Richard William Pearse, 187

CCL, n.d.[b]

Richard Pearse was a South Canterbury inventor, engineer and farmer. He is famous for being one of the first people on earth to leave the ground in a powered aircraft. His life and work have inspired books (including a novel), poetry, stamps, documentaries, and three stage plays.

His first plane, built at Waitohi, inland from Temuka, had many innovations - a steerable tricycle undercarriage, wing controls, and a variable pitch airscrew made of metal, not wood. The propeller was directly connected to the crankshaft of the engine. The power-to-weight ratio of the plane was better than many aircraft designed in later years.

A SOLITARY LIFE

During his life Pearse was a solitary character - he took few notes and talked to few people about his work. He was regarded as intelligent but eccentric, earning him the nicknames 'Mad Pearse' and 'Bamboo Dick'. It was not until after his death that the importance of his work became more widely appreciated, thanks to the efforts of George Bolt, the founder of the Canterbury Aero Club.

While he is most remembered for his work with aircraft, Pearse built all kinds of machinery, which according to South Canterbury Aviation Heritage Centre included:

> a needle threader, power cycle, recording machine, magic viewer, harp, power generator, potato planter, topdresser, motorised discing machine and two sorts of musical box.

Pearse's work was mostly undertaken alone, without formal training. He was constantly improvising from materials he found or recycled. Playwright Mervyn Thompson wrote in the preface to Jean and Richard: A fantasy:

> Pearse struggled alone, invented alone, flew alone and died alone. Instead of the cheers and fame he deserved he remained obscure and unsung, known to few — and then mainly as a mad man!

BUNGALOWS AND PEARSE'S 'SECOND HOME'

Pearse lived in Christchurch from the 1920s. In November 1921, he paid £45 for a q
acre section on the south side of Breezes Road. Originally it was number 4 Breezes
but is now 164. Pearse built the three-bedroomed bungalow entirely by himself.

Two years later he purchased more land at 68 Wildbe
The building fee of 30 shillings allowed him to constru
house, on the corner of Wildberry and Dampier street
Pearse rented the properties to tenants and lived off t

Christchurch City Libraries, n.d.

Research for Pearse's projects was often conducted at the library. In the fourth edition of The Riddle of Richard Pearse, Gordon Ogilvie writes (page 146):

> The Christchurch Public Library now became almost his second home. He spent a great amount of time in the reading room poring over tome after tome on engineering, aviation, mechanics, aeronautics and science.

THE 'UTILITY PLANE'

Debate around whether Pearse was the first to fly is what springs to mind for most people about Pearse, but another of his lasting legacies was the last plane he built. At 68 Wildberry Street, he was able to work in his garage virtually full-time on his idea of a craft that would do for planes what Henry Ford did for cars.

Called the utility plane, Pearse's idea was a plane that could land anywhere, and could also be driven like a car. The propeller was able to be moved from the front of the plane to above it by means of levers, providing the ability for vertical take-off. The plane was built in Pearse's garage and is now housed, along with a replica of Pearse's first plane, at Auckland's Museum of Transport and Technology.

Fact file

Born: 3 December 1877 in Waitohi, near Temuka

Died: 29 July 1953, in Christchurch

EARLY LIFE

Richard Pearse's parents were Digory Sargent Pearse and Sarah Browne. They had nine children, including Richard who was the fourth child.

All of the family were good at tennis, chess and music and together they formed a family orchestra. Richard played the cello. Richard also played golf.

Richard's parents farmed a large property at Waitohi, then a rugged and isolated part of South Canterbury. Waitohi is inland from Temuka, just north of Timaru.

Richard was quiet and independent at school, but a keen reader who would day-dream in class sometimes.

1906

When he was sixteen Richard left school to work on the family farm, but he did not like farming. He wanted to go to university and study engineering but his father could not afford to send him.

Richard was given a 100-acre block of land when he turned 21, but instead of farming, he built a workshop with a forge and a lathe, and began building his own inventions.

Adult life

Richard Pearse's first invention to receive a patent was a type of bicycle, where the pedals were pushed up and down, rather than around, and the tyres could be pumped up while still riding. The bicycle frame was made of bamboo. But his real interest lay in flying.

Pearse began working on ideas for powered flight in the last years of the nineteenth century. He kept in touch with what was happening in the world of flight by reading the magazine Scientific American.

By 1902 Pearse had probably built his first lightweight two-cylinder engine. He then built his first plane out of bamboo, tubular steel, wire and canvas, and would practise taxiing it around his paddocks.

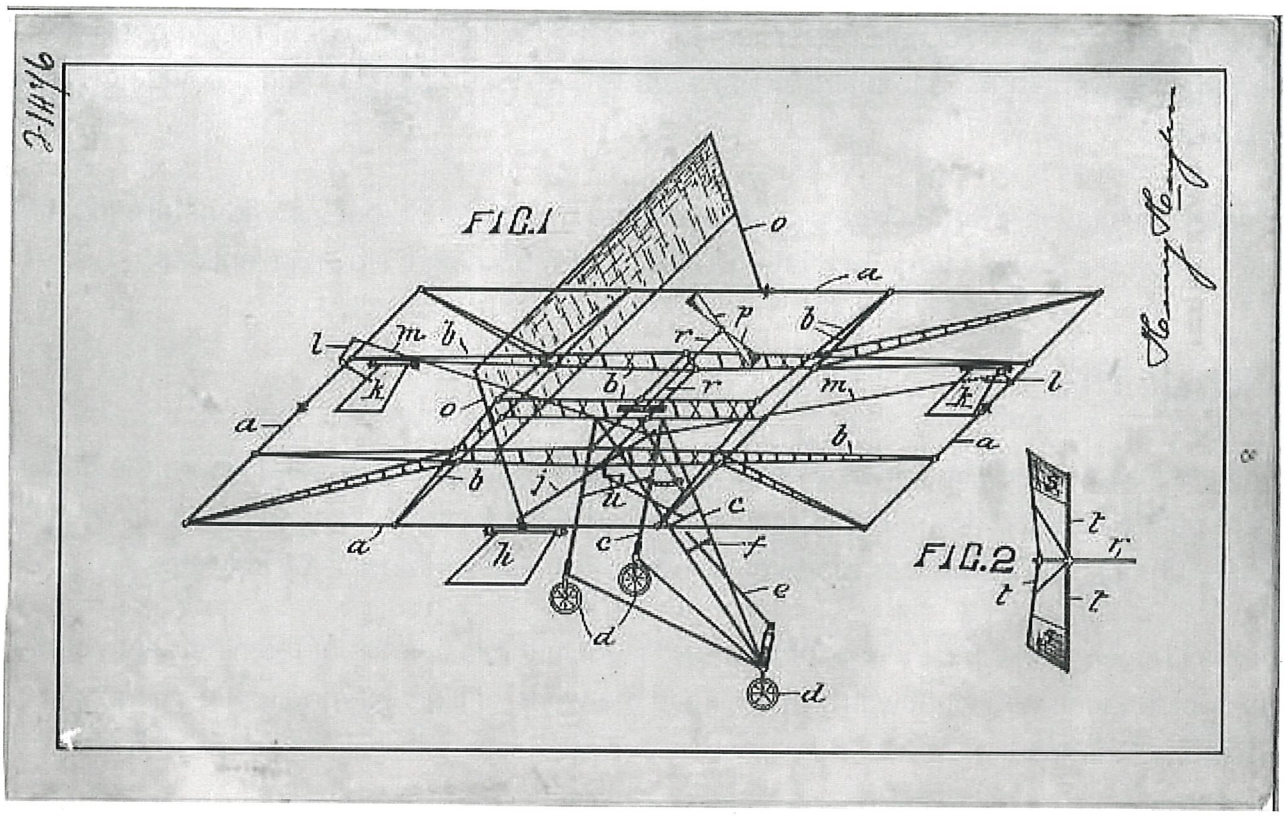
Pearse made his first public attempt at flight along the Main Waitohi Road, and after staying in the air for about 50 metres, crashed into a gorse fence. (Pearse was not very good at farming and his gorse fences were about 3 metres high).

There is no official record of this attempt at flight though eye witness accounts suggest that it took place on 31 March 1903 (or even possibly 1902). Supporting evidence in the intervening years has sometimes contradicted these dates.

What Pearse achieved was a powered takeoff, not controlled and sustained flight. His was the fifth successful powered takeoff to have taken place anywhere in the world.

Pearse did not believe he flew properly, leaving that to the Wright brothers, Wilbur and Orville, who flew on 17 December 1903 at Kittyhawk in the United States.

Pearse applied to patent his aircraft design in 1906 and continued his attempts to fly.



Richard Pearse's Fantastic Flying Machine, drawing from Richard Pearse's patent, July 1906 [patent number #21476], Archives New Zealand (CC BY-SA 2.0)

A number of eyewitness accounts tell of seeing his plane leaving the ground on several different occasions, but it is not certain if any of them could be described as true flight, that is, flying under control for a reasonable length of time.

Pearse kept more and more to himself. He never married. In 1911 after becoming very ill with typhoid, Pearse moved to a farm near Milton in South Otago where he carried on inventing, designing and making several pieces of farm equipment.

He was conscripted into the army in May 1917 and was sent overseas in January 1918, but fell ill and returned to New Zealand later that year.

In 1921 Pearse moved to Christchurch where, after building three houses, he began designing what he called his 'Utility Plane'. The patent for this was granted in 1949.

The Utility Plane had a tilting engine to allow for vertical take-off and landing, and Pearse hoped it would one day become a plane which everyone could afford and fly, taking off from a backyard anywhere.

Unable to attract interest from aircraft companies to further develop his Utility Plane, Richard Pearse became obsessed with the idea that people were trying to steal his inventions.

Pearse was admitted to Sunnyside Mental Hospital in Christchurch in June 1951. He died there on 29 July 1953 after a heart attack. He was 75 years old.

Recognition after death