RCMW-FSP
September 2015

IN THIS ISSUE

Cover Painting from Air Trails August 1952

For the Model Bulder and Flyer - September 2015 Issue

Cloud 9
RC Micro World

Full Size Plans

As our regular readers know, this issue is a bit late it being the second week of September instead of the first week of each month as is our regular schedule. Just returned from a nearly two week trip to Alaska, and preparations got in the way of finishing the September issue before leaving.

It was a great trip on a small ship that could get into places where the big cruise ships couldn't, and we saw lots of wildlife and had chances to hike in the wilderness and see glaciers, whales, seals, otters and all of the other things not seen much in central Illinois except in zoos.

I won't show vacation pictures but it was a good trip that we had wanted to do for several years and just decided to do it before we got too old to appreciate it.

Now back to model airplanes. First up is a nice little model called HALF-PINT by Bill Tyler that appeared first in the August 1947 issue of Air Trails and that originally used the Herkimer (OK Cub) CO2 motor. Would make a good small electric RC job.

Next is COQUETTE, a cute engine powered Biplane by well known British modeler Vic Smeed. This appeared in the July 1950 issue of Aeromodeller magazine.

How about a classic UC stunt model, the SMOOTHIE by Bob Palmer? It appeared first in the August 1952 issue of Air Trails.

Next in line is the TEXAS AG-1 by Paul Palanek, a scale free flight model of the spray plane that I believe was designed by Fred Weick, the same engineer responsible for the Ercoupe and the Piper Cherokee. From August 1952 Air Trails

Next up is Roy Clough's FLYING SAUCER, a free flight novelty by the fellow who specialized in unusual and interesting models. Also from August 1952 Air Trails.

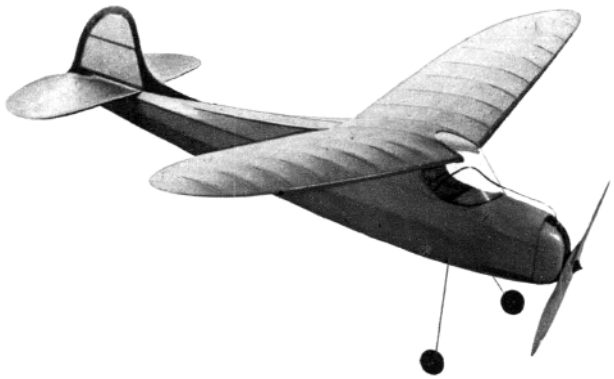
And finally SIMPLE FLYMAN, a easy 1/2A UC trainer from Aubrey Kochman, another regular contributor to the magazines. This one would be great for teaching a kid to fly U-Control, simple and rugged. This too from August 1952 Air Trails

We're trying a new idea with this issue. For the HALF-PINT and COQUETTE we include the construction article in this issue of RCMW the same as we have done for the last couple of years. But for the rest of the models, since they all came from the same issue of Air Trails magazine, we have included a link so that readers can download the complete August 1952 issue. That way you get to see a brief tour of model airplane history with the other articles, editorials and advertisements. Just look at those 1952 prices !! Let us know if you like the idea of being able to download complete issues of these old magazines to get the construction articles. Send me an email at cardinal.eng@grics.net

Roland Friestad, Editor

HALF-PINT
by
Bill Tyler

This model appeared in the August 1947 issue of Air Trails and was one of the early designs to use the new Herkimer CO2 gas motors. It would make a good electric or CO2 powered Micro RC job.



At last, a gas model that can literally be carried around in a hat box. Furthermore, it's really the first gas model in the true meaning of the, word, as carbon dioxide, the engine "fuel," is a gas and not a liquid as is used in the conventional type of gas model engine.

The peanut-size I lerkimer CO2 engine, which we used for the first time on this model, is not a two-cycle internal combustion engine, nor can it be called a diesel or compression ignition type.

Engineers would term it an "expansion-type reciprocating engine" as it is the energy of the expanding carbon dioxide gas that provides the power for turning over the crankshaft.

Don't be fooled by the small size of this engine. While the overall height is only 1-3/4", and the displacement is but .0178 cubic inches compared to .099 cubic inches — the displacement of the current smallest Class A engines — the little CO2'er really gives out with much power.

Strobotac tests have clocked it at over 7.000 r.p.m. using a 7"-diameter 3"-pitch prop. It has power plus, and will successfully fly models up to 40" wingspans with wing areas of 140 square inches.

For the experimental-minded modeler, the CO2 engine offers all kinds of possibilities. Because of its consistent performance (each cartridge contains the same charge of gas), many interesting tests can be conducted.

By using the same prop for all experiments, accurate comparative tests can be made on different type airfoils, fuselages, etc.

The small size of this engine lends itself beautifully to completely enclosed cowlings as you don't have to allow for cooling or air intake openings.

For radically designed models, the ones you always sketch on paper but .never dare build. the CO2 engine is the answer. Flying wings, pushers, canards, or what have you, can be fully exploited in a small economical size before time and supplies are wasted on large "full-scale" models.

This procedure can even be followed by builders of large six-foot Class C models. A half size CO2 powered model can be made of a new design and fully developed in small size before building the big brother.

This method of testing is done on real aircraft and now can be done with CO2 powered models to eliminate design and structural defects before going full-size.

It was in line with the above thinking of testing a new proposed design in a smaller size before building the full-scale ship that Half Pint was built.

We wanted to test our latest Class B brainstorm that had a wingspan of 56", so in laying out Half Pint for the CO2 engine, we made the wingspan exactly 28" and scaled our full-size plans to one-half the original size, and we found that this new method of testing a "model of the model" really works.

Half Pint, with a few minor adjustments, amazed us with its flying ability and will amaze you too. You will be more amazed at how easily and quickly you can build a model of this size. It is no more complicated than a simple. rubber-powered model.

The fuselage is built around a basic square framework of 1/8" square stringers and is completed by adding the turtledeck structure and nose Fairing.

Note that the under section of the fuselage, where the cartridge holder is located, is sheeted with 1/8" soft balsa and a hole is cut in this section to house the holder.

Finish off the fuselage by adding the firewall which is built up from two 1/32" plywood faces and 1/8" balsa. core. Before adding the firewall to the fuselage structure, locate the mounting holes and attach the motor using #3 round head bolts.

Now carve the cowl from a solid block of soft balsa and hollow the inside to house the motor. Dress snaps can be used to make the cowling detachable.

Locate the cartridge holder within the fuselage before covering and try to avoid any sharp bends in the copper tubing that might cause an unsteady flow of gas while the engine is in operation.

The landing gear is bent from 1/16" piano wire and cemented securely to a 1/32" plywood sheet backed up by a 1/8" sheet gusset. All landing gear dimensions can be obtained from the drawing.

The tail surfaces are cut from 1/8" balsa and follow standard gas model construction. In assembly, the stabilizer must be cemented to the fuselage first and then the rudder placed in position. Cement all joints of both the rudder and stabilizer securely to prevent warpage.

The wing was built by what we call the "quickie" process. Instead of plotting out a lot of ribs as is usually required in making a tapered wing, we used a method that was introduced to outdoor modelers by indoor builders:

A wing rib template is cut from thin sheet aluminium or tin the width of the maximum wing chord. Using this template as a guide, a series of top ribs are sliced from sheet balsa. On a model of this size, the top ribs were cut from 1/16" sheet balsa by 3/32" deep.

Lay these ribs aside and now form the wing spar. Place strips of 1/32" x 3/32" balsa on your wing drawing at each wing location and pin in position. This forms the bottom part of the wing ribs.

Cement the wing spar in place. Add leading and trailing edges, then the tips. Once this is done the upper part of the rib can be added over the top of the wing spar.

When this wing half is dry it can be removed from the drawing board and the other half wing constructed. The center section is added last.

This method of construction is much faster than cutting out tapered ribs and is very easy to do once the knack of slicing ribs with a template is mastered.

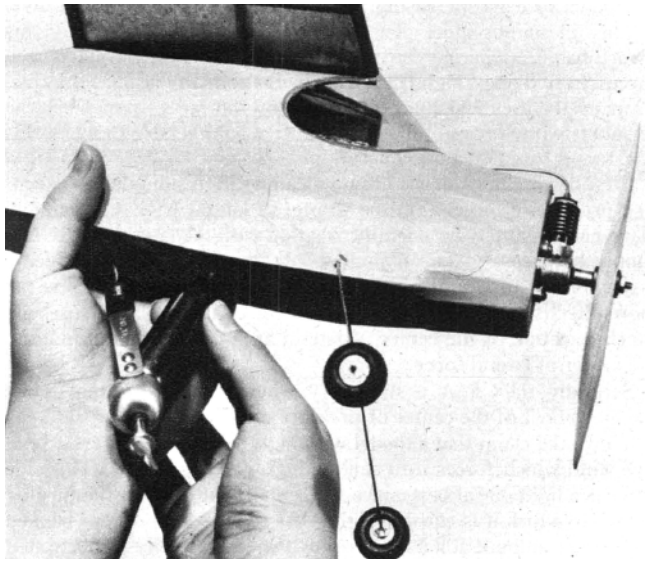
The windshield is cut from .016 celluloid sheet, using the half pattern shown on the plan as a template. Once the wing has been cemented to the

fuselage the windshield can be added in position.

It is best to attach it first to the center section of the wing, then to the nose of the fuselage and finally to the sides. Masking tape may be used to hold the celluloid in place while drying.

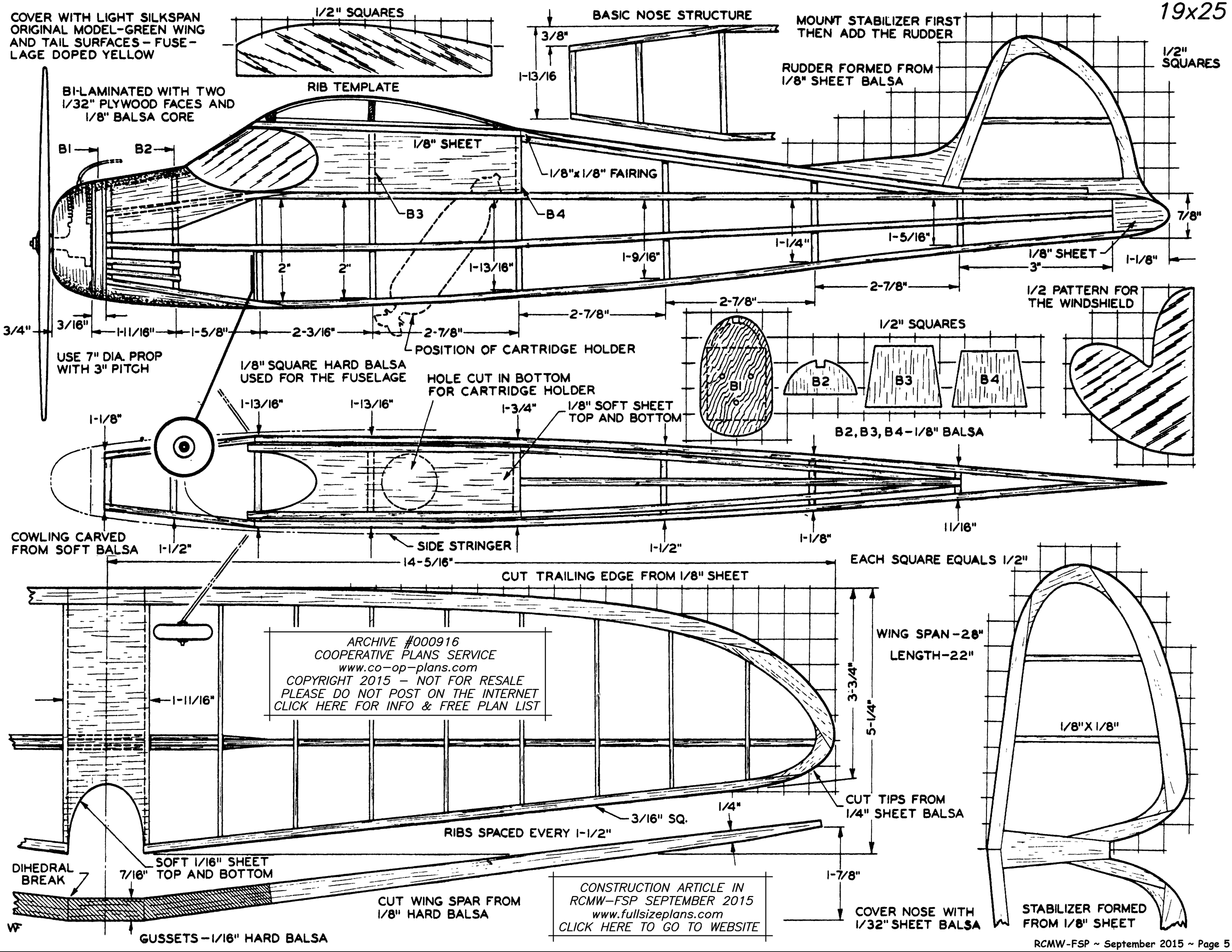
The original model was covered with light Silkspan and the fuselage doped yellow while the wing and tail surfaces were colored green. To keep weight to a minimum we dyed the Silkspan used on the wing and tail surfaces by dipping the tissue in a solution of green analine dye and water. Remember, Silkspan can be worked wet. Analine dyes can be obtained in most local drug stores.

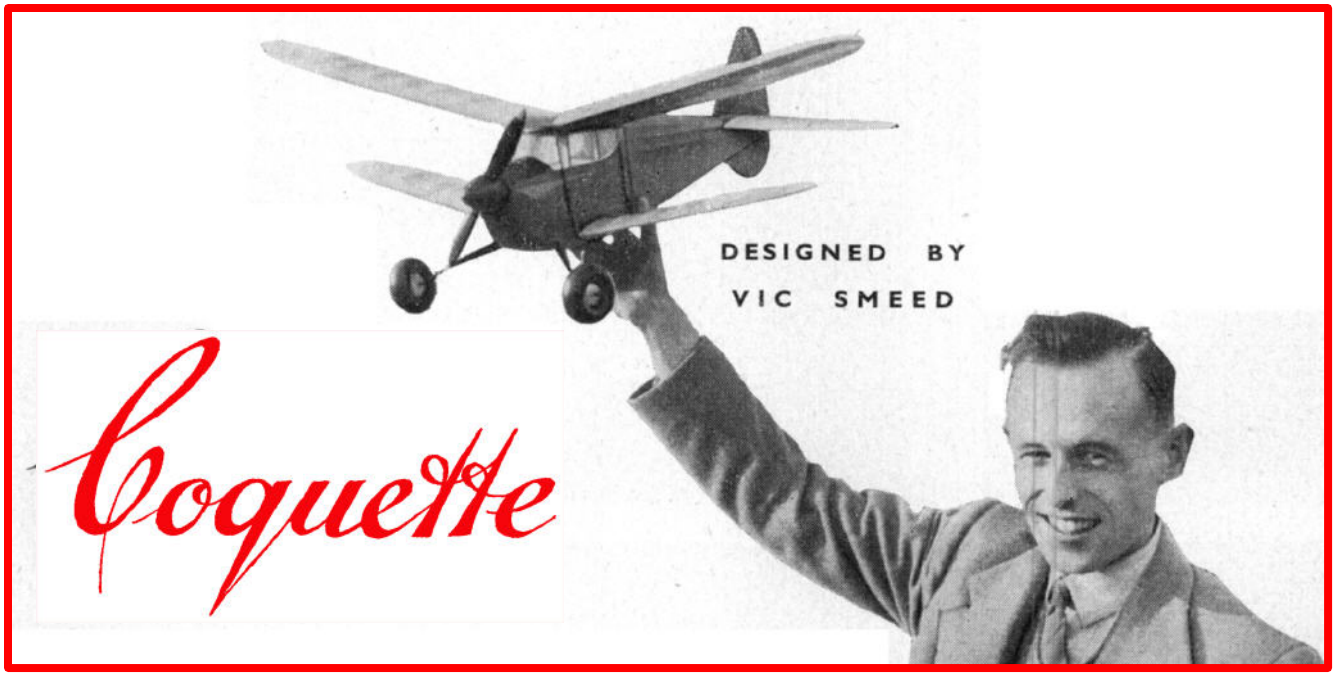
Before test flying your model, check carefully to see that all surfaces are free from warps and are properly aligned. Check to see that the center of gravity is located at approximately the same point as the wing spar. Next, try a couple of glide tests and make any minor adjustments necessary for proper balance.



Don't forget that a cartridge should be placed in the cartridge holder and that a prop should be attached to the engine during these preliminary tests. The cartridge holder is held in the fuselage by an elastic hand attached to two small hooks on the bottom of the fuselage.

When you are satisfied that the model is in flying balance then try a test flight. Do not use the full cartridge charge on this test flight but allow at least the maximum power portion of the engine run to be exhausted before hand launching the model. You may find that the model will tend to stall under power. If so, a small amount of down thrust should be added before flying the model with the engine wide open. You may be sure the Half Pint will give you a barrel of fun!





Vic Smeed is best known, at least in the USA, for his TOMBOY design. But he was a prolific designer of models and this attractive biplane that appeared in the July 1950 issue of Aeromodeller is just one of many.

COQUETTE was designed to be a rugged little biplane, simple, but good-looking, that would supply hours of enjoyment to the chap who flies for fun rather than for pots.

It appears that only about 20 per cent. of this country's aeromodelling population are interested in a climb resembling that of a she-angel resisting the improper advances of Lucifer —most builders aren't particularly contest-minded, but want rather realism and a model that won't give them a two-mile trot each time it takes the air.

The vertical ascent and super-floating descent were not major considerations in this design, and the result is a docile, easily-trimmed job that will still turn in ratios of 3 or 4 : 1 in late evening air.

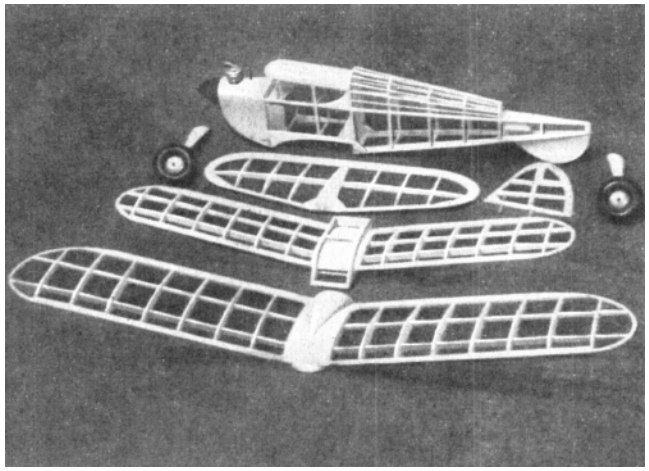
The ruggedness and simplicity are there, too, and good looks are only a question of taste after all. All round, Coquette is a job that can be undertaken with confidence by anyone who has produced one successful power model, and it was in fact designed to be within the scope of the relative beginner who wishes to break away from the normal monoplane lay-out.

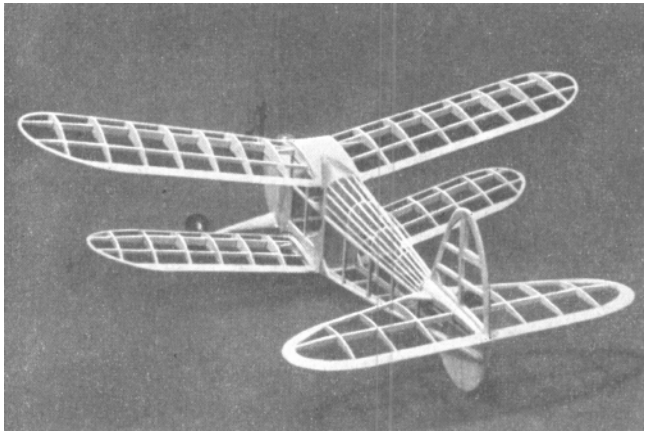
The following notes are written with this type of builder in view, and more experienced modellers are asked to excuse the somewhat lengthy treatment of some of the phases of the construction.

Biplanes have been long neglected, due, in all probability, to the apparent tediousness of constructing a second wing and exaggerated difficulties in flight trim. Well, a biplane has to have two wings, and since they have to be made, any tediousness should be attacked in the design.

Coquette's wings are simple to a degree, and if all the ribs are cut at one time and the wings built together, stage by stage, the extra work just isn't noticed. As for trimming troubles—four different biplanes (petrol and rubber) by the designer have required no change whatsoever from the original drawings, and Coquette, the first diesel-powered one, needed only one pinch of shot at the tail.

In view of the popularity of the E.D. "Bee", the model was designed round this motor, using the normal upright mounting. Inversion would improve the looks immeasurably, and there is ample room within the cowling for this type of installation.





Motors of •6 c.c. upwards may be used, and the model seems quite capable of handling anything up to the Mills 1-3. It should be stressed that no larger motor than the Bee has been tried (the writer's second model, nylon covered, has a Mills •75) but there is no reason to think that a little more power would produce viciousness.

The climb with a Bee using an 8 x 4 ins. plastic prop is in the order of 400-500 feet per minute. With a wooden 8 x 4 ins. this rate is almost doubled, with no change of trim.

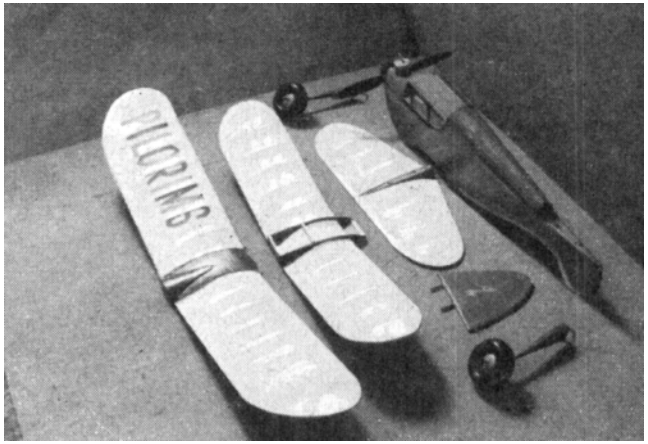
The glide is pleasingly flat—the model's size makes it appear to scud along, but in actual fact the speed is low.

Long, scalish take-offs and cushy landings result from the arrangement of the landing gear, which gives a ground attitude approaching the flying position. The original has landed in all sorts of terrain and has never once turned on its back.

Among other advantages are the modest outlay required—a maximum of 12s. 6d., including dopes, but excluding wheels, motor, and prop.—and the fact that the whole job will pack in a box measuring only 30x6x5 ins.

In general, the structure is very straightforward, but intending builders should be careful to pick only medium balsa throughout, with the exception of the fuselage longerons and spacers, which should be hard. The same degree of strength could obviously be achieved by harder, smaller sections, but the large, medium-strength components offer more cementing area, easier work, and a greater resistance to warping.

By careful grading of material the model could be built down to under 9 ozs. without sacrificing material strength. This would naturally boost performance, though the original flew very nicely at 14 ozs., a weight which was achieved deliberately as being as heavy a model as would probably be produced by other builders.



Of the 14 ozs. almost an ounce is accounted for in dope. The model lends itself to a nice finish and doesn't set out to be a duration job, so why not bring it to a good gloss ? With ailerons etc. marked in, and with civilian registration, it would bear some resemblance to such delightful machines as the Avro Commodore and the cabin Wacos of the mid '30s.

For anyone who really cannot face the prospect of two wings, the designer is "cautiously optimistic" as to results using the upper wing only. The lower wing attachment panels should be built into the fuselage and an extra rib added to each side of the upper wing, increasing the span to 33-1/2 ins. The same construction should be used otherwise.

Fully detailed building instructions are available with the plan.

A 30" SPAN SPORT BIPLANE

COQUETTE

DESIGNED BY

V.E. SMEED

3/6

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THE AEROMODELLER PLANS SERVICE

38, CLARENDON ROAD, WATFORD HERTS.

ALL WOODS ARE MED. BALSA UNLESS OTHERWISE STATED

DATA.

SPAN (UPPER) ---- 30"

(LOWER) ----- 24"

WING AREA ------- 210 SQ INS

FOR ·75 – 1·3 CC ENGINES

ALL UP WEIGHT ---- 11½ OZS

DECALAGE ------- + 4°

MATERIALS REQUIRED

SHEET.

1 SHEET OF 4½" X 1" X ¾" MED BALSA

STRIP

2 STRIPS OF 1/16" X 3" X 36" MED BALSA

1 " " 1/8" X 3" X 36" " "

1 " " 1/32" X 3" X 18" " "

1 " " 1" X ½" X 4" " "

3 " " 3/16" X 3/16" X 36" " "

2 STRIPS OF 3/16" X ½" X 36" MED BALSA

2 " " ½" X 1/8" X 36" " "

3 " " ¼" X 1/8" X 36" " "

3 " " 1/8" X 1/16" X 36" " "

6 " " 1/8" X 1/8" X 36" HARD

24" OF 14 SWG PIANO WIRE 14 SWG TUBING

8" X ¼" X 3" SCRAP BALSA, CELLULOID

6" X 1/8 DOWEL, FIBRE TUBE, BEARERS ETC

IMPROVEMENT IN APPEARANCE MAY BE BROUGHT ABOUT BY INVERSION OF MOTOR

1¾" SPINNER

3/8" X 5/16" BEARERS

BEARERS MAY BE 3/8" X ¼" PACKED WITH 1/16" PLY TO BRING THICKNESS TO 5/16"

WING PLATFORM

BLOCK

TUBE

F2A

1/16" SHEET

BUILT UP FAIRING

F3A

STRINGERS 1/8" X 1/16"

F3

F4

F5

F6

F7

BLOCK

1/8" DOWEL

3/16" X 3/16"

1/8" SHEET

3/32"

SCRAP 3/8" X ¼"

1/8" SHEET

F1

SOFT ¼" SHEET

F2

1/8" SHEET

C.G.

1/8" X 1/8" HARD

1/8" GUSSETS

1/16" SHEET STIFFENERS

1/16" PLY GUSSET

TUBE

3/8" SHEET SCRAP

2 - 2½" DIA AIRWHEELS TRACK 8"

SEPARATION LINE

HOLES SPACED TO SUIT "E.D. BEE"

F. 2. 1/16" PLY

2° RIGHT THRUST MAY BE USED

14 SWG TUBES

TUBES FOR WING RETAINER 3/16" I/D FIBRE OR PAPER

LOWER SPACERS ARE 1/8" SHORTER THAN UPPER AFT OF F3.

1/16" SHEET STIFFENERS

FILL TOP & BOTTOM WITH 1/16" SHEET

F1 1/16" PLY

F4

STRINGERS 1/8" X 1/16" PROTRUDE 1/16"

FACE F7 WITH CELLULOID

F6

F 4, 5, 6 & 7 1/16" SHEET

FILL BETWEEN WIRES WITH 1" X ½" BLOCK WRAP WITH TISSUE

UNDERCARRIAGE 14 SWG WIRE, ACTUAL LENGTH TOE IN AXLES 5°

REAR

FRONT

T4

T3

T2

T1

TAILPLANE RIBS 2 OFF

T1 1/8 SHEET T2, 3, 4, 1/16" SHEET

F.2A 1/8" SHEET

F5

FUSELAGE SIDE PANELS ADDED AFTER SHEETING CENTRE SECTION

DIHEDRAL 2·4"

TAPER SPARS FROM HERE

DIHEDRAL BRACE LOWER WING

20 SWG HOOKS

LOWER RIB. 2 OFF 1/8" SHEET 10 OFF 1/16"

LOWER TIP RIB 2 OFF 1/16" SHEET

3/16" X 3/16"

1/2" X 1/8"

1/16" RIBS

1/32" SHEET TOP & BOTTOM

1/8" RIBS

1/32" PLY BRACE

1/4" X 1/8"

1/2" X 3/16"

1/8" GUSSETS

NOTE 1/8" OVER HANG

4 LAMINATIONS 1/8" X 1/32"

1/8" SHEET

SCRAP BLOCK FAIRING

UPPER RIBS 2 OFF 1/8" SHEET 12 OFF 1/16"

UPPER TIP RIBS 2 OFF 1/16" SHEET.

DIHEDRAL 3°

TAPER SPARS FROM HERE

DIHEDRAL BRACE UPPER WING

20 SWG HOOKS

3/16" X 3/16"

1/2" X 1/8"

1/32" SHEET TOP

1/16" RIBS

1/8" RIBS

1/32" PLY BRACE

1/4" X 1/8"

1/2" X 3/16"

1/8" GUSSETS

1/32" SHEET ADDED OVER F3A & C/S COVERING

F3A

TIP MAY BE STRENGTHENED BY USING 1/8" X 1/32" BAMBOO FOR FIRST LAMINATIONS

CELLULOID FACING TO DOTTED LINES TOP & BOTTOM

BLOCK BUILT INTO TAILPLANE 4⅜" X 1" X ¾"

WING PLATFORM 1/8" SHEET

F3A 1/8"

F 3 1/16" SHEET

INSTRUMENT PANEL

3/16" X 3/16"

¼" X 1/8"

5/8" X 1/8"

1/16" RIBS

1/8" RIB

T1

T2

T3

T4

TAPER SPAR FROM HERE

FUSELAGE CONSTRUCTION

1. CUT LOWER WING MOUNT SIDE PANELS CUT ON SEPARATIONLINE & LIGHTLY CEMENT
2. BUILD SIDES IN NORMAL WAY, BUILDING IN SIDE PANELS
3. SEPARATE SIDES, ADD STIFFENERS & GUSSETS
4. ASSEMBLE SIDES WITH F2 & F3 COMPLETE IN NORMAL WAY
5. ADD BEARERS & SOFT ¼" SHEET SIDE PLATES & F1, MOUNT U/C TUBES & INSERT 3/8" COWLING FLOOR SAND TO SHAPE
6. INSTAL MOTOR COVER TOP COWL WITH 1/16" SHEET, CUTTING ADEQUATE APERTURES FOR ENGINE OPERATION.

UPPER WING ATTACHMENT DOWELS IN F3A LOCATE IN F3

RUBBER BAND ENGAGES WING HOOK

HOOKS

DOWEL HOLES

RUBBER BAND

FIBRE TUBE 3/16" DIA

RUBBER BANDS

DOWELS

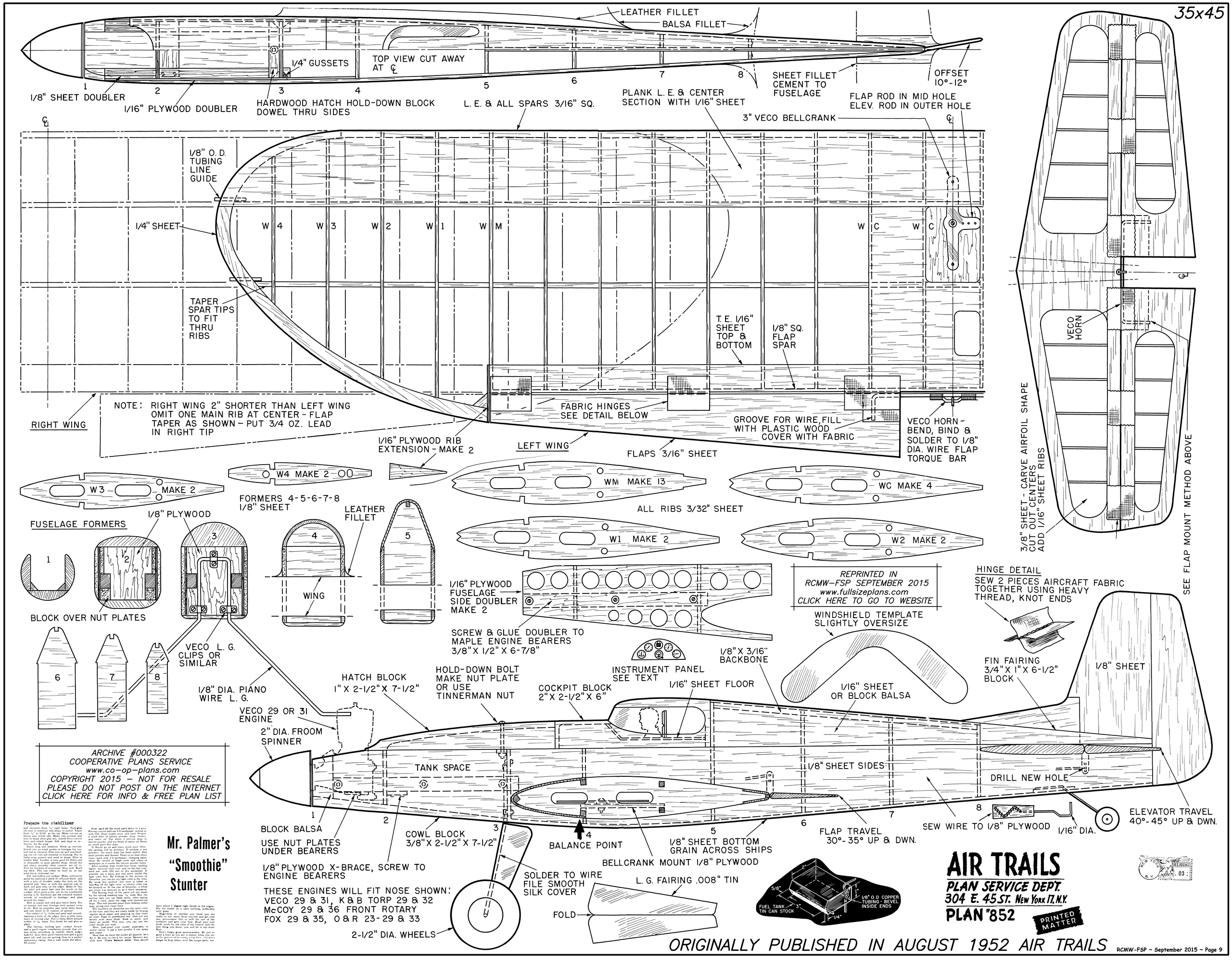
SIDE PANELS

LOWER WING ATTACHMENT. DOWELS AT REAR OF WING BOX, ENGAGE IN F3 RUBBER BAND THROUGH TUBE HOLDS HOOKS

ORIGINALLY PUBLISHED IN AEROMODELLER, JULY 1950

P 384

35x45


LEATHER FILLET
BALSA FILLET
TOP VIEW CUT AWAY AT ℄
1/4" GUSSETS
1/8" SHEET DOUBLER
1/16" PLYWOOD DOUBLER
HARDWOOD HATCH HOLD-DOWN BLOCK DOWEL THRU SIDES
L. E. & ALL SPARS 3/16" SQ.
PLANK L. E. & CENTER SECTION WITH 1/16" SHEET
SHEET FILLET CEMENT TO FUSELAGE
OFFSET 10°-12°
FLAP ROD IN MID HOLE ELEV. ROD IN OUTER HOLE
3" VECO BELLCRANK
1/8" O. D. TUBING LINE GUIDE
1/4" SHEET
TAPER SPAR TIPS TO FIT THRU RIBS
T. E. 1/16" SHEET TOP & BOTTOM
1/8" SQ. FLAP SPAR
FABRIC HINGES SEE DETAIL BELOW
GROOVE FOR WIRE, FILL WITH PLASTIC WOOD COVER WITH FABRIC
VECO HORN - BEND, BIND & SOLDER TO 1/8" DIA. WIRE FLAP TORQUE BAR
RIGHT WING
NOTE: RIGHT WING 2" SHORTER THAN LEFT WING OMIT ONE MAIN RIB AT CENTER - FLAP TAPER AS SHOWN - PUT 3/4 OZ. LEAD IN RIGHT TIP
1/16" PLYWOOD RIB EXTENSION - MAKE 2
LEFT WING
FLAPS 3/16" SHEET
VECO HORN
3/8" SHEET - CARVE AIRFOIL SHAPE CUT OUT CENTERS ADD 1/16" SHEET RIBS
SEE FLAP MOUNT METHOD ABOVE
W3 MAKE 2
W4 MAKE 2
WM MAKE 13
WC MAKE 4
ALL RIBS 3/32" SHEET
W1 MAKE 2
W2 MAKE 2
FUSELAGE FORMERS
1/8" PLYWOOD
FORMERS 4-5-6-7-8 1/8" SHEET
LEATHER FILLET
WING
BLOCK OVER NUT PLATES
VECO L. G. CLIPS OR SIMILAR
1/8" DIA. PIANO WIRE L. G.
1/16" PLYWOOD FUSELAGE SIDE DOUBLER MAKE 2
SCREW & GLUE DOUBLER TO MAPLE ENGINE BEARERS 3/8" X 1/2" X 6-7/8"
REPRINTED IN RCMW-FSP SEPTEMBER 2015 www.fullsizeplans.com CLICK HERE TO GO TO WEBSITE
WINDSHIELD TEMPLATE SLIGHTLY OVERSIZE
HINGE DETAIL
SEW 2 PIECES AIRCRAFT FABRIC TOGETHER USING HEAVY THREAD, KNOT ENDS
INSTRUMENT PANEL SEE TEXT
1/8" X 3/16" BACKBONE
FIN FAIRING 3/4" X 1" X 6-1/2" BLOCK
1/8" SHEET
HATCH BLOCK 1" X 2-1/2" X 7-1/2"
HOLD-DOWN BOLT MAKE NUT PLATE OR USE TINNERMAN NUT
COCKPIT BLOCK 2" X 2-1/2" X 6"
1/16" SHEET FLOOR
1/16" SHEET OR BLOCK BALSA
VECO 29 OR 31 ENGINE
2" DIA. FROOM SPINNER
TANK SPACE
1/8" SHEET SIDES
DRILL NEW HOLE
ARCHIVE #000322 COOPERATIVE PLANS SERVICE www.co-op-plans.com COPYRIGHT 2015 — NOT FOR RESALE PLEASE DO NOT POST ON THE INTERNET CLICK HERE FOR INFO & FREE PLAN LIST
BLOCK BALSA
USE NUT PLATES UNDER BEARERS
COWL BLOCK 3/8" X 2-1/2" X 7-1/2"
BALANCE POINT
1/8" SHEET BOTTOM GRAIN ACROSS SHIPS
BELLCRANK MOUNT 1/8" PLYWOOD
FLAP TRAVEL 30°-35° UP & DWN.
SEW WIRE TO 1/8" PLYWOOD
1/16" DIA.
ELEVATOR TRAVEL 40°-45° UP & DWN.
1/8" PLYWOOD X-BRACE, SCREW TO ENGINE BEARERS
THESE ENGINES WILL FIT NOSE SHOWN: VECO 29 & 31, K & B TORP 29 & 32 McCOY 29 & 36 FRONT ROTARY FOX 29 & 35, O & R 23-29 & 33
SOLDER TO WIRE FILE SMOOTH SILK COVER
L. G. FAIRING .008" TIN
FOLD
2-1/2" DIA. WHEELS
FUEL TANK TIN CAN STOCK
1/8" O D COPPER TUBING - BEVEL INSIDE ENDS
Mr. Palmer's "Smoothie" Stunter
AIR TRAILS
PLAN SERVICE DEPT.
304 E. 45 ST. NEW YORK 17, N.Y.
PLAN #852
PRINTED MATTER
ORIGINALLY PUBLISHED IN AUGUST 1952 AIR TRAILS

AG-1

FREE FLIGHT SCALE

ORIGINALLY PUBLISHED IN AUGUST 1952 AIR TRAILS

28x35

Construction is simple with about 75 per cent of the model being built with 1/16 sheet balsa Start with sheet balsa sides Formers A through E are cut from sheet balsa and cemented to the fuselage sides Former D is cut full depth then chopped prior to wing installation

Stringers of 1/8 sq balsa are added externally (see cutaway drawing) to give shape and body to the fuselage When sufficiently dry the top and bottom rear portion of the fuselage is covered with very soft sheet balsa Before attempting to cover the curved sections of the fuselage dip the trimmed sheet balsa into hot water to soak Wrap the damp balsa over the area to be covered and hold fast with rubber bands until dry Once dry the stiff balsa can be secured in place The above procedure pertains to all curved surfaces on the wings and fuselage

The engine mount is made from hard wood runners held together with sheet balsa web bing Slip the mount in place through formers A B and C and cement well While the mount is drying the top forward portion of the fuselage can be sheet covered When sufficiently dry cut out a hole in the sheet portion of the mount as well as directly above this A 30 sec Maeco plastic tank is installed Cover the balance of the fuselage with soft sheet balsa and add the sheet nose block Sand all seams using fine sandpaper Before setting the fuselage aside, cement former G in position and using sheet, finish off the headrest

In the construction of all tail surfaces select straight even grained sheet balsa This will eliminate most of the headaches of warpage Trim the stabilizer and smooth sharp corners Cut out a slit in proper position at the rear of the fuselage and install the stabilizer Set the stab parallel to the center line

The rudder is cut in a similar manner then sanded Before cementing in place add the tail wheel wire The rudder is fitted into the slot and secured in position

In an effort to carry the appearance of the model to realistic scale the wing panels are covered with soft sheet balsa rather than tissue alone Select very soft 1/32" x 3" sheet balsa and butt cement the edges to a 9" width When dry cement the lower spars in place cracking the 1/32" sheet where needed to build in the dihedral angle

All ribs are cut from 1/16" sheet and cemented in place When dry add the upper spars Allow to dry thoroughly There is no leading edge required since the sheet covering wrapped over the ribs gives it shape and body Before attempting to bend be certain the balsa is well soaked When finally wrapped the upper spars are spaced to ease the butt cementing of the covering The bottom sheet at the trailing edge is feathered with the upper sheet lapping over to form the trailing edge

Before covering the center section cement a strip of balsa for the gear support The landing gear is shaped from 1/16 dia wire Bind with thread and cement in the wing to the gear support

The upper wing covering extends beyond the end ribs as shown and is trimmed to the contour shown in the top view The sheet tip cap is next added and trimmed to proper shape

Sand all cemented seams and blend in all joints round all sharp corners

Lay the wing cut out on the fuselage. The wing should fit snugly in place When properly fitted cement the wing in position at zero degree incidence Check for proper tail to wing alignment A sheet of 1/16" balsa is cemented under the wing and blended into the fuselage

The entire model is given a coat of clear dope when dry all areas are tissue covered Dope the tissue directly to the model working out all air pockets This will give a good base for silver doping Prior to color doping add the 1/8" dia dowel for the crash guard and the 1/8" sheet balsa fairing to the landing gear

Apply two coats of silver dope to all areas The ailerons rudder and stab hinge lines are added use a ruling pen or black Trim Film The latter is for the license numerals and the engine in take Safety cable between the cabin and rudder is cemented using heavy thread The windshield is made from .020 celluloid Duro Seal is employed for the base of the lettering appearing on the fuselage and rudder Print the desired lettering on the Duro Seal remove the protective backing and fasten the model This material is readily available at most stationery stores Apply a coat of fuel proofer to all areas

Adding the engine 1½" dia wheels and 1½ tail wheels should results for test flying. The original model weighs a 7/4 prop turning in excellent results Test flying should be conducted on a mild day with little wind Try varying amounts of power till a happy medium is attained Add weight where necessary for proper balance

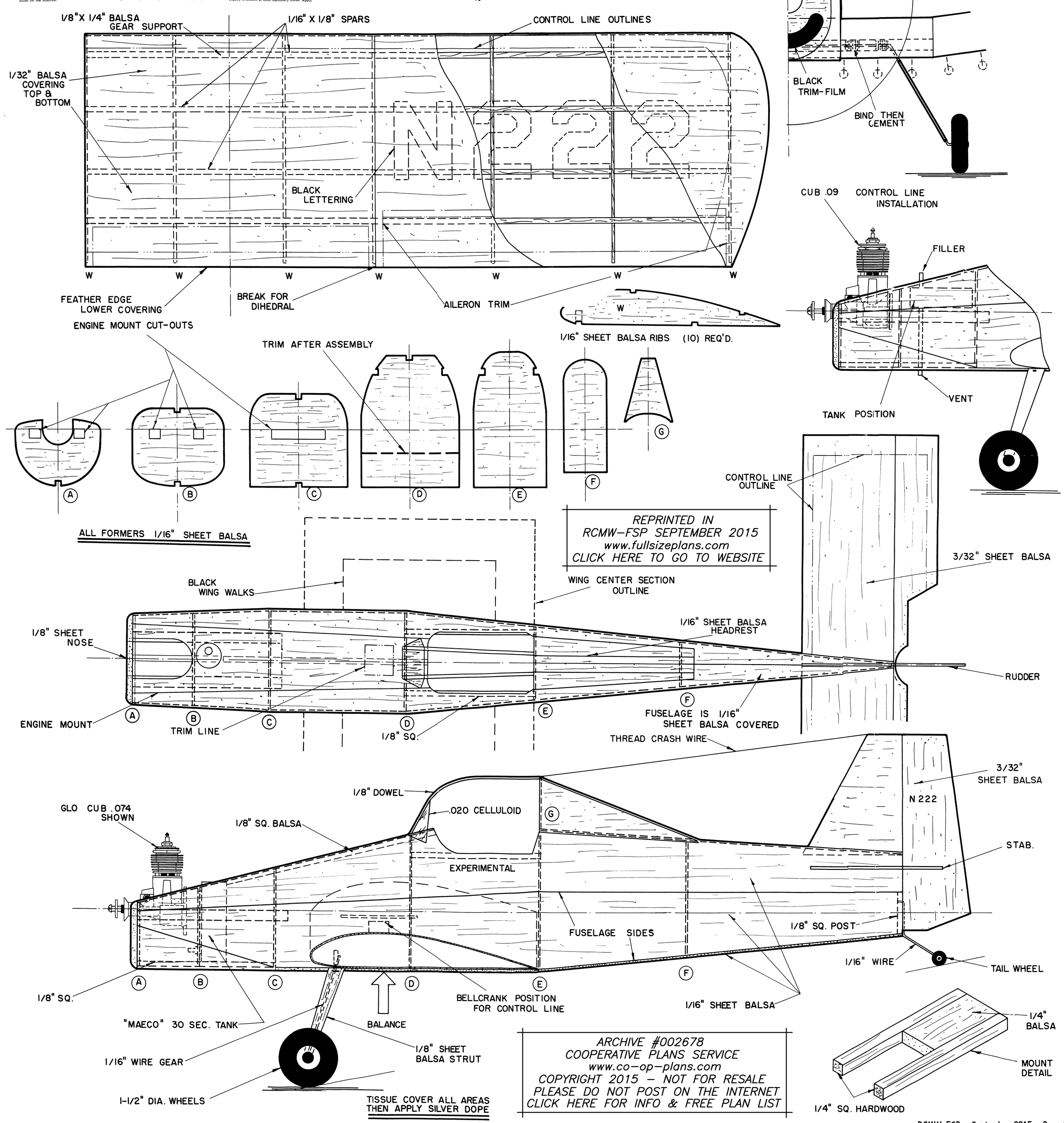
For you control line fans proportions are given for a control line model of the Ag 1

Bill of Materials

(Balsa unless otherwise specified)

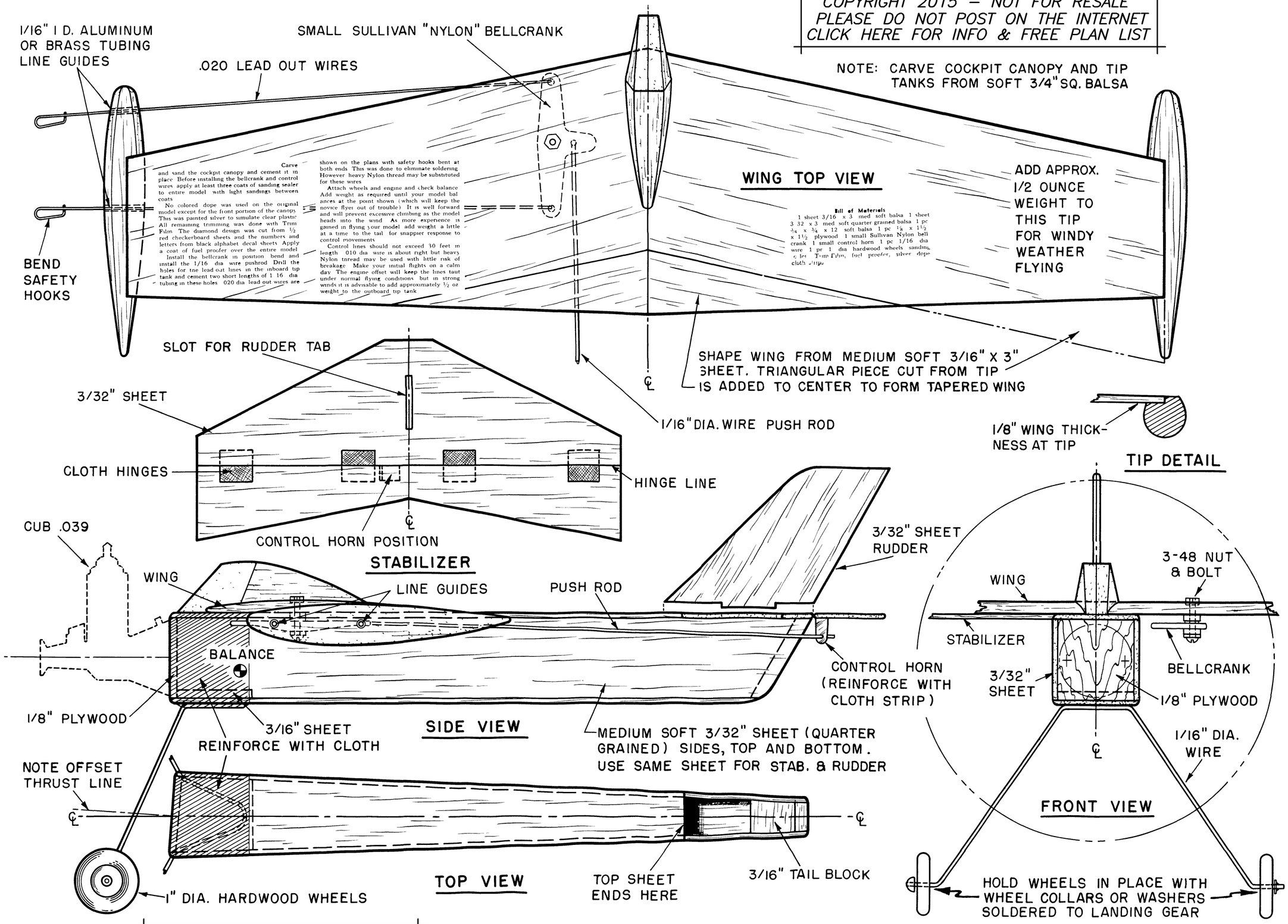
2 pcs 1/8 x 1/8 x 36 (medium) fuselage stringers 4 pcs 1/16" x 1/8" x 36 (medium) wing spars 4 pcs 1 16" x 1/8 x 36 (medium) fuselage sides ribs formers 1 pc 3/32 x 3 x 36 (medium) tail surfaces 2 pcs 1/16 x 3 x 36 (soft) fuselage covering 4 pcs 1 32 x 3 x 36 (soft) wing covering 1 pc 1/4 x 1/4 x 12" (hardwood) motor bearers 1 pc 1/4 x 2 x 4 (medium) motor mount web 1 pc 1/8 x 1/2 x 12 (medium) landing gear fairing

Clear dope silver dope cement tissue black Trim Film fuel proofer .020 celluloid 1/8" dia dowel wheels 1/16 dia wire Maeco 30 sec tank, nuts & bolts engine, 7/4 prop



17x23

NOTE: CARVE COCKPIT CANOPY AND TIP TANKS FROM SOFT 3/4" SQ. BALSA



Carve and sand the cockpit canopy and cement it in place Before installing the bellcrank and control wires apply at least three coats of sanding sealer to entire model with light sandings between coats

No colored dope was used on the original model except for the front portion of the canopy This was painted silver to simulate clear plastic All remaining trimming was done with Trim Film The diamond design was cut from 1/2 red checkerboard sheets and the numbers and letters from black alphabet decal sheets Apply a coat of fuel proofer over the entire model

Install the bellcrank in position bend and install the 1/16 dia wire pushrod Drill the holes for the lead out lines in the inboard tip tank and cement two short lengths of 1 16 dia tubing in these holes 020 dia lead out wires are shown on the plans with safety hooks bent at both ends This was done to eliminate soldering However heavy Nylon thread may be substituted for these wires

Attach wheels and engine and check balance Add weight as required until your model balances at the point shown (which will keep the novice flyer out of trouble) It is well forward and will prevent excessive climbing as the model heads into the wind As more experience is gained in flying your model add weight a little at a time to the tail for snappier response to control movements

Control lines should not exceed 30 feet in length 010 dia wire is about right but heavy Nylon thread may be used with little risk of breakage Make your initial flights on a calm day The engine offset will keep the lines taut under normal flying conditions but in strong winds it is advisable to add approximately 1/2 oz weight to the outboard tip tank

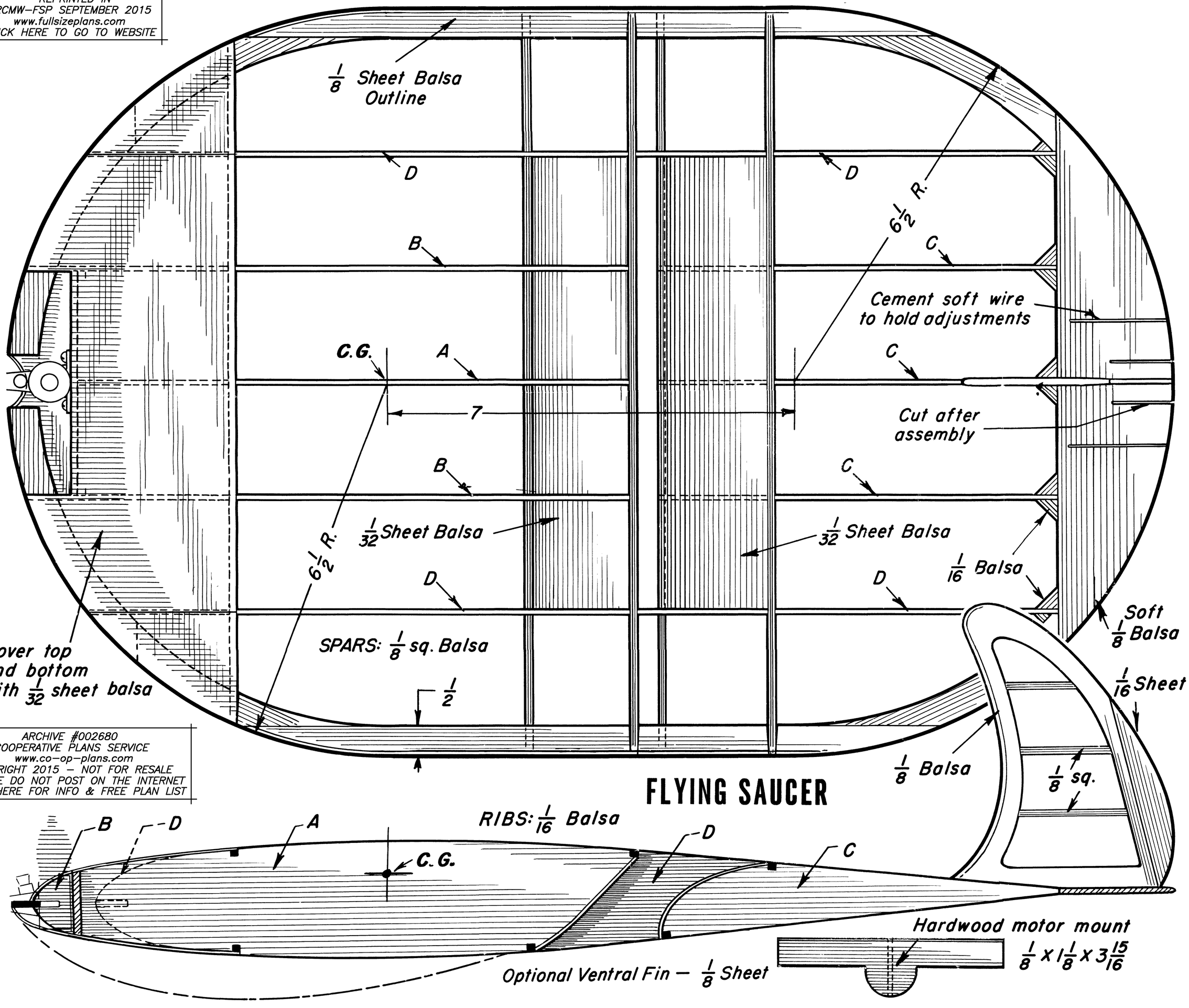
Bill of Materials

1 sheet 3/16 x 3 med soft balsa 1 sheet 3 32 x 3 med soft quarter grained balsa 1 pc 3/4 x 3/4 x 12 soft balsa 1 pc 1/8 x 1 1/2 x 1 1/2 plywood 1 small Sullivan Nylon bell crank 1 small control horn 1 pc 1/16 dia wire 1 pr 1 dia hardwood wheels sanding, c let Trim Film, fuel proofer, silver dope cloth strips

ORIGINALLY PUBLISHED IN AUGUST 1952 AIR TRAILS

Simple Flyman

19x23



ORIGINALLY PUBLISHED IN AUGUST 1952 AIR TRAILS

Download a Complete Issue of AIR TRAILS Magazine

As mentioned on the editorial comments on page two of this issue, I am trying out a new idea and would like to have the reactions and suggestions of the subscribers.

You will note that the construction articles for the HALF-PINT and COQUETTE designs are included in this issue. But the construction details for the other plans in this issue, SMOOTHIE, TEXAS AG-1, SIMPLE FLYMAN and FLYING SAUCER do not include the construction articles.

When selecting these plans for inclusion I came across the SMOOTHIE and noticed that the others in the August 1952 issue of Air Trails would also be of interest to our readers.

So instead of including the construction details for each plan I have uploaded the complete issue of the August 1952 Air Trails to a file transfer service called Mediafire.

The complete issue of Air Trails is too large to include embedded in this issue of RCMW because it would probably cause download problems.

But these new file transfer services have the ability to allow downloading of large files. They also have automatic correction features that allow a download to continue even if it is interrupted.

So, with that in mind, if you click on the link below you should be taken to the Mediafire website where you can download the entire August 1952 issue of Air Trails. It is about 32 megabytes, includes every page, and is a really interesting tour of model airplane history from the early 1950's.

Here's the link --- **CLICK HERE**

If you have problems please let me know by sending me an email at

cardinal.eng@grics.net

Also, even if you don't have problems, I would like to get your opinion on whether you think this is a good idea. Send me a message with your opinions and suggestions.

Thanks -- Roland Friestad, Editor

October Coming Attractions

In the October issue we will have a review by Bob Aberle of the NEAT Fair held in September - You'll see it here first !!

Also, more of the HAMMER series by Dick Sarpolus. And more of our usual reprints of classic plans and kits.

Remember the recent FIZZ-WIZZ from the March 1962 Air Trails reprinted in our July issue? - Bob Aberle has adapted it into a Micro RC flyer as shown below. Watch for it.

Old Model Airplane Magazines

If you're like me, you enjoy paging through model airplane magazines and plans, sometimes to find a project to build, to research a particular aircraft, or to just spend some pleasant time away from the daily grind.

If you like to build models, the magazines of today don't offer much since they are primarily expensive catalogs of ready-to-fly models. There's nothing wrong with RTF or ARF models but they don't offer much to interest model BUILDERS.

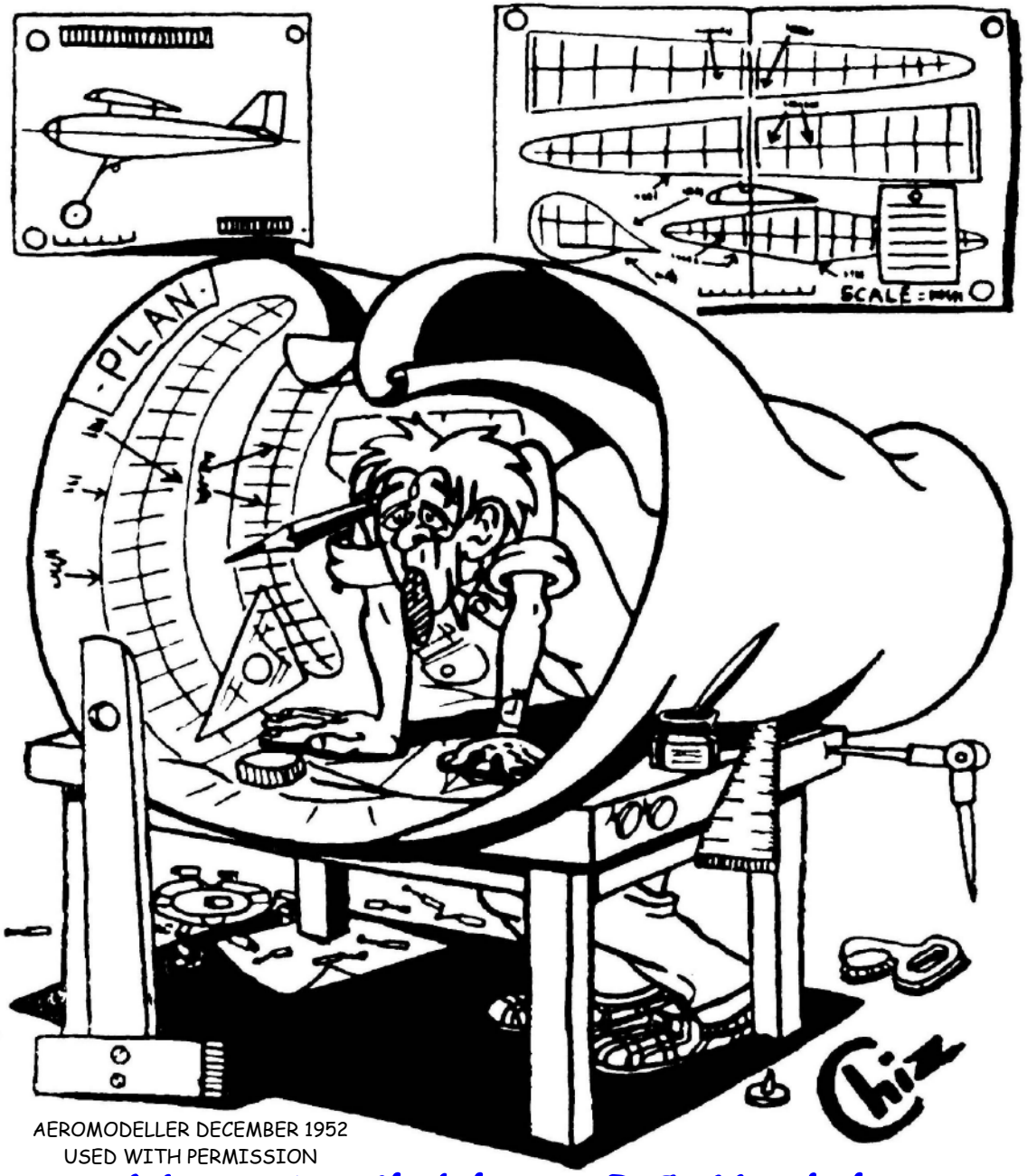
That's NOT the way it was in the past, when you had to build a model before you could fly it. If you're an old-timer, as I am, you have fond memories of ***Air Trails***, ***Flying Models***, ***Model Airplane News***, ***Aeromodeller*** and many of the several other magazines available "way back when".

If you're a relative newcomer to modeling and want to learn how to build them, those old magazines can provide a wealth of useful information, plans and how-to-do-it articles.

There are several problems with those old magazines. They are sometimes hard to find, often in bad condition, and in many cases they are so fragile that they can fall apart just by turning the pages. This is because they were often printed on pulp paper, also known as newsprint. Newsprint is inexpensive, but has residual chemicals that cause it to deteriorate when exposed to the air and particularly to sunlight. Your wife or "significant other" might also ask "When are you going to get rid of all those smelly old magazines?"

I admit to being a bit of a "nut case" but have been collecting these magazine for over 50 years and now I am trying to digitize them to preserve them for other modelers. They are now available as digital PDF files. See the details on the next page.

Keep 'em Flying - Roland Friestad



AEROMODELLER DECEMBER 1952
USED WITH PERMISSION

Now Available - RC Modeler

First 10 years - 1963-1972

We have switched to USB Memory Cards Much More Reliable

NEW - Now available is a digital collection of the first 10 years of RC Modeler magazine, starting with the first issue published in October of 1963 through the issue of December 1972 - 109 issues in all on a single USB drive card. -

$50 - Postage paid world wide

AIR TRAILS - This magazine went under several names. The final issue was published in March of 1975. There are 435 monthly issues included in the complete set and priced as follows ---

D001010 - January 1937 through December 1943 - 84 issues - $50

D001011 - January 1944 through December 1950 - 84 issues - $50

D001012 - January 1951 through December 1961 - 132 issues - $50

D001013 - January 1962 through December 1971 - 96 issues - $50

D001014 - January 1972 through March 1975 - 39 issues - $25

AIR TRAILS ANNUALS -
D001009 - 1938 through 1969 - All 25 issues - $30

D001015 - SPECIAL - Complete set including the annuals - $200

MODEL AIRPLANE NEWS - The first issue of this magazine was published in July of 1929 and it is still in publication. We have the following collections currently available ---

D001002 - July 1929 through December 1942 - 161 issues - $50

D001004 - January 1943 through December 1952 - 120 issues - $50

MODEL BUILDER - This magazine ran from the first issue of September~October 1971 through the final issue dated October, 1996 -

D001001 - The complete run - 295 issues - $75

FLYING MODELS - The first issue of this magazine to use the name was published in June of 1947 and it is still in publication. We have the following collections currently available ---

D000013 - June 1947 through December 1963 - 123 issues - $50

RC MICRO FLIGHT & RC MICRO WORLD - The complete run of RC Micro Flight, 1999 through 2004 and all issues of RC Micro World, 2005 through 2012 are available - D001016 - $30

Currently being digitized are complete runs of RC MODELER and AEROMODELLER. RC Modeler is coming along and is scheduled to be done by March 2015 - Aeromodeller should be completed by the end of 2015 - Prices have not been set yet -

The digitizing of several other magazines will follow including MODEL CRAFTSMAN, FLYING ACES, POPULAR AVIATION, MODEL AIRCRAFT (British) and others. This is a long term project. Many thousands of hours and dollars are represented in these collections.

All prices include postage worldwide

Send payment using Paypal to
cardinal.eng@grics.net

Or check or money order to
Roland Friestad
1640 N Kellogg Street
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