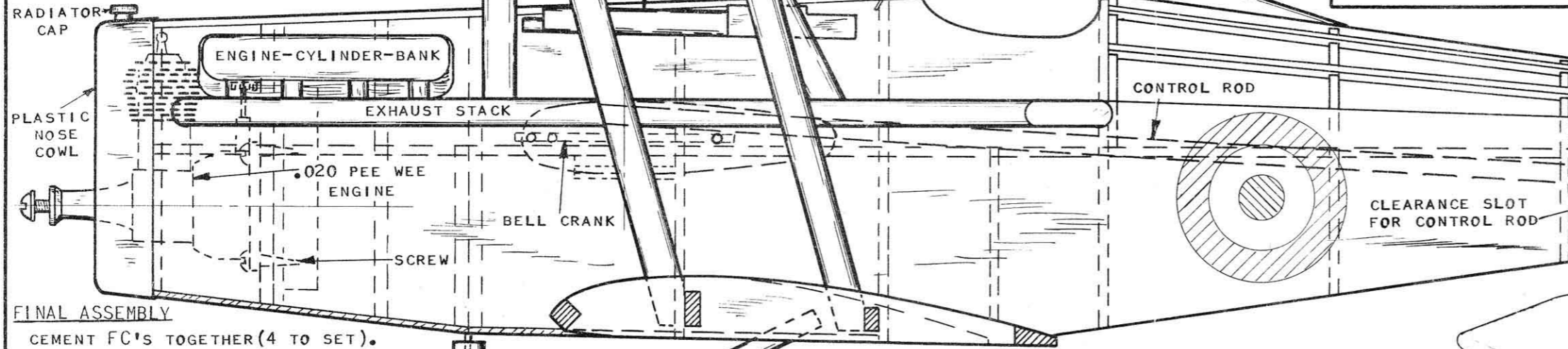
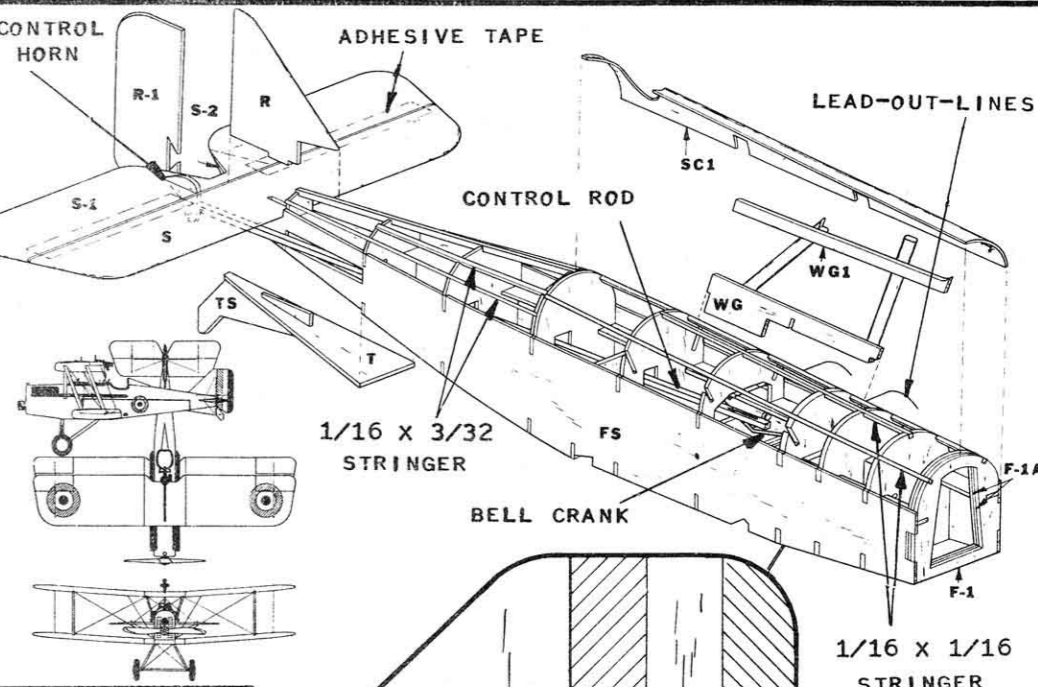


STEP #1
FUSELAGE CONSTRUCTION
 CEMENT REAR OF D'S TOGETHER. CEMENT LANDING GEAR INTO CREASES BETWEEN F4 AND F4A (SEE SKETCH). FOR .020 ENGINES (RECOMMENDED FOR FREE-FLIGHT) ASSEMBLE MOTOR MOUNT BULKHEAD AS SHOWN IN .020 SKETCH. FOR .049 ENGINES ASSEMBLE MOTOR MOUNT BULKHEAD AS SHOWN IN .049 SKETCH. DRILL SMALL HOLES AT PUNCH MARKS IN BULKHEADS THROUGH MOTOR MOUNTS, TO RECEIVE TINY WOOD SCREWS FOR ENGINE INSTALLATION. SLIP BULKHEADS INTO NOTCHES BETWEEN D'S. FOR CONTROL-LINE OR AUTO-MAGIC (SEE NOTE) FLYING, CEMENT THE CP'S TO EACH OTHER AND ACROSS BOTTOM OF D'S AGAINST F5.

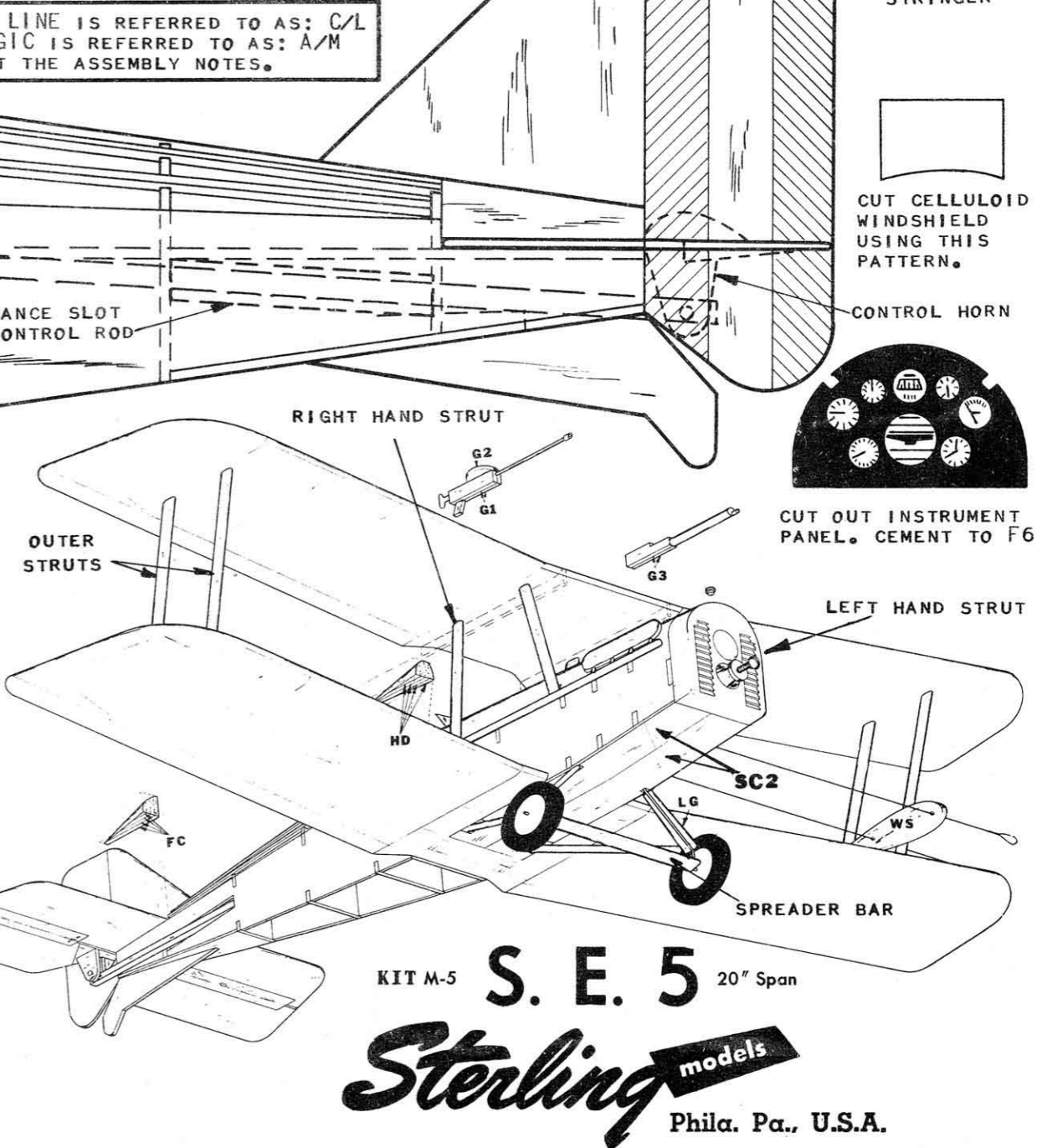
STEP #2
 CEMENT SIDES FS TO EITHER SIDE OF FUSELAGE. GLUE F1 AND F1A'S TOGETHER. CEMENT TO FRONT OF FUSELAGE AGAINST D'S. CEMENT TS'S TOGETHER AND INTO NOTCH IN T. CEMENT ASSEMBLY TO BOTTOM REAR OF FUSELAGE. ON FREE-FLIGHT MODELS, PERMANENTLY CEMENT S TO S1'S AND R TO R1'S. SAND SMOOTH, (ROUNDING OUTER EDGES) AND CEMENT IN PLACE. FOR C/L OR A/M FLYING, CEMENT S2 TO BOTTOM OF S1. DRILL SMALL HOLES THROUGH PUNCH MARKS IN PLYWOOD BELL CRANK AND CONTROL HORN. CEMENT HORN INTO NOTCH IN S1. ASSEMBLE S TO S1 WITH ADHESIVE TAPE, LEAVING 1/16" SPACE BETWEEN UNITS. CEMENT TO FUSELAGE. CUT OUT SLOT IN RIGHT-REAR SIDE FOR CONTROL ROD. MAKE AND INSTALL CONTROL SYSTEM (SEE NOTE). CEMENT R1 AT ANGLE TO R, 3/8" TOWARD RIGHT. CEMENT TO FUSELAGE. SELECT 1/16" SQUARE STRIPS FROM STRIP-SHEET, AND CEMENT INTO NOTCHES IN BULKHEADS FROM F1 TO F7. CEMENT 1/16" X 3/32" STRIPS INTO NOTCHES IN REMAINING BULKHEADS. MAKE CENTER SECTION STRUT ASSEMBLIES (SEE NOTE) AND CEMENT IN PLACE. WG'S MUST BE PRESSED FIRMLY INTO RECEIVING NOTCHES IN BULKHEADS, TO INSURE PROPER ANGLE OF TOP WING WHEN VIEWED FROM SIDE. COVER TOP-FRONT OF FUSELAGE WITH SC1'S. FOR EASY BENDING, MOISTEN OUTSIDE WITH WATER. HOLD IN PLACE WITH PINS.



FINAL ASSEMBLY
 CEMENT FC'S TOGETHER (4 TO SET). TRIM TO SHAPE. CEMENT TO EITHER SIDE OF RUDDER. CEMENT BOTTOM WING IN PLACE BY FIRMLY PUSHING INTO NOTCHES IN FS'S (TO INSURE CORRECT SIDE ANGLE). CEMENT THE TWO SC2'S TOGETHER ON FLAT SURFACE. THEN CEMENT TO FRONT BOTTOM OF FUSELAGE. HOLD IN PLACE WITH PINS. WHEN DRY, SAND ENTIRE FUSELAGE STRUCTURE SMOOTH. COVER FUSELAGE WITH TISSUE APPLIED WET. GIVE ENTIRE STRUCTURE TWO COATS OF CLEAR DOPE. CEMENT HD'S TOGETHER. TRIM TO SHAPE AND CEMENT TO REAR OF COCKPIT. USING TINY WOOD SCREWS, SECURE ENGINE TO MOTOR MOUNTS. CUT MOLDED NOSE COWL AND ENGINE-CYLINDER-BANKS FROM PLASTIC SHEET. CUT OUT HOLES IN NOSE COWL. PLASTIC MAY BE TRIMMED SMOOTH WITH SAND PAPER. CUT TOP AWAY TO FIT AROUND ENGINE (ALLOWING 1/16" CLEARANCE) AND CEMENT IN PLACE. MAKE RADIATOR CAP FROM SCRAP Balsa AND CEMENT TO COWL. CUT EXHAUST STACKS FROM 3/16" DOWEL. ROUND OFF FRONT AND CUT REAR OFF AT ANGLE. CEMENT TO PLASTIC CYLINDER BANKS AS SHOWN ON SIDE VIEW. UNITS ARE PAINTED BLACK AND CEMENTED IN PLACE AFTER MODEL HAS BEEN PAINTED. ROUND OFF FRONT AND REAR OF LG'S AND

CEMENT OVER LANDING GEAR. CUT 5/32" X 3/32" STRIPS (FROM STRIP SHEET) TO SHAPE SHOWN ON SIDE VIEW. CEMENT FRONT TO BOTTOM OF LG'S. REAR RIDES FREELY THROUGH HOLES IN SC2. ROUND OFF LENGTH OF 3/32" X 1/4" FOR SPREADER BAR, AND CEMENT BETWEEN LANDING GEAR. CEMENT TOP WING TO CENTER STRUT ASSEMBLY PRESSING FIRMLY SO THAT WING RESTS ON WG1. ROUND OFF 3/32" X 1/4" STRIPS. CUT OUTER STRUTS TO LENGTH SHOWN ON SIDE VIEW, AND CEMENT BETWEEN WINGS INTO NOTCHES TO RECEIVE THEM. CHECK WINGS FOR WARP BEFORE SETTING ASIDE TO DRY. IF MODEL IS C/L OR A/M FLIER, CEMENT WS'S TOGETHER, AND DRILL SMALL HOLES AT PUNCH MARKS. CEMENT TO WING STRUTS ON LEFT SIDE, HOLES LEVEL WITH BELL CRANK. PAINT ENTIRE MODEL WHITE (COLOR SCHEME OPTIONAL). CEMENT PAINTED CYLINDER BANKS IN PLACE. ASSEMBLE LEWIS (TOP WING) GUN BY CEMENTING G1'S TOGETHER. ADD G2. BEND HANDLE FROM PIN AND CEMENT TO REAR OF G1'S. CUT TRIGGER HANDLE FROM 1/16" SCRAP (SEE SIDE VIEW) AND CEMENT TO REAR BOTTOM OF G1'S. WRAP SEVERAL TURNS OF PAPER 1/8" WIDE, AROUND FRONT OF

1/16" DOWEL BARREL. CEMENT TO FRONT OF G1. PAINT BLACK AND CEMENT TO TOP CENTER OF WING. MAKE VICKERS (BOTTOM) GUN BY CEMENTING G3'S TOGETHER. CUT 3/16" DOWEL BARREL TO LENGTH (SEE SIDE VIEW) AND CEMENT TO G3'S. CUT 1/16" DOWEL TO LENGTH AND CEMENT TO FRONT OF BARREL. TRIM BOTTOM OF G3 ON ANGLE SO THAT GUN MOUNTS LEVEL (FRONT). PAINT BLACK AND CEMENT TO FUSELAGE IN FRONT OF COCKPIT. PAINT THE FOLLOWING PARTS BLACK: ALL WING STRUTS, LANDING GEAR STRUTS, OUTLINE OF COCKPIT, FRONT OF HEADREST, WHEEL TIRES, WHEEL HUBS ARE SILVER. ADDAILERON, ELEVATOR AND RUDDER MARKINGS IN INDIA INK OR BLACK SCOTCH TAPE CUT 1/32" WIDE. CUT OUT AND CEMENT WINDSHIELD IN PLACE. SOAK DECALS IN WATER, AND SLIDE INTO POSITION SHOWN. FREE-FLIGHT MODELS SHOULD BALANCE LEVEL (SIDE) WHEN BALANCED ON FINGER TIPS 1-1/2" BEHIND FRONT OF TOP WING. IF NECESSARY, ADD WEIGHT TO FRONT OR REAR OF FUSELAGE. FOR C/L OR A/M FLIER, CHECK THAT CONTROLS OPERATE FREELY. DRAW LEAD-OUT-LINES THROUGH WS, TIEING LOOPS FOR FLYING LINES.



KIT M-5 **S. E. 5** 20" Span
Sterling models
 Phila. Pa., U.S.A.

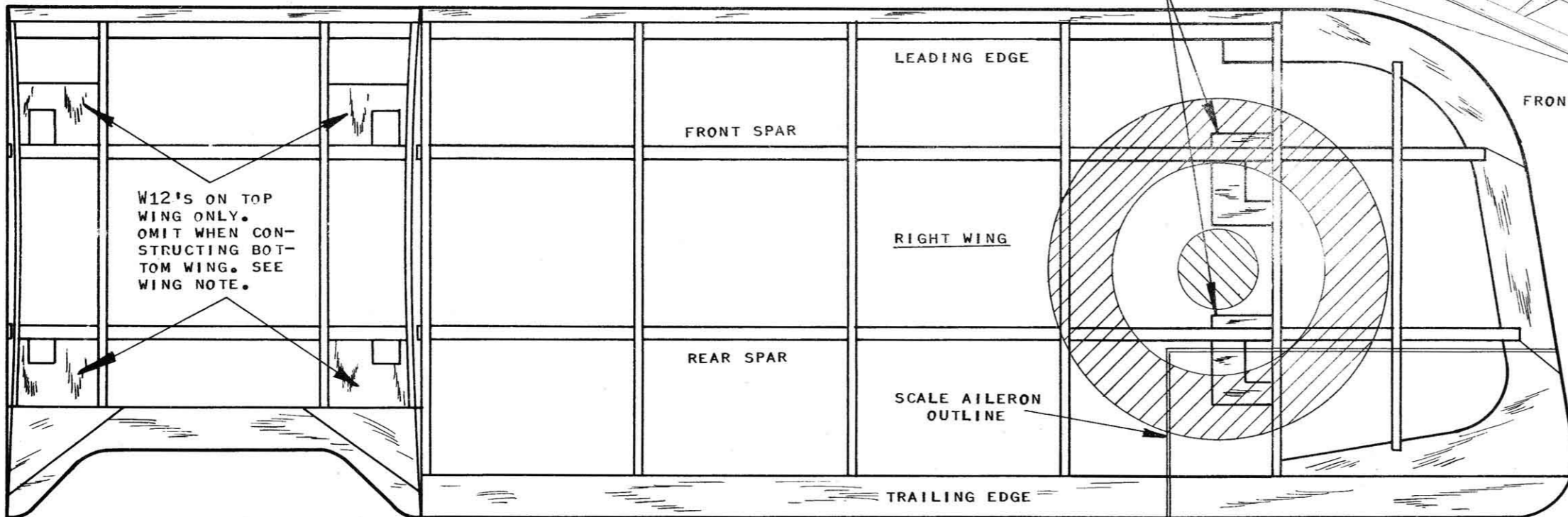
WING TIP 4 REQUIRED REAR SPAR 3/32" X 1/4" (SELECT FROM STRIP-SHEET)

WING SPAR NOTE

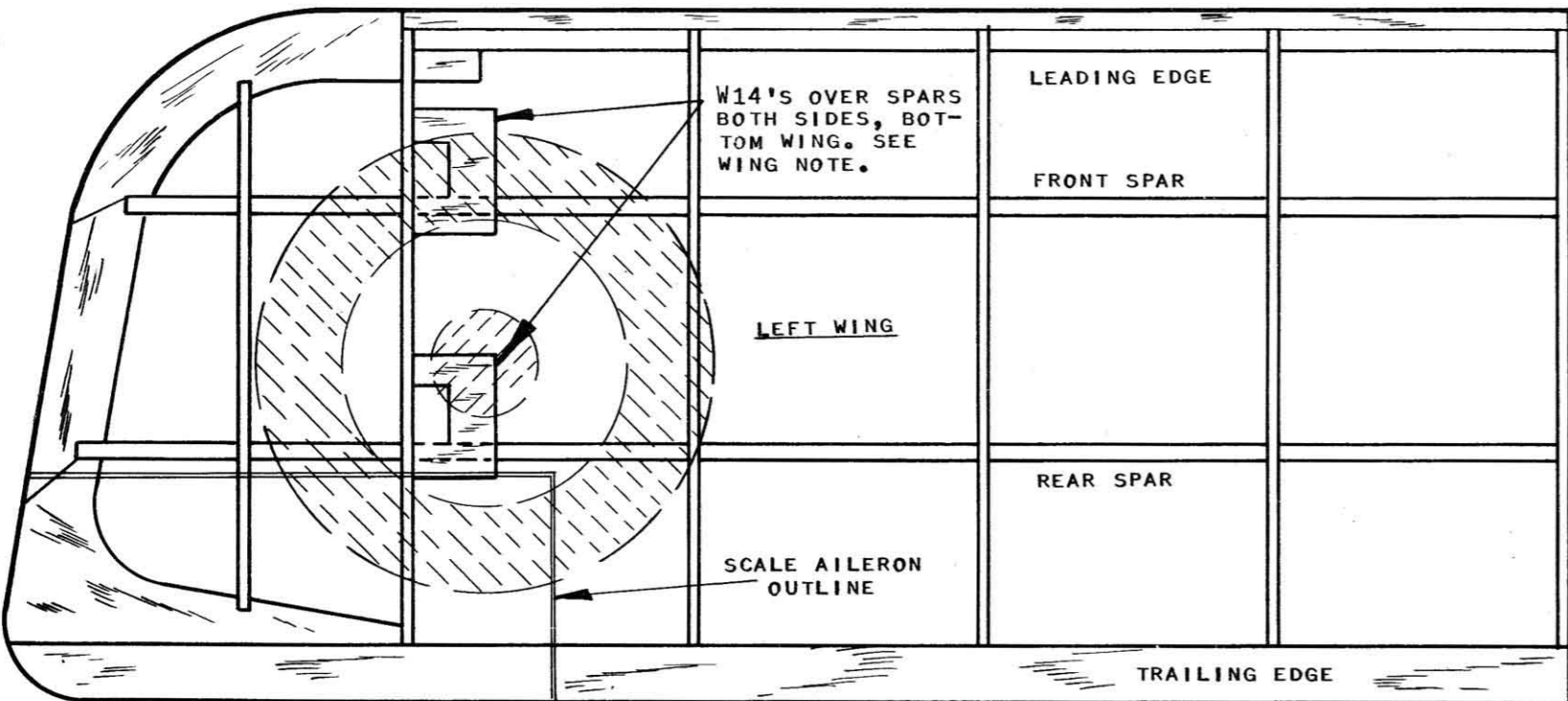
DRAWING OF SPARS IS SHOWN FULL SIZE. CUT TWO EXACT LENGTH, AND TAPER WING-TIP END AS PER DRAWING.

WING TIP 4 REQUIRED FRONT SPAR 3/32" X 5/32" (SELECT FROM STRIP-SHEET)

W14'S UNDER SPARS, BOTH SIDES, TOP WING. SEE WING NOTE.



W12'S ON TOP WING ONLY. OMIT WHEN CONSTRUCTING BOTTOM WING. SEE WING NOTE.



W14'S OVER SPARS BOTH SIDES, BOTTOM WING. SEE WING NOTE.

SCALE AILERON OUTLINE

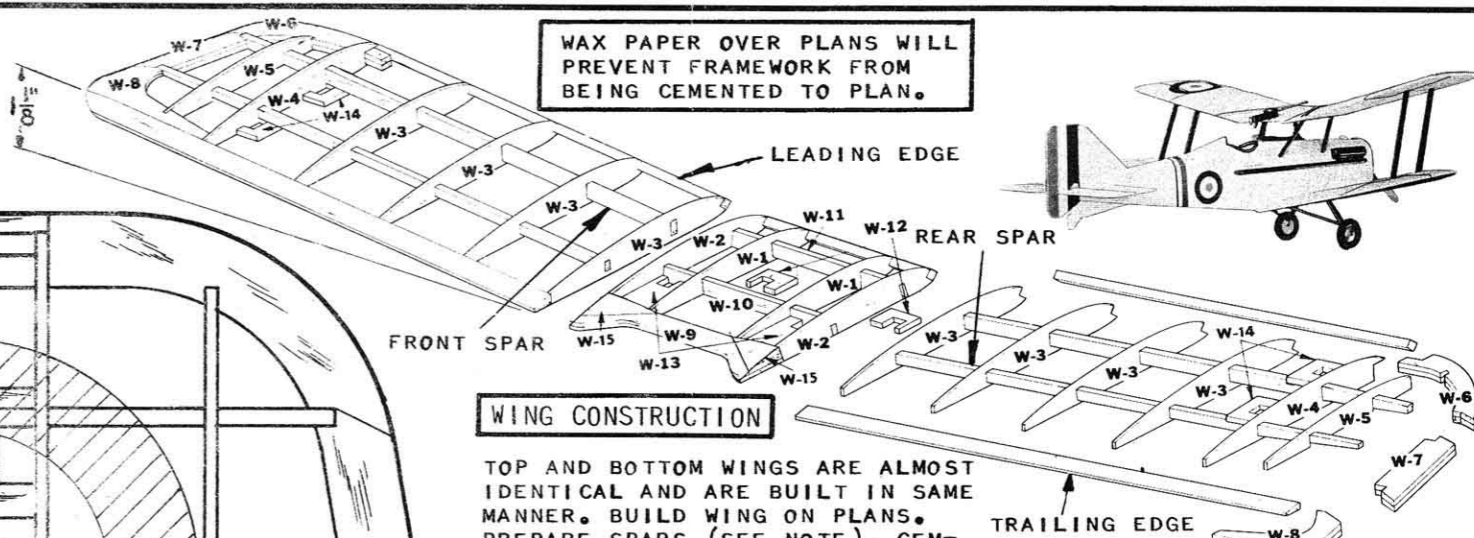


CONTROL SYSTEM NOTE

DRAWING SHOWS CONTROL SYSTEM FULL SIZE. CUT 1/8" SQ. BALSA CONTROL-ROD TO LENGTH. INSERT STRAIGHT PIN THROUGH SMALL CENTER HOLE (NEAR POINT) IN BELL CRANK AND THROUGH ROD AS SHOWN. USING NEEDLE-NOSE PLIERS, BEND PIN OVER (INCLUDING SPUR POINT). CEMENT AND WRAP WITH THREAD. THERE SHOULD BE CLEARANCE BETWEEN ROD AND BELL CRANK TO ALLOW FREE MOVEMENT. PUSH PIN THROUGH REAR OF ROD LOCATING PIN

HOLE FOR HORN THEN REMOVE. PLACE ROD IN FUSELAGE INSERTING THROUGH HOLES IN BULKHEADS. SECURE BELL CRANK TO CP ASSEMBLY WITH SMALL MACHINE SCREW. PLACE WASHER BETWEEN BELL CRANK AND CP. SLIP WASHER AND TWO NUTS ON PROTRUDING MACHINE SCREW. RUN NUTS CLOSE TO CP (SO THAT BELL CRANK MOVES EASILY) AND TIGHTEN TOWARDS EACH OTHER. A COAT OF CEMENT OR DROP OF SOLDER WILL PREVENT NUTS

FROM LOOSENING. INSERT PIN THROUGH CONTROL HORN AND HOLE MADE IN ROD. BEND OVER, AND SECURE IN SAME MANNER AS FRONT PIN. MOVEMENT OF BELL CRANK SHOULD MOVE ELEVATOR UP AND DOWN FREELY AND EASILY. ANY STICKING TENDENCIES MUST BE REMOVED. TIE A LENGTH OF NYLON (OR STRONG THREAD) LINES TO HOLE ON BOTH SIDES OF BELL CRANK. KNOTS WILL BE TIED AFTER WING GUIDE (WS) IS INSTALLED IN FINAL ASSEMBLY.

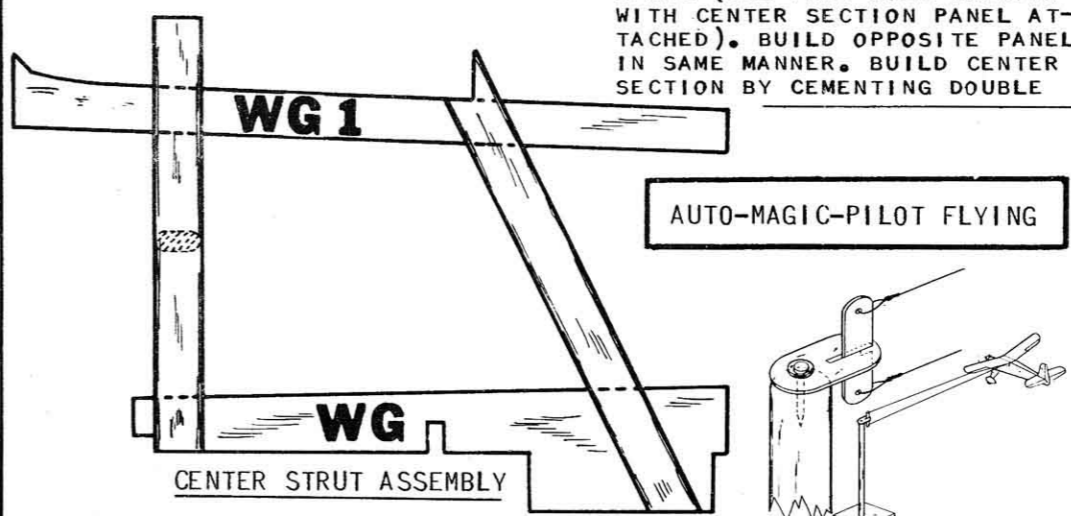


WAX PAPER OVER PLANS WILL PREVENT FRAMEWORK FROM BEING CEMENTED TO PLAN.

WING CONSTRUCTION

TOP AND BOTTOM WINGS ARE ALMOST IDENTICAL AND ARE BUILT IN SAME MANNER. BUILD WING ON PLANS. PREPARE SPARS (SEE NOTE). CEMENT DOUBLE LAYER WING TIP SECTIONS TOGETHER AS SHOWN. PIN TRAILING EDGE DOWN. POSITION RIBS ON SPARS (DON'T CEMENT IN PLACE UNTIL AFTER CEMENTING THEM TO LEADING AND TRAILING EDGES) AND CEMENT TO TRAILING EDGE. RIBS SHOULD BE VERTICAL. CEMENT LEADING EDGE TO FRONT OF RIBS. CEMENT WING TIP SECTIONS TOGETHER AND INTO POSITION, RAISING SO THAT IT IS FLUSH WITH SPARS. FOR TOP WING ONLY CEMENT GUSSETS W14 TO RIB W4 UNDER SPARS SO THAT FRONT OF NOTCH IS FLUSH WITH REAR OF SPARS (SEE FULL SIZE DRAWING WITH CENTER SECTION PANEL ATTACHED). BUILD OPPOSITE PANEL IN SAME MANNER. BUILD CENTER SECTION BY CEMENTING DOUBLE

THICKNESS OF W9'S. ADD W15'S TO EITHER SIDE, FLUSH WITH FRONT FOR ADDITIONAL THICKNESS. PIN TO PLANS AND ASSEMBLE IN SAME MANNER AS WING PANELS USING W10 AND W11 AS SPARS. RIBS ARE ANGLED, SO THAT WHEN SECTIONS ARE CEMENTED TOGETHER, WING TIPS ARE 1-1/8" HIGH, ON EACH SIDE AS SHOWN. CEMENT W12'S AND W13'S IN PLACE FLUSH WITH BOTTOM. (SEE WING PLAN). ALLOW FRAMEWORK TO THOROUGHLY DRY ON FLAT SURFACE TO PREVENT WARPS. SAND WING TIPS ROUND TO BLEND SMOOTHLY INTO LEADING AND TRAILING EDGES. SECURELY CEMENT WING PANELS TOGETHER, THEN COVER EACH PANEL WITH TISSUE PROVIDED, APPLIED WET. APPLY TWO COATS OF CLEAR DOPE CHECKING STRUCTURE CONSTANTLY AGAINST WARPS. IF WARP OCCURS - APPLY CLEAR DOPE AND TWIST IN OPPOSITE DIRECTION, HOLDING UNTIL DRY. BOTTOM WING IS CONSTRUCTED IN SAME MANNER WITH THIS EXCEPTION. GUSSETS W14 ARE CEMENTED TO RIBS W4 FLUSH WITH TOP OF SAME, SO THAT REAR OF NOTCH IS FLUSH WITH FRONT OF SPARS (SEE WING PLAN WITHOUT CENTER SECTION ATTACHED); AND W12'S ARE OMITTED FROM CENTER SECTION. CUT TISSUE OUT OF NOTCHES IN W12'S, W13'S AND W14'S TO ALLOW INSTALLATION OF WING STRUTS IN FINAL ASSEMBLY.



ASSEMBLE ON PLAN. ROUND OFF STRUTS. CUT TWO EACH TO LENGTH AND SHAPE. FOR LEFT HAND UNIT CEMENT STRUTS ON TOP OF WG & WG1. FOR RIGHT HAND UNIT CEMENT WG & WG1 ON TOP OF STRUTS.

AUTO-MAGIC-PILOT FLYING

NEW METHOD OF CAPTIVE FLYING FOR SMALL AREAS. HAND CONTROLLING AS IN U-CONTROL NOW UNNECESSARY. PREVENTS CHASING AND POSSIBLE LOSS OF MODEL, OR COLLISION DAMAGE, AS EXPERIENCED IN FREE-FLYING. MODEL AUTOMATICALLY FLIES TO PRE-DETERMINED HEIGHT UNTIL GRACEFUL LANDING IS MADE. INSTALL CONTROLS IN MODEL AS DESCRIBED IN CONTROL SYSTEM NOTE. DRILL OUT SMALL HOLE (IN VERTICAL) AND LARGE HOLE (IN HORIZONTAL) PLYWOOD A/M UNITS AND SECURELY CEMENT TOGETHER. SECURE A POST (BROOMSTICK) APPROXIMATELY 4 FT. HIGH. DRIVE POST INTO GROUND OR NAIL BOARD TO BOTTOM AND WEIGHT SAME TO PREVENT POST FROM SHIFTING. FASTEN A/M PILOT UNIT TO TOP OF POST WITH NAIL. USE WASHERS ABOVE AND BELOW UNIT. BE CERTAIN HOLE IS LARGE ENOUGH SO THAT IT SWINGS FREELY AND EASILY. TIE 12 FT. TO 15 FT. NYLON (OR STRONG THREAD) LINES FROM A/M UNIT TO LINES COMING FROM MODEL. BE CERTAIN LINES ARE SAME LENGTH. WHEN LINES ARE TAUT, AND MODEL IS HELD AT SAME LEVEL AS A/M UNIT, ELEVATOR IS NEUTRAL. WHEN MODEL IS LOWERED ELEVATOR GOES UP; WHEN RAISED, ELEVATOR GOES DOWN. RUDDER "R" MUST BE ANGLED 3/8" TOWARDS OUTSIDE OF CIRCLE. TO FLY MODEL, START ENGINE, PULL MODEL AWAY FROM POST UNTIL LINES ARE TIGHT, THEN RELEASE FOR TAKE-OFF.