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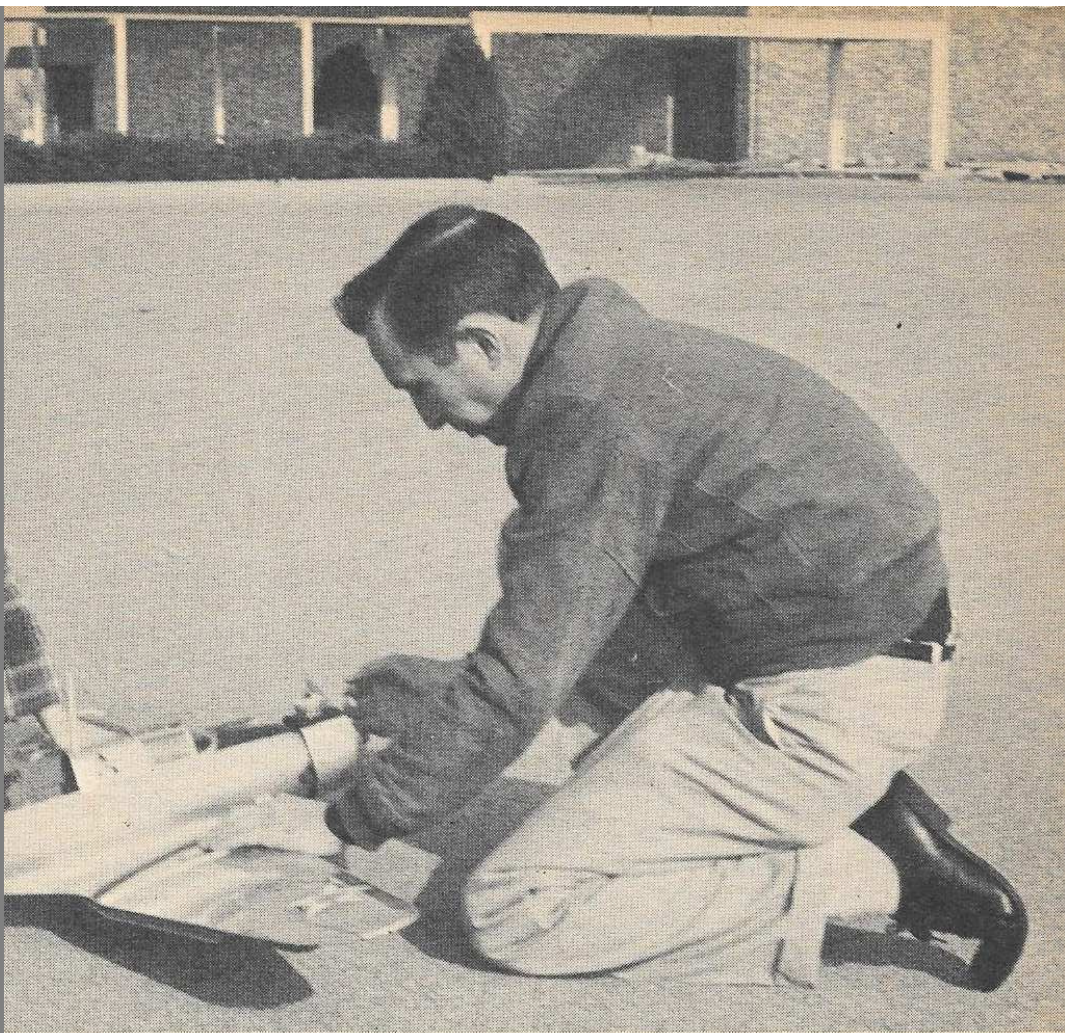
We're sure

Cont
scale
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Impressive nu



MODEL AIRF



author's daughter, he didn't indicate, she does nice job of holding while Pop fires up engine.

Pop A-17A Nomad

of offering the country's top C/L
win with scale points it will also
; stable hard-out on the lines is
ing the Northrop A-17A Nomad.

By J. A. WILSON

by handsome array of trophies behind plane.



► During the 1930's, the Army Air Corps began a rather intense expansion and updating program. Many new aircraft were ordered, and quite a few of them employed innovations and conceptions which paved the way for the "hot" fighters of W.W. II.

The aircraft of the thirties are very suitable for U-control scale subjects—more so than planes from any other decade. Their proportions are next to perfect, and their wing and tail areas are ample. The A-17A is an example of an ideal subject from the '30's. Its layout makes a good flying model, and it has the room in the right places for engine, tank, Roberts Control, etc.

The A-17A was an early ancestor of the modern fighter-bomber type used so extensively today. It was the first to feature the multi-cellular wing, a type of construction which consisted of a honeycomb arrangement of ribs, spars, and baffles. This type of construction is used in almost every aircraft today.

One hundred and twenty nine "Nomads" were delivered to the Army in 1936 and 1937. Many were equipped with bomb racks to supplement the four .30 caliber wing mounted guns and the flexible .30 caliber gun in the rear of the greenhouse. Top speed was 220 M.P.H., and power was furnished by a 750 H.P. R-1535-13 Pratt and Whitney engine.

The A-17A (Continued on next page)

NORTHROP A-17A NOMAD . . . continued

was later designated the 8A, and was sold to many foreign countries. Around 1939, the Northrop firm was absorbed by Douglas Aircraft Corp., and the "Nomad" design resulted in the famous "Dauntless" of the South Pacific War.

The model is built to a scale of 1 inch equals 1 foot—giving it a wing span of $47\frac{2}{3}$ inches. Wylam plans were scaled up, and our model is a very accurate copy in every way.

To comply with current AMA regulations, the flyer must have a copy of a three-view drawing of the real airplane. There are two sources of the Wylam drawings: Dec. 1943 M.A.N., and "The

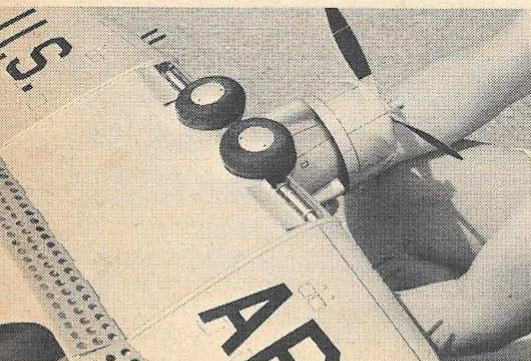
Best of Wylam" Book Two. Someone in your club or locality may have a copy you can borrow. These should be included in a booklet, and presented with your model at the contest. I suggest that you obtain the drawings **before** construction, as they will aid you in building. (See note: Best of Wylam Book #2 is available).

This model will require a power plant of .35-.45 size. Ours is powered by a Fox .40 with a homemade throttle linkage. Be sure that your engine has a good throttle on it, so that you can qualify for extra points, etc. Plans show the engine mounted inverted for better appearance.

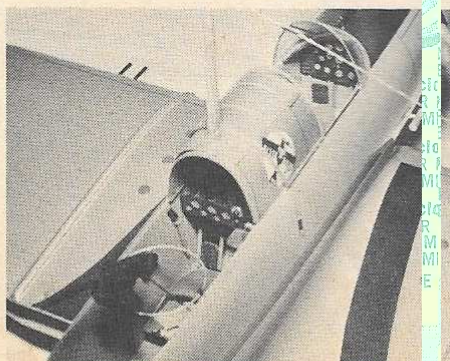
Ours was upright because of the early installation of a retractable gear mechanism—this was later changed to a spring clockwork system installed under the cockpit floor. This system is not shown on the plans; its installation is rather tedious, and varies with the type of alarm clock that is converted to the retraction motor.

The extra points that were gained from raising and lowering the gear were never needed in contests. In twelve AA and AAA meets, the model won first place every time, always by a margin of greater than 25 points.

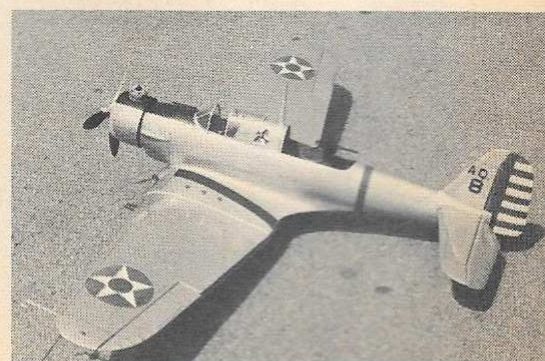
Begin construction (Continued on page 54)



View of under section of wing showing main gear in retracted position—note panel detailing.



Close-up of cockpit detail, also canopy, wing walk, etc. Note rear gunner ring & machine gun.



And here we have the pretty bird at rest on the tarmac—note flap and aileron details.



Dan Wakerly, '67 Junior National Champion, uses Ambroid Cement

"I've been building and flying model planes" — says Junior Nats Champ Dan Wakerly — "since I was only six years old and have been using Ambroid Cement since I started. My Dad has been flying for years and got me interested in the hobby. My main activity is in speed, but I'm also interested in indoor and outdoor glider. At the '67 Nats I won five speed events (1/2A, A, B, C & B Proto) — plus third place in indoor glider".

More National Champions use Ambroid Cement than all other brands combined — including the '67 Open & Senior Champs, as well as Junior Champ Wakerly.

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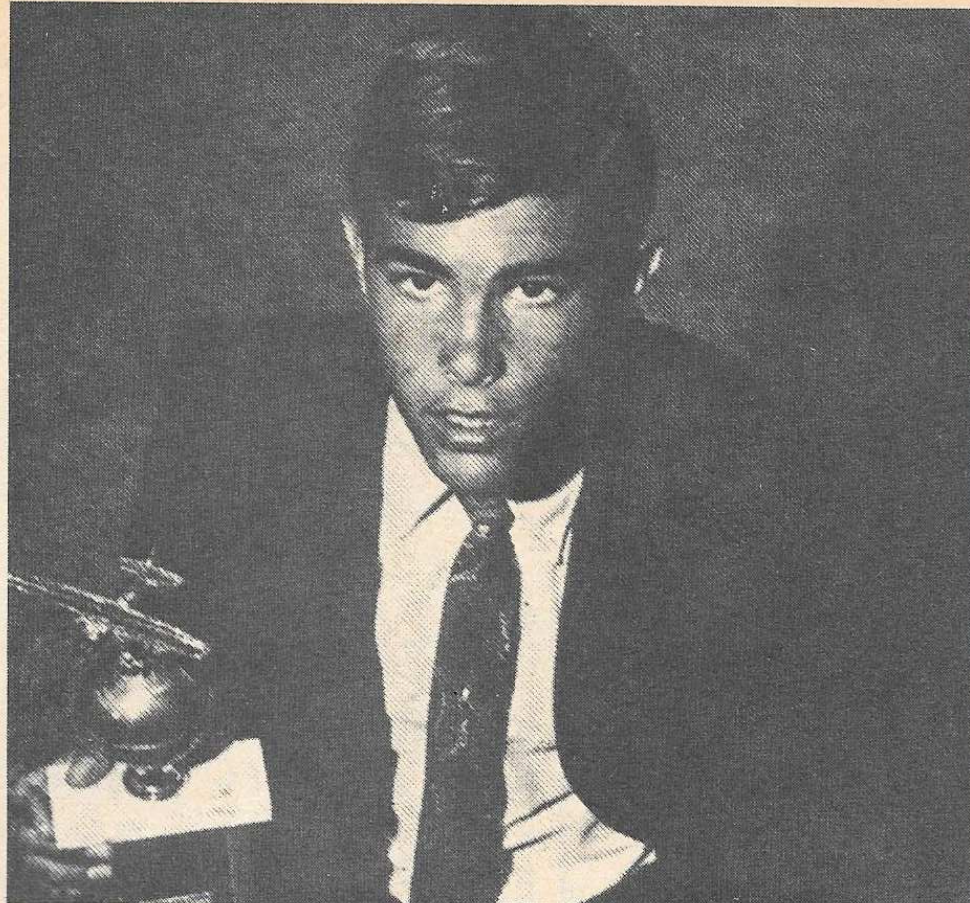
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mounted. The fin is solid with a hole drilled up through it for the light.

Solder the wire to the light, being sure the wires are long enough to run forward to the nose. Glue the light in place. Install the stabilizer-elevator assembly, and then glue the fin to the stabilizer. Install mounts and tank next.

Cut through the top of the wing planking for access to the Roberts Control. Hook up the elevator pushrod, and attach the fuselage to the wing by gluing bulkheads C through F to the wing planking. Install the micro switch and battery box, and complete the wiring. Wires are soldered to the terminals marked "C" and "N.O." on the switch. The micro switch can be purchased from your local dealer. He can be found in the Yellow Pages under "Switches—Electrical." Ask for part number ISMI MS25085-1.

Next install the throttle pushrod. The switch actuator should be soldered to this pushrod so that it closes the micro switch at full low speed.

Remove the crutch in the cockpit area and the center knock out portion of the bulkheads D through H. Install cockpit floor, sides front and back. Complete the strip planking adding the tail wheel wire while doing so. Sand entire model with 3/0 garnet paper.

Paint the cockpit area a light green, and install the cockpit details . . . be sure to paint them first as follows: Seats, sticks, and pedal supports are light green. Instrument panels, radio gear, stick grips, gear handle and throttle quadrant are dull black. The hood, cowl and wheel housing are molded of fiberglass. Since this technique has been covered in many recent magazine articles, it will not be discussed here. A lathe turned mold will have to be made for the cowl. If you

can't do this, a Sterling Corsair Cowl can be substituted. The fiberglass cowl sure is a lot easier to paint, though.

The cockpit greenhouse is molded from "Aeroglass." This product is available from aircraft parts dealers at your local airport. I use .040 inch thickness, and it molds much easier than Plexiglass or Lucite. Carve a male mold from white pine, allowing for thickness of the Aeroglass. Attach the mold to a one foot square piece of 1/4 inch plywood. Now make a dye plate out of a piece of 1/8 inch thick, 6 inch by 12 inch plywood. Cut a hole in the center of this that is about 1/8 inch larger than the male mold, all the way around. The greenhouse is molded by putting the male mold with Aeroglass lying over it into an oven heated to 275° F. When the plastic becomes limp, withdraw it from the oven, and press the dye plate down over the plastic. Hold in position until the plastic re-hardens.

The cockpit frames are made by masking off plastic, and painting epoxy glue where frames are needed. This is later painted silver. The lenses for the navigation lights are made as follows: Carve the end of a 1/8 inch by 3/8 inch spruce stick, 3 to 4 inches long, into a tear drop shape. Mount the stick upright in a vise, and pull a piece of soft, 025 celluloid over the end of the stick. The celluloid is softened over a candle or hotplate. Landing and position light lenses are molded in the same way.

External details can now be added, and this completes the construction that needs explanation.

The finish on a scale model is of utmost importance. If it isn't nearly perfect, all the construction work is lost, and the entire project will be nothing more than

a waste of time and money. I feel that applying a good finish involves about 25% skill and technique, and 75% patience.

We'll supply an outline on procedure, but it's really up to you to get good results.

1. If you can spend three to four evenings a week, and a few hours on your days off, then plan on spending a month on the finish. If you want to wind it up any faster, then take a vacation or quit your job!

2. Fill all cracks and dents with plastic balsa.

3. Sand all wood with 6/0 garnet paper.
4. Sand all wood with 400 wet or dry (use it dry, of course) until the wood takes on a shiny appearance.

5. Brush on two coats of clear dope, and dry sand with 400. Repeat.

6. Apply coat of silk or silk span.
7. Brush on 2 coats of clear dope, and dry sand with 400. Repeat twice.

8. Brush on three coats of filler, and then wet sand with 400. Keep repeating until the model looks as if it's been molded out of plastic.

9. Rudder, ailerons and elevator should receive four coats of clear, and should be sanded with dry 400. Then use step #7.

10. The color is silver—mixed as follows: Three parts Aero Gloss silver, one part clear, one part thinner. Add three drops of Baker's AA Castor Oil per ounce of mixture. This may need more thinning depending on your spraying equipment.

11. Spray on eight coats of silver, then rub with DuPont #7 rubbing compound.

12. While rubbing, the paint will take on a metallic dark gray look. This is removed by washing it with a wad of cotton saturated with rubbing alcohol. We learned this from Bill Ogden, who is one of the country's best scale men.

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13. Keep painting and rubbing until the finish is perfect.

And stripes and insignia. The anti-glare panel is put on by spraying black Aero Gloss with talcum added. Don't rub out!

The 34th Bombardment Squadron Insignia was applied by making a stencil for each color shape out of typing paper, and spraying with a Bink's Air Brush.

After applying the anti-glare panel to the cowl, the yellow squadron stripe can be added. Use the scallop shaped pattern on the drawing for this. There are three scallops, and their points should be $\frac{3}{4}$ inch forward from the rear edge. The bottom scallop should be centered on the vertical center line of the cowl.

Balance is as important in scale as it is in any event. Center of gravity is $\frac{1}{4}$ of the root cord from the leading edge. Molded lead blocks should be bolted to the engine mounts, until the balance is obtained. Don't worry about a nose heavy condition. As far as flying is concerned, this model is a stable flyer with no tricks or oddities.

We wish you all the luck and success that we have enjoyed with our "Nomad."