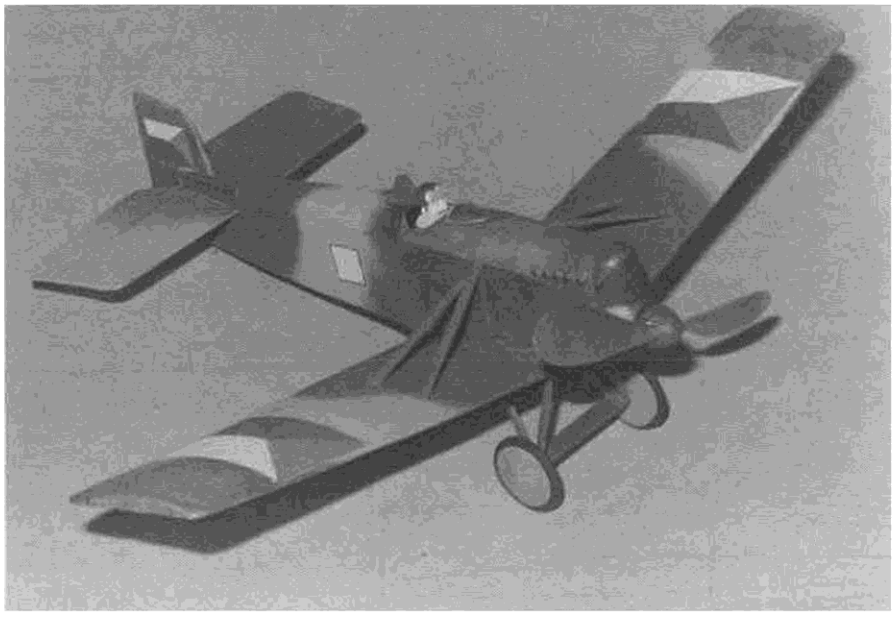
AVIA BH-3



A 1921 CZECH FIGHTER IN PEANUT SCALE

By JOHN BERRYMAN

• I'm ashamed to admit that the Avia is an aircraft that I know practically nothing about. I saw an R/C version of the ship on the cover of a magazine, and was immediately attracted by the colorful Czech markings and the three-color "between the wars" camouflage. Besides, there weren't too many compound curves, and apart from a rudder the size of a postage stamp, the areas and moments looked reasonably good. When I found a three-view in the magazine, I decided to build the airplane.

In the version presented here, the rudder is enlarged about 250% (it really was the size of a postage stamp!), the horizontal stabilizer by about thirty percent, and the dihedral was essentially doubled. On the real ship, the thickness of the wing also tapered from the point where the struts attach to the root of the wing.

Construction is straightforward for anyone who has ever built a Peanut. It is a low-wing, and although the Avia flies fine, it's not an airplane I'd recommend for a rank beginner.

The wing and tailfeathers are assembled in the usual manner. I chose to pay a weight penalty, and used fairly hard stock for the leading edge of the wing. I tend to hit things with my airplanes. The wing ribs are sliced, in the best Perfesser Mooney tradition. I find that wings built this way are strong, smooth (no external spar), and that tapered wings can be built easily. Keep the tail light—I used some 5 lb./cu. ft. 1/20 stock.

The fuselage longerons are stiffish 8 lb. stock (a weight penalty again), while the crosspieces and uprights are lighter 6 lb. stock. The sides are built on top of each other, to ensure that they really are identical. I like to assemble the fuselage using a couple of temporary bulkheads tack-glued in place to preserve alignment as the crosspieces are installed.

The landing gear is made from hard 1/8 x 1/16. The only wire is located in the crosspiece, and is sandwiched between two pieces of 1/32 sheet balsa. The wheels are made from two laminations of 1/20 stock, bushed with a small piece of 1/16-inch birch dowel. The flat inner hub and conical outer hub are both made from bond paper to which tissue is glued with a glue stick before the parts are cut out. The radiator is made from soft 1/32 scrap balsa. I used shims of more 1/32 scrap to maintain equal spacing for the slats in the radiator.

Since there isn't much nose on this airplane, I elected to use a Peck-Polymers 4-3/4 inch prop, sanded well and polished with Brasso. This also accounts for the location of the rear motor peg, which may be a bit more forward than you're used to. Yes, the motor run is shorter, but you're not carrying around a big lump of ballast in the nose, either.

All the other goodies (spinner, headrest, pilot) were carved from soft balsa. By all means, take the time to hack out a pilot. Open-cockpit airplanes look really forlorn without one.

The prototype was olive drab on top with dark earth and sand camouflage, and silver on the bottom. I used Peck-Polymers' green tissue (super-light grade) for the covering on the upper surfaces, and airbrushed *thin* Floquil "earth" and "mud" on the aircraft for the camouflage. National insignia were also airbrushed, again with thin Floquil. The cost of Floquil thinner will make you weep, but I've been able to use the lacquer thinner that's sold at my local discount house with success.

The belly of the ship presented a problem. I've found silver paint of any kind to be heavy, so I tried something new (to me, at least). I picked up some of Dr. Phineas T. Martin's Synchromatic Transparent Water Color (yes that really is the name). The good

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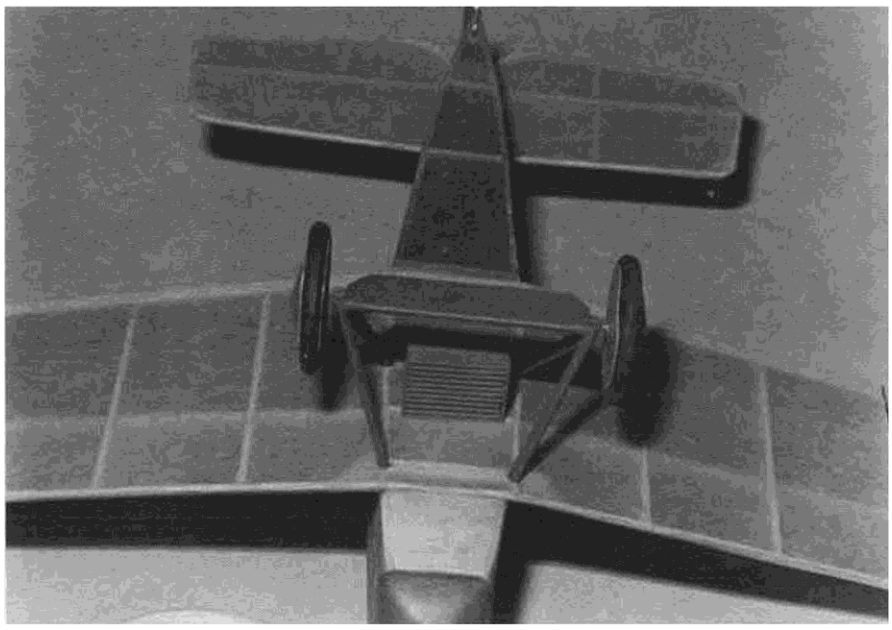

Underside features a dummy radiator made from scrap balsa — makes a nice touch of detail. Wheels are laminated balsa with bond paper on both sides.

doctor produces a series of liquid water colors that are sold in graphic arts stores. I bought some "stone gray," threw about half of the small bottle in my large airbrush bottle, thinned it about 200% with isopropyl alcohol, and added a few drops of ammonia to help it penetrate the tissue. Then I mounted some Peck's white tissue on a frame, and airbrushed on about three coats of the Dr. Martin's. The result is emphatically not metallic, but it does give a good representation of the gray of weathered aluminum, and is not "toy-ish," as silver paint often appears to be on small models.

My initial flight settings are indicated on the plans. As is the case with any low-wing Peanut, be prepared to tweak as required. The completed ship weighs a fraction under 8 grams (with its plastic prop, and less rubber). I believe that a hand more deft than mine with an airbrush could have shaved the weight to about 7.5 grams. A homebrew prop would help even more, but might result in balance problems. I fly my ship on one loop of .100-inch FAI about 1.5 times the distance from the front motor hook to the rear peg. The Avia will never beat a Fike, but it is a seldom-modeled subject that is cute as the dickens in the air. Have fun! •