

MAX FAX



Journal of the D. C. Maxcutters

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

Editors: Dan Driscoll & Stew Meyers

May/June 2006

COMET SPEED-O-MATIC ISSUE

P-47



Fw-190



European Combat Pair

COMING ATTRACTIONS

MAY 27,28 2006 Memorial Weekend CASA "Spring Sizzle" Electric R/C
Gude Drive flying site. Street address is 600 Gude Dr, Rockville MD 20850
Event website is <http://home.comcast.net/~mkroese3/>

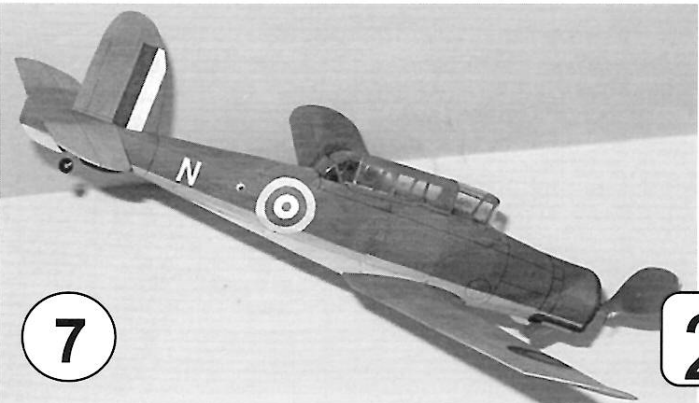
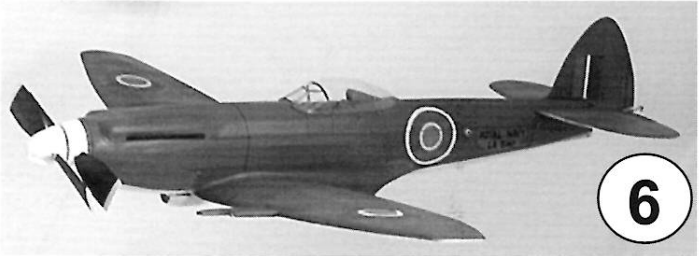
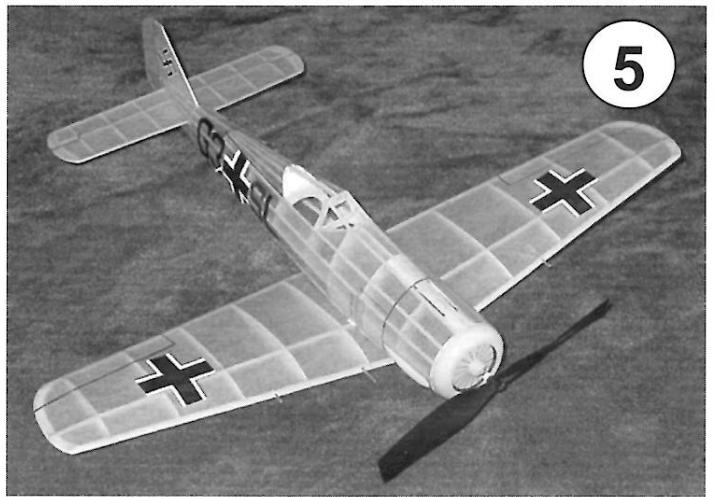
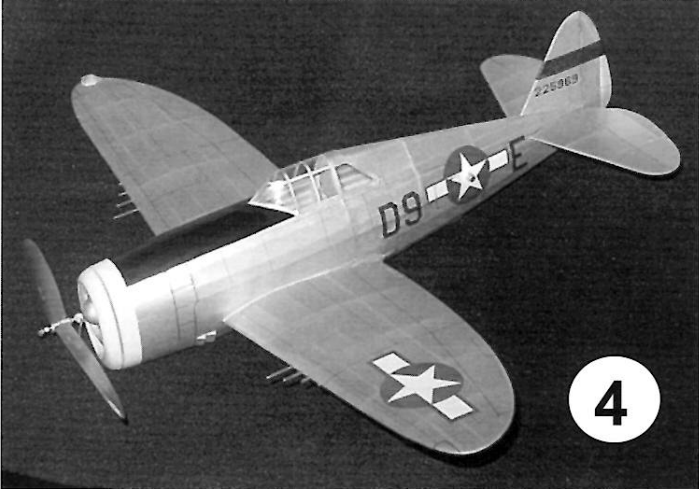
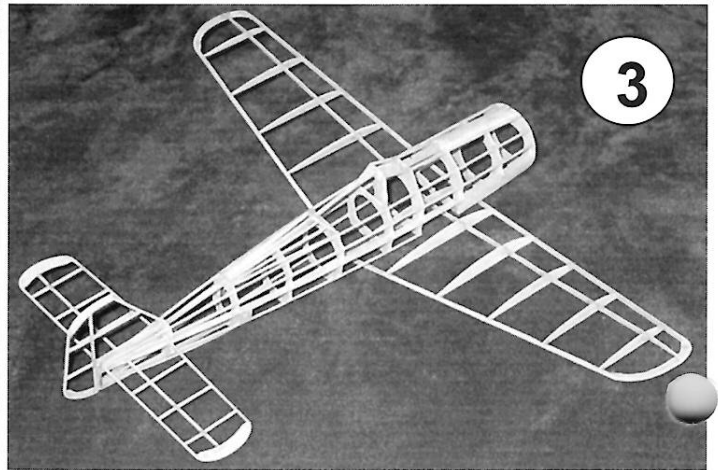
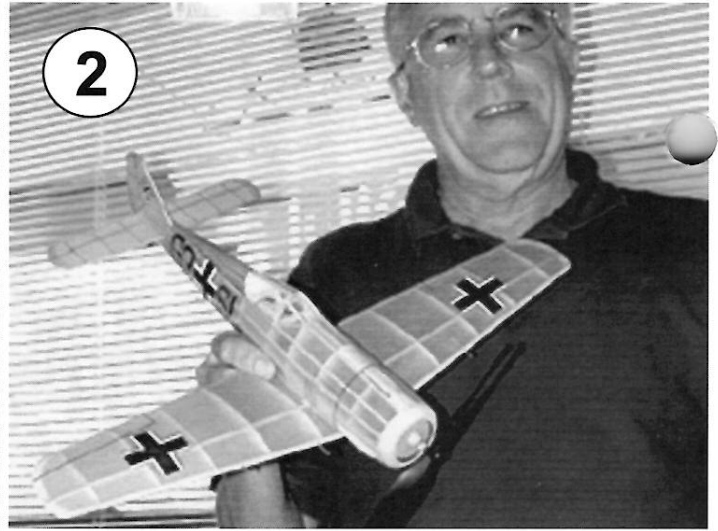
JUNE 10,11, 2006 EASTERN US FREE FLIGHT CHAMPS
WAWAYANDA, NEW YORK Includes FAC events

JULY 14,15,16, 2006 FAC NATIONALS GENESEO, NEW YORK
THE BIG ONE EVERY TWO YEARS!
Includes the special Hurst Bowers events.

JULY 21, 22, 23. 2006 WESTERN NY FF SOCIETY AND CANADIANS
"GREAT GATHERING OF GRAPES" GENESEO, NEW YORK
Includes SAM, AMA, NFFS, FAC (some) and SAM RC events
Contact Jim Moseley for additional info --- jjmoseley@look.ca

SEPT 16,17, 2006 FAC AT MUNCIE, INDIANA

SEPT 11-15, 2006 SAM CHAMPS MUNCIE, INDIANA
WITH 'EARL STAHL' MODEL SPECIAL EVENTS.



Comet "Speed-O-Matic" E-Series European Combat Pair Issue

Bob McLellon

Dan Driscoll

This issue continues the Comet "Speed-O-Matic" E-Series with the E5 P-47 Thunderbolt and the E7 Focke Wulf FW-190.

We also have the results of our final fun-fly for the season at the the National Building Museum (NBM). There was a nice write-up on our NBM activities in John Kagan's Free Flight Indoor column in the May 2006 Model Aviation. Tony Pavel submitted the information to John. Thanks to Tony and John.

And don't forget the Hurst Bowers events at the Spring and Fall Kudzu contests and the 2006 FAC Nats. Complete details are on the Maxecuter website at: www.his.com/~tschmitt.

P-47 Thunderbolt

The Comet E5 kit represents the XP-47B or one of the first three production P-47B's. These differed from all subsequent P-47's by not having a sliding canopy. These aircraft had a hinged car door type canopy that is shown on the Comet plan. It is easy enough to modify the canopy to represent the sliding version. The nose is also shorter by eight inches than subsequent airframes. This works out to 1/4" at the scale of the model.

Two of our buddies built the Comet P-47 and had the following comments:

PHOTO PAGES PAGE 2

1. Bob and Jane McLellon with Bob's Comet P47.
2. Dan Driscoll with his Comet FW-190.
3. The bones of Dan's FW-190.
4. Close up of Bob's P-47
5. Dan's FW-190.
6. Bob McLellon's latest a Seafire with counter-rotating propellers
7. One of Bob's older aircraft a Blackburn Skua.
8. Claude Powell is ready for the Hurst Bower's events with his RWD-10.

I enlarged mine to 20 inch span, but I don't think that would make any difference in the way it turns out. Construction changes were as follow:

I made the whole nose block removable. I slimmed the keels down by using two strips of 1/16 square, laminated. The formers are shown with a small hole thru the center for the rubber. I made it a BIG hole. I enlarged the horizontal tail by twenty percent. I added adjustable trim tabs on the tail surfaces (they don't have to be very large) and added Earl Stahl type strips to the surfaces to create a streamlined section. I made the wing in one piece and slipped it in to a slot in the fuselage. I added about two degrees of incidence to the wing, which is shown as zero (a typical Comet boo-boo). I placed the rubber peg forward to minimize balance problems, but still needed some clay in the hose.

I used an eight inch Peck prop and two loops of 1/8 inch Tan II. I ended up with almost no downthrust and about 3 degrees of right thrust. With some clay on the right wing tip, it flies right-right just fine and is very stable. It is a fun little model.

(A photo of Bob's model is on the photo pages of this issue and also appeared on the cover of our November/December 2005 issue.)

Norm Davison

When our editor wanted builders for this issue's model plans, I volunteered because Comet, Megow, Scientific and Cleveland were the kits of my youth. I built some war-time Comet cardboard and pine speed-o-matic kits but never an ugly P-47. Was I wrong! The P-47 has a beautiful curvaceous shape with only the leading edges having straight lines. I was a kid, what did I know about voluptuous forms?

I never met a kit I didn't bash. The canopy was updated from a P-40 style canopy that was fixed with a P-39 like door to the sliding canopy of the first "Razorback" production fighter. The sliding canopy was laminated on forms with .02 X .03 basswood. (When asked why I didn't glaze the canopy, I tell people, not to touch because I don't want fingerprints on it, but look close. I found a cleaner that really cleans plexiglass.) The dihedral was increased to above the thrust line, but below the canopy. The tail group was increased 8.5%. The slab slot was widened to allow trim adjustment. The rubber cutouts in the bulkheads were rounded to 5/8 diameter. Then the bulkheads were placed on a removable length of plastic pipe to maintain alignment during construction. I notched the bulkheads for the framing longerons but not for the stringers. I do that after laying out the stringers and marking their location on the bulkheads in order to avoid

wavy stringers. I added an additional 1/16" square strip to the wing's trailing edge as the ribs cutout too short. The curved portions of the wingtips, stabilizer and rudder were cut to shape after joining multiple pieces of sheetwood to assure good grain direction and contact. I scalloped the bulkheads between stringers and wet covered two or three lengthwise bays at a time adhering with UHU glue stick. I sprayed an undercoat of Krylon Crystal Clear Acrylic. I colored with plastic model spray enamel. Big mistake it is too heavy. If it trims out good enough to take to a FAC contest, I'll add the details, i.e. guns, aerial, tail wheel and super charger housing, but no main gear. It now weighs 23 grams without prop. The display four bladed prop I made a long time ago for a gas job. It was made from Tony Grish's wood Tornado props.

I used Dave Mitchell's no pin-tack spray building method. It worked because every piece has to fit exactly, therefore no warps. You cannot build in stress by force fitting parts with pins.

If I were to build it again, I would modify the fuselage to accommodate a one-piece wing, either slid through the fuselage or attached from below as done in the Dumas kit.

My only regret was that I dressed by curvy lady in olive drab and medium gray without added highlights. She should have had an unlimited racer's flashy appearance, but she was never a fast lady.

Focke Wulf FW-190

Dan Driscoll

When we started this series on Comet E series WWII models, the FW-190 was the only one that nobody had built recently. I needed a new WWII mass launch airplane, and the FW-190 looked like a winner. Also, I wanted to try a couple of new things to see if they worked.

The model was built pretty much per the plan with the following changes:

- Wing leading edge 1/8" square, spar 1/16" x 1/8"
- Dihedral increased to 10 degrees and about 2 degrees of incidence added
- Stab enlarged about 25% (span increased by 1 1/2")
(A different enlarged stab is shown on page 12.)
- Rear motor peg located in front of former 13
- Center opening of each former enlarged

If you choose to increase the dihedral, be warned that the wing spar will hit the stringer between fuselage formers 8 and 9. I cut that portion of the stringer out and filled the area with 1/16" sheet and shaped it to allow the wing to fit.

I also filled the areas for the gun troughs on top of the cowl and the areas where the "cowling air bypass" attached to

the fuselage sides. Flight tests have shown ballast is needed. It would have been nice if the entire cowl had been filled in to support this ballast on the bottom. The added weight of this fill in would even reduce the amount of clay added.

The paper patterns for the canopy and area around the wing worked very well. The canopy paper pattern was cut a little oversize and trimmed for exact fit. I recommend separating the windshield from the rest of the canopy. The patterns were then traced onto clear plastic, cut out, and attached.

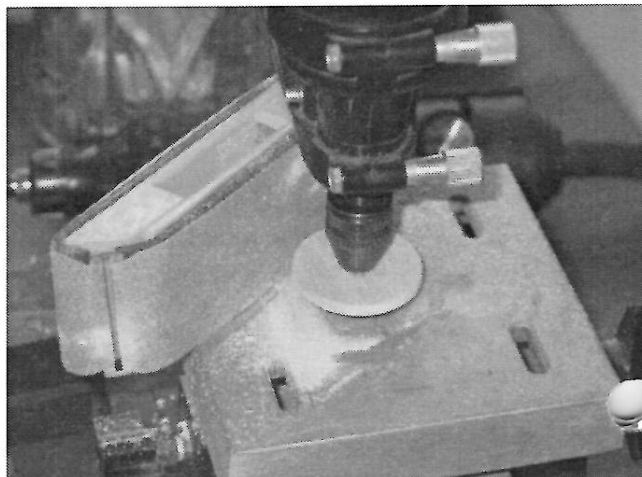
Cover the wing and fuselage with tissue and attach the wing before attempting to cover the open area around the wing. I cut the pattern a little oversize and then cut it into four parts by bisecting it lengthwise and widthwise. This made it a lot easier to work with and trim to an exact fit.

The finished airframe without rubber or ballast, but with a 7 1/2" North Pacific prop, weighed 23 grams.

I finished my model in the all yellow scheme shown in the profile in the July/August 2001 MaxFax. On the real FW-190, you couldn't see the radial engine because there was a fan in front of it. I simulated this by painting the front of the noseblock gray and using ink lines to simulate the fan blades. I erred in attaching a tail wheel as shown on the plan. The real tailwheel was partially retractable, and since my model is wheels up, only about half of the wheel should be visible.

The new things I tried involved the cowl and noseblock. Most plans with a radial engine call for the cowl to be made from balsa half circles. I've always built mine this way and was always a little dissatisfied with the results. It was time consuming and getting even contours was difficult. This time, I did it this way:

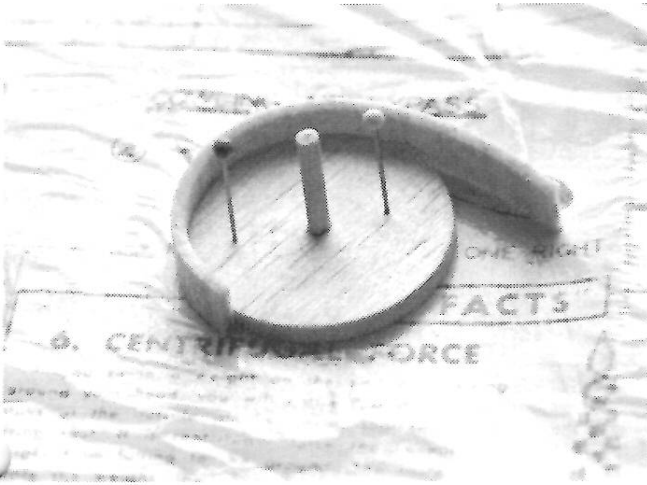
With a compass, draw a circle on 1/8" balsa to the diameter of the inside cowl opening. Rough cut out the disc and drill a 1/8" diameter hole in the center. Chuck a one inch length of 1/8" dowel in your drill press and lower the dowel into the hole as the balsa disc rests on the drill press platen.



(This insures that the dowel is perpendicular to the disc.)
Cement the dowel in place.

Push the dowel all the way up the chuck. This will keep the dowel from flexing as it turns. Situate the disc about 1/4" above the platen and using a sanding block resting on the platen, turn the disc to the to the correct diameter as shown above:

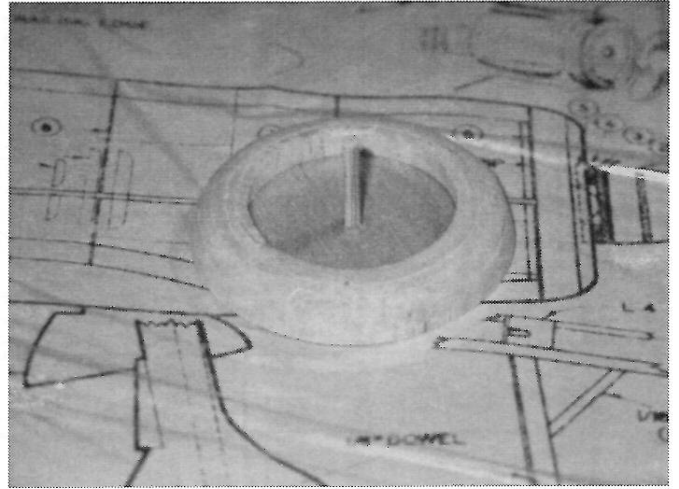
Remove the disc from the drill press and pin it down to your building board over a piece of wax paper. Cut eight 3/8" wide strips from 1/16" balsa across the grain. Soak the strips in water and them wrap them around the disc attaching with instant glue as shown below:



Wrap and glue five layers staggering the joints. When done, it will look like this:



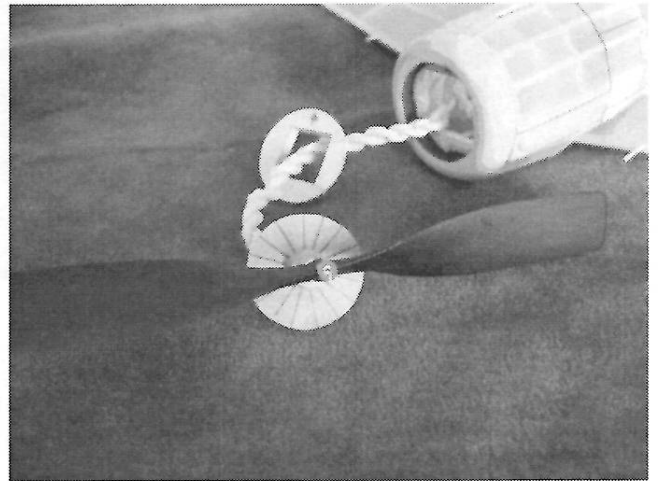
After the strips dry, chuck the disc back in the drill press and using a sanding block, turn the cowl to the correct contour. Like this:



To finish the cowl, I smeared it with light weight spackling compound, let it dry, and then smoothed it with fine sandpaper while turning it in the drill press. Two coats of thinned clear dope left it glass smooth and ready for paint.

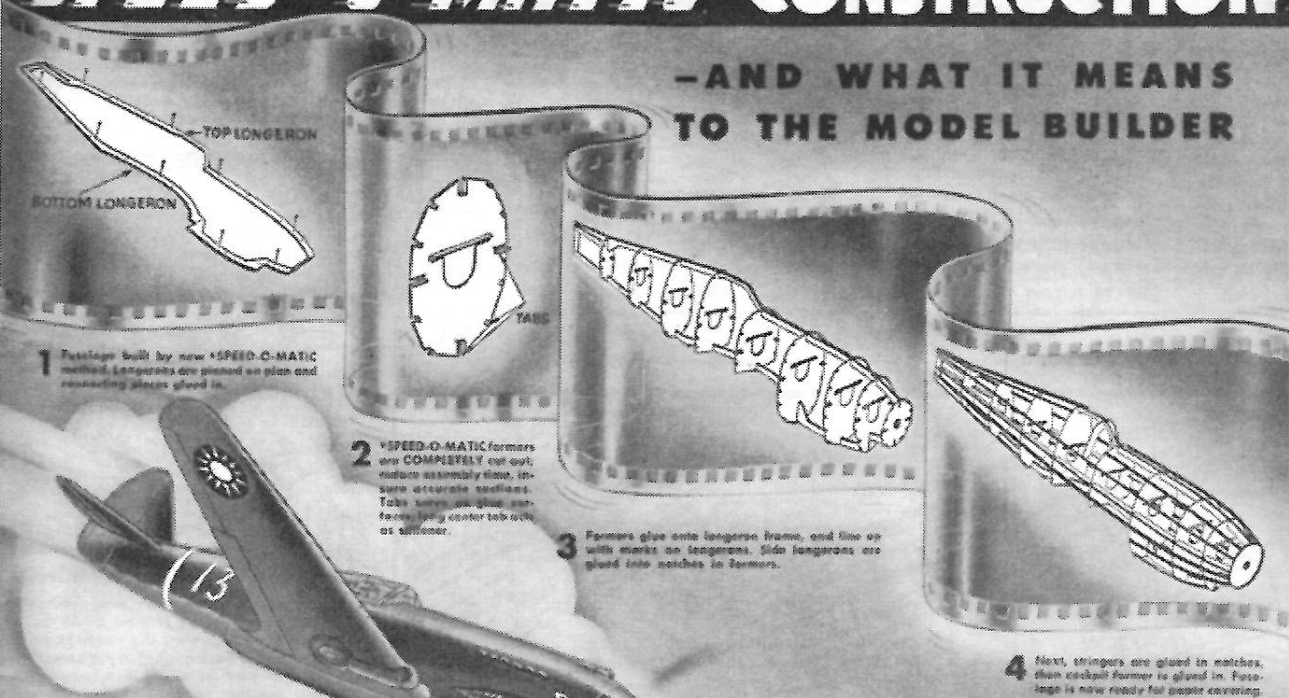
I doubt if I'm the first modeler to do a radial cowl this way, but I've never seen anything published about it. The following double noseblock method, however, is not my idea. Although I've never seen it published, I have seen it twice on models at Geneseo, and one of the modelers said he saw it in an old model publication.

Over the years, I've tried many types of noseblocks that allow for adjusting both down and side thrust. They all work, but I found them to be cumbersome to use and usually, the down and side thrust adjustments weren't independent of each other. The double noseblock shown below is simple to make, simple to use, and offers independent adjustment of down and side thrust. Mine looked like this:



COMET'S Sensational New "SPEED-O-MATIC" CONSTRUCTION

—AND WHAT IT MEANS TO THE MODEL BUILDER



This is the CURTISS TIGER SHARK P-40C, Kit No. E1, one of the new Comet *SPEED-O-MATIC 25¢ flying models. Others are: Kit No. E2, Grumman Wildcat P-47-4; Kit No. E3, Mitsubishi Zero; Kit No. E5, Republic Thunderbolt P-47; Kit No. E7, Focke-Wulf FW-190, and Kit No. E6, North American Mustang P-51.

—and wait 'til you see the new-type PLANS!

The pictures above are intended to show you just how quickly and easily you can construct the fuselage of a flying model by the Comet *SPEED-O-MATIC method—and the wings, tail and stabilizer are just as easy! This is due in part to the unique new plans furnished with each *SPEED-O-MATIC kit—plans which are amazingly detailed, and just packed with new ideas and short-cut construction methods. Plans also contain interesting facts about the actual

planes, details of a new method of flying these models without the use of rubber, and a series of "Plane-Facts" which are really a short course in aeronautics.

Right now, your dealer has the first series of Comet *SPEED-O-MATIC models on his shelves—and there are more coming, in every price range. Look for them—buy them—build them—and let *SPEED-O-MATIC give you your biggest model-building thrill!

*Patent Applied For—Trade Mark Reg. U. S. Pat. Off.

✓ CHECK THE FEATURES!

1 FINISHED PARTS—Formers completely cut out; finished wheels, thrust button, turned cowling, insignia.

2 CUTS BUILDING TIME—Kits practically build themselves. You save hours—get better results!

4 BETTER FLYABILITY—Tested design, great inherent stability means these models will FLY.

3 AUTHENTIC, ACCURATE MODELS OF WARPLANES—The planes that are in the news, planes every model builder wants!

5 SCALE 3- and 4-BLADE PROPS—New method permits construction of scale 3- and 4-bladed props.



COMET MODEL AIRPLANE & SUPPLY CO.
CHICAGO NEW YORK

NBM Results – March 5, 2006

We had 21 registered flyers for free flight and 12 for R/C.

Grand Champ – Steve Fujikawa

14g. Bostonian (9 entrants)		
1	Stew Meyers	Shtick
2	Steve Fujikawa	Decathalon
3	Dave Mitchell	Zaotonian

P-Nut Scale (13 entrants)		
1	Steve Fujikawa	Lacey
2	Stew Meyers	Cougar
3	Bob Bissett	Lacey

Phantom Flash (13 entrants)		
1	Steve Fujikawa	
2	Dave Mitchell	
3	Bob Marchese	

WW II No-Cal (11 entrants)		
1	Steve Fujikawa	P-39
2	Glen Simperts	P-47
3	John Appling	FW-190D

Dime Scale ML (9 entrants)		
1	Steve Fujikawa	Bristol Brownie
2	Stew Meyers	Robin
3	Dave Mitchell	Fairchild 21

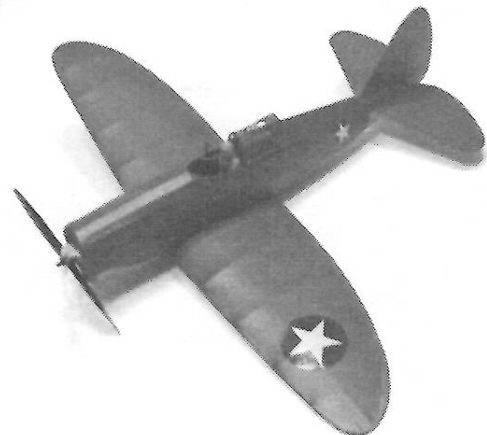
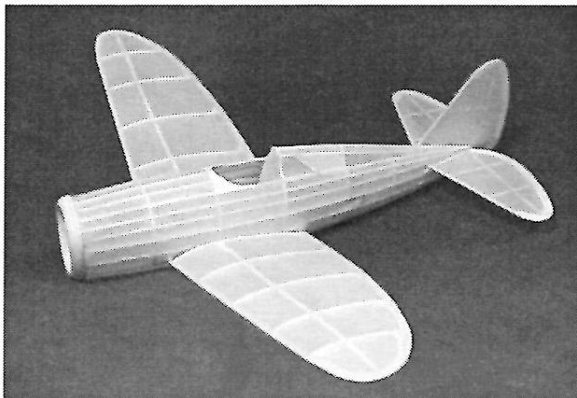
Helicopter (8 entrants)		
1	Terry Slattery	Unicopter
2	Sharon Appling	Agusta
3	Al DeRinzis	Agusta

Pennyplane (5 entrants)		
1	Glen Simperts	7:46
2	John Appling	5:59
3	John Zseleczky	4:10

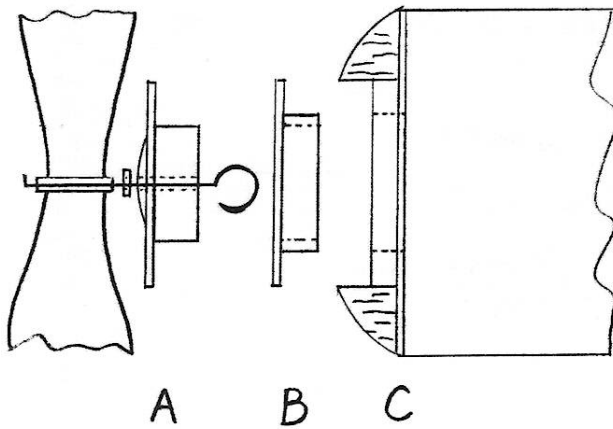
Ready-to-Fly (5 entrants)		
1	Bob Marchese	Junior (2:04)
2	Terry Slattery	Butterfly (2:03)
3	Sharon Appling	Firefly (2:00)

FAC Dime Scale (5 entrants)							
		Times			Bonus	Total	Place
Steve Fujikawa	Bristol Brownie	77	97	86	30	290	1
Stew Meyers	Robin	86	83	62	0	231	2
Dave Mitchell	Fairchild 21	49	55	71	30	205	3

Norm's P-47 covered and colored.



DOUBLE NOSE BLOCK SCHEMATIC



Block A fits into Block B which fits into C. 1/32" plywood used for the face of A and B and 1/16" X 3/16" balsa for the frame of Block B.



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. Spot 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.

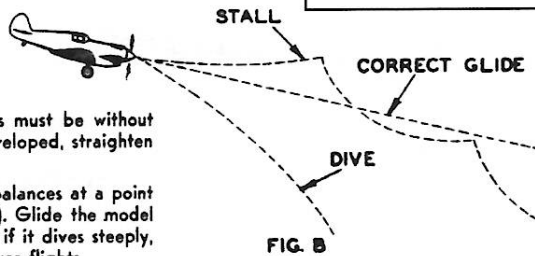


FIG. B

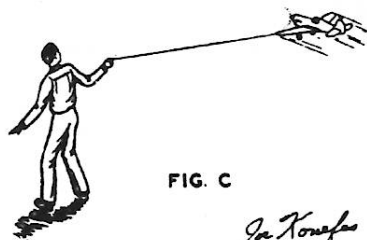


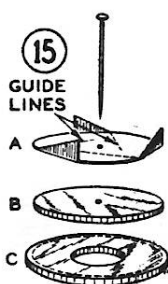
FIG. C

PHOTO PAGES

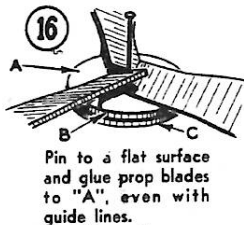
PAGE 23

9. Lindsey Smith's Comet Speed-O-Matic E-10 P-59 Airacomet. This model is now finished but not flown with its twin Rapier power.
10. Lindsey's Hurlburt Hurricane
11. Allan Schanzel's latest diorama with his Stahl Globe Swift. See the May/June 2005 MaxFax for lots of Globe Swift plans and info.
12. Stew Meyer's R/C SE-5 showing it's stuff over Airdale. This Guillow's 24" model will be the subject of a future MaxFax for R/C or FF.
13. Bill Bell at the NBM with a real antique, his Stearman.
14. Van Hereford cloned his nifty rubber powered 'Lindsay' racer into an electric R/C.
15. John Hunton with his twin electric Bell YFM-1 Airacuda and Boeing 314. These are Aero Ace conversions.

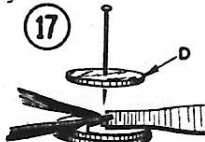
YOU REALLY DON'T WANT TO USE THE SHEET PROPELLERS SHOWN IN THESE INSTRUCTIONS EXCEPT FOR DISPLAY. A PLASTIC 6 OR 7 INCH PECK OR NORTH PACIFIC IS A MUCH BETTER BET. I FINALLY GOT AROUND TO FLYING MY ZERO. AT 23 GRAMS EMPTY, A 6 INCH PECK AND 4 STRANDS OF 3/32 FAI TAN DOES THE JOB. DAN USES A 7 INCH NORTH PACIFIC AND A LITTLE LARGER CROSS SECTION.



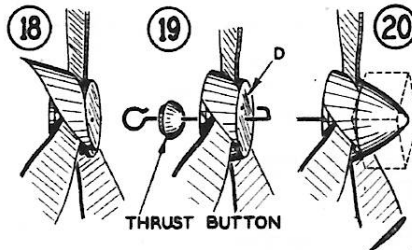
Glue pitch former (A) and base formers of spinner (B and C) or hub together, using pin for concentric alignment.



Pin to a flat surface and glue prop blades to "A", even with guide lines.

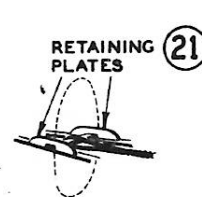


Glue front spinner or prop former (D) over blades, lining it up with a pin.



THRUST BUTTON

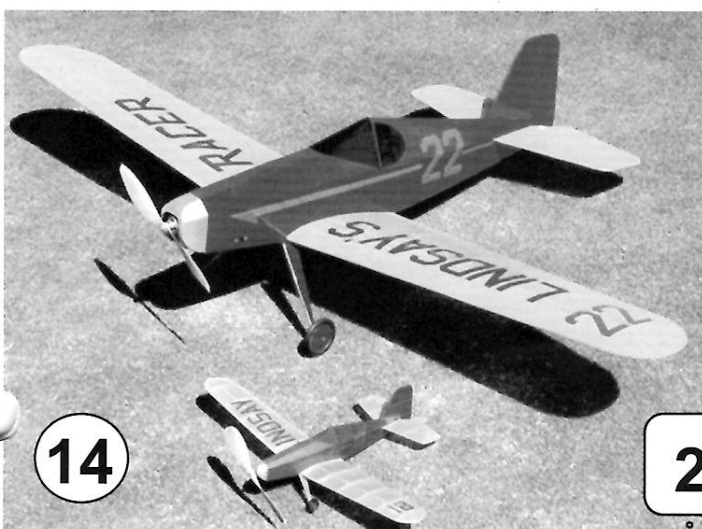
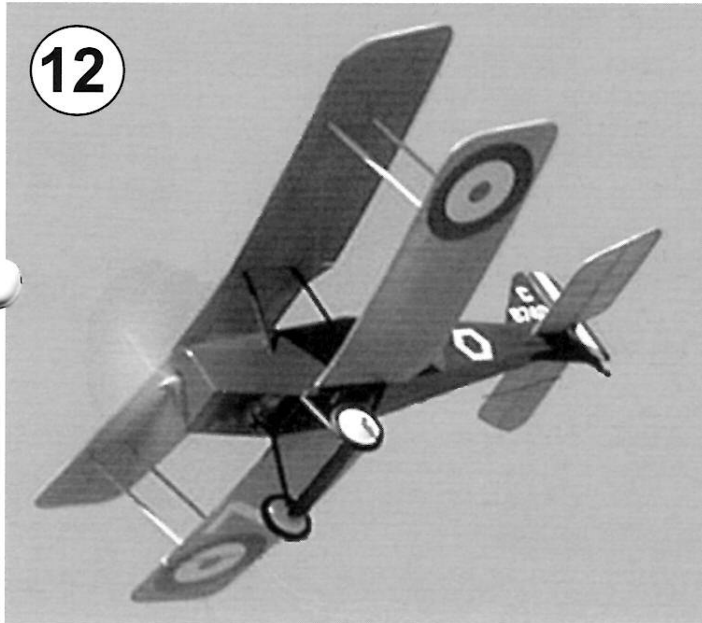
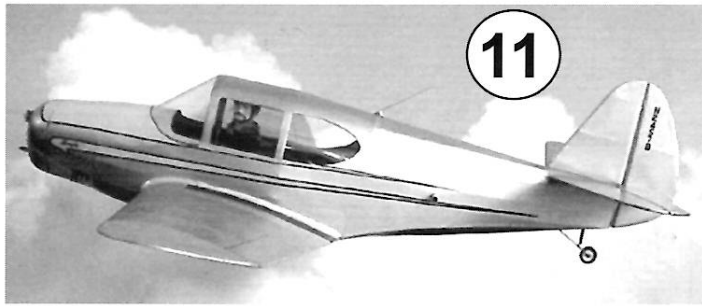
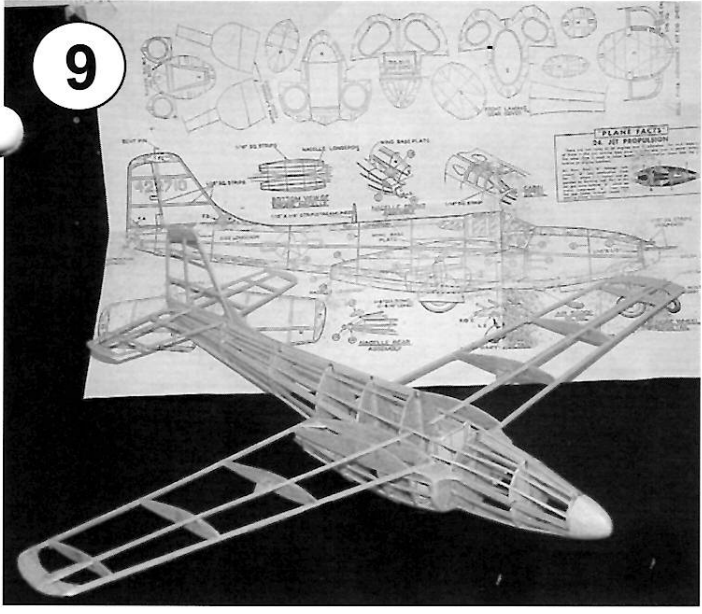
18. Cover spaces between blades with paper, trimming to fit before gluing.
19. Slide thrust button and prop on the prop shaft and bend the end over, put glue on it, and push back into part "D".
20. Glue block to front end. When dry, carve and sandpaper to shape of spinner point.



RETAINING PLATES

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.



23

Photos by Bill Hadden and John Hunton

First Takeoff



Flyby



Flight tests of the HP-42

John Hunton

The 98 inch span model of the Handley Page HP-42 was flown for the first time on April 30. Of course retired RAF pilot Mike Dale had served as inspiration for the project along with an old TV film of the HP flying into an African fort. The model was considered too much for one man to build in a reasonable span of time, so Bill McMullen, Bill Hadden, Mike and myself agreed to share the work. Don Srull provided the necessary technical advice. Dividing of the work was to the strengths of each team member so the project was not too onerous for any one man. The HP was ready to fly in less than a year.

The configuration proved to be very stable and easy to fly.
More lightly built, it would make a good electric free flight.

A satisfied HP 42 after it's first flight.



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.

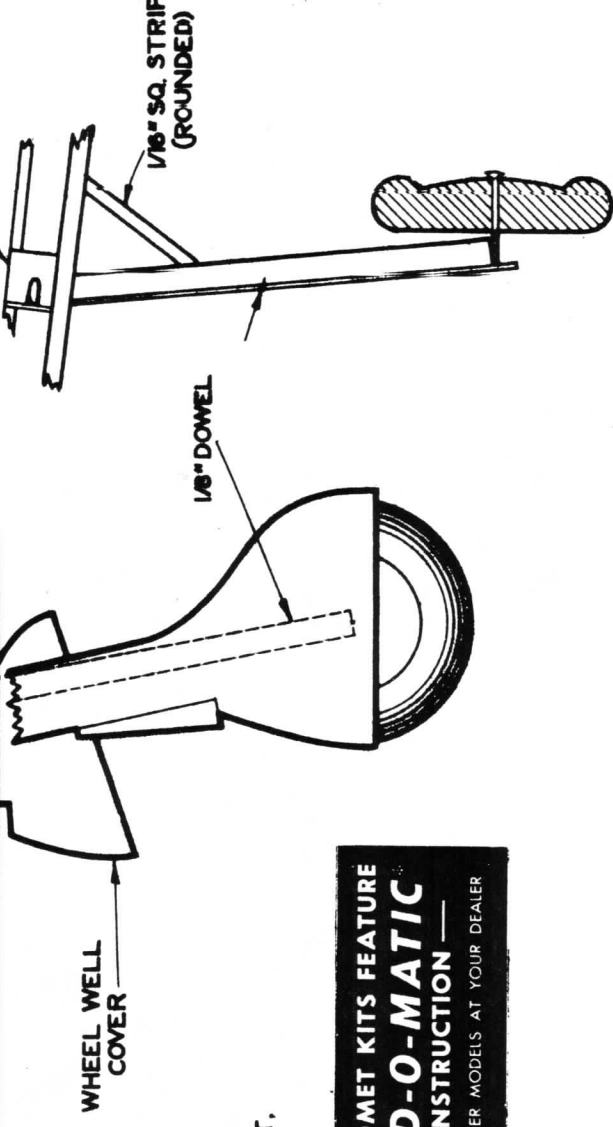
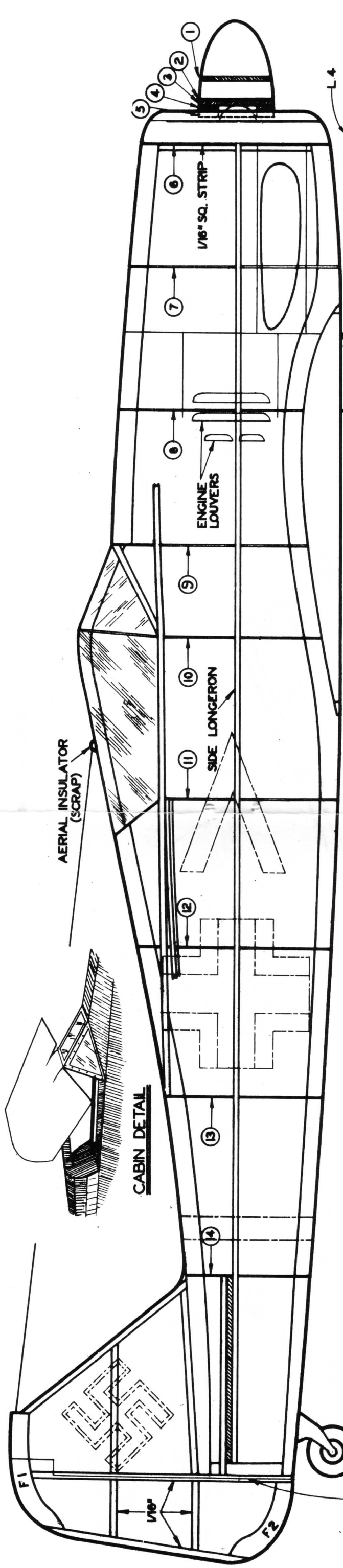
PUBLISHING DATES - Six issues of MaxFax are sent each year as close to the nominal dates as possible, but since this is a volunteer publication nothing is guaranteed except that six issues will be sent to all members.

CONTACTS - Material for the newsletter and membership questions should be addressed

to Stew Meyers phone 301-365-1749. Email gets immediate attention. stew.meyers@erols.com

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

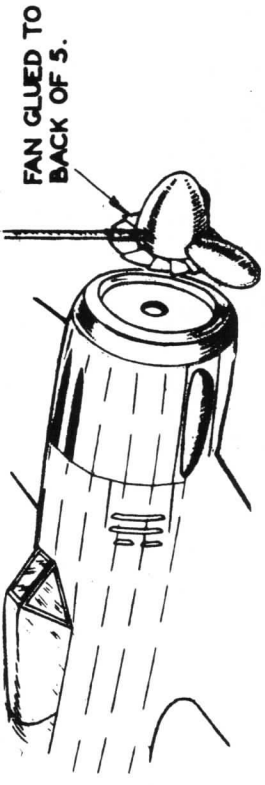
Your DUES are due



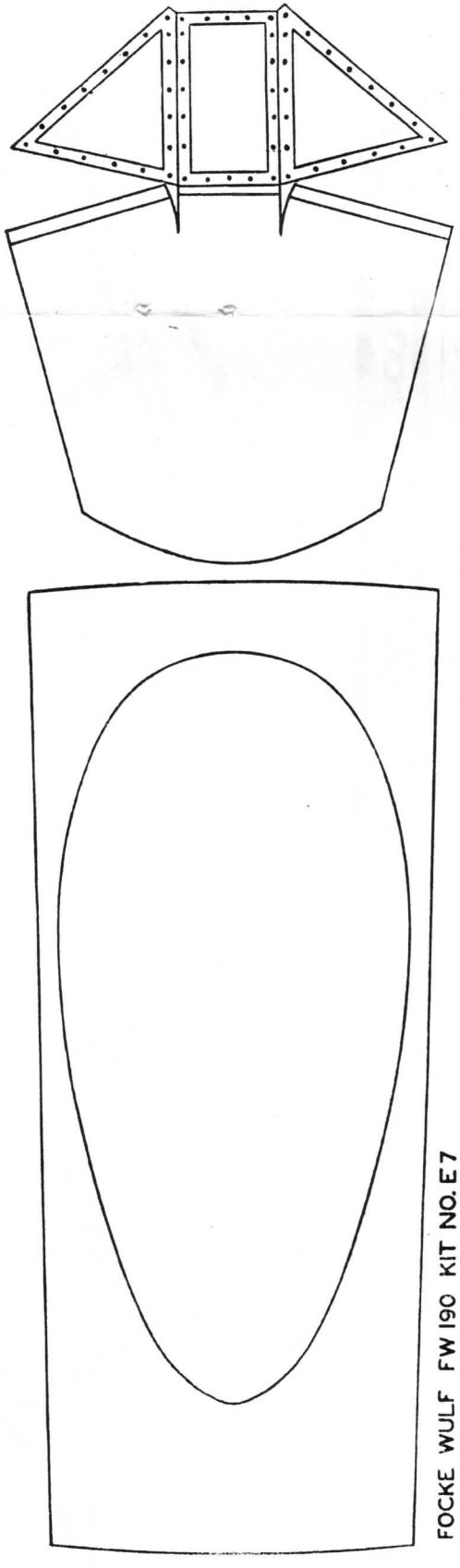
MAKE ONE LEFT AND ONE RIGHT.

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

ENGINE COWLING DETAIL



LANDING GEAR (FULL SIZE)



FOCKE WULF FW 190 KIT NO. E7

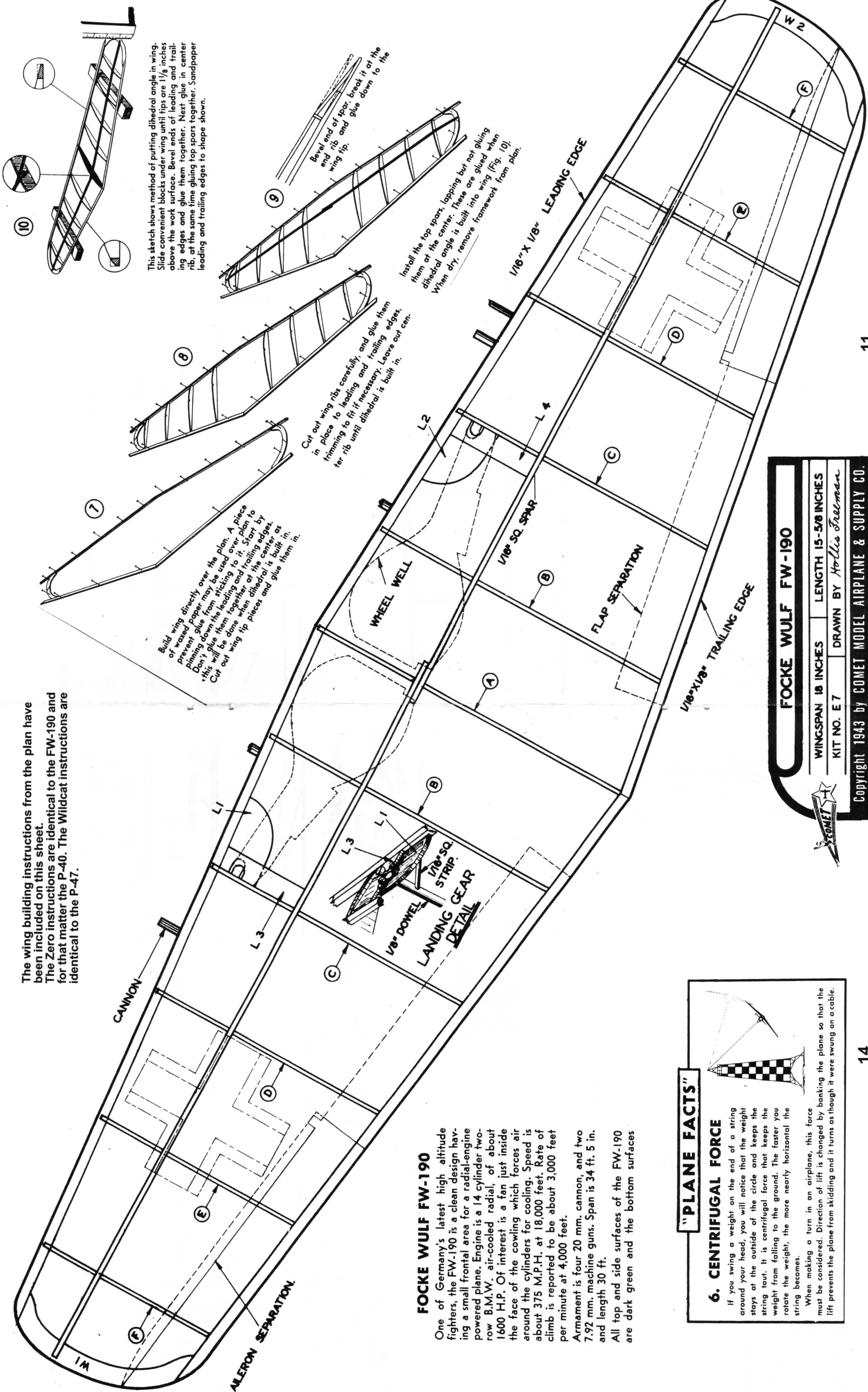
COMET

FOCKE WULF FW-190

WINGSPAN 18 INCHES LENGTH 15-5/8 INCHES
 KIT NO. E7 DRAWN BY *Hollis Freeman*

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The wing building instructions from the plan have been included on this sheet. The Zero instructions are identical to the FW-190 and for that matter the P-40. The Wildcat instructions are identical to the P-47.



This sketch shows method of putting dihedral angle in wing. Slide convenient blocks under 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.

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 (Fig. 10). When dry, remove framework from plan.

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.

FOCKE WULF FW-190

One of Germany's latest high altitude fighters, the FW-190 is a clean design having a small frontal area for a radial-engine powered plane. Engine is a 14 cylinder two-row B.M.W. air-cooled radial, of about 1600 H.P. Of interest is a fan just inside the face of the cowling which forces air around the cylinders for cooling. Speed is about 375 M.P.H. at 18,000 feet. Rate of climb is reported to be about 3,000 feet per minute at 4,000 feet.

Armament is four 20 mm. cannon, and two 7.92 mm. machine guns. Span is 34 ft. 5 in. and length 30 ft.

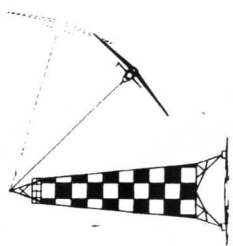
All top and side surfaces of the FW-190 are dark green and the bottom surfaces

"PLANE FACTS"

6. CENTRIFUGAL FORCE

If you swing a weight on the end of a string around your head, you will notice that the weight stays at the outside of the circle and keeps the string taut. It is centrifugal force that keeps the weight from falling to the ground. The faster you rotate the weight, the more nearly horizontal the string becomes.

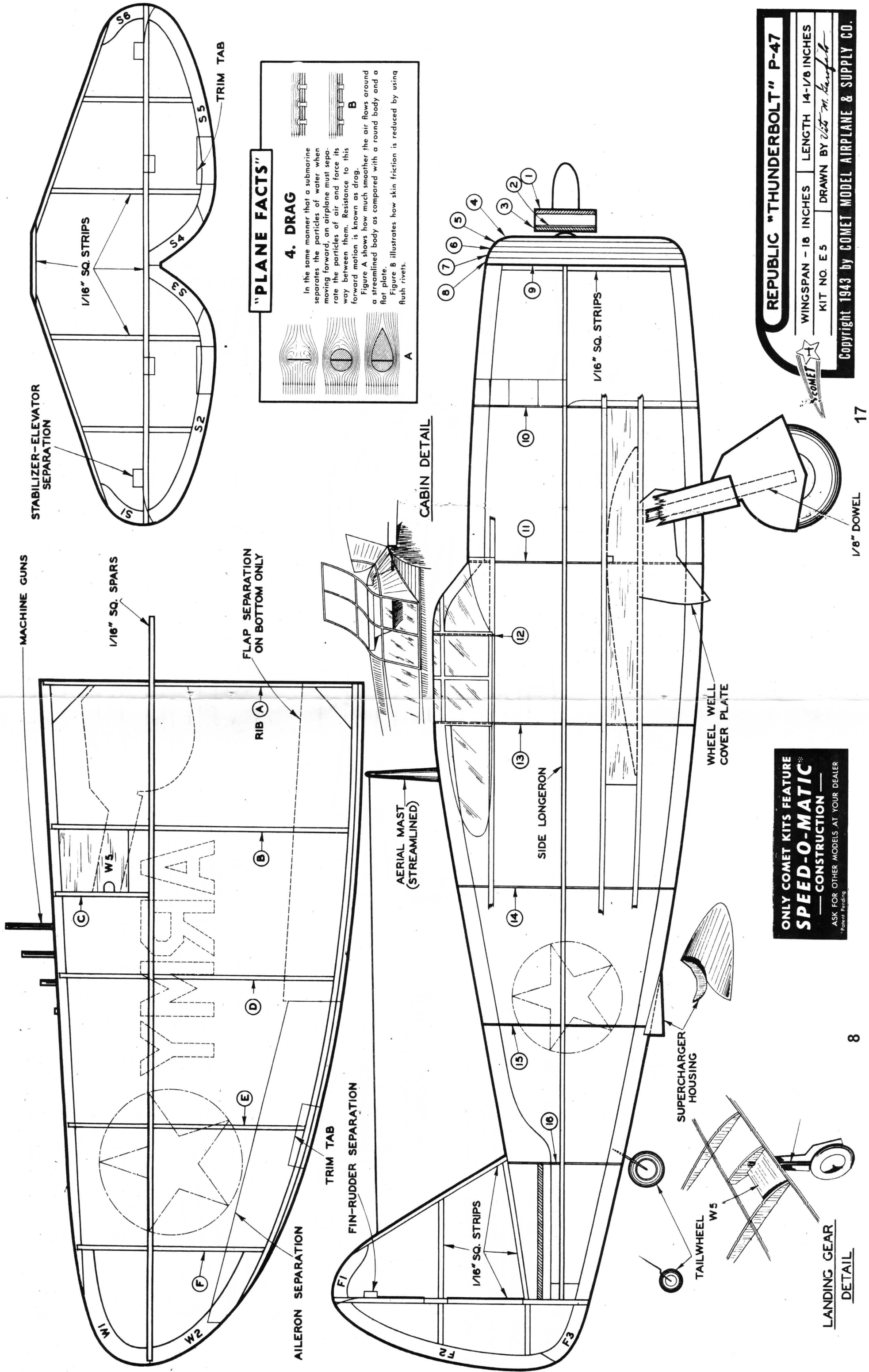
When making a turn in an airplane, this force must be considered. Direction of lift is changed by banking the plane so that the lift prevents the plane from skidding and it turns as though it were swung on a cable.



FOCKE WULF FW-190

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KIT NO. E7	DRAWN BY <i>Hollis Freeman</i>

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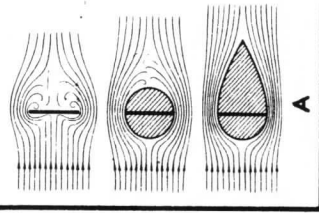


"PLANE FACTS"

4. DRAG

In the same manner that a submarine separates the particles of water when moving forward, an airplane must separate the particles of air and force its way between them. Resistance to this forward motion is known as drag.

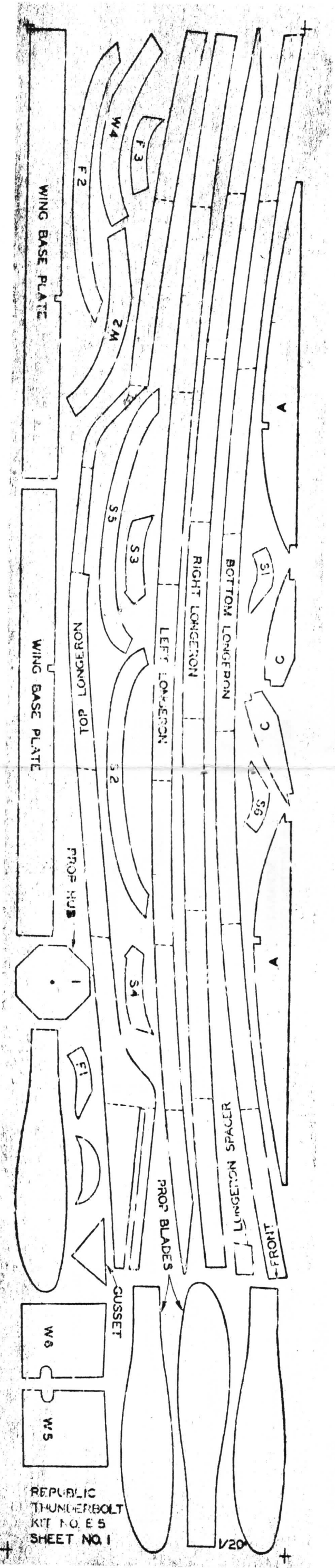
Figure A shows how much smoother the air flows around a streamlined body as compared with a round body and a flat plate.
Figure B illustrates how skin friction is reduced by using flush rivets.



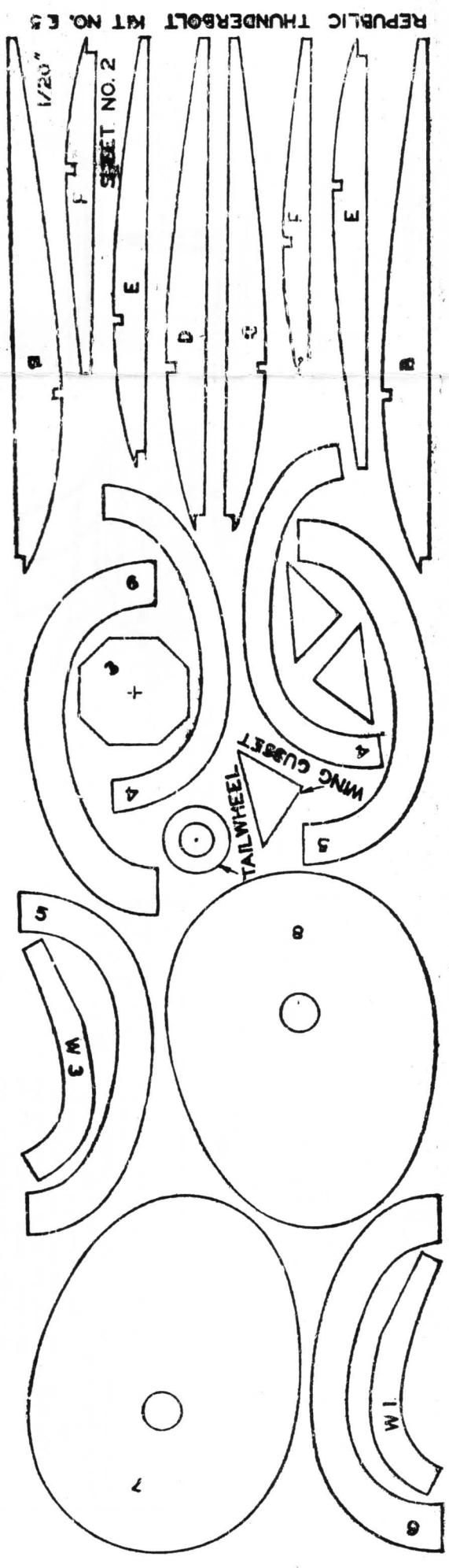
REPUBLIC "THUNDERBOLT" P-47
 WINGSPAN - 16 INCHES | LENGTH 14-1/8 INCHES
 KIT NO. E 5 | DRAWN BY *Victor M. Kaufman*
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SPEED-O-MATIC
 — CONSTRUCTION —
ASK FOR OTHER MODELS AT YOUR DEALER
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LANDING GEAR
 DETAIL

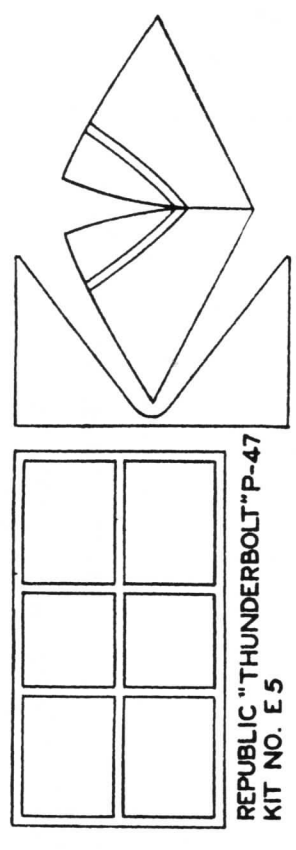


REPUBLIC THUNDERBOLT
KIT NO. E5
SHEET NO. 1



REPUBLIC THUNDERBOLT KIT NO. E5

SHEET NO. 2



REPUBLIC "THUNDERBOLT" P-47
KIT NO. E5

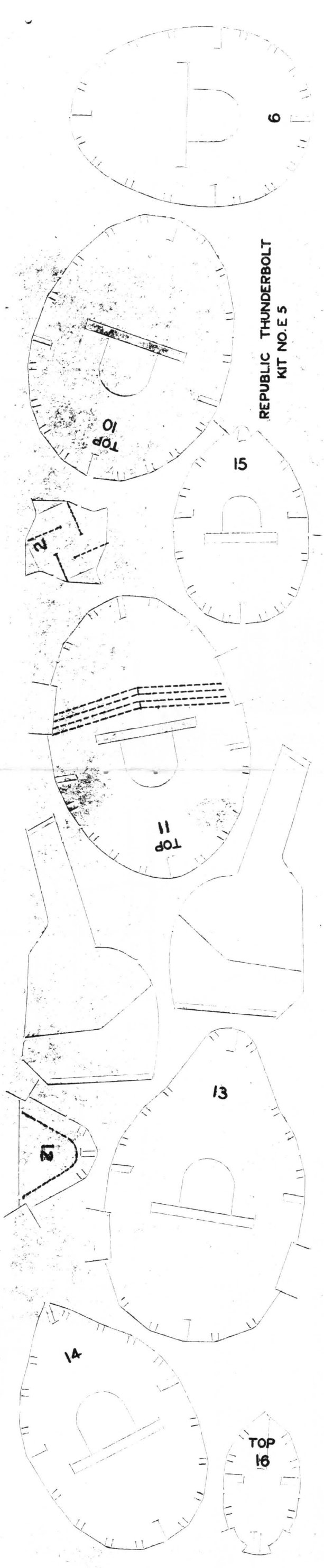
REPUBLIC "THUNDERBOLT" P-47

WINGSPAN - 18 INCHES LENGTH 14-1/8 INCHES

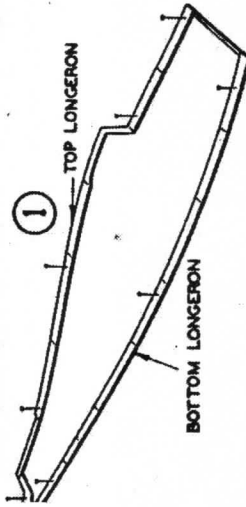
KIT NO. E5 DRAWN BY *W. M. Kaufelt*

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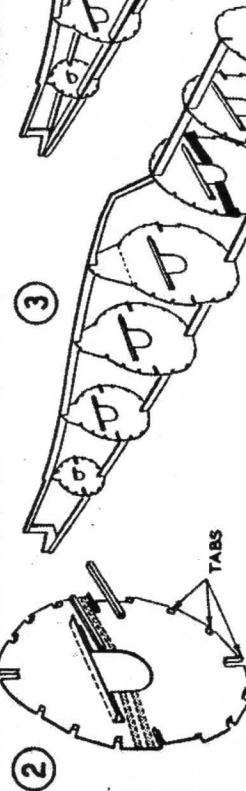


REPUBLIC THUNDERBOLT
KIT NO. E5

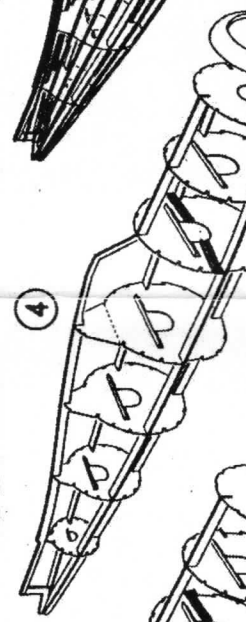


This fuselage is built with the new Comet SPEED-O-MATIC construction method. Begin by carefully cutting the top and bottom longerons from the printed wood sheet. Pin these longerons down on plan in their respective places and glue in the connecting pieces—a 1/16" sq. strip in front and a piece cut from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

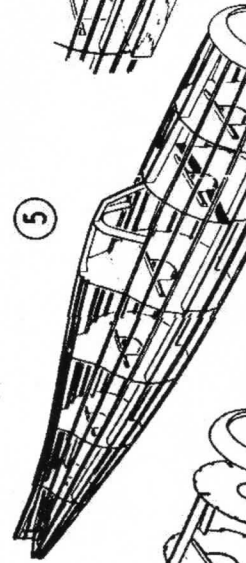
Comet SPEED-O-MATIC formers are designed to reduce the assembly time and insure accurate fuselage sections. The tabs serve as glue surfaces and the 1/16" sq. ones can be bent over with the aid of a small piece of 1/16" sq. strip. The long center tab acts as a stiffener. One of the formers has a Comet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



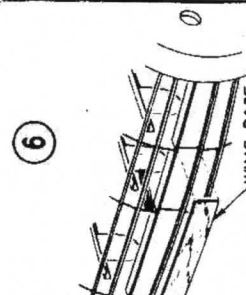
Glue the formers to the longeron frame, lining them up with the marks on longerons. Refer to plan for arrangement. Do not use excessive amounts of glue at this stage of assembly so the formers will not be warped and thrown out of line.



Glue side longerons in their notches, making certain that they are even at the back and that all formers are perpendicular to longerons. Then glue the wood noseplate or cowling 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.



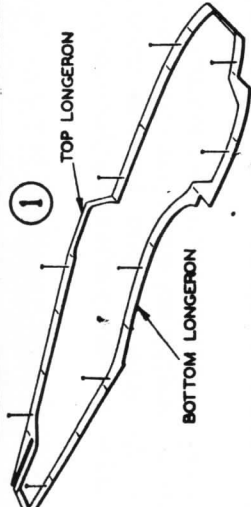
Glue wing base plates between the stringers and against bulkheads. Next install the cockpit cover as illustrated elsewhere on this plan.



NOTES ON COVERING

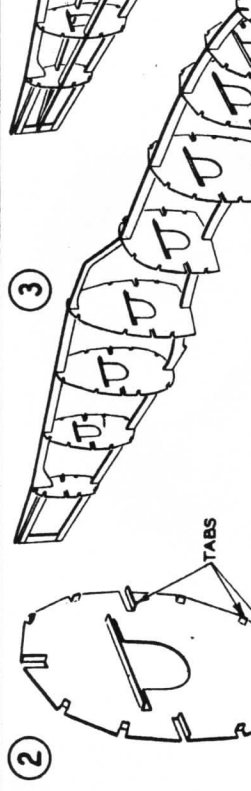
Stick tissue to framework using banana liquid or tissue cement. Fibers of tissue should run the length of part being covered. Use narrow strips for covering rounded fuselages and cover between stringers. After all parts of model have been covered, glue them together and spray lightly with water. This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

The wings are mounted to the fuselage by sliding spar into the SPEED-O-MATIC dihedral jig on each side of the fuselage, and gluing the end ribs to the wing base plates.

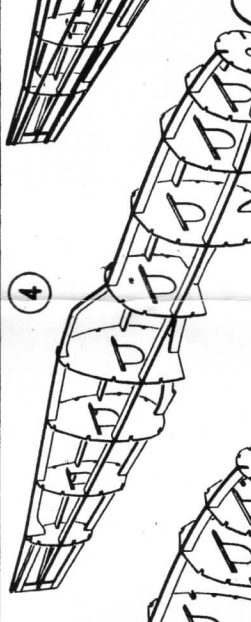


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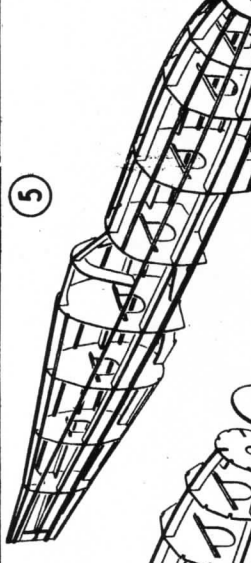
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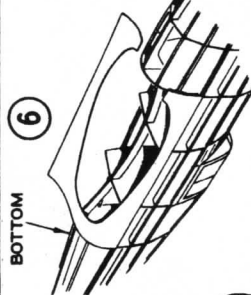
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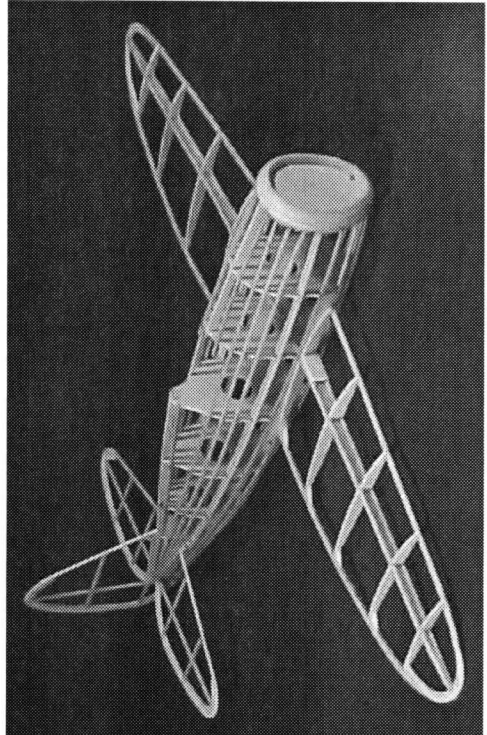
Next glue on the paper covers that fit around the wing. Also glue cockpit covers in place. If desired, transparent portions may be made of celluloid. See sketch elsewhere on plan for cockpit details.



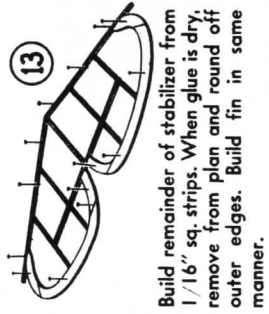
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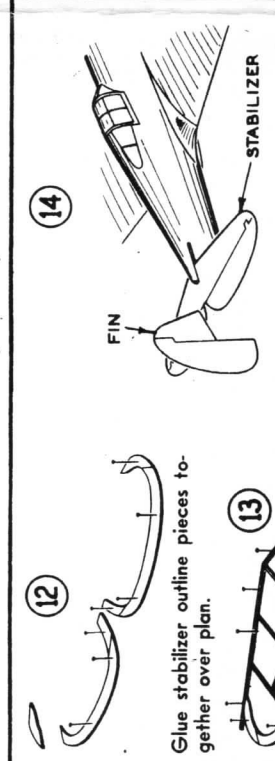
After wing and fuselage have been covered with tissue, assemble as shown, gluing center rib directly to bottom longeron. Comet SPEED-O-MATIC construction assures perfect alignment.



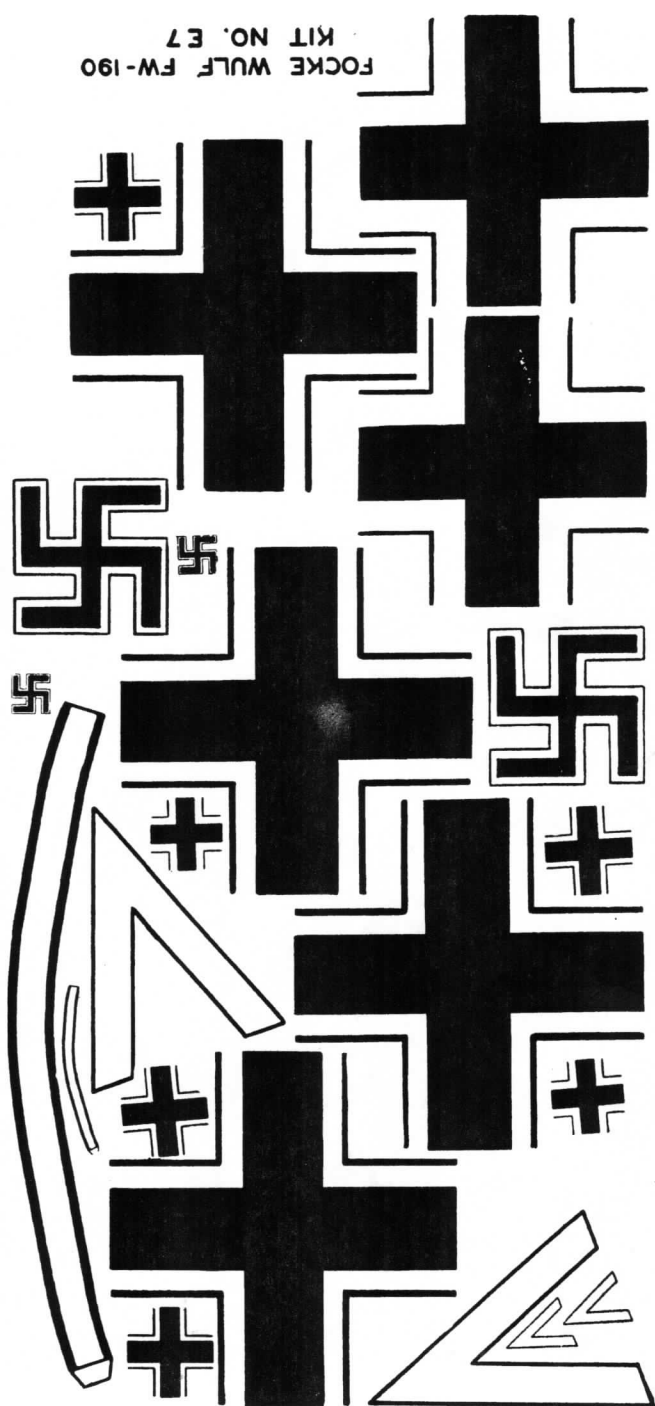
Glue stabilizer outline pieces together over plan.



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.



FOCKE WULF FW-190
KIT NO. E7

THE BONES OF NORM'S P-47. WE HAVE NOT INCLUDED THE PAPER INSIGNIA FOR THE P-47. YOU CAN GET THEM OFF THE PLANS. I DOUBT YOU WANT THE PROTOTYPE WITH US ARMY ACROSS THE BOTTOM OF THE WING AND THE STARS DON'T LOOK VERY GOOD IN BLACK AND WHITE RATHER THAN COLOR. THE FW-190 BLACK INSIGNIA ON THE OTHER HAND CAN BE CUT OUT AND GLUED ON TO GOOD EFFECT.

ON THIS PAGE ARE THE GENERIC INSTRUCTIONS FOR BOTH THE LOW WING AND MID WING COMET E SERIES SPEED-O-MATIC SERIES WHICH APPEARED ON THE PLANS. THE PROPELLOR AND FLIGHT INSTRUCTIONS ARE ON PAGE 22.