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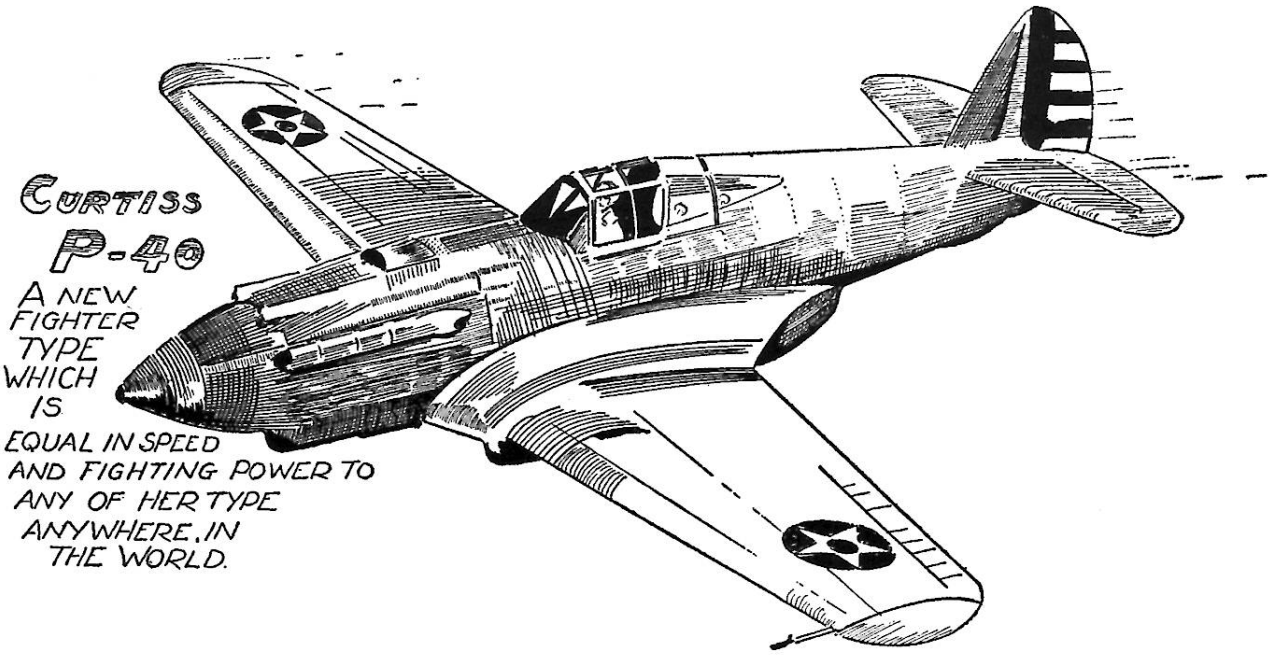
Editor: Stew Meyers JANUARY-FEBRUARY 2008



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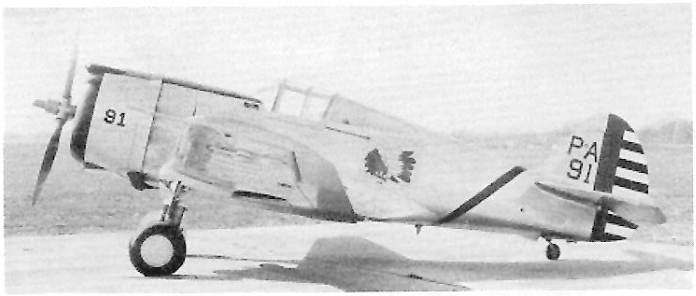
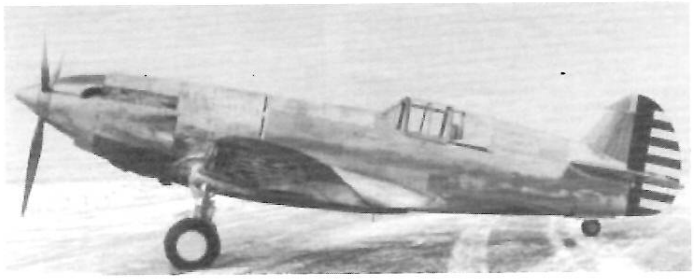


CURTISS P-36, THE BASIC AIR FRAME.



THE XP-37 MODIFICATION OF THE P-36.

THE XP-40 CONVERTED FROM A P-36 WITH THE ORIGINAL AFT RADIATOR INSTALLATION, THE SUBJECT OF THIS ISSUE.

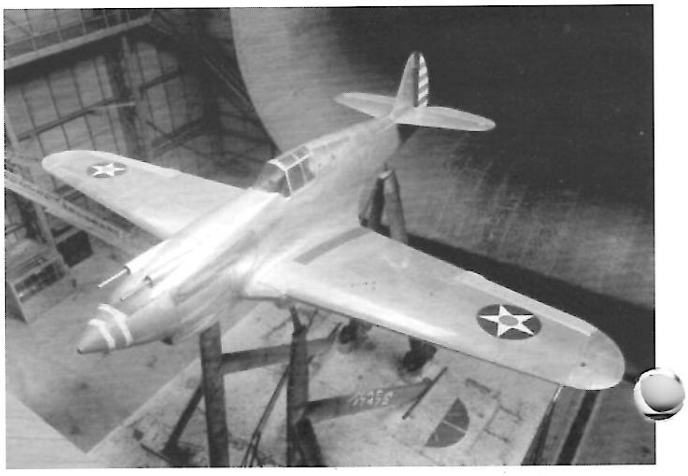
THE XP-40 WITH INTERMEDIATE RADIATOR INSTALLATION.

THE FINAL XP-40 CONFIGURATION SAME AS THE PRODCUTION P-40.

THE PRODUCTION P-40A.

LOUSEY PHOTO, BUT IT SHOWS THE BOTTOM OF THE XP-40.

THE CLASSIC XP-40 PHOTO.



FINAL XP-40 IN LANGLEY WIND TUNNEL.

Max Fax January-February 2008

XP-40 Issue

Stew Meyers Editor

The XP-40 as presented in this issue was a single example that existed in this configuration for less than three months at the end of 1938. For such a short-lived aircraft, it garnered considerable attention from the model world at that time. It graced the cover of both Flying Aces and Model Airplane News, was the subject of model construction articles in both, and was kitted by at least six model airplane companies.

Once agin, Dan Driscoll has delved in to his vast collection of kits and plans to come up with material on the first Curtiss P-40. Including a nifty Peerless dimer and Weiss plans from MAN. You will note the rhetoric in Model Airplane News is a bit over blown.

Thanks to Commander-in-Chief Lin Reichel for the Megow plan in this issue that erroneously identifies the XP-40 as a "Curtiss P-39". Don Srull tells us he built this as a kid. We don't have room to present it full scale.

XP-40 HISTORY

In February 1937, while the USAAC was still evaluating the P-36 for production, it contracted with Curtiss to re-engineer the fighter to test the potential of a highly promising new liquid-cooled V-12 engine, the turbosupercharged General Motors Allison V-1710. To save money, the factory rebuilt the original Hawk 75 prototype to create the new prototype. First flown in 1937, the XP-37, as the new fighter was called, was not an unqualified success. Although its 1,150-hp Allison engine and aerodynamic lines gave it far better performance than the P-36, it had a number of serious drawbacks as a combat plane. The General Electric turbosupercharger boosted the engine's critical operating altitude -- i.e., the altitude at which the supercharger would operate at peak efficiency -- to 20,000 feet, but it proved unreliable and likely to catch fire. In addition, the cockpit had to be moved aft to balance the heavy engine and its bulky turbosupercharger, which reduced pilot visibility.

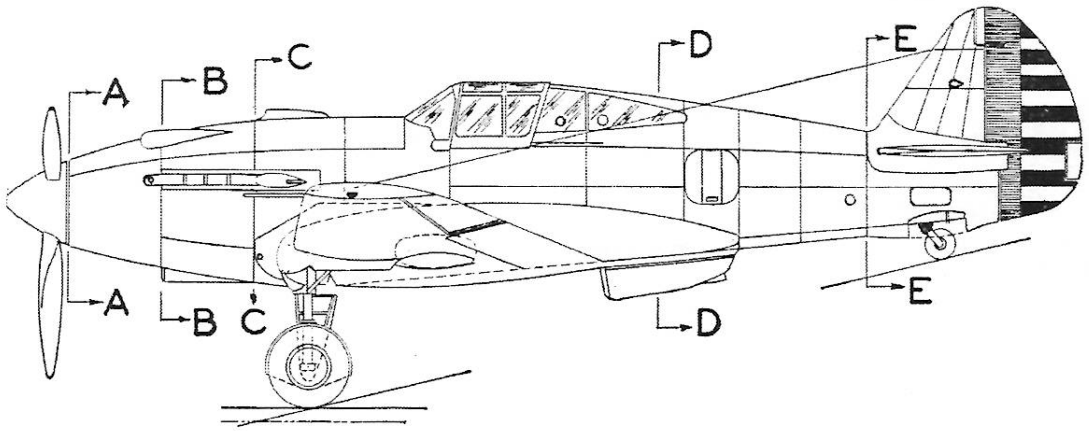
Despite the promising performance of the turbosupercharged Allison engine, the problems encountered with the XP-37 were rapidly reducing the likelihood that the airplane ever would be placed in production. Therefore, Don Berlin decided to take a different approach to a P-36 derivative equipped with an Allison engine. On March 3, 1938, Curtiss submitted a proposal to the Air Corps to modify a P-36 airframe to accept an Allison engine fitted with a mechanically driven supercharger. The modifications to the airframe were less extreme than those required for the XP-37, as they did not require moving the cockpit aft. The engine also proved to be more reliable than the turbosupercharged Allison used in the XP-37, although its critical operating altitude was reduced to 10,000 feet, with performance falling off at higher altitudes up to its service ceiling of 32,750 feet. At Curtiss the new fighter design was known as the Model 81, but the Air Corps called it the XP-40.

Work on the XP-40 began in 1938. This would use a modified P-36 fuselage, with the Allison V-1710-19 inline engine, producing 1,050 hp at 10,000 feet. Tests suggested the new aircraft would be fast, but at a relatively low altitude. Work on the prototype began under the terms of a contract issued on 30 July 1938. It first flew on 14 October 1938. It was modified from the 10th production P-36A airframe. The XP-40's sharply pointed nose was longer than that of the P-36, though not so long as that of the XP-37. Since the cockpit was not displaced aft, the pilot's view was better than in the XP-37. The radiator, which had been buried in the fuselage between the engine and cockpit of the XP-37, was now installed under the fuselage, aft of the wings.

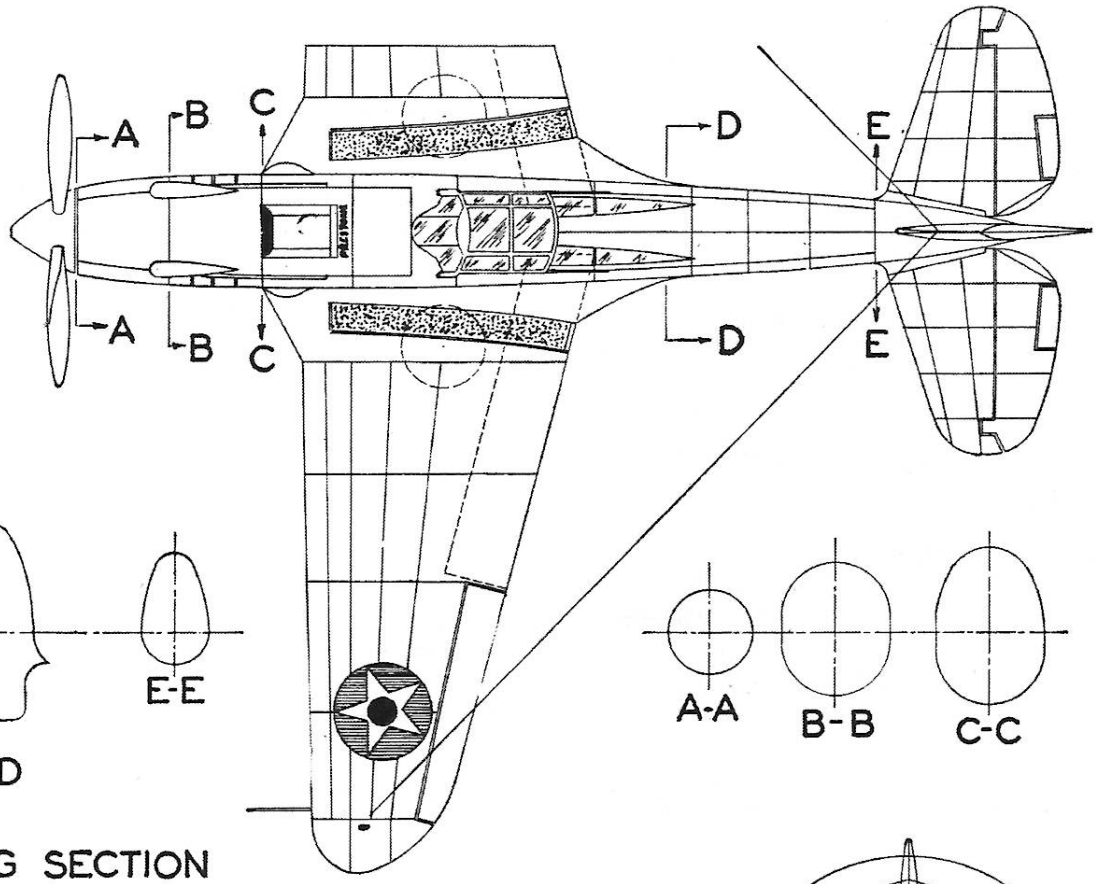
However, the new aircraft did not live up to expectations. Top speed was only 340 mph, twenty miles per hour slower than Curtiss had promised. It would take all of 1939 to fix this problem, until in December 1939 the XP-40 reached 366 mph at 15,000 feet. This put its top speed on a par with the Spitfire I, but at a much lower altitude – the Spitfire peaked at 18,500 feet. The most conspicuous change was the relocation of the radiator to a new position under the nose, giving the P-40 its most characteristic feature.
The following January, The XP-40 won the Army's 1939 fighter competition against the Lockheed XP-38 Lightning, Bell XP-39 Airacobra, Republic AP-4, and Curtiss' own XP-37 and Hawk 75R, the latter a turbosupercharged version of the radial-engine P-36. The XP-38 outperformed the XP-40, especially at high altitudes, and was more heavily armed, but the XP-40 had the advantage of being based on an existing fighter design that was already on the production line. That meant that Curtiss could put the P-40 into production with a minimum of delay, and at the highly competitive price of $24,566.60 apiece. On April 26, 1939, Curtiss was awarded a contract for 524 P-40s -- once again, the largest order for fighter planes placed by the Army since 1918. It was thus the most modern fighter available to the USAAF when American entered the Second World War.

The P-40 prototype was armed with one .50- and one .30-caliber machine gun -- the standard USAAC fighter armament during the 1930s -- but the production model was armed with two .50-caliber machine guns. In keeping with President Franklin D. Roosevelt's policy of making the latest American military hardware available to the Allies, 140 of the original batch of P-40s were diverted to France. They were armed with one .50-caliber machine gun in the fuselage and four 7.5mm guns in the wings. None of those P-40s were delivered by the time France capitulated, however. Instead, the export P-40s were delivered to the RAF and became known as Tomahawk Mk.Is.

CURTISS XP-40
WORLD'S FASTEST PURSUIT PLANE



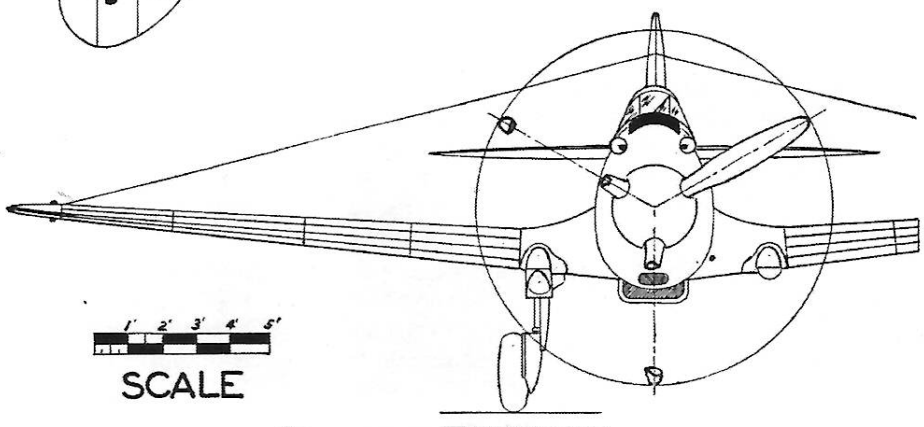
ALLISON LIQUID-COOLED ENGINE



WING SECTION

ROOT

TIP



SCALE

ROBERT C LARREN

MODEL AIRPLANE NEWS

10th Year of Publication

FEBRUARY, 1939
20¢

Curtis Fighter XP-40

(See Page 8)

392 PER- in the CURTISS XP-40

THE PLANE ON THE COVER

By ROBERT McLARREN

UNCLE SAM in his relentless search for an aerial article of horror, a plane with such ghastly striking power that all who behold it will be stricken with the pervading atmosphere of lancing, slashing death that it exudes, has searched not for a ship which represents a dynamic leap into the blind space of destiny's future but a conventional, inexorable, progressive modification of an accepted type which has proven itself capable in actual service.

He has demanded, naturally, a craft of proven structure and design. But he has commanded also that that strange fruit of engineering dreamers' designing genius bear a meat of scientific superiority over those other nations of the world. Through the closest kind of cooperation by three of our land's most important national defense agencies—the United States Army Air Corps, the Allison Engineering Company and the venerable Curtiss Airplane Company—Uncle Sam now has that dream painted in shocking reality : a fighter of such wickedness he has analyzed his own dreams for it with amazed tolerance.

It is with a great deal of pride that we present our plane on the cover this month :
the Curtiss XP-40 single-seat pursuit-fighter. The reason for that pardonable pride is obviously evident, for we are hereby the agency of introduction of this new ship, the hosts at the XP-40's "coming out party." It is generally known the impenetrable shroud of secrecy which invariable veils newly developed and experimental items for our national defense. But the present volcanic rumblings of international unrest the world over makes it imperative that those nations which might be singed by the explosion exhibit their strength, their power of defiance, in a last effort to stave off the catastrophe. Such was the mighty Air Force of Germany in the Czechoslovakian crisis and such is our own Army Air Corps in the present and even more fearful and pregnant crisis.

None of the most boisterous bullies in the corner tavern dare attack or even tread upon the toe of the giant who stands apart, whose magnificent torso, flexed biceps and sinewy cords of muscle are displayed. Neither shall Germany, Italy nor Japan flagrantly violate Uncle Sam's sanctity when his weapons of battle are laid bare.

Hence the shedding of that tight barrier of secrecy surrounding experimental military units by our governmental agencies. The East and the West must know of our power ; they must be made aware of our strength. And thus the release of photographs, the distribution of information and our presentation of the Curtiss XP-40 this month. May it serve its purpose!

The Curtiss Air Corps XP-40 is the latest modification of a proven type and isthe present ultimate development of the original Curtiss Model 75 single-seat

pursuit plane. Construction follows convetional all-metal cantilever design. In comparison with the XP-37, described in the May 1938 issue of MODEL AIRPLANE NEWS, we see that several radical and efficacious alterations have been applied, chief of which is the abandonment of the exhaust-driven General Electric centrifugal supercharger, the redesign of the liquid cooling system and the moving of the cockpit forward to its present position of vantage in the mid-point of the fuselage. This has been accompanied by a thinning-out of the fuselage aft of the cockpit and a resultant gain in streamlining of consequent speed increase. The wing has been faired more completely into the fuselage through the use of generous filleting practice of the wing leading edge into the fuselage. The wing is of all-metal, internally-braced structure built up on a mai spar, two auxiliary spars and conventional rib and bracing wire truss. Ailerons are metal-frame fabric-covered, as are the cantilever tail control units : rudder and elevators. Flaps are of metal structure throughout and move down a full thirty degrees when necessary. Landing gear and tail wheel are both fully retractable, the main wheel moving through a longitudinal arc of ninety degrees in folding rearward and lying flush with the lower wing surface. The unit is of the single strut, pneumatic oleo type. The tail wheel folds to the rear and upward, the enclosure being completely sealed with retracting metal plates.

Power is supplied by an advanced type Allison twelve cylinder, Vee type liquid-cooled engine, model GV-1760-D1, developing 1620 horsepower at 3000 revolutions per minute. This power plant is Prestone cooled through the use of tubing conductors to the belly radiator situated just under the trailing edge of the wing. A small oil cooler is located just under the nose. Supercharging is obtained through the use of a gear-driven design anchored to the rear of the engine.

The ship is equipped with a Curtiss constant-speed three bladed, all-metal propeller, driving mechanism of which is fully enclosed in a polished metal nose spinner.
The pilot's quarters have been considerably revamped both in placement and accommodations. He is now located in the center of the fuselage and is completely enclosed in a sliding glass hatch. The standard Model 75 rear view glass enclosure has also been included in the XP-40 and extends

rearwards from the main hatch along the sides of the fuselage. Within this latter enclosure are the main gas tanks, outlets to which have been made through this glass surface. Other tankage is in the wing, and oil storage is provided within the fuselage to the rear of the engine. The pilot is furnished with a controlled heat and cold air-conditioning system within the cockpit. Now the problem of wearing apparel, so difficult for summer operations, at which time it may be one hundred degrees Fahrenheit on the ground and below freezing at thirty thousand feet altitude, has been solved. Thus, average flying clothing may be donned and perfect flying comfort be maintained throughout the ship's altitude range.

A special command radio set built to United States Army Signal Corps specifications has been installed. This facilitates communication between planes in the air and between group leaders and their command points on the ground. Armament aboard the XP-40 has been considerably redesigned. The twin Browning model MG-53, fifty caliber machine guns, have been moved to the top of the fuselage, and barrel extremes are enclosed in long, streamlined fillets. The guns proper are mounted within the fuselage to each side of the instrument board, readily available to the pilot in the untoward event of stoppage or various mechanical difficulties. These guns, oddly enough, are Prestone cooled (through a spray injector mounted around the firing chambers), which, in turn, is cooled through the installation of a small radiator just preceding the pilot on the upper cowl.

A considerable reduction in weight has been achieved over the previous XP-37 model, the later type installing a gross. fully loaded, of only 5.190 pounds, which includes fuel for a range of 625 miles. Vastly improved performance both in speed and climbing characteristics has been achieved. Official performance data has not, as yet, been released by the War Department, but confidential reports from members of the testing staff credit the Curtiss XP-40 with a top speed of 392 miles per hour and a cruising speed of 365 miles per hour. Absolute ceiling remains at 33,000 feet with service ceiling upped to 30,500 feet. The rate of climb has been reported as being close to the 6,000 feet per minute mark.

No official details of negotiations have been received but we have been informed that the Chief of the Army, President Franklin D. Roosevelt, who viewed this ship in its first public appearance at Bolling Field, Washington, D.C., has expressed great personal interest in the craft and is in favor of ordering the construction of a vast fleet of them as a national defense measure.

Such a step, insuring the formation of something like a dozen squadrons of these flashing aerial beasts, might temper the vociferous clamour of the dictators and put an effective damper on their war drums of defiance.

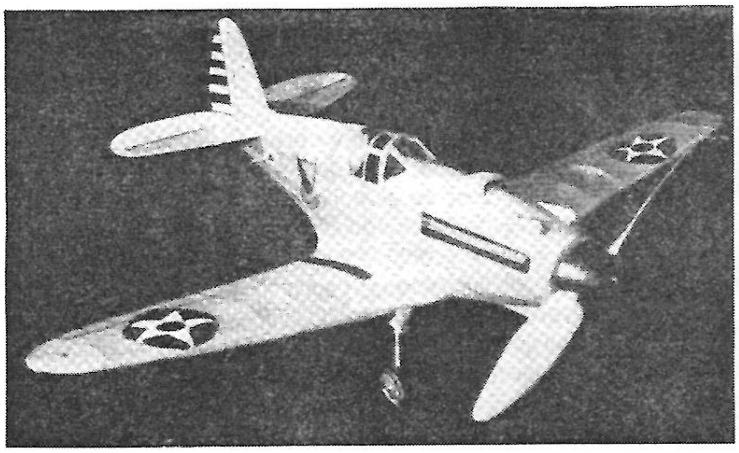
Build A Model Curtiss XP-40

Select a block of high grade balsa or pine 5-1/2" x 1" x 5/8" for the fuselage of our Curtiss XP-40 solid scale model. Trace the side view outline onto the block and cut with a band or small hand-saw. Next, trace the top view outline on the block and repeat the cutting operation. Take a razor blade (suitably installed in a well-guarded holder) and whittle off the rough edges until it approaches the true outline of the ship. Now, make templates from the fuselage cross-sections and place them at the indicated place, whittling off until the fuselage is just a shade larger than the template applied. The reason for this will be made obvious in a moment. Follow this for all five cross sections.

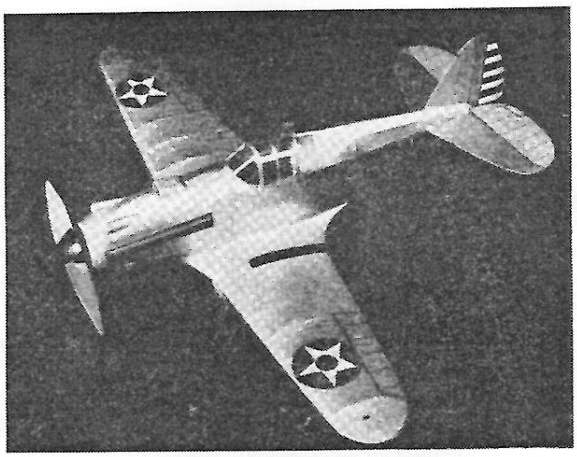
Take a grade of rough sandpaper and smooth the fuselage down, taking care not to gouge too deeply. Then take two pieces of balsa 3-1/4" x 1-1/2" x 1/4" and trace the outline of the wing. Cut to shape and trace the front outline. Cut to shape and follow the wing sections closely. Using a good tough grade of sandpaper, taper the wings as indicated, taking care that the finished product is slightly larger than your template. Follow this operation on the tail surfaces.

Now, before assembly, paint the wings and fuselage silver. After these are thoroughly dry, take a fine grade of sandpaper and sand them down, forcing the paint into the grain and smoothing the surface. Paint, dry, and sand again. Apply the templates and make sure that the surface contacts them at the exact outline. After this apply a final coat of paint and you'll be surprised how smooth and even it will dry. Use small blocks of scrap balsa for carving the gun louvres and various cooling radiator cowls. The pilot's cabin is constructed of small wire or bamboo bent in a rough semi-circle and forced into the wood. A layer of cellophane is then glued over this structure. For final assembly, glue the wings and tail surface (elevators) using plenty of ambroid and making sure that the former have the correct dihedral angle and the latter have none. Wipe the evcess glue away and let the ship stand until thse parts are completely dried.

The landing gear is of extremely sturdy construction if the wheels are glued directly onto the retracting plates and are not made to rotate. Use small sheet balsa parts, carefully sanded, and build the landing gear up as shown in the drawings. Lay the model on its back and glue the main landing wheels into place. Next, glue the rudder on, after having painted in a single vertical blue stripe and alternate stripes of red and white as indicated. The propeller is built up of three lengths of balsa or preferably pine, and glued at the center and well sanded. Attach the tail wheel and mark rivet lines, aileron and elevator lines in black india ink String radio wires from rudder to wing tips and your model will be complete.



The completed model is a fine flyer in spite of its small size

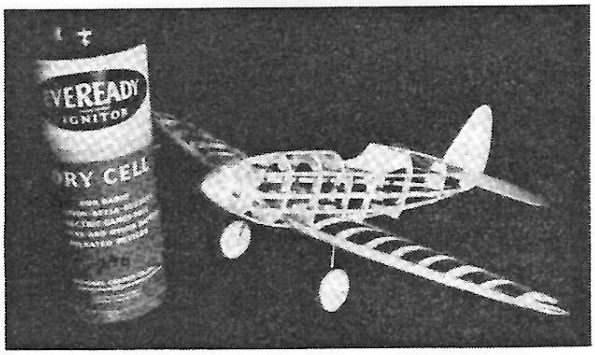


It has graceful lines and realistic appearance

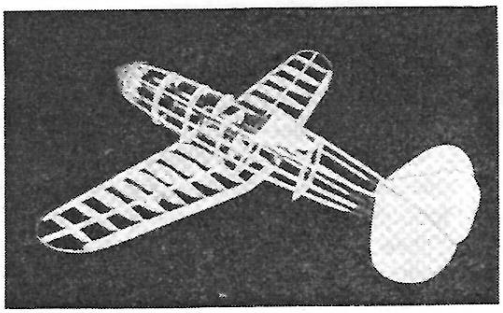
The XP-40 Takes To The Air

A Realistic Scale Model of a High Speed Curtiss Pursuit Plane Designed in Careful Detail That Will Fly For 25 Seconds

By HERBERT K. WEISS



The battery indicates the relative size of the plane. Note the strong construction of the frame.



The plane is easy to build yet has many realistic details.

FOR several months we've been planning to work up a model for this series that would have considerably more detail than the simpler layout of the past. We were willing to sacrifice a little performance in the interests of, say, closer wing spacing and a couple of coats of dope. To offset the increased weight, we wanted a very clean ship with low frontal area; this, of course, eliminating the radial engined prototypes. Our ideal was a mid-wing ship with liquid cooled engine, slim fuselage and reasonable tail area. But somehow we couldn't find quite the plane.

We'd pretty nearly given up the United States and were all set to have another look at Jane's "All the World's Aircraft," when we picked up a newspaper . . . and there was a picture of the XP-40. She was low-winged rather than mid-winged, but otherwise she was just what we wanted, and after a good deal of scurrying after data we were able to lay her out on the drafting board and begin building the model.

We might say something here about the original large plane. Several years ago, the Curtiss company was developing its model "77" low-wing fighter. Pictures that slipped out of the plant occasionally showed a great deal of experimentation going on to determine the effects of many design changes. Every engineer knows the value of trying every design combination in hopes that there may be one which will be outstanding from the rest, but very few have the patience to apply this principle to the small features of a project; such as windshield contours, vent locations, landing gear fairings and the multitude of possible variations of detail design.

In full flight, climbing for altitude

Model builders who have followed the old Hawk biplane series are well acquainted with the thoroughness with which Curtiss engineers investigate the possibilities of design changes. Hawks were built with straight wings, tapered wings, wing radiators, fuselage radiators; with inverted, radial and V-engines; with air-cooled, water-cooled and liquid-cooled engines. Landing gears with split axles, single struts, pants, spats, unfaired struts, faired struts and fully retractable gears were built. The same principle of trying everything was advanced to the "77" monoplane. And so when the ship finally emerged successfully from U.S. Army tests, it became the already famous Hawk P-36, which needs no introduction to any model builder.

But the engineers were still not satisfied. In collaboration with the Army Air Corps specialists at Wright Field they produced a P-36 with co-axial props, the P-37 with Allison engine and finally the XP-40, which flies over 390 m.p.h., and can climb almost a mile a minute.

Those of you who are interested in the constructional details of the XP-40 will find them in the February issue of MODEL AIRPLANE NEWS. And we'd like to point out that Curtiss already had a good ship in the P-36 but they tried again and pro-

The XP-40 Takes to the Air
(CONTINUED)

duced an even better one. It's a good thought for model builders.

Wing

The wing of the model is laid out in one piece. Don't be alarmed if the size of the leading and trailing edge stock seems excessive. After you've shaped the wing to airfoil section, you'll find that most of the leading and trailing edge pieces have been cut away. Ailerons are optional. We'd suggest that you omit them on a flying model, as they add considerable weight and spoil the smooth wing surface.

A very simple way to bend the bamboo for the wing tips is to hold it against the end of a lighted cigarette. If you hold the bamboo just within the ash, but not quite touching the burning end, the bamboo will bend very nicely without charring.

In assembling the wing, leave the leading and trailing edges square-cornered until the wing is assembled and the cement has dried thoroughly. Then carefully trim them to shape with a sharp knife and finish with a sandpaper block. At this time you can sand sharp edges and bumps of cement from the other parts of the wing frame.

Fuselage

With a razor or a sharp knife cut out two halves of each fuselage bulkhead. All bulkheads except A, B and C are 1/16" sheet ; A, B and C are 1/8" sheet. Cement corresponding halves together with short pieces of 1/32" bamboo across the joints for strength.

Cement bulkheads E, G and H to the wing center section and add the two 1/8" x 1/16" balsa side stringers. To these add the remaining bulkheads and the tail post which is also 1/16" x 1/8" balsa. The remaining stringers can now be put in place.

Tail Surfaces

The tail surfaces are cut from 1/32" sheet balsa. We have found these sheet balsa tails to be much more satisfactory on small models than built-up surfaces, for they are lighter and much less liable to warp, to say nothing of the time saved by their simplicity.

Choose a firm grade of medium balsa. Do not use soft brittle material. The bamboo stiffeners on one side of each surface help to keep the balsa from splitting. Sand the pieces to a smooth surface.

Propeller and Landing Gear

Note that a low pitched propeller is designated for flying. This is important, for unless your model is very light, it will mush badly when equipped with a propeller of too high a pitch.

The landing gear has been simplified somewhat from the original, in that the cover plates have been omitted. These would only be a hindrance on a flying model. Model builders desiring an exact model can obtain this detail from pictures of the full scale XP-40.

Cement the landing gear struts in place before covering the wing. The balsa fairings are added after the wing has been covered. They are cut to fit from small pieces of scrap balsa.

The propeller spinner can also be carved from a small block of balsa, but in constructing the test model, we found it simpler to build it up from rings of 1/8" sheet balsa, sanding the final assembly to conical shape. Diameters of the rings are easily obtained by directly measuring from the plan.

Fairing

The wing fairing on the model gave us something to worry about for a while. We thought of using bond paper, but didn't like either the appearance or the weight. Finally we used 1/32" sheet balsa with excellent results. Fitting the fairing is pretty much a "cut and try" proposition which takes patience, but is not at all difficult. Probably the easiest way is to cut and sandpaper a piece of 1/32" sheet balsa which is somewhat larger than necessary, then pin and cement it in the desired position. When the cement is dry trim the edges of the fairing. We used two pieces on each side of the model, one between bulkheads E and G, and one between bulkheads G and I. The front end of the fairing curves too sharply for sheet balsa, so we carved this piece from scrap balsa, again using the "cut and try" method. When the fairing was in place we sanded the whole assembly smooth, doped it with clear dope, and then sanded it again.

Try fitting a piece of paper first, until you see how the fairing is to go, and then use sheet balsa.

Covering and Doping

Cover the whole model, except for the tail surfaces, with silver tissue. Then mix some thin scale model dope by using half thinner and half a good grade of silver model dope. Dope the model with this,

giving three coats all over except on the tail which only receives two coats. Sand the model lightly between coats of dope. Dope the tail surfaces quickly on both sides, so that uneven drying will not cause them to warp.

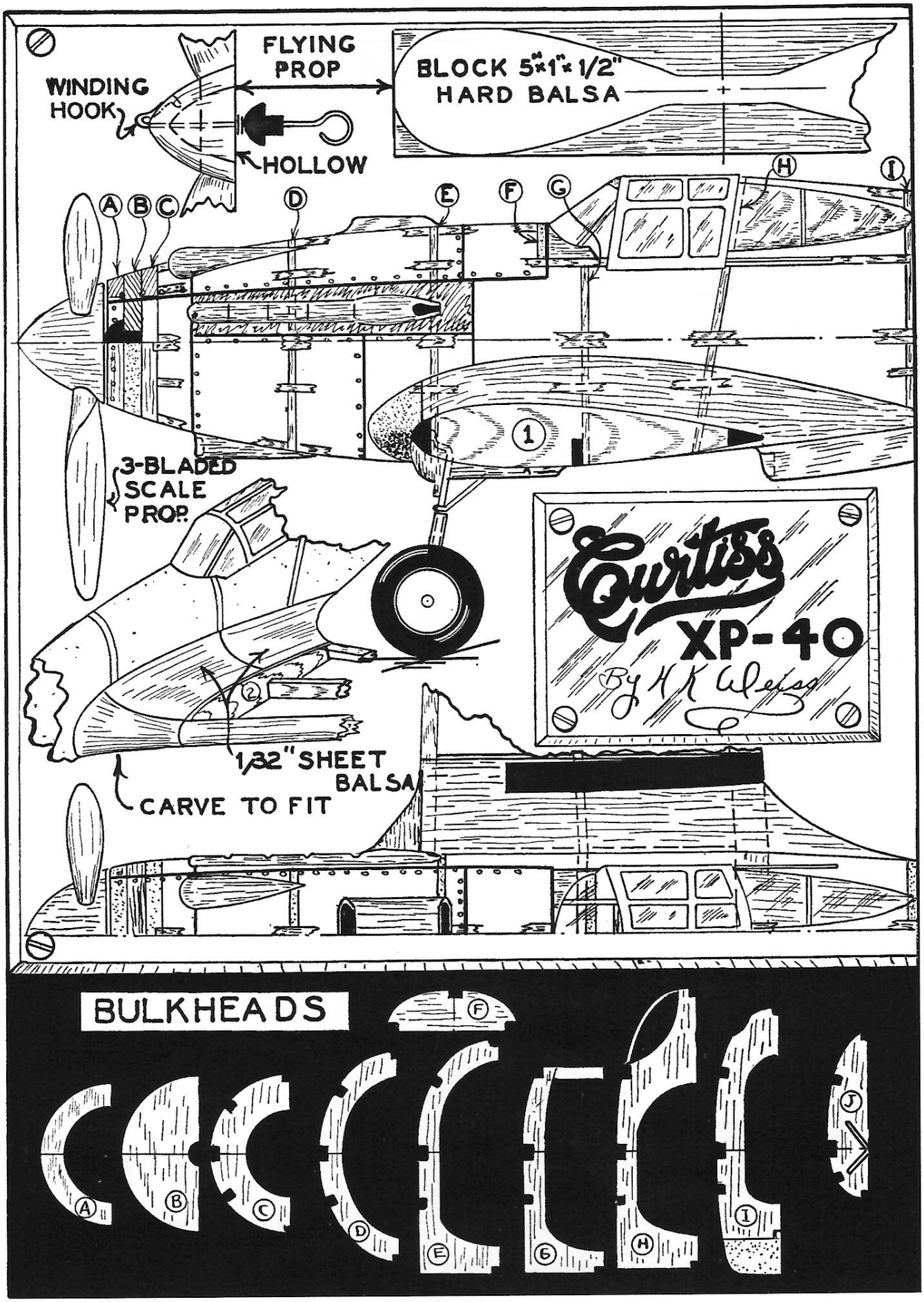
Paint a blue stripe and seven red and six white stripes on the rudder, with the usual U.S. Army stars on the wing. Cement the tail and the small details in place. Markings may be added in India ink. The cockpit housing is covered with celluloid and then outlined in silver. Air scoops and radiators are carved from balsa, doped several times with silver dope, sanded smooth again and cemented in place. String the radio aerial from the rudder to each wing tip. Add the pilot tube to the left wing tip and the tail wheel under the tail.

Flying

Use two strands of 1/8" rubber for flying. If the model does not climb on this amount use two strands of 3/16" rubber. Correct any tendency to spiral dive by applying opposite rudder. In general you will find that every model flies best when circling in one direction, and this may be left for one model or right for another of the same design. Try to detect the natural turning tendency in your model and aid it as much as possible. If, after applying opposite rudder, your model "crabs," or slides sideways, relieve the rudder and warp the trailing edge of the inside wing down ; that is, the wing which tends to drop. And, of Course, if the model stalls, add weight to the nose ; while if it dives sharply, warp the elevators up.

The secret of obtaining good flights with flying scale models is simply great patience. It is very improbable that your model will fly perfectly on its first flight. Treat your model carefully until you've learned something about its characteristics, then begin trying for long flights,—and you can get them with the XP-40.

The Weiss plan and article are from the June 1939 Model Airplane News.(*I have left the first page as it was, but reformatted the continuations to fit them on a single page.*)


WINDING HOOK
FLYING PROP
HOLLOW
BLOCK 5"×1"×1/2" HARD BALSA
A
B
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1
2
3-BLADED SCALE PROP.
Curtiss
XP-40
By H K Weiss
1/32" SHEET BALSA
CARVE TO FIT
BULKHEADS
A
B
C
D
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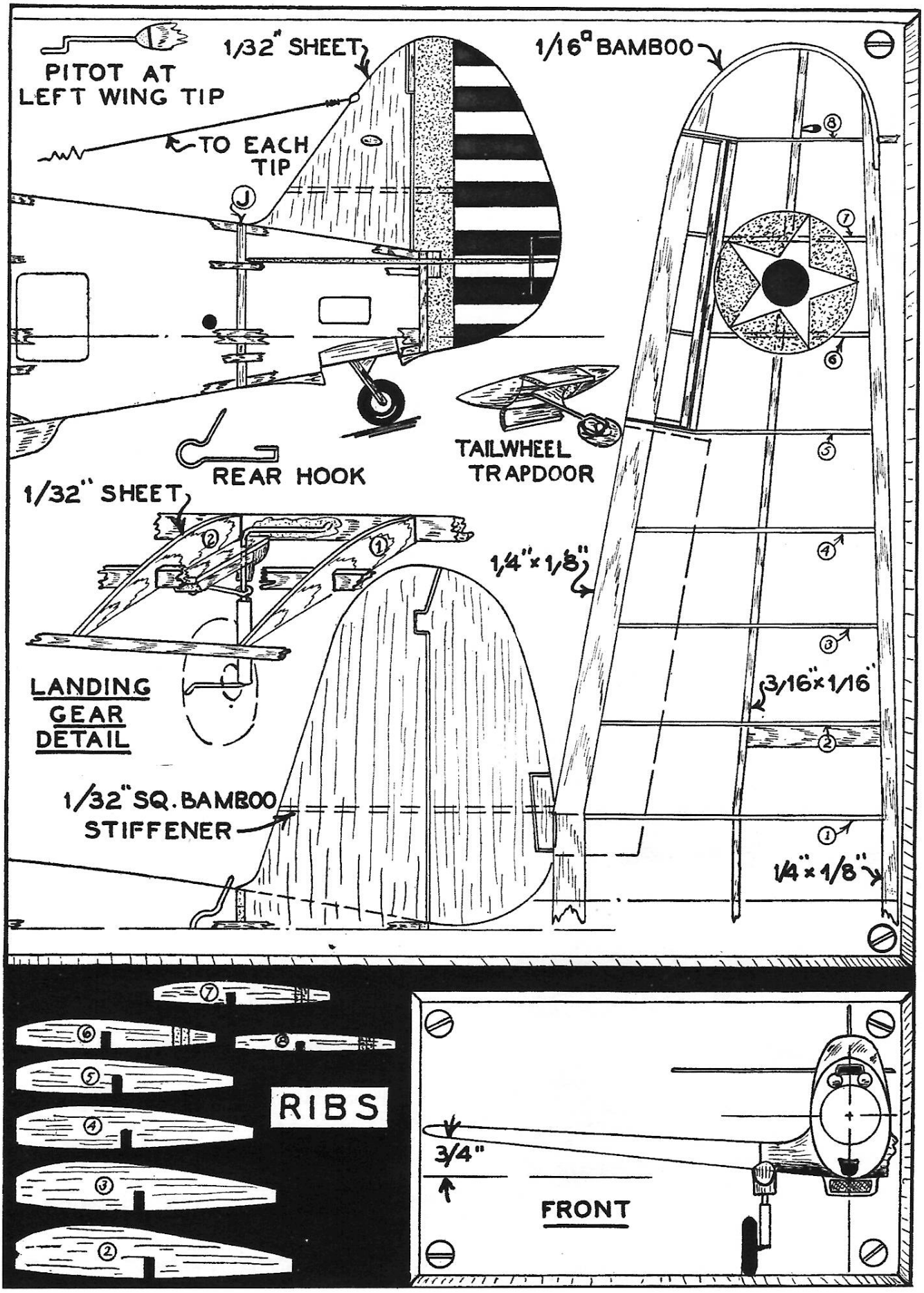
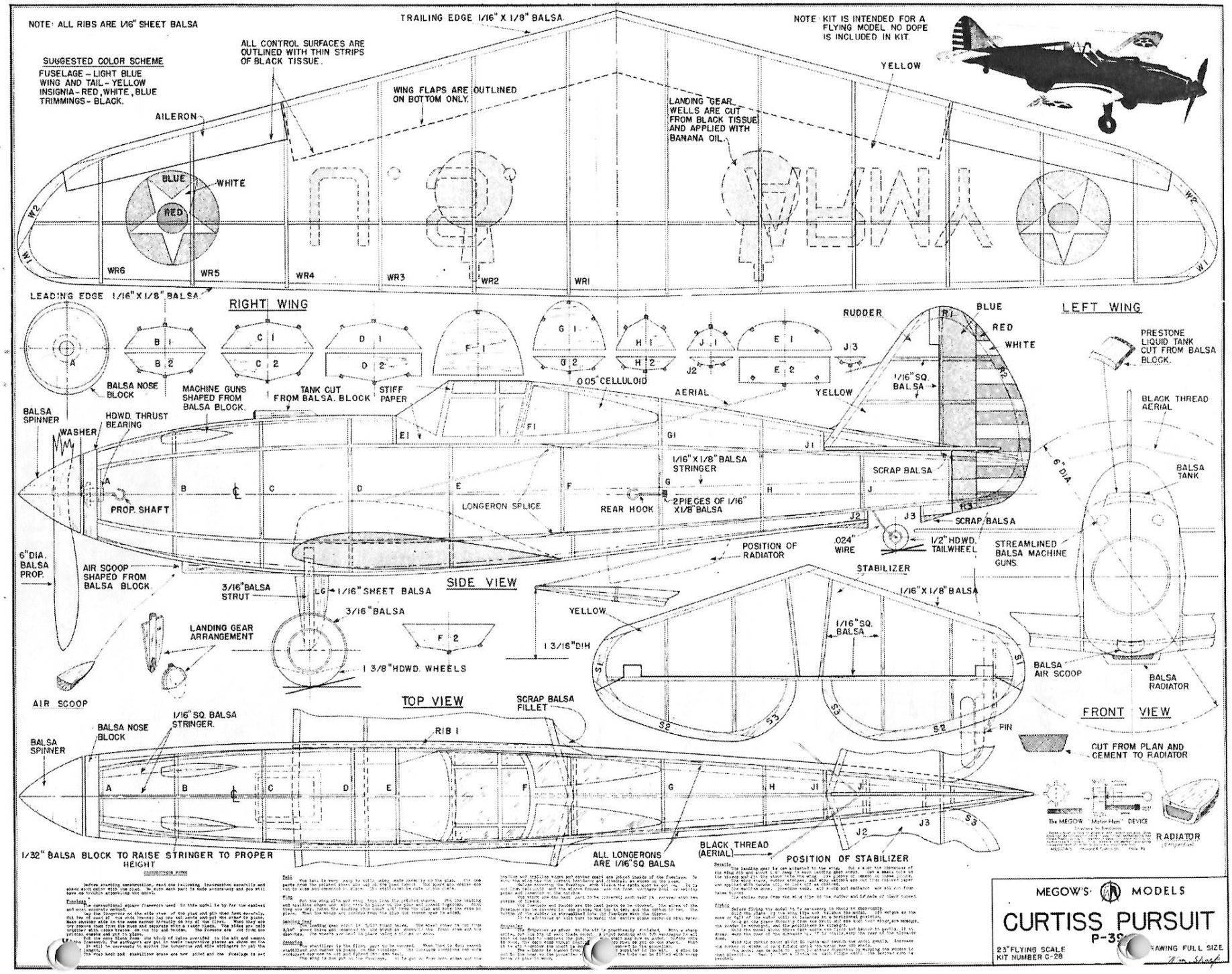
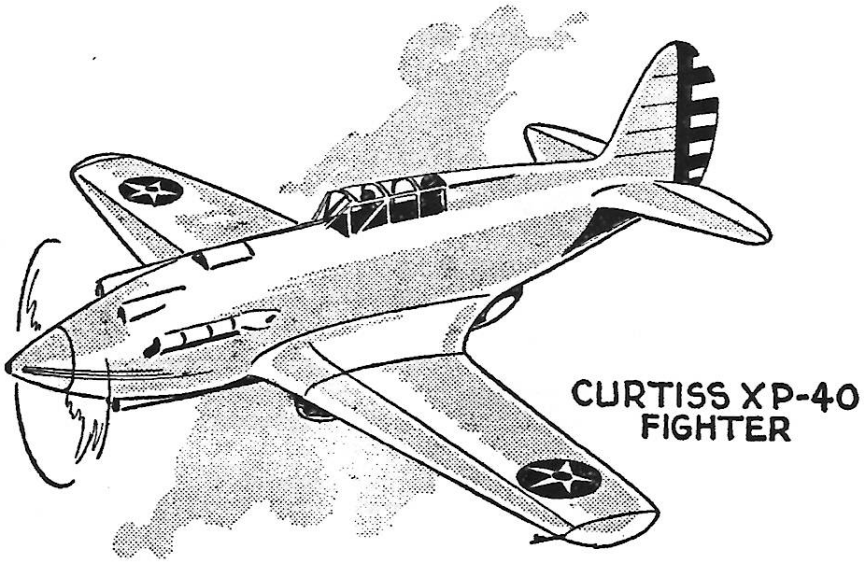
F
G
H
I
J


PITOT AT LEFT WING TIP
TO EACH TIP
1/32" SHEET
1/16" BAMBOO
J
REAR HOOK
TAILWHEEL TRAPDOOR
1/32" SHEET
1/4" x 1/8"
LANDING GEAR DETAIL
3/16" x 1/16"
1/32" SQ. BAMBOO STIFFENER
1/4" x 1/8"
RIBS
3/4"
FRONT


NOTE: ALL RIBS ARE 1/16" SHEET BALSA
TRAILING EDGE 1/16" X 1/8" BALSA
NOTE: KIT IS INTENDED FOR A FLYING MODEL NO DOPE IS INCLUDED IN KIT.
SUGGESTED COLOR SCHEME
FUSELAGE – LIGHT BLUE
WING AND TAIL – YELLOW
INSIGNIA – RED, WHITE, BLUE
TRIMMINGS – BLACK.
ALL CONTROL SURFACES ARE OUTLINED WITH THIN STRIPS OF BLACK TISSUE.
WING FLAPS ARE OUTLINED ON BOTTOM ONLY.
AILERON
LANDING GEAR WELLS ARE CUT FROM BLACK TISSUE AND APPLIED WITH BANANA OIL.
YELLOW
BLUE
WHITE
RED
W1
W2
WR6
WR5
WR4
WR3
WR2
WR1
LEADING EDGE 1/16"X1/8" BALSA
RIGHT WING
LEFT WING
RUDDER
BLUE
RED
WHITE
R1
R2
R3
PRESTONE LIQUID TANK CUT FROM BALSA BLOCK.
BLACK THREAD AERIAL
BALSA TANK
6" DIA
BALSA NOSE BLOCK
MACHINE GUNS SHAPED FROM BALSA BLOCK.
TANK CUT FROM BALSA BLOCK
STIFF PAPER
.005 CELLULOID
AERIAL
YELLOW
1/16" SQ. BALSA
BALSA SPINNER
WASHER
HDWD. THRUST BEARING
PROP. SHAFT
LONGERON SPLICE
REAR HOOK
2 PIECES OF 1/16" X1/8" BALSA
1/16" X1/8" BALSA STRINGER
SCRAP BALSA
6" DIA. BALSA PROP.
AIR SCOOP SHAPED FROM BALSA BLOCK
POSITION OF RADIATOR
.024" WIRE
1/2" HDWD. TAILWHEEL
STREAMLINED BALSA MACHINE GUNS.
SIDE VIEW
3/16" BALSA STRUT
1/16" SHEET BALSA
3/16" BALSA
LANDING GEAR ARRANGEMENT
1 3/8" DIH
1 3/8" HDWD. WHEELS
STABILIZER
1/16" X 1/8" BALSA
1/16" SQ. BALSA
YELLOW
BALSA AIR SCOOP
BALSA RADIATOR
FRONT VIEW
AIR SCOOP
TOP VIEW
SCRAP BALSA FILLET
1/16" SQ. BALSA STRINGER.
BALSA NOSE BLOCK
BALSA SPINNER
RIB 1
PIN
CUT FROM PLAN AND CEMENT TO RADIATOR
The MEGOW "Motor Horn" DEVICE
RADIATOR
1/32" BALSA BLOCK TO RAISE STRINGER TO PROPER HEIGHT
ALL LONGERONS ARE 1/16" SQ. BALSA
BLACK THREAD (AERIAL)
POSITION OF STABILIZER
MEGOW'S MODELS
CURTISS PURSUIT
P-36
23" FLYING SCALE
KIT NUMBER C-28
DRAWING FULL SIZE

THESE ARE AMERICA'S NEWEST FIGHTING JOBS

Vultee, Vought, Curtiss, and Douglas are the contributors to this striking four-ship display that reflects the modern trend in U. S. military aircraft.



THE CURTISS XP-40

CURTISS seems to be well on its way back as a producer of first-line fighting planes. There was a time when it appeared that Boeing, Seversky, and Grumman had almost displaced the famous Buffalo builders from the pursuit field; but since they broke through with an order for 210 Curtiss P-36A fighters, they seem headed again for the top.

Since the advent of its P-36A—the low-wing monoplane fighter with the Wright Cyclone as its power plant—Curtiss has been openly moving toward development of a ship using an in-line water or chemical-cooled engine. Years ago, they tried to get into this in-line field with their Conqueror engine. But somehow the Conqueror never quite "made it" against the splendid radial-powered jobs.

For a time we got the news that Curtiss was experimenting with the new 1,000-h.p. Allison in a low-wing model known as the XP-37. Later on, they presented the same plane with a special double prop system designed to counteract the strong torque of the high-powered Allison.

This, of course, was frankly an experimental job. But those who flew it declared it handled beautifully. Speed figures were not available. We presume it performed somewhere up in the 300-m.p.h. class.

Now Curtiss appears to have gone off the deep end in the Allison-powered field. They are now testing a new low-wing all-metal monoplane (see accompanying sketch) listed as the XP-40. According to reports, this uses the "larger" Allison. Since the present Allison is rated at 1,000-h.p., we suppose this power plant must be the one which has recently got a lot of "rumor publicity" as a 2,000-h.p. engine. So far we have been unable to run down any authentic facts on this motor.

The XP-40 appears to be a model quite similar to the P-36A. Designed to take an in-line engine, it has the same wings, fuselage, and tail-assembly. Moreover, the cockpit is covered in exactly the same manner as the now-famed P-36A.

National Building Museum – January 13, 2008

We had eighteen registered flyers for freeflight and eight for RC. As usual, Steve Fujikawa was Grand Champ.

We started awarding Tom Hallman type trophies using pictures of old magazine covers, and we thank Randy Kleinert for his past efforts in creating the button awards we previously used. Also, thanks to Carol Meyers for organizing a special guided tour of the museum for wives and friends who were not flying.

14g. Bostonian ML (8 entrants)		
1	Stew Meyers	Schtick
2	Ross Summers	Bostard
3	Rich Gillis	Citabria

P-Nut Scale ML (15 entrants)		
1	Steve Fujikawa	Lacey
2	Ondrej Mitas	Cardinal RG
3	Rich Gillis	Pottier

Phantom Flash ML (10 entrants)		
1	Steve Fujikawa	-
2	Glen Simpers	-
3	Bob Bissett	-

WW II No-Cal ML (11 entrants)		
1	Dave Mitchell	Typhoon
2	Steve Fujikawa	P-39
3	John Zseleczky	Spitfire

Dime Scale ML (4 entrants)		
1	Steve Fujikawa	Bristol Brownie
2	Dave Mitchell	Vega
3	Stew Meyers	Robin

Helicopter ML (6 entrants)		
1	Terry Slattery	Unicopter
2	Dan Driscoll	Seasprite
3	Bob Marchese	Aerospatial

Pennyplane (3 entrants)		
1	John Zseleczky	5:47
2	John Appling	5:00
3	Tony Pavel	3:19

Ready-to-Fly (3 entrants)		
1	Sharon Appling	Firefly (2:48)
2	Terry Slattery	Butterfly (2:45)
3	Bob Marchese	? (1:31)

A-6 (6 entrants)		
1	Ondrej Mitas	2:50
2	Tony Pavel	2:41
3	John Murphy	1:54

FAC No-Cal Profile Scale (6 entrants)		
1	Steve Fujikawa	Cassutt (563 sec.)
2	John Appling	FW-190 (294 sec.)
3	Dave Mitchell	Typhoon(222 sec.)

Grand Champion: Steve Fujikawa

On page 15 the XP-40 article is from the September 1940 Flying Aces with the XP-40 on the cover. Slightly less purple prose than in the February 1939 Model Airplane News with the nifty Joe Kotula cover. Obviously this cover art is base on the photo shown on page 2.

HOW TO WIN BY A NOSE

Make all the required adjustments on the ground if you'll have your model win a contest. Nosing around a bit won't hurt, either.

BY RICHARD MAcNALLY

A MODEL BUILDER may bring his rubber powered ship to a contest for participation in a meet. The model might be light, strong, and well built; equipped with a durable landing gear, rugged fittings, a pre-wound well-lubricated motor, etc. The model is given a few glides and maybe a short test hop. The best wing location and angle incidence are determined and the rudder is adjusted to make the model circle in the glide.

When the craft is ready to be wound up for an official good flight, the model flyer is well aware of the fact that additional adjustments are required if the ship is to fly in a stable manner as it climbs for altitude. Sidethrust off-set must be applied to the nose-plug in most cases to counteract the increased prop torque so the ship will circle up under power.

Due to the fact that it is dangerous to circle a model to the left or with torque, and keeping in mind the fact that the wing cannot be adjustedfurther without changing the glide, most models at this stage of adjusting need a bit of side thrust adjustment as previously explained. In addition, downthrust must be applied to the nose-plug also, to prevent the model from stalling under increased power.

It is risky and very troublesome to wedge both off-set and downthrust slivers between a single nose-plug and fuselage. A faulty nose-plug can very easily be the weak link in a chain of excellent, thoughtful preparation. Rubber powered model flyers have an opportunity to banish this potential weak link if they utilize the Double Nose-Plug as illustrated in Figs. 1 and 2.

Using this device we insert an offset sliver between the fuselage nose and the rear nose-plug. The down-thrust sliver is inserted between the front and the rear nose-plugs. The two parts of the Double Nose-Plug are held together and to the fuselage by the usual method of rubber bands or small hooks on front plug and body.

PAPER-BOOK MATCHES after the tips have been cut off are very appropriate for use as the off-set slivers. They are non-crushable and owing to the fact that they are made of pressed paper, can be split lengthwise with the help of a fingernail. This makes it possible to quickly prepare your nose-plug adjustment slivers whether an odd thickness is required or not.

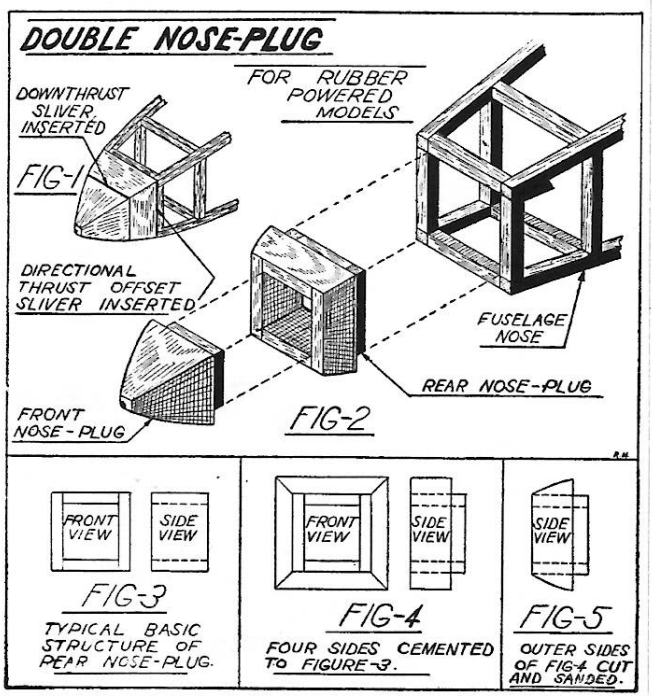
The construction of this rear nose-plug is quite simple. The foundation is built of one-eighth inch hard balsa stock as shown in the front and side views of Fig. 3. Fig. 4 shows the addition of the four outer sides which are cemented well and allowed to dry before being carved to shape. In Fig. 5 we see the result of carving and sandpapering the outer sides shown in Fig. 4. A front view of this finished piece is omitted because a drawing of it would look similar to the front view in Fig. 4.

Before actual construction is started, the model builder would do well to make a full size drawing of the nose of his ship in order to get an idea as to how a front and rear plug assembly can be adapted to his particular design of fuselage. When the side view drawing of a regular nose plug is made, it can be measured as follows : The first two thirds will constitute the length of the front plug while the remaining third will be the side length of the rear plug plus the distance it will fit into the fuselage nose.

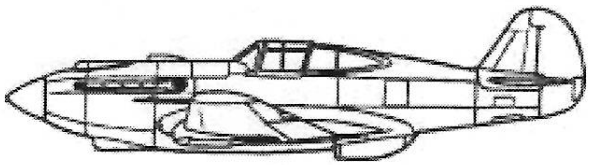
This general idea may be incorporated in a super-elliptical nose design as well as in the rather blunt nose of a flying scale model.

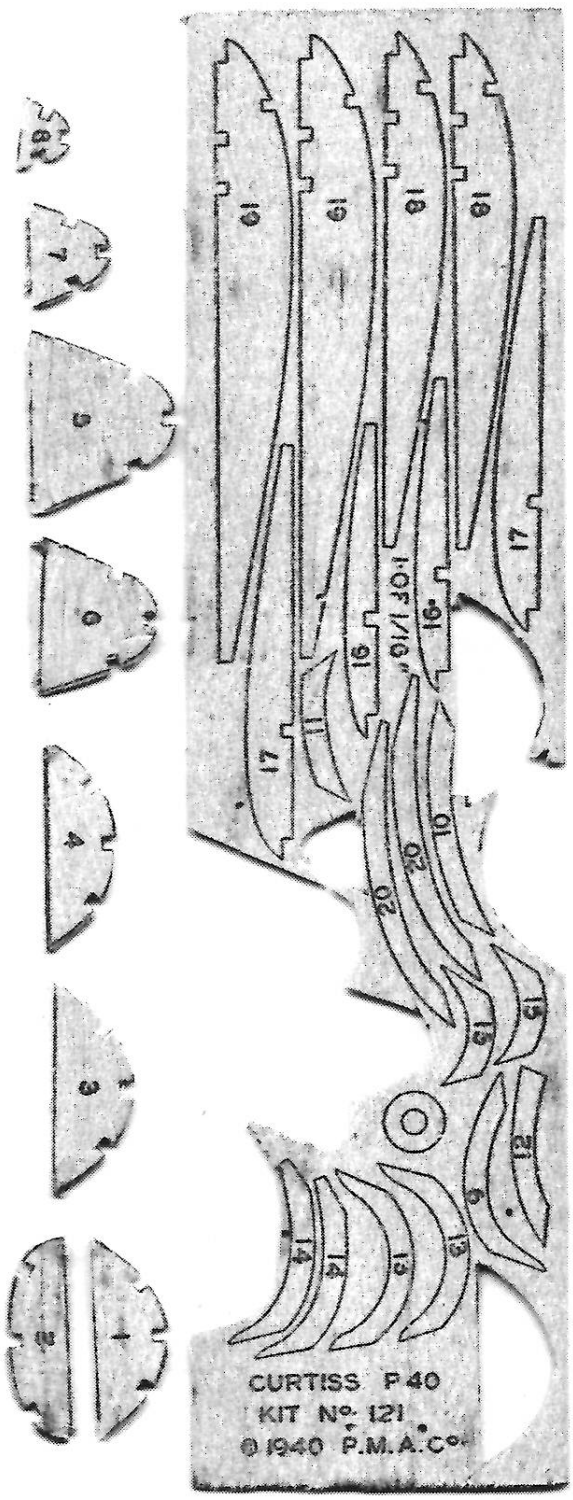
If it is to be used as a contest model where many winds are required for maximum flights, make sure the parts are made from hard balsa stock. The front nose plug should be equipped with 3/64ths plywood or sheet brass bearings so that the prop shaft will keep the adjustment forced upon it. The front compartments of the fuselage nose. similar to the one illustrated, should be filled in with one-eighth sheet balsa for strength.

Many builders, when designing their models, plan to have one size nose plug fit each craft so that a prop and nose plug can be quickly changed from one to another. The double nose plug will be of additional value in this case because a rapid change in nose plugs between different type models calls for a quick change in adjustments. The value of the double nose-plug will. without a doubt, prove distinctly advantageous.



Dan found this article in the November 1941 Flying Aces. He has found it quite useful.





Unfortunately the kit Dan got off E-bay had been started. However, he deconstructed the fuselage to provide this print wood. By the way the box is red. I had never seen one.

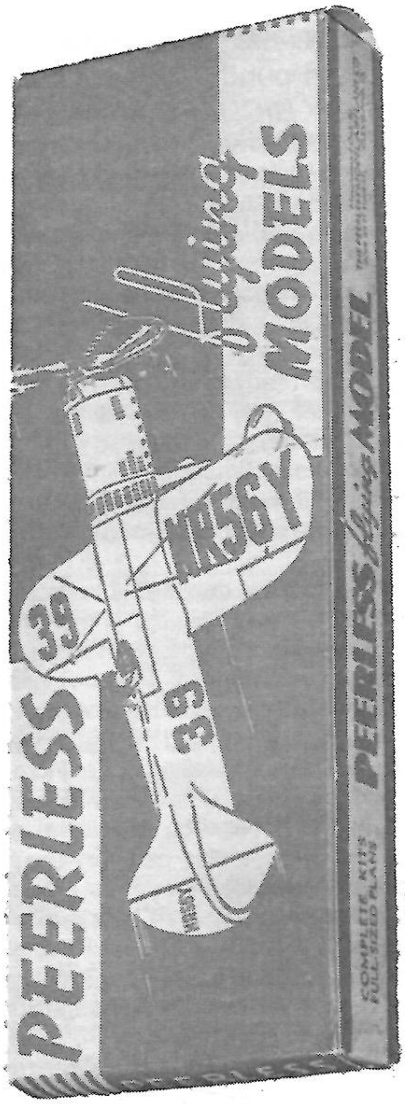


Photo Captions Page 19

1. Dick Sherman in his fabulous model museum in New Hampshire holding Fulton Hungerford's Tri-motor. He may have sold the museum but continues building great models
2. Here is Dick's latest effort a MC-72 with counter-rotating props from Paul Plecan's plan.
3. David Plumpe did a magnificent job with Hurst Bowers Flyline Kinner kit.
4. Ted Allebone with his triplane at the Geneseo FAC contest this past Summer. This was a Flying Models feature plan.
5. A great Scientific WACO by Tom Hallman.
6. Something different, a Vimy FAC Electric Power by Ted Allebone at the FAC contest, at which it incidently took first.
7. And a Walrus FAC Electric Power by Ted at the Geneseo FAC. It flew away only to be recovered to fly again at Muncie where is was lost again not to be recovered.


1

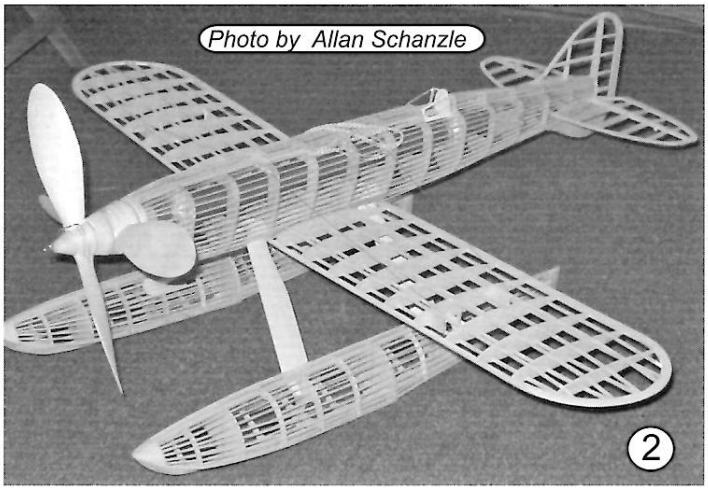


Photo by Allan Schanzle
2

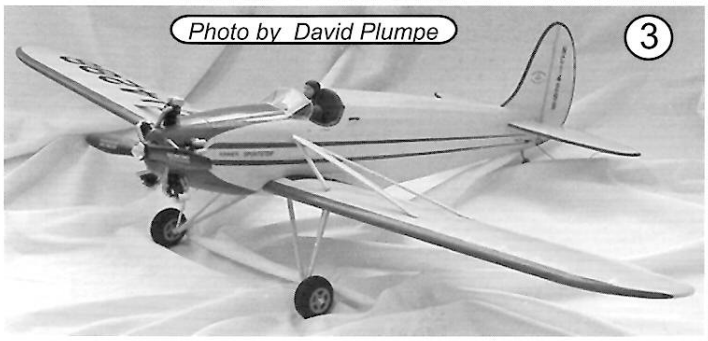


Photo by David Plumpe
3


4
Photo by Stew Meyers

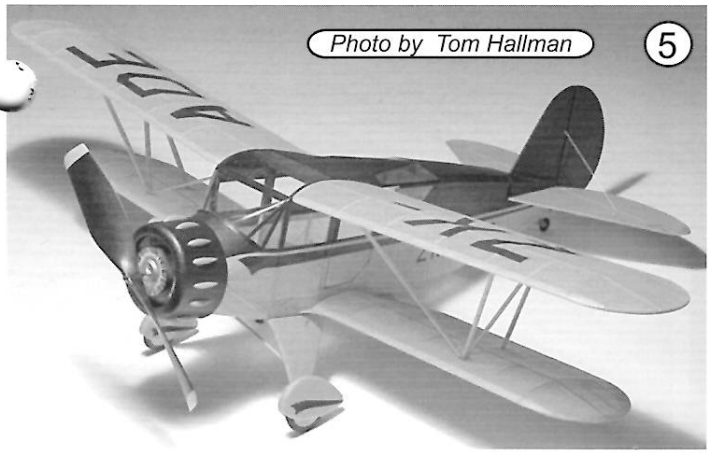


Photo by Tom Hallman
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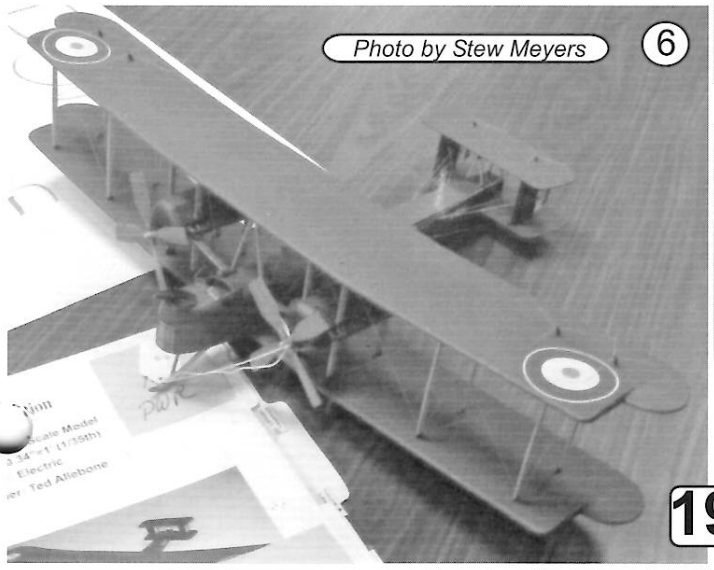
Photo by Stew Meyers
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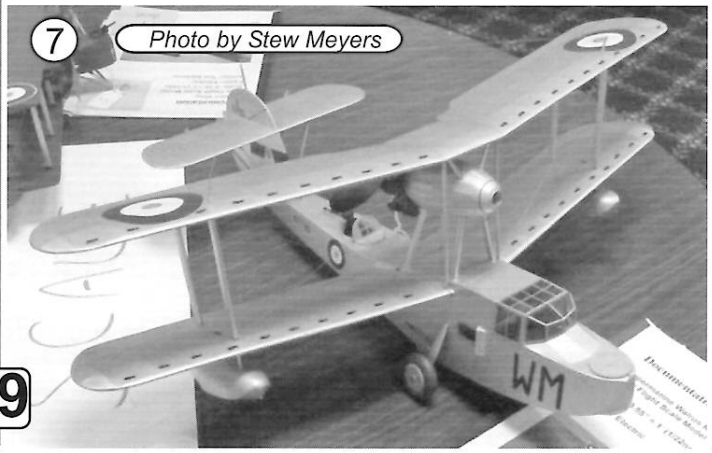
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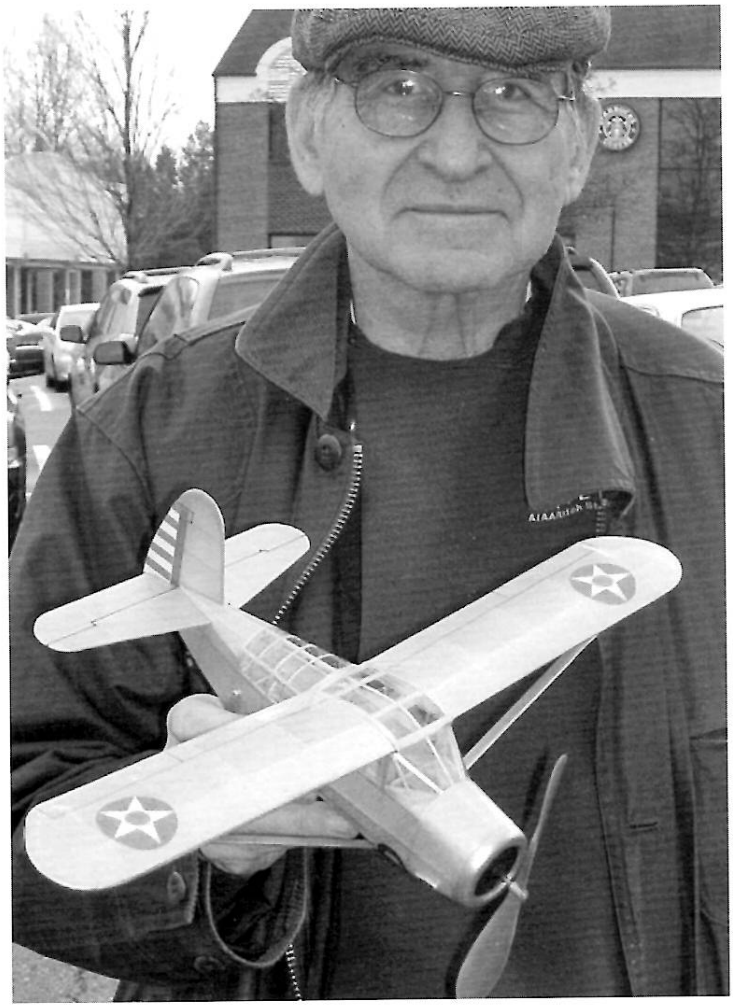
Photo by Stew Meyers

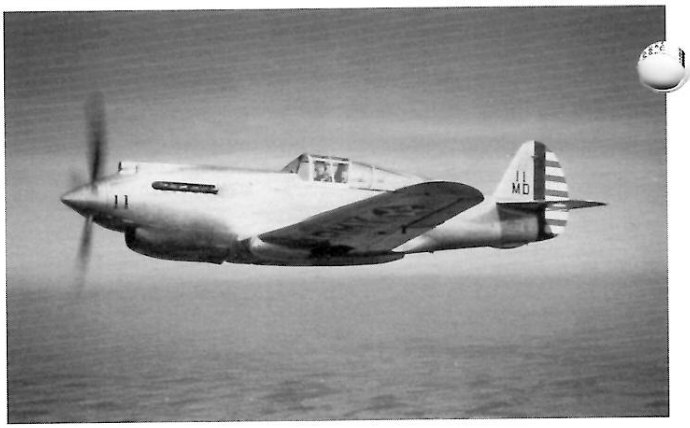
THE OWL

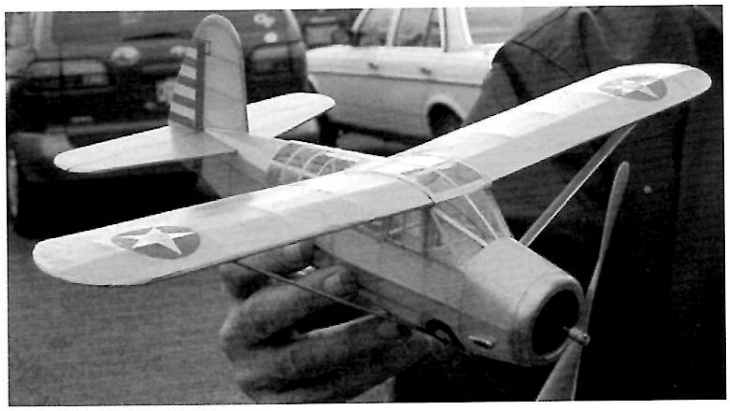


Yes, I do build what I publish. The Owl from the Skyleada plan weighs 16 grams with out rubber. It's not flown yet. I am waiting for dry, unfrozen, grass for test flights. The prop is a 150mm peck with a Struck tube clutch. The covering jap tissue with two coats of brushed nitrate followed by a thin spray of nitrate with aluminum powder mixed into it. The canopy frames are from jap tissue stretched on a frame and brushed on both sides with nitrate before spaying with aluminized nitrate dope. These are cut out and attached with RC-56. The insignias are cut from colored jap tissue. The white was sprayed on a frame with white acrylic. Stars were cut from a 2" square of blue tissue. The blue square is then glued to a 2" white square with a Uhu glue stick. An Ufa circle cutter then is used to cut out a circle from the stack and a red meat ball is glued in the middle. The insignia is then glued to the model with thinned down white glue.

SKYLEADA 16" FLYING
SCALE SERIES
Rubber Powered
SPITFIRE
HURRICANE
TEMPEST
MUSTANG
HELLDIVER
HELLCAT
CURTISS OWL
ASCENDER
ROOM E RANG
TYPHOON
THUNDERBOLT
MILES M.10

There are other Skyleads kits out there. If anyone has them, how about sending me the plans, I will copy them and return them. These are good fodder for future neo-dime scaler issues.





The final version of the XP-40 had smaller wingroot fillets and no wheel side fairings as well as a relocated radiator and cleaned up exhusts. These all contributed to the drag reduction which enabled it to meet its speed expectations of over 360 mph.

CLUB OFFICERS -President: Stefan Prosky 414 11th Street SE., Washington, DC 20003
Secretary: David Mitchell 230 Walnut St. NW., Washington, DC 20012
Treasurer:Stew Meyers, 8304 Whitman Dr., Bethesda, MD 20817 ---- *Note change - Stew has replaced Norm!*
Editor: Stew Meyers, 8304 Whitman Dr., Bethesda, MD 20817

MEETINGS - The D.C. MAXECUTERS hold meetings at 8:00 pm on the first Tuesday of every month at the College Park Airport, the oldest continuously operating airport in the world.

MEMBERSHIP - Dues for membership in the D.C. MAXECUTERS are $20 per year for residents of the USA, Canada, and Mexico, and $25 for all other countries.

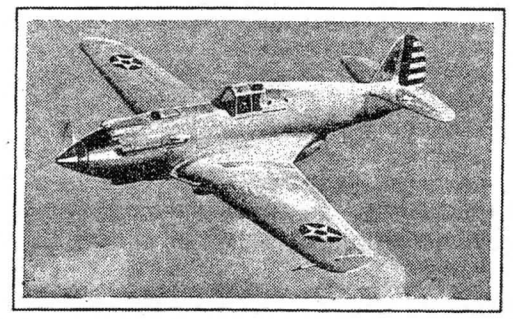
Your mailing label indicates the year and month of the last issue of your current membership. A red "X" in the box below is a reminder that your dues are due. Send a check, payable to the"D.C. MAXECUTERS", to the treasurer, Stew Meyers.

PUBLISHING DATES - Six issues of MaxFax are sent each year as close to the nominal dates as possible, but since this is a volunteer publication nothing is guaranteed except that six issues will be sent to all members.

CONTACTS - Material for the newsletter and membership questions should be addressed to Stew Meyers phone 301-365-1749. Email gets immediate attention. *stew.meyers@erols.com*

Maxecuter web site: http://www.dcmaxecuter.org

Your DUES are due



WING TIP IS RAISED 3/4" ABOVE N°. 19

15 16 17 18 19 20

1/16 "SQ.

1/16 "SQ.

LEADING EDGE

1/16 X 1/8"

19 18 17 16 15 20

1/16 "SQ.

WING WALK

BLACK LINE

MAKE TWO STAB.

13 14

1/16 "SQ.

1/16 "SQ.

1/16 "SQ.
SIDE STRINGER

CROSS BRACES MARKED "C" ON TOP VIEW.

C C 1 C 3 4 C C 5 C 6 C 7 C 8

RUDDER

BOND PAPER SPINNER

1/16 "SQ.

CUT OUT AND GLUE TO LANDING GEAR STRUTS. COVER WITH TISSUE.

WING WALK

LAYOUT OF RADIATOR. CUT OUT AND BEND ON DOTTED LINES.

1/16 "SQ. SIDE FRAMES MADE WITHIN HEAVY LINES. CROSS BRACES MARKED BY "X" ON SIDE VIEW.

9 10 11 12

1/16 "SQ.

STABILIZER

1 2 3 4 5 6 7 8

1/16 "SQ.
SIDE STRINGER

SUGGESTED BOND PAPER FILLET

STABILIZER

COMMON PIN

SCRAP

MAPEL DOWEL

WHEEL COVER

CUT OUT RADIATOR FRONT

CUT OUT AND BEND AS SHOWN.
COMMON PIN FOR AXLE.

ACTUAL LENGTH

RADIATOR

REAR VIEW OF NOSE BLOCK SHOWING LOCATION OF MAIN FRAME AND STRINGERS.

DRAWN AND DESIGNED BY
HAROLD E. COOVERT

KIT N°. 121 7140

"CURTISS P-40 PURSUIT"

EXACT SCALE FLYING MODEL

By

PEERLESS MODELS

THE PEERLESS MODEL AIRPLANE CO.
CLEVELAND, OHIO U.S.A.