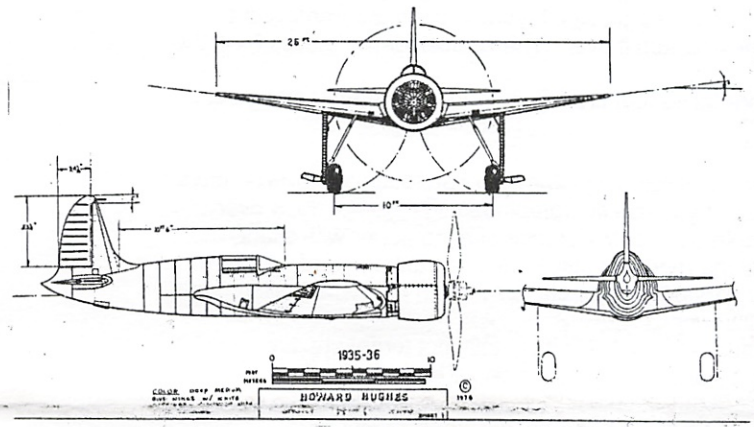
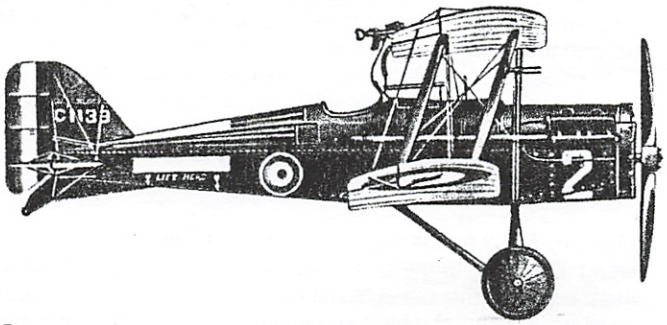
CROSSWINDS

#116

18" SE5 Derived from the Easy Built Kit

20" Hughes H-1 Transcontinental and
16" Hughes H-1 Racing Plane
Derived from the Bell Kit

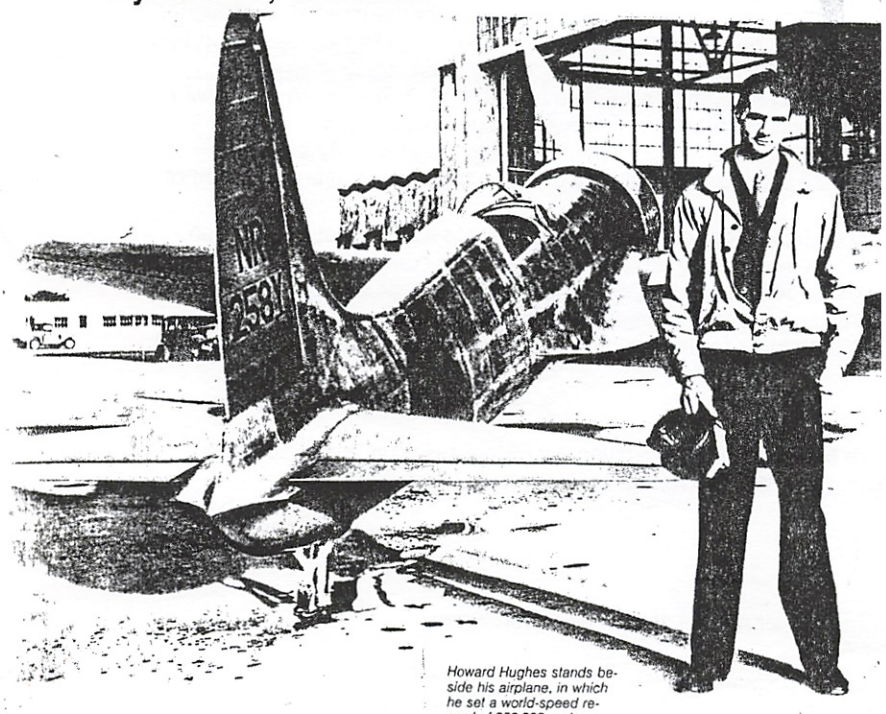




25

Royal Aircraft Factory-built S.E.5a flown by Capt. K. L. Caldwell, commanding No. 74 Squadron R.F.C., France, March 1918. *Engine:* One 200 h.p. Wolseley W.4a Viper water-cooled Vee-type. *Span:* 26 ft. 7⅜ in. (8·11 m.). *Length:* 20 ft. 11 in. (6·38 m.). *Wing area:* 245·8 sq. ft. (22·84 sq. m.). *Take-off weight:* 1,988 lb. (902 kg.). *Maximum speed:* 120 m.p.h. (193·1 km./hr.) at 15,000 ft. (4,572 m.). *Service ceiling:* 19,000 ft. (5,944 m.). *Endurance:* 3 hr. 0 min.

Russ Brown
4909 N.Sedgewick
Lyndhurst, OH 44124



Howard Hughes stands beside his airplane, in which he set a world-speed record of 352.322 mph on September 13, 1935, at Santa Ana, California. (Photo: SI A4127OB)

440948476 R001

HUGHES H-1

This plan for the Hughes H-1 racing version and transcontinental version was adapted from the plan in the 20" Bell kit to make the construction lighter and simpler. Since 'Flying Aces' rules allow landing gears to be in the "up" position, the structure for them has been eliminated on this plan. If you wish to make this model for the Thompson race event, it is necessary to use the racing (short span) wing. The other wing will do for the FAC scale event and will probably turn in better flights since it has more area.
The model will probably fly longest with a high pitched prop in the region of 1.5:1 or 1.6:1 P:D ratio, so it will be necessary to carve a prop or modify a plastic prop to get this high pitch.

I have left off the stringer notch markings from all but the nose formers, because I've found that it is better to file the notches in formers after the framework has been assembled in order to get the stringers as straight as possible. I recommend a Swiss pattern file or a strip of bass, with fine sandpaper glued to its edge, for filing the stringer notches. As with my other rounded fuselage designs, I have used the box frame edges for four of the stringers. To build the two opposite fuselage sides, simply grease the plan so you can see the right side layout through the translucent paper, or make a copy on tracing paper through a copy machine and turn it over. The vertical former pieces form the usual uprights and save weight and glue in so doing.
You will have to cover the wings and most of the fuselage before fitting formers 5B, 6B and 7B and their stringers, then cover this part and install the wing fairings.

The only fussy part of the construction of this model is the shaping of the wing fairings. I had to spend several hours fitting and trying to get blue styrofoam shaped just right for them. If you use stryrofoam fairings, do not dope over them because the solvents will dissolve the styrofoam. You could use several pieces of bond paper with slight overlaps instead of styrofoam if you prefer. In that case, apply the rearmost piece first and work forward so the overlaps will produce less drag! In either case a bit of fitting and trying is required. Use the 1/16" balsa trailing edge fairings as a base.
The cowling is made just as recommended on the Bell plan, and with light balsa it is really not terribly heavy once sanded to its final contour. The secondary cowl was lightened by eliminating the planking, however.
I had obtained silver tissue form JCI in California, but am not sure this source is still active. Silver domestic tissue is available from Easy Built Models at P.O. box 681744 Prattville AL 36068-1744 www.easybuiltmodels.com.
Alternantively you can use silver Floral Spray over clear Krylon and white Esaki tissue.

The wings for the transcontinental version were dark blue. For this, you can obtain dark blue domestic tissue from "Easy Built Models" or simply rub dark blue chalk into light blue Esaki tissue, then spray with gloss clear Krylon or clear dope.

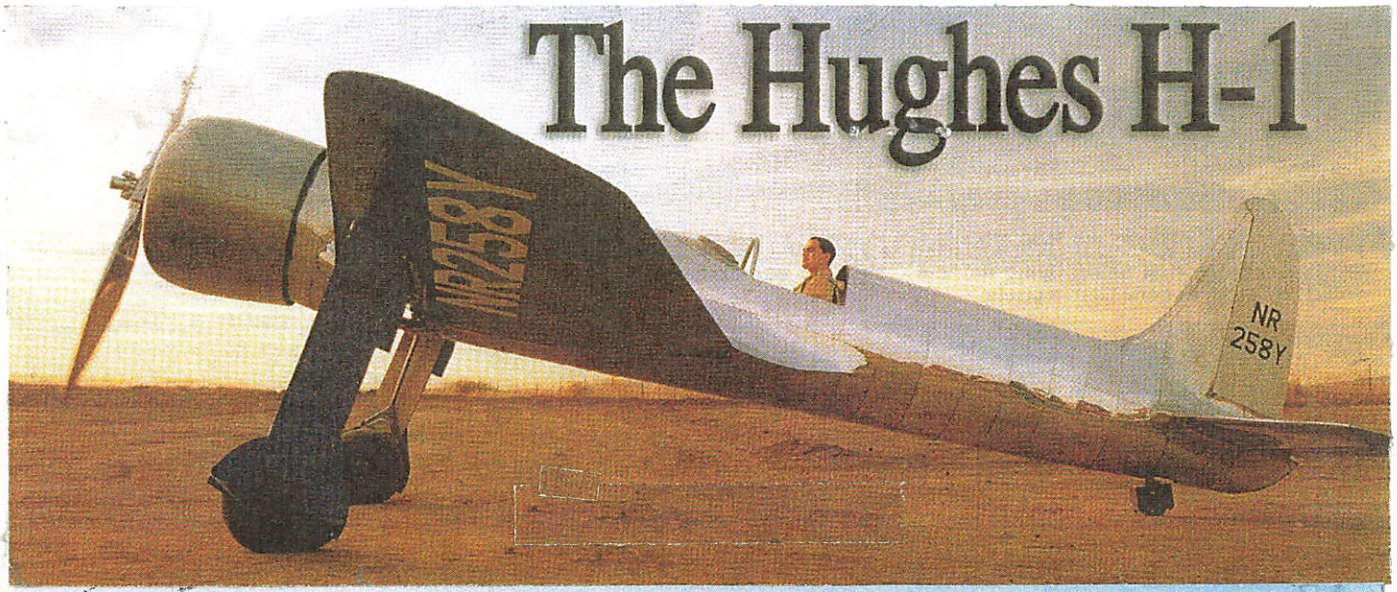
The transcontinenental Hughes is now in the National Air and Space Museum, the source of the three view drawings in this issue of "Crosswnds". Both versions were designed by Glenn Odekirk. The short wing Hughes was flown to a new speed record of 352.322 mph. on September 13, 1935 by Howard Hughes. The original registration was NR258Y, but was changed to NX258Y for the transcontinental flight. Both were powered by a Pratt & Whitney Twin Wasp Junior of 700 hp.at 8,500 ft. It could deliver 1000 hp. for brief intervals for the high speed flights.
For the transcontinental flight, the dark blue, long span wings were fitted, which enabled Hughes to fly from Los Angeles to New York City in 7 hours, 28 minutes and 25 seconds. A distance of 2,490 miles at an average speed of 332 mph!
Great care had been taken in design and assembly of the H-1 to keep it as smooth as possible. Rivets were flush, the aluminum fuselage skin was highly polished, and all screws in the plywood wings were countersunk. The retractable landing gear was so closely fitted that it was difficult to see the seams when the gear was up. The bell shaped engine cowling was effective in reducing drag and improving engine cooling.
The H-1 set very important design and construction standards for the military aircraft of all major combatant countries in WW-II.

References: "Aircraft of the National Air and Space Museum", Fourth Edition; by Richard Hallion and Claudia M. Oakes, and "The Golden Age of Air Racing" by S.H. Schmid and Truman C. Weaver; published by the EAA.

Steve Griebling for "Crosswinds", 2006

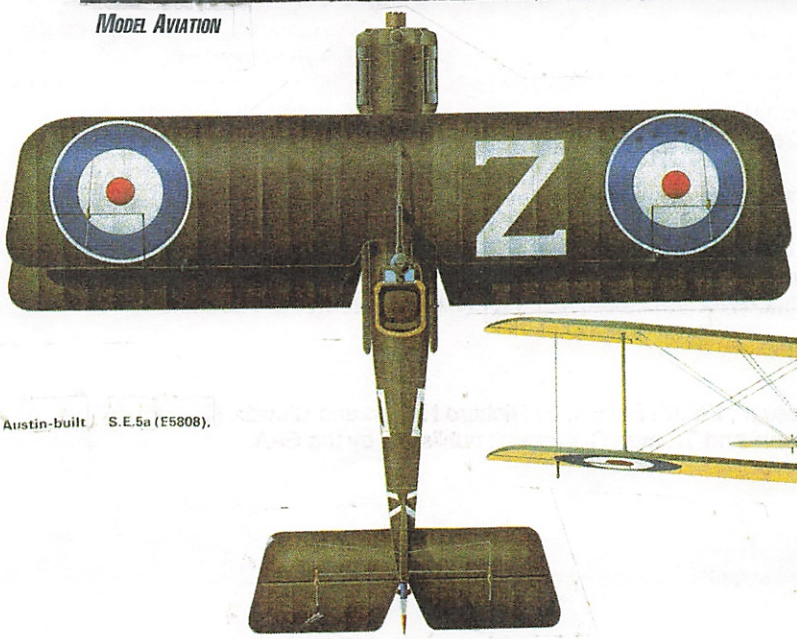
See Skyways October 2003 for Jim Wright's Hughes Racer replica photos by editor Dave Ostrowski. (Shot in color, printed b&w.)

The Hughes H-1

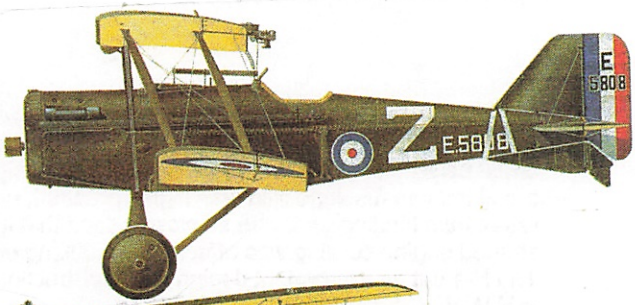


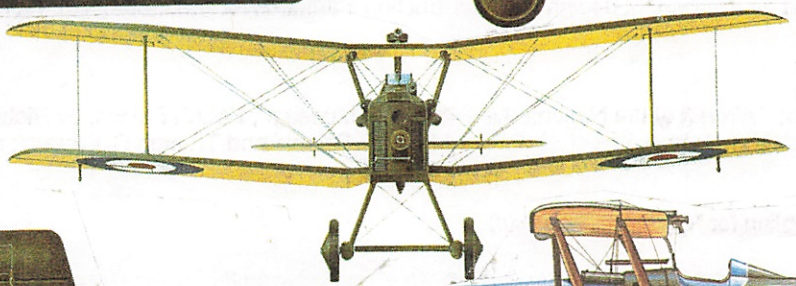


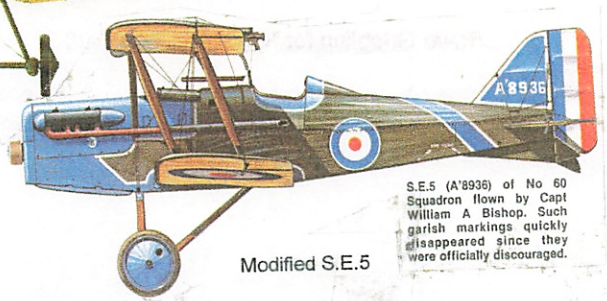
Model Aviation July 2005



Austin-built S.E.5a (E5808).

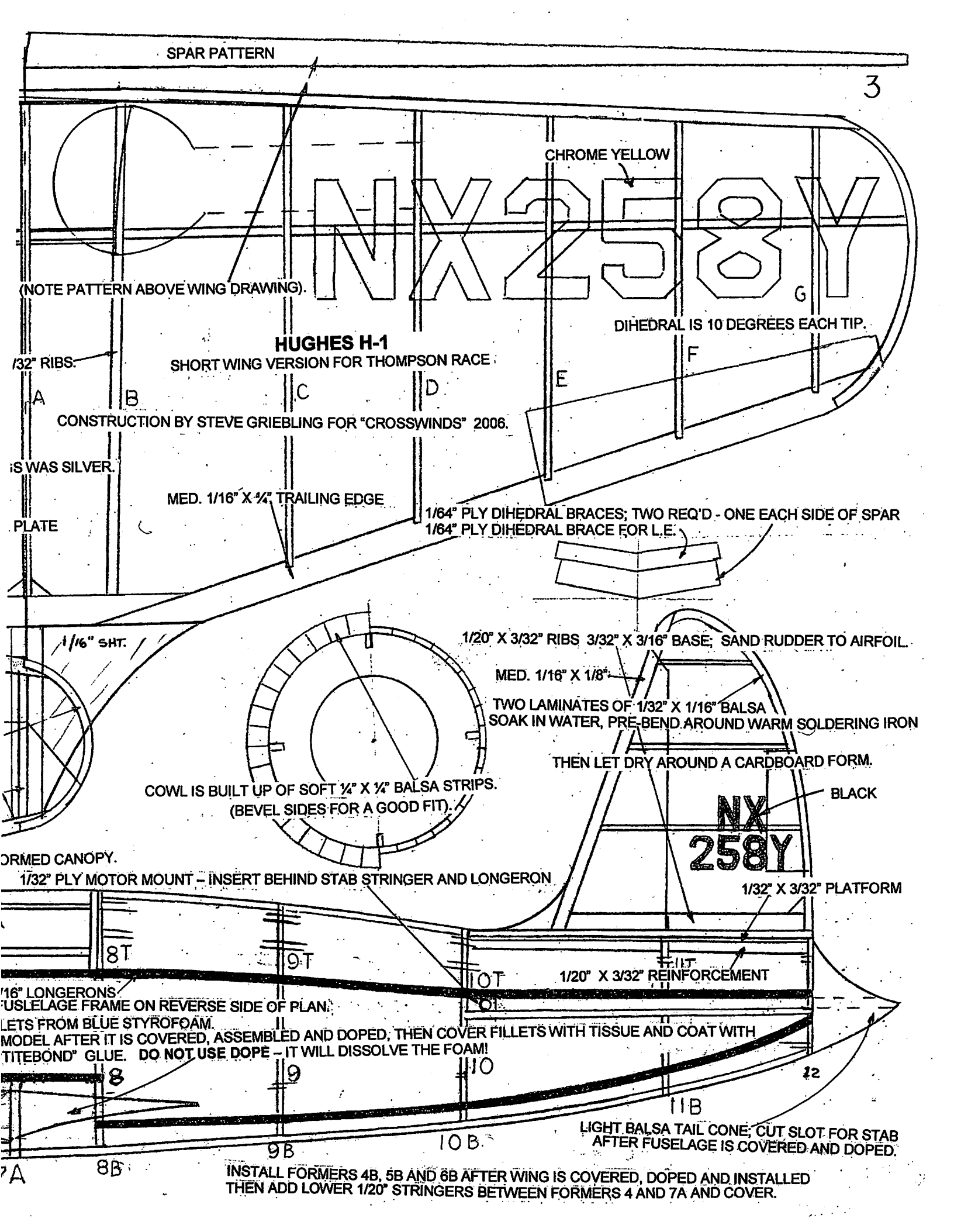


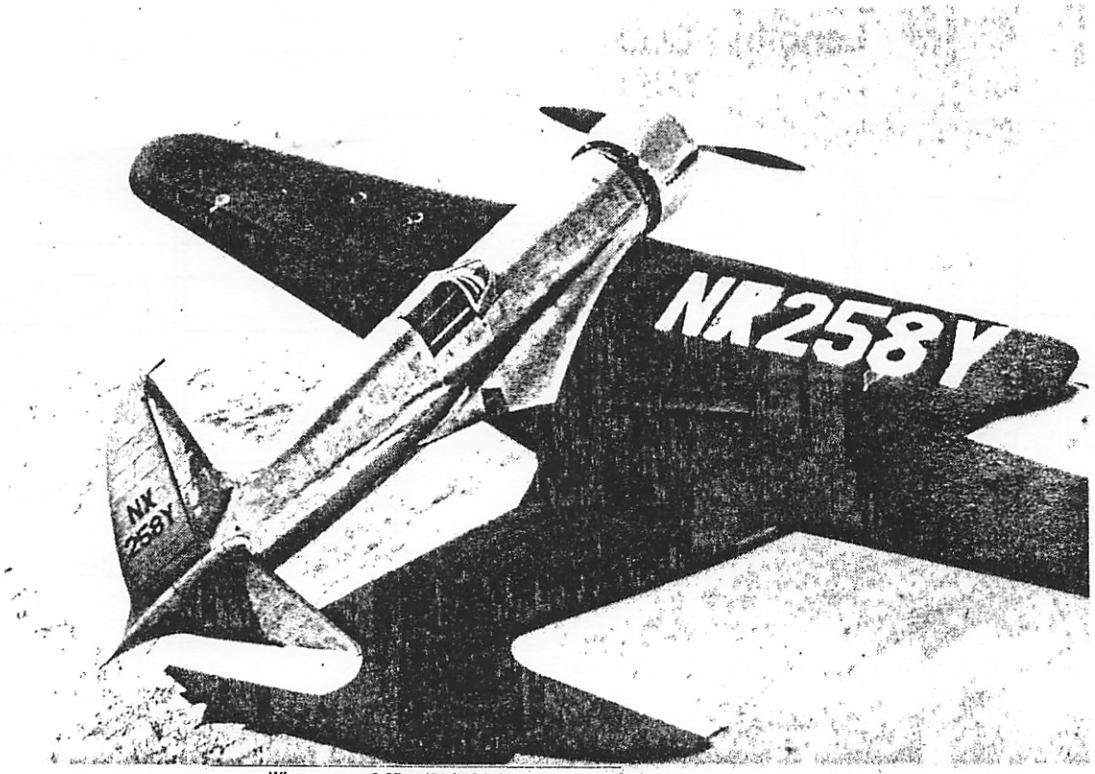




S.E.5 (A'8936) of No 60 Squadron flown by Capt William A Bishop. Such garish markings quickly disappeared since they were officially discouraged.

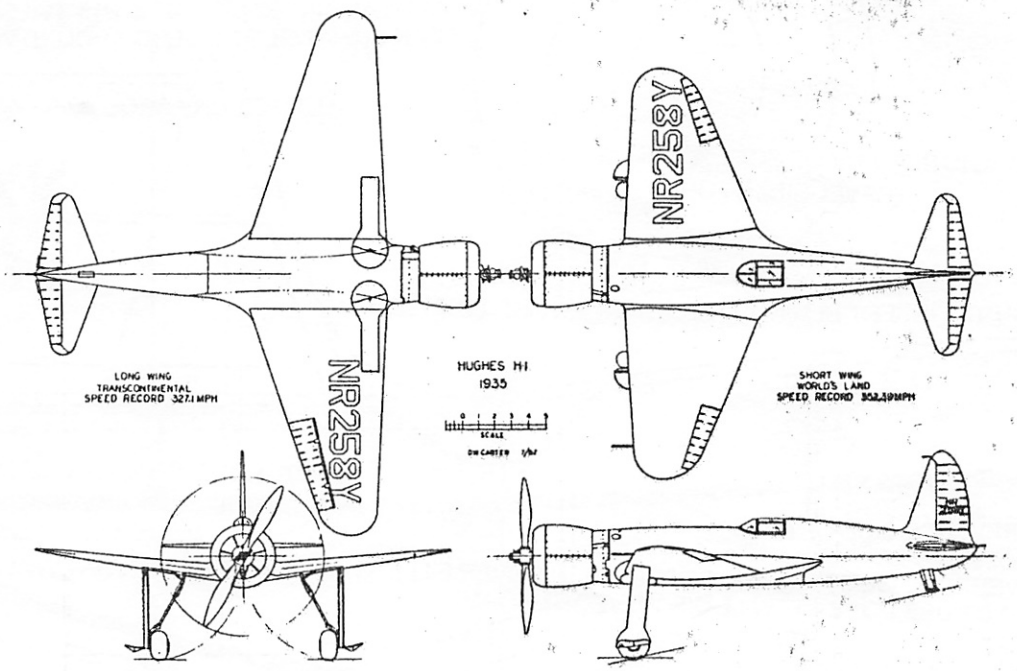
Modified S.E.5


SPAR PATTERN
3
CHROME YELLOW
NX258Y
(NOTE PATTERN ABOVE WING DRAWING).
G
DIHEDRAL IS 10 DEGREES EACH TIP.
HUGHES H-1
SHORT WING VERSION FOR THOMPSON RACE
/32" RIBS.
A
B
C
D
E
F
CONSTRUCTION BY STEVE GRIEBLING FOR "CROSSWINDS" 2006.
iS WAS SILVER.
MED. 1/16" X ¼" TRAILING EDGE
PLATE
1/64" PLY DIHEDRAL BRACES; TWO REQ'D - ONE EACH SIDE OF SPAR
1/64" PLY DIHEDRAL BRACE FOR L.E.
1/16" SHT.
1/20" X 3/32" RIBS 3/32" X 3/16" BASE; SAND RUDDER TO AIRFOIL.
MED. 1/16" X 1/8"
TWO LAMINATES OF 1/32" X 1/16" BALSA
SOAK IN WATER, PRE-BEND AROUND WARM SOLDERING IRON
THEN LET DRY AROUND A CARDBOARD FORM.
COWL IS BUILT UP OF SOFT ¼" X ¼" BALSA STRIPS.
(BEVEL SIDES FOR A GOOD FIT).
BLACK
NX
258Y
ORMED CANOPY.
1/32" PLY MOTOR MOUNT – INSERT BEHIND STAB STRINGER AND LONGERON
1/32" X 3/32" PLATFORM
8T
9T
10T
11T
1/20" X 3/32" REINFORCEMENT
/16" LONGERONS
USLELAGE FRAME ON REVERSE SIDE OF PLAN.
LETS FROM BLUE STYROFOAM.
MODEL AFTER IT IS COVERED, ASSEMBLED AND DOPED, THEN COVER FILLETS WITH TISSUE AND COAT WITH
TITEBOND" GLUE. DO NOT USE DOPE – IT WILL DISSOLVE THE FOAM!
8
9
10
12
11B
LIGHT BALSA TAIL CONE; CUT SLOT FOR STAB
AFTER FUSELAGE IS COVERED AND DOPED.
9B
10B
7A
8B
INSTALL FORMERS 4B, 5B AND 6B AFTER WING IS COVERED, DOPED AND INSTALLED
THEN ADD LOWER 1/20" STRINGERS BETWEEN FORMERS 4 AND 7A AND COVER.

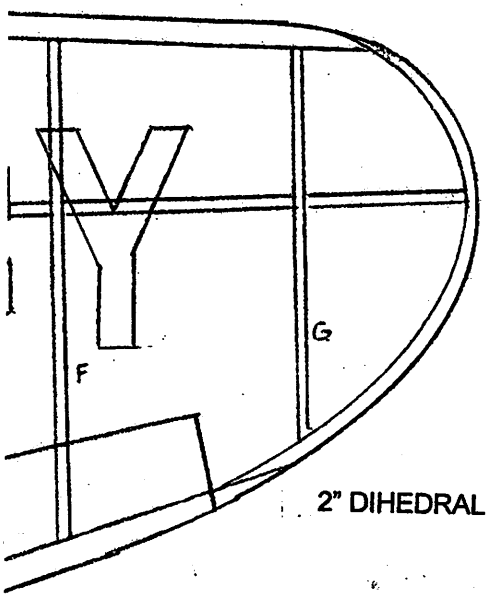


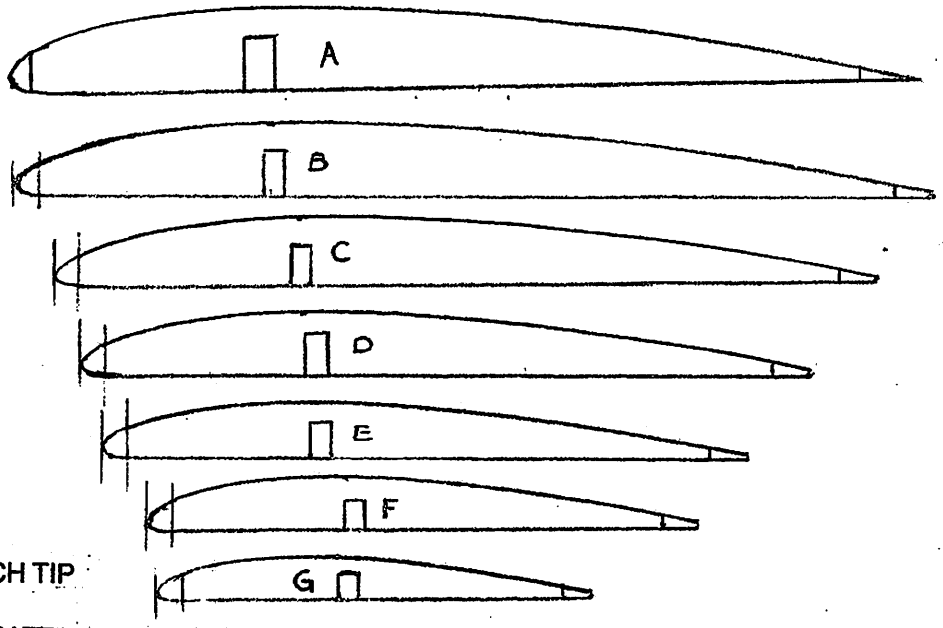
Wingspan:	9.67 m (31 ft. 9 in.)
Length:	8.23 m (27 ft.)
Weight:	Gross, 2,495 kg (5,500 lb.)
Engine:	Pratt and Whitney Twin Wasp, Jr., 700 hp

Piloted by Hughes, the H-1 set a transcontinental speed record of 7 hours, 28 minutes, and 25 seconds on January 20, 1937. (Photo: SI 41270)



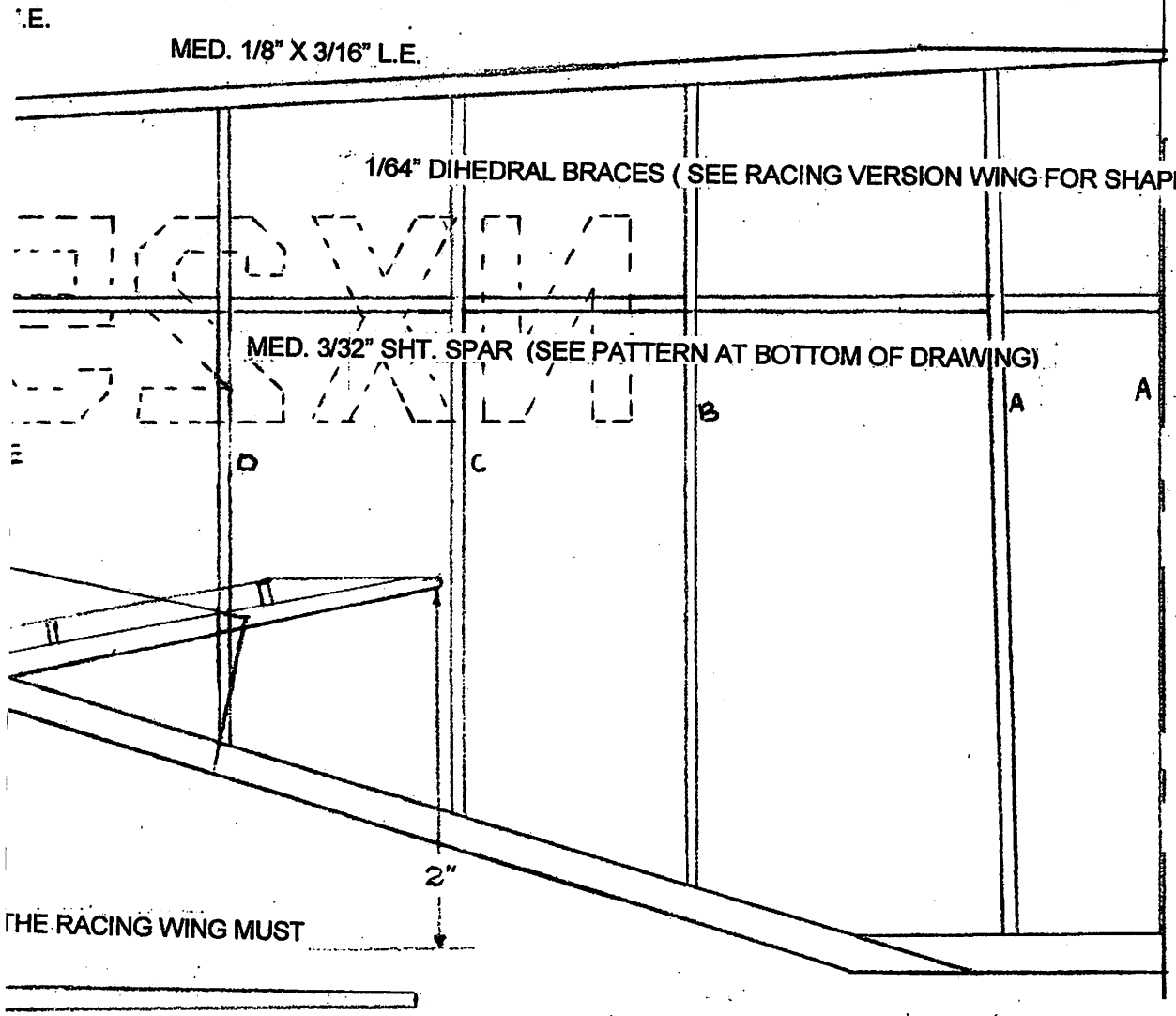
Courtesy Racing Planes, *vol. 3, by Reed Kinert*





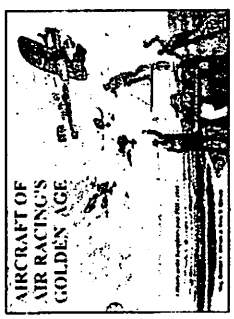
2" DIHEDRAL – EACH TIP

RIB PATTERNS:
MAKE CENTER "A" RIB OF 1/16" SHT. AND NEXT 2 "A" RIBS OF 3/32" SHT.
ALL OTHER RIBS ARE 1/20" SHEET.

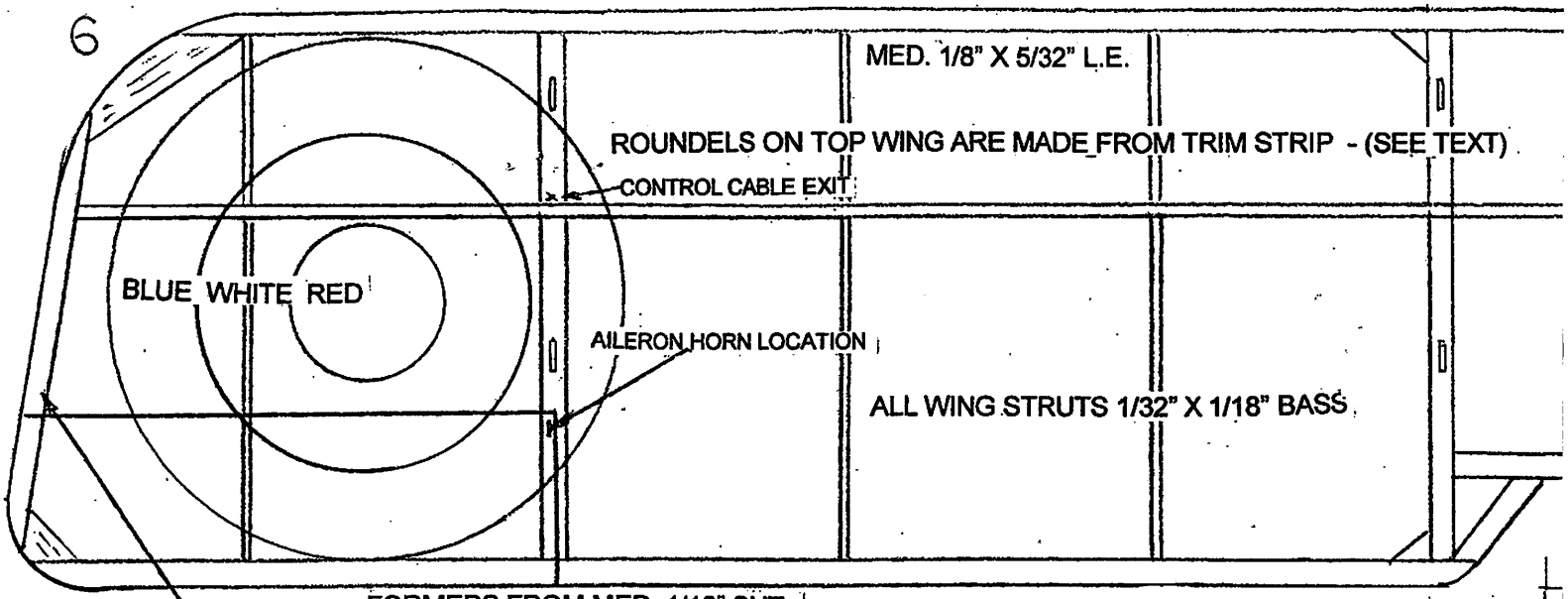


"Aircraft of Air Racing's Golden Age" - Book

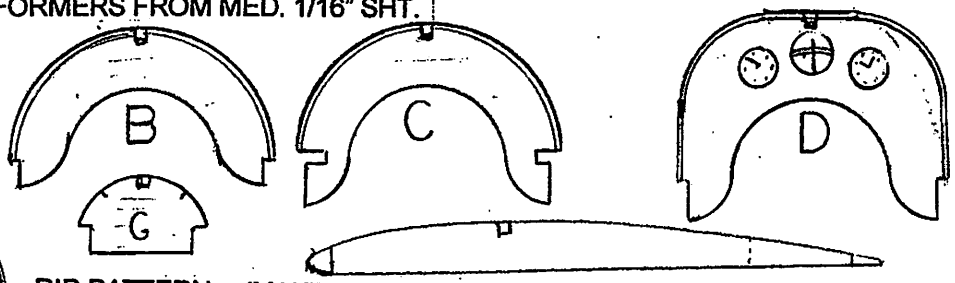
Robert S. Hirsch and Ross N. Hirsch: "Aircraft of Air Racing's Golden Age" (Published by the authors 2005, ISBN 0-9761960-1-8, 0-9761960-2-6). Two-book boxed set, hardbacks, 29.5 x 21.5 cm (11.5 x 8.5 inches) landscape format, 1071 pages. Price US $ 75.00, regularly available on eBay (seller "aarga21"). Address to the publishers: Hirsch Publishing, 8439 Dale Street, Buena Park, CA 90620, USA, phone +1 714.8287369, e-mail rossnblanca@yahoo.com.

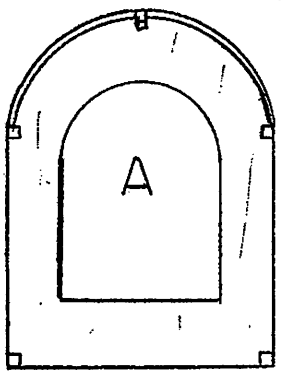


DRAWING BY S.T.GRIEBLING FOR "CROSSWINDS" 2006



FORMERS FROM MED. 1/16" SHT.

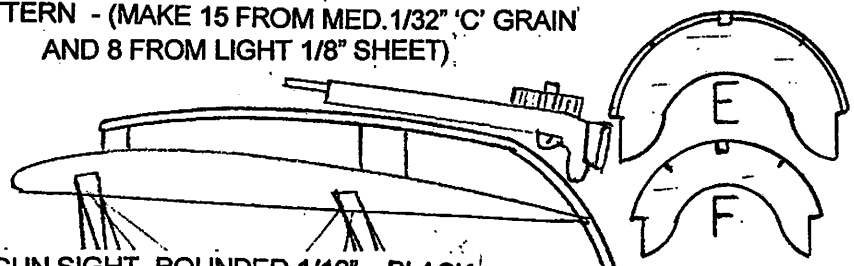




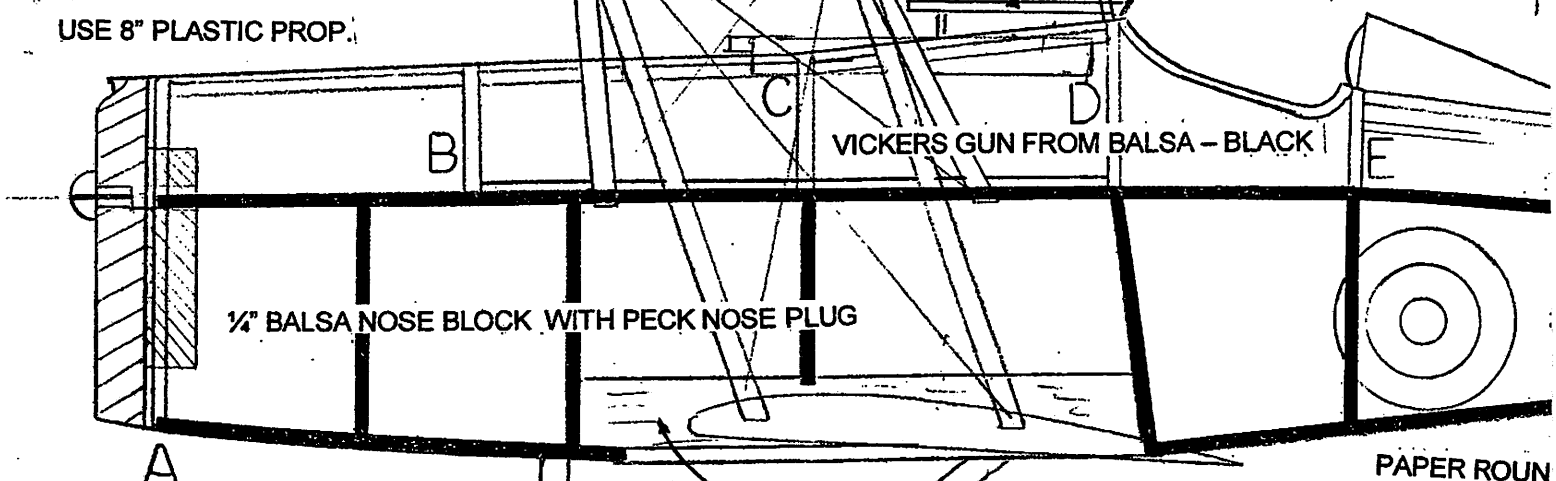
RIB PATTERN - (MAKE 15 FROM MED.1/32" 'C' GRAIN AND 8 FROM LIGHT 1/8" SHEET)

KEY IS ¼" THICK HARD BALSA

USE 8" PLASTIC PROP.

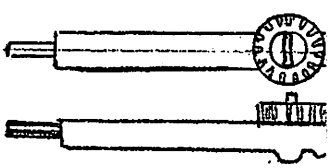


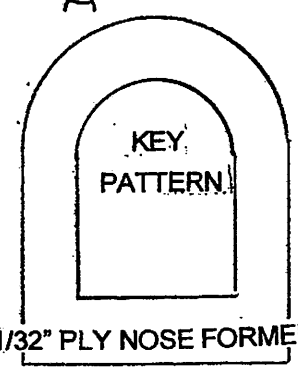
GUN SIGHT- ROUNDED 1/16" – BLACK



PAPER ROUN

1/16" WING SADDLES (2 REQ'D.)





1/32" PLY NOSE FORMER

FOSTER MOUNT IS TWO WET FORMED LAMINATES OF 1/64" X

POWER WITH 4 STRANDS 1/8" TAN II OR EQUIVALENT, BRAIDED

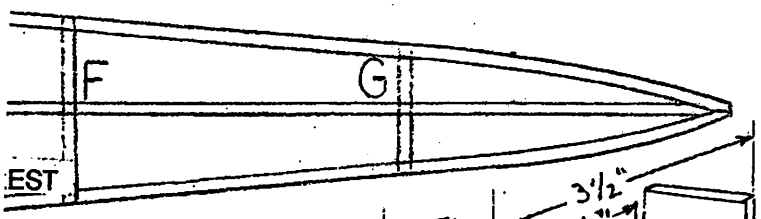
HORNS: (FROM ALUMINUM PASTRY TRAY)
AILERON HORNS: 4 REQ'D.



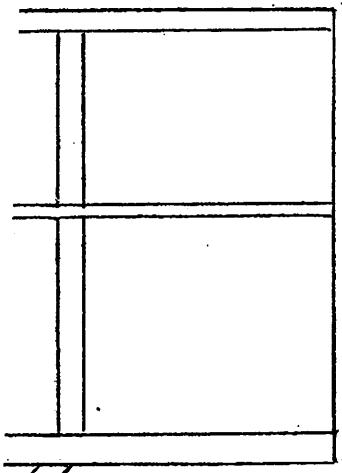
:acer replica photos by editor

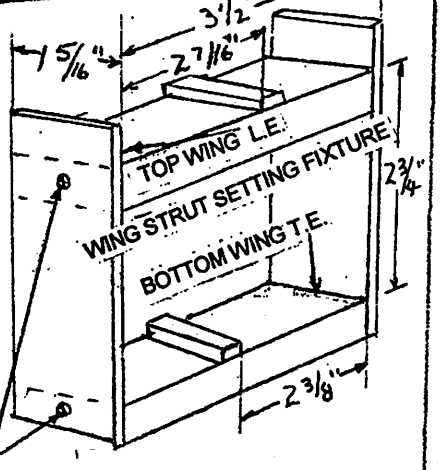
ELEVATOR & RUDDER HORNS (4 REQ'D.)

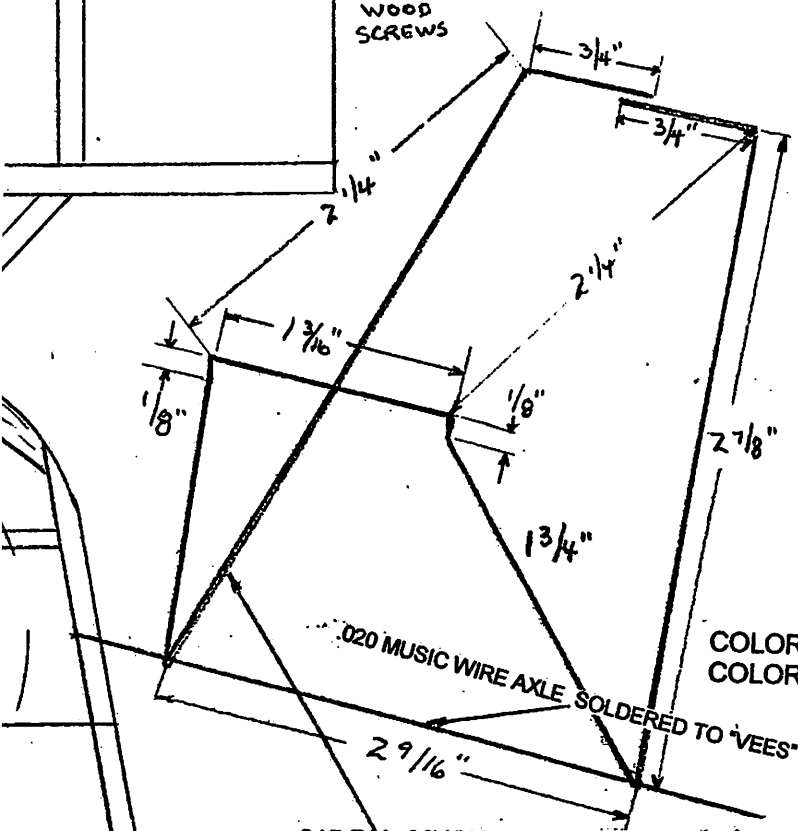
)FOAM CUSHION - BROWN

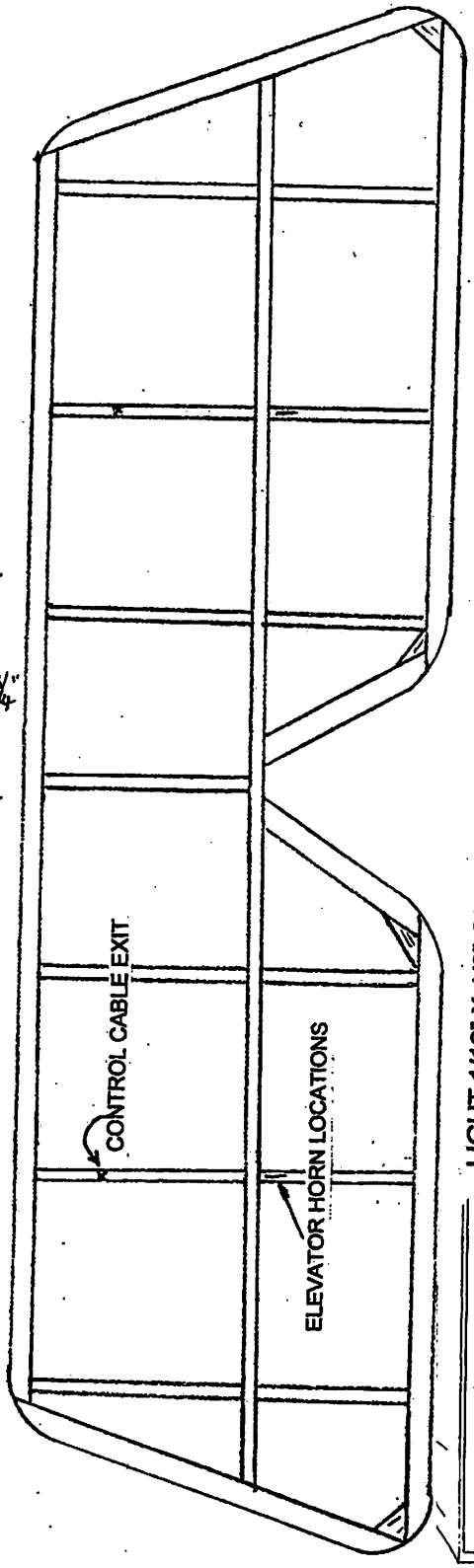


SSUE BEFORE COVERING









LIGHT 1/16" X 1/8" OUTLINE MED. 1/16" SQ. SPAR, LIGHT 1/16" SQ. RIBS



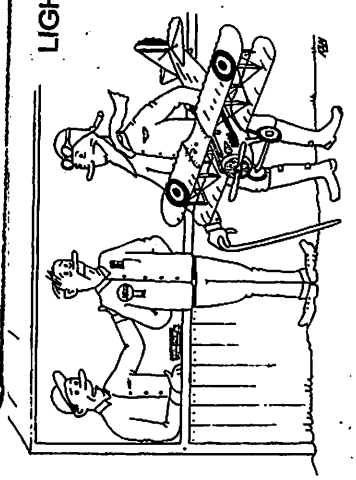
No.74.SQN.S.E.5.A. 1918.
(Individual numbers or letters used & sometimes marked on nose only)



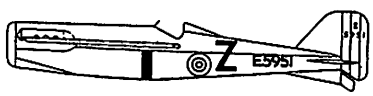
No.41SQN.SE.5.A. MARCH-NOVEMBER 1918.

HE SAYS HIS NAME IS EDDIE AND

HE WANTS TO ENTER SCALE COMBAT!

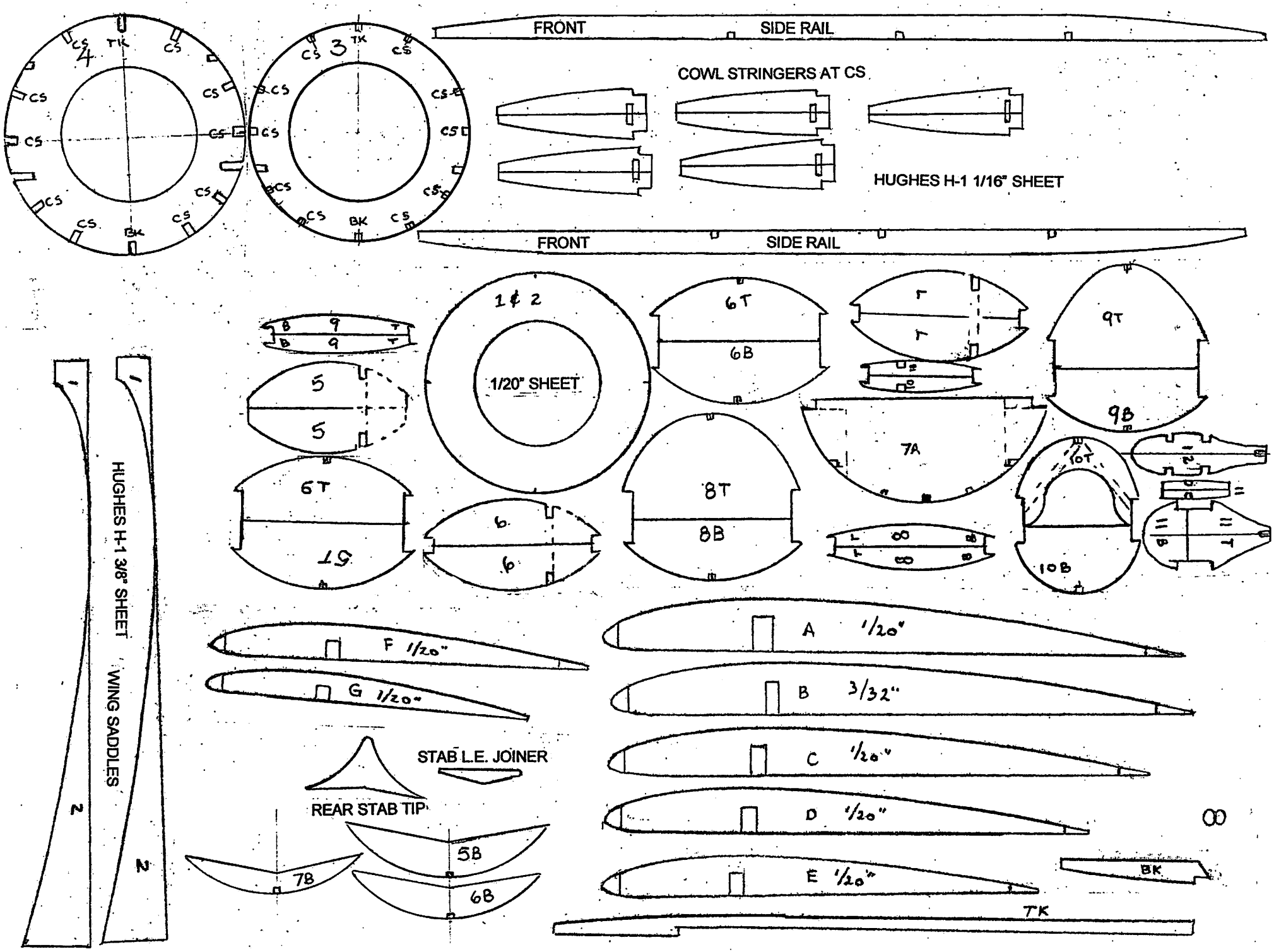


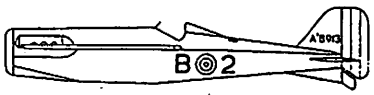
COLOR, TOP: GREEN ESAKI TISSUE RUBBED WITH TAN CHALK
COLOR, BOTTOM: WHITE



No.68SQN.(No.2.A.F.C.) S.E.5.A. APRIL- NOVEMBER 1918.

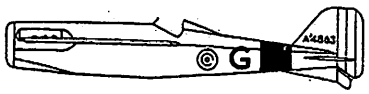
18" SE 5 **RE-ENGINEERED FROM AN 'EASY BUILT' PLAN BY STEVE GRIEBLING FOR "CROSSWINDS"**


4
TK
CS
3
BK
FRONT
SIDE RAIL
COWL STRINGERS AT CS
HUGHES H-1 1/16" SHEET
FRONT
SIDE RAIL
1 & 2
1/20" SHEET
6T
6B
9T
9B
7A
8T
8B
10T
10B
5
5T
5B
6
7B
HUGHES H-1 3/8" SHEET
WING SADDLES
F 1/20"
G 1/20"
STAB L.E. JOINER
REAR STAB TIP
A 1/20"
B 3/32"
C 1/20"
D 1/20"
E 1/20"
BK
TK



No.56.SQN.S.E.5.TEMPORARY HOME DEFENCE DUTY 1917.

The 18" SE 5



No.56.SQN.S.E.5.JULY 1917-MARCH 1918.
(McCudden's aircraft)

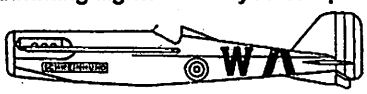
There are many kits and drawings for models of the SE5 because it was such an important aircraft in WW I and is a good choice for a rubber powered model because its nose moment is longer than many early biplanes.

My model started out with an 18" wingspan 'Easy Built' kit, but the structure of this kit was just a little too sparse to satisfy me and strut attachments and other details were not well planned or indicated. The Easy Built SE5 is not to scale, having too great a wingspan, too long a nose moment and too long a tail moment to be truly to scale. However. I am told that it is allowable in FAC contests because it is a commercially available kit and was designed back in the pre-war years.
In a future issue of Crosswinds, a scale plan of the SE5 (not SE5a) will be presented to our loyal readers! Dave Niezielski, owner of Easy Built Models, has no plans to redraw or re-engineer these early Easy Built plans.

I found it easy to mark up the Easy Built plan and put in additional wing ribs, designed strut attachments and added many details by referring to drawings by Wylam, and other plans provided by Russ Brown, (drawn by Bill Lane of Western Model Engineers) and by Peerless Model Airplane Co. The William Wylam drawings I referred to were from 'Scale Aircraft Drawings' Volume I – World War I, by Air Age Publishing, but I did use the original "Easy Built" plan form.

FUSELAGE:
The Easy Built fuselage formers, appear to be the correct shape and fitted nicely, but their centers need to be cut out to clear the rubber motor, which is shown having the high thrust line of the 150 hp.Hisso engined version.
I cut these formers to extend a little deeper into the box frame in order to eliminate the top cross pieces which would have interfered with the rubber motor!
I added a 1/16" x 5/32" rail for mounting the cabane struts and used very light 1/8" balsa for the wing ribs where struts are attached. Holes for the 1/32" bass struts are easily made by first slitting the balsa with a #11 Xacto blade then widening them with a Swiss pattern needle file. (See the top view of the fuselage for the rail drawing and locations). I also added light 1/32" sheet balsa covering over the top of the fuselage from former "A" to "E". Make this from three separate pieces since there are different slopes between formers C and D and between D and E. Cut the cockpit opening after the sheeting is in place. Pierce holes thru the sheeting to line up with those in the side rails before covering the fuselage. (The former drawings show a secondary line to allow for this sheeting). You can simulate leather cockpit edging with bond paper colored brown with a dark brown felt tip marker.
Make a wire armature for the landing gear (see isometric drawing on the plan) and bind the front 1-3/16" length to a balsa strip 1/16" x 3/16" wide and glue the unit to the fuselage frame, but let the rear legs be free at this point so you can install the wing assembly later.
WINGS:
Aside from the soft 1/8" strut-mounting wing ribs, I added additional wing ribs made of 'C' grained 1/32" sheet.
The lower wing is made in one piece to assure alignment and a simple saddle is incorporated in the fuselage to accommodate it. (After the lower wing has been glued in place, add two strips of 1/16" sq. extending from the lower edges of the wing saddles to the rear edge of the lower wing to blend the lower, forward edge of the saddle into the fuselage contour).

Cover the wings and water spray them, then immediately pin them over waxed paper on your building board with the tips blocked up to the correct dihedral. When dry, check and correct any warps by re-dampening the tissue if necessary and let dry before doping the wings.
I strongly recommend building a fixture (see plan) for setting the interplane struts, incidence angle and stagger for the wings.
WING FIXTURE:
Make the fixture from two pieces of ¾" x 1-5/16" x 3-1/2" pine (or other cheap wood) and two pieces of 1/8" x 1-5/16" x 3-1/2" Masonite or other cheap stuff. Nail the Masonite to the pine blocks on one end and attach the other end with wood screws so you can disassemble the fixture to remove the wings once the interplane struts are glued in place. You can pin the wings to the fixture or use stop blocks in the fixture to hold the wings in position as shown in the sketch. Add the interplane struts but don't glue them in place yet!. Check the spacing of the wings at the interplane strut locations when they are in the fixture to be sure they have exactly the same incidence angle and spacing. This is easier if you strap pieces of stiff balsa at least 1/8" square and about 5" long to the bottom of the wings with rubber bands, letting the balsa strips extend about 2" to the rear of the top wing and 2" to the front of the bottom wing. Measure the distances from the top edges of these strips after you have dry fitted the interplane struts and tweak the strut penetrations into their respective ribs till the spacing is perfect, then glue the struts in place with a drop of cyanoacrylate on each side of the struts.
When the cyano has set up, disassemble the fixture, remove the wing/interplane strut assembly and add it to the fuselage.
Use a square to make sure the wings are at a right angle to the fuselage structure when looking down at the plane.
Once the lower wing has been glued in place add the cabane struts. You can bend the top wing up a little to insert these struts. Push the struts rather deeply into the fuselage slots and then pull them up and push them into the slots in the bottom of the wing ribs. Check the spacing accurately with a rule and sight the wing to check for incidence angle. When it is perfect, carefully apply a little cyano to the struts and sockets.
Now, glue the rear landing gear legs to the bottom of the lower wing and add 1/16" sq. strips extending from the edge of the wing saddle to the trailing edge of the wing.
STABILIZER AND RUDDER:
I eliminated all the moveable control surfaces, but left a generous space for shimming up the stabilizer so its incidence angle can be adjusted. Glue the rudder at the stern post only till you have completed your trimming flights. Then you can put a drop of glue at the rudder's leading edge to hold its position.



No.56.SQN.S.E.5 A. MARCH-NOVEMBER 1918.
(G.M line's machine, serial painted out SCHWEINHUND marked on nose)

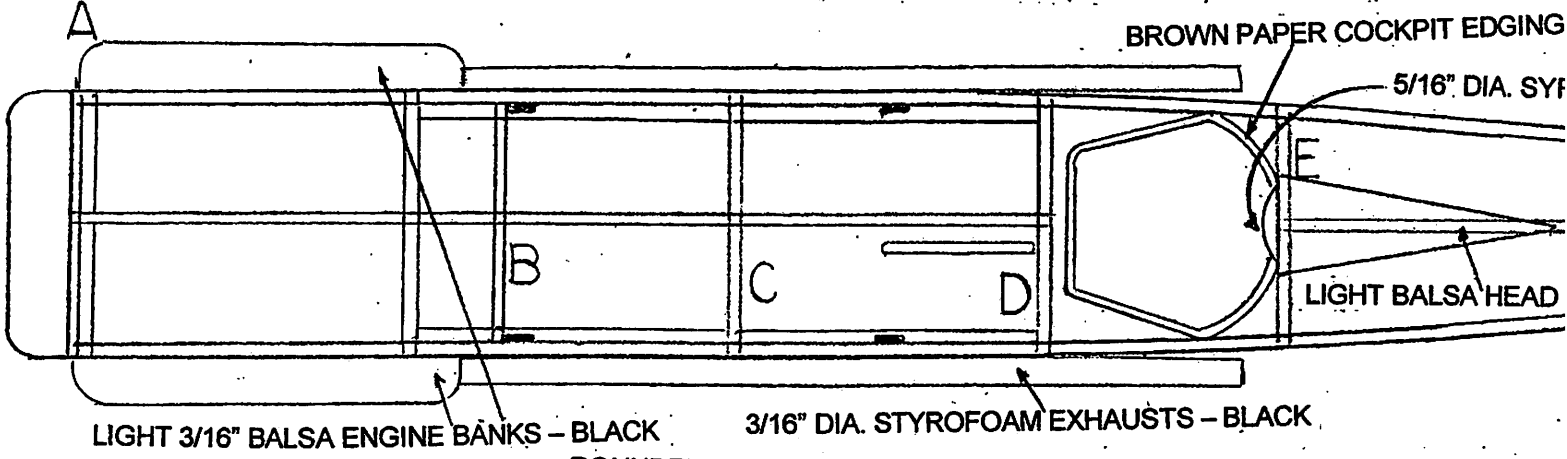
W·W·1 Aero THE JOURNAL OF THE EARLY AEROPLANE
Leonard E. Opdycke, Editor

SKYWAYS THE JOURNAL OF THE AIRPLANE 1920-1940
David Ostrowski, Editor

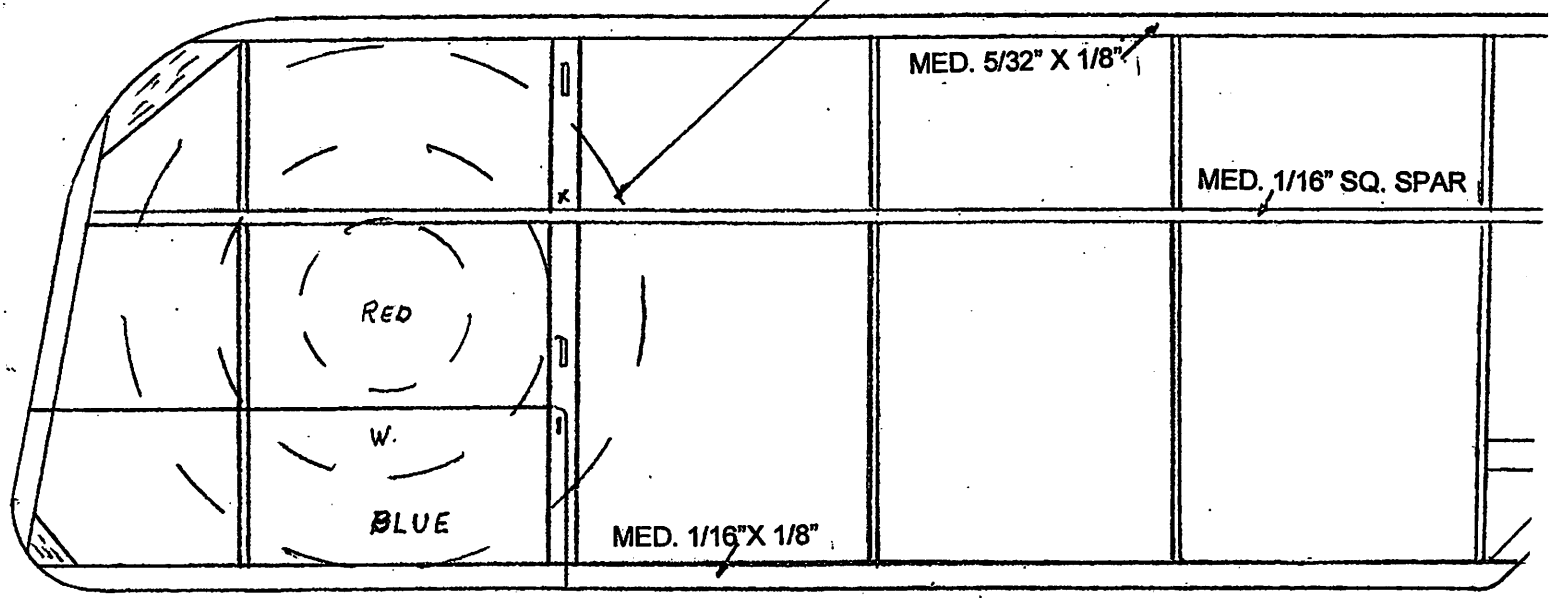
WORLD WAR 1 Aeroplanes, IN
15 Crescent Rd, Poughkeepsie, NY 12601, USA
(845) 473-3679
www.ww1aero.org or www.skywaysjournal.org

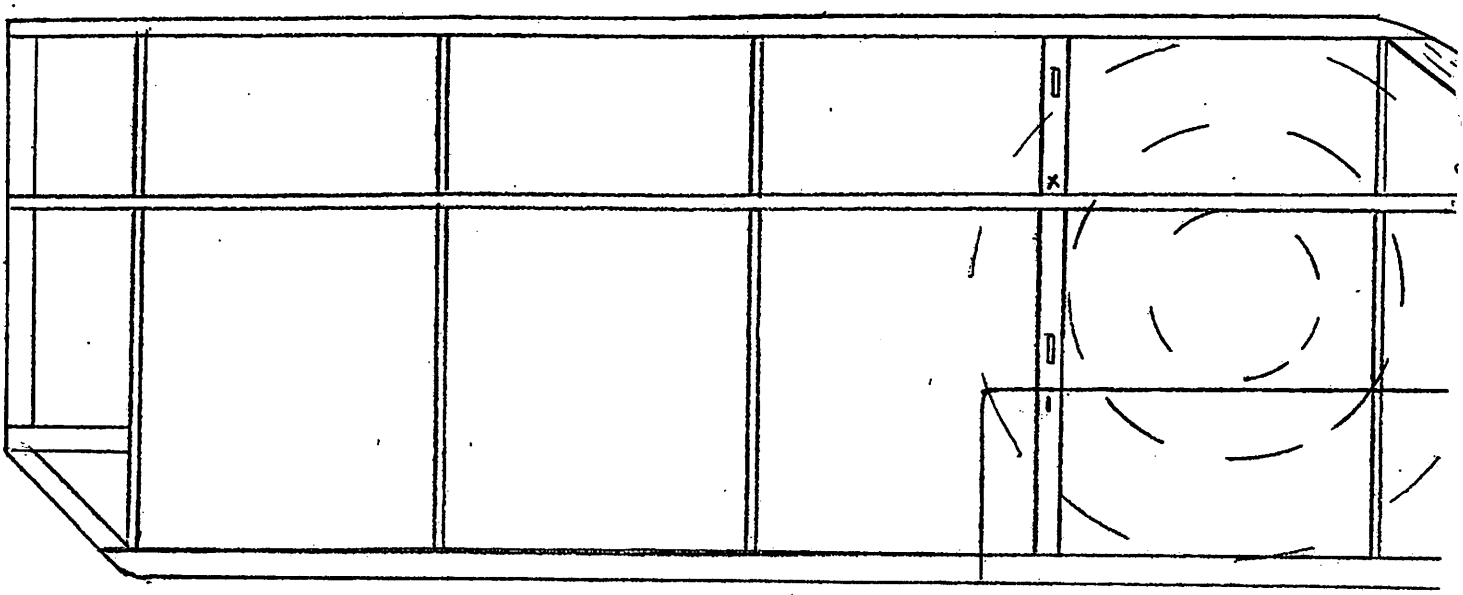
See Skyways October 2003 for Jim Wright's Hughe
Dave Ostrowski. (Shot in color, printed b&w.)

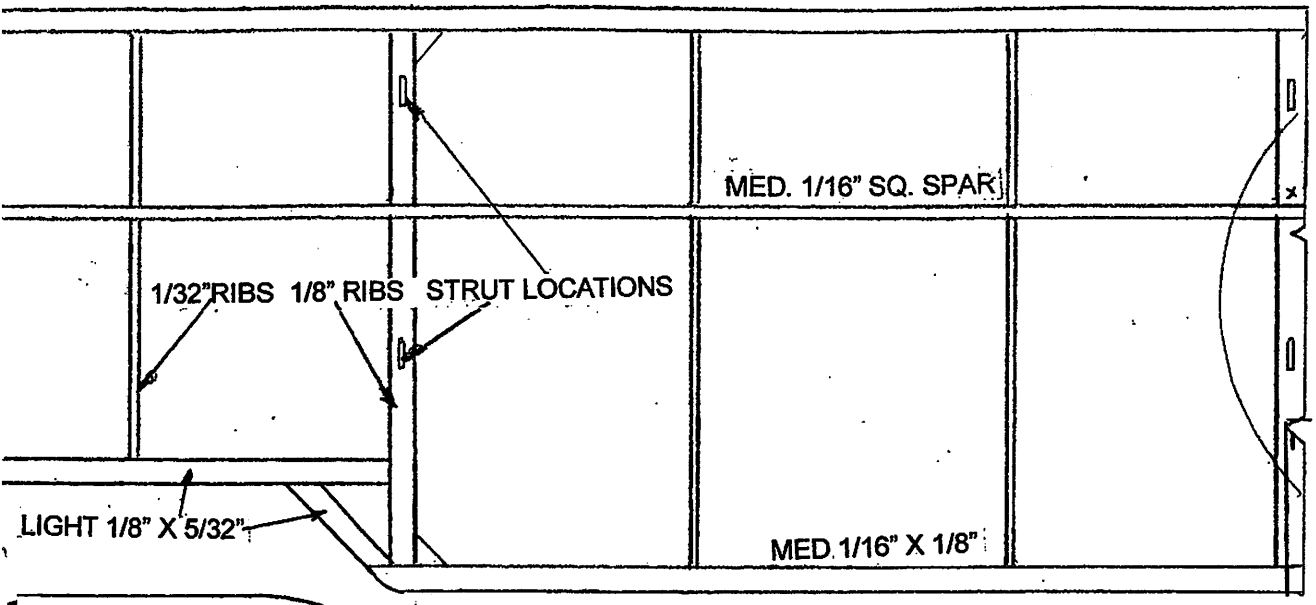
SIDE RAILS 1/16" X 5/32" MED. BALSA (2 REQ'D.)
GLUE TO TOP OF LONGERONS BEFORE ADDING FORMER "B" (SEE TEXT)

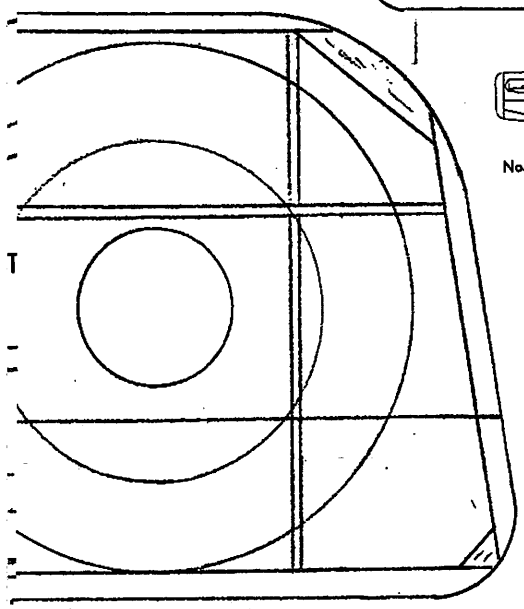


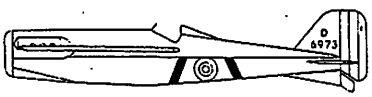
ROUNDELS ON BOTTOM WING AND STRIPES ON RUDDER ARE DRAWN ON T



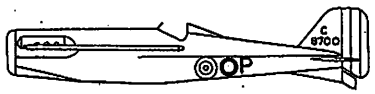








No.84.SQN.S.E.5.A,MARCH-NOVEMBER-1918.



No.1.SQN. S.E. 5A, MARCH-NOVEMBER 1918.
(previous to March 1918 Markings as for No.84 Sqn)

.010 ACETATE WINDSCREEN

WHITE TRANSFER LETTERS FOR NUMBER 60 SQUADRON

BLUE WHITE RED

LIGHT 1/16" X 1/8"

B507

½" DIHEDRAL, BOTH WINGS

MED. 1.16" SQ. SPAR, LIGHT 1/16" SQ. RIBS

RUDDER HORN LOCATION

MED. 1/16" SQ. FRAME 1/16" X 1/8"

CONTROL CABLE EXIT

/32" DIA. ALUMINUM TUBING PEG.

1/32" X ¼" BASS MOTOR ANCHOR

DEL ON FUSELAGE

TWO WHITE STRIPES FOR NUMBER 60 SQUADRON

MED. 1/16" SHEET SKID LIGHT 1/16" SQ. STRINGERS

LEWIS GUN FROM BALSA – BLACK

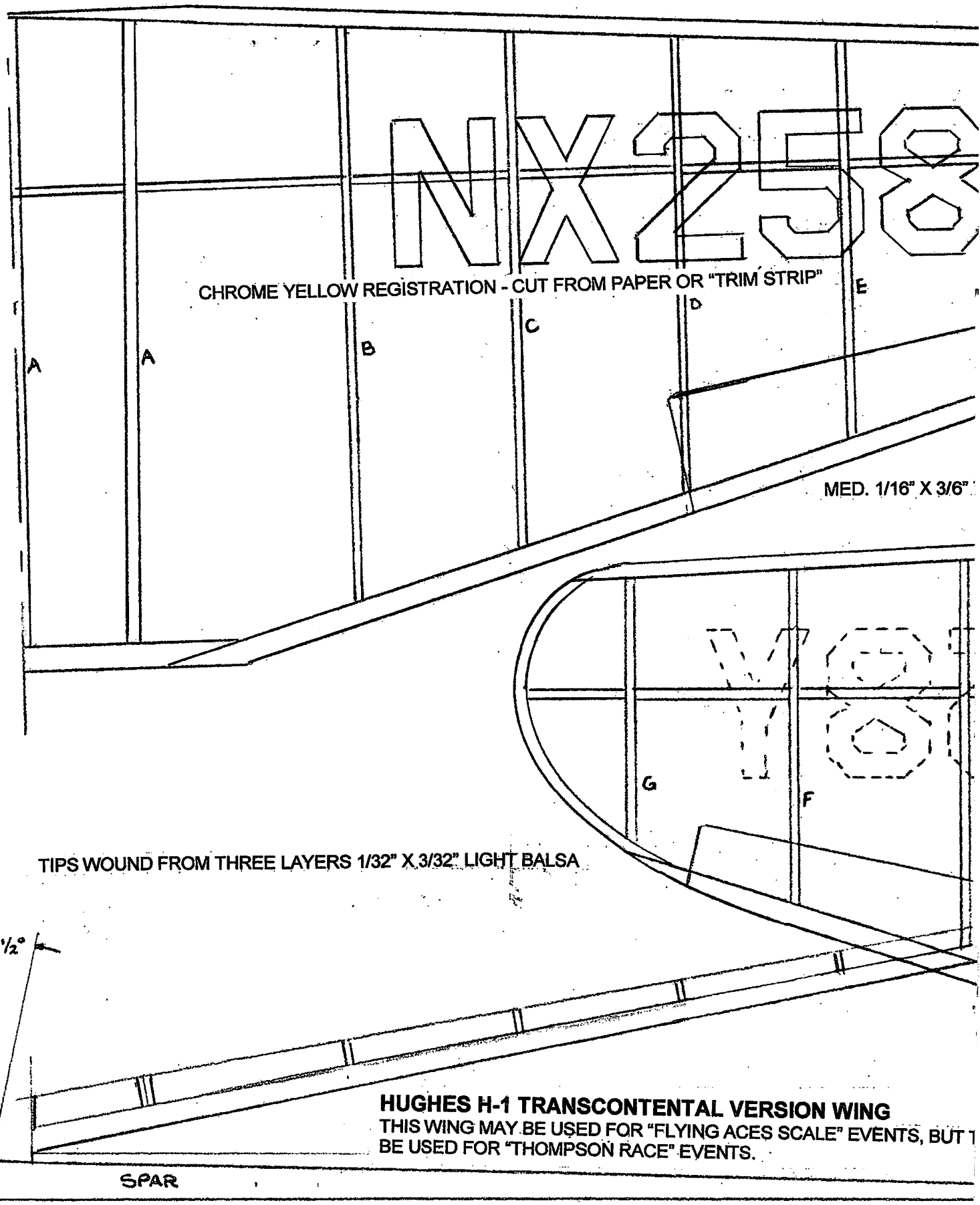
1/16" BASS - ASSEMBLE WITH MODEL CEMENT

SPREADER IS 1/16" X 1/2" BALSA

SHOCK HOUSINGS FROM LIGHT 1/8" SHT.

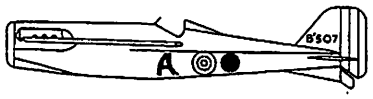
18" SE 5

RE-ENGINEERED FROM AN 'EASY BUILT' PLAN
BY STEVE GRIEBLING FOR "CROSSWINDS"



HUGHES H-1 TRANSCONTENTAL VERSION WING

THIS WING MAY BE USED FOR "FLYING ACES SCALE" EVENTS, BUT T
BE USED FOR "THOMPSON RACE" EVENTS.



No.60.SQN.S.E.5 A.JUNE 1917-MARCH 1918.

Add the wing and stabilizer rigging since it was so characteristic on the full sized aircraft. For rigging, use either fine silk thread or "Lycra" from "Shorty's Basement". Wing rigging is best done before the bottom of the fuselage is covered so you can get access to the inside of the fuselage at the centerline for the rigging between the cabane struts and the top of the fuselage. The use of 1/32" basswood wing struts is recommended because it is easily pierced with a fine rigging needle (I use a quilting needle) and is stronger and less likely to split than balsa. 1/32" bass is also a good choice for the rear motor attachment peg since it resists wallowing out
You will find that the light 1/8" ribs make it easy to install control horns and cables if you go in for this much detail. Thin aluminum, from commercial pastry trays, is a good material for the horns. Use a .025" drill or a pin to pierce holes in the horns for the thread. The aileron cables pass from their exit points, thru the horns, then thru the trailing edges of the wings etc. (The ailerons on top and bottom wings acted as a unit).

COLORS:
The SE5 was basically brownish green on top and white on the bottom. I recommend chalking green Esaki tissue with a tan or light brown chalk to make the tissue less translucent and to intensify the color. This also approximates the iron oxide paint, which was used on these early aircraft to resist rotting of the covering.

I had good success making the top wing roundels from trim strip cut with a circle cutter made by "MORE SUN" which I obtained from a local craft shop. Cut the blue into a ring and place it on the wing, then use the same setting used for the inside of the blue ring to cut a white disc, but pre assemble a red disc to the white before placing it in the center of the blue ring. (You may prefer to make decals from the material available from "Micro Mark" for either laser or ink jet computer printers or to purchase decals from The Major Decal Company.
I made fuselage roundels from white paper with the rings drawn on with red and blue felt tip markers. For maximum weight reduction, draw the roundels for the bottom wings directly on the tissue with felt tip markers before covering the wings. You can prevent bleeding of the felt tip ink if you draw the outlines for your roundels with blue and red ball point pens first. Lay the Esaki tissue over heavy white paper while applying the felt tip ink. Use the same technique for the rudder striping.
After the tissue has been water shrunk, give it a very light coat of clear Krylon over the roundels so their inks will not spread, then follow with additional light coats of Krylon as desired.
Make the Foster mount track for the Lewis gun from two laminations of wet 1/64" x 1/16" bass assembled with model cement or Titebond glue. Make the gun from blue foam or balsa with a balsa barrel and paint it black. The Vickers gun at the left side of the fuselage can also be made of blue foam. The gun sight is rounded 1/16" balsa, painted black. Make the Hisso valve covers from very light 3/8" balsa, rounded. Coat with sanding sealer and paint them black. I used blue foam for the exhaust pipes, painted black. Coat the nose block with sanding sealer and paint it green except for the radiator, which is aluminum colored and black. Wheels are balsa with paper cone covers and 1/8" dowel hubs. The spreader is 1/16" balsa green on top and white on the bottom. Make the axle from .025" wire and solder it to the vee in the L.G. armature before applying the balsa struts to the wires. Cover the landing gear struts with tissue colored light brown. The windshield is .005" or .010" acetate. Cut the cockpit into the balsa decking and outline its rim with dark brown colored bond paper cut to fit. The instrument panel has three round gages on a brown background.
I used white transfer letters rubbed on to a strip of green Esaki for the registration and applied them to the fin with thinned "Titebond" glue.
My model weighed 25 grams without motor. Four strands of 1/8" rubber should power it nicely. I recommend an 8" diameter plastic prop. Old, high drag biplanes need low pitched props to fly, and you'll need some additional nose weight anyway, so there is no reason to carve a wood prop for the SE5, but do use a free wheeler!

You can make a pitot tube assembly from black button thread stiffened with cyano. Make its "Z" bend around pins pierced into your build board over waxed paper and use alligator clips to tension the thread draped over the edge of your table. Alligator clips also make great tensioning weights when you are installing the silk rigging.

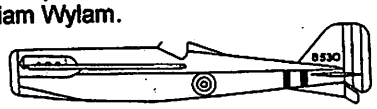
HISTORY OF THE SE5

You serious model builders know that the early 150 hp. SE5s of 1916 were improved with greater horsepower and retitled SE5a. The first SE5s had a wing span of 27',11" ,but the second batch had a reduced span of 26',7-1/2". All were built by the Royal Aircraft factory and they remained in service till the end of he war, but the original large windscreens were replaced by smaller ones before they were put into military service.
The best engine for the SE5a was the 200 hp W.4A Wolsley Viper, but 200 hp Sunbeam Arab and 220 hp Hispano Suiza engines were also used in the SE5a. Armament was a Lewis gun in a Foster mount above the top wing and a Vickers M.G. mounted on the left side of the upper decking. Four 25 lb. Cooper bombs were carried in some missions. Although the SE5 was a little less manouverable than the Sopwith Camel, it had a great climbing ability and was superb in the dive.
The water cooled engines of the SE5 and SE5a took longer to warm up that the rotary engines of many WWI planes, which made them a little less attractive for defensive scrambling, but their great stability and durability was the reason the British regained air superiority in the final days of the war.

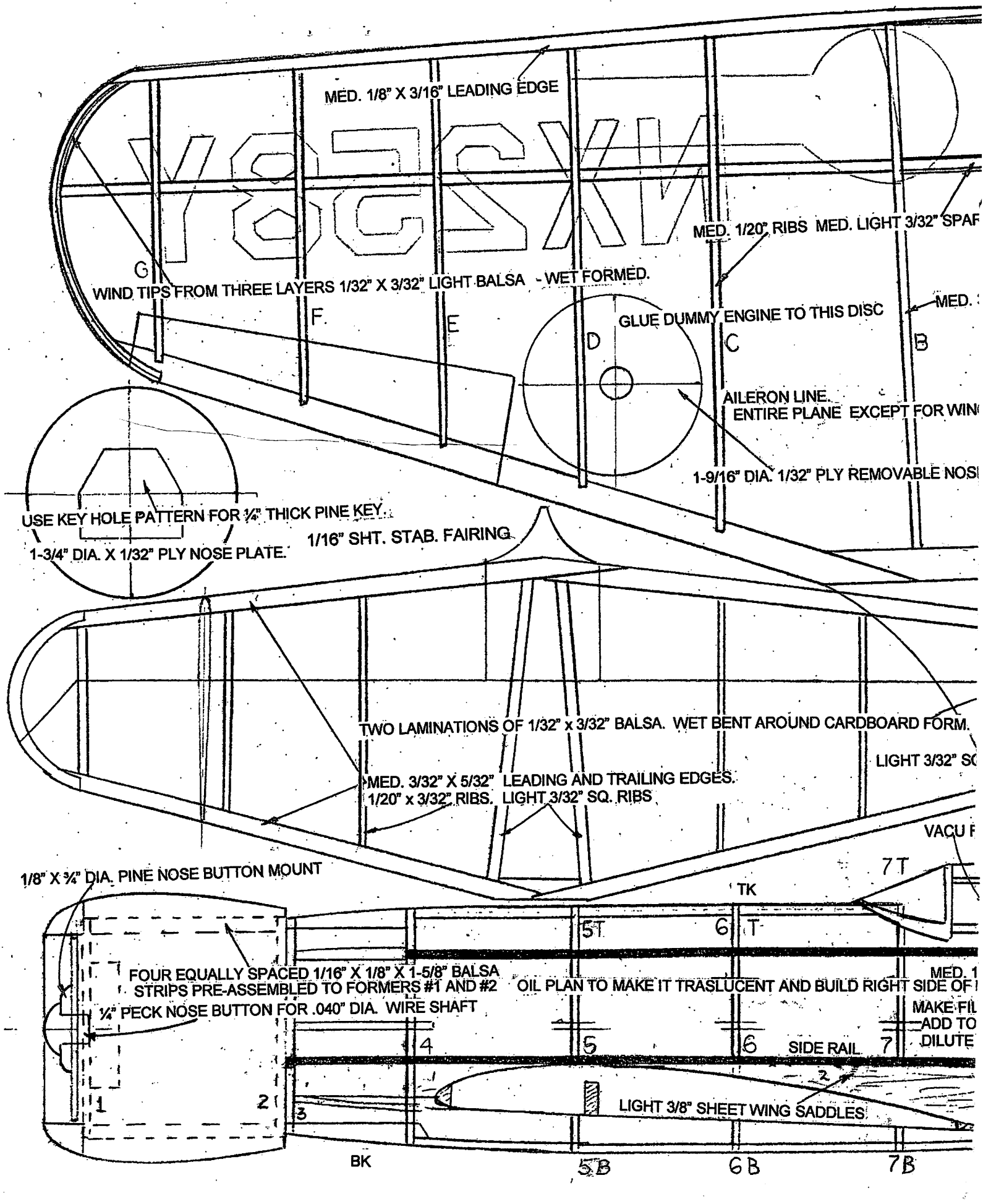
Arguably the best fighter in WWI, the Martinsyde Buzzard, resembled the SE5, but was somewhat larger. The most striking differences are the rounded rudder and the beautiful curved ailerons on the Buzzard. Unfortunately, the Martinsydes had a spate of radiator leaks in their initial production run which delayed their delivery to the front until late 1918.

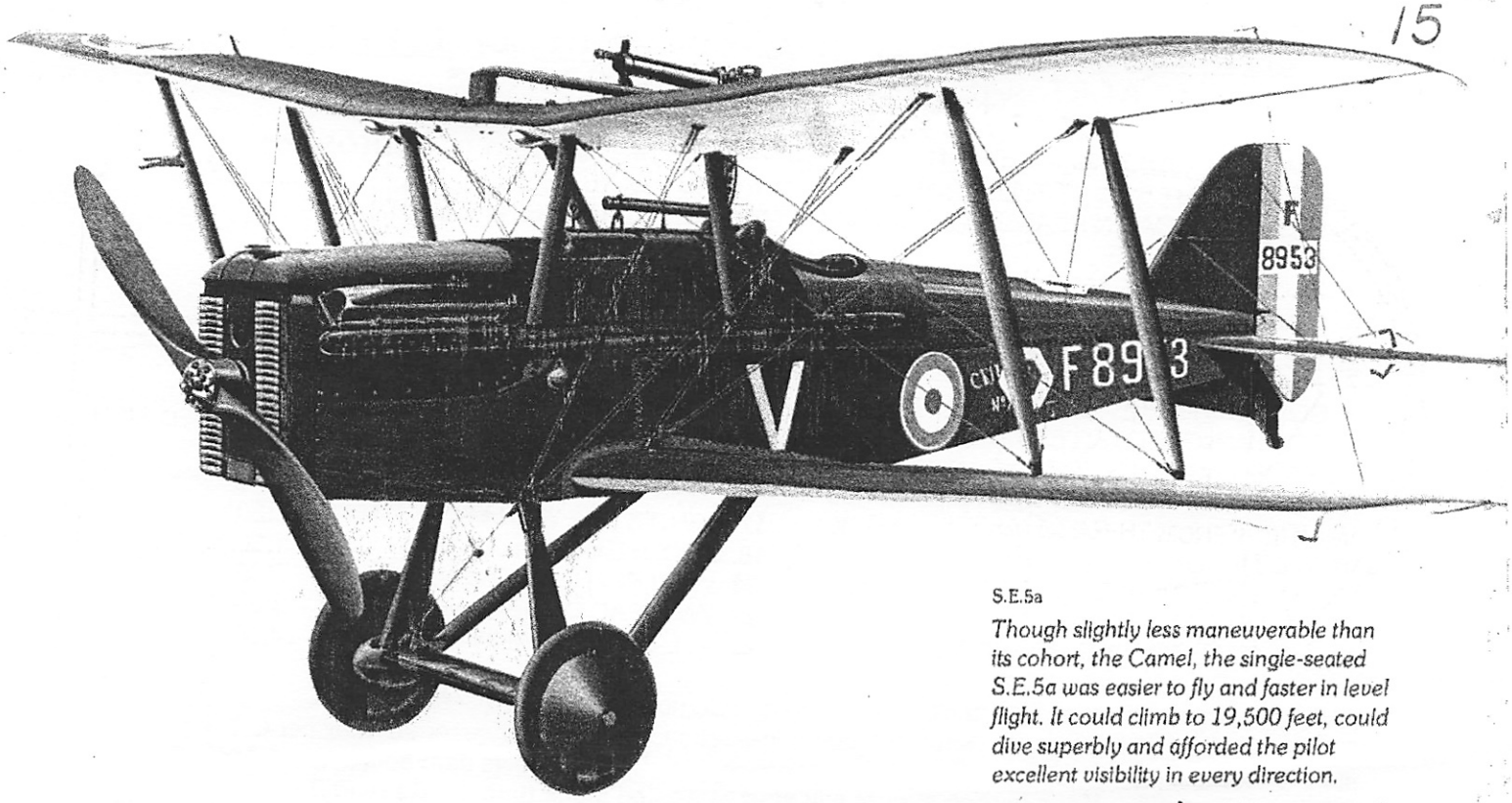
References: Fighters 1914-19 by Kenneth Munson; Modern Military Series- Aircraft by Christopher Chant; "Knights of the Air" by Time Life Books; "Scale Aircraft Drawings – Vol. I" (by Model Airplane News) – William Wylam.

Happy landings, Steve Griebling for "Crosswinds" , 2006



No.60.SQN.S.E.5 A.MARCH-NOVEMBER 1918

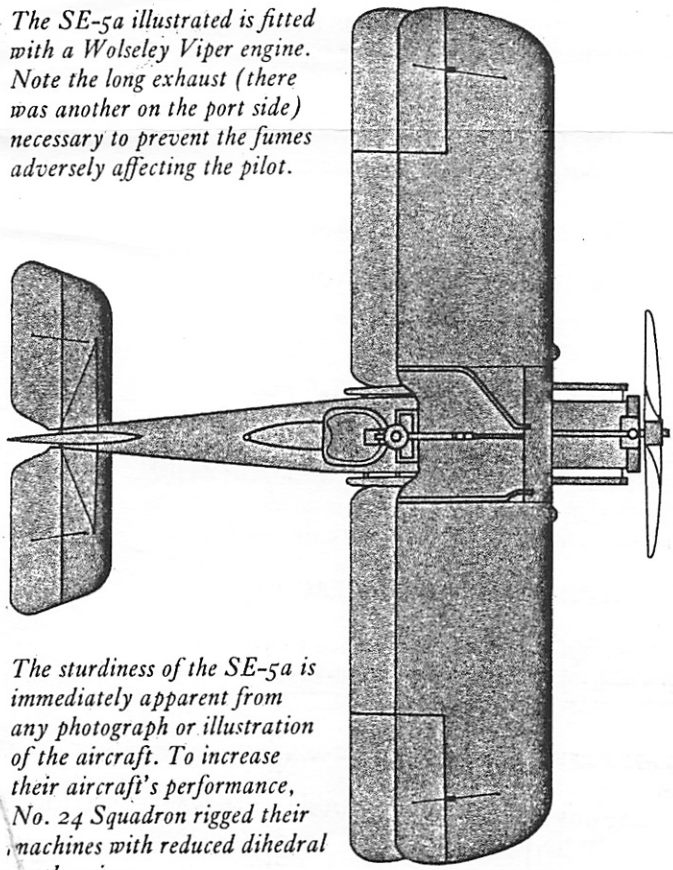

MED. 1/8" X 3/16" LEADING EDGE
MED. 1/20" RIBS MED. LIGHT 3/32" SPAR
G
WIND TIPS FROM THREE LAYERS 1/32" X 3/32" LIGHT BALSA - WET FORMED.
F.
E
D
GLUE DUMMY ENGINE TO THIS DISC
C
B
MED.
AILERON LINE.
ENTIRE PLANE EXCEPT FOR WIN
1-9/16" DIA. 1/32" PLY REMOVABLE NOS
USE KEY HOLE PATTERN FOR ¼" THICK PINE KEY.
1-3/4" DIA. X 1/32" PLY NOSE PLATE.
1/16" SHT. STAB. FAIRING
TWO LAMINATIONS OF 1/32" x 3/32" BALSA. WET BENT AROUND CARDBOARD FORM.
LIGHT 3/32" SQ
MED. 3/32" X 5/32" LEADING AND TRAILING EDGES.
1/20" x 3/32" RIBS. LIGHT 3/32" SQ. RIBS
VACU F
1/8" X ¾" DIA. PINE NOSE BUTTON MOUNT
7T
TK
5T
6T
FOUR EQUALLY SPACED 1/16" X 1/8" X 1-5/8" BALSA
STRIPS PRE-ASSEMBLED TO FORMERS #1 AND #2
OIL PLAN TO MAKE IT TRASLUCENT AND BUILD RIGHT SIDE OF
MED. 1
¼" PECK NOSE BUTTON FOR .040" DIA. WIRE SHAFT
MAKE FIL
ADD TO
DILUTE
4
5
6
SIDE RAIL
7
1
2
3
LIGHT 3/8" SHEET WING SADDLES
BK
5B
6B
7B



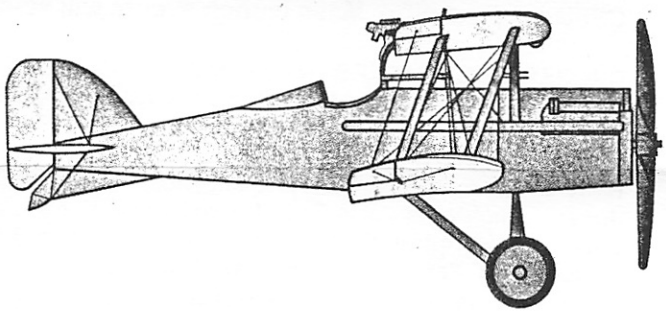
S.E.5a

Though slightly less maneuverable than its cohort, the Camel, the single-seated S.E.5a was easier to fly and faster in level flight. It could climb to 19,500 feet, could dive superbly and afforded the pilot excellent visibility in every direction.

The SE-5a illustrated is fitted with a Wolseley Viper engine. Note the long exhaust (there was another on the port side) necessary to prevent the fumes adversely affecting the pilot.

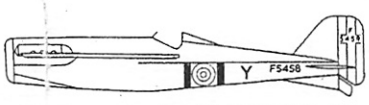


The sturdiness of the SE-5a is immediately apparent from any photograph or illustration of the aircraft. To increase their aircraft's performance, No. 24 Squadron rigged their machines with reduced dihedral on the wings.

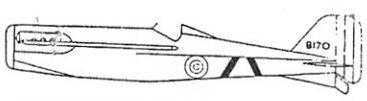


SPECIFICATIONS

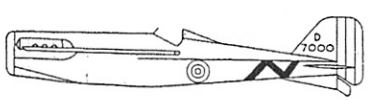
Type		single-seat fighter
Engine		200-hp Hispano-Suiza, 220-hp Hispano-Suiza, 200-hp Wolseley W.4A Viper, 200-hp Wolseley Adder, or 200-hp Sunbeam Arab (all 8-cylinder liquid-cooled inlines)
Armament		one fixed, synchronized ·303-inch Vickers machine gun and one ·303-inch Lewis machine gun, plus four 25-pound Cooper bombs
Speed	126	mph at 10,000 feet
Climb	13	minutes 15 seconds to 10,000 feet
Ceiling	17,500	feet
Endurance	2¼	hours
Weight	1,531	lbs (empty)
	2,048	lbs (loaded)
Span	26	feet 7·4 inches
Length	20	feet 11 inches
Height	9	feet 6 inches



No.24.SQN.S.E.5A. MARCH-NOVEMBER 1918.
('Y' repeated on top starboard wing)



No 32.SQN.S.E.5A MARCH-NOVEMBER 1918.



No.40.SQN.S.E.5 A. MARCH-NOVEMBER 1918.

CFFS CONTEST EVENTS AT LORAIN COMMUNITY COLLEGE FIELD
AT RT. 301S. ABBE RD. I-90 EXIT TO RT. 301S, HOAG RD. OR MAIN ENTRANCE, UPWIND

MAY 28 JULY 30 SEPT. 17		JUNE 18 AUGUST 6 OCTOBER 1	
1. FAC PEANUT SCALE, FULL POINTS		1. FAC PEANUT SCALE	
2. HIGH WING CABIN PEANUT		2. HIGH WING CABIN PEANUT	
3. FAC DIME SCALE		3. FAC DIME SCALE	
4. FAC RUBBER SCALE		4. FAC RUBBER SCALE	
5. EMBRYO ENDURANCE		5. EMBRYO ENDURANCE	
6. FAC TWO BIT O.T. RUBBER		6. FAC TWO BIT O.T. RUBBER	
7. FAC FICTION FLYER		7. FAC FICTION FLYERS	
8. GOLDEN AGE CIVIL		9. GOLDEN AGE MILITARY	
10. LOW WING MILITARY TRAINER		11. NO.CAL. PROFILE	
12. HAND LAUNCH GLIDER		13. 6" STICK CATAPULT GLIDER	
14. FUNK & WACO MASS LAUNCH	11:30	14. FUNK & WACO MASS LAUNCH	11:30
15. GREVE INLINES RACE M.L.	12:30	17. BENDIX PRE WAR M.L	12:30
16. THOMPSON RADIALS M.L	1:30	18. GOODYEAR, F1 RACE M.L	1:30
19. WW I MULTIWING PEANUT	2:30	21. WWII PEANUT COMBAT M.L	2:30
20. WWI FAC MULTIWING M.L	3:30	22. WWII FAC COMBAT M.L.	3:30
23. ALL SCALE FLYING HOARD M.L.	4:30	23. ALL SCALE FLYING HOARD M.L.	4:30

FAC rules apply with inspection of No. Cal., Dime and Combat for minimum detail.
O.T.'s must be built to plan with plan provided for inspection. No size change for 25" Max.per O.T. plan. Flier must pre-select event for multiple option models. Special events earn double credit for CFFS year end prize. **Mass launch events will start at posted clock times! Be ready!**

CROSSWINDS READERS WITH THE DREADED RED X AT ISSUE RENEWAL CODE #116 OR LOWER CAN SEND $16 PER YEAR TO RUSS BROWN 4909 N. SEDGEWICK, LYNDHURST, OH 44124 – U.S.A.

SPECIAL EVENTS FOR CFFS YEAR END PRIZE ARE:

May: Peanut Scale, Embryo Endurance, WW I Peanut, WW I FAC Dogfight
June: High Wing Cabin Peanut, Two Bit O.T. Rubber, WW II Peanut M.L. , WW II FAC Combat M.L.
July: FAC Rubber Scale, Dime Scale, Greve Race M.L., Thompson Race M.L.
August: FAC Fiction Flyers, No. Cal. Profile Scale, Bendix Race M.L., Goodyear Peanuts M.L.
Sept: Golden Age Civil, Low wing Military Trainer, Funk & Waco M.L., WW I Peanut M.L.
Oct: Golden Age Military, FAC Fiction Flyers, Embryo Endurance, Two Bit O.T. Rubber, WW II Peanut M. L.

SE5 Sightings - by Russ Brown:

SE5s in FAC action include "Bigger is Better" - Bob Bojanowski's - as shown in Dennis Norman's text in MODEL AVIATION 3/06. Fliers at the FAC NATS in Geneseo. NY, July 13-15 may find a 'General Western' ¾ in per ft. scale SE5a on Dennis' table of old goodies. Have a peek at the G.W. Fokker D-7 , Nieuport 17C, and the Spad 13 kits if Dennis still has some, or try 'Air Ace Models' at 11216 Lake Ave. Cleveland, OH 44102 (Phone 216 631-7887; FAX 216 631-7776) e-mail tvnorman@aol.com. Look for the 'Easy Built Models' table to ask for the SE5 kit at 18 inch wingspan, stretched on a 3" chord, as flown by F.A. pulp hero Pinoakchio Pinkham.
Meanwhile, Iron Mike Midkiff has flown the new Rockytop Model Aviation SE5a kit model in FAC action in Texas.
Look for Buzz Trabbic at the FAC NATS or order from 'Rockytop Model Aviation Supply', Bugg Hollow Rd. Gallatin, TN 37066 (phone 615 452-4127) e-mail rockytopmodels@aol.com. The SE5 kit is $24.95 + $5.95 S&H. Easki tissue is $1 per sheet, 10 min. in red, yellow, orange, black, blue, green or white.

Hannan's Runway Box 210 Magalia, CA 95954, (phone 530 873-6421, FAX 530 873-6329) www hrunway.com has great SE5 & SE5a detail and color in: 'Windsock Datafiles No.30 - RAF SE5, $16.95; (No. 10: SE5a was out of stock). Datafile Special Edition SE5/5a was $33.00. RAF SE5a was $25.00. Squadron Signal 'SE5 In Action' has more data and color. Profile Publication No.1: 'SE5a and No.103: SE5' are out of print. (Get lucky on the web!)
Single Profiles once sold for $0.35 each. See WWI Aero No.125 for Bill Hannan's Peanut SE5a plan by Ulises Alvarez of Montividao, Uraguay via Hannan's Runway.

CFFS Indoor Contest at Kent State Univ. Field House - April 22, 2006. Saturday 8 am-5pm.