

CURTISS CANADA



Photos via author unless noted otherwise

by Colin Owers

Curtiss Canada in flight in the UK. The struts that were added to support the upper wing overhang are evident in this view.

THE CURTISS C, or *Canada*, of 1915 was a large biplane that owed its wing structure and engine installation to the Curtiss H series of flying boats. Instead of a hull, a large nacelle carried a forward cockpit for two gunners while the pilot was placed to the rear of the wings in a position that had very little forward view: indeed, his view was restricted in every direction. The nacelle was connected to the lower wings by its upper longerons. The tail structure was supported by three thick booms, two of which came from the rear of the engine nacelles and a third from the rear of the fuselage nacelle. This arrangement was to reappear on the Curtiss H-7 flying boat. The upper wing had long extensions that were braced entirely by wires, the landing wires being braced to kingposts. Ailerons were fitted to the upper wing only. The tandem wheel-pair arrangement of each undercarriage unit was also novel and the subject of US Patent 1,246,020. Dual wheels were carried as a tandem pair on each side of the machine. They were supported by a pair of struts forming a V mounted directly underneath each engine nacelle. A tailskid was carried on the lower tail boom just forward of the rudder. The twin-engined landplane was apparently intended to be a bomber and while its configuration was unusual, it was not as radical as others in these formative years, and besides, it promised a good performance.

Design had begun in May 1915, in response to a request from the British Admiralty.¹ The Curtiss Company had established a factory in Canada at 20 Strachan Avenue, Toronto, in April 1915, as the Curtiss Aeroplane and Motors Ltd of Canada, apparently looking ahead for orders from the British government. When the landplane was ordered, the Curtiss facilities at Hammondsport and Buffalo were full with orders for H-4 flying boats and JN-3 trainers, and so the landplane was transferred to the Canadian factory. This probably led to the change of name from the Curtiss *Columbia* to the Curtiss *Canada*. Additional to being the first twin-engined landplane from the Curtiss Company, it was the first twin-engined aeroplane to be built in Canada.

Frithiof Gustaf Ericson was appointed Chief Engineer with Anthony (*Tony*) Jannus as test pilot and consultant, and Dr Alfred F. Zahm as consultant on the project. Construction began about the end of June 1915 and the machine was completed by the beginning of September. Ericson was Swedish by birth and was associated with Tom Benoist and the Jannus brothers before joining Curtiss in Toronto.

As the 170hp Curtiss VX engines were not delivered in time

for the first test flight, the machine was initially flown by Tony Jannus on 3 September 1915, with two 90hp Curtiss OX-5 motors. Despite the lack of power, the machine recorded a speed of 70mph. Jannus had returned from Russia, where he had been sent by the Curtiss company that had sold Model K flying boats and hydro-aeroplanes to the Russian government. He carried out all testing of the *Canada* before he returned to Russia, where he was killed during a test flight.

Jannus carried out the first flight at Long Branch, on the western outskirts of Toronto. Commander John Porte witnessed the type's acceptance tests in Canada on 7 September. Porte was to have been the British half of the crew of the *America* flying boat on its proposed trans-Atlantic flight. With the outbreak of war he had returned to England and immediately volunteered for the RNAS. He was instrumental in the Admiralty ordering the two *America* boats and was to have a long association with Curtiss during the war years, leading to the F series of Felixstowe flying boats. It is probable he was also involved in the decision to order the Curtiss landplane. Due to wartime secrecy, Porte was known as Mr J.B. Scott while in North America. The Admiralty had allocated serials 3700 and 9501-9600 to 101 Curtiss twin-engined biplanes by March 1916: however it was to the RFC that the aircraft was first delivered.

In a letter published by the *New York Times*, the first flights of the 'giant warplane' were described as follows:

The first flights of 'The Canada' were everything that could be desired. Tony Jannus was the pilot and went up for a short flight and then came down and the machine was thoroughly gone over, while the motors were left running. Then on the second flight, he took up a passenger and they made a more extended trip. Everything worked beautifully. The two 100 horse power Curtiss standard engines never missed a shot, and speed of nearly 100 miles an hour was developed. All the attachments worked perfectly.

'The Canada' is of the type of 'The America,' which was built before the war to make the trip across the ocean, but is much larger. Its wings are 102 feet across, and it is built to carry more than 2,000 pounds. This will allow a heavy calibre rapid fire gun to be carried and a large quantity of bombs.

The new developments are the most wonderful things about it. The Sperry stabilizer is used and by a new arrangement a telescope is fitted so that the pilot always knows his exact vertical. That is, he always knows the angle his machine has with the horizontal. This, with other fittings, the nature of