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Flying High

The Lockheed P-38 Lightning was one of the most common U.S. fighting aircraft during World War II. Introduced in 1941, it was retired in 1949.

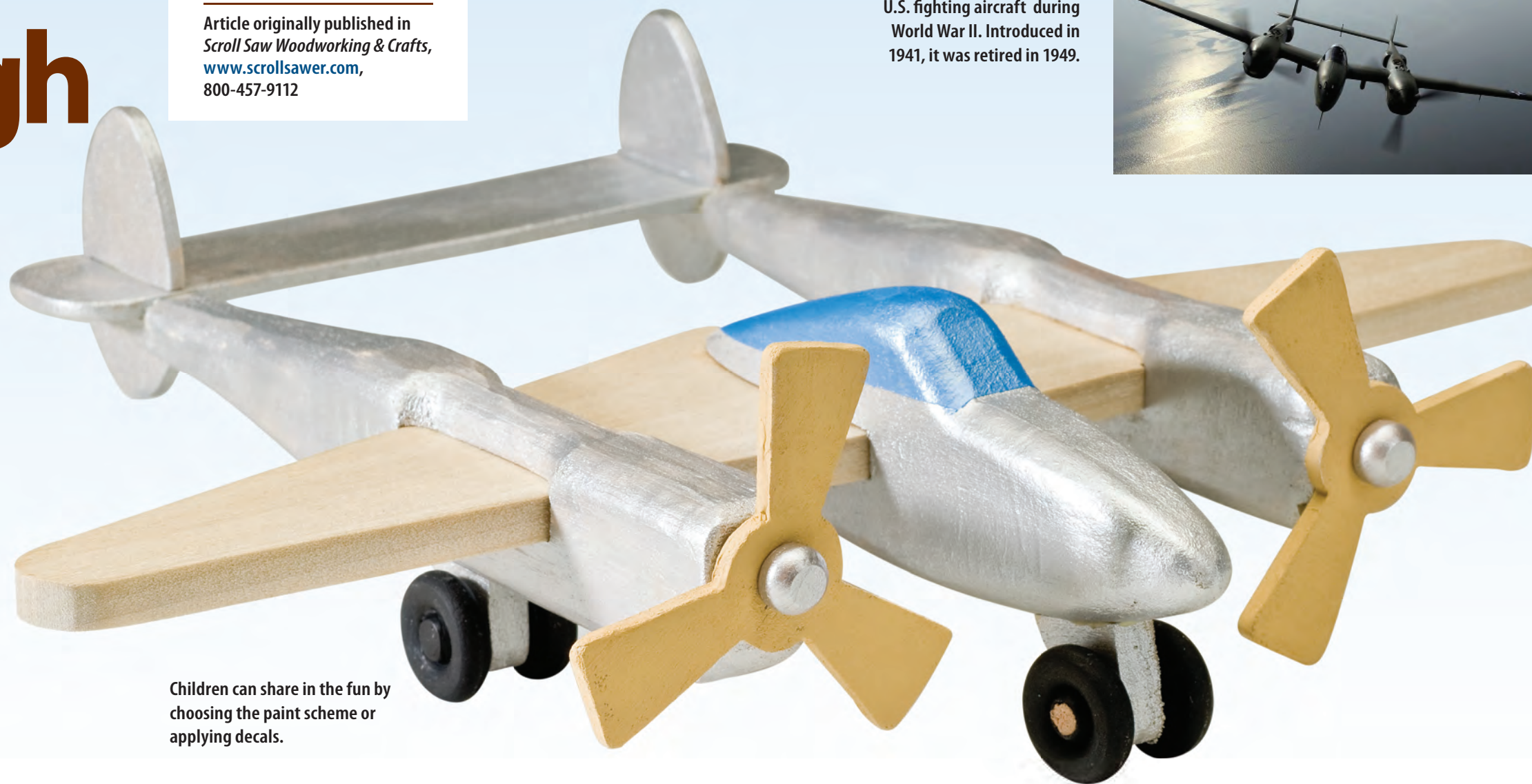


Sturdy toy airplane is easy to make

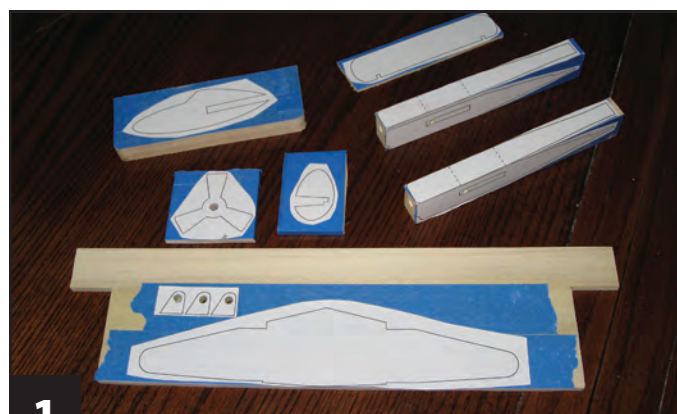
By Ron Forsyth

With spinning propellers and moving wheels, this toy plane is sure to delight future pilots. The best part is that you can cut, paint and assemble the P-38 Lightning airplane in a single afternoon.

I make a variety of toys and donate them to 50 local charities, so I'm always looking for quality toys that can be crafted quickly. I keep the paint scheme simple to speed the process, but you can easily personalize the plane. Invite children to participate by choosing the colors and applying the paint or adding decals from the hobby shop.



Children can share in the fun by choosing the paint scheme or applying decals.



1 Assemble the materials. Cut the stock to the sizes listed in the materials list. Photocopy the patterns and cover the wood with blue painters' tape. Attach the patterns with a glue stick. Drill the holes for the propellers in the end of the engine booms, the landing gear, the propellers, and any required blade-entry holes.



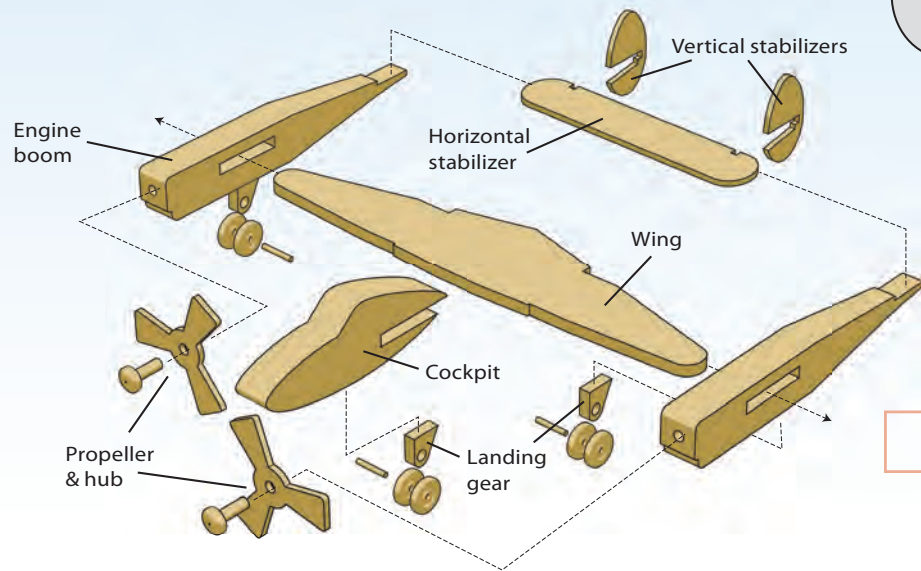
2 Cut the pieces. Use extra care when cutting the engine booms; cut the holes for the wings first. Use compound-cutting techniques to cut the top of the boom. Tape the cut pieces back in place and cut the side profile. Be sure to mark the left and right engine booms; they are mirror images of each other.



3 Round the pieces. Round the horizontal stabilizer with sandpaper to avoid weakening the tail. Position the other pieces on a non-slip carpet runner and round them with a laminate cutter with a 1/4"-radius round-over bit. The tool's roller bearing will slip into the hole for the wing and produce a contour on the engine booms. This effect was not intentional, but it works well.



4 Paint the plane. Use masking tape to tape off the glass cockpit area. Paint the remainder of that piece, the engine booms, tail, rear stabilizers, landing gear, and propeller hubs silver. Paint the tires black. After the paint is fully dry, remove the tape, and mask off the area around the cockpit. Paint the cockpit glass blue. Paint the propellers a dull yellow. Leave the wing natural.



ASSEMBLY DRAWING

Use the assembly drawing as a guide. If you are unsure of your cutting, dry-fit the pieces together before painting in case any areas need sanding.

Step 1: Fit the cockpit and engine booms. Dry fit the pieces and adjust if necessary. With the engine booms on the wing, check the fit of the horizontal stabilizer. Make sure it lays across both of the engine booms properly.

Step 2: Assemble the landing gear. Glue the axle to one wheel. After the glue dries, slide the axle through the landing gear and glue on the other wheel. Make sure the wheels turn freely.

Step 3: Assemble the plane. Glue the engine booms to the wing. Slide the cockpit onto the wing and center it. The wing is flat in the front and tapers to a point on the back edge. The cockpit is aligned with the point. Glue the cockpit in place.

Step 4: Glue the landing gear in place. Make sure the plane will sit evenly on all three wheels. Position the landing gear on the engine booms close to the back edge of the wing to prevent the plane from tipping back on its tail.

Step 5: Attach the stabilizers. Glue the horizontal stabilizer in place across the back of the engine booms. Glue the vertical stabilizers in place over the horizontal stabilizer and the back of the engine booms.

Step 6: Attach the propellers. Feed the axle pegs through the propellers. Add a bit of glue to the tips of the axle pegs and push the axle pegs into the engine booms. Make sure the propellers still spin freely.

Step 7: Apply a clear protective finish. Use polyacrylic clear finish or your finish of choice.

Materials:

- 2 each 3/4" x 1" x 7 1/2" pine or wood of choice (engine booms)
- 3/4" x 1 5/8" x 5" pine or wood of choice (cockpit)
- 1/4" x 2 1/2" x 10 1/2" poplar or wood of choice (wings)
- 2 each 1/8" x 2 1/2" x 2 1/2" plywood or wood of choice (propellers)
- 2 each 1/8" x 1 1/4" x 2" plywood or wood of choice (vertical stabilizers)
- 1/8" x 1 1/4" x 5 5/8" plywood or wood of choice (horizontal stabilizer)
- 3 each 1/4" x 3/4" x 3/4" plywood or wood of choice (landing gear)
- 3 each 3/4"-diameter wooden wheels
- Blue painters' tape

Materials & Tools

- 2 each 1/4"-diameter axle pegs (propeller hubs)
- Glue stick
- Wooden dowel: match diameter to the axle hole in the wheels.
- Assorted grits of sandpaper
- Wood glue
- Acrylic paint: blue, silver, and dull yellow
- Polyacrylic clear finish

Tools:

- #5 reverse-tooth blades or blades of choice
- Laminate trimmer or router with 1/4"-radius round-over bit
- Drill with assorted drill bits
- Paintbrushes



Ron Forsyth of West Linn, OR, is a retired widower. His 9-year-old-grandson is the product tester for all the toys he produces.

