

# THE S.E.5A REPLICA

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**B**IPLANES ARE BEAUTIFUL! Not too many homebuilders will argue. How about a 1918-vintage biplane? One with guns, roundels, and skinny wheels? Great!, but where do you get one?

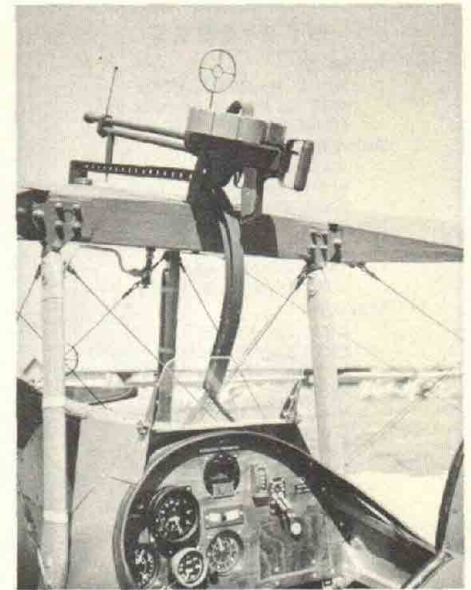
In the Fall of 1968, five EAA'ers gathered to ponder this problem. We had seen pictures of the English Currie "Wot" modified to resemble an SE5 for use in the movies, so we decided to get "Wot" plans and build five of the World War I scouts.

By the time the plans arrived our five enthusiasts had dwindled to two — Dan McGowan, who had built a Bowers "Fly Baby," and me, with a Druine "Turbi." After a few nights of study and several violent arguments, we decided that the "Wot" wasn't what we wanted, so "design" work started on an original SE5 replica. Since we had both built all-wood aircraft, it was decided that the replicas would be of wood construction also. Construction was started simultaneously of both machines in the same shop so that we could save time on jigs and mass-produce many of the multiple fittings required in biplane construction.

Construction roared along at a great rate until we began to build in some of the detail so necessary to make an airplane of this type look right. Bungee-sprung cross-axle landing gear,



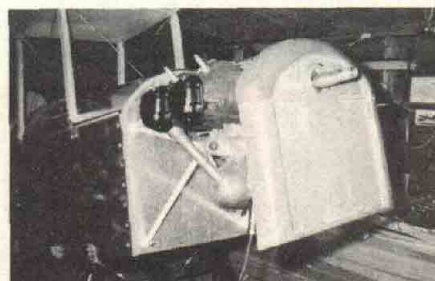
The modern tail wheel is a "give-away" for scale, but the overall S.E.5A Replicas prove a means of satisfying this type of aviation desire in a practical manner.



Where obtainable, older instruments were used. The Lewis-type gun was made from fiberglass and aluminum tubing, and the fuel is carried in the center section.



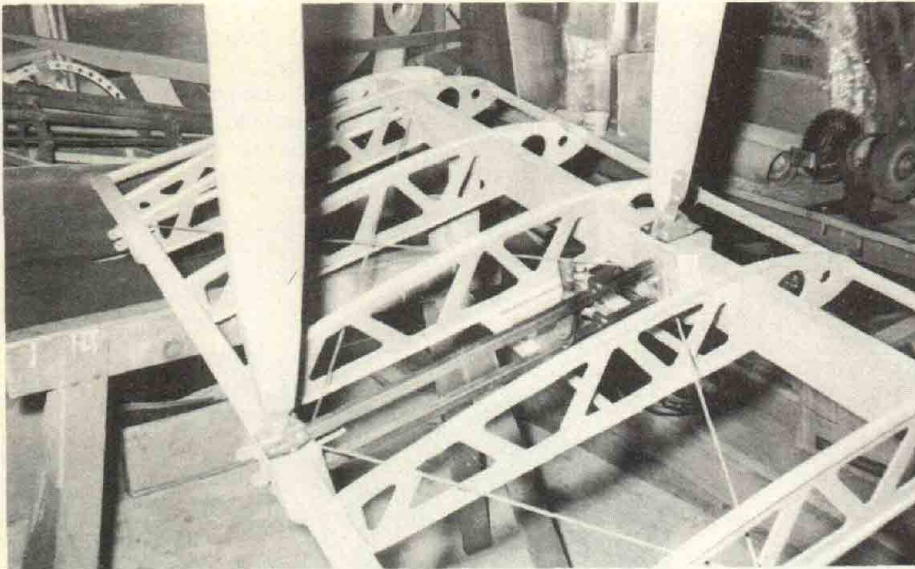
CF-QGL, Dan McGowan's S.E.5A Replica, strikes a realistic stance as it turns away.



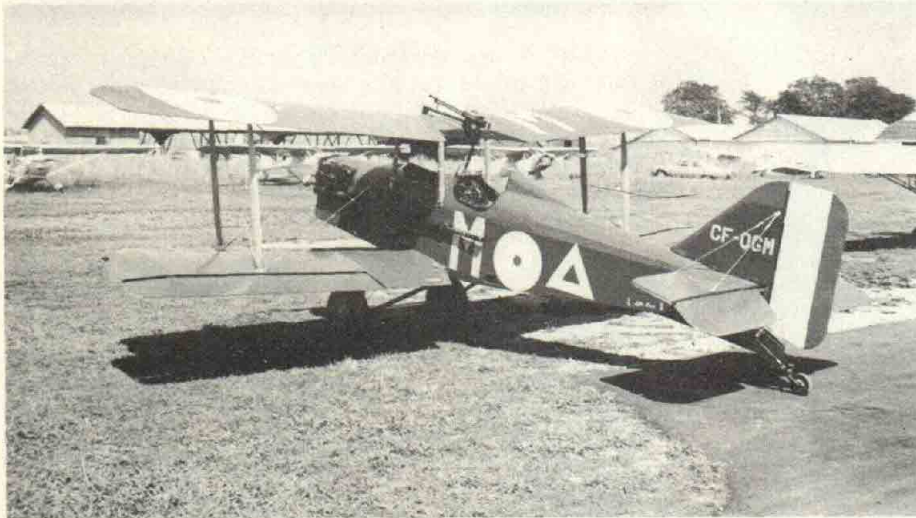
The 85-hp Continental was adapted to the ship as best as could be with acceptable results.



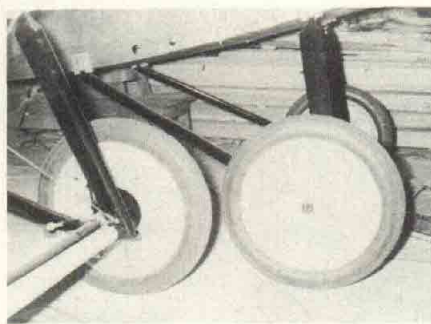
The exhaust is carried back to aft of the cockpit in long pipes on either side of the fuselage. The fixed machine gun can be seen on the left side forward of the cockpit.



Sawn-out ribs and fitting details are seen in this uncovered lower-wing panel.



CF-QGM is the author's S.E.5A Replica.



Inside and out details of the converted motorcycle wheels.

#### SE5A Replica Specifications

Scale .....	65 percent
Wing span .....	22 ft. 10 in.
Length .....	16 ft.
Empty weight .....	680 lbs.
Gross weight .....	1100 lbs.
Cruise speed .....	85 mph
Rate of climb .....	550 fpm
Powerplant .....	Continental
.....	C-85-12 @ 85 hp

with brakes, 16-in. wheels, radiators, guns and gun sights, louvres, wooden struts, and on and on. The wheel problem was solved with motorcycle wheels converted with larger bearings, and with fabric covers. Guns were built up with wood, fiberglass, and aluminum tubing from scale drawings. We collected every photo that we could find for details of cowlings, windshields, markings, and so on. We collected old-type instruments to make the panel look right, built up radiator shells from fiberglass and aluminum screen, made up the flat windscreen and spruce struts, and finally were ready for paint.

The original SE5's were dull green on the top surface of the wings, fuselage, and tail, with clear-doped linen on the bottom. But, every color picture we found was a different green. One day in a model shop we found some enamel for use on scale models—World War I Royal Flying Corps Green and Doped Unbleached Linen. Down to the local paint manufacturer to have matching enamel mixed and back to work with the painting. The unbleached linen looked great but at about the halfway point with the green we decided something didn't look right. Right!—we didn't have Royal Flying Corps Green, we had Willys Jeep Brown! "Sorry," said the paint-mixing people, "we can't afford to try again! Here is our master file on paint colors, if you find what you want we will mix it for you." After many hours of searching we found it—a perfect match—American Telephone and Telegraph Service Truck Green.

Back to painting, then the detail, identification letters, registration, and squadron markings (the triangle is for Delta Airpark where the planes are based).

Final assembly and test flying was routine and both airplanes were flying early in July, 1970 after about 18 months of work. Dan's machine (and Dan) made the flight to Oshkosh, and we both attended the Northwest EAA Fly-In at Arlington, Washington.

Other than slight rigging adjustments, we've had no problems. Both airplanes are in regular use and have logged a total of about 140 hours without incident. Handling both on the ground and in the air is excellent and, although Canadian regulations do not allow aerobatics in homebuilts, we have done enough "unusual attitude tests" to be sure that the SE5 Replica is a very capable machine.