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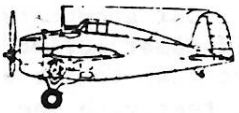

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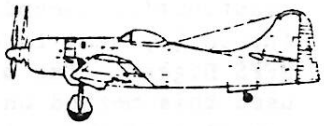

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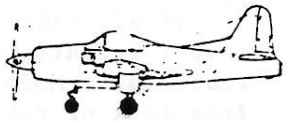

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THE NEWSLETTER OF THE D.C. MAXECUTERS

JULY/AUG 1983

MEMBERSHIP

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

DUES REMINDER ☐

MEETINGS

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

PRESIDENT

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

SECRETARY

TOM SCHMITT
11014 Marcliff Road
Rockville, MD 20852

TREASURER AND NEWSLETTER EDITOR

ALLAN SCHANZLE
20008 Spur Hill Dr.
Gaithersburg, MD 20879

UPCOMING EVENTS

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

CLUB NEWS

Allan Schanzle

THIS ISSUE has two sets of plans. Our feature model is the Nicholas Beasley NB-3 by Dave Rees. You'll notice that MAX-FAX has made this a full size plan that can be easily removed from the newsletter. We can thank Dave for this idea, who planted the seed for a full size fold out. Also, special thanks go to Tom Schmitt for the necessary folding. If you like the full size fold out idea, let the editor know, and we'll do it again. It costs a little more, and takes more time to prepare, but we'll do our best.

Our secondary plan comes to us via Mark Fineman in Connecticut. This is an updated old Comet 10¢'er of the always popular Spitfire. Mark found it was necessary to enlarge the stab to get stability, but the end product still should look great cruising along at 30 feet with the sun shining thru the tissue.

In addition to these two plans, Tom Schmitt offers our photo pages and a hint for a construction technique, Rolf Gregory returns with another CAVU, and you'll find an incredibly neat free wheeling device (via Tom Schmitt) that was published recently in the NFFS Digest. The origional idea, however, came from the 1938 Zaic yearbook. Tom Schmitt used this method on his F.A. MOTH, and it does indeed work well, as well as permit the changing of props in at most 30 seconds. This should spearhead some experimentation into optimum prop/rubber configurations.

If all this looks like your editor got lazy this time, you're right. Actually, the move I recently went thru took considerable time, as well as trying to get the new place tidied up. Modeling has become a lost art, and I'm beginning to have withdrawal symptoms from lack of fumes. Les-see, I know where the brown bags are, but where the heck is the Ambroid?

OUR FIRST Friday night mini-contest for the FAC MOTH drew 5 entries. Rolf Gregory, with his all black "Midnight Moth" was the winner of this "who dares to wind the most contest". A 15 mph wind was blowing directly toward the trees. Rolf beat Allan Schanzle by about 2 seconds, and he landed 8 feet from the trees. Other entries were Dan Priscoll, Tom Schmitt, and Ed Chevinsky. If you haven't built one of these yet, you should. They fly like gang busters with an 8 or 9 1/2 inch plastic prop and two loops of 1/8 or 5/32 FAI rubber.

OUR SECOND Friday night mini-contest was for peanut scale models. Don Srull brought out his veteran Waterman Racer and cleaned house by a whole bunch of seconds. Other entries were: Rolf Gregory (Clipped Wing Monocoupe), Allan Schanzle (Embraer Impanema), Bill McNeal (Cougar), Marvin Yoder (Cougar), and Tom Schmitt (Bonzo).

THOSE FOLKS who deliver letters (sometimes by carrier field mouse, I think) brought some interesting news from coast-to-coast.

From Bob Thompson in Connecticut:

> "Interesting to see the way the comments on qualifying flights have moved through the heads and pages. All I can say is that whether the rules state it or not, I am judging no plane that hasn't flown. I'm no lawyer, but there is a thing in the law about "custom", which can have the force of law when it is generally abided by among the populace. Now an angry contestant can come armed with a court order to force me to judge his airplane that he has little intention of flying, but isn't it easier and more fun to simply fly the thing once, make fifteen seconds, and have DONE with it? That way you please yourself (your model actually flies!), the judge (who knows you are a serious contender for FAC honors), and all the people (you have served Custom).Why the technical hassle? That is what the AMA is about, and just why they have such complicated rules."
>
> (Editors note: The way I read the rules, the title of the event is "FLYING ACES HANDICAP REPRESENTATIVE SCALE". That's FLYING ACES, not STATIC ACES. For whatever reason someone may be concerned about qualifying flights, least they not forget the whole idea behind the F.A. events is to have FUN. If they want to make a contest something other than that, then they must live with the consequences.)

From Jerry Persh (4908 Saqusit Ln., Annandale, VA 22003)

> "I have a brand new Flyline Fairchild '22' all built and ready to go for R/C or F/F - My opportunities for flying this plane are practically nil, so I would like to swap it off to somebody who has time to fly but cares less for building. I will take almost any old time F/F new production kit in trade (of reasonably comparable value) - P & N Semi kits such as Zipper are of interest."

Can anyone help Jim Pulley (RR 1, Box 394, New Palestine, IN, 46163)?

> "I am trying to find a plan of two models, one is a COMET MONOCOUPE D-145, KIT NO. X-14, 20" SPAN. The other is the COMET BOEING P-26A, KIT NO. X-13, SPAN 17 1/2 inches."

From Earl and Ann Eckerson in New Mexico, came the following note regarding the proposed Smithsonian contest:

> "We were surprised by the lack of response to a contest sponsored by the Smithsonian, so we spoke to our group, Albuquerque Aeromodelers We were delighted with the interest and willingness to support the event.
> To our commitment of two you can add seven more for a total of nine.
> We plan to be in D.C. for the contest and will bring all our entries. Should we not be able to make the trip as planned we will ship all models to you."

Well, now. Do I hear this type of enthusiasm from some of you other folks out there?

FREE WHEELERS

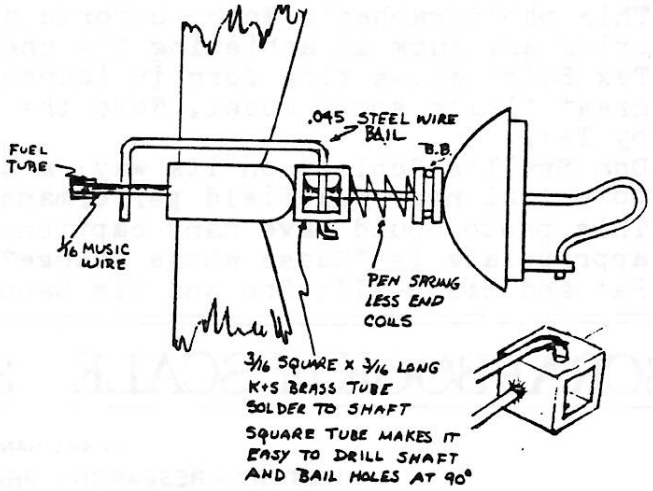
TOM SCHMITT

The January-February issue of the National Free Flight Society (NFFS) Digest presented an interesting and very practical free wheeler and rubber tensioning device which is relatively simple to construct. The orgin of the idea was shown in the 1938 Frank Zaic Yearbook on pages 85 and 164. It was a little more complicated to make back then since it required a wound wire fitting in place of Bob Lieber's idea of using the square brass tubing: See the accompanying drawing. The real beauty of this prop shaft and free wheeler is the inherent ability to change props without bending a new shaft. The tensioner and stop may not be necessary for braided motors. Hopefully, adoption of this rubber motor front end will lead to increased experimentation with props.

Rubber Power

by Bob Lieber

After a few months of flying P30 I found that I couldn't get free wheeling and rubber tensioning to work consistently with a simple prop drive and those green plastic props. Looking in the 1938 Frank Zaic yearbook (page 85) I found an interesting free wheeler and rubber tensioner of French design that is easy to construct, uses an unmodified plastic prop per rules, and works well. At least I don't have a plane that stalls as much anymore.



CRACK FILLERS

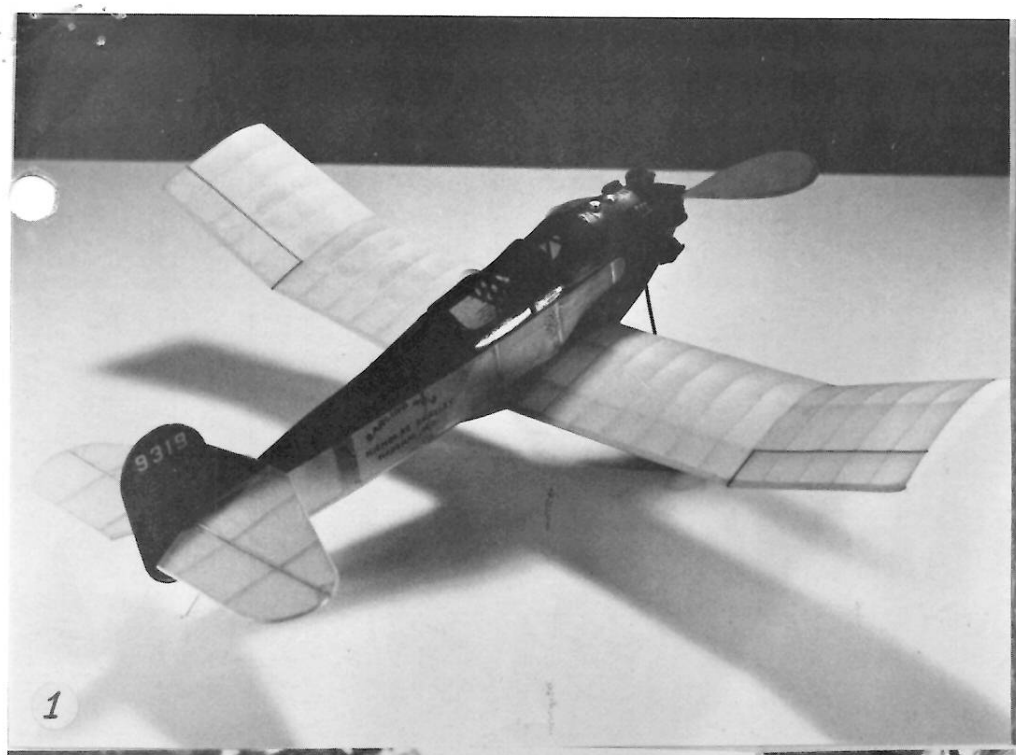
TOM SCHMITT

A trip to the local hardware store for some spackling compound for some necessary household painting chores uncovered a new lightweight material marketed under the Red Devil trademark. It costs $1.99 for one-half pint and is named "ONETIME Spackling". It is very light and seems to contain either micro-balloons or something similar. On initial use it appeared to be dry and somewhat crumbling but a little smoothing with a moist tool (finger) took care of that minor problem. I believe that Don Srull has tried it and found it satisfactory. It sands very good and does not lift under dope. Last but not least, the price is right. As mentioned previously the cost is $1.99 for one-half pint. Compare that to Sig Epoxolite at $5.95 for five ounces. However to be fair we should mention that Sig sells unmixed micro-balloons at $2.49 for one pint. How about some feedback on this product and it's uses.

PHOTO PAGES

Tom Schmitt

1. The feature plan of this issue, a full size fold out of Dave Rees' great flying Nicholas Beazley. Model and photo by Dave.
2. Frank Renaut, a COMSAT regular and photographer extraordinaire, shows off one of his fleet of electric models, a very pretty Camel.
3. Pat Daily's CO2 Hawk is a terrific flyer indoors or out. See the March/April MAX-FAX.
4. Allan Schanzle tunes his Vultee for the Bill Winter Commemorative this coming September..Only three months to go for this event; let's get busy building.
5. Bill Mc Neal and his P-40 in Chinese markings. Why don't we see more P-40s; this one is a good flyer.
6. A Sparky by Dan Driscoll, This is one high performance sport model and a little too good for COMSAT. Note the dethermalizer cam on the bottom at the center of balance. It is driven by a modified Tomy toy clockwork motor. Dan uses the device for every flight.
7. Allan winds his Fleet; one of the many excellent kits by Joe Fitzgibbon of Golden Age.
8. The next five photos are the entries in our June Friday night contest, a mass launch of Flying Aces Moths; and the winner was this this high-flying "Midnight Moth" by Rolfe Gregory.All five are great sport flyers. Let's see a few more at our September "ONE DESIGN" contest.
9. Dan Driscoll's Moth; no mistaking the design's origin.
10. Ed Chevinsky and his sea-faring Moth.
11. Allan's Phineas Pinkham enriched Moth.
12. This photographer's Moth; unfortunately the decorations did not bring any luck in achieving the checkered flag.
13. Tex Baird shows fine form in launching his Pacific Ace, another great flying sport model. Note the beautiful hand-carved prop by Tex..
14. Don Srull's Schlepp on its way; a terrific scale model with potential near-Wakefield performance.
15. This photo could have many captions but the one that seems most appropriate is "Guess whose Stooge?". Models, left to right are: Pat and his D-VII; Don and his Gannet; and Stew with his Caudron.



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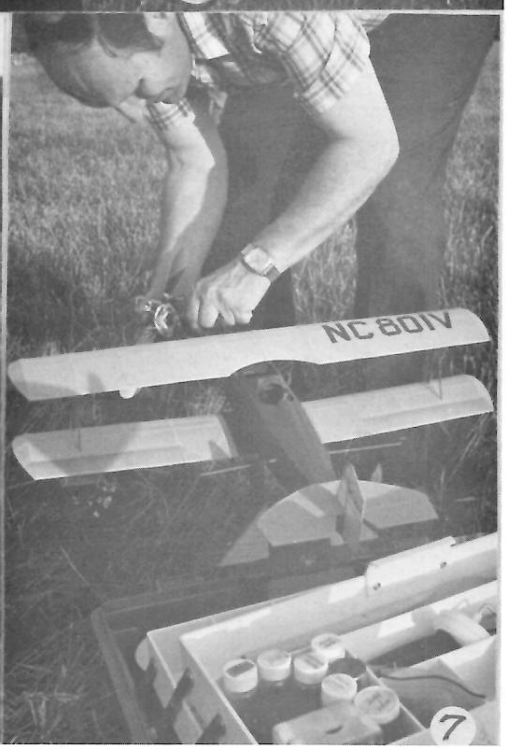

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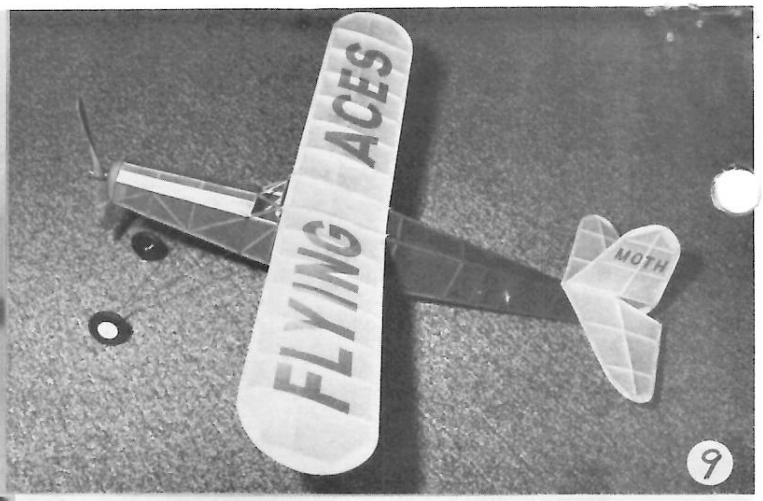

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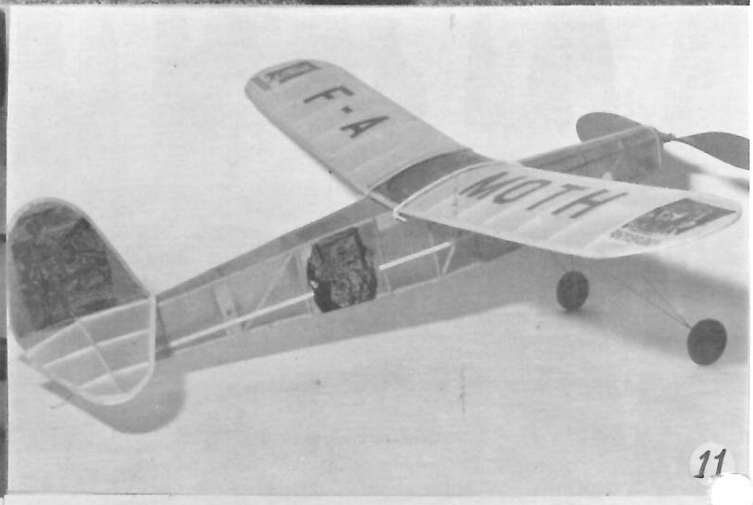

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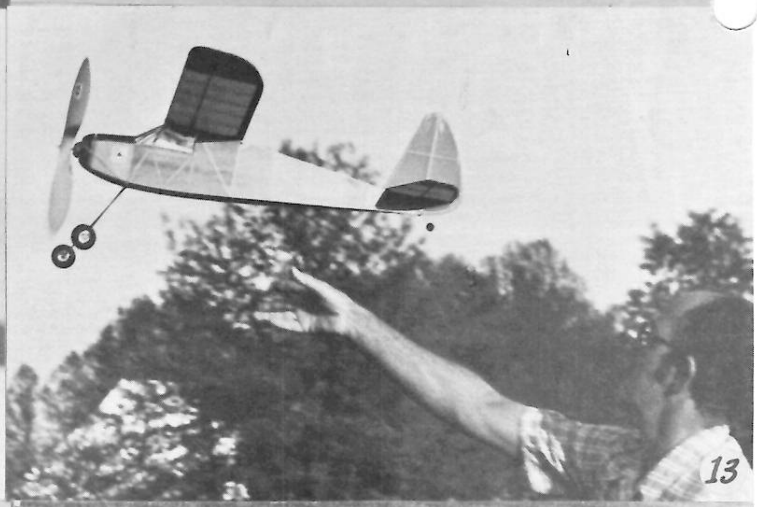
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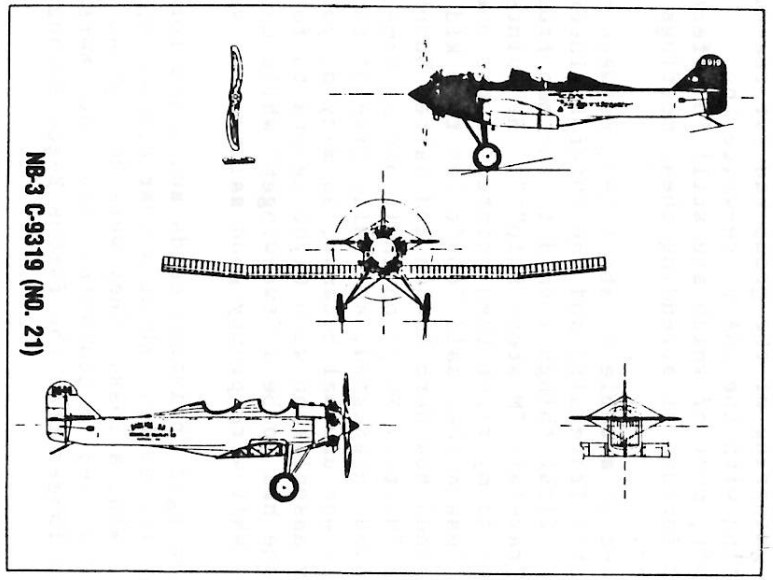
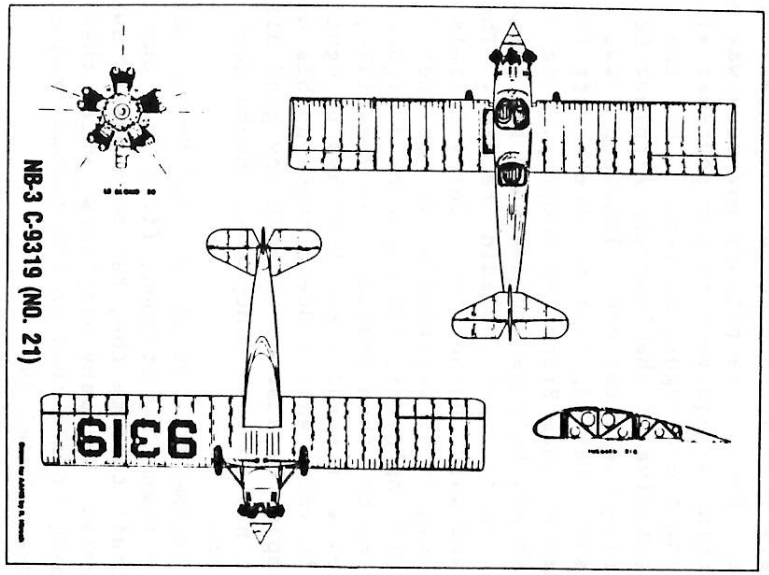




D.C. MAXECUTER'S '83 SUMMER FUN FLY

Sept 10

9⁰⁰ to 6⁰⁰

AMA SANCTION
#693

CONTEST DIRECTOR
Allan Schanzle
8311 Exodus Dr.
Gaithersburg MD 20879

301 840-9883

EVENTS

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

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

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

MASS LAUNCH:

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

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

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

H.L. GLIDER:
As per AMA.

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

CAVU

"Ceiling and Visibility Unlimited"

Rolf Gregory

Readers of this CAVU column (possibly all three of them) may remember the yarn of a few issues back telling about an exciting experience I had one bright summer day way back in 1929 when, as a kid, my father dropped me off at Byrd Airport in Richmond, Virginia and I first saw a Travelair, "Mystery Ship". The pilot of the airplane was Doug Davis. Being a really sharp kid I figured this out right away because that was the name neatly lettered under the edge of the cockpit. Also, being a sort of dumb kid I thought maybe he had designed the airplane too. While the airplane was being refueled, you may recall, he showed me the wonders of a slide-rule. I asked him if he had designed the airplane and he said something like "no young fellow, I don't design 'em, I just fly 'em".

In September of that year, Doug Davis raced the Mystery Ship at the National Air Races and took all the marbles. This closed course race was for the Thompson Trophy Cup which the following year became the Thompson Trophy Race. The little Travelair shook up the brass by out-running everything the military had and set the trend for the future fighters. Some say the Boeing P 26 set the trend to low wings but I think, rather, the P 26 was the result of the Travelair. In any event, the low wing's success spelled down for (are you listening Stew Meyers?) those wonderful old biplanes.

Ever since that day so long ago when I watched that beautiful little red and black speedster climb into the blue and disappear, it has lingered in memory as one of my favorites. As soon as I found a 3-view drawing I built a model. As our Editor, Allan Schanzle will readily confirm, I never throw anything away, and the model, or parts thereof, are no-doubt stashed somewhere in my (what Schanz won't confirm) well organized basement.

The years flew by, as years are wont to do, and the kid of 1929 studies engineering, went to work for an airplane company and took a trip to St. Louis, Missouri, which-as Paul Harvey would say - brings me to the rest of the story.

In 1944 the Airplane Technical Committee of the Aeronantical Chambers of Commerce (later the Aircraft Industries Association) was formed of engineering executives and designers from all the member companies. The gathering of the group had far reaching effects. One of the primary purposes was meeting with the CAA to re-write the Airworthiness requirements for post-war aircraft, most of which are still in effect, including the category system. I had the good fortune of attending these meetings as representative of the Luscombe Airplane Company.

During the first group luncheon I was seated at a table of about ten, between the Assistant Chief Engineer for Beechcraft (formerly Travelair) and the Chief Engineer for Freedman Burnham Propeller Company. One of the first things I said to the man from Beech was "can you tell me who designed the famous Travelair "Mystery Ship"?". He pointed to the man on my right and said "he did". The one to my right then pointed to the one I had asked and said "no he did". Jerry Gerteis of Cessna then said "don't let them kid you, they designed it together". It was then I learned how Herb Rawdon and Walter Burnham, Travelair employees, had together designed the "Mystery Ship" on their own at home, how Walter Beech, then President of Travelair, became interested, and built five of the little beauties as the Model R. I always thought this was unusual because, as many of you probably know, Walter Beech broke up his early association with Clyde Cessna to form his own company because he thought any good airplane had to be a "two-winger" while Cessna said it had to be a monoplane. Maybe Herb and Walt were pretty good salesmen as well as engineers.

I became friends of Walt and Herb. We exchanged Christmas cards and notes for many years - then they stopped, first from one then the other. About a year ago an employee of Beechcraft told me they had both passed away. What a loss. They were both great engineers. Not many airplanes, which they had a hand in designing, have been better designed, or remained in continuous production longer than the famous Beech Bonanza or the Twin Beech Model 18.

FUSELAGE CONSTRUCTION

CLAUDE POWELL

This procedure may be used for non-box fuselages and solves several common construction problems. It is both easy and simple to use and it very nicely accommodates any plan with a top view and side view. It works well with the early plans that utilized large, hollowed fuselage areas, existing kit plans and makes scratch built plans much easier to develop. It guarantees straight fuselages every time, fuselages are stronger and lighter, and there is more clearance for rubber for high and low thrust-line planes.

Construct a frame of the side view using only single strips for keels (See Figure 1) and place uprights where formers are designed (it will look like a no-cal). Then construct two halves of the top view separated by the thickness of the stripwood (Figure 2). When completed, glue one of the halves on the center line of the side view or the indicated position for the side keel (Figure 3). Make quarter formers with grain direction as shown in Fiqure 4. (Note: The Nose Former should be a complete half former) Glue the quarter formers in position as shown in Figure 5. Now lift the structure from the building surface and add the other half of the top view and remaining quarter formers. Use a sanding stick or jewelers file to notch the formers for placement of the stringers. Glue another nose former (whole) to the front of the fuselage with the grain at right angles to the first nose former. Now cut a hole in the nose former and make a nose block to fit. Add all planking or sheeting that you are going to use. Fuselage construction is now complete and ready for sanding. Perform all sanding from nose to tail and scallop all formers. Fuselage is now complete except for removal of internal cross-structure. Use a pair of long nose end-cutters (similar to long nose pliers with the cutting edge at the tip), reach between the stringers and cut at the X's in Figure 6. Continue cutting the internal structure apart until the pieces can be shaken out.

EXTRAS:

1. Prior to cutting out the internal cross-structure, spray the fuselage with water and allow to dry. This action will set-in all curves.

2. Gradually reduce the thickness of the formers, for example: use 1/16" thick formers from CG to nose, use 1/20" thick formers from CG to wing trailing edge, and use 1/32" thick from wing trailing edge to tail.

Fig. 1

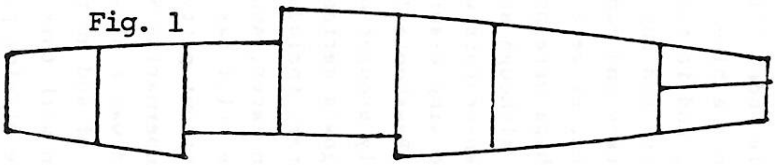
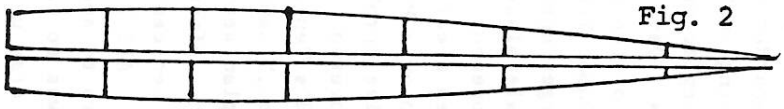


Fig. 2



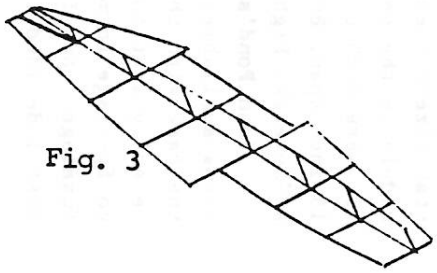


Fig. 3

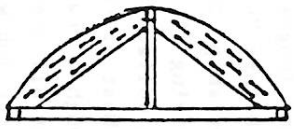


Fig. 4

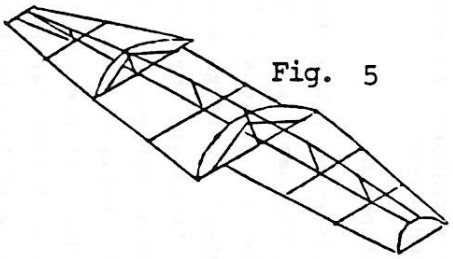


Fig. 5

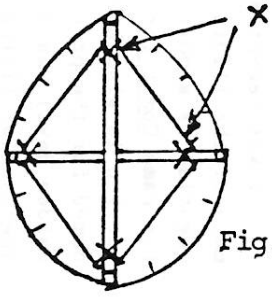


Fig. 6

COMET TEN-CENTERS, OR ADVENTURES IN MODEL AIRPLANE ARCHEOLOGY

Mark Fineman

I was recently bitten by a bug that has long infected many of the fliers at Pinkham Field. The bacterium in question is almost always a serious infection and goes by the name Comet Ten-center, although a Burd and Megow version is also known to exist. My first ten-center (so named for the price of a complete kit back in the olden, golden days) was a Mr. Mulligan that proved to be a spectacular flying model. At one point it was lost in the woods so thoroughly that I immediately set about building a replacement. Weeks later Bill Miller found the wreckage, occupied by a particularly ornery tick, and the plane was put back into flying condition. It soon went on to make my longest recorded scale model flight: 10 minutes plus before "specking out" in the blue. I still have the sister ship, the replacement, and it too has put in many satisfying flights. Dave Stott and Bob Thompson both have large collections of ten-centers and many are superb fliers.

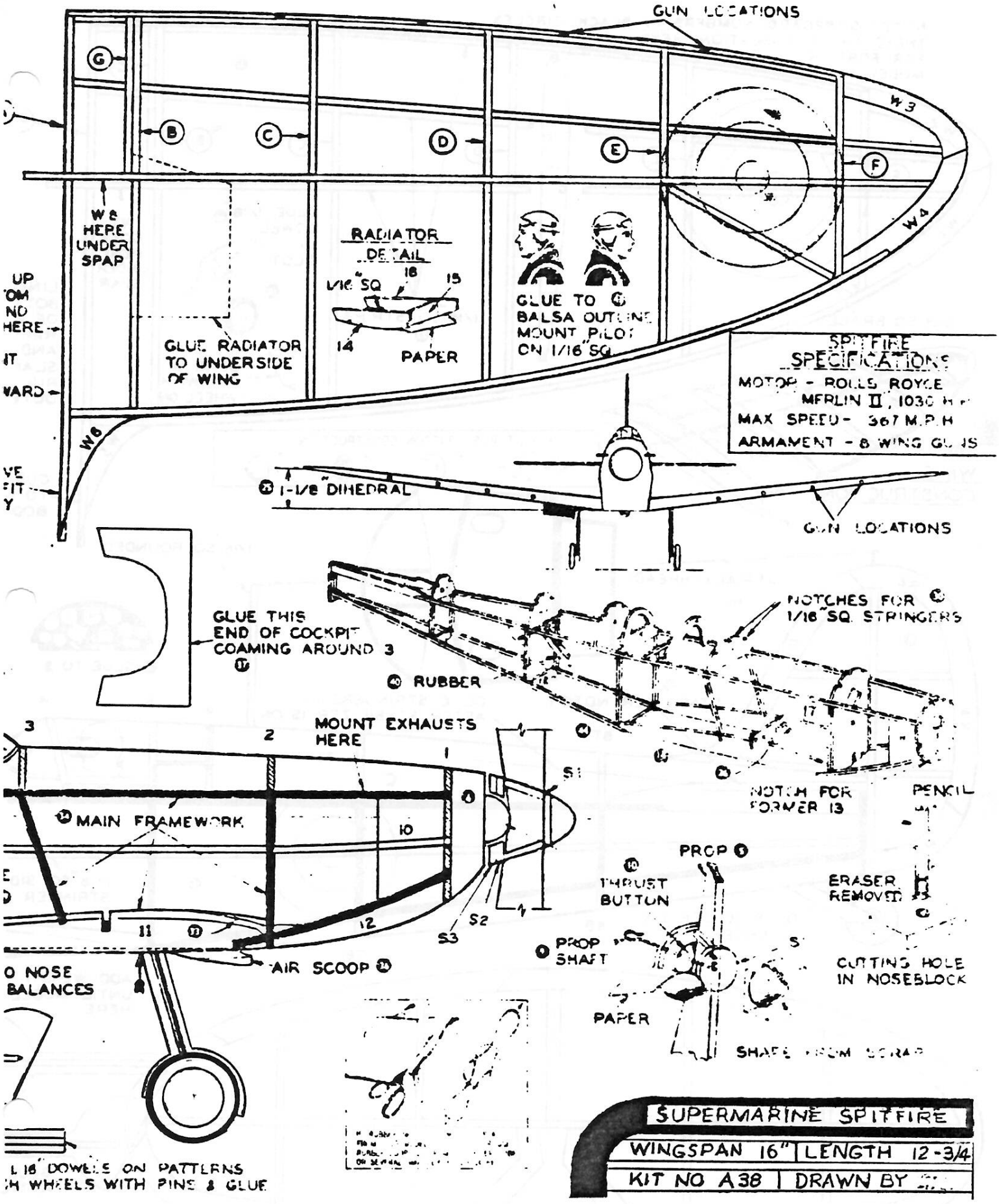
Most of the Comet Ten-centers were 16-inch span, although a few larger span ships were produced in the series. Almost all are scale planes, although an occasional sport or stick job was present. Ten-centers were usually simple in design and often specified single-surface wings and stabilizers - even on a P-26 Peashooter! Some of the last models in the series, probably brought out just before WW II, were double-covered. Megow's series was usually 15-inch span; Burd's Ten-centers included such goodies as a "Seversky Fighter," Caudron Racer, and a Helldiver.

John Pond's plan service still has many of these plans available, but often without patterns. Such was the case with the ten-cent Supermarine Spitfire that I recently sent for. All I had was a blue line plan; no fuselage formers to speak of and no top view of the fuselage. But I was so taken with this little charmer that I decided to draw up the missing pieces, much as an anthropologist or paleontologist reconstructs a complex object or organism from a fragment of pottery or a single tooth.

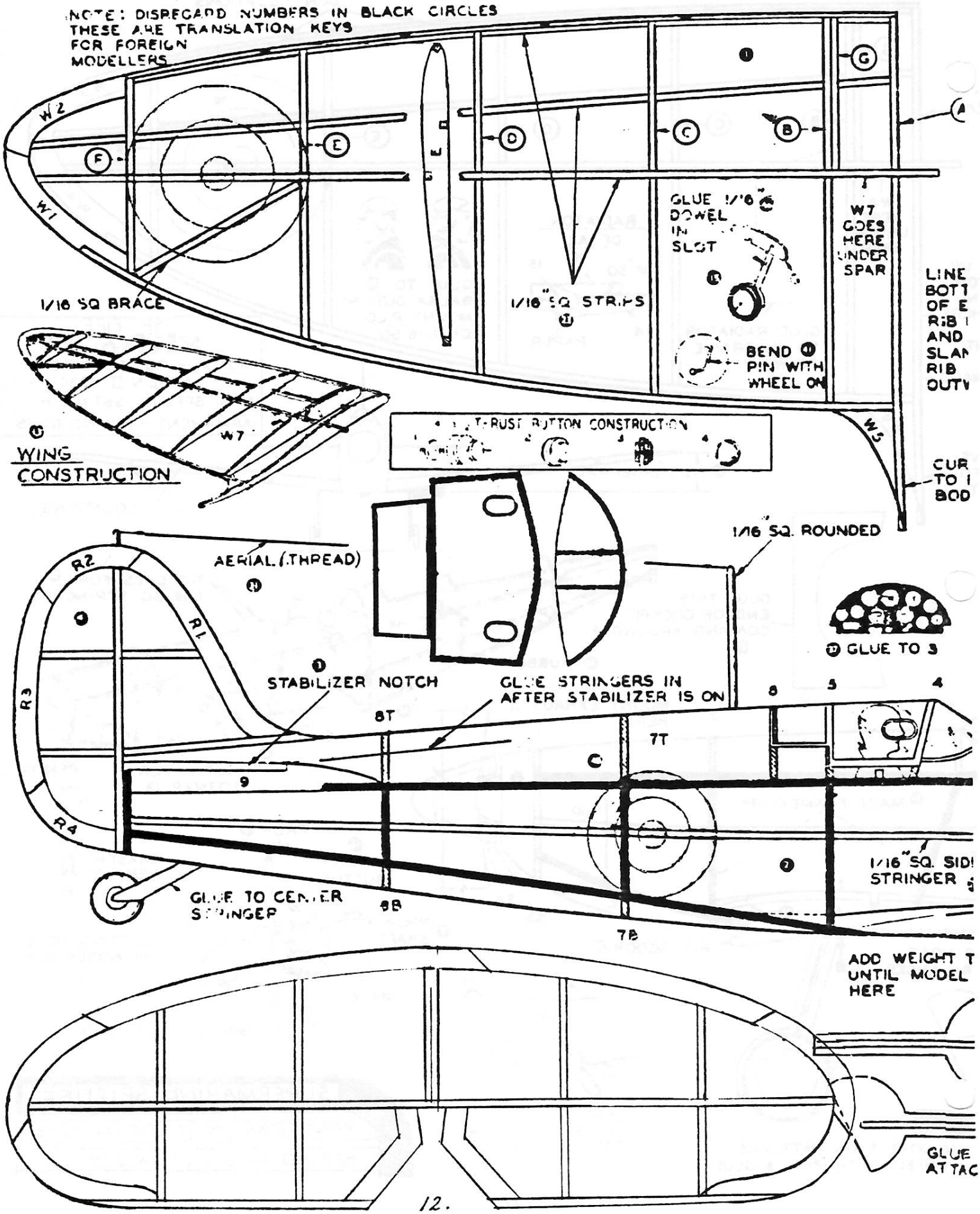
The plan did show one former, the number 3 former on which the instrument panel was mounted. Using this and the wing plan, along with a good 3-view, I was able to draw up a reasonable fuselage top view. Armed with that and the perspective view on the plan, all of the remaining formers could be reconstructed. Having just finished building the model, I can assure you that it looks right on the money. The plan also showed one wing rib. This worked out to be much like a section using a Simplex 4% upper surface with a flat bottom. Simplex airfoils are a family of curves that have the delightful property of retaining the same proportions, even when cut from the rear. It appears to be slightly thinner than the root rib shown on the plan, but that may actually be an improvement. The only departure I made from the plan was to build a one-piece wing instead of the stuck-on kind favored on the plan. I simply refuse to build stuck-on wings after regluing my Avenger's panels back to the fuselage innumerable times. Therefore the accompanying patterns show a revised version of part number 11, the new wing saddle.

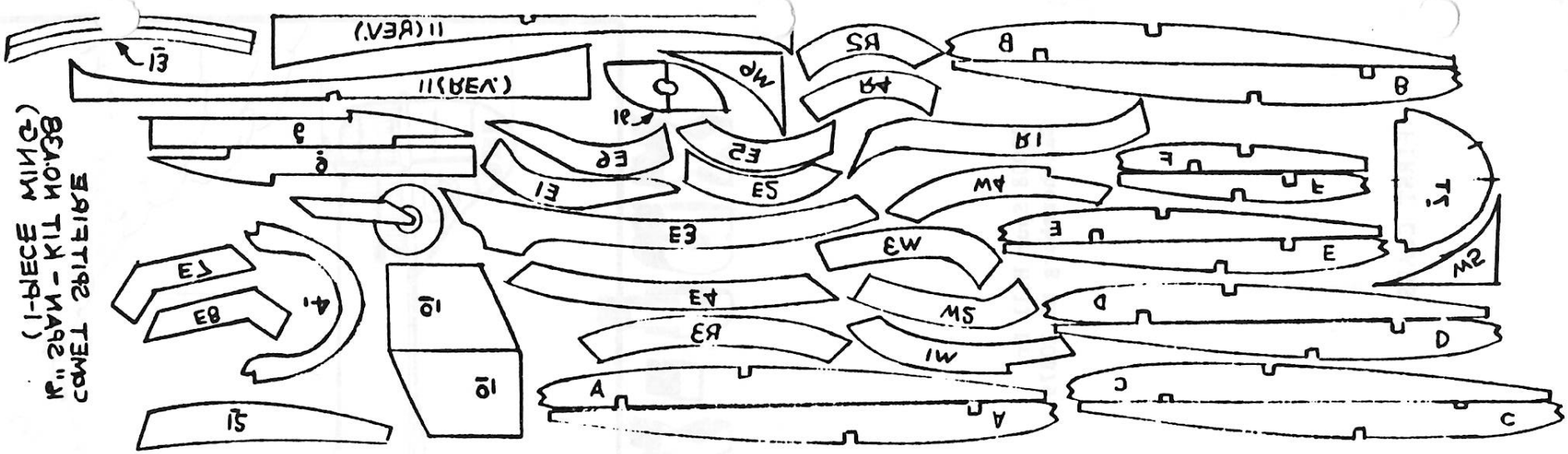
Finally, I traced all of the parts, new and old, onto a new pattern sheet with all of the writing reversed. A Xerox copy of the patterns was then taped face down to a sheet of 1/16 x 3 x 12 inch balsa and the back of the pattern was swabbed with a cotton ball lightly dipped in dope thinner. Voila, instant print wood! I may have missed a minor part here or there, but they can be easily determined from the plan.

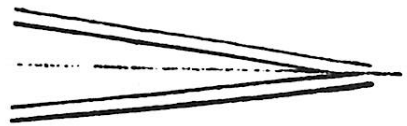
Please remember that Ten-centers are greasy kid models. Please, no vacuum-formed canopies or other evidence of super-detail. Keep it simple with lots of charm.

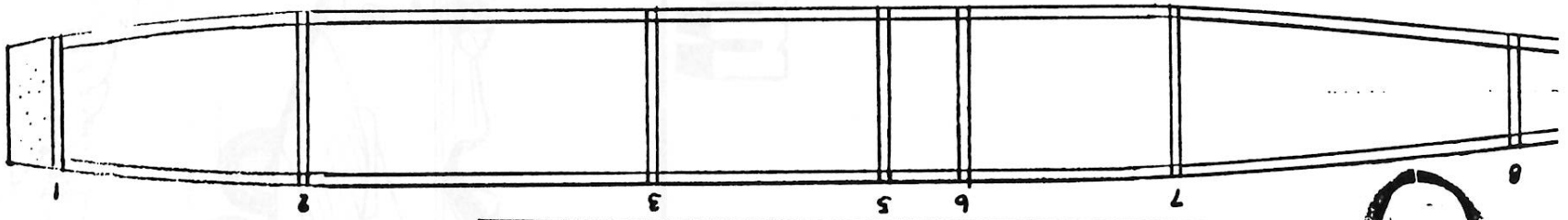


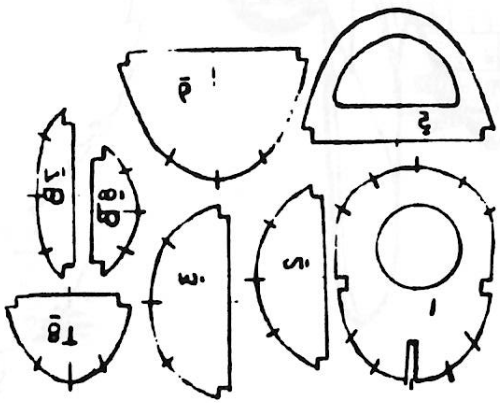
SUPERMARINE SPITFIRE	
WINGSPAN 16"	LENGTH 12-3/4
KIT NO A38	DRAWN BY

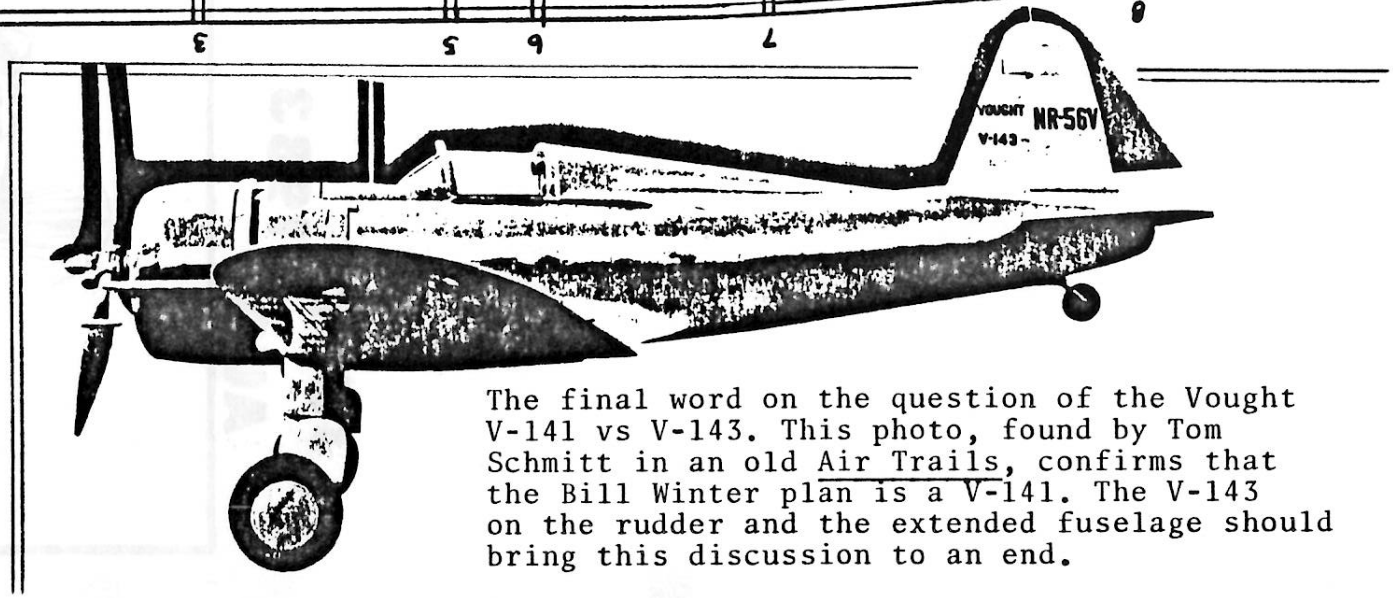

NOTE: DISREGARD NUMBERS IN BLACK CIRCLES
THESE ARE TRANSLATION KEYS
FOR FOREIGN
MODELLERS
W2
W1
F
E
D
C
B
A
G
1/16 SQ BRACE
1/16" SQ STRIPS
GLUE 1/16" DOWEL IN SLOT
W7 GOES HERE UNDER SPAR
BEND PIN WITH WHEEL ON
LINE BOTT OF E RIB AND SLAN RIB OUTV
W7
W5
CUR TO BOD
WING CONSTRUCTION
T-RUST BUTTON CONSTRUCTION
1/16 SQ. ROUNDED
AERIAL (THREAD)
R2
R1
R3
R4
STABILIZER NOTCH
GLUE STRINGERS IN AFTER STABILIZER IS ON
GLUE TO 3
8T
7T
9
8B
7B
GLUE TO CENTER STRINGER
1/16" SQ. SIDE STRINGER
ADD WEIGHT T UNTIL MODEL HERE
GLUE AT TAC











The final word on the question of the Vought V-141 vs V-143. This photo, found by Tom Schmitt in an old Air Trails, confirms that the Bill Winter plan is a V-141. The V-143 on the rudder and the extended fuselage should bring this discussion to an end.

FIRST CLASS

20008 Spur Hill Dr.
Gaithersburg MD 20879

max-fax

JULY
AUG 1983

REMOVABLE NOSE PLUG ASSY

A

½ Sq BALSA

1/16 ALUM TUBING

1/32 PLYWOOD

B

SCRAP FILL BETWEEN STRINGERS

H

C

D

E

F

G

I

K

L

WING WEIGHT
1.9 GMS. FRAME
3.4 GMS. COMPL.

FRONT LEG

SLIDE INTO TUBE - "HOT STUFF" IN PLACE

REAR LEG

L.G. DETAIL

REFERENCES:
JOURNAL OF THE AMERICAN AVIATION HISTORICAL SOCIETY, SPRING, SUMMER & FALL 1982 ISSUES;
"THE NICHOLAS-BEAZLEY AIRPLANE CO." BY JACK KENNEDY.
INCLUDED ARE THREE VIEWS BY R. HIRSCH FOR NB-3, NB-4 & NB-5 AIRCRAFT.

POWER: .135" x .045" x 24"
LOOP FAI, 1500 TURNS.

SOFT BALSA BLOCK

COVER ENTIRE WING INCLUDING CENTER, THEN CEMENT TO FUSELAGE.

STAB WEIGHT:
.4 GMS, FRAME
.7 GMS COMPL.

#600 SANDPAPER WING WALK

FUSE WEIGHT:
1.7 GMS. FRAME

COLOR:
ENTIRE COVERING ORANGE MICRO-X TISSUE. FRONT & TOP OF FUSE + RUDDER: GLOSS BLACK ENAMEL.

1/20 x 3/32 SPAR

1/20 x 3/16 SPAR

SILVER-PAINTED GLUE BLOBS SIMULATE TURNBUCKLES.

.005 DIA. NYLON RIGGING (TYP.)

1/20 SQ. BALSA HOT BENT

3/32 x 1/8 HIGH L.E.

1 3/4

13/32

1/20 SLIT RIBS

REINFORCE SPAR JOINTS

1/16 x 1/8 T.E.

(2) 1/32" SANDWICH FORMERS FOR BOTH GEAR MOUNTS

BLACK NUMBERS ON UNDERSIDE OF THIS WING ONLY

WEIGHT, LESS MOTOR: 17 GMS.

WHEELS SHOWN IN UNLOADED POSITION

SECTION VIEW @ WING LEADING EDGE

BRUSH PAINT PROP W/ "PINE" ENAMEL. USE LENGTH-WISE STROKES

WINDSHIELD PATTERNS .003 ACETATE

THREAD-WRAPPED CORK CYLINDERS (5) FLAT BLACK.

.010" THK. SHEET

COCKPIT EDGING MADE FROM LARGE DIA. 1/16 O-RINGS

RUDDER OUTLINE MADE FROM ONE PIECE 1/20 SQ BALSA HOT BENT

9319

COPPER WIRE HINGES (TYP.)

ALL FUSELAGE STRUCTURE 1/20 SQ. OR SHEET.

3/32 TUBE

DATUM LINE

DOWNTHRUST
3°

MANUFACTURED BY NICHOLAS BEAZLEY AIRPLANE CO. MARSHAL, MO.

GREETING CARD STOCK CONE FOR SPINNER.

PLASTIC STRAW

1° INCIDENCE

BLACK PAPER

.012 DIA. MUSIC WIRE

HOT BEND TO MAINTAIN SHAPE

.020" MUSIC WIRE W/ BLACK WIRE INSULATION COVERING.

3/16 BALSA WHEELS .6 GM. EACH

05-18 CM. (7") PROP 3 GMS.

DETAIL OF UNDERSIDE STRINGERS

NICHOLAS-BEAZLEY BARLING NB-3

3 SEATER MONOPLANE

18" SPAN

DAVE REES 10 OCT 82