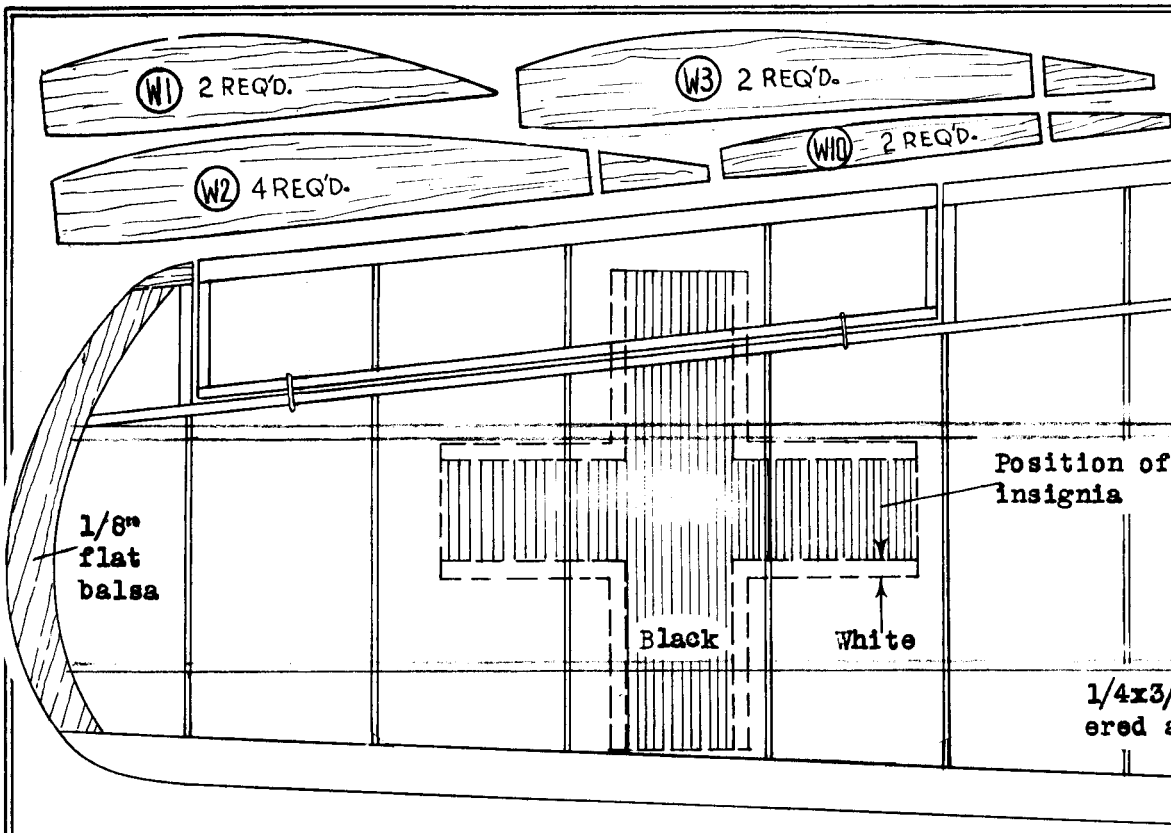
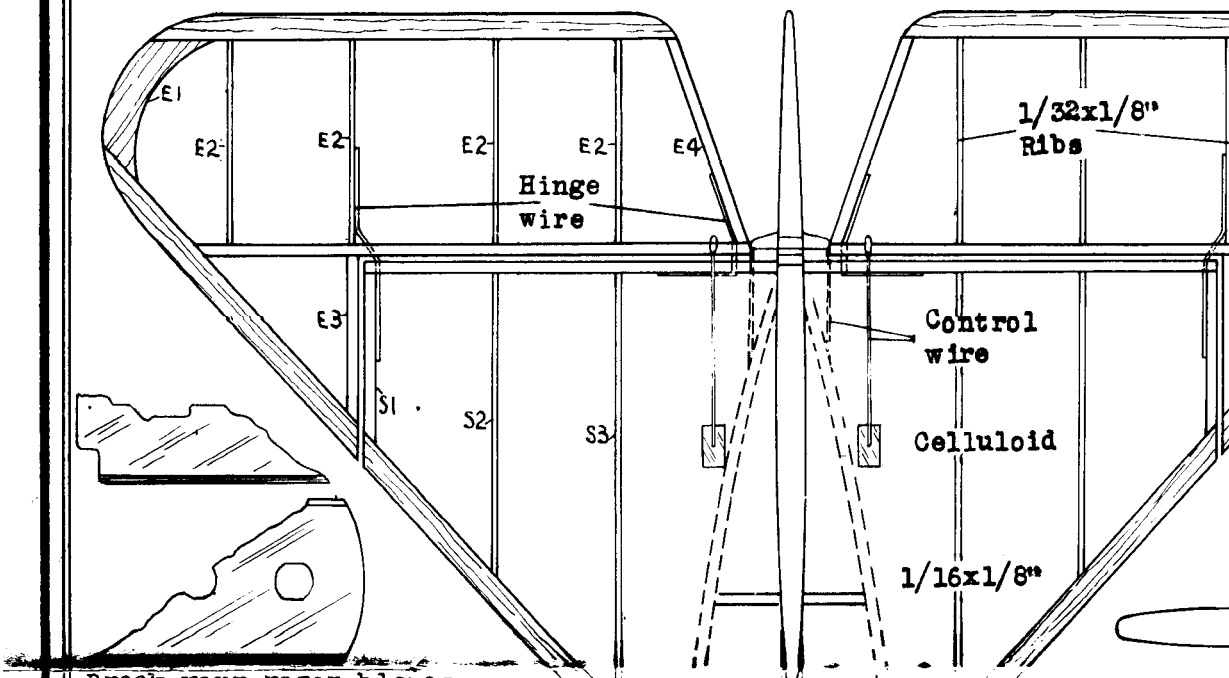
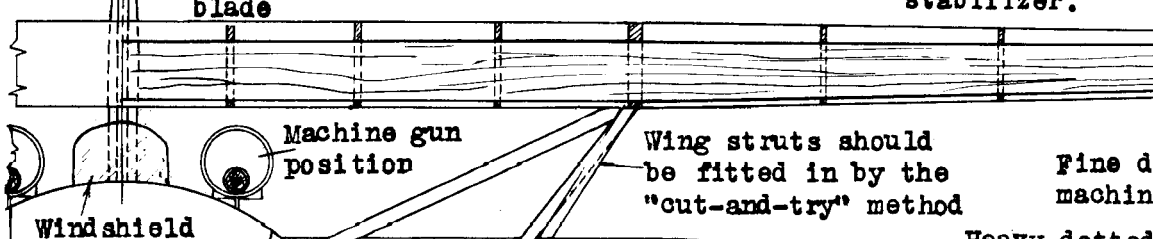




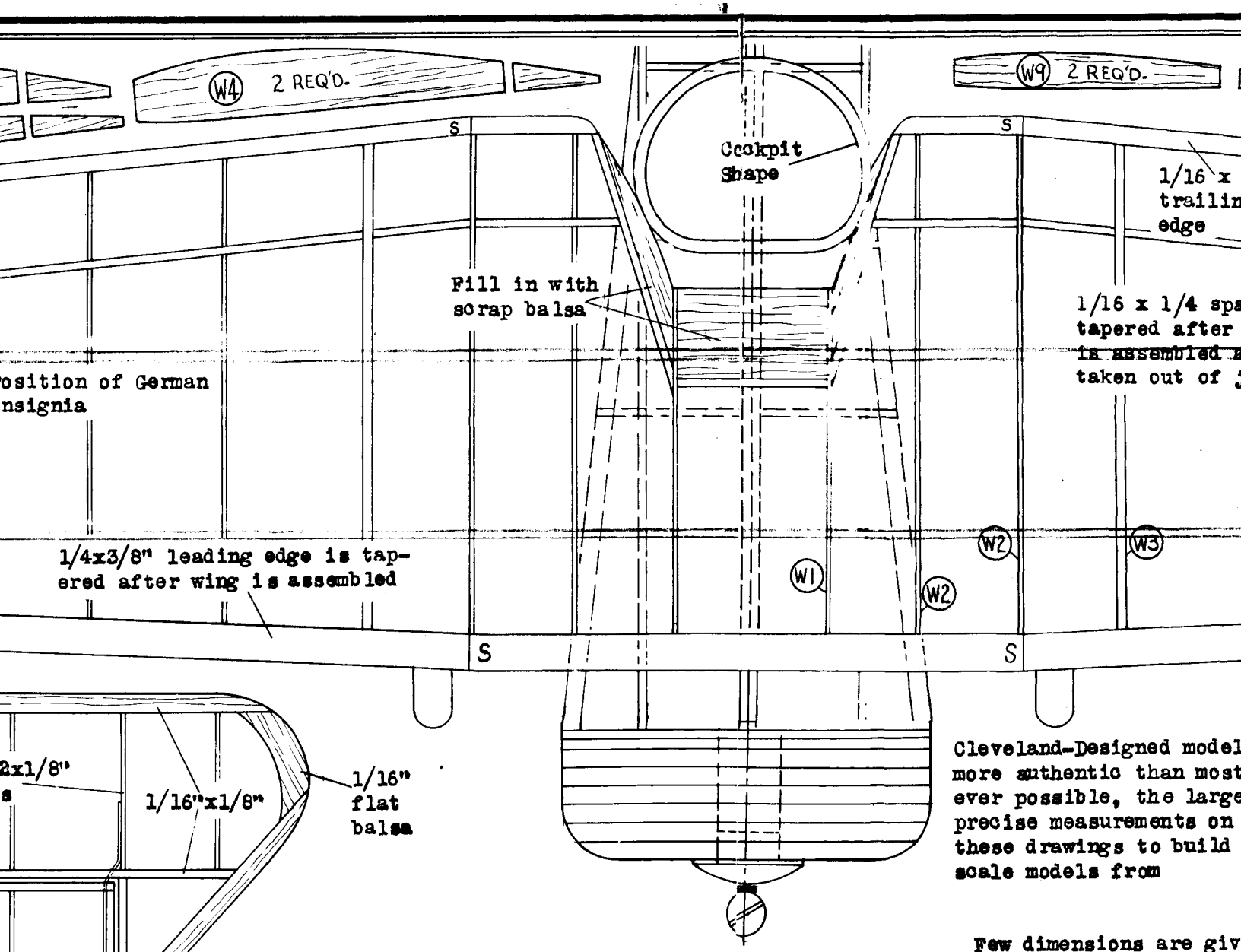
Break your razor blades with cutting or flat nose pliers

All balsa patterns and tissue trimming is done with a broken razor blade

Crosshatching in blue color runni to cream colored stabilizer.



Fine d machin



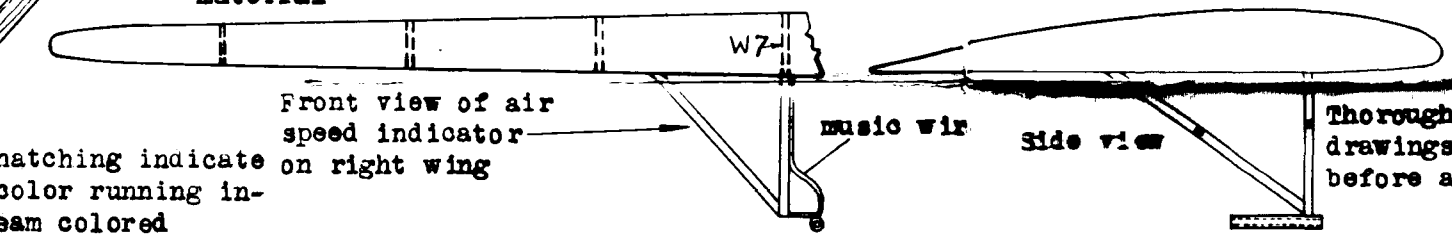
Cleveland-Designed model
more authentic than most
ever possible, the large
precise measurements on
these drawings to build
scale models from

Few dimensions are giv
is drawn full size. O
of sizes of material w
necessary. All are to
right on the drawing

Use a sufficient quantity of cement on such parts as joints of landing gear struts, wing struts, motor spar to the nose, rear hook to the motor spar, etc.

Do not cut any small lengths of wood until the larger ones have been cut first. This will eliminate the possibility of running short of material

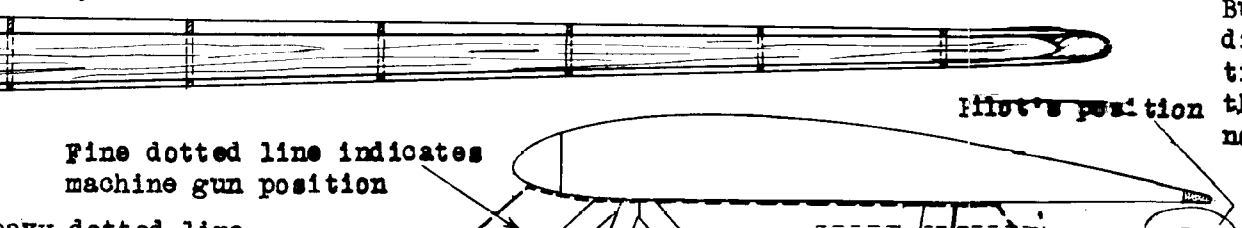
Color
struts
and ta
black



natching indicate
color running in-
eam colored
lizer.

Thoroughly familiar
drawings by reading
before attempting c

Build fuselage in two half
drawing and pins as a "pat
tions and reverse tracing
the halves together. Clam
notched 5/16x5/8" long (po



All fuselage su
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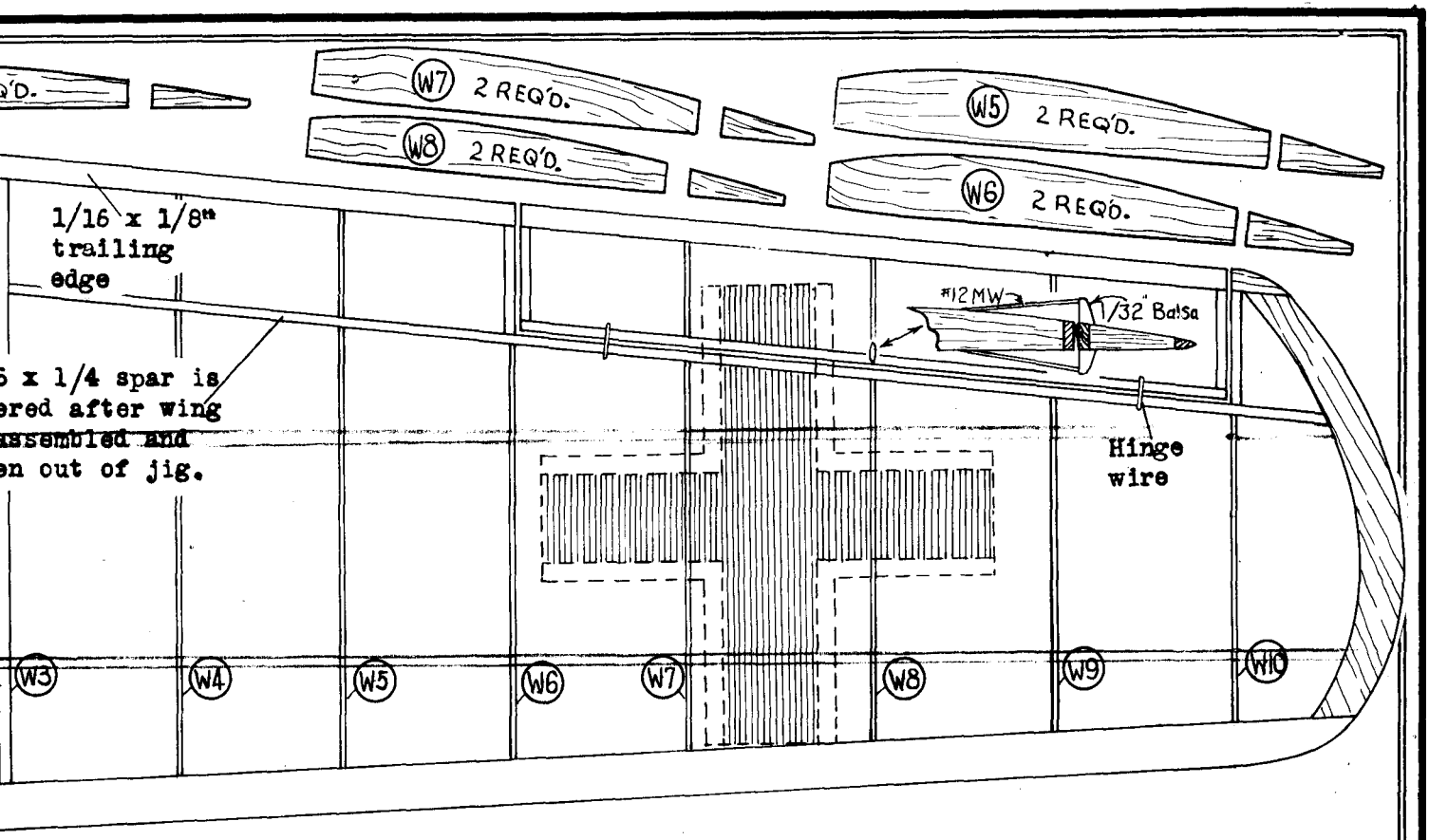
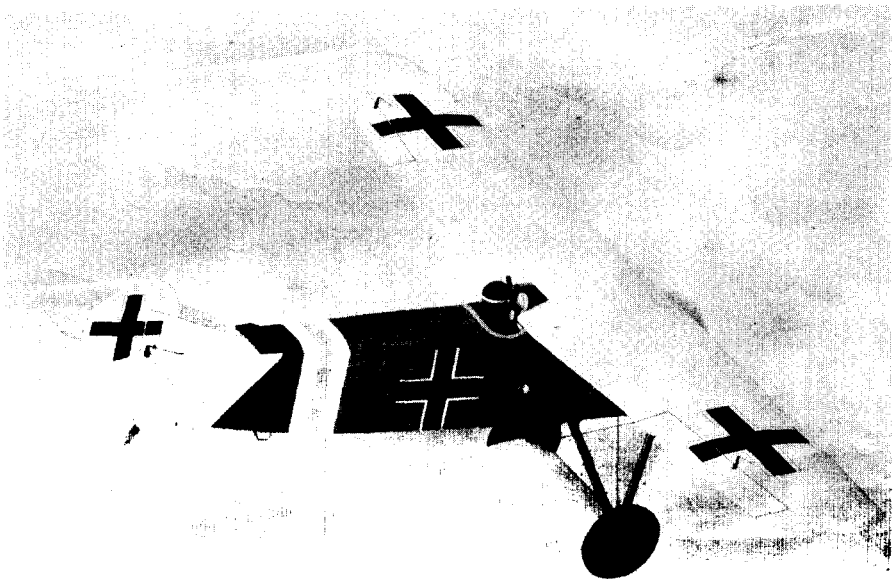


igned model drawings will be found
than most any others for when-
, the large ship is scaled from
rements on the large ship. Use
s to build authentic solid 3/4"
from

ns are given as everything
l size. Only a comparison
material with drawing is
All are to be cut to length
drawing

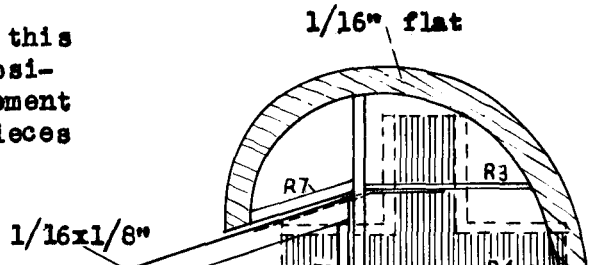
Color the fuselage and struts blue, the wings and tail cream with black details.

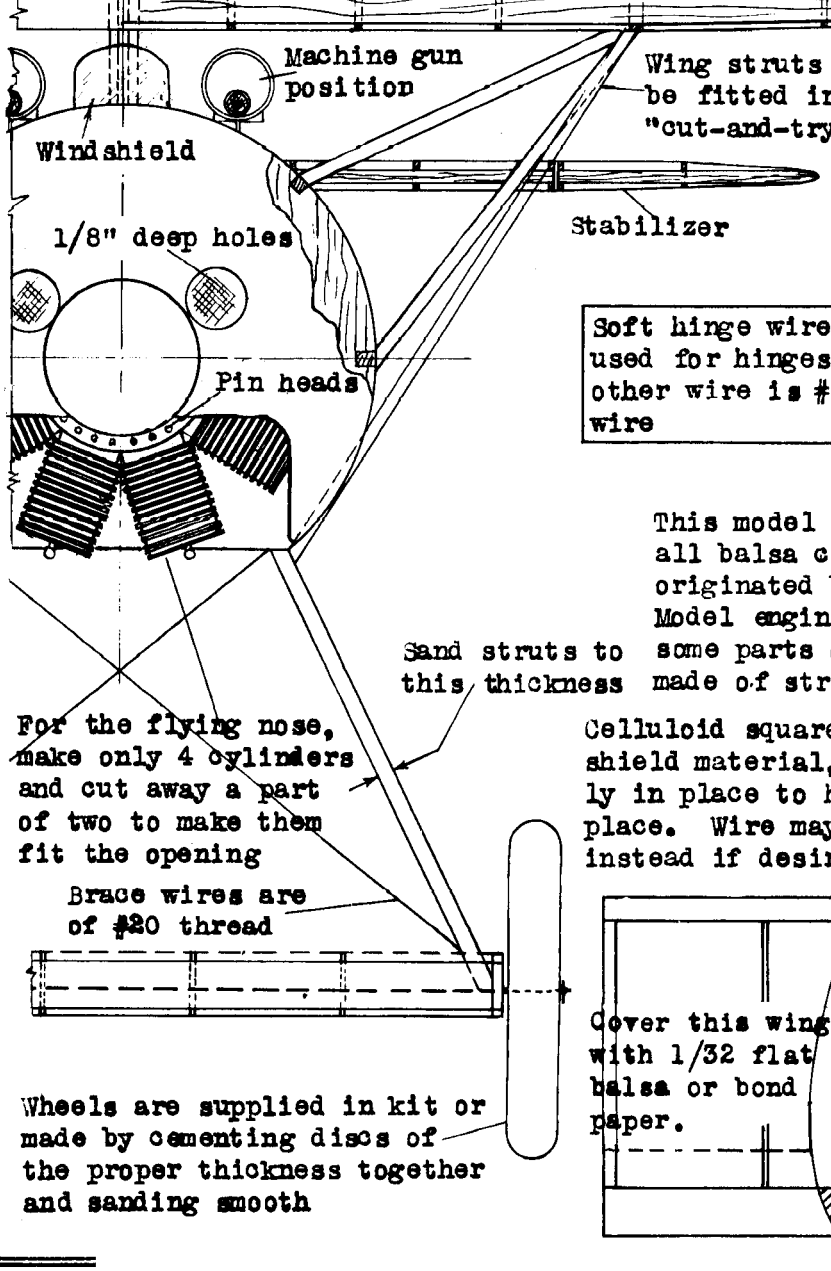


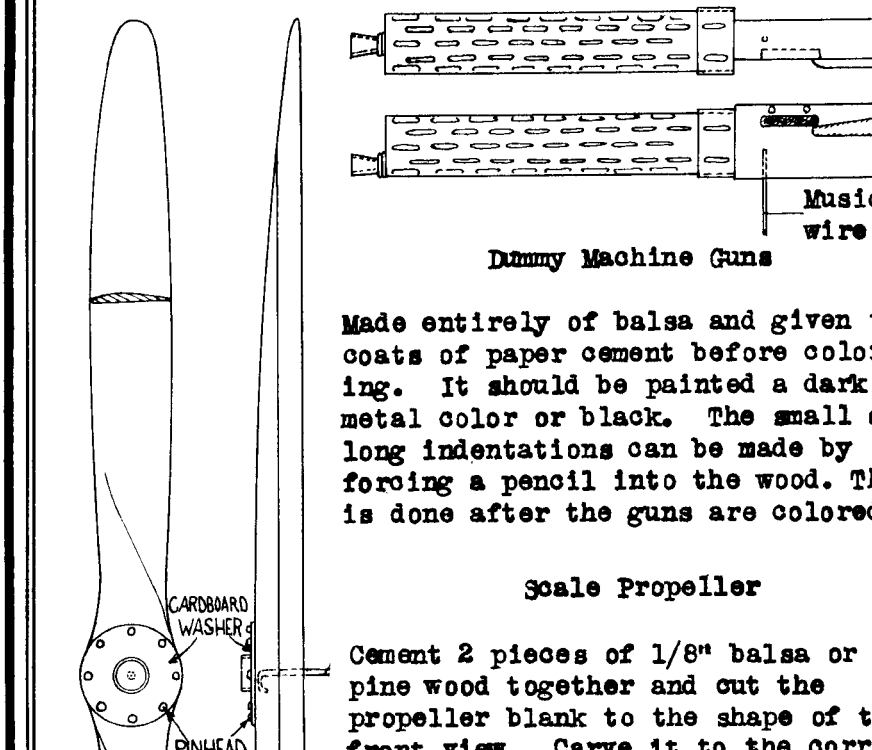
y familiarize yourself with the
by reading notes and instructions
tempting construction

n two half-shells. The left side is made first, using this
s as a "pattern jig". Trace the outline and bulkhead posi-
se tracing for making the right side. When complete, cement
ther. Clamp for doing this may be made of 1/16x3/8x1 pieces
3" long (pointed)

fuselage surfaces except
bit are covered over with







Dummy Machine Guns

Made entirely of balsa and given coats of paper cement before coloring. It should be painted a dark metal color or black. The small long indentations can be made by forcing a pencil into the wood. This is done after the guns are colored

Scale Propeller

Cement 2 pieces of 1/8" balsa or pine wood together and cut the propeller blank to the shape of t

tions and reverse tracing
the halves together. Clam
notched 5/16x5/8" long (po

All fuselage su
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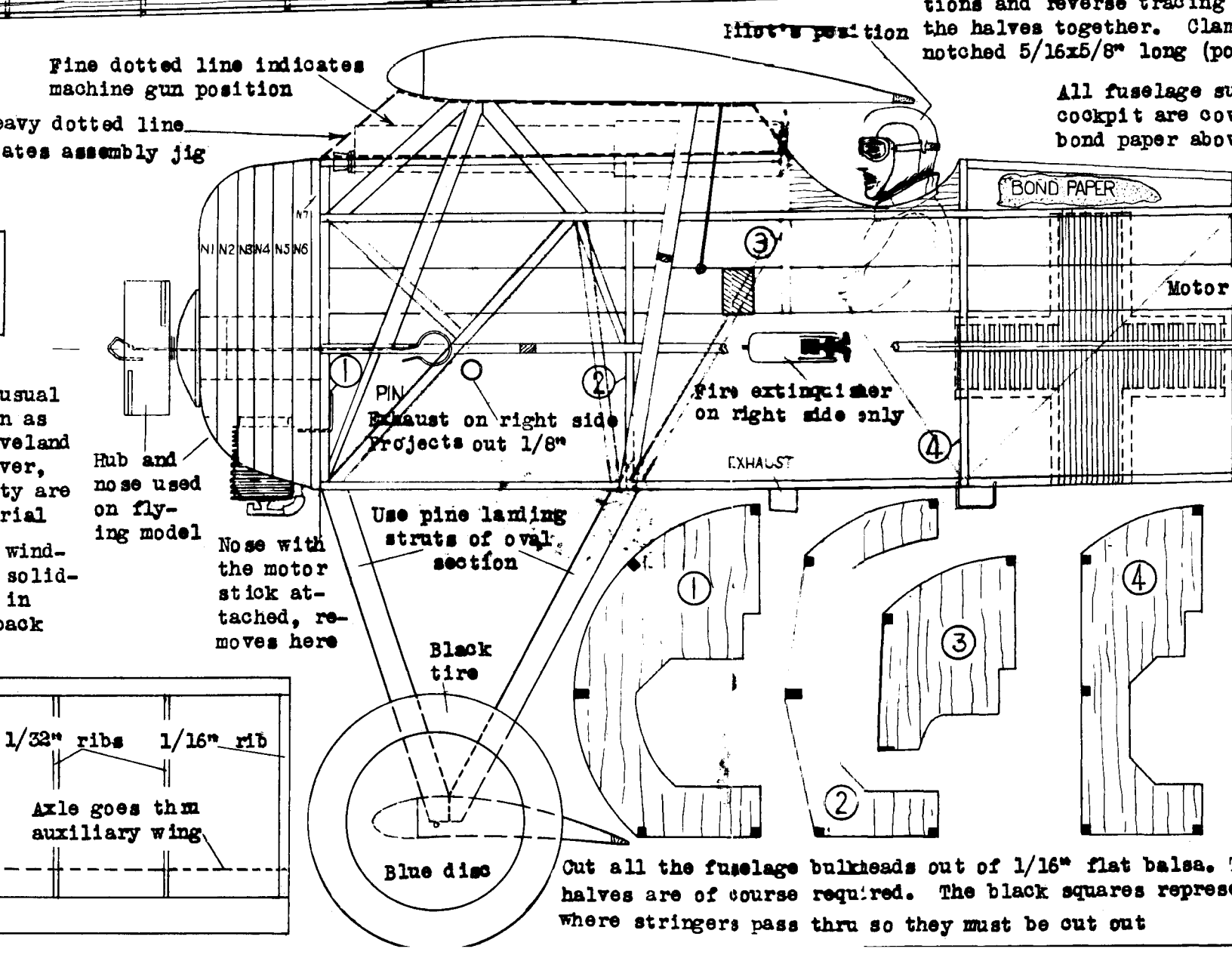
bond paper abov



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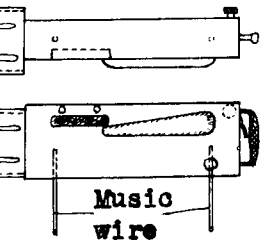
Cut all the fuselage bulkheads out of 1/16" flat balsa.
halves are of course required. The black squares repres
where stringers pass thru so they must be cut out



Guns

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balsa or
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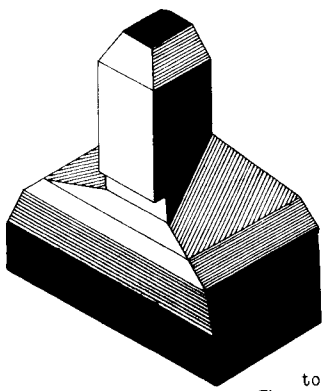
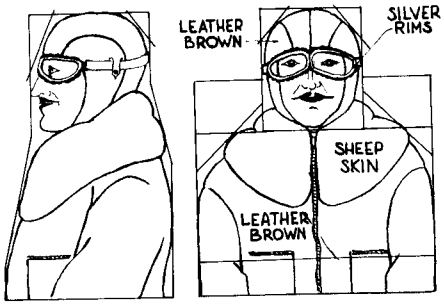
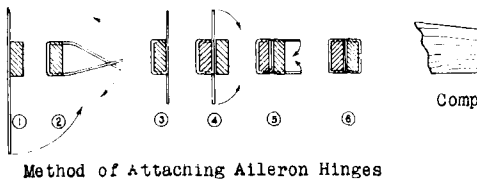




A Realistic Pilot For Your Model

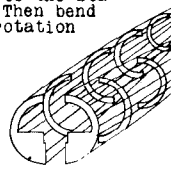
With a sharp knife, cut out a balsa block to the shape of the illustration at left side. Then cut the block to the profile of the man shown. This done, shape it to outline of front view. Cut all corners off of the block and carve in the features. When all carved, sand off the rough spots. Give it a coat of paper cement and add goggles, moustache (if desired) and details in the flying suit. These can be made of fine cardboard. About 4 times the thickness of newspaper. The coloring is done by tinting China white which is obtainable at artist supply stores at a low price. Tinting may be done with plain water colors. A very fine brush will be needed to paint the eyes, eyebrows, lips, etc.



Comp

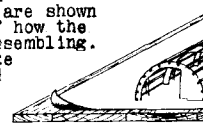
Method of Attaching Aileron Hinges

Cement a piece of hinge wire to the stationary spar as in Figure 1. Then bend the wire as figures show in rotation from left to right



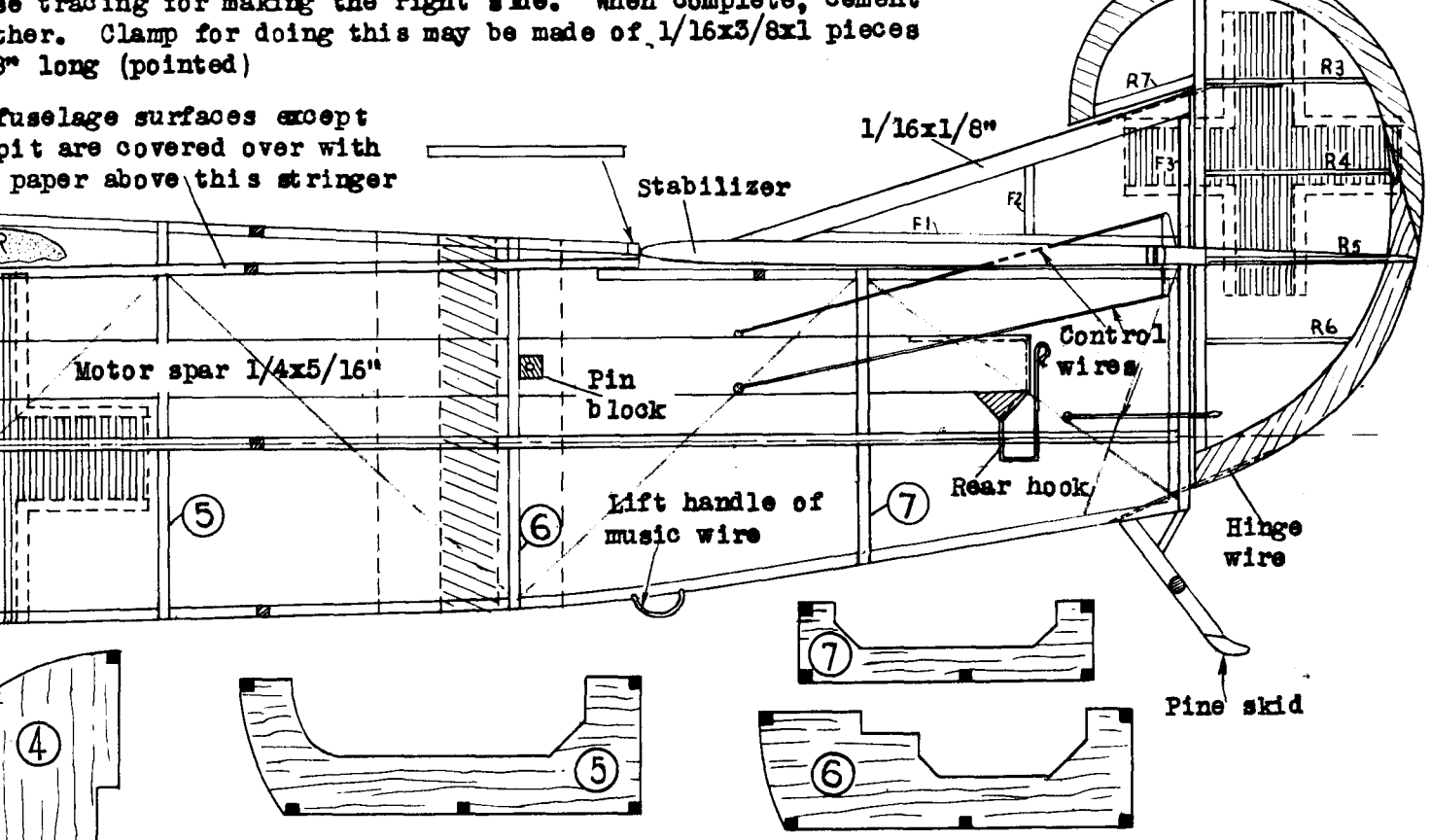
Fuselage Construction

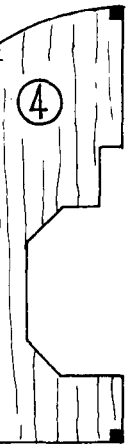
At right there are perspective drawings showing standard fuselage half shell construction. These drawings are shown only to give you an idea of how the shells would look before assembling. The clamp shown is full size and can be of a harder wood than balsa



...e tracing for making the right side. When complete, cement
...ther. Clamp for doing this may be made of 1/16x3/8x1 pieces
...3" long (pointed)

...fuselage surfaces except
...pit are covered over with
... paper above this stringer





...at balsa. Two
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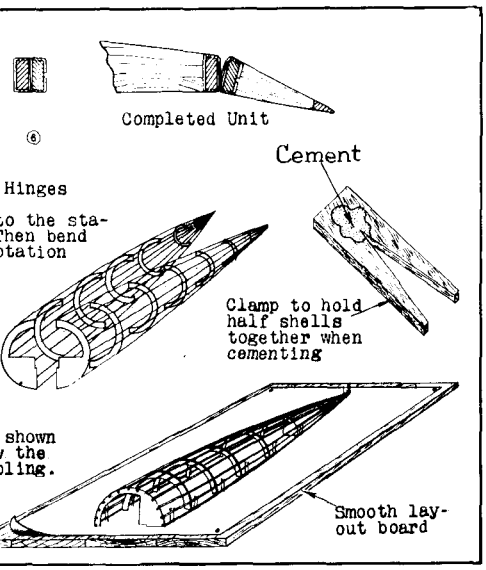
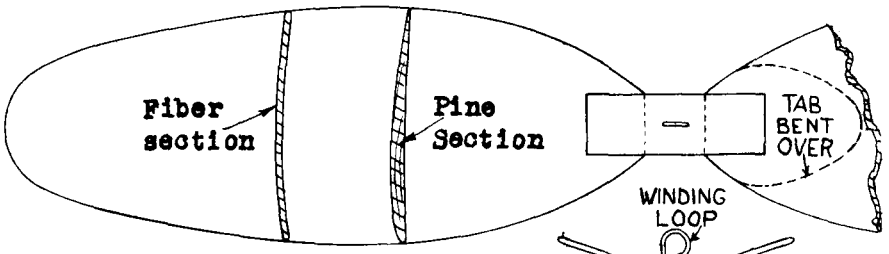
A CLEVELAND DESIGNED ¼" SCALE FLYING MODEL SF-34

1918 FOKKER D-8

"OBERURSEL" ENGINE — DRAWING IS FULL SIZE

THIS DESIGN INCORPORATES THE EXPERIENCE OF THIS CONCERN AS MODEL ENGINEERS, SINCE 1919

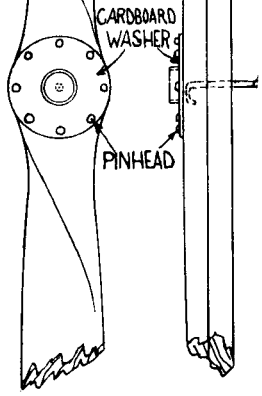




A 7" Flying Type Propeller

If you have a ki... ...ou need only to assemble all the propeller parts but otherwise cut out two blades of fiber or pine and insert them into a hardwood hub which is slotted 60 to the line of thrust. The prop shaft is of #14 music wire. It is a good plan to try 7-1/2" and 8" propellers although our model worked best with the 7" size.

a smooth job. Doping may next be done. Now is the time for you to decide what kind of dope job is desired. A dry, well ventilated room of



Scale Propeller

Cement 2 pieces of 1/8" balsa or pine wood together and cut the propeller blank to the shape of t front view. Carve it to the corr section and sand smoothly. Give two coats of paper cement and col it light brown or better yet, mix little brown into paper cement an then coat the prop. It will appe as a piece of varnished hardwood

Constructing the Fokker D-8

Cut out all the fuselage bulkheads and construct the fuselage. A note above the side view explai the half shell construction. When the fuselage together, fill cockpit section between #3 and #4 bulkheads with scrap 1/16" flat balsa. Sand smo and give two coats of paper cement. Cement the [illegible] bulkhead #1 and cover the turtle- [illegible] back with bond paper. Insert [illegible] pin block onto bulkhead #6. Cement 1/8" flat pieces together t make the nose. Insert the dummy cylinders into the nose and give it two coats of paper cement. Fit the motor spar into the nose and fuselage. D not forget to make it removable. Cover the re- mainder of the fuselage with Jap tissue. Make t auxiliary wing that is under the fuselage. Cove it and cement the landing gear struts onto the fuselage and into the auxiliary wing. Cut all t tail patterns out and elevate them over the draw ing on 1/32" balsa scraps. Pin the tail spars i place and slip in 1/32x1/8" balsa tail ribs be- tween the curved patterns and tail spars. The r are rectangular in shape until the tail is assem Then they are streamlined with a sandpaper block Insert the hinges and cement them on the tail.Co the tail with Jap tissue and cement it to the re of the fuselage. Attach the tail skid and cemen it solidly. Cut the ribs out of 1/32" flat bals except W3 which is of 1/16" stock. It is impor- tant to cut the outlines of these as accurate as possible if a nice covered wing is desired. Pin the leading edge spar (1/4x3/8") in place. Pin t center spar (1/16x1/4") in place. Another 2 sho spars for the ailerons are cut to length and pin in position. The trailing edge is pinned in pla and all the ribs inserted in their relative posi tions. Cement the joints well and pin the 1/8" flat wing tip patterns in place and cement them well in place. When wing parts are dry, split t spars enough at "s" to elevate the wing tip 1/4" over the layout board. Cement the spars solidly where they were split and when dry take the wing from the drawing. The section at the rear and between ribs #W1 is filled in with scrap 1/16" flat balsa. With a sandpaper block, sand the leading, center spar and trailing edge to shape. Put the aileron hinges in place and cement well. Cover the wing with small pieces of Jap tissue t

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Cement the
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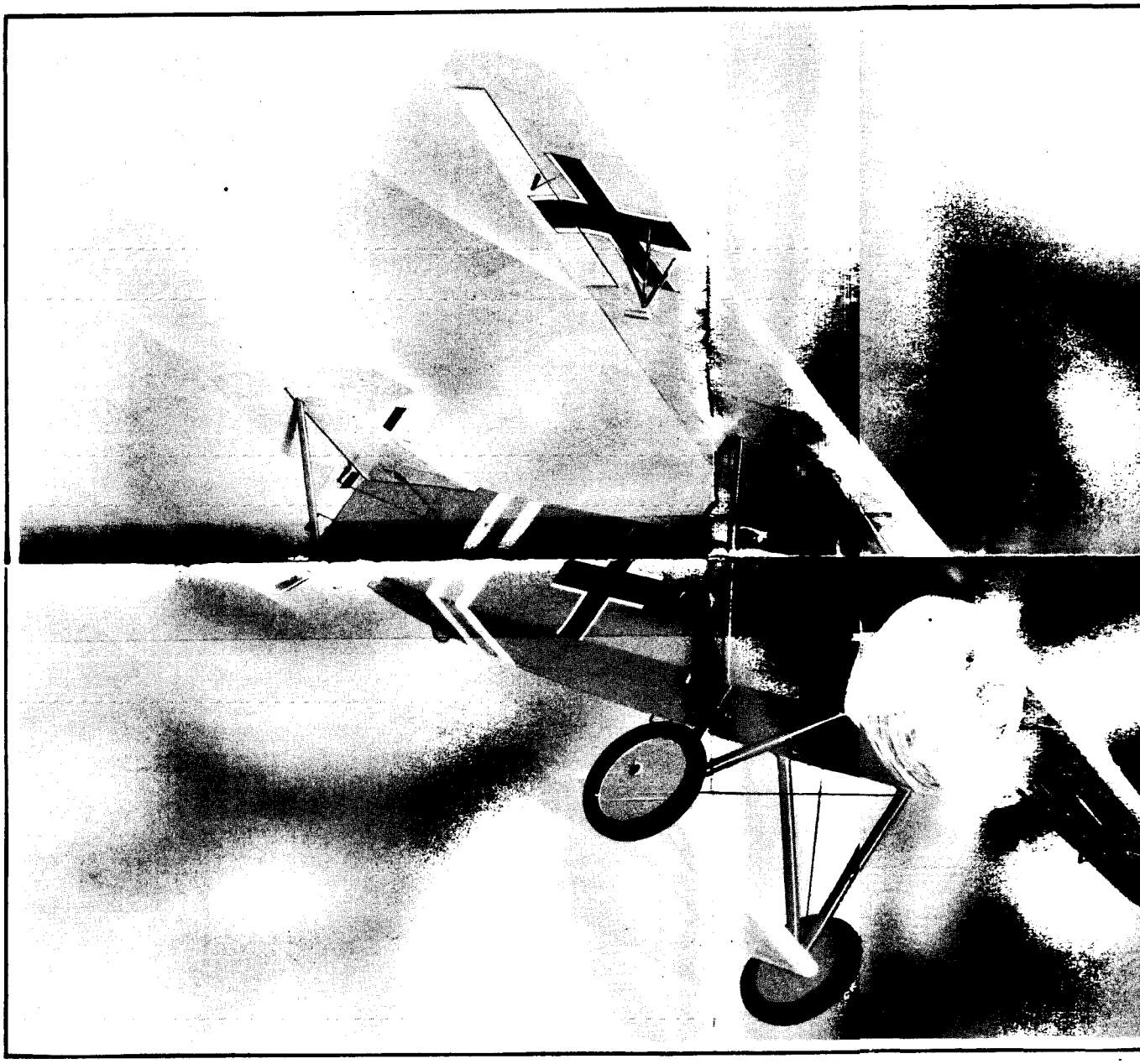
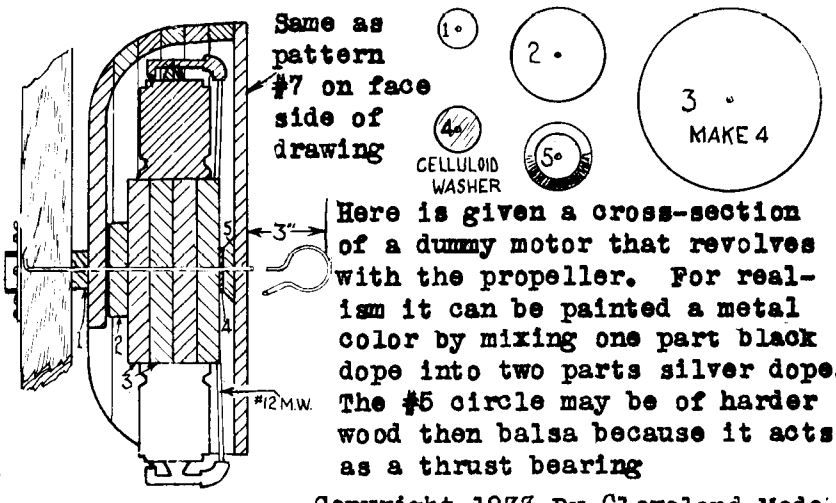


The Famous C-D Fokker D-8 model in action. It may employ the dummy motor eve
but the possible danger of the nose being smashed in a bad crash is really no
taking a chance on, so why not build a flying and exhibition nose?

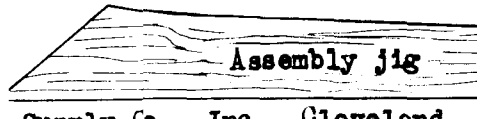


Same as pattern #7 on face side of drawing

Here is given a cross-section of a dummy motor that revolves with the propeller. For realism it can be painted a metal color by mixing one part black dope into two parts silver dope. The #5 circle may be of harder wood then balsa because it acts as a thrust bearing

Instrument board is cement
#3 after fuselage is assem

Below is an assembly jig w
1/8" flat balsa and used i
wing to the fuselage in or
proper scale alignment.

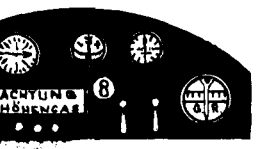


Supply Co. Inc. Cleveland,

worked best with the 7" size.

a smooth job. Doping may next be done. Now is the time for you to decide what kind of dope job is desired. A dry, well ventilated room of about 70° is best suited for doping. Stir the enamel dope with a hardwood stick or a loop of 1/16" dia. wire. (Never with a brush). If a nice average job is wanted, apply two coats of dope right over the Jap tissue but if a special high lustre job is wanted, dope the tissue first with light dope which is made by mixing 3 parts acetone or Anti-Blush thinner with one part paper cement. One coat is sufficient to pull the Jap tissue taut Then give the surface two or more coats of colored Enamel-Dope. Over the Enamel-Dope, give 1 or 2 coats of paper cement. (In the kit, we supply a little more dope than is needed for the average nice job. The high lustre job is an optional feature and if wanted is an added expense. We tell you this because many "C-D" enthusiasts have written and asked how to put on a real "polished" job.) Use blue dope on the fuselage, [illegible] and struts. Cream is used on the wing, stabilizer, elevator, auxiliary wing and nose. If dope blushes, paint over the blushed parts with "Cleveland Anti-Blush". Assembling the wing must be done carefully. Below the photograph at right side is given an assembly jig which is carefully cut of 1/8" flat balsa. Cement the front bottom end to bulkhead #1 and the rear bottom to bulkhead #3. Then place the wing on top of the jig and put a drop of cement at the entering and trailing edges. Fit the 1/16x1/8" pine struts in place (they should already have been painted blue) and cement them solidly. When dry, cut the assembly jig out from between the wing and fuselage with a razor blade. Attach the wheels to the axle and cement the machine guns in place. Cut the windshield out of celluloid and cement in place. If a thin ink line (1/32" wide) is painted on the outline, the windshield will show up better. Attach the insignia to the model with paper cement. Control horns and other details may be attached if desired. Use 6 (or more) strands of 1/8" flat rubber put on in 3 individual loops. This will eliminate ruining the whole motor in case of breakage of only one strand. Do not wind, generally speaking, much over 125 turns by hand with an unstretched motor for each 1' length of motor (not strand). By using a winder, or removing the bearing button and stretching out the rubber, from 2-1/2 to 4 times as many turns may be stored. Since rubber life (uncontrollably) varies considerably, no definite number of turns may be given any motor. Experience alone, the best teacher. Select a field with grass that is tall enough to have the model crash into it without damaging the model because you can never tell exactly how the first flights will work out. After the model is adjusted of course, you can even fly it in a large indoor place without serious damage. Put weights on the nose if the model stalls or climbs too steeply. Give it short hops first to get proper flight adjustments.

motor even for flying,
really not worth



is cemented to bulkhead
is assembled.

embly jig which is cut of
and used in assembling
plage in order to get
ignment.

bly jig

Cleveland, Ohio. U. S. A.