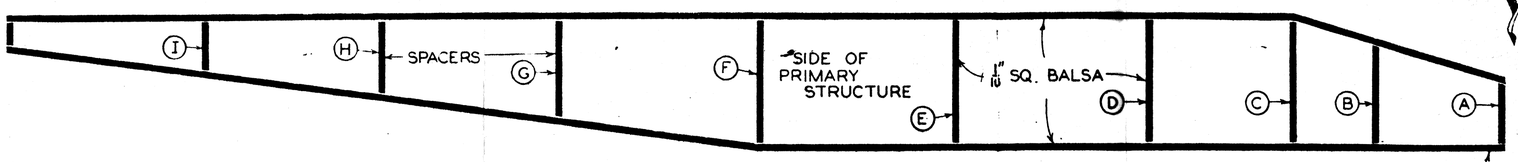
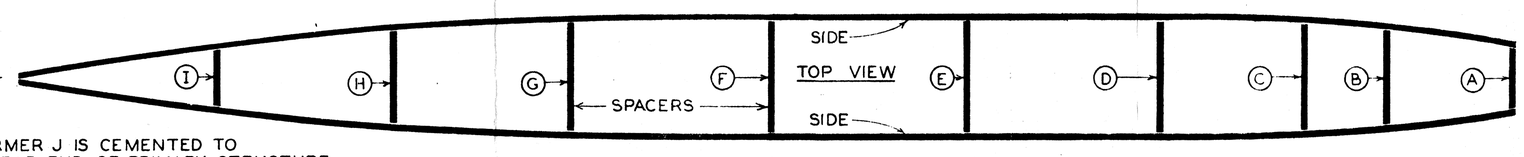
BOEING TRANSPORT NO. 247 — SHEET NO. 2.



NO MEASUREMENTS ARE GIVEN HERE BECAUSE PLAN IS FULL SIZED AND PARTS CAN BE SIZED BY MEASURING DIRECTLY OVER PLAN.

PRIMARY STRUCTURE

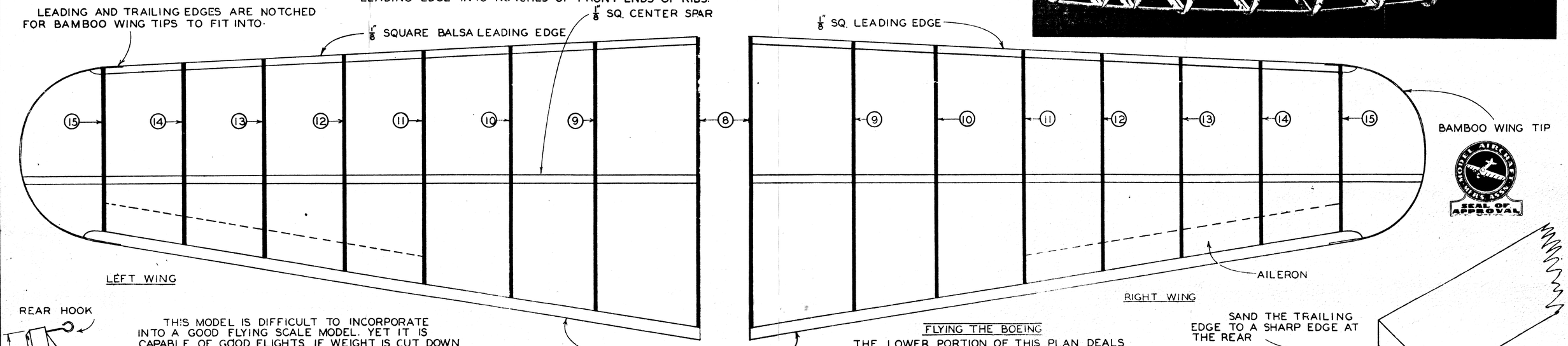
ASSEMBLE TWO OF THESE SIDES DIRECTLY OVER PLAN TO INSURE ACCURACY.

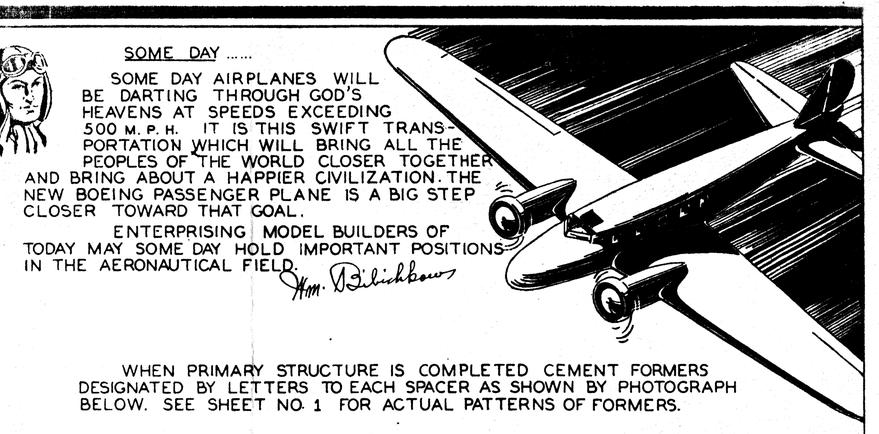


FORMER J IS CEMENTED TO THE REAR END OF PRIMARY STRUCTURE AS PHOTO AT OTHER END OF SHEET PLAINLY SHOWS.

THE FIRST STEP IN THE CONSTRUCTION OF THE WING IS TO PIN THE CENTER SPAR AND TRAILING EDGE OVER PLAN SO AS TO BE DIRECTLY OVER LINES REPRESENTING THEM. NEXT CEMENT THE RIBS TO THESE STRIPS SO THAT RIBS COVER THE HEAVY BLACK LINES. FINALLY CEMENT THE LEADING EDGE INTO NOTCHES OF FRONT ENDS OF RIBS.

ASSEMBLE THE TWO SIDES OF PRIMARY STRUCTURE USING SPACERS TO CONFORM TO THE LENGTHS OF THE TOP VIEW.





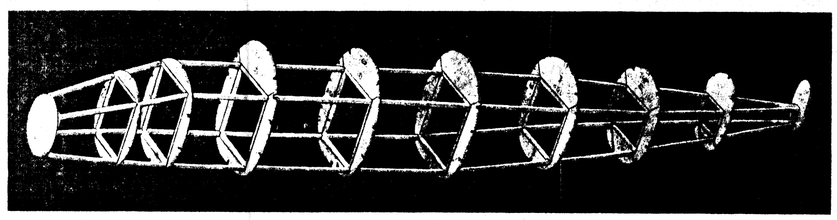
SOME DAY .....

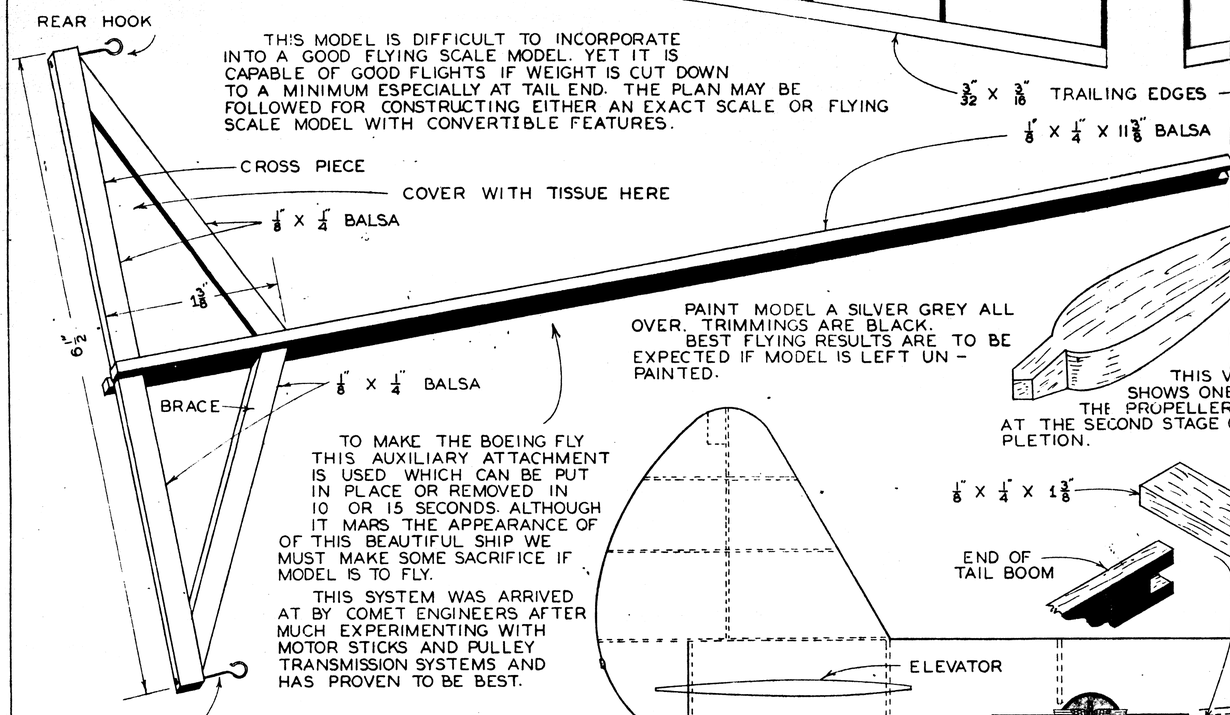
SOME DAY AIRPLANES WILL BE DARTING THROUGH GOD'S HEAVENS AT SPEEDS EXCEEDING 500 M. P. H. IT IS THIS SWIFT TRANSPORTATION WHICH WILL BRING ALL THE PEOPLES OF THE WORLD CLOSER TOGETHER AND BRING ABOUT A HAPPIER CIVILIZATION. THE NEW BOEING PASSENGER PLANE IS A BIG STEP CLOSER TOWARD THAT GOAL.

ENTERPRISING MODEL BUILDERS OF TODAY MAY SOME DAY HOLD IMPORTANT POSITIONS IN THE AERONAUTICAL FIELD.

Wm. P. Bilichbow

WHEN PRIMARY STRUCTURE IS COMPLETED CEMENT FORMERS DESIGNATED BY LETTERS TO EACH SPACER AS SHOWN BY PHOTOGRAPH BELOW. SEE SHEET NO. 1 FOR ACTUAL PATTERNS OF FORMERS.



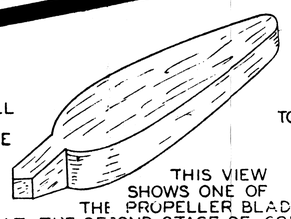


THIS MODEL IS DIFFICULT TO INCORPORATE INTO A GOOD FLYING SCALE MODEL. YET IT IS CAPABLE OF GOOD FLIGHTS IF WEIGHT IS CUT DOWN TO A MINIMUM ESPECIALLY AT TAIL END. THE PLAN MAY BE FOLLOWED FOR CONSTRUCTING EITHER AN EXACT SCALE OR FLYING SCALE MODEL WITH CONVERTIBLE FEATURES.

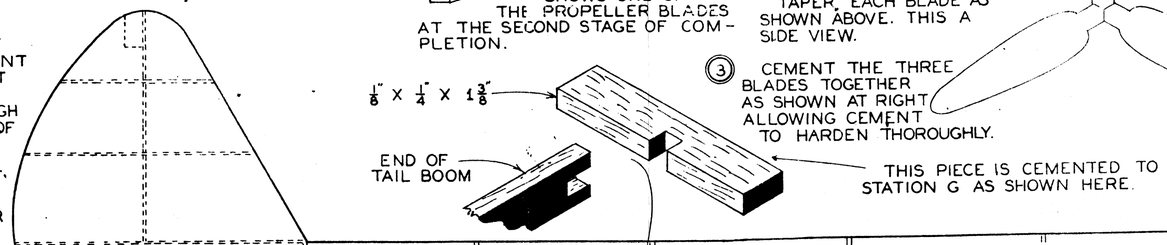
PAINT MODEL A SILVER GREY ALL OVER. TRIMMINGS ARE BLACK. BEST FLYING RESULTS ARE TO BE EXPECTED IF MODEL IS LEFT UNPAINTED.

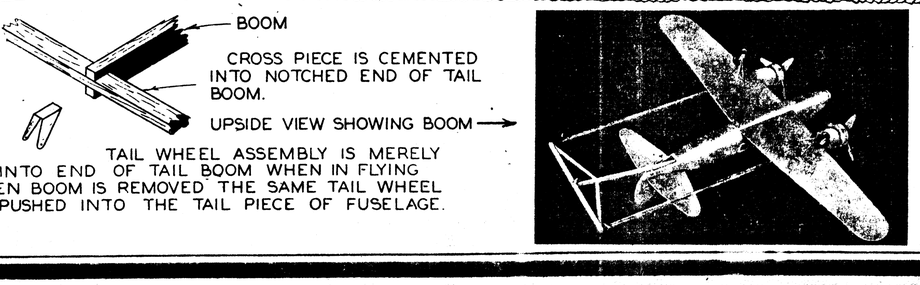
TO MAKE THE BOEING FLY THIS AUXILIARY ATTACHMENT IS USED WHICH CAN BE PUT IN PLACE OR REMOVED IN 10 OR 15 SECONDS. ALTHOUGH IT MARS THE APPEARANCE OF OF THIS BEAUTIFUL SHIP WE MUST MAKE SOME SACRIFICE IF MODEL IS TO FLY.

THIS SYSTEM WAS ARRIVED AT BY COMET ENGINEERS AFTER MUCH EXPERIMENTING WITH MOTOR STICKS AND PULLEY TRANSMISSION SYSTEMS AND HAS PROVEN TO BE BEST.



THIS VIEW SHOWS ONE OF THE PROPELLER BLADES AT THE SECOND STAGE OF COMPLETION.





TAIL WHEEL ASSEMBLY IS MERELY PUSHED INTO END OF TAIL BOOM WHEN IN FLYING USE. WHEN BOOM IS REMOVED THE SAME TAIL WHEEL CAN BE PUSHED INTO THE TAIL PIECE OF FUSELAGE.

THE TENSION OF THE RUBBER MOTORS WILL KEEP THE BOOM IN PLACE.

FOUR FEET OF 1/8" FLAT RUBBER IS REQUIRED FOR EACH MOTOR.

A PIECE OF CELLOPHANE MAY BE USED TO COVER A SMALL SECTION OF BOTTOM OF FUSELAGE WHICH GIVES VISIBILITY IN STICKING BOOM INTO FUSELAGE.

SECTION OF WING AT RIB 10 SHOWING PROP SHAFT.

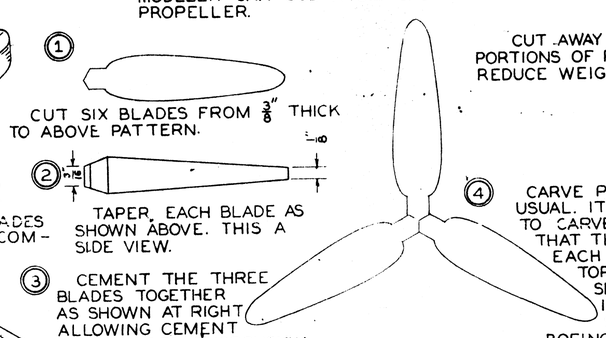
2 WASHERS

1/16" DIA. ALUMINUM TUBING USED FOR BUSHINGS.

FLYING THE BOEING

THE LOWER PORTION OF THIS PLAN DEALS ON HOW TO MAKE YOUR BOEING MODEL FLY.

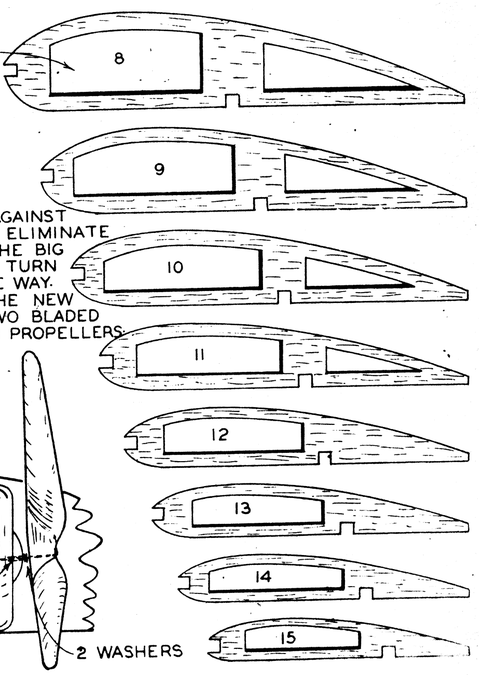
THIS PROPELLER IS USED ON EITHER THE FLYING OR SCALE MODEL. HOWEVER THE EXACTING SCALE MODELER CAN USE A DIE-CAST OR AN ALUMINUM PROPELLER.



SAND THE TRAILING EDGE TO A SHARP EDGE AT THE REAR

CUT RIBS FROM 1/16" THICK SHEET BALSA. FOR FLYING MODEL SAND IT DOWN A LITTLE. CUT TWO OF EACH.

CUT AWAY INNER PORTIONS OF RIBS TO REDUCE WEIGHT.



NOTE: THIS PLAN IS FULL SIZED. PARTS TO BE CUT MAY BE LAID DIRECTLY OVER THE PLAN AND CUT TO THE CORRECT LENGTH ALL PATTERNS ARE EXACT SIZE.

New BOEING 200 M.P.H. TRANSPORT NO. 247

SHEET NO. 1.

COMET

NACELLE DETAIL NOTE EXHAUST PIPE
THIS PICTURE BY COURTESY OF POPULAR AVIATION

PIERCE HOLE WITH PIN AND THEN PUSH ELEVATOR BRACE THROUGH HOLES

CUT ELEVATOR AND RUDDER RIBS FROM $\frac{1}{16}$" SHEET BALSA

STICK STRIPS OF BLACK TISSUE TO RUDDER & ELEVATOR IMITATING HINGE

TAIL BLOCK

BALSA RIBS

$\frac{3}{32}$" X $\frac{3}{16}$" BALSA TRAILING EDGE

NOTE: TO AVOID CONFUSION ALL OF THE STRINGERS ARE NOT SHOWN ON THE TOP VIEW

$\frac{1}{8}$" SQ. CENTER SPAR

$\frac{1}{8}$" SQ. LEADING EDGE

$\frac{1}{16}$" SQ. BALSA

STRINGERS

RUDDER

BRACE WIRES

PROPELLER SHAFT

BUSHING

PROPELLER IS ATTACHED HERE

HOLLOW BALSA NACELLE

BALSA BLOCK — 1" X 1½" X 2 9/16"

TURNED OR SANDED ROUND

SANDED OR TURNED TO SHAPE

CUT SHAPED NACELLE BLOCK IN HALF AND HOLLOW OUT. NOW CEMENT THE TWO HALVES TOGETHER AGAIN. IT IS NOT NECESSARY TO HOLLOW OUT IF MODEL WILL NOT BE FLOWN.

CUT A $\frac{1}{8}$" SQ. NOTCH IN WALLS OF NACELLE FOR LEADING EDGE TO FIT INTO.

$\frac{3}{32}$" X $\frac{3}{4}$" X 1¼" BALSA NACELLE SUPPORT

WIRE

AL. TUBING

A BUSHING CONSISTS OF A ONE-QUARTER INCH LENGTH OF ONE-SIXTEENTH DIA. ALUMINUM TUBING

HOOK FOR RUBBER STRAND

DUE TO THE FACT THAT NO TWO FUSELAGES CAN BE MADE EXACTLY ALIKE IT IS OFTEN NECESSARY TO SHIFT A NOTCH A LITTLE SO THAT STRINGERS WILL LINE UP PERFECTLY

CUT ALL FORMERS OUT OF ONE-SIXTEENTH THICK SHEET BALSA AND SAND DOWN SLIGHTLY.

A RAZOR BLADE IS A VERY HANDY TOOL FOR CUTTING THE NOTCHES OF THE FORMERS WHEN BROKEN OFF AS SHOWN HERE

COWLINGS ARE SHAPED FROM BALSA BLOCKS SIZED 1½ X 1½ X ½ THICK

SHOWING THE THREE CORNERED BLOCK CUT TO SHAPE AND CEMENTED TO FIRST RIB

RIBS

ALUMINUM BUSHING

CENTER SPAR

TRAILING EDGE

ALL MODELERS SHOULD HAVE A GOOD PROPELLER CARVING KNIFE. IT IS ESPECIALLY HANDY FOR CUTTING THE 3 CORNERED BLOCK TO SHAPE

THIS THREE CORNERED BALSA PIECE IS SHAPED TO FIT FUSELAGE SO THAT WING CAN BE ATTACHED TO IT

COWL SHUTTER IS SHAPED FROM A $\frac{3}{8}$" X $\frac{5}{8}$" X $\frac{5}{8}$" BALSA BLOCK

A ¾" WIDTH STRIP OF BALSA VENEER OR HEAVY PAPER MAY BE CEMENTED AROUND LEADING EDGE. IT WILL BE NECESSARY TO GLUE $\frac{1}{16}$" SQ. STRIPS TO RIBS TO SUPPLY A SURFACE TO WHICH TO CEMENT THE BALSA VENEER OR PAPER.

CUT OUT MOTOR DESIGN FROM PLAN & STICK TO COWLING. NEXT STICK COWL SHUTTER IN POSITION.

LANDING LIGHT

CENTER SPAR

1½" DIA. ALUMINUM DRAG RING

FOR REALISM PIECES BLACK TISSUE MAY BE PASTED HERE OR PAINTED BLACK TO REPRESENT COWLING SHUTTER.

MANY MODELERS USE A READY MADE CELLULOID MOTOR AND AN ALUMINUM DRAG RING IT GIVES A VERY REALISTIC LOOKING APPEARANCE BUT THE SHAPE OF THE DRAG RING IS NOT EXACTLY TO SCALE.

AERIAL MAST

WIRE BRACES

STRUTS

PIN IS USED FOR AXLE

A PIECE OF $\frac{1}{16}$" DIA ALUMINUM TUBING IS USED AS A BEARING

DROP OF CEMENT HOLDS WHEEL ON.

CUT OUT PRINTED PIECES FROM GUMMED PAPER AND STICK TO LEADING EDGE TO REPRESENT LANDING LIGHT.

FOR LACK OF SPACE THE ENTIRE WING IS NOT SHOWN HERE. SEE SHEET NO. 2.

HEAVY PAPER OR BALSA VENEER

TRACE THIS SHAPE ON A PIECE OF SMOOTH HEAVY PAPER AND COVER SPACE BETWEEN RIBS 9 AND 10.

BROKEN LINE SHOWS WHERE PRIMARY STRUCTURE IS CEMENTED

A

OUTLINE OF COVERING

GLASS BEAD OR DROP OF CEMENT LOOKS LIKE INSULATOR

BLACK THREAD REPRESENTS AERIAL WIRE

INSULATOR

BALSA AERIAL MAST

LEAD-IN WIRE

DOOR AND WINDOW OUTLINES ARE CUT FROM PRINTED GUMMED PAPER, FURNISHED IN KIT, AND STUCK TO FUSELAGE

BALSA RIBS

BAMBOO RUDDER

BAMBOO RUDDER POST

DOOR GOES ON THIS SIDE ONLY

UNITED AIRLINE INSIGNIA

REED IS VERY PLIANT WHEN BOILED IN WATER USE ⅛" & 1/16" DIA. REED FOR PIPES

TAIL LIGHT

ELEVATOR

WINDOWS

$\frac{1}{16}$" SQ. PIECES

BRACE WIRES

AIR LOUVRES PAINTED ON

3 5/16"

ALUMINUM TAIL WHEEL FORK

.040" DIA TAIL WHEEL

FORMER J

REAR END OF PRIMARY STRUCTURE

ALL STRINGERS ARE $\frac{1}{16}$" SQ. STRIPS SANDED DOWN SLIGHTLY.

$\frac{1}{16}$" SQ. PIECE OF BALSA

TAILPIECE IS SHAPED FROM A BALSA BLOCK MEASURING ½" X ⅞" X 1"

TAIL WHEEL FORK

AXLE HOLE

TRACE THIS PATTERN ON A PIECE OF SHEET ALUMINUM AND BEND ON DOTTED LINES. USE A PIN TO PIERCE AXLE HOLES.

WING

EXHAUST PIPE

STREAMLINED BALSA LANDING GEAR STRUT

EXHAUST HOUSING

AIR SPEED INDICATOR

THOSE BUILDING FOR EXHIBITION PURPOSES ONLY MAY ADD MORE STRINGERS TO FUSELAGE.

1¼" DIA. BALSA WHEEL

A PIECE OF SHEET ALUMINUM IS BENT AROUND A PENCIL AND SLIPPED TO NACELLE WITH EXHAUST TUBE RUNNING THROUGH IT.

C

B

D- E- F

STICK BOEING INSIGNIA HERE

NOSEPIECE IS CUT FROM A BALSA BLOCK 3/8" X 1" X 1"

WING TIPS ARE 1½" HIGHER AT TIPS THAN AT FUSELAGE TO GIVE PLANE DIHEDRAL ANGLE. THIS GIVES PLANE LATERAL STABILITY.

LEADING EDGE

SHAPED FROM BALSA

MUSIC WIRE

ROUNDED FROM A PIECE OF BALSA

SPECIFICATIONS — SCALE - FULL SIZE	
LENGTH	16"
WING SPAN	23"

FRONT VIEW OF BOEING TRANSPORT

SEAL OF APPROVAL