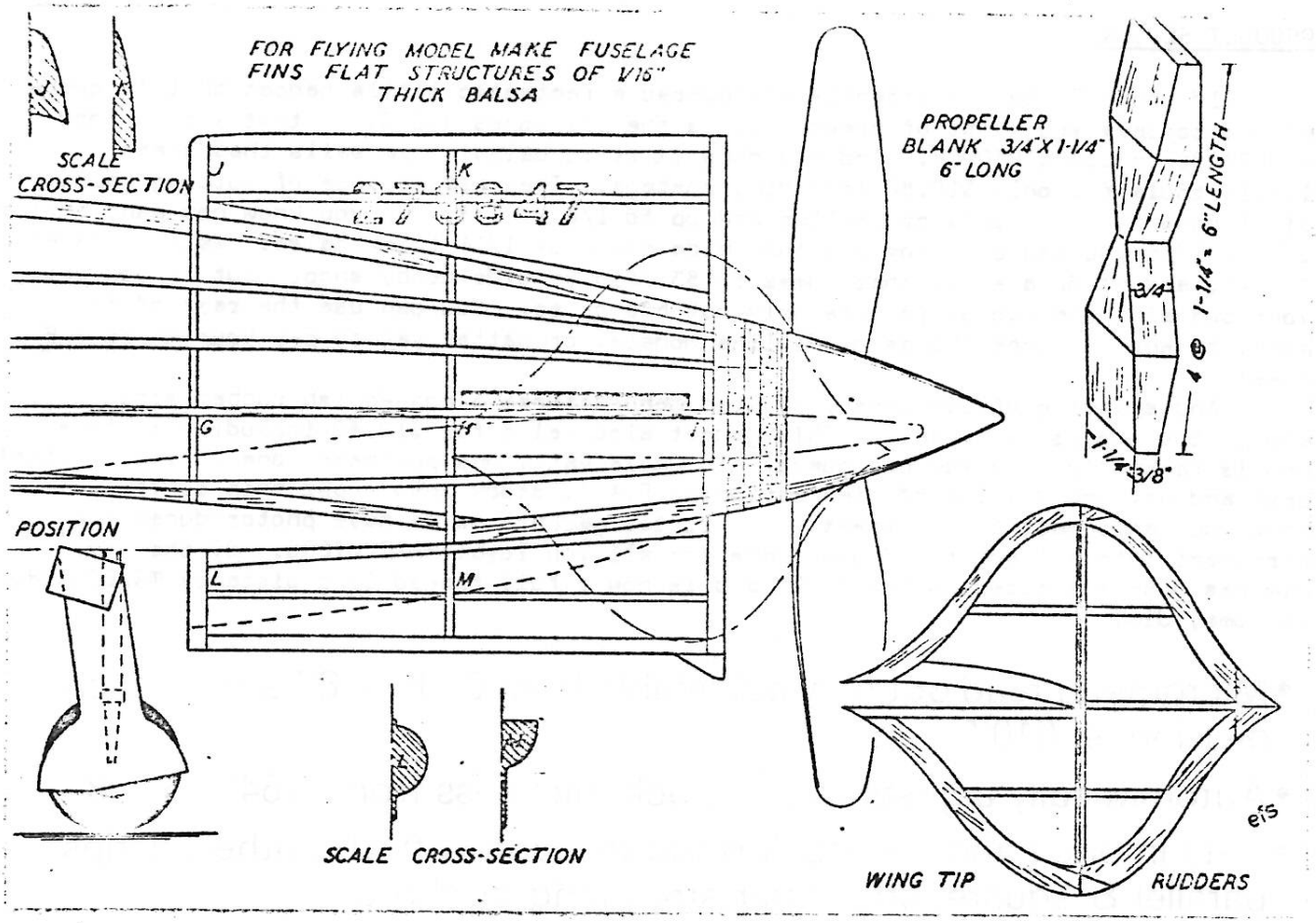
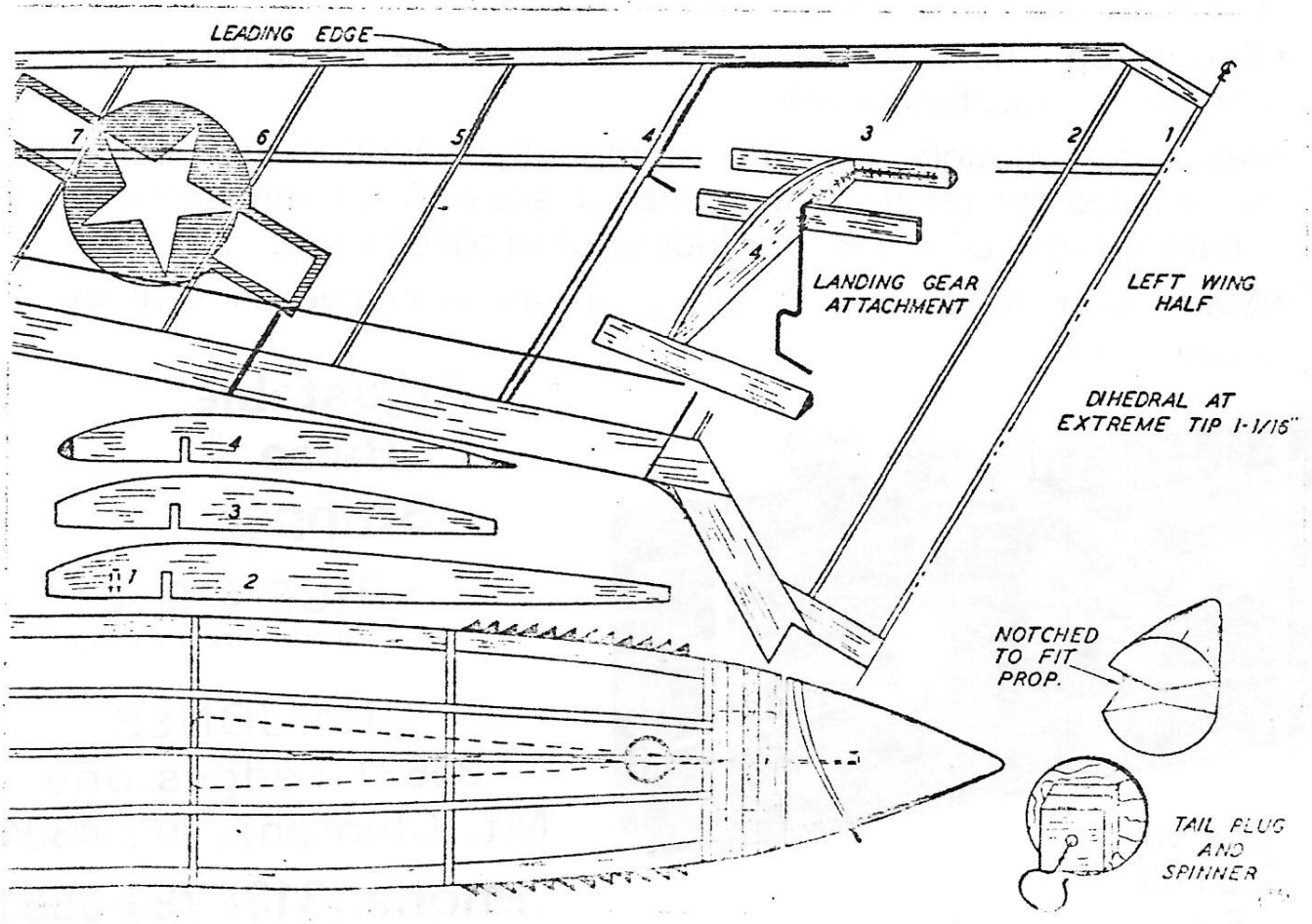

FOR FLYING MODEL MAKE FUSELAGE FINS FLAT STRUCTURES OF 1/16" THICK BALSA
SCALE CROSS-SECTION
J
K
G
H
I
L
M
POSITION
SCALE CROSS-SECTION
PROPELLER BLANK 3/4" X 1-1/4" 6" LONG
3/4"
4 @ 1-1/4" = 6" LENGTH
1-1/4"
3/8"
WING TIP
RUDDERS
ejs

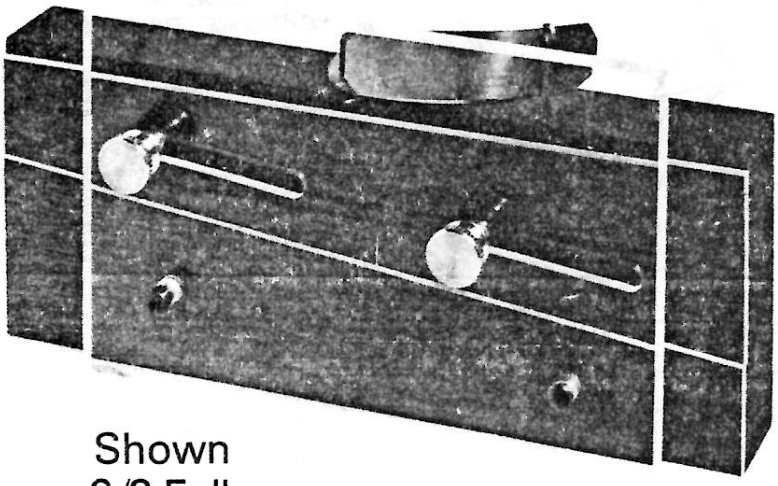

LEADING EDGE
7
6
5
4
3
2
1
LANDING GEAR ATTACHMENT
LEFT WING HALF
DIHEDRAL AT EXTREME TIP 1-1/16"
4
3
1
2
NOTCHED TO FIT PROP.
TAIL PLUG AND SPINNER

PRODUCT REVIEW

Old Uncle Patty has recently discovered a fantastic little gadget that is guaranteed to save you a lot of bread. It is the Jim Jones A.B.S. -- that stands for ADJUSTABLE BALSA STRIPPER. And boy does it strip balsa! Jim sells thes great little tools for only $10.80 including postage. They are capable of cutting balsa right down to 1/64x 1/64 or smaller and up to 1/8 x 1/8. Do you know how many strips of 1/16 x 1//6 you can cut from a 3 inch wide piece of 1/16 thick balsa? Well clubsters, its 48, and at 8¢ a strip that comes to $3.80in ye olde hobby shop, but if you cut your own with the A.B.S. you are only out 65¢ or so. You can use the rest of that money to spen on Gene Thomas or Flyline models, or better yet to pay your MAXECUTER dues!

And speaking of Jim Jones, he also manufactures a non-Polish rubber stripper , and it too strips right well. This gadget also sells for $10.80 including postage and is fantastic. As you can guess, old Uncle Patty has purchased one of lthese little gems and now spend a lot of time stripping F.A.I. stock into super thin stuff. I know you can't wait to buy these little gadgets so we have photoreduced the pertinent info and adress of Jim Jones for all you loyal MAXECUTERS. By the way, Jim has just suscribed to MAX FACTS and is now a full fleged long distance MAXECUTER. Welcome, Jim.

- Micrometer read out fully adjustable from 0'' to 1/8'' strips. Each division is .010''
- Automatically adjusts to the stock thickness from 1/64'' to 1/8''
- Held in one hand the stock is fed through with the other. Strips parallel & square, strip after strip, long or short.
- 6-1/4'' long, 3'' high, uses 1/2 a standard double edge razor blade.
- Shows up ''hard spots'' in the sheet while stripping, helps eliminate unusable pieces.
- Accurate enough for the competition indoor builder & unexcelled for penny plane, peanut scale, & all longerons & spars up to 1/8'' x 1/8'' for indoor or outdoor work.
- Made from hardwood & plexiglas—an attractive as well as useful tool.

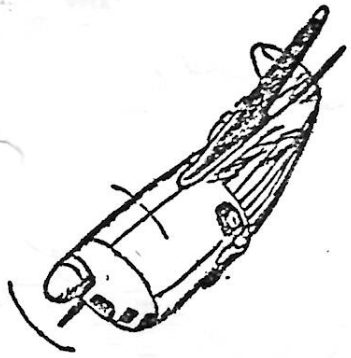


Shown
2/3 Full
Size

Adjustable
Balsa
Stripper

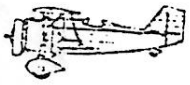
PRICE $10.80
Including Insurance & Postage

JIM JONES
36631 Ledgestone
Mt. Clemens, MI 48043
Phone (313) 791-0651



D.C.

MAXECUTERS



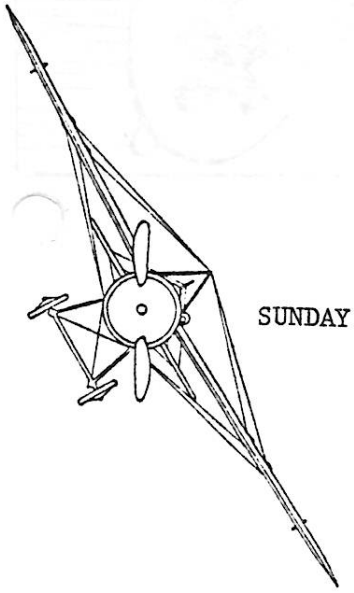
PROUDLY ANNOUNCE THE 4TH ANNUAL NATIONAL CAPITAL
INDOOR RUBBER SCALE CONTEST

INDOOR SCALE CONTEST --INDOOR SCALE CONTEST--INDOOR SCALE CONTEST -- INDOOR SCALE CONTEST

DATES: JANUARY 28 & 29, 1978 (Saturday and Sunday)

LOCATION: ANDREWS AIR FORCE BASE -- in the NAVY hangar --JUST OUTSIDE WASHINGTON, D.C.

EVENTS: SATURDAY 3-9 PM



AMA MONOPLANE SCALE AMA MULTIWING SCALE	SCALE JUDGING USING MOONEY RULES FLIGHT SCORES OF 1 POINT PER SEC UP TO 100 SEC --MUST R.O.G.
P-NUT MONOPLANE SCALE P-NUT MULTIWING SCALE	SCALE JUDGING BY MOONEY RULES FLIGHT SCORES AS IN AMA SCALE 10 SEC BONUS FOR R.O.G.

SUNDAY 10AM - 1PM

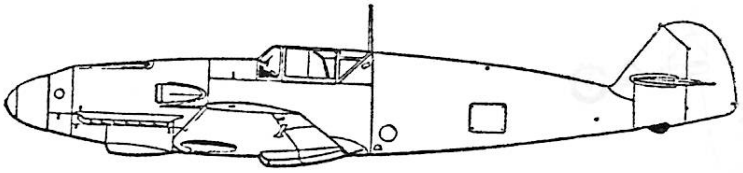
F.A.C. NO-CAL SCALE	USES F.A.C. RULES--profile shapes with 16 inch max span
F.A.C. WORLD WAR I DOGFIGHT	OPEN TO ANY WW I PLANE -- MUST HAVE APPROPRIATE MARKINGS -- USES MASS LAUNCH THOMPSON TROPHY TYPE RULES

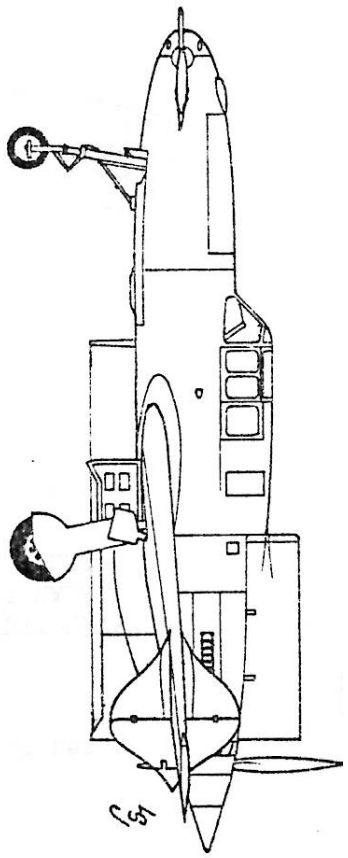
AWARDS: TROPHIES AND/OR MERCHANDISE TO THIRD PLACE, AWARDS FOR JUNIORS TOO!

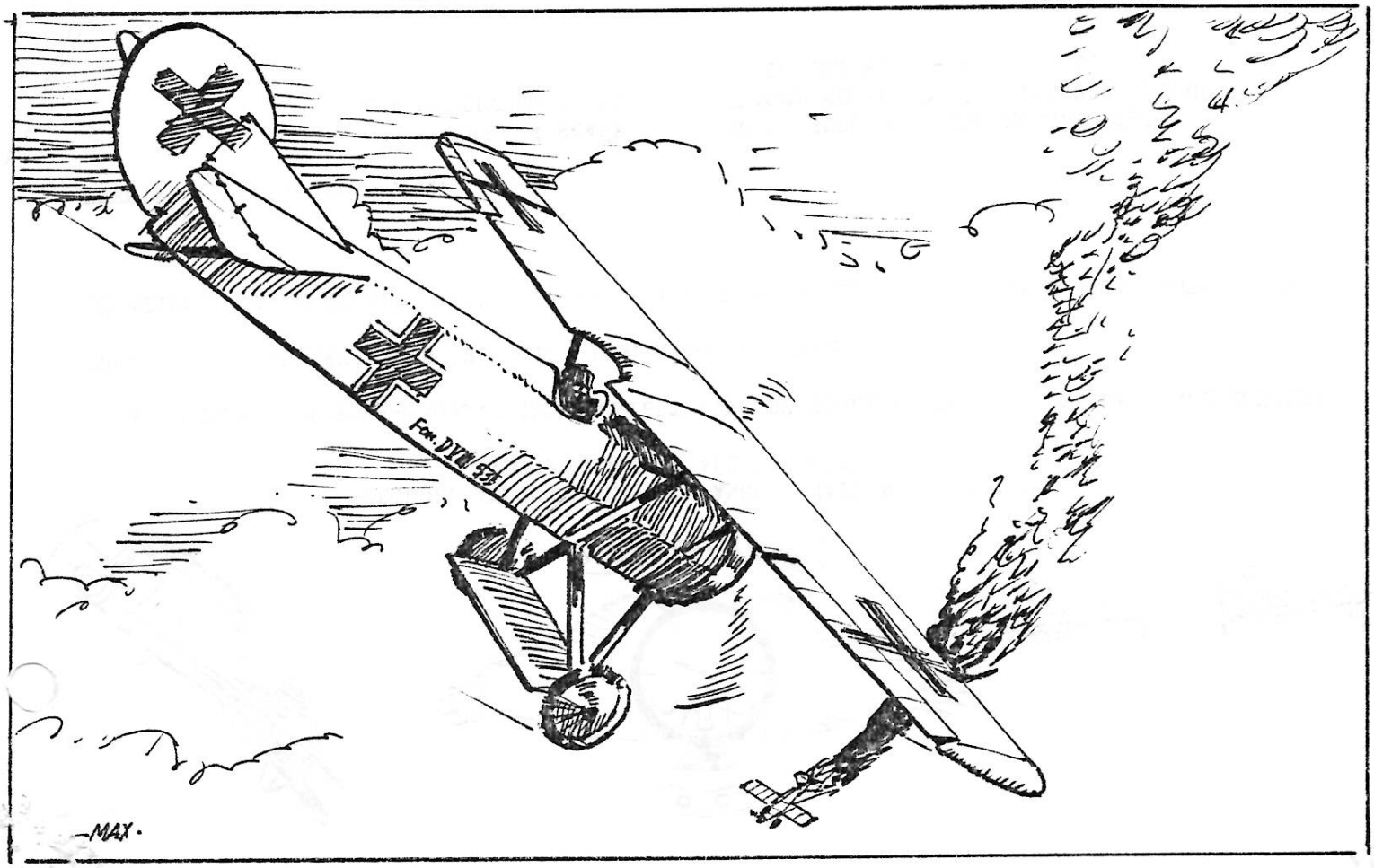
ENTRY FEES: $1.00 PER EVENT OR $3.00 FOR UNLIMITED ENTRY.

ADDITIONAL INFORMATION: CALL OR WRITE PAT DAILY (301) 460-1298
14908 Rocking Spring Dr.
Rockville, MD. 20853

FLYING ACES






FOK. DVII 953
-MAX-