Virginia Aviation History Project

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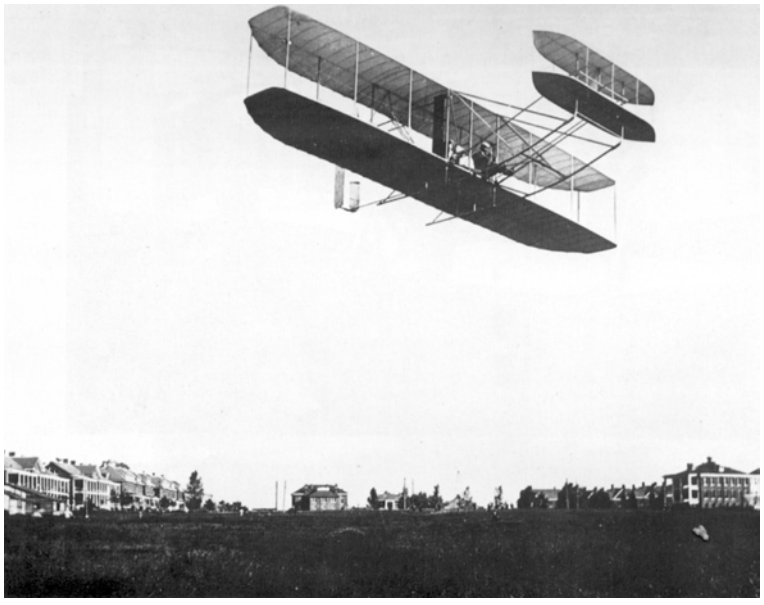
The Wright Brothers' Historic Flying Demonstration at Fort Myers

by Linda Burdette, VAHP Feature Article Editor

September 17, 2008 is the anniversary of both a historic flight and a historic tragedy. Many pilots and aviation enthusiasts know about the Wright Brothers' historic flying demonstration at Fort Myer, Virginia and that it resulted in the first aviation fatality. Although the event is widely known, a 100th anniversary surely deserves a repeat of the details. In the aftermath of the 1903 flight at Kitty Hawk, the Wright Brothers were struggling against a lot of skepticism. Some said they simply had never flown and were crackpots. Others couldn't believe that two bicycle mechanics from Dayton, Ohio could possibly have done what so many before them had failed to do. Others had the idea that if such simple people had built a successful airplane, it couldn't be difficult. But the Wrights persevered and by 1905 had produced a new and more capable airplane. After successful tests that year, they tried to interest the War Department in the purchase of airplanes, but were turned down again and again.



Orville Wright demonstrating a modified 1905 Wright Flyer 3 for the Army at Fort Myer, Virginia in 1908

But someone must have listened because on December 23, 1907 the U.S. Army Board of Ordinance and Fortification issued an "Advertisement and Specification for a Heavier-Than-Air Flying Machine." Many felt that the specifications required in this advertisement were simply impossible, but the Wright Brothers were not deterred. This was

the chance they wanted. The specifications were indeed steep: the airplane must carry a pilot and passenger for 125 miles at a speed of 40 miles per hour; the airplane must remain aloft at least one hour at a time and land without damage; it must be transportable on an Army wagon; and must permit "an intelligent man to become proficient with its use in a reasonable length of time."

The Wrights began by modifying the 1905 Wright Flyer 3 with two seats, stick controls, and a 35-horsepower engine. They took this plane to Kitty Hawk to test and while there were informed they needed to try to sell airplanes in France as well, the French government having expressed interest in their product. So they made the decision that they would split up. Wilbur headed to France with one plane to perform demonstrations and Orville remained in Kitty Hawk and later Dayton to finish the work on the airplane for the Army.

In September 1908, Orville headed to Fort Myer accompanied by Charles E. Taylor. Taylor was a machinist and bicycle repairman who went to work for the Wrights in June 1901. He kept the shop running while the brothers were inventing and during their trips to Kitty Hawk. Even though he was in Dayton in December 1903, he was an integral part of the first flight as he was the primary creator of the 12HP/1,025 RPM engine that powered the original Wright Flyer. He still worked with the Wrights in 1908 and helped Orville with the last minute repairs and corrections on the plane to be demonstrated at Fort Myer. In the days leading up to the September 17 flight, Orville performed numerous flights around the area of ever longer durations and faster speeds. He also began taking passengers up. On September 17, 1908 Orville was again demonstrating and testing the capabilities of the airplane and offered to take Taylor, who had never flown. Taylor was in the passenger's seat and Orville was readying for take-off when Lieutenant Thomas E. Selfridge asked if Orville would mind carrying an Army observer instead of Taylor. Orville consented, although he couldn't have been very happy about his passenger. He did not particularly like Selfridge since not only was the lieutenant a member of the Army's Review Board, he was also a very active member of the Aerial Experiment Association, an organization which directly competed with the Wrights, and as the designer of the AEA's first powered airplane, he was himself a potential competitor. Orville wrote to Wilbur "I don't trust him an inch. He plans to meet me often at dinner where he can pump me." At any rate, Selfridge replaced Taylor and in a December 25, 1948 interview with Collier's magazine, Taylor mused, "Since then, a lot of people say they have narrowly avoided being killed in an airplane by a last-minute switch in plans. Maybe I was the first, though."

Rescuers extricating Orville Wright and Lt. Selfridge from the wreckage on September 17, 1908

The weather that day was perfect, although with a 6 MPH wind. After a 30 foot take-off run, the small aircraft lifted off and began a spiral climb. At about 150 feet of altitude, the flyers and the crowd heard a sharp snap

and the airplane suddenly veered downward and to the left. The propeller had hit a wire, shattering one blade on one of the two propellers.

This highly visible fact led many people to claim that the plane crashed because it had two propellers. In a November 17, 1908 interview for Motor magazine, Wilbur Wright refuted this claim. "It is untrue that my brother's accident was caused by having two propellers. The first story that got abroad was that one propeller broke off and the other one running caused the apparatus to swing round as if on a pivot. People accepted this report, for there were plenty willing to say 'I told you so'. As a matter of fact, the accident would have happened just the same if there had been but one propeller. The engine was shut off so quickly that the undamaged propeller had no time to swing the machine round. All the damage was done by the breakage of the rudder." Orville backed up this opinion. In a 1914 interview with Boys Life magazine he stated "we did not fall because of [the propeller breaking] as the newspapers stated at the time. If the accident had been no more serious than the breaking of a propeller shaft I could have glided to the ground in safety."

According to Orville, the crash happened because the broken wire stabilized a vertical rudder. As soon as possible, Orville shut off the engine, but the plane had already dived away from the field and over a ravine, the worst possible place to go down. Having ample experience with gliders, Orville was able to maneuver the controls to guide the plane back over the field where he expected to make a difficult but safe landing. However, as they descended they heard another snap. The broken rudder had swung into a horizontal position where it forced the plane to plunge nose down toward the ground. The plane went into a sheer drop of 90 feet. About 20 feet from the ground, the rudder flew back into its vertical position and Orville regained control, but too late to make a safe landing. Orville and Selfridge were pulled from the crash and taken to the post hospital. Unfortunately Selfridge died on the operating table later that day. Orville sustained a cut over his left eye, a broken left leg, four broken ribs and hip injuries that would only be diagnosed twelve years later when x-rays were available. His injuries caused him pain for the rest of his life. He suffered from extreme sensitivity to low vibrations and eventually any travel in ships, autos or trains would cause throbbing pain. Worst of all, he could not fly without pain. He last piloted a Wright aircraft in May 1918. In 1939 he went up in a new DC-4 but reported that he could only relieve the pain by standing on his toes. On April 26, 1944 he went up again in a Lockheed Constellation and actually took the controls for a brief period of time. He reported that as the airplanes became more advanced, they caused him less pain. But those two flights were the only ones he took in the last 20 years of his life.

And the result of the Fort Myer demonstrations? After Orville's recuperation and Wilbur's return from his extremely successful tour of France, the brothers rebuilt the Military Flyer. They returned to Fort Myer and completed the tests. Not only did they meet the specifications, but they exceeded the speed requirement by flying an average of 42 MPH. This garnered them a $5,000 bonus from the Army so that they received $30,000 for the first military airplane.

Sources:

Most of the information in this article came from an excellent book entitled The Published Writings of Wilbur and Orville Wright, edited by Peter L. Jakab and Rick Young, published by the Smithsonian Institution in 2000. It is part of the Smithsonian History of Aviation Series.

Additional information and the pictures came from the Wright Brothers Aeroplane Company of Dayton, Ohio. Wright Brothers History found at www.first-to-fly.com.