

# MAXFAX



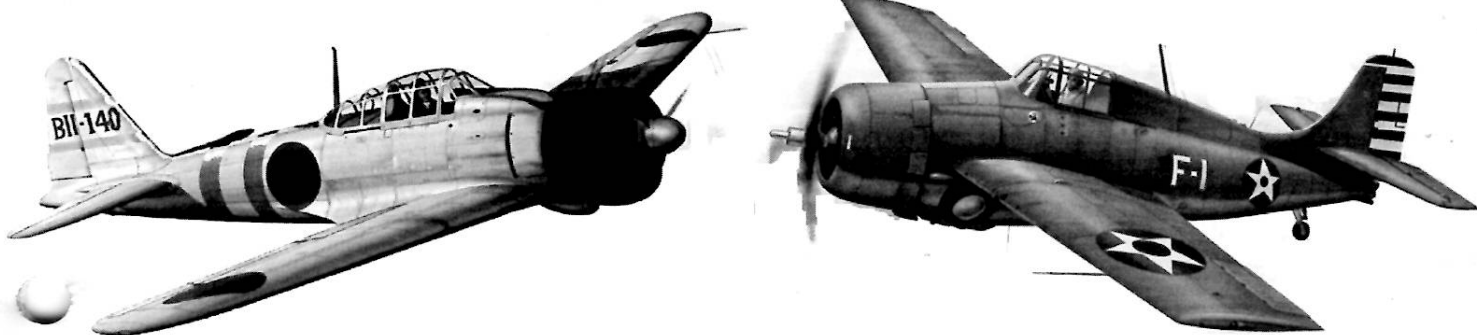
**Journal of the D. C. Maxcutters**

*... home of the dreaded POTOMAC PURSUIT SQUADRON of the Flying Aces Club*

**Editor: Stew Meyers**

**JANUARY-FEBRUARY 2006**

## COMET SPEED-O-MATIC ISSUE



**Pacific Combat Pair**

## COMING ATTRACTIONS

**Scout Delta Dart Sessions:**

January 28, 2006, February 25, 2006, March 18, 2006  
More info concerning NBM events and contacts for admittance  
in November/december 2005 MAXFAX

**SAM Chapter 10 CAAMA 2006 COLLECTO --Sunday January 29, 2006**

Noon until 5:00 PM at the meeting room of the Fairfax County Tysons-  
Pimmit Regional Library -- 7584 Leesburg Pike. Falls Church, Virginia  
Your hosts are Jim Coffin (703-256-3865) and Martin Schindler (703-938-2975)

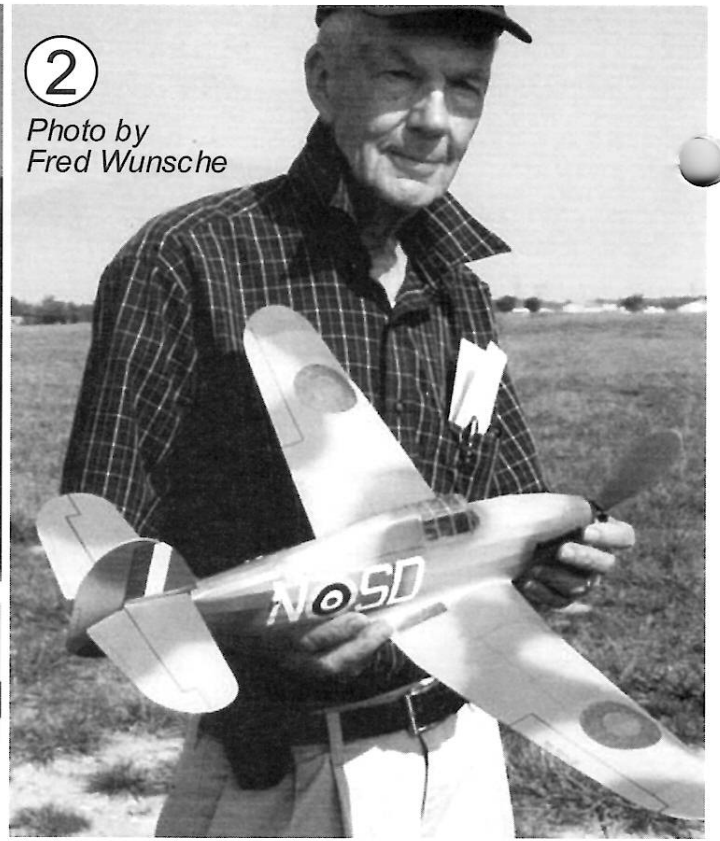
**FAC Nationals at Geneseo are scheduled for 14,15,16 July 2006**

**Western NY FF Society and Canadians "Great Gathering of Grapes"**  
21-23 July 2006 also at Geneseo.



1

Photo by Fred Wunsche



2

Photo by Fred Wunsche



Photo by Allan

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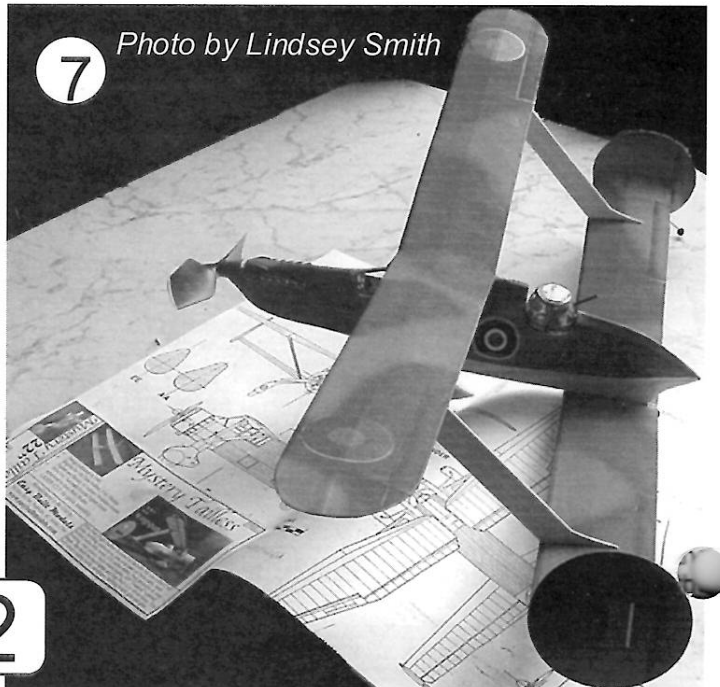


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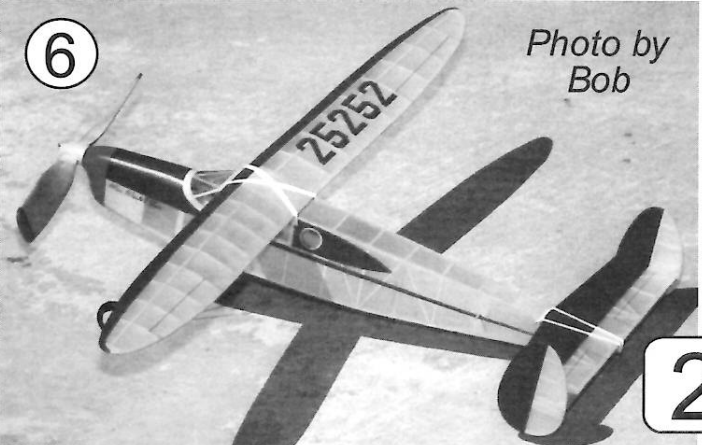
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Photo by Richard Adams



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Photo by Lindsey Smith



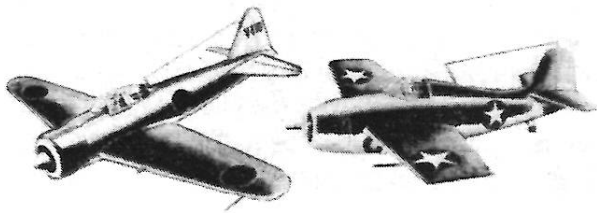
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Photo by Bob

2

## Comet "Speed-O-Matic" E-Series Pacific Combat Pair Issue

Stew Meyers



This issue continues the Comet "Speed-O-Matic" E-Series with the E2 Wildcat and E3 Zero kits. Of course I had built these two during the war. I built the Wildcat again a year or two ago, or at least I framed it up, it is uncovered as yet. Covering is not my favorite phase of modeling. I had gotten the plans from John Pond a while back. These were a bit fuzzy and not up to our standards. Last spring Dan bought a postwar E2 kit on Ebay. Now that we had all the original kits in the series and decent copies of the plans, print wood, and formers, I was moved to put out the entire series starting with the E1 "TigerShark" in the last issue. These plans are presented in the center of MaxFax so that you can pop the staples and remove the plans pages. You can then make Xerox copies at Kinkos or the ilk to build from.

Dave Mitchell has corralled all the Hurst Bowers plans that have appeared in MaxFax and offers these to our readers. Dan Driscoll has codified the rules for the proposed Hurst Bowers contest. See page four.

### PHOTO PAGES PAGE 2

1. Our editor Stew at Muncie in 2005 with his war weary Karkov. Only good enough for fourth in WW2
2. Bob McLellon was also at Muncie with his Hurricane.
3. Another Hurricane, this one by our Diorama builder - Allan Schanzle.
4. From the archives a Taupin Peanut by Emmanuel Fillon presented in his memory.
5. Richard Adams way up in Michigan built this nifty R/C Tiger Moth.
6. And Bob Schlosberg sent this photo of his 30 inch 'Miss World's Fair',  
One of my favorites since 1939. .... Tom Schmitt
7. A takeoff on the Lysander turret fighter by Lindsey Smith -- another 'Mystery Tail-less' from Easy Built's kit.

I have gone into excruciating detail on building the Zero which I built last month, but can't remember the same depth of details on the Wildcat that I built a few years ago. I have not included the insignia sheets that were in the kits. You can get these off the plans and black and white reproduction of these color sheets makes no sense.

Squadron/Signal Publications in action series on the F4F Wildcat and A6M Zero provide excellent three views and color schemes.

The color for this early model Zero is very close to Polar Gray Butrate dope made by Randolph and marketed by Bordak and Sig. Just add a bit of burnt Siena or red-orange to tint it. The cowl is black.

A wide variety of color schemes are available for the Wildcat. I'm going to go with Blue Gray / Gray color scheme with big Meat Ball-less insignia and no tail stripes suitable for a F4F-3 in 1942. The cowl with out a carburetor air scoop shown on th plan is typical of an F4F-3.

Just a word about MaxFax, we put this out six times a year. We aim at mailing the first month of the issue. This January-February 2006 issue should therefore be mailed in January. You will have noticed that we don't always make this schedule and the US Snail may take up to three weeks to deliver it after it is mailed.

Dues for MaxFax run \$15 US a year for US, Canada, and Mexico, or \$25 elsewhere and will get you six issues hopefully delivered on or near their issue date. We can accept only checks drawn on U S banks as there is a \$10 charge for foreign exchange. We do accept cash and most foreign subscribers send us US\$. We will accept Can\$ and have a special deal - seven issues for Can\$20 Cash.

Checks should be made out to DC Maxcuters, Postal Money Orders to Stewart Meyers.  
Send to:

DC Maxcuters  
C/O Stew Meyers  
8304 Whitman Dr.  
Bethesda, MD 20817

We use a red "X" system to indicate when your dues are due. You will notice a subscription date next to your name on the label. 200601 is January 2006 for example. If the issue date is greater than this you will also see a red "X". We next increase to two "X"s, and then the dreaded triple "X". We therefore have a grace period of three issues or six months before you are dropped. When you pay up we update you subscription date by one year. Therefore you will get another red "X" in six months if you wait until you get three "X"s to renew

## Hurst Bowers Plans from MaxFax are now available

AIRCRAFT	WS	INTENDED POWER
Aero A-10	30"	Rubber, CO2, Electric
RWD-10	20"	Rubber, CO2
Mooney A-1 Low Wing	28.8"	Rubber, CO2, Electric
Farman F-250	25.25"	Electric
American Eagle "Wallace Touroplane"	30.5"	Electric, Rubber
Stinson "Detroitter"	27"	Electric
Monocoupe 1935	30"	Rubber, Gas
Curtiss Robin	30"	Rubber, Gas
Fairchild 22	31.5"	Not specified
Caudron C-109	31.5"	Rubber, Electric
Doyle Aero Corp "Oriole"	28"	Rubber
Lincoln AP-K5	26.25"	Rubber, CO2
Bernard 191 "L'Oiseau Canari"	28.5"	Rubber
RWD-5bis	27"	Rubber, Electric
"Wong Way Wobin" Bostonian	15.75"	Rubber
Poncelet Lightplane	22"	Electric
Paramount "Cabinaire" Biplane	26.25"	Rubber, CO2, Electric
Blackburn "Blackburn"	23.38"	Rubber

I have collected the various Hurst Bowers plans that were published in MaxFax, and can provide the plans for the cost of printing and shipping. This is a strictly non-profit courtesy. An invoice will be included in each order. Please specify if you want your plans shipped rolled in a tube, otherwise they will be folded and shipped flat.

My interest in filling plans orders is limited to those Bowers designs that appeared in the MaxFax, and for the duration of the run-up to this next season's 2006 contests **only**. Other Bowers designs can be found via the AMA and *Flying Models* plans services.

Please—when you receive your invoice, pay promptly! Otherwise, you will be cursed, fated to always wind one turn too many.

Orders should be addressed to:

David Mitchell  
Secretary, D.C Maxcuters  
230 Walnut St. NW  
Washington, DC 20012

-or-

[edgemitchell@verizon.net](mailto:edgemitchell@verizon.net)

Include your name, the name of the aircraft(s) for which you want plans, and the address you want the plans shipped to. I will ship plans within 1 week from receiving your order.

## Hurst Bowers Contest Rules

This is an event for models designed by Hurst Bowers. The event will be held at the 2006 Spring and Fall Maxecuter/Brainbuster contests at Raeford, NC, and the 2006 FAC Nats.

Models are to be rubber powered free flight scale models only. This includes designs that Hurst designated as "impressionistic scale". Any design for other power may be converted to rubber power.

Model must be the size as originally designed or presented in MaxFax - no scaling.

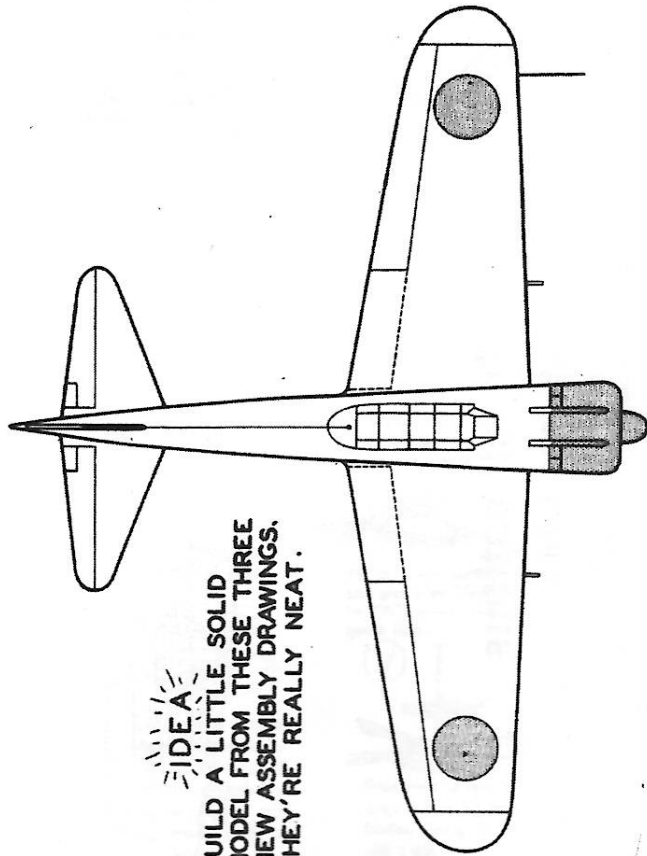
Construction must closely follow the plan. Structure may be added, but none deleted. Details may be added and slight modifications made to increase scale appearance. Minor changes to the nose block and the rear rubber anchor are allowed. Modifications to convert a power design to rubber power allowed. Provision for detachable wings and dethermalizers allowed.

There will be two awards:

Winner of the mass launch of all eligible models. Plans for your model must be presented to the event director to be eligible.

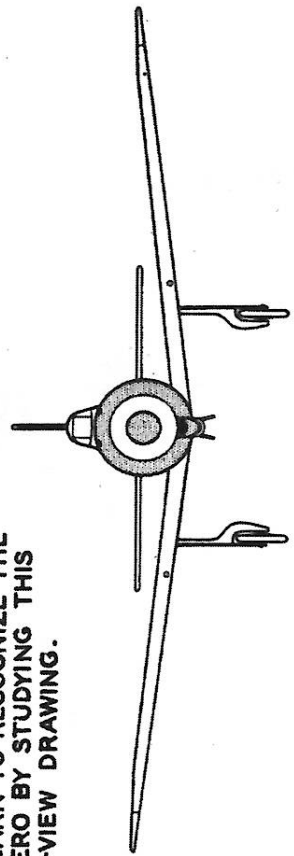
The model with the highest total points in the judged scale events, whether it is Peanut Scale, FAC Scale, Jumbo Scale, or Giant Scale.





**IDEA**  
 BUILD A LITTLE SOLID  
 MODEL FROM THESE THREE  
 VIEW ASSEMBLY DRAWINGS.  
 THEY'RE REALLY NEAT.

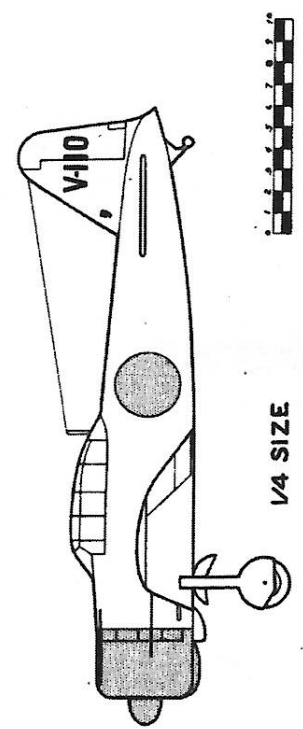
LEARN TO RECOGNIZE THE  
 WILDCAT BY STUDYING  
 THIS 3-VIEW DRAWING.



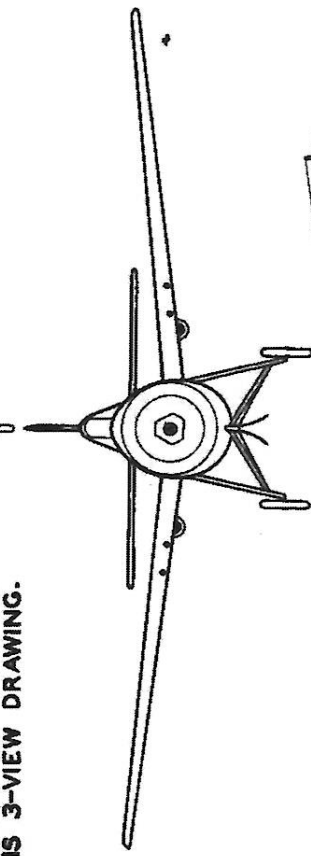
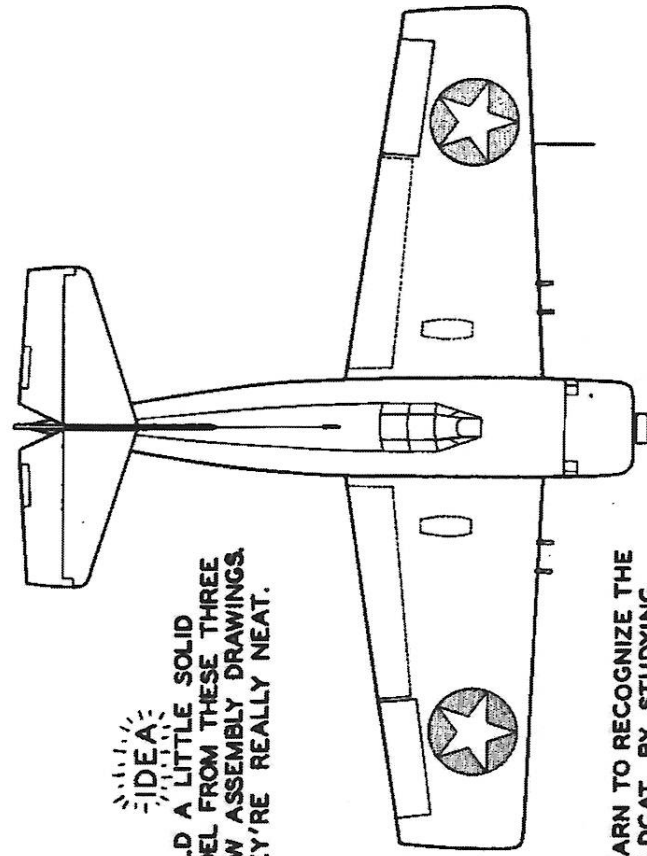
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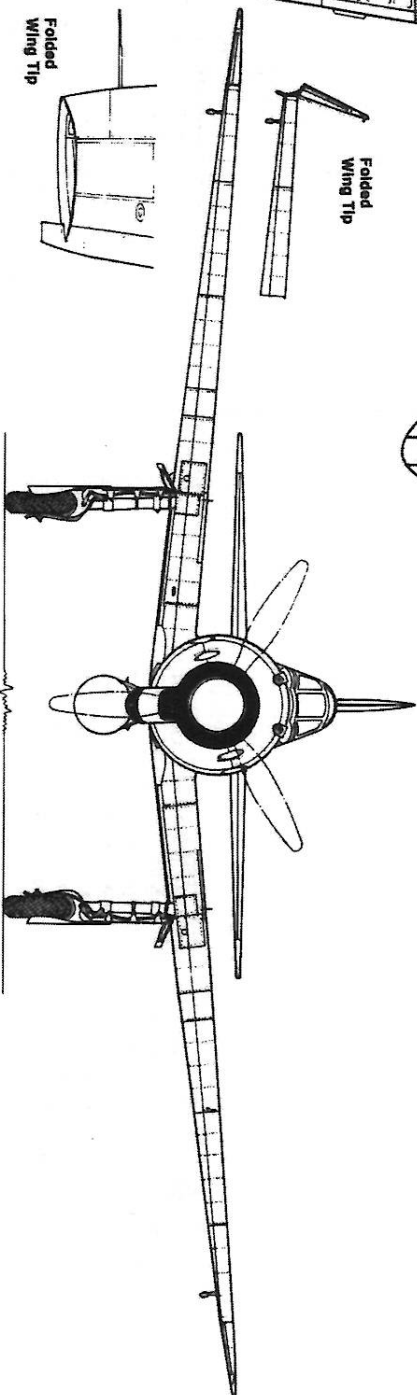
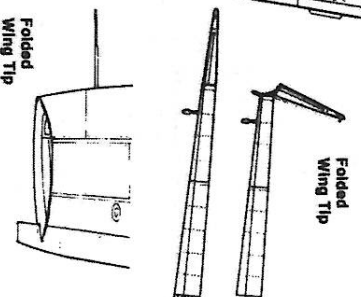
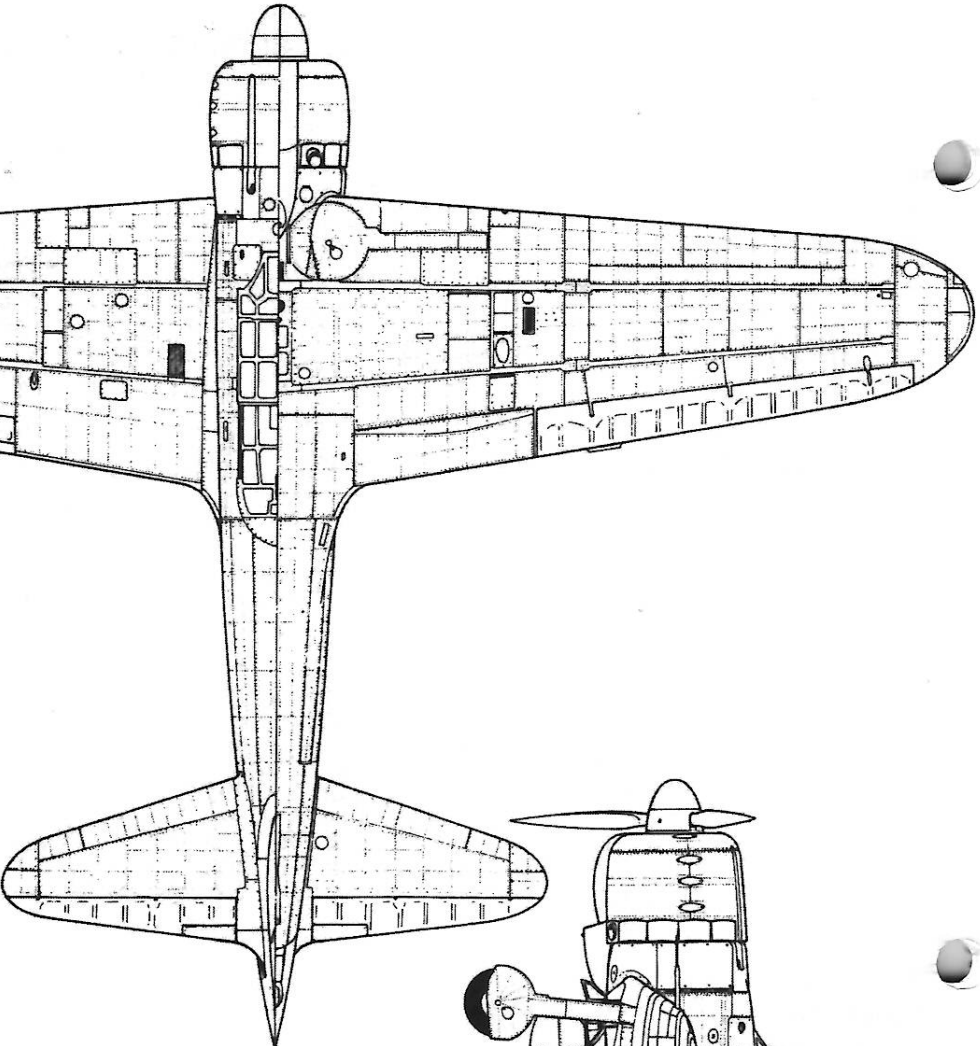
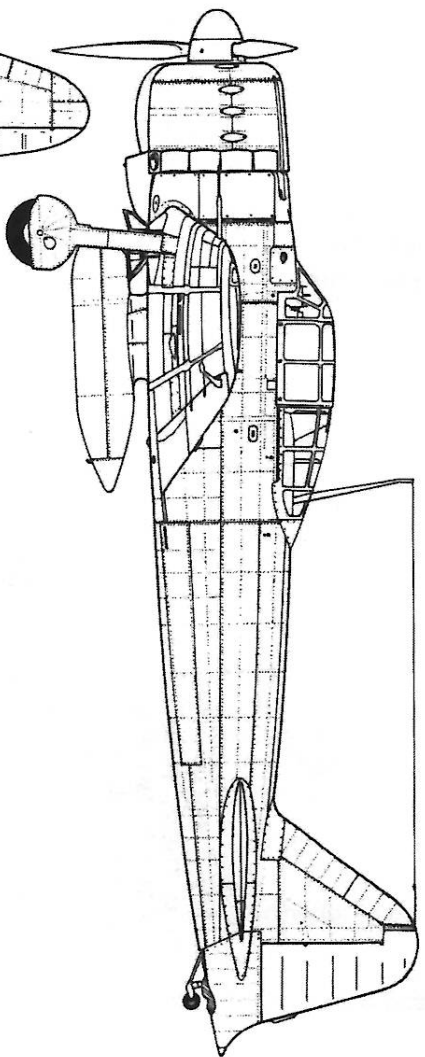


1/4 SIZE



1/4 SIZE

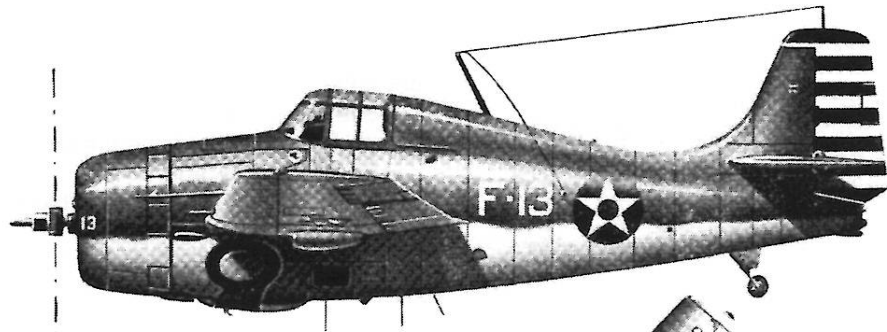
# A6M2 Model 21



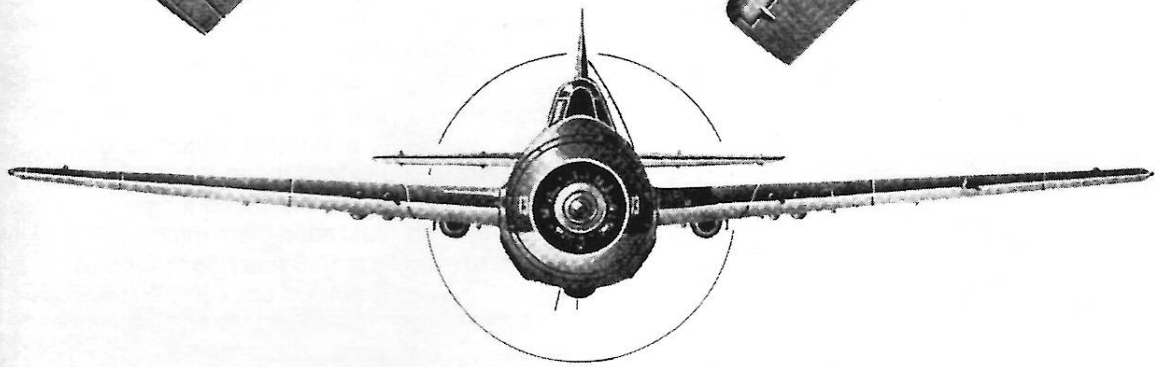
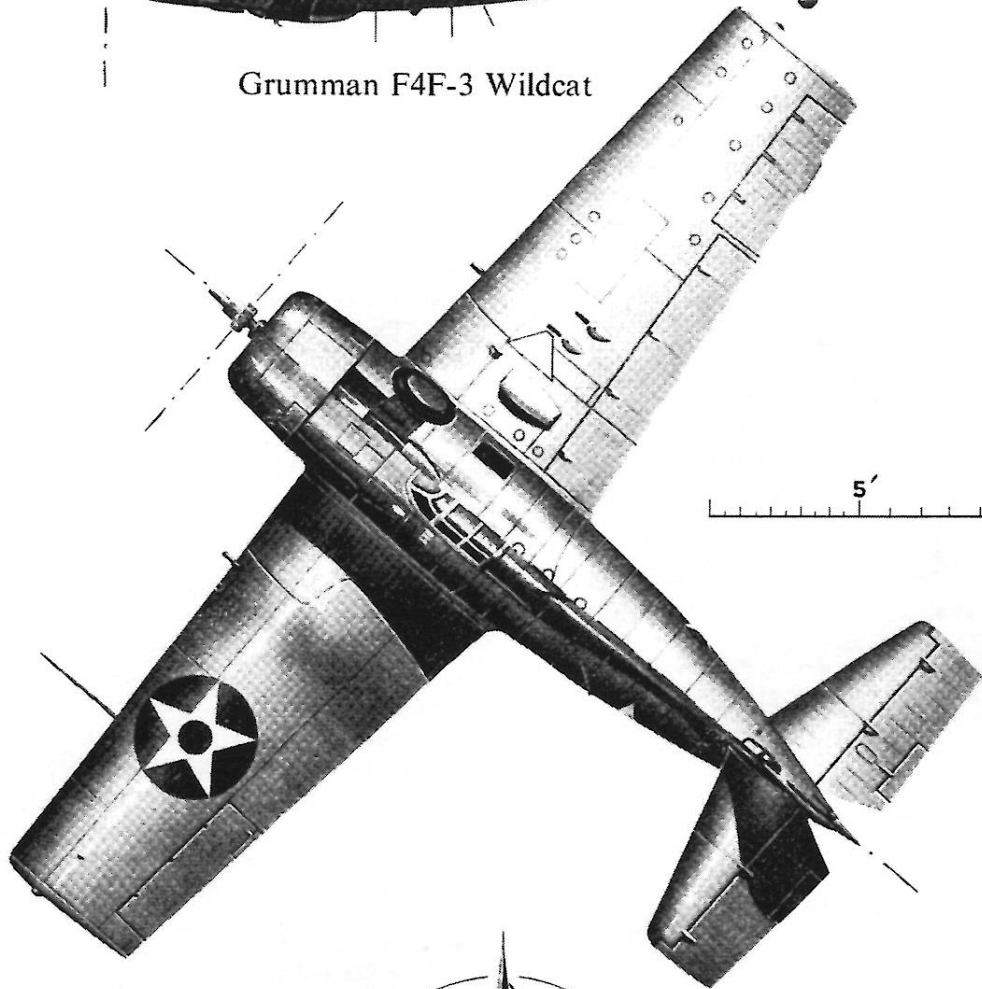
## Specifications

### A6M2 Model 21

- Engine: Sakae 12
- Horse Power: 940
- Weight (loaded): 5,313 lbs.
- Maximum Speed: 288 mph.
- Maximum Range: 1,930 miles
- Armament: Two 20mm cannons  
Two 7.7mm Machine guns



Grumman F4F-3 Wildcat



## Building the E3 ZERO

Stew Meyers

I bought a Comet E3 kit of the Zero at Geneseo last year for \$10. Sure enough it had pine print wood and stringers and a cardboard cowl in addition to the file card stock "Speed-O-Matic" formers. After putting out the first issue of this series I was inspired to throw together the Zero. I built it per the plans except for substituting balsa for the cardboard and pine.

I made copies of the print wood and formers on balsa by placing a Xerox copy of the print wood or former upside down on the wood and tracing it with a felt tip blender pen filled with acetone.

The fin and stab were built per the plan no changes. Maybe the stab needs to be 10% larger. The wing was also built per the plan except for a 1/8th sq leading edge. I used thin aliphatic glue on the wing and tail. The wings were joined with ambroid, rib A added and the dihedral set. Gussets were added between rib A and the LE and TE and a 1/8 by 1/16th balsa reinforcement is added behind the LE in the bay that supports the wing guns. I goofed and added more dihedral than I meant to, the plans show 1-1/8" per panel, I read this as 1-7/8. 1-1/2 would be about right.

The photos show how I modified the formers. The first step was to notch the longerons (keels) 1/16th wide and 1/16th deep on the inside at the former locations defined by the dotted lines. Symmetry allows one to accurately determine the center line of the formers while the other notch positions may not be correct. So the formers were notched 1/16 wide and 1/8th deep on the top and bottom only. The first former #4 is notched 3/16th deep and the longeron is not notched at this position.

The upper and lower longerons were glued together at the rear. The formers now were slid into place on the upper and lower keels. Don't glue it! Friction will hold it. The side longerons are slid in place roughly where they are shown on the formers. There are no notches in them yet. After aligning things by eyeball mark the formers where the side longerons line up. Take it all apart and notch the formers 1/8th deep on the marks. Reassemble it to check the notches, and then take it apart again.

Now add the 1/16th sq braces to the formers and cut the holes for rubber clearance and lightening. Since former # 5 is nearly round and up where rubber clearance is critical, a large ellipse is cut out and a hoop of .007x.063 carbon fiber glued inside with cyano. Carefully sand the edges smooth, exposed carbon fiber can act as a knife on rubber. Former 4 is left whole.

Now reassemble everything and hit it with cyano except for the bottom of formers 6 and 8. I cut the bottom longeron just ahead of the wing and jogged it up 3/32" to provide wing incidence. The bottom notches in formers 6&8 were deepened to accommodate this.

You can now mark the stringer positions notch them and add the stringers. I filled in between the stringers between formers 4 and 5 with 1/16th balsa. On the top where the cowl guns go, I used 3/16th sheet.

I drilled a 1/16th hole in a hard wood block and

glued in a length of 1/16 OD brass tubing with 3/32" extending above the surface. I then punch a 1/16th dia hole in a piece of 1/16th balsa and place it over the tubing on the block. Now I have a bearing for the OLFA circle cutter in the balsa. I cut five disks of 1-15/16" dia. I then set circle cutter to 1-1/2" dia. and cut the centers out of four of the disks to make rings. I assembled these into the cowl with white glue alternating the grain.

You could glue 1/2" dia 1/64th ply disks cut with the circle cutter on either side of the rear disk aligning the 1/16th dia hole. Then mount it on a Dremel mandrel and stick it in a drill press to turn the radius of the cowl. I just glued the cowl on the front of former 4 and sanded it by eye ball.

The kit features a paper oil cooler chin radiator, I replaced this with hard balsa as gear up landings take it on the chin.

The 1/64th ply facing disk has the square hole for the nose block cut into it before it is glued to the rear of the cowl. Fit up the square 1/4" basswood block to it by sanding until you have a tight fit. When the ply facing is glued to the cowl it provides a template to cut the rubber clearance hole in the back of the cowl and former 4. Check the fit of the basswood block in the rubber clearance hole which is now over 1/8 thick and when hardened with cyano will assure a snug fit.

You can now assemble the nose block by glueing the square block and thrust button support ring to the 1/16th ply disk. Of course you need a "S" hook and clutch.

The paper canopy fit well, but I don't like the opaque look of it. I copied the canopy pattern to a transparency (viewgraph) film. Now the structure of the longerons and thick formers showed up and offended me. I laminated the top of formers 7 and 8 from three layers of 0.020 x 0.063 basswood. Now these 1/16th square hoops are a lot less offensive. To locate former 7, I notched the out side of the top longeron, slid the hoop in place and glued the bottom to the stringers with gussets. I then cut the upper longeron off from the front of the canopy location to the back. I then cut down former 8 to form a low deck and added the hoop. A piece of vellum is used in this area. It would have been easier to modify former 8 before the final assembly if I had known I was going to do it.

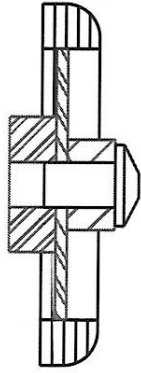
It turns out the balsa wing fillets don't fit but are easy to trim to shape. You really need to make a paper fairing to blend this to the fuselage.

The side longerons end just ahead of the juncture of the upper and lower vertical longerons. This so confused me as a kid that I tried to glue them in 3/8" rearward. If you extend the rear end of the side longerons a bit they will over lap the vertical longerons just as the rest of E-series do. Just sand them each 1/32 aft of the printed length to provide a 1/16 notch to fit the vertical longerons.

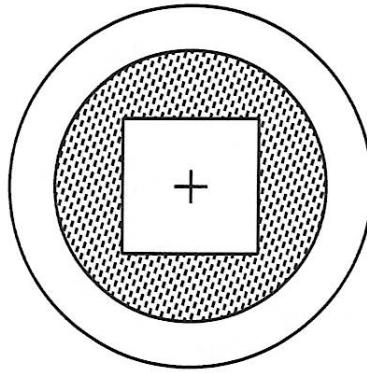
I haven't applied color to the model yet but the all up airframe weight is 22 grams and it balances on the spar with a 6' peck prop. Let's say 24 grams complete. 8 grams of rubber will give 25% power. Four strands of 3/32 rubber 30 inches long will do the job. That's good for over 2000 turns. It will fly a damn site better than the one I built in 1945.



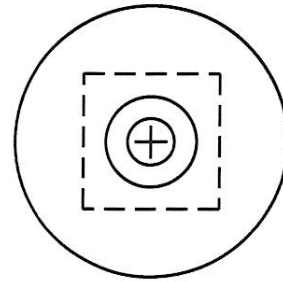
# COWL AND NOSE BLOCK ARRANGEMENT FOR COMET ZERO



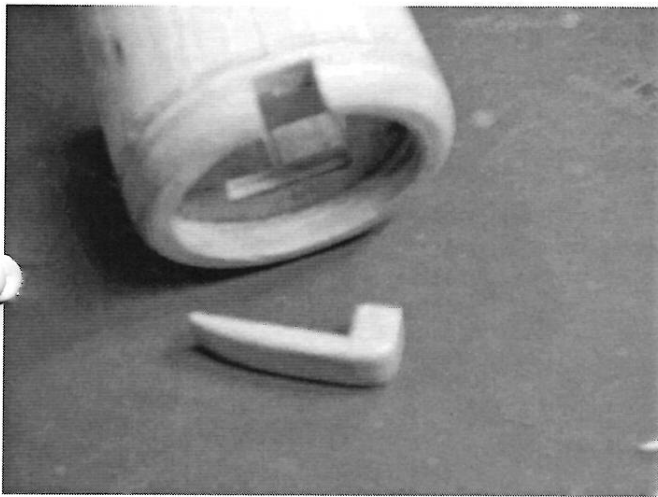
Cross section of cowl with nose block and thrust button



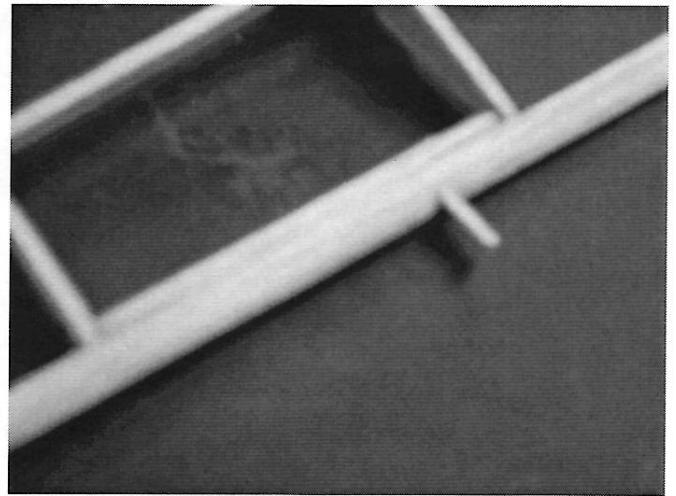
Cowl with out nose block showing hole in 1/64 ply for nose block



Nose block without thrust button made from 1/16 plywood and 1/4" basswood. Hole for thrust button is 1/4"



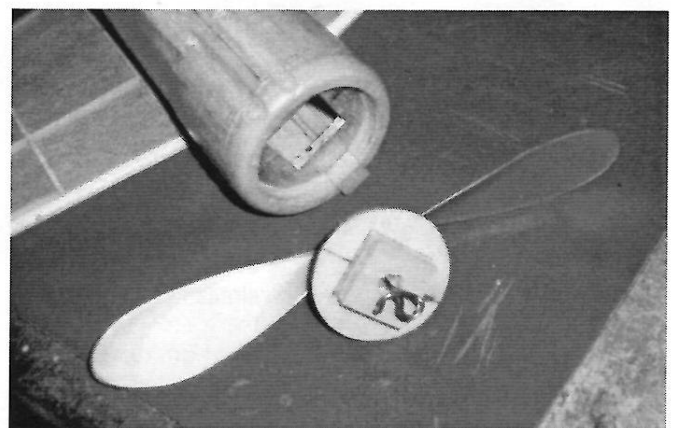
HARD BALSA AIR SCOOP



WING GUN SUPPORT



COWL GUN TROUGHS



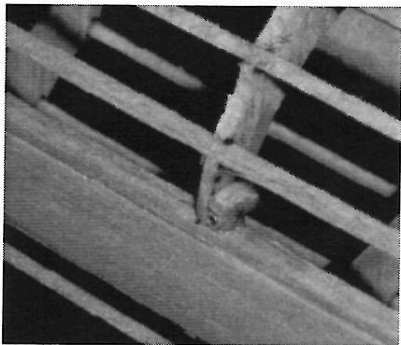
WORKING END OF NOSE BLOCK  
NOTE THE REVERSE "S" HOOK

# COMET E-2 WILDCAT CONSTRUCTION

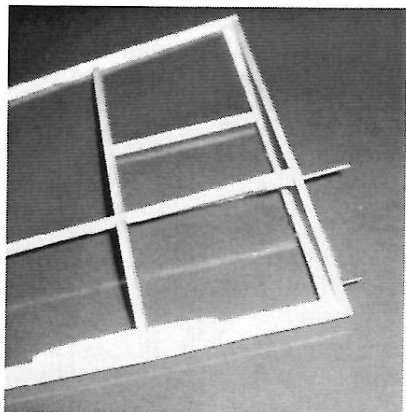
Stew Meyers

I built the wings pretty much per the plans except that I used a 1/8sq LE and reinforced the root rib with a strip of 1/16th x 1/8th balsa on the bottom of the root end to prevent the root rib from bowing when covered. This also makes adding the root rib after the wing has been fit up to the fuselage much easier.

Rather than carrying the spar into the wing dihedral jig on former 6, I glued a length of 1/16th aluminum tube where the bottom 1/16th square balsa dihedral is shown. I glued 1/16th square balsa strips on either side of the aluminum tube. I glued another length of 1/16th aluminum tubing to the bottom of the spar. A short length of 1/32 soft steel wire is inserted into the tube as a joiner. There is a little fiddling in fitting the wing up to the fuselage and adding the root rib per the scrap drawing on the wing instruction sheet. I also added a staple and tissue tube pin to the LE to pin the correct 3 degrees incidence. Two strips of 1/16th balsa go from the root rib to the next rib to provide a support for the oil cooler. The LE is reinforced for wing guns.



Alum. Tube dihedral jig



Wing root details

and the upper longeron eliminated in the canopy area. The paper canopy fits very well but will be replaced by clear plastic.

The tail feathers were built per the plan except for a 1/16th x 1/8th strip on the center line of the stab to strengthen the attach area. The fin/rudder has staple wire pins for attachment. These go through the stab into the attach plate on the fuselage. This arrangement allows you to pin up the bones and admire them and makes alignment after covering repeatable. (That is if you ever get around to covering those beautiful bones.)

Formers 5, 6, and 8 have carbon strip reinforcement similar to former 5 on the Zero. Former 7 was laminated again similar to the Zero

## ZERO CONSTRUCTION PHOTOS PAGE 24

1. WILDCAT bones shot. This is as far as I have gone with the E-2 kit.
2. ZERO bones shot of E-3 before covering. Note the canopy bulkheads have been replaced by hoops of laminated 1/16th sq. basswood. And the upper longeron (keel) has been removed between former 5 and former 9. The foreshortening of a large f-stop is obvious.
3. Longerons and bulkheads notched and ready for final assembly. Note the reinforcing cross strips on most formers and rounded corners for the cut outs. Former 5 has a hoop of .007 carbon fiber in the elliptical cut out. Former 4 is whole.
4. Fuselage assembly with stock kit bulkheads in canopy area. I did not like the looks of this when I used a transparent canopy and went to hoops. Sorry about the out of focus photo.
5. Fuselage assembly showing joggle in lower keel to increase the wing incidence to 3 degrees. Note stringer positions unnotched yet.
6. Former 7 laminated hoop to replace the solid former.

## PHOTO PAGES PAGE 23

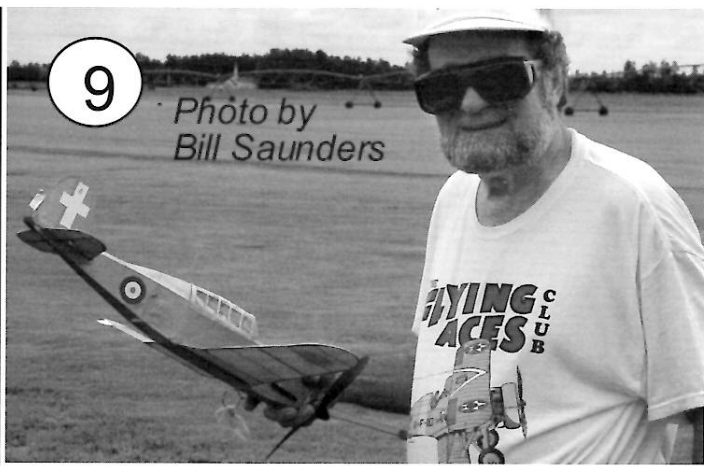
1. Bill Bell with his profile of a Martin B57 he worked on at Middle River years ago.
2. Bill Saunders sent several photos from last summer's fun at Kudzu. Here we see David Franks with Fiat.
3. Dave Rees with his 'Times Flies' at Kudzu.
4. Ask Don to draw this one up for electric; Porco Rosso's Macchi by a modeler in Japan and compressed air powered.
5. Down memories lane -- a WACO CTO overhauled for a stunt pilot at Parks about 1946 -- beautiful white with green trim finish.
6. Our intrepid water flyer, Dan, ready to launch at Dave's lake for the seaplane Kudzu flying last summer.
7. No not real but a great shot of John Hunton's electric R/C 'Orion' by our editor Stew last summer.

The cowl and nose block were done almost identically to the Zero.

Next time we'll present the ETO combat pair, the E5 Thunderbolt and E7 Focke Wolfe 190. Then end the series with the E9 P51 Mustang and the 3204 version.

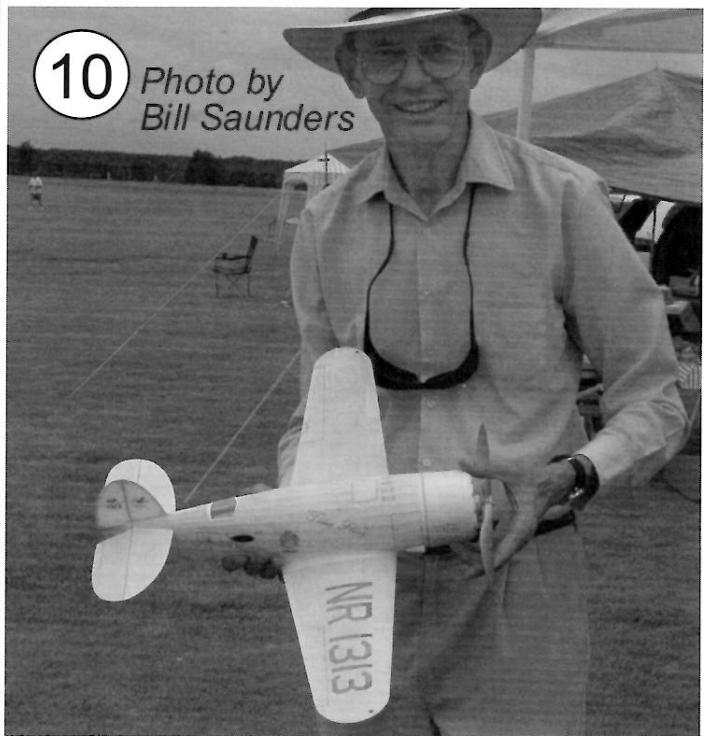


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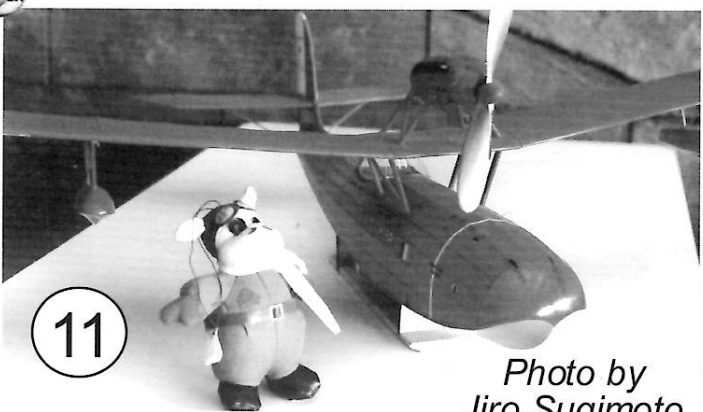
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Photo by Bill Saunders



10

Photo by Bill Saunders



11

Photo by Jiro Sugimoto



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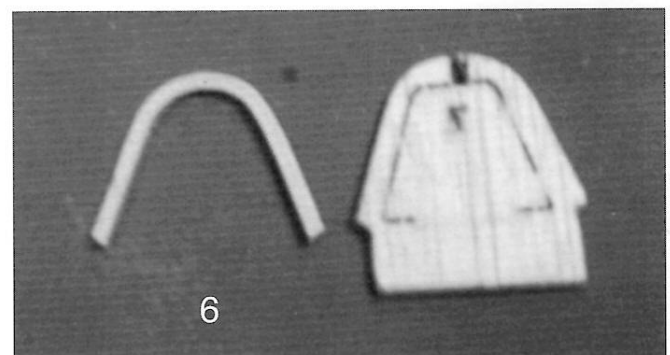
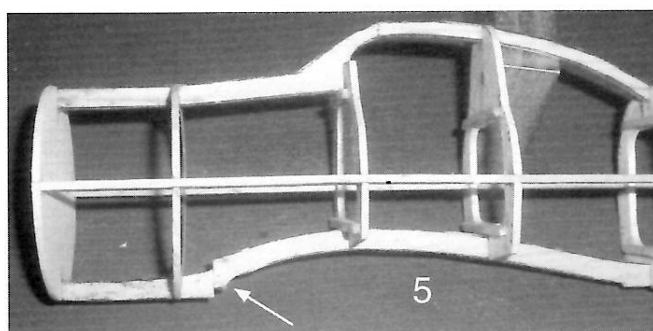
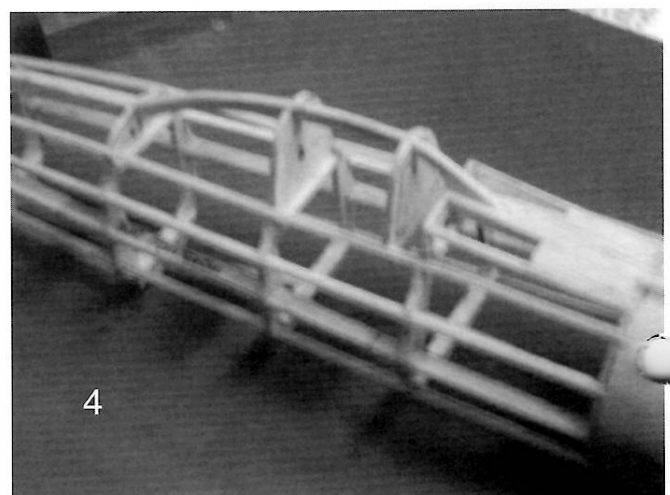
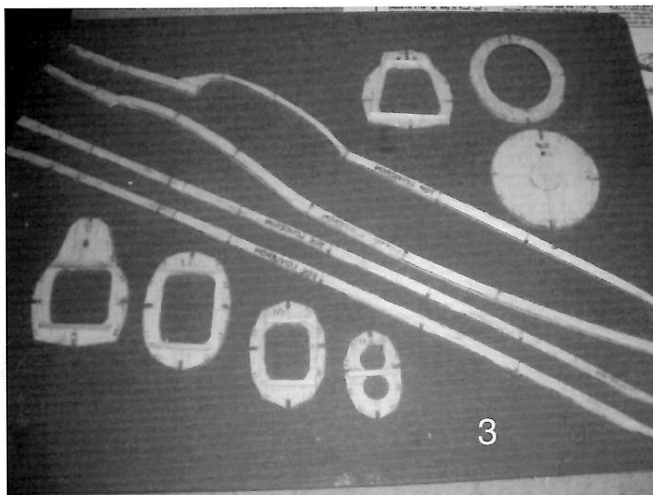
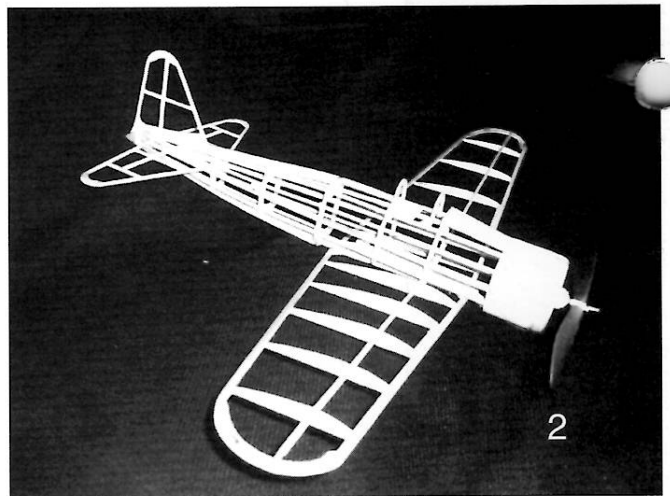
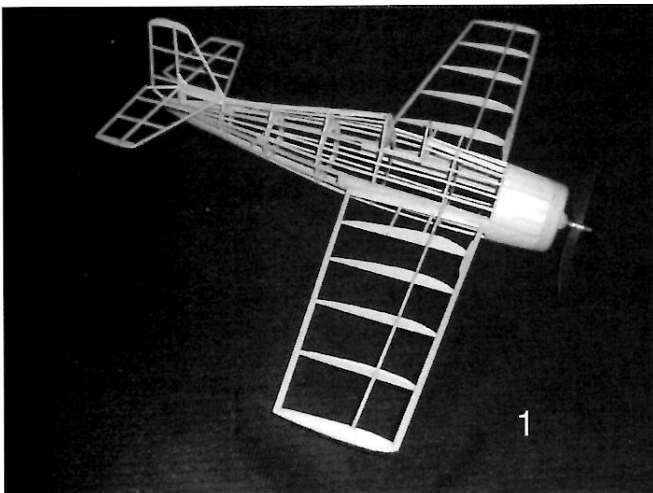
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Photo by Stew Meyers



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CLUB OFFICERS -President: Stefan Prosky 414 11th Street SE., Washington, DC 20003  
 Secretary: David Mitchell 230 Walnut St. NW., Washington, DC 20012  
 Treasurer: Stew Meyers, 8304 Whitman Dr., Bethesda, MD 20817 ---- *Note change - Stew has replaced Norm!*  
 Editor: Stew Meyers, 8304 Whitman Dr., Bethesda, MD 20817

MEETINGS - The D.C. MAXECUTERS hold meetings at 8:00 pm on the first Tuesday of every month at the College Park Airport, the oldest continuously operating airport in the world.

MEMBERSHIP - Dues for membership in the D.C. MAXECUTERS are \$15 per year for residents of the USA, Canada, and Mexico, and \$25 for all other countries.

Your mailing label indicates the year and month of the last issue of your current membership. A red "X" in the box below is a reminder that your dues are due. Send a check, payable to the "D.C. MAXECUTERS", to the treasurer, Stew Meyers.

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Maxecuter web site: <http://www.his.com/~tschmitt/>

Your DUES are due



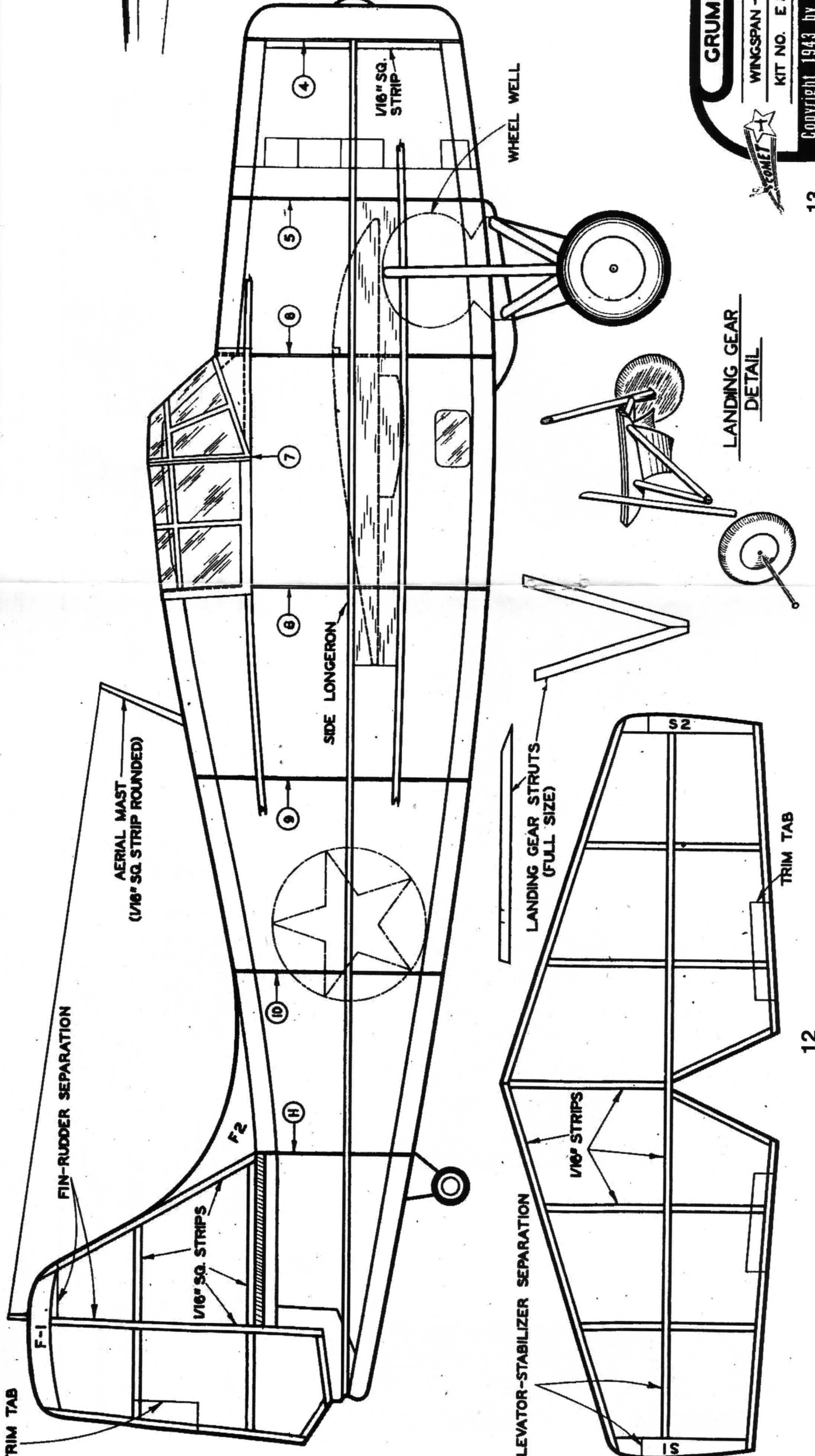
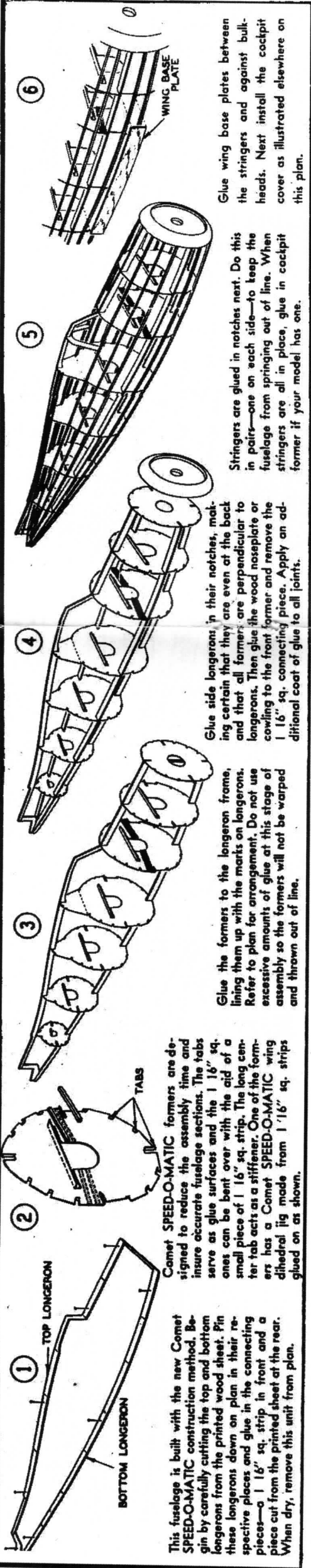
# GRUMMAN "WILDCAT"

The U. S. Navy designates their standard shipboard fighter F4F-4, and the ones in service for the British are called the "Martlet."

It is a single place, all metal plane, powered by an air-cooled "Wasp" engine of 900 H.P. Wings fold back for compact stowage on carriers. U. S. Navy and Marine fliers have proven it to be the best carrier fighter now in service.

Armament is four .50 cal. machine guns in the wings. Span is 38 ft., length 28 ft. 9 3/8 in.

Some of the Wildcats are colored gray all over, and some have all top surfaces the Navy's dark gray-blue and bottom surfaces gray.



ONLY COMET KITS FEATURE  
**SPEED-O-MATIC**  
CONSTRUCTION —  
ASK FOR OTHER MODELS AT YOUR DEALER

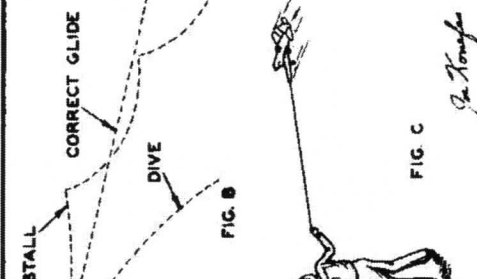
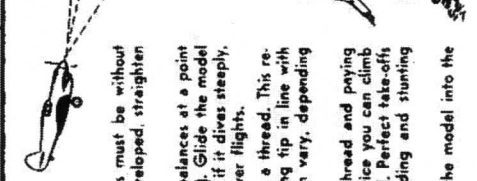
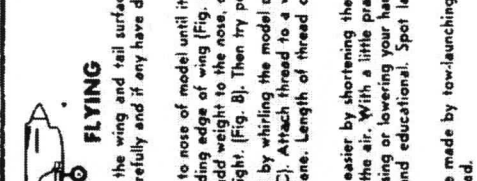
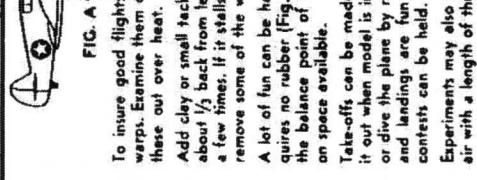
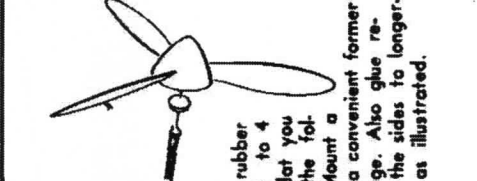
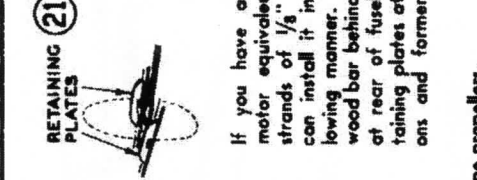
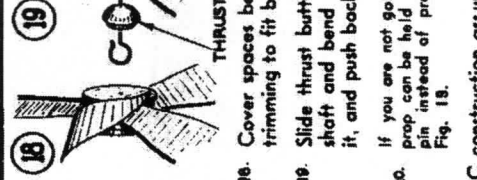
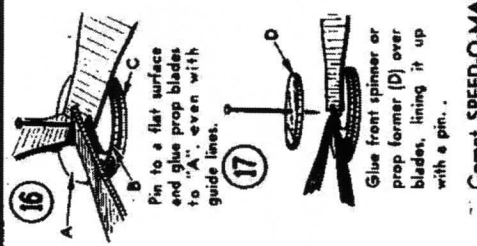
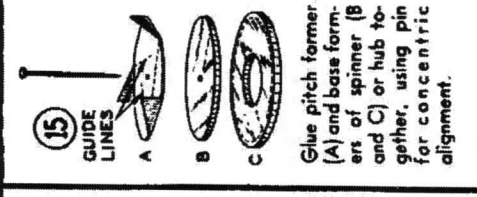
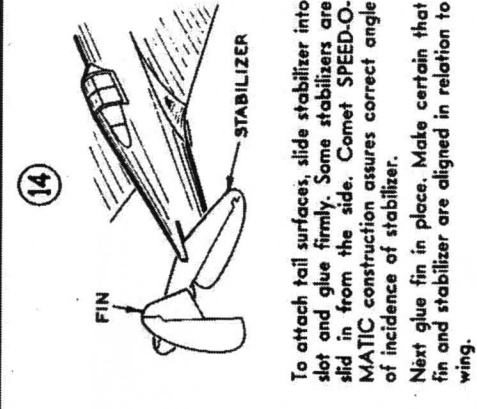
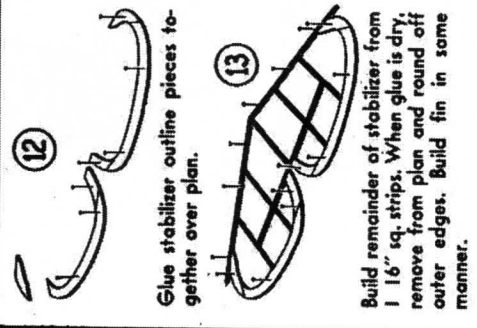
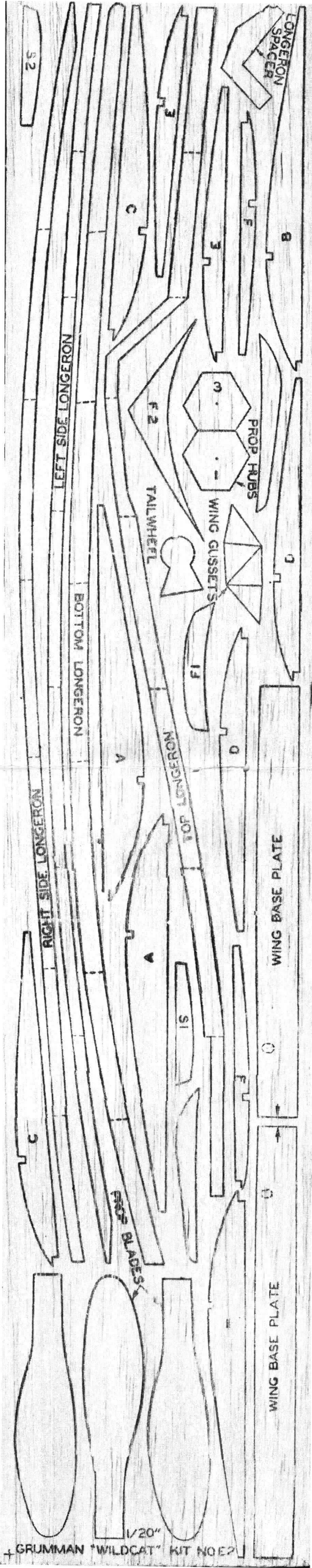
**GRUMMAN "WILDCAT" F4F-4**

WINGSPAN - 18 INCHES    LENGTH 19-34 INCHES

KIT NO. E 2    DRAWN BY *Alvanor Hobbs*

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GRUMMAN "WILDCAT" F4F-4

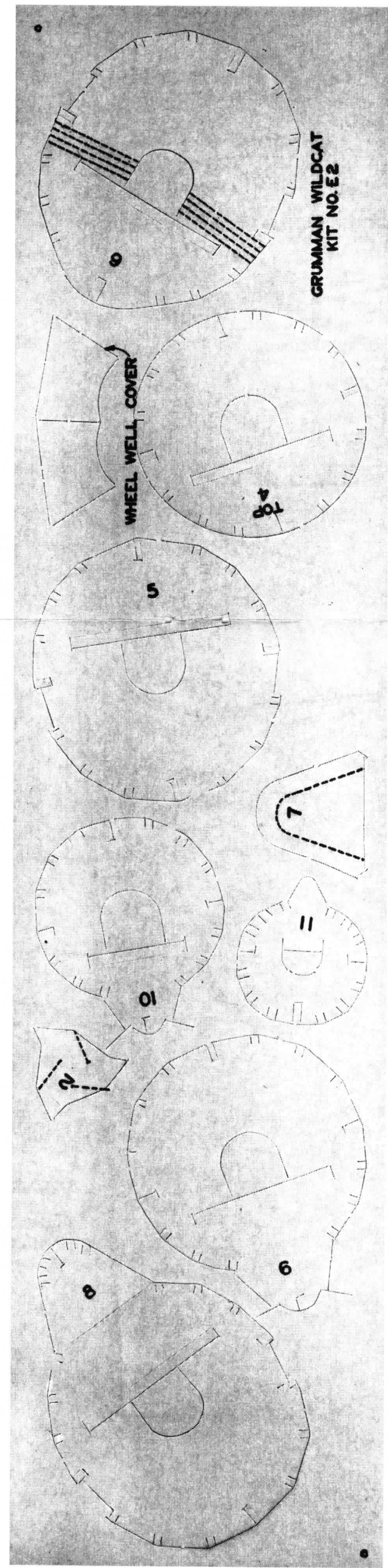
WINGSPAN - 18 INCHES

LENGTH 13-3/4 INCHES

KIT NO. E2

DRAWN BY *Comet Models*

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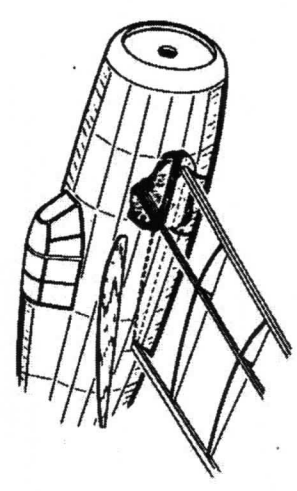
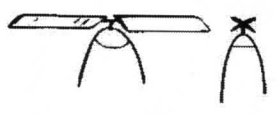


**"PLANE FACTS"**

**2. THRUST**

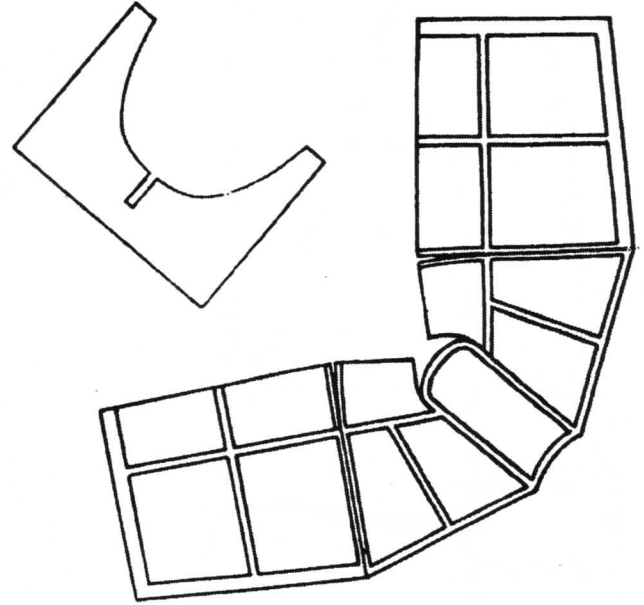
Thrust is a motive force that gives forward motion to the airplane. A propeller, which is usually used to produce this motion, is virtually two wings joined at a positive angle to the direction of rotation. These wings produce lift as they rotate, thus pulling the plane forward.

When the prop turns, the tips move faster than the sections near the hub. This is why the sections near the hub (A) have a steep angle, gradually changing to a flatter angle (C) toward the tips.



The end rib is installed by first sliding the spars into the dihedral jig until the leading and trailing edges touch the wing base plates. Then glue the end ribs to the spar and leading and trailing edges, keeping the rib flat against the fuselage.

WHEEL WELL COVER

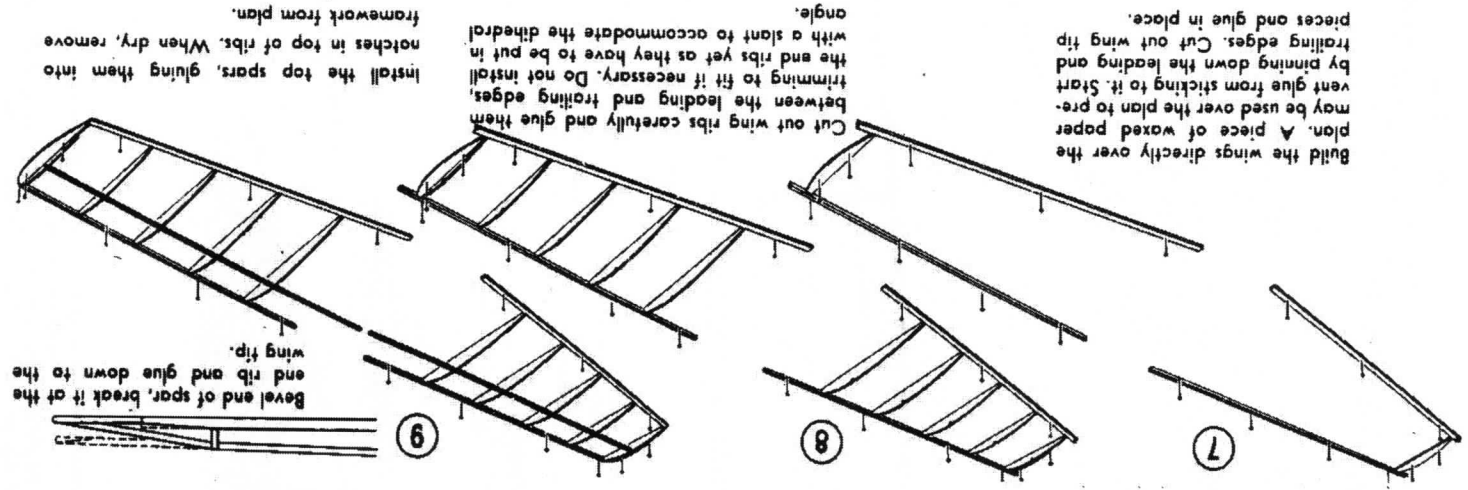


The wings are mounted to the fuselage by sliding spar into the SPEED-O-MATIC dihedral jig on each wing base plate.

Build the wings directly over the plan. A piece of waxed paper may be used over the plan to prevent glue from sticking to it. Start by pinning down the leading and trailing edges. Cut out wing tip pieces and glue in place.

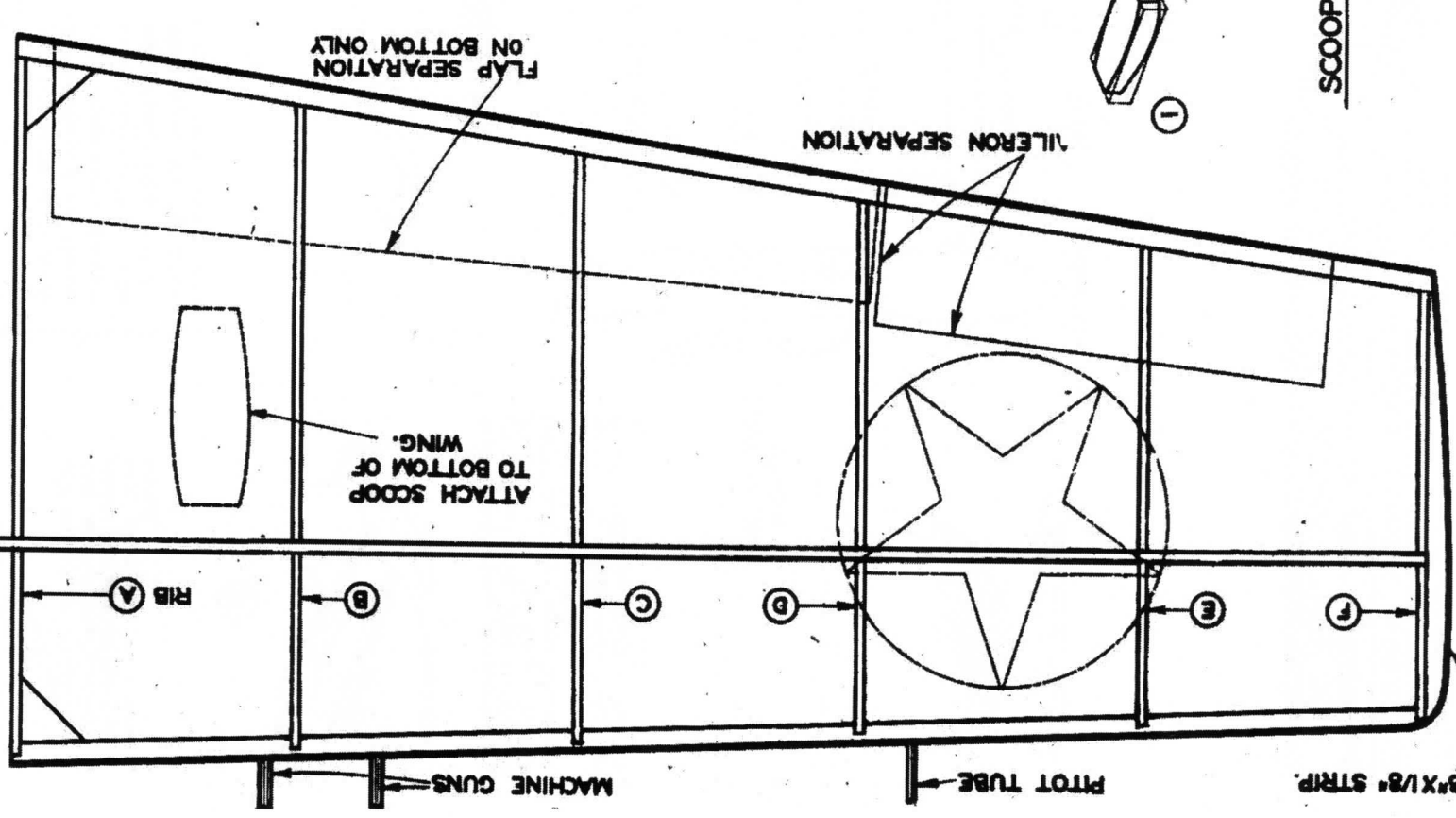
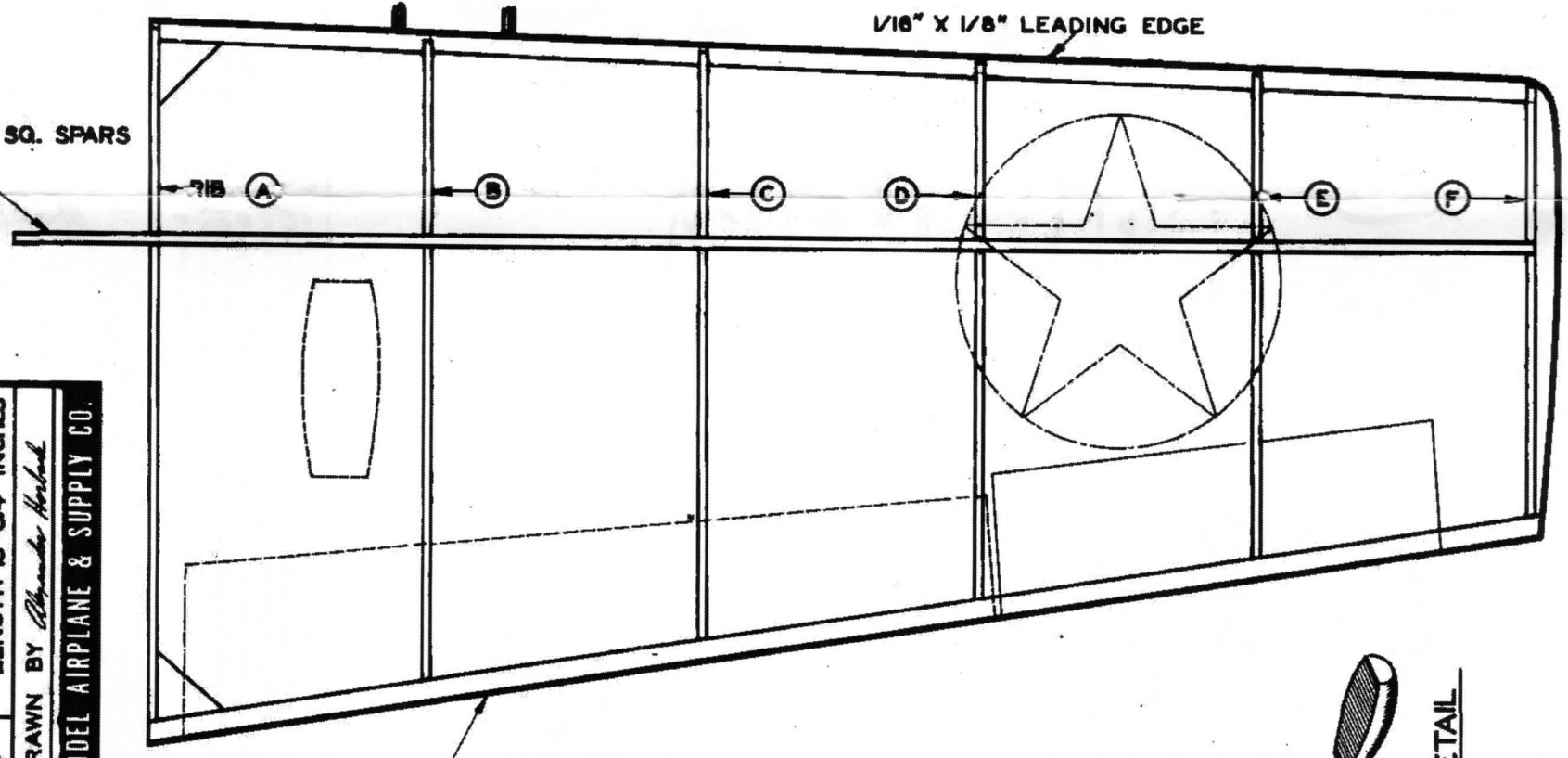
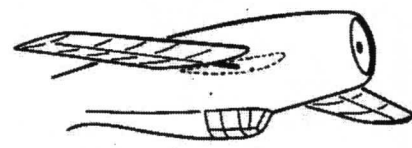
Cut out wing ribs carefully and glue them between the leading and trailing edges, trimming to fit if necessary. Do not install the end ribs yet as they have to be put in with a slant to accommodate the dihedral angle.

Install the top spars, gluing them into notches in top of ribs. When dry, remove framework from plan.



**NOTES ON COVERING**

Stick tissue to framework using banana liquid or tissue cement. Fibers of tissue should run the length of part being covered. Use narrow strips for covering rounded fuselages and cover between stringers. After all parts of model have been covered, glue them together and spray lightly with water. This shrinks the tissue smooth. A few coats of banana liquid or clear dope may be applied to keep tissue taut.

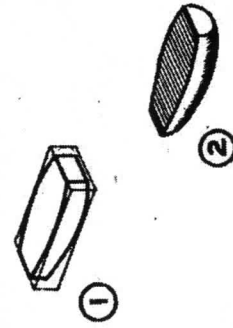


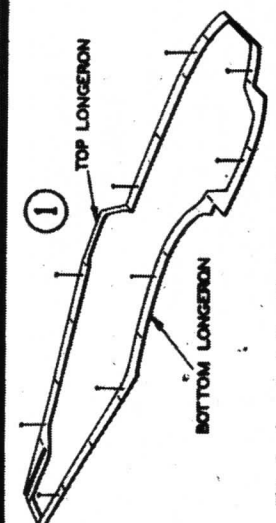
**GRUMMAN "WILDCAT" F4F-4**

WINGSPAN - 18 INCHES    LENGTH 13-34 INCHES  
 KIT NO. E2    DRAWN BY *Alvin H. Hark*  
 Copyright 1943 by COMET MODEL AIRPLANE & SUPPLY CO.

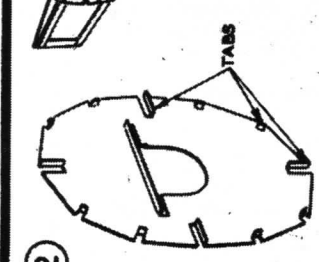


SCOOP DETAIL

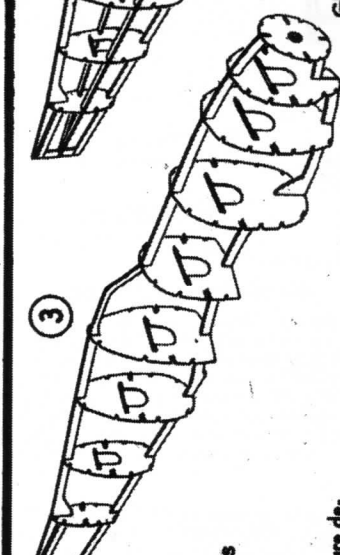




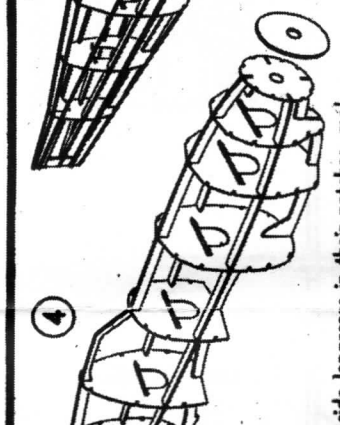
This fuselage is built with the new Comet SPEED-O-MATIC construction method. Begin by carefully cutting the top and bottom longérons from the printed wood sheet. Pin these longérons down on plan in their respective places and glue in the connecting pieces—a 1/16" sq. strip in front and a piece cut from the printed sheet at the rear. When dry, remove this unit from plan.



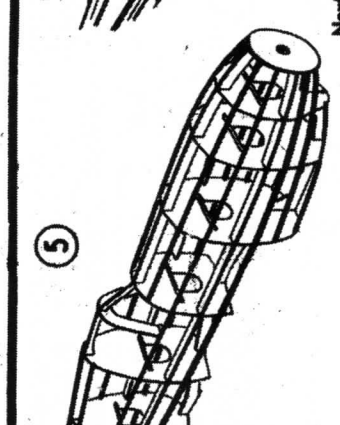
Comet SPEED-O-MATIC formers are designed to reduce the assembly time and insure accurate fuselage sections. The tabs serve as glue surfaces and the 1/16" sq. ones can be bent over with the aid of a small piece of 1/16" sq. strip. The long center tab acts as a stiffener.



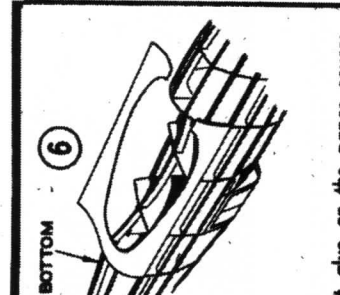
Glue the formers to the longeron frame, lining them up with the marks on longérons. Refer to plan for arrangement. Do not use excessive amounts of glue at this stage of assembly so the formers will not be warped and thrown out of line.



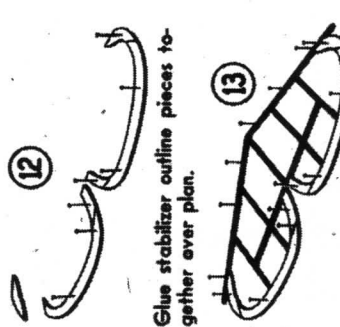
Glue side longérons in their notches, making certain that they are even at the back and that all formers are perpendicular to longérons. Then glue the wood noseplate or cowl to the front former and remove the 1/16" sq. connecting piece. Apply an additional coat of glue to all joints.



Stringers are glued in notches next. Do this in pairs—one on each side—to keep the fuselage from springing out of line. When stringers are all in place, glue in cockpit former if your model has one.



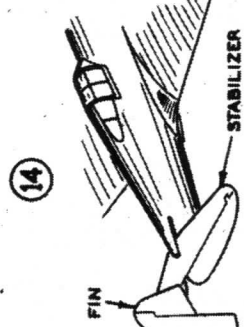
Next glue on the paper covers that fit around the wing. Also glue cockpit covers in place. If desired, transparent portions may be made of celluloid. See sketch elsewhere on plan for cockpit details.



Glue stabilizer outline pieces together over plan.

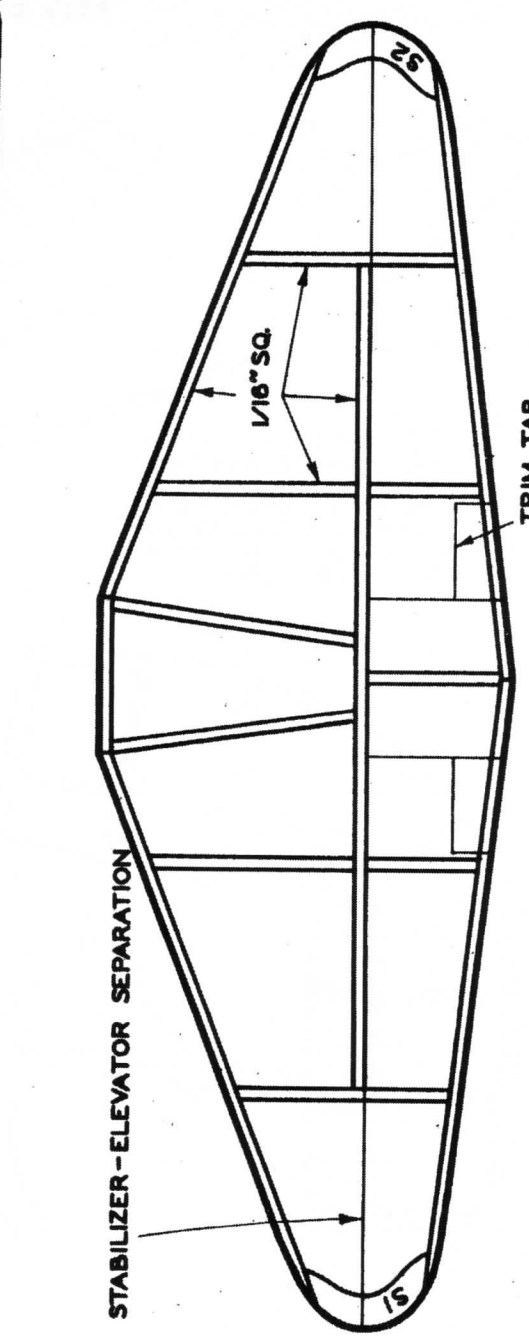
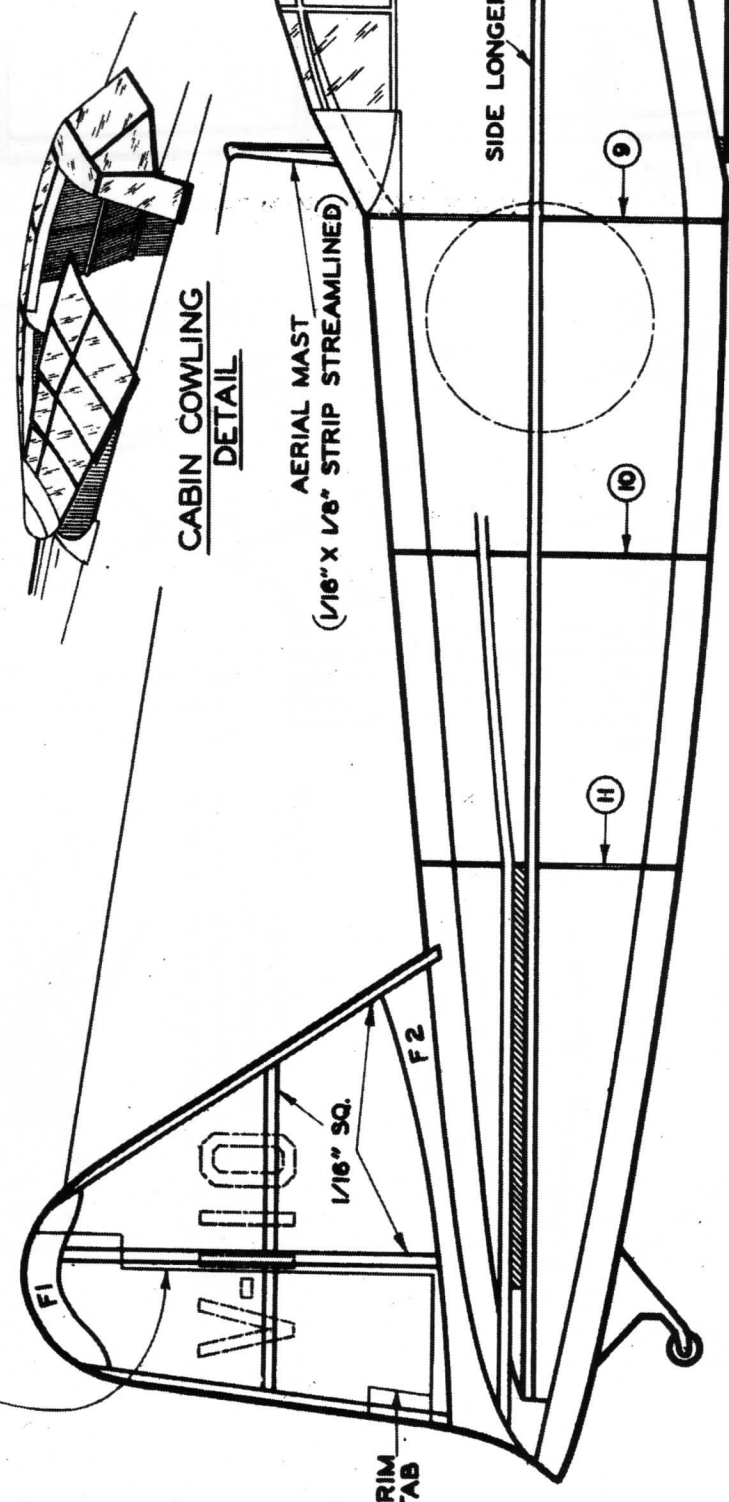


Build remainder of stabilizer from 1/16" sq. strips. When glue is dry, remove from plan and round off outer edges. Build fin in same manner.



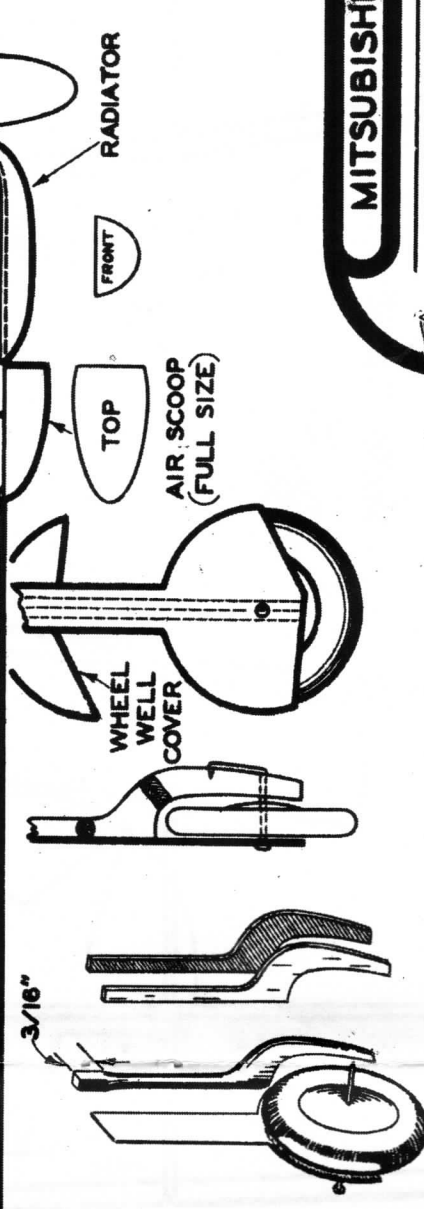
To attach tail surfaces, slide stabilizer into slot and glue firmly. Some stabilizers are slid in from the side. Comet SPEED-O-MATIC construction assures correct angle of incidence of stabilizer.  
Next glue fin in place. Make certain that fin and stabilizer are aligned in relation to wing.

**FIN-RUDDER SEPARATION**



**STABILIZER-ELEVATOR SEPARATION**

**LANDING GEAR DETAIL**

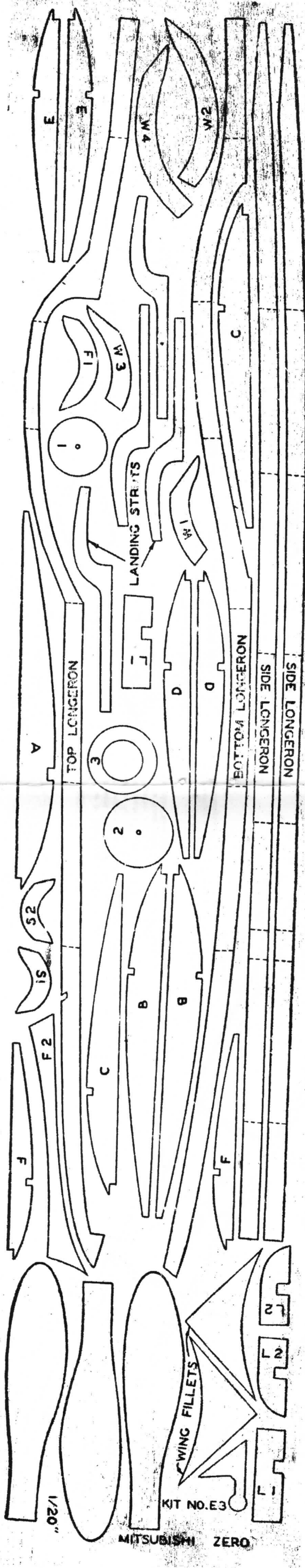


**RADIATOR DETAIL**

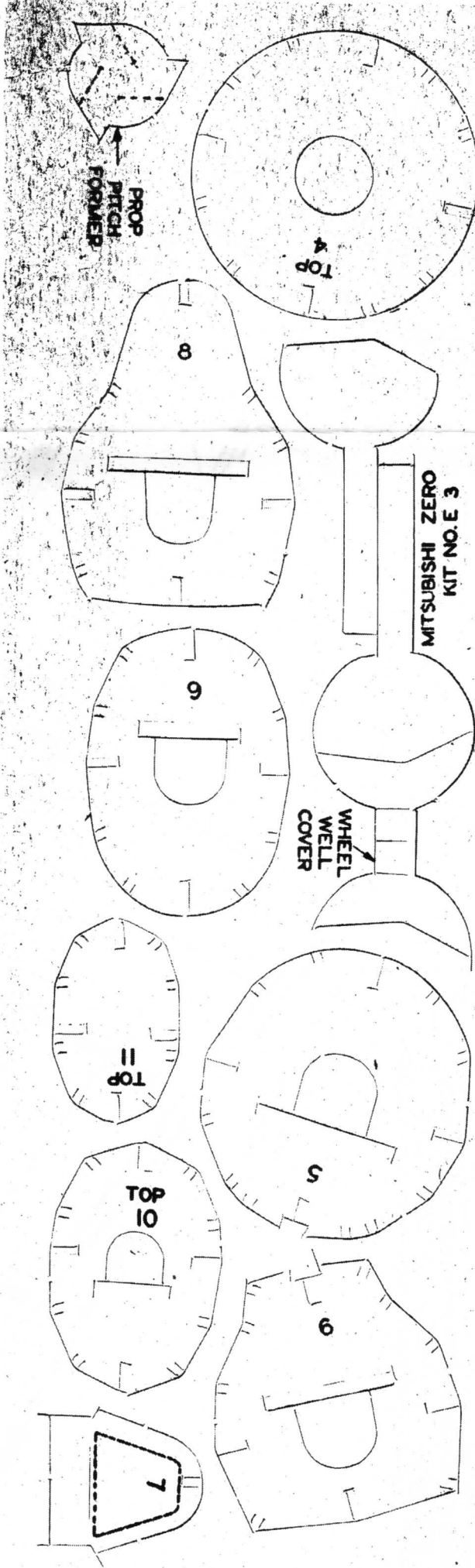


**MITSUBISHI "ZERO" TYPE 00**  
 WINGSPAN - 18 INCHES    LENGTH 13-1/8 INCHES  
 KIT NO. E3    DRAWN BY *Off. Shimizu*

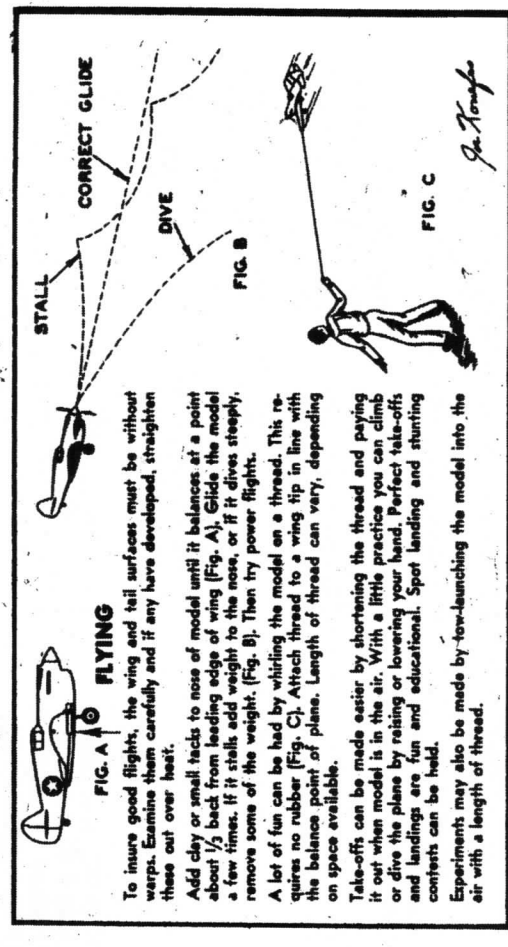




MITSUBISHI ZERO  
KIT NO. E3



MITSUBISHI ZERO  
KIT NO. E 3



**FIG. A FLYING**  
To insure good flights, the wing and tail surfaces must be without warps. Examine them carefully and if any have developed, straighten these out over heat.

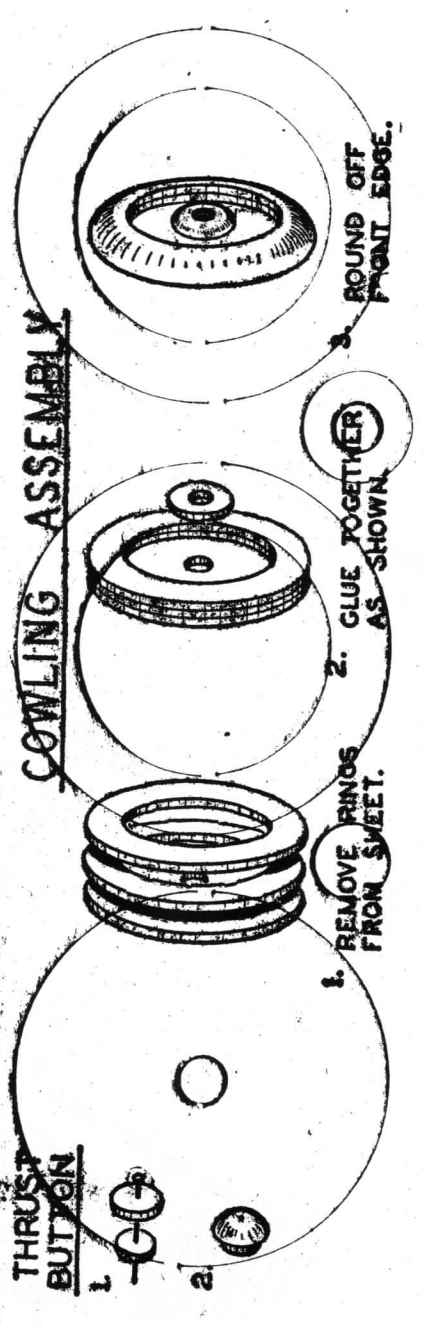
Add clay or small tacks to nose of model until it balances at a point about 1/3 back from leading edge of wing (Fig. A). Glide the model a few times. If it stalls add weight to the nose, or if it dives steeply, remove some of the weight (Fig. B). Then try power flights.

A lot of fun can be had by whirling the model on a thread. This requires no rubber (Fig. C). Attach thread to a wing tip in line with the balance point of plane. Length of thread can vary, depending on space available.

Take-offs can be made easier by shortening the thread and paying it out when model is in the air. With a little practice you can climb or dive the plane by raising or lowering your hand. Perfect take-offs and landings are fun and educational. Sport landing and stunting contests can be held.

Experiments may also be made by tow-launching the model into the air with a length of thread.

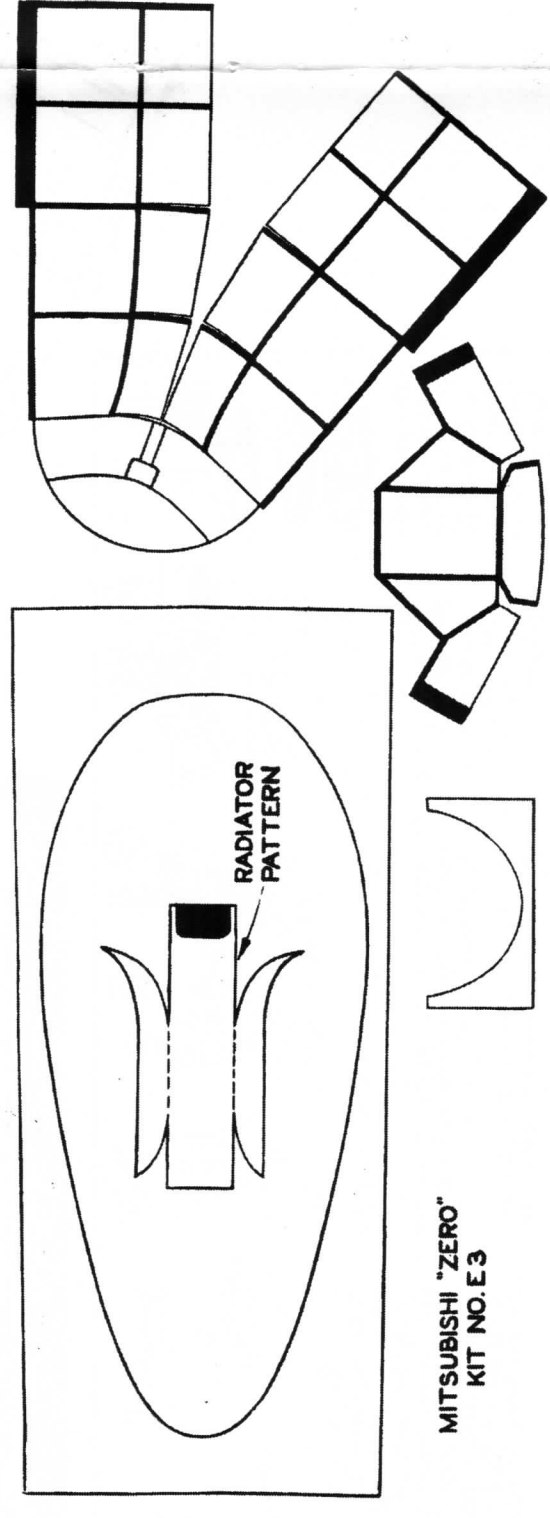
FIG. C



**COWLING ASSEMBLY**

THRUST  
BUTTON

1. REMOVE RINGS FROM SWEET.
2. GLUE TOGETHER AS SHOWN.
3. ROUND OFF FRONT EDGE.



RADIATOR  
PATTERN

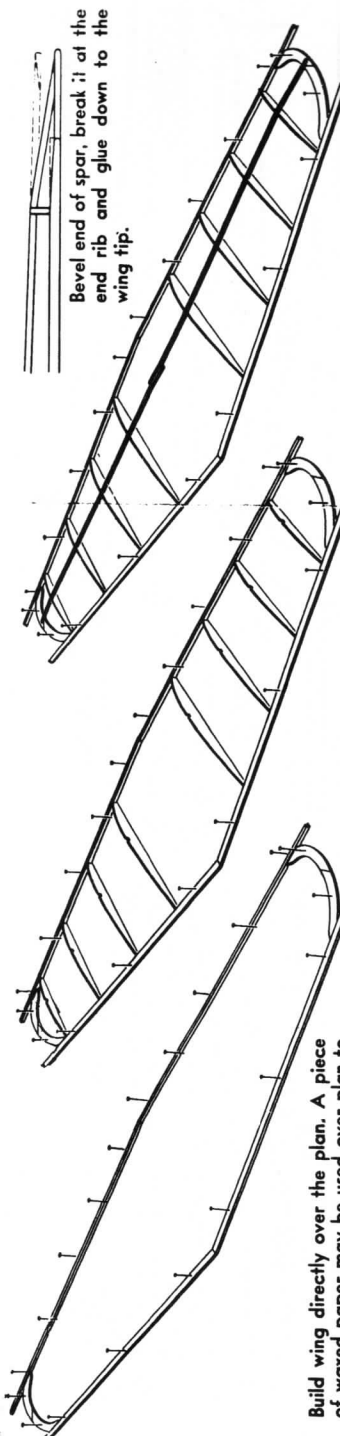
MITSUBISHI "ZERO"  
KIT NO. E3

The cowl shown above is printed on heavy cardbord. It was a bear to cut and sand. Naturally today it should be made from bass wood or hard balsa. This piece is identical in both the E-2 Wildcat and E-3 Zero kits.

**MITSUBISHI "ZERO" TYPE 00**

WINGSPAN - 18 INCHES    LENGTH 13-1/8 INCHES

KIT NO. E3    DRAWN BY *Op. Shimizu*



Build wing directly over the plan. A piece of waxed paper may be used over plan to prevent glue from sticking to it. Start by pinning down the leading and trailing edges. Don't glue them together at the center as this will be done when dihedral is built in. Cut out wing tip pieces and glue them in.

Cut out wing ribs carefully, and glue them in place to leading and trailing edges, trimming to fit if necessary. Leave out center rib until dihedral is built in.

Install the top spars, lapping but not gluing them at the center. These are glued when dihedral angle is built into wing. When dry remove framework from plan.

Bevel end of spar, break it at the end rib and glue down to the wing tip.

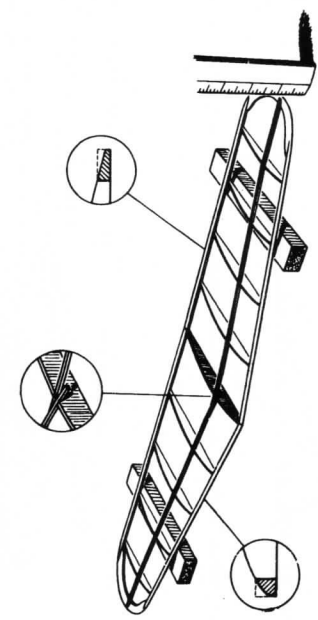
**NOTES ON COVERING**

Stick tissue to framework using banana liquid or tissue cement. Fibers of tissue should run the length of part being covered. Use narrow strips for covering rounded fuselages and cover between stringers. After all parts of model have been covered, glue them together and spray lightly with water. This shrinks the tissue smooth. A few coats of banana liquid or clear dope may be applied to keep tissue taut.

After wing and fuselage have been covered with tissue, assemble as shown, gluing center rib directly to bottom longeron.

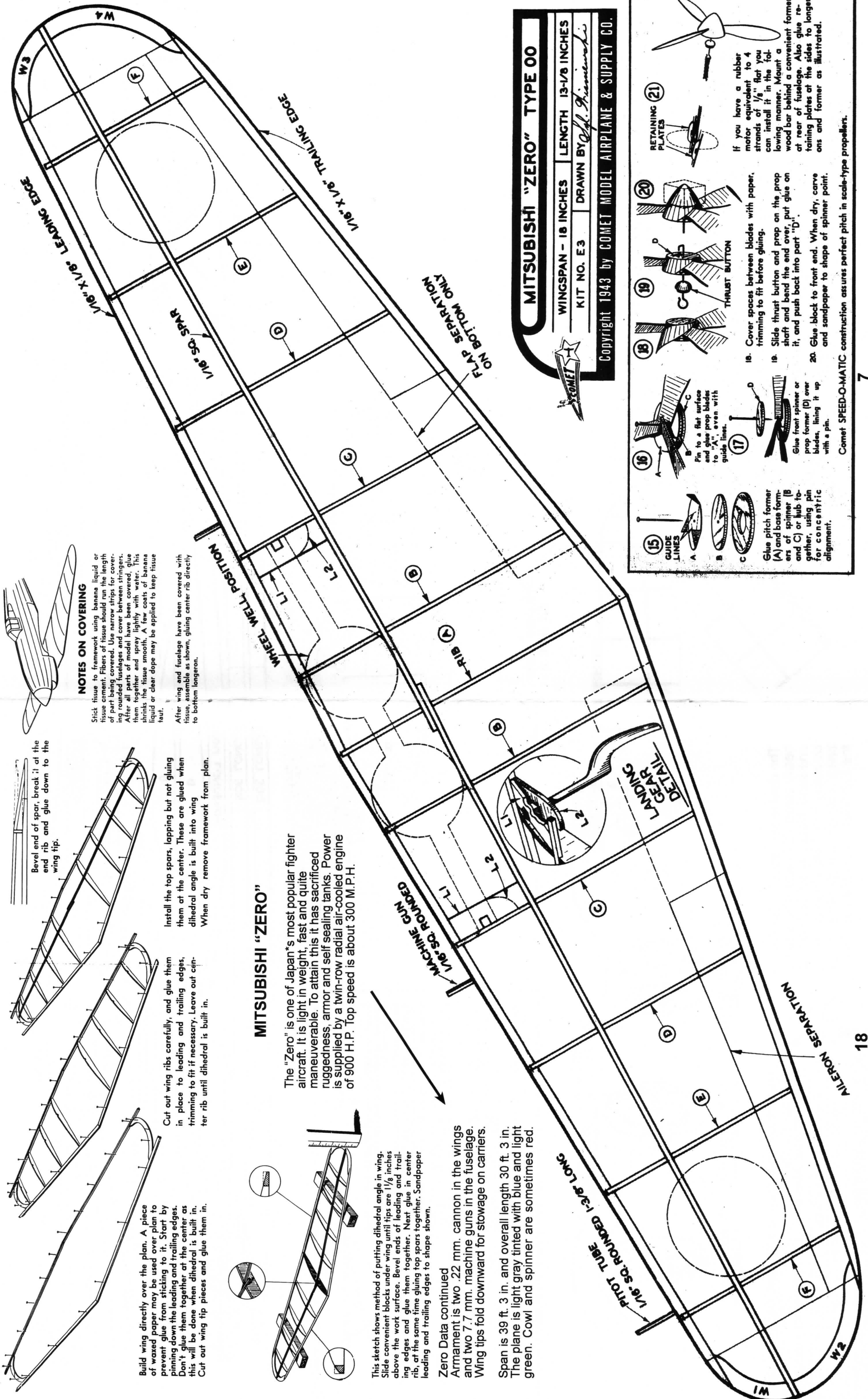
**MITSUBISHI "ZERO"**

The "Zero" is one of Japan's most popular fighter aircraft. It is light in weight, fast and quite maneuverable. To attain this it has sacrificed ruggedness, armor and self sealing tanks. Power is supplied by a twin-row radial air-cooled engine of 900 H.P. Top speed is about 300 M.P.H.

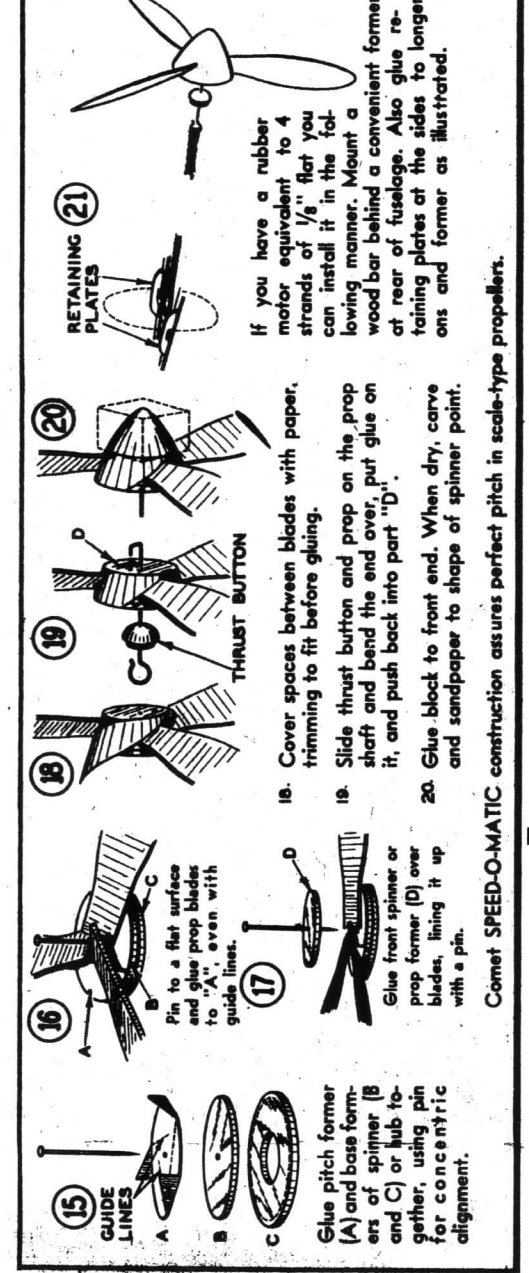


This sketch shows method of putting dihedral angle in wing. Slide convenient blocks under wing until tips are 1/8 inches above the work surface. Bevel ends of leading and trailing edges and glue them together. Next glue in center rib, at the same time gluing top spars together. Sandpaper leading and trailing edges to shape shown.

Zero Data continued  
 Armament is two .22 mm. cannon in the wings and two 7.7 mm. machine guns in the fuselage. Wing tips fold downward for stowage on carriers.  
 Span is 39 ft. 3 in. and overall length 30 ft. 3 in. The plane is light gray tinted with blue and light green. Cowl and spinner are sometimes red.



**MITSUBISHI "ZERO" TYPE 00**  
 WINGSPAN - 18 INCHES LENGTH 13-1/8 INCHES  
 KIT NO. E3 DRAWN BY *Ed. Shimizu*  
 Copyright 1943 by COMET MODEL AIRPLANE & SUPPLY CO.



- 15. Glue pitch former (A) and base formers of spinner (B and C) or hub together, using pin for concentric alignment.
- 16. Pin to a flat surface and glue prop blades to "A", even with guide lines.
- 17. Glue front spinner or prop former (D) over blades, lining it up with a pin.
- 18. Cover spaces between blades with paper, trimming to fit before gluing.
- 19. Slide thrust button and prop on the prop shaft and bend the end over, put glue on it, and push back into part "D".
- 20. Glue block to front end. When dry, carve and sandpaper to shape of spinner point.
- 21. If you have a rubber motor equivalent to 4 strands of 1/8" flat you can install it in the following manner. Mount a wood bar behind a convenient former at rear of fuselage. Also glue retaining plates at the sides to longerons and former as illustrated.

Comet SPEED-O-MATIC construction assures perfect pitch in scale-type propellers.