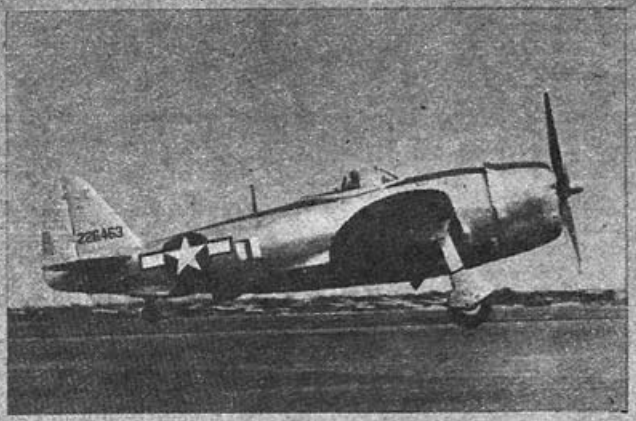
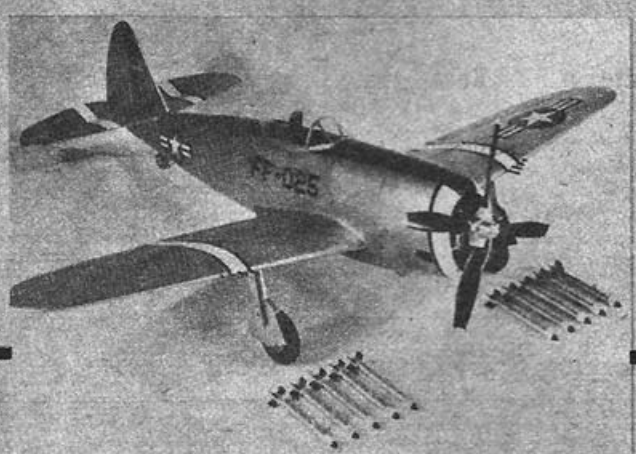


P-47D-25 lifts off; this was the version which saw greatest service. Thunderbolt was designed as long-range bomber escort.

Designer Musciano found that most any engine from .13 to .35 cu. in. can be used to power your P-47. Those .19-.29 will be best.



Although this is the "D" model of Republic's famous fighter, you can turn out a "B" or "N" by following the supplementary data.

How proudly they flew! These P-47B's over Long Island were attached to 1st Army Air Force squadrons. Compare with "D" (top).

■ When Alexander de Seversky produced the P-35 pursuit plane in 1937, little did he dream that it would develop into the death-dealing monster of World War II known as the Thunderbolt. The U.S. Army Air Corps purchased 136 of the 310 mph, 1200 hp P&W powered P-35s. Gross weight of this craft was 6,035 lbs.

The last P-35 was reworked into the XP-41 equipped with turbo-supercharging which was quickly developed into the P-43 Lancer. The Lancer's ability to climb to 44,000 feet set the pace for the yet-to-come P-47. Two hundred and fifty-two of the 360 mph, 7800-lb. "Lancers" were delivered.

Stringent requirements worked out by the Wright Field Army Board in 1940 for a high-altitude escort, heavy firepower, armored fighter gave birth to the P-47—an enlarged and, of course, improved version of the Lancer. Speed of this early P-47B (P-47 and P-47A were canceled) was 429 mph, while it tipped the scales at 13,356 lbs. Power was the 2000 hp Pratt & Whitney twin row engine.

Externally, the Thunderbolt did not change until the middle of the "D" modifications. The P-47D-RE and P-47D-RA were revised to include a bubble canopy during 1943-1944. All subsequent models sported the canopy; later models included a dorsal fin for added directional stability. Speed of the P-47D was 420 mph and weight jumped to 14,500 lbs. Over 13,000 P-47D fighters were built!

Modifications continued up to the P-47N with speeds top-

Republic P-47 B-D-N

Famous World War II "flying jug" is back as eye-catching control model

ping 510 mph on some experimental models. The P-47N was fitted with an enlarged wing and dorsal fin. Power was a 2100 hp P&W engine which upped the plane's speed to over 460 mph. The gross weight was 21,200 lbs., and 1,817 were built.

In view of the fact that the P-47D was, by far, the most widely used Thunderbolt, we decided to duplicate it in model form. For the benefit of those readers who are interested in the early P-47B and the later P-47N Thunderbolts, these craft have also been illustrated.

(We wish to thank Dr. Thad S. McCulloch and Mr. Leon Shloss for their kind efforts and generosity without which this article would not have been possible.)

Any engine from .14 to .35 cubic inch displacement will fit into the nose of this ¾" to the foot scale replica. The .14 size will provide much realism in view of the fairly slow speed that will result, while a .35 will really burn that circle. For flights of moderate speeds, install an engine of from .19 to .29 cu. in. displacement. Either upright or inverted power-

plant installation can be used successfully. An inverted engine has the advantage of being entirely or partially enclosed, thereby providing a more pleasing and realistic appearance.

Construction can begin with the wing by cutting the spars to the correct taper. Follow this by sawing the plywood joiner in one piece and cementing it to the spars, thus forming the correct dihedral automatically. While this is drying, cut the ribs to shape. The sheet covering can now be cut to outline shape and butt-joined to form the correct chord width. Cement the spar to the lower covering, holding it in place with straight pins until dry. Attach the ribs to both the spar and lower covering.

Bend the wire landing gear struts. Make sure to form one left and one right hand strut. These struts are then sandwiched between two plywood sheets. Use plenty of cement and hold together with clamps until dry.

Slip the strut through the wing lower covering, from the top, and cement the plywood securely to the ribs, lower covering and spar. Pour several coats of cement around this joint to insure a firm installation as this is a point of great stress.

Carefully bevel the leading and trailing edges until the bevel meets the angle of the rib upper camber. Sand well.

Cut the upper covering to shape, butt-join and cement it to the top of the spar. Hold in place with pins. Using a slow-drying cement, apply it liberally to the ribs and beveled portion of the lower covering. Attach the top covering to the cemented surfaces and hold in place with straight pins until dry. It is suggested that the wing be set aside to dry overnight after the solid wing tips have been cemented in place.

While the wing is drying, the fuselage horizontal keel can be cut to shape as well as the formers and firewall. If a beam type engine mount is contemplated, it should be firmly cemented to the keel at this time. The hardwood bellcrank mount should also be cemented firmly to the keel now. Follow this by attaching the formers and firewall to the top and bottom of the keel. Add the stabilizer pylon mount to the keel.

Sandpaper the wing thoroughly and then attach the fuselage frame to it by cementing the formers to the wing covering. Check for correct incidence during this operation. This should be zero.

Cut the tail surface to outline form and sand to a streamline shape. Cement the elevator halves to the dowel spar and add the control horn. Hinge the elevator assembly to the stabilizer using standard fabric hinges. This assembly should then be securely cemented atop the pylon mount.

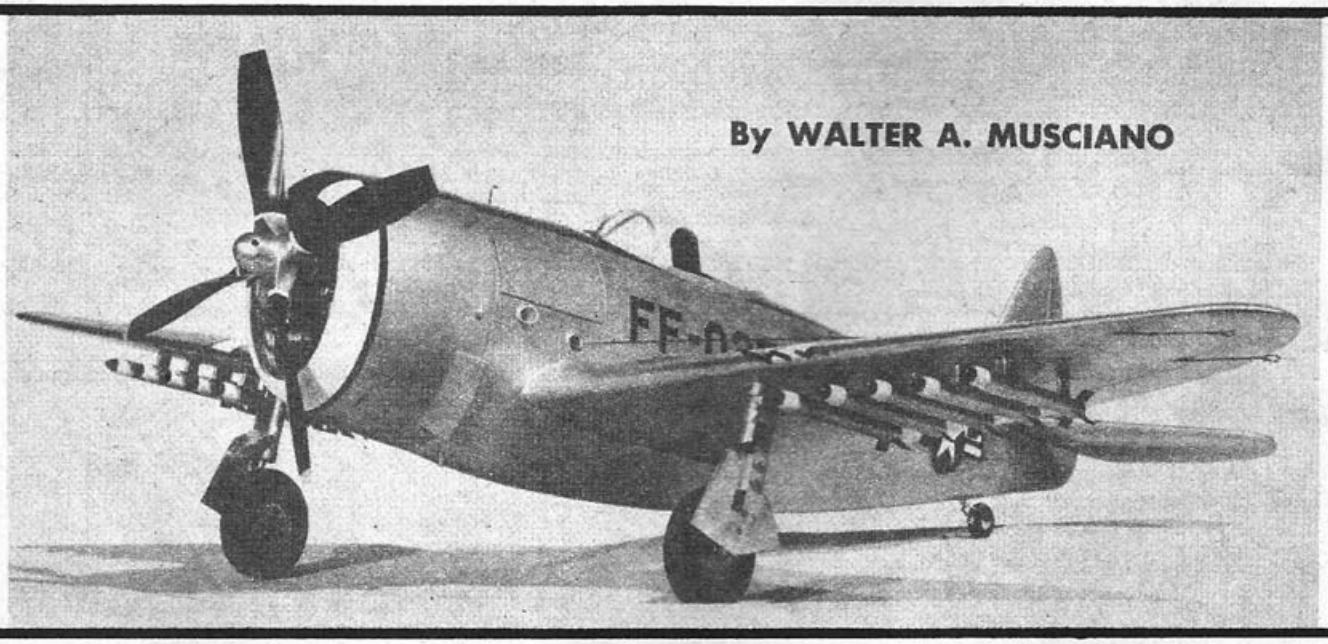
Many standard commercial metal or plastic bellcranks will fit your model. Attach the music wire lead-out lines securely by twisting and solder-sealing the twisted portion. The bellcrank is bolted to the mount after the wire control rod has been attached. Either offset-bend the ends of the rod as shown or solder a washer to the ends to prevent the control rod from slipping off the horn or bellcrank. Bolt the bellcrank to the mount in such a manner as to allow free movement of the control system. It is advisable to insert washers between the bellcrank and mount to total 1/16".

If the engine you choose has an attached tank—use it, otherwise many standard tanks can fit this model. Be sure to select the proper size fuel tank for your engine. This should be very firmly mounted within the fuselage. On some installations, it will be necessary to cut away the leading portion of the wing in order to fit the tank. Do not, however, ever cut away the spar or any portion of it. Add the plastic tubing filling, vent and feed line extensions at this time.

The fuselage is now planked after the remaining formers are cemented to the bottom of the wing. Begin by cementing one planking strip on each side and the very top and bottom of the fuselage. Hold these strips to the formers with pins until the cement has dried. Follow with another strip cemented to each side of the four already in place and continue in this manner. Make certain to cement all strips to the formers as well as to each other. Taper and bevel the last few strips in order to insure a good fit in the confined areas.

Fill in all cracks and crevices with Plastic Balsa, forcing the compound deep into the spaces with the fingers. When dry, the fuselage should receive a thorough sanding with 1/0 and then 3/0 sandpaper. It may be well to note that the forward ends of the planking strips rest on ledge formed by the difference in size of formers "A" and "B".

With sheet balsa as a pattern and foundation, the fillet is built of many layers of Plastic Balsa. This should be applied with the fingers to form a smooth contour between the fuselage and wing. Do not hesitate to apply added thickness to the fillet in order to be able to form a truly smooth fairing without the fear of oversanding. Much fillet sanding is done by wrapping the sandpaper around the fingers and sanding



with rolling motion to achieve the smooth conyex surface.

In view of the unusual dihedral, it was found necessary to run the control lead-out lines through the wing in lieu of using the more common guides. We could have raised the bellcrank location but this would cause a "mushing" tendency at high angles of attack. Carefully pass a sharpened shaft of 3/32" or ⅛" wire through the wing. Enlarge this hole with a long drill or by passing the wire through several times. Line these holes with plastic tubing. This should be the hard variety of plastic similar to the sipping straws available at the dime store. Cement these in place, and when dry cut ends flush with the upper and lower wing contour.

A decent finish cannot be attained without applying several coats of sanding sealer or similar wood-filling mixture before the paint is added. The first coat should be applied liberally with a brush and sanded with 3/0 sandpaper. Follow with at least four more coats and sand well. This can be continued if desired until glass-like finish results.

Carefully cut away the cockpit opening and the engine hatch using a very sharp razor blade. Apply silver dope to the cowl interior and follow this with several coats of clear fuel proofer. Fit the engine in place and bolt securely. We have successfully used ⅜" wood screws on engines up to .14" size; however, this is optional. The engine cylinder should clear the cowl by at least 3/32" and preferably ⅛". Openings must be cut for needle-valve extension and for engine choking. It may be wise to add a rubber tube extension to engines with intakes at the rear. This extension can be led out through the fuselage side to insure easy choking and fresh air supply to the engine.

The entire model is painted silver with trim as illustrated. We brushed on six coats, thinning the last two progressively 10 and 25 percent. Sand the first two coats with very fine finishing paper. The last coat can be rubbed to a high luster by applying rubbing compound with a wad of absorbent cotton. Finish off with a soft flannel cloth.