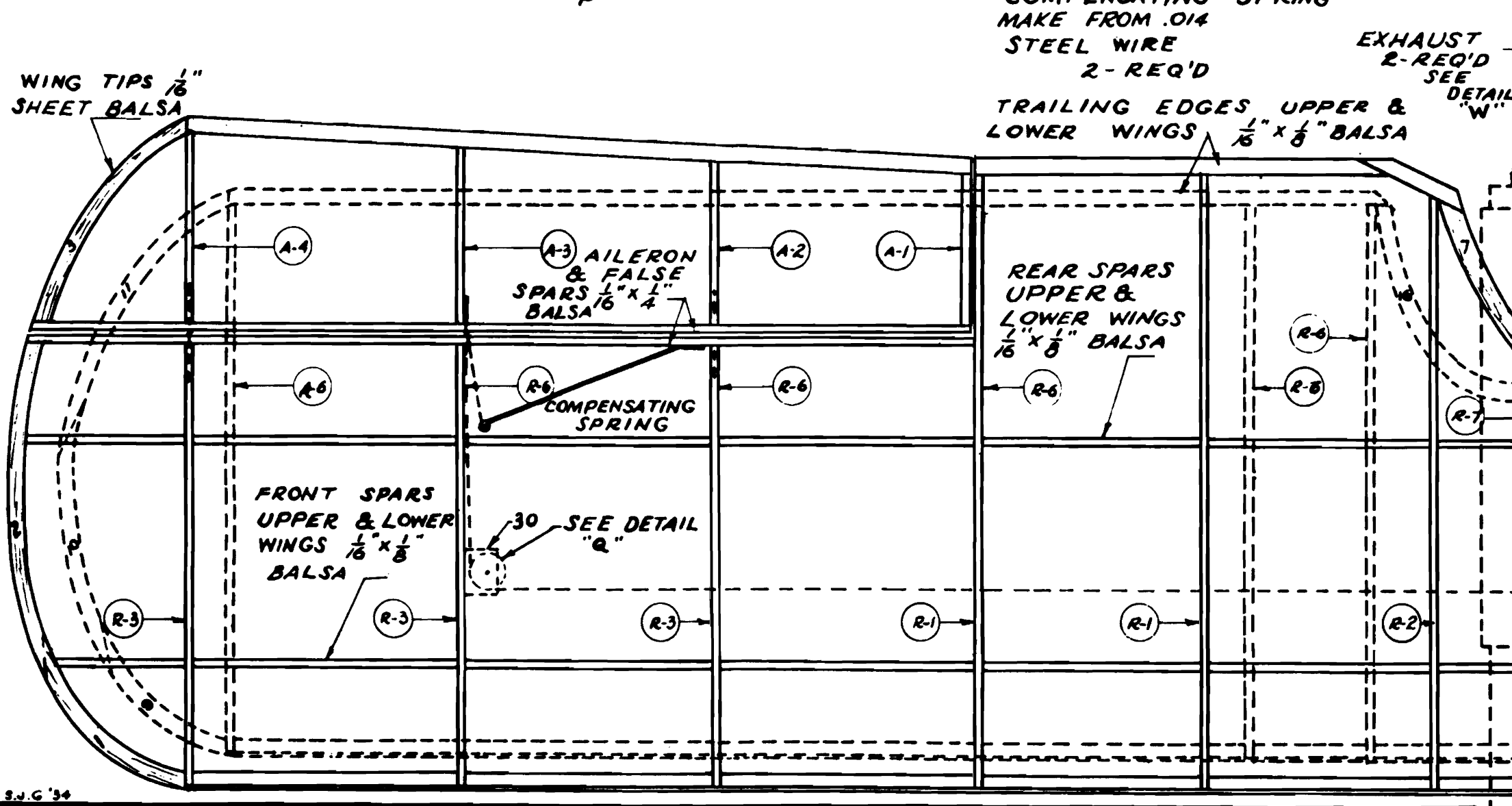
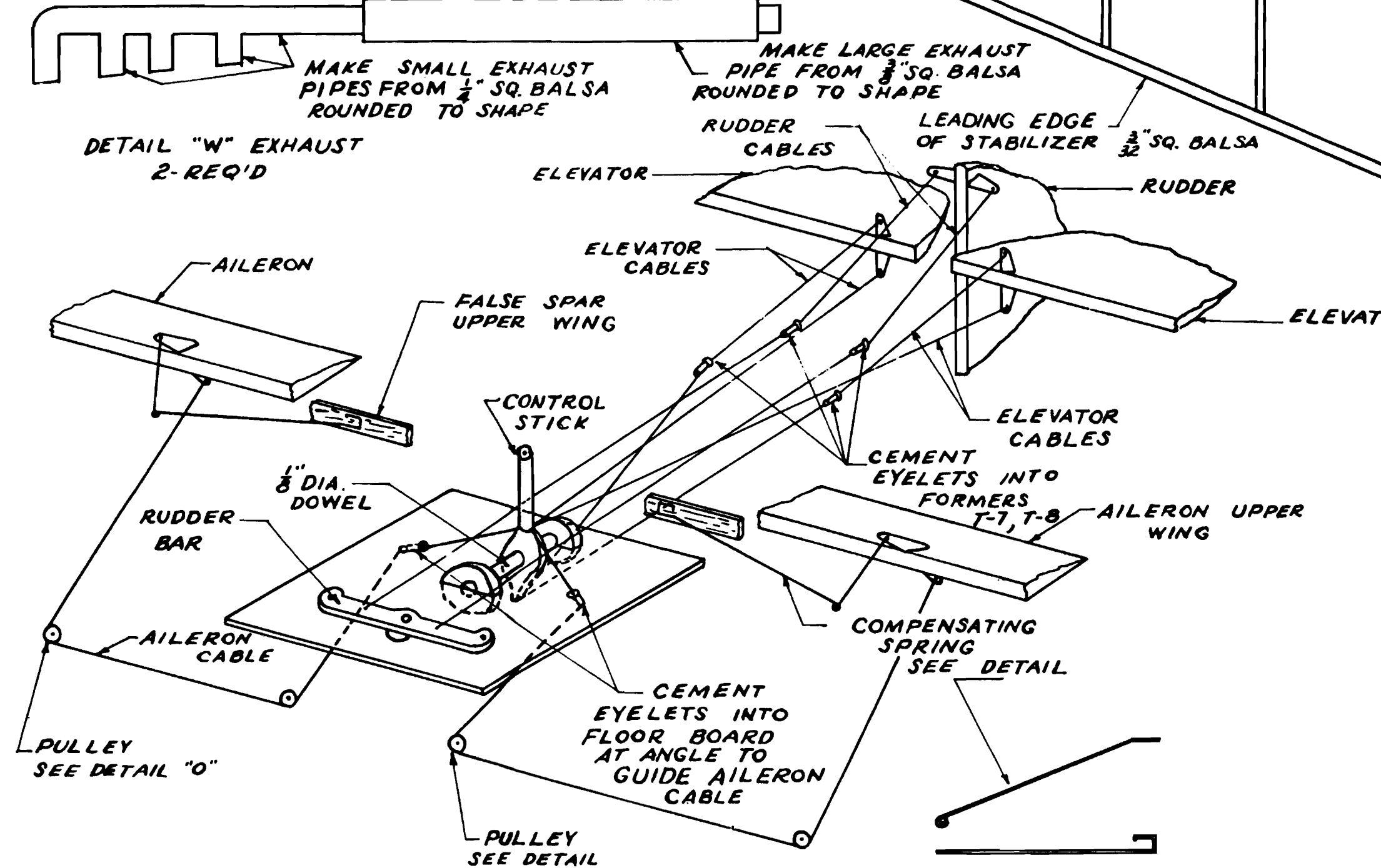
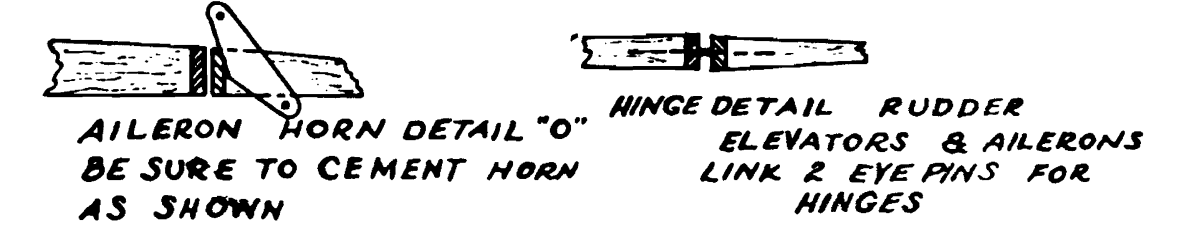


"SPAD XIII"

24 INCH WING SPAN FLYING SCALE
 FULL SIZE DRAWING
 DESIGNED & DRAWN BY STEPHEN J. GRAFFEO
 CONSTRUCT-A-PLANE CO. INC.
 BROOKLYN, NEW YORK
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COLOR SCHEME: FUSELAGE, RUDDER, & FIN ORANGE. WINGS, ELEVATORS & STABILIZER YELLOW.



INSTRUCTIONS FOR BUILDING THE SPAD XIII

FUSELAGE—Build two sides of the fuselage on the plan using 3/32" sq. Balsa. Build both sides together so that they will be exactly alike. When dry, cut apart. Cut out the top and bottom formers from printed sheet. Use razor blade or model builders knife. Bottom formers are marked "B", top formers are marked "T", notch formers where shown. Be sure notches are only 1/16" to receive stringers which are 1/16" sq. Balsa. Cement in place as shown on plan. When fuselage framework is complete, lay aside. Do not cover until control parts are in place.

WING CONSTRUCTION—Cut ribs and wing tips from printed sheet. Make notches as shown. Use 1/8" sq. Balsa strip for leading edge. For trailing edge 1/16" x 1/8" Balsa strip. Wing spars are made of 1/16" x 1/8" strip Balsa. Spars are on the bottom of wings to assure smooth covering. Place ribs in their proper places as shown on plan. Aileron ribs are marked "A-1", "A-2", "A-3" and "A-4". Be sure that these ribs are cut accurately so that they will fit the wing section, for aileron spars use 1/16" x 1/4". Now cover bottom of upper wing and top of lower wings. Do not cover top of upper wing and bottom of lower wings until all control parts are in place.

TAIL SURFACES—Build the tail surfaces of 1/16" x 1/8" Balsa. Sandpaper to streamline shape. Use 3/32" sq. Balsa for leading edge. Stabilizer and elevator spars are made of 1/16" x 1/8" Balsa. Tape at the ends to 1/16" to meet tips of stabilizer and elevator. Tips are cut from printed sheet and numbered 18, 19, 20, 21, 22 and 23 for elevator, and 17 and 24 for stabilizer. Build rudder and fin of 1/16" x 1/8" Balsa. Sandpaper to streamline shape. Use 1/16" x 1/8" for spars. Rudder tips are cut from printed sheet #25, 26, 27 and 28, for fin use 3/32" sq. Balsa for leading edge.

WING AND LANDING GEAR STRUTS—Sandpaper Balsa strips 1/16" x 1/4" and 1/16" x 3/16" to a streamline shape for wing struts. Make land-

ing gear struts of 1/16" x 1/4" Balsa. Make spreader bar from 1/8" x 1/4" Balsa streamlined.

CONTROL SYSTEM—Cut floor board from printed sheet. Notch where shown for control stick. Cut rudder bar #33 from printed sheet. Put in proper place as shown on plan. The control stick #32 is cut from printed sheet and laminated. Cut small hole to receive 1/8" dia. dowel as shown. Before gluing tail surfaces to fuselage, install control threads through fuselage. Tie loose ends to horns on movable surfaces. Insert bulkhead #29 as shown with rear hook, and 4 strands of rubber, glue in place. Insert eyelets into formers "T-7" and "T-8" for elevator and rudder cables. Cover top & two rear sections of fuselage only and glue tail surfaces on. Adjustments are made by pulling threads at front of fuselage. Threads are now glued permanently to controls. Also make two compensating springs from .014 steel wire and glue to aileron spars of right and left upper wing. Connect thread to top of aileron horns and springs as shown so that ailerons are pulled upward. Draw aileron control threads from control stick through eyelets on floor board, then thru bottom wings and up to top wings, and tie to bottom of aileron horns. Adjust by loosening as required.

FINISHING COVERING—Be sure to draw paper over the fuselage and wings so that there will be no wrinkles. Use dope to cement the paper to the leading and trailing edges of the wings only, not to the ribs, as this will wrinkle the paper when doped. When paper is glued to all surfaces spray with water. Allow to dry. When perfectly dry, apply one coat of dope. Brush one way only to assure a fine even coat.

PROPELLER—Propeller is ready made in the kit. All you need to do is sand blades to airfoil finish.

