



# CURTISS HAWK for control line fans

Designed and Drawn by PAUL PLECAN

■ For the Flying Scale fan who has a weakness for biplanes, mention of any of the Curtiss "Hawks" brings instantaneous praise. Rugged, aesthetically pleasing in line and form, almost all "Hawk" models are generously endowed with the multiplicity of struts, wires, ribs and stringers that set the "detail hound" to drooling. If you are of this breed, pull up a chair, this is your meat.

Our model, drawn to a scale of 1" to the foot, performs well with anything from .19 to .29 displacement, and has scale rib spacing.

Construction is fairly straightforward, but the demands are high if a good-looking job is to result. After all, with 50 (yes, fifty!) ribs squeezed into 31" of span for that top wing, each one has to be "right on the button." The examination will be thorough when the gang spots this job at the local flying site! Built right, there's nothing like a "Hawk" to command attention, so let's clear the work bench.

Basic framework is 3/16" sq. medium hard balsa as shown in profile view. Not all framework was shaded in on drawing; to do so would have obliterated other details. Top longeron is straight (just under stabilizer level); the bottom conforms with the bottom edge of the profile view. Forward of F-3 these longerons converge, ending at F-1.

Diagonal bracing is a "must" as is ample drying time for the cement before removing from workbench for cross-brace installation. Cross-brace sizes are given above cockpit area. Note two each are required. Since 1B, 2B, 3B and 4B are similar, eight of this size will be needed. When installing cross-braces, note slight bevels needed at those ends where the longerons converge aft of cockpit. Those forward of F-4 do not get this treatment.

Once basic framework is built, the balsa-block areas can be worked. Side blocks cement on first, followed by top and bottom. All cross-sections are on plan. A good bit of carving is required. Bending stringers to conform with side curves of fuselage suffice for some modelers, but we think it better to cut out shaped and tapered stringers as shown (S1 and S2). Then mere application is necessary, plus a bit of sanding to trim them exactly.

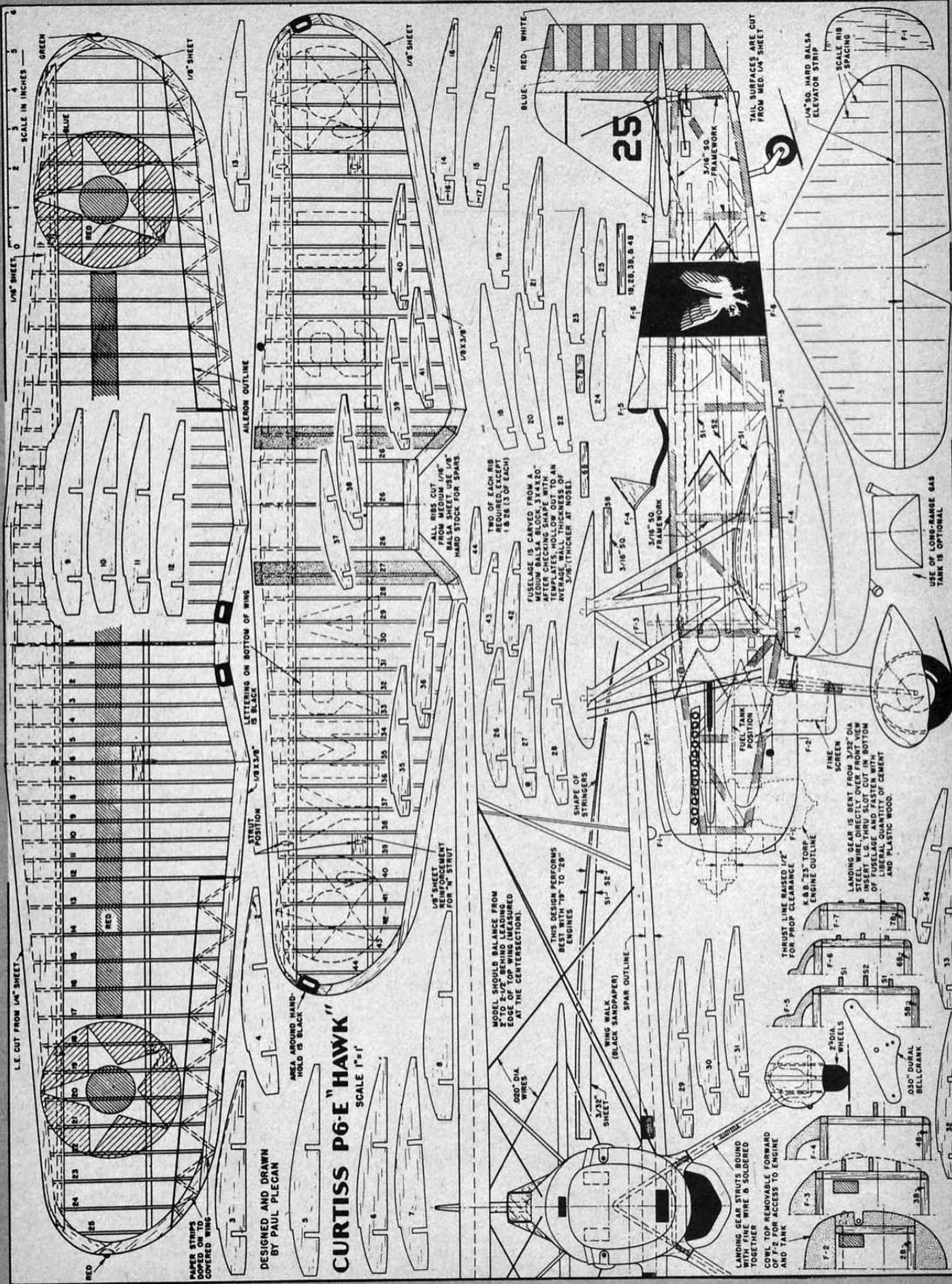
It will be best to "fill-in" the area between stringer S2 and bottom longeron where lower wing passes through fuselage to obtain strength. Area below stabilizer is similarly "filled-in," scrap 3/32" or 1/8" balsa being just right. Due to the taper, the hole in fuselage for passage of wing will have to be large enough for rib #28 to pass through. After Wing is cemented in place, remaining space is

filled in with Aero Gloss Plastic Balsa or similar compound to produce fillets at root of lower wing.

Wing construction is orthodox, but take care in cutting out ribs and spars—in this model, neatness counts. Firm, straight-grained wood is a "must" for entire wing. For the sake of simplicity, tail surfaces are 1/4" sheet, sanded to airfoil (streamline) cross-section. For the rare individual who has all the info on proper scale rib spacing, etc., the tail can be built up, but it isn't necessary. Scale position of ribs can be simulated with strips of bond paper cemented to tail where desired.

Individual ability will be governing factor in the completion of model, as will the amount of extra detail over and above that shown on plans. Correct information on coloring is a stumbling-block for many, so here is the data for your P6-E: fuselage was olive drab, although just prior to WW 2, some P6-Es had blue. Nose area, L.G. struts, hawk talons of claws on the wheel-pants, and band around rear of fuselage was black. White trim as shown. Hawk on each side of fuselage, white. Wings entirely yellow, except for national insignia and red stripe on top wing; black lettering and national insignia on lower wing (bottom surface only). Hand-holds on lower wing tips

(Continued on page 55)



L.E. CUT FROM 1/4" SHEET

1/8" SHEET 0 1 2 3 4 5  
SCALE IN INCHES

PAPER STRIPS COUPED ON TO COVERED WINGS

DESIGNED AND DRAWN BY PAUL PLECTAN

# CURTISS P-6E "HAWK"

SCALE 1"=1'

AREA AROUND HAWK HOLD IS BLACK

STRIUT POSITION

LETTERING ON BOTTOM OF WING IS BLACK

AILERON OUTLINE

1/8" SHEET REINFORCEMENT FOR "H" STRUT

ALL RIBS CUT FROM 1/8" HARD BALSAM STOCK USE 1/8" HARD STOCK FOR SPARS

NOSEL SHOULD BALANCE FROM EDGE OF TOP WING (MEASURED AT THE CENTERSECTION).

THIS DESIGN PERFORMS BEHIND ENGINES

WING WALK (BLON SHAPER)

SPAR OUTLINE

TWO OF EACH RIB REQUIRED, EXCEPT 18, 26 (13 OF EACH)

FUSLAGE IS CARVED FROM 1/8" HARD BALSAM AFTER CHECKING SHAPE WITH A TEMPLATE, HOLLOW OUT TO AN AVERAGE 1/16" THICK AT NOSEL 3/16" THICKER AT REAR

LANDING GEAR STRUTS GOING TOGETHER WITH FINE WIRE & SOLDERED

COUL TOP REMOVABLE FORWARD OF F-2 FOR ACCESS TO ENGINE AND TANK

25" DIA WHEELS

0.50" DURAL BELL CRANK

THRUST LINE BASED 1/2" FOR PROP CLEARANCE

K&B 25-TON ENGINE OUTLINE

LANDING GEAR IS BENT FROM 3/32" DIA FINE WIRE & SOLDERED TO INSERT U.S. THIRD SLOT IN BOTTOM OF FUSELAGE AND FASTER WITH LIBERAL QUANTITY OF CEMENT AND PLASTIC WOOD.

FINE SCREEN

FUEL TANK POSITION

3/16" SO FUEL TANK

3/16" SO FUEL TANK

3/16" SO FUEL TANK

3/16" SO FUEL TANK

3/16" SO FUEL TANK

TAIL SURFACES ARE CUT FROM MED. 1/4" SHEET

1/4" SO HARD BALSAM ELEVATOR STRIP

SCALE RIB SPACING

USE OF LONG-RANGE GAS TANK IS OPTIONAL

# Curtiss Hawk

(Continued from page 17)

and center section of upper wing are black.

Horizontal tail surface entirely yellow, same for fin and that portion of rudder ahead of the hinge line. Red, white and blue striping on rudder as indicated on plans. White diamond trim on headrest. Black number on fin; same number in white on nose just above prop. These markings are those used by 17th Pursuit Squadron based at Selfridge Field, Michigan, in mid-thirties.

Minor variations occurred in many P6-E Hawks. Wheel-pants that exposed the outboard face of wheel appeared on later versions in interest of faster wheel-changes or tire repairs. While enclosed cockpits and supercharged engines were also used, it is doubtful if these changes saw actual squadron service.

### Bill of Materials

(Balsa, unless otherwise specified)

Five pieces 1/16" x 2" x 36" for ribs, leading edge covering; (1) 3/8" x 2" x 36" for spars, wing tips, etc.; (2) 3/8" x 3/8" x 36" trailing edge stock; (6) 3/16" x 3/16" x 36" hard balsa for longerons, cross braces, etc.; (1) 3/32" x 2" x 36" for stringers, fill-in material; (1) 1/2" x 2 3/4" x 3" nose block; (1) 1" x 2 3/4" x 14" turtledeck; (1) 3/8" x 2 3/4" x 5 3/4" top-front cowl; (1) 1" x 2 3/4" x 5" bottom cowl; (2) 3/8" x 3" x 5 1/2" side cowls; (1) 1/2" x 3" x 36" medium for tail surfaces (use leftovers for wheel-pants, etc.); (1) 3/32" x 3/4" x 30" N-struts (pine or other hard wood); (1) 3/32" x 5/32" x 20" cabane struts (pine); (2) 5/16" x 3/8" x 5" hard wood engine bearers; (1) 3/32" dia. x 36" steel wire for landing gears; (1) 2 1/2" bellcrank; (1) .045" or .049" dia. x 36" steel wire for pushrod; (1) 3/4" dia. tailwheel; (1) pair 2" dia. main wheels; (1) 3/16" dia. brass or aluminum tubing for scale exhaust stacks; (5) .020" dia. steel wire rigging; dope, cement, Aero Gloss Plastic Balsa as required; engine .23 cu. in. displacement (or close), tank, fuel line, props, related flying equipment as required.

A few remarks concerning biplane U-control models will not be out of place here. Incidence of wings is of utmost importance—making a simple scrap "jig" to position upper wing is mandatory when struts are being cut to size and fitted. Strength of joints where struts join fuselage and where they meet wing surface is very, very important . . . you don't want the upper wing to part company with its mate on a rough landing. A free-turning pair of wheels is necessary, since model sets higher off ground than a monoplane. Be ready to trot forward the moment the wheels touch down, so model rolls straight ahead with your control lines loose.

## One Bite... on Tight!

for 1/2 A's to 60's



Pat. Reg. 587-082

**KWIK KLIP**

Engine Starter  
**50¢**  
ALL DEALERS

B&F Mfg.  
4741 N. Artesian Ave.  
Dept. 117, Chicago 25

Start fast! Get all the power your battery offers . . . quick, easy. Tough, durable plastic, insulated. Good metal contacts, spring-pressure tight. Screw terminals to attach your wires. Get KWIK-KLIP today!

## Lafayette's Radio-Control Specialties



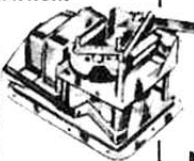
### LITTLE "JEWEL" R/C RELAY

The Mighty Mite of the R/C field. Weighs less than 1/2 oz.! Only 3/4" H x 17/32" W x 1-1/16" L. Highly sensitive—extremely rugged. Pulls at 1.4 Ma—drops out 1.2 Ma D.C. S.P.D.T. 5000 ohm coil.

F-260 ..... Net 2.75

### R/C ELECTRIC SERVO MECHANISM • DESIGNED AND PRICED FOR HOBBYISTS

New, powerful, motor driven R/C actuator. Delivers positive, instantaneous action. Provides selective steering and electronic, automatic return to neutral! Extremely efficient when used with model boats and land vehicles. Only 2 1/4" x 2" x 1 1/4". Includes instructions and linkage.



### LAFAYETTE SPECIAL R/C RECEIVER

Completely wired and assembled, with tube, ready to operate on exam free 27.255 MC remote control band. Size: 1 3/8" x 1-15/16" x 3". Weight 3.3 oz. Uses one 1.5 volt and one 45 volt battery. Less batteries. Shpg. wt., 6 oz.

F-208 ..... Net 8.95

### LAFAYETTE SPECIAL RADIO CONTROL TRANSMITTER

Completely assembled—tested—and guaranteed R/C transmitter. Includes tube and 27.255 MC crystal, 6 sect. telescoping antenna. Size: 4" x 4" x 12". Approx. 1 mile range. Shpg. wt., 3 lbs. Less batteries.

F-249 ..... Net 14.95

Lafayette Radio 165-08 LIBERTY AVE. JAMAICA 33, N. Y.

NEW YORK, N. Y.—100 Sixth Ave.  
BRONX, N. Y.—542 E. Fordham Rd.  
NEWARK, N. J.—24 Central Ave.  
PLAINFIELD, N. J.—139 West 2nd St.  
BOSTON, MASS.—110 Federal St.

**FREE!**  
LAFAYETTE  
CATALOG



JUST OFF THE PRESS!

### NEW 180 PAGE ELECTRONIC CATALOG FEATURING THE BEST BUYS IN THE BUSINESS

The newest and largest assortment of Electronic, Radio and TV parts, Hi-Fi and Public Address Components and systems, Test Equipment, tubes, Transistor Kits and miniaturized components for transistor circuitry, Ham Equipment, Builders Kits, Tools, Books, Microscopes, Binoculars, Telescopes, Cameras, and Drafting Equipment—ALL AT LOWEST PRICES—Catering to the economy minded dealer, serviceman, engineer, technician, experimenter and hobbyist. CRAMMED FULL OF MONEY SAVING BUYS. SEND FOR YOUR FREE COPY TODAY.

Lafayette Radio 165-08 LIBERTY AVE. JAMAICA 33, N. Y.

DEPT. AM-K

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

ZONE \_\_\_\_\_ STATE \_\_\_\_\_

**SEND FREE CATALOG 305**

## New Flash-Weld DRY ASSEMBLY

Speedy  
Clean

Polystyrene  
PLASTIC  
Cement



With NEAT-FLO Pin-Point Applicator  
PATENT PEND.

For Speedy  
Clean-Cut  
Dry Assembly  
Of Polystyrene

**PLASTIC**

MODELS  
PLANES  
BOATS  
TRAINS  
TOYS

No Blotches  
No Splotches

Will Not Soil Or Damage Clothing Or Rugs

WONDERFUL FOR MENDING Polystyrene HOUSEWARES

Retail **25¢**

VICTOR STANZEL & CO. SCHULENBURG, TEXAS

## For that "Finishing Touch"



only **\$3.75**  
**HOBBY SPRAY GUN**  
410M PRODUCTS

New and Improved.

Operates from vacuum cleaner.

Give your model that "finishing touch"! The Hobby Spray Gun sprays any type of paint, dope, vinyl, lacquer, or water-base paint. Will spray up to 10 sq. ft. with one filling of 48 cc. jar. It is chrome plated for easy cleaning and protection against chemical action. Includes vacuum attachment. May be used with piped or compressed air. No moving parts, always in adjustment, simple to operate. The ideal spray gun for modelers and hobbyists and the do-it-yourself fan . . . paint your model planes, cars, trains, boats, display shelves, etc.—the Hobby Spray Gun gives them that "finished touch".

**stewart/lundahl co.**

7342 Fulton Avenue  
North Hollywood, California