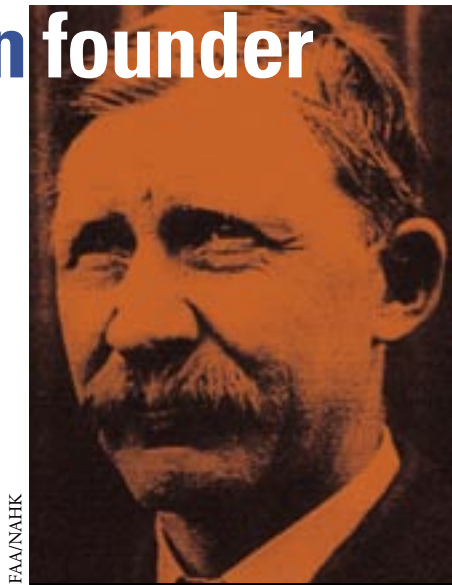


The forgotten founder

Amid last year's world-wide celebrations to mark the centenary of powered flight, one man was all but forgotten – aviation's first mechanic. Trevor Robinson reports.



FAA/NAHK

Maestro mechanic: Charles E. Taylor (1868-1956), aviation's little-known first mechanic.

ON 17 DECEMBER 1903, Wilbur and Orville Wright made history with the first sustained powered flight, lasting just 12 seconds and flying 120 ft.

They called their aeroplane the "Flyer". It's now generally known as the "Wright Flyer".

But there was a third person who deserves some credit for the first powered flight: Charles E. Taylor, aviation's first mechanic.

Charlie Taylor built the engine for the Flyer. Without his unpretentious genius and artanship, the arrival of powered flight might have taken several more years.

Yet little is known about this unassuming man.

Born May 24, 1868, Charlie Taylor left school at the age of twelve. With an aptitude for anything mechanical, he went into business in his early twenties making metal house numbers. In 1896 he moved to Dayton, Ohio, where he worked manufacturing farm equipment before running his own small machining business.

Charlie had done a few machining jobs for the Wrights. One hot June night in Dayton, one of the brothers asked Charlie to come and work for them. The \$18 a week wage – not bad for the time – was enough to tempt him.

Although Charlie was employed to fix bicycles, the Wrights soon called on his skills to help them with their gliding experiments. The Wrights needed to test their aerodynamic ideas – Charlie built

them a wind-tunnel; they wanted metal parts for their gliders – Charlie made them.

When the Wrights thought the time was right for powered flight, at first they turned to established engine manufacturers. No-one was interested. So they asked Charlie to build the engine. The specifications were straightforward: the engine had to deliver 8-9 horsepower and weigh a maximum of 180 lb (82 kg). Although this sounds simple today, in 1902 these specifications were radical.

Six-week success: With the Wrights concentrating on building the airframe, Charlie started making the engine. Despite his lack of formal training, and with only rough drawings for reference, Charlie finished the engine – including test runs – in just six weeks.

Built using nothing more than hand tools, a lathe and drill press, the 4-cylinder engine with 4-inch stroke and bore produced 8 horsepower at 670 rpm, 11 horsepower at 1,000 rpm and 12 horsepower at full throttle.

This unexpected extra engine performance allowed the Wrights to reinforce much of the airframe, improving the structural integrity and safety.

What happened next is well known. The Flyer flew four

times on that chilly December morning. The brothers went on to be celebrated as the fathers of powered flight. But what happened to Charlie?

Charlie Taylor stayed with the Wrights until 1920, mostly maintaining and refining their aircraft for demonstration flights to the US Army.

After 1920 he set up his own machining business, but lost all of his money in the Great Depression.

In 1937 while researching a project to build a replica of the Wrights' bicycle shop in Michigan, Henry Ford found Charlie working for an aircraft facility in Los Angeles. Ford employed Charlie until 1941, when he returned to California to work in a factory.

Interviewed in 1948 after the death of Orville Wright, Charlie said he had "always wanted to fly, but never did. The Wrights refused to teach me and tried to discourage the idea. They said they needed me in the shop and to service their machines, and if I learned to fly I'd be gadding about the country and maybe become an exhibition pilot, and they'd never see me again".

A reporter researching an article in 1955 found Charlie in a Californian hospital charitable ward, almost destitute and in failing health. Recognising Charlie's significant contribution to aviation, the aviation industry raised funds to look after Charlie, moving him to a private hospital, where he died on January 30, 1956 aged 88.

Sources: "My story", by Charles E. Taylor as told to Robert S. Ball, first published in Collier's December 25, 1948; Charles E. Taylor, 1868-1956, the Wright Brothers Mechanician, by H.R. DuFour, Wright State University, Dayton, Ohio, 2003.

Trevor Robinson is a maintenance specialist for CASA.



WRIGHT STATE UNIVERSITY

The Flyer engine: The four-cylinder engine had a 4-inch stroke and bore, and produced 12 horsepower at full throttle.