

Fall 2013

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Scholarly Commons Citation

Freiwald, D. (2013). The Wright Lawsuit. *Journal of Aviation/Aerospace Education & Research*, 23(1).
<https://doi.org/10.15394/jaaer.2013.1604>

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THE WRIGHT LAWSUIT

David Freiwald

Abstract

While the flights of the Wright brothers over a century ago have enshrined their names in aeronautical history, only slightly less important are the lawsuits brought forth by the brothers in defense of their invention. From 1906 to 1917 the Wright brothers maintained a successful stranglehold on the development and production of the airplane in the United States. This paper examines that history, the ensuing litigation, and the impact that the Wright brothers actions had upon the readiness of the U.S. in World War I.

The Wright Lawsuit

The Wright brothers were granted a patent by the U.S. Patent Office in 1906 for a flying machine (U.S. Patent No. 821,393, 1906). This patent was based on the application they had submitted in 1903 that had included a detailed description and drawings of their control system as applied to a glider (Crouch, 1981). Their application described wing warping, as well as the entire system that allowed the aircraft to be controlled in forward flight (Wright & Wright, 2011). The Wrights had also stated in their application that a feature like ailerons could provide lateral control (U.S. Centennial of Flight Commission, 2005). Obtaining a patent meant that no one could copy the Wrights' design without their permission and without paying them a royalty. However, the success of the Wrights' design, bolstered by Chanute's subsequent publication of their achievements, proved impossible for other aircraft designers to ignore. Furthermore, the concept of lateral control was so basic to any aircraft design that, without it, no aircraft could have flown successfully (Heppenheimer, 2003).

Wright and Wright v. the World: A Primer

After the success of the June Bug, the members of Alexander Graham Bell's Aerial Experiment Association designed and built its final airplane, the Silver Dart. It was the first American aircraft built by a team other than the Wright brothers that performed well enough to be considered a practical aircraft (Goddard, 2003). Bell told the members that they had not trespassed on the Wright patent.

In the midst of these discussions, Curtiss received a telegram from Augustus Herring suggesting that the two form a partnership to build airplanes (Shulman, 2002).

Curtiss unveiled the Aeronautical Society machine, which he called the Golden Flyer, on June 16, 1909 flying it from Morris Park in the Bronx. To further differentiate his airplane designs and the Wrights', he mounted ailerons between the wings of the biplane. On July 17, he flew the Golden Flyer for 25 miles and captured the Scientific American Trophy for the second year in a row (Shulman, 2002). This exceeded the Wright's patience and Wilbur filed a patent-infringement suit against Curtiss on August 16 and another on August 19 seeking to prevent the Aeronautical Society from flying the Golden Flyer (Banner, 2008). Curtiss' subsequent success at Rheims did little to assuage Wilbur's anger (Brady, 2000).

The Wrights' Position: A Propositional Fallacy

Because of the experiences and values gained from their clergyman father, the brothers could be best described as hyper-vigilant towards those whom they perceived as less ethically bound and therefore likely to steal their invention (Howard, 1988). This mindset led to the selection of the isolation of Kitty Hawk, the silver paint of the aircraft, and the retreat to Dayton – all founded in a belief that the press and public scrutiny would result in a loss of control of their design (Brady, 2000). Orville warned Curtiss on July 20, 1908, "We do not intend to give permission to use the patented features of our machines for exhibitions or in a commercial way. [...] If it is your desire to enter the

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exhibition business, we would be glad to take up the matter of a license to operate under our patents for that purpose” (Wright & Wright, 2011, p. 907). Clearly, the Wrights saw their patent applying to all airplane flight as a consequence of their successful design (Banner, 2008). This belief was so broadly applied that it led to an unnamed Curtiss employee to remark, “If you jump in the air and flap your hands, the Wright Brothers will sue!” (White, 2011, para. 1)

As Bradshaw (1992) notes, it is known from the literature that the Wright’s progress was wholly iterative: they did not use the traditional design-build-test feedback loop of a sole-source inventor, they focused on the refinement of components using knowledge obtained from Chanute and others. No invention, no scientific discovery, no work of art, no human endeavor happens in an historical vacuum. There are always other factors – cultural, political, and personal – that influence the outcome of a single event. So it was with the invention of the airplane. A translation of Lilienthal’s *Birdflight as the Basis of Aviation* (1911) was discovered in the Special Collections area of the Embry-Riddle library with evidentiary markings from the U.S. Court of Claims indicating that the book belonged to the Wrights at the time of its seizure in 1929, *prima facie* evidence that the knowledge that made their first powered flight possible was not entirely self-synthesized. Though the printing of the text postdates their first flight the content within precedes it by a decade and a half.

Unfortunately for Curtiss, when the final verdict came in 1913 Orville Wright, now without Wilbur, was the unmistakable winner. With all delays and appeals exhausted, the Federal Circuit Court of Appeals ordered Curtiss to cease making airplanes with two ailerons that operated simultaneously in opposite directions (Freudenthal, 1949). After consulting with Henry Ford, their mutual lawyer encouraged Curtiss to bait Orville to reopen the litigation by devising a new configuration for lateral control using the Langley aerodrome that hung in the Smithsonian (Kelly, 1989). The idea was to persuade the court that Curtiss’ plane was based on Langley’s design, not on the Wrights’, an attempt that was unsuccessful, but ensured that the case dragged on. Ford’s lawyer was able to persuade the court to temporarily stay the old verdict, and the legal challenges began again (Shulman, 2002).

The suit finally ended with the start of World War I when the aircraft manufacturers established the Manufacturers’ Aircraft Association to coordinate wartime aircraft manufacturing in the United States and formed a patent pool with the approval of the U.S. government (Kane, 2003). All patent litigation ceased automatically and

royalties were reduced to one percent and the free exchange of inventions and ideas took place among all the airframe builders. While this arrangement was to have lasted only for the duration of the war, the litigation was never renewed at the end of the war in 1918. By this time, Orville had sold his interest in the Wright Company to a group of New York financiers and had retired from the business (Kelly, 1989). For the war effort, however, the damage had already been done.

The Effect of the Lawsuit upon the Development of Aviation in the United States

The aeronautical world in 1918 would be unrecognizable to Wilbur Wright who had left it only six years earlier. As late as 1914, the worldwide aircraft industry employed only a few hundred workers. By 1918, over 350,000 people were dependent upon the new industry that had manufactured over 50,000 aircraft as a consequence of World War I (Goddard, 2003).

By the time the United States had entered World War I, other countries had pulled far ahead in production. As early as 1913, a year before hostilities commenced on the continent, France appropriated \$74 million for aviation. By contrast, America’s spending of \$125,000 approximated that of Bulgaria (Goddard, 2003). When the assassination for the Archduke catapulted the continent into war there were already several hundred serviceable aircraft available – even if their mission had yet to be well defined.

The United States did not produce any aircraft of its own design for use at the front during World War I; nevertheless, the war served as an impetus for the infant industry and gave several aircraft companies their start. Most wartime production revolved around the manufacture of training aircraft, of the British De Havilland DH-4 bombers and reconnaissance aircraft, and of aircraft engines, where the automobile companies dominated (Brady, 2000). Federal policy during the war dictated that the government should not rely exclusively on private industry for all its aircraft needs as a direct result of the past decade of patent squabbles. Consequently, the U.S. government established the Naval Aircraft Factory (NAF) at the Philadelphia Shipyards to design and produce wartime aircraft as well as serve as a check on industry costs and profits. Although industry resisted its establishment and its intrusion into the private sector, the NAF succeeded in designing and producing a number of naval airplanes. Its production included 50 Curtiss H-16s, and a total wartime production of 183 flying boats plus spare parts for the craft (U.S. Centennial of Flight Commission, 2005).

Conclusion

History is not especially kind to the Wright brothers where the airplane business is concerned. Their aircraft company did not prosper; it struggled along for six years until it was finally sold (Kelly, 1989). During that time, the firm lost its technological lead and Wright airplanes became hopelessly obsolete. The brothers alienated much of the aviation community with their patent lawsuits and then, when they won those suits Orville alienated the investors in the Wright Company by refusing to take full advantage of their legal position. Consequently, many historians judge Wilbur and Orville Wright to be as

inept in business as they were brilliant in engineering. Sadly, their obstinacy led to a strategic disadvantage for the United States in World War I. If the promise to “darken the skies over Germany” with the “greatest aerial armada ever seen” (Hughes, 1919, p. 897) had been able to be fulfilled one must wonder how many men on both sides of the conflict might have been spared the prolonged misery of the trenches. In this we can see that the real losers of the Wright lawsuits were not the aviation pioneers but those who would come to depend upon the airplane as a valued tool in the swift prosecution of warfare. →

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