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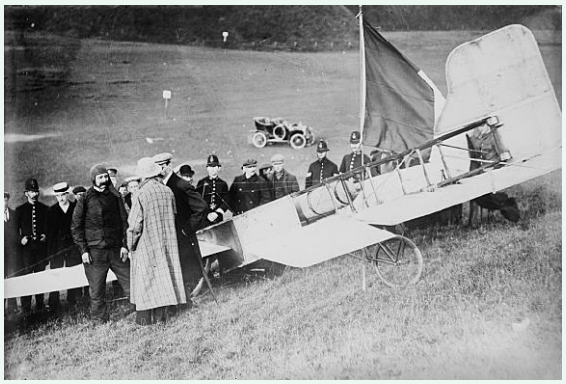
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SPIRIT OF ST LOUIS H182

The model in this box is of the *Spirit of St Louis*, the plane which was used by Charles Lindbergh (1902-1974) to make the first solo crossing between New York and Paris.



The history of flight is marked by a series of memorable events in which the distance that a plane could fly was gradually extended. In 1909, for example, the French pilot Louis Blériot (right) made the first successful crossing of the English Channel. He flew 22 statute miles (35 km) from Les Barraques (near Calais) to Dover in his Blériot XI. The trip took thirty-seven minutes. The photograph on the left shows Blériot and his plane at the landing site near Dover.

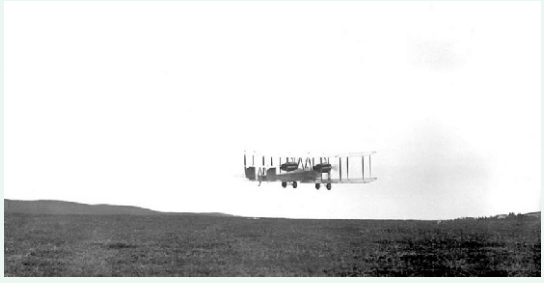


The first people to fly non-stop across the Atlantic were the British pilots Arthur Witton Brown and John Alcock (right). They made their flight on 14 June 1919. They flew a modified World War I Vickers Vimy bomber (below left) from St John's, Canada, to Clifden, Ireland. They left St John's at 1.45 p.m. local time, and landed in Derrygimla bog 16 hours and 12 minutes later after flying 1,980 miles. They won a £10,000 prize offered by the *Daily Mail* newspaper for the first non-stop flight across the Atlantic. The photograph below right shows them taking off from St John's.



By the time Charles Lindbergh made his flight from New York to Paris, 81 people had flown across the Atlantic. His, though, was the first solo, non-stop transatlantic flight.





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The *Spirit of St Louis* was made by Ryan Airlines of San Diego, California. The company designer Donald Hall collaborated with Lindbergh to custom-make a plane which was capable of the long flight across the Atlantic. Their design was loosely based on the Ryan M2, a mail-carrier built in 1926.

The original wingspan of the Ryan M2 was increased by 10 feet (3 metres) and redesigned to create a surface area large enough to lift 450 gallons (1,703 litres) of fuel. The fuel was carried in five fuel tanks, the main one of which was in the nose. This reduced the risk of the pilot being crushed to death in a crash, but there was no front windshield and the pilot's view was limited to the side windows. A periscope was fastened to the plane's left side to provide a forward view, although it is unclear whether the periscope was used during the flight.

Lindbergh had to sit in a cramped cockpit which was 94 cm wide by 81 cm long and 130 cm high. The cockpit was so small, Lindbergh could not stretch his legs. The stiff wicker seat in the cockpit was custom built for Lindbergh's tall and lanky frame, but was also said to be purposely uncomfortable to help keep him awake!



The *Spirit of St Louis* was powered by a 223-horsepower, air-cooled, 9-cylinder Wright J-5C 'Whirlwind' radial engine. The engine had a maximum operating time of 9,000 hours and a special mechanism that could keep it clean during the whole New York to Paris flight. The aircraft fuselage was made of treated fabric over a metal-tube frame. The wings were made of fabric over a wood frame.

The plane was rather unstable with a tendency to curve, dip, and bank at random times. Lindbergh later wrote in his account of the journey how the aircraft's movements woke him various times during the flight. It carried no radio in order to save weight and Lindbergh refused to take souvenir letters so that every spare ounce could be devoted to fuel.

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Lindbergh and Hall had to work quickly to design and make the plane, as Lindbergh wanted to win the $25,000 Orteig Prize for the first non-stop flight between New York and Paris. In the spring of 1927, several other pilots were also preparing to compete for this prize, which was offered by a French-born hotelier based in New York. The photograph on the right shows Lindbergh with Raymond Orteig after he had made his successful flight.

At that time a transatlantic flight was very risky. During the spring and summer of 1927, 40 pilots would attempt various long-distance over-ocean flights, leading to 21 deaths. On 10 May 1927 news broke that Frenchmen Charles Nungesser and Francois Coli had taken off from Paris bound for New York. It appeared as if all Lindbergh's efforts would be in vain. However, despite a radio report claiming that Nungesser and Coli had been spotted over the Atlantic, the two were never seen again.

Lindbergh's strategy for his flight was somewhat risky - the *Spirit of St Louis* was a single engined plane, instead of the tri-motors that most other competitors favoured. He also dispensed not only with a radio, but a sextant and parachute (although he carried an inflatable raft). The final key to his success was his decision to fly into weather conditions that were clearing, but not clear enough for others to consider safe. He was quoted as saying 'What kind of man would live where there is no danger? I don't believe in taking foolish chances. But nothing can be accomplished by not taking a chance at all.'

The *Spirit of St Louis* took off on the morning of 20 May 1927. It made for St John's, Newfoundland and then set out over the Atlantic. After 24 hours Lindbergh spotted fishing boats and an hour later passed over the south west tip of Ireland. Amazingly he was only three miles off-course. With 600 miles to go, he flew over southern England and then over the Channel to Cherbourg, which he reached at 8.30 p.m. on 21 May. One and a half hours later he circled the Eiffel Tower and then landed at Le Bourget airport at 10.24 p.m., having covered 3,610 miles non-stop.



Over a 100,000 people were said to have turned out to greet him at Le Bourget (left). Lindbergh promptly became a national hero. His flight was followed by the 'Lindbergh boom', as public interest in air travel bloomed and aviation stocks skyrocketed.

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Photographs. Top: Lindbergh poses by the Spirit of St Louis. Middle: The Spirit of St Louis as it is today, in the National Air and Space Museum in Washington, DC. Bottom: Plan of the Spirit of St Louis.



