

Spring 2011

The Wright Patent Lawsuit: Reflections on the Impact on American Aviation

Benjamin J. Goodheart
Embry-Riddle Aeronautical University - WW, goodheb@erau.edu

Follow this and additional works at: <https://commons.erau.edu/jaaer>

Scholarly Commons Citation

Goodheart, B. J. (2011). The Wright Patent Lawsuit: Reflections on the Impact on American Aviation. *Journal of Aviation/Aerospace Education & Research*, 20(3). Retrieved from <https://commons.erau.edu/jaaer/vol20/iss3/4>

This Forum is brought to you for free and open access by the Journals at Scholarly Commons. It has been accepted for inclusion in *Journal of Aviation/Aerospace Education & Research* by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.

FORUM

**THE WRIGHT PATENT LAWSUIT: REFLECTIONS ON THE IMPACT
ON AMERICAN AVIATION**

Benjamin J. Goodheart

The Wright brothers, it must be conceded, were the first to fly a powered, heavier-than-air machine in sustained flight and under control. To deny them this rightful distinction is to willfully ignore fact (Hayward, 1912). Their contributions to aviation are innumerable, and without their insight, man may have been years awaiting what they accomplished in 1903. The Wrights' status as first in flight notwithstanding, their treatment of the issues surrounding the patent which was taken on their aircraft was harmful to the progress of aviation in the years following their success at Kitty Hawk. To claim that they owed the world the whole of their invention, and by extension, the profits arising from it, is unreasonable; but to suppose that in pursuit of their rightful gains, they would not impede any other from pursuing experimentation and improvement of aircraft is an expectation that is difficult to argue. In litigating against all those they deemed infringers upon their basic ideas, the Wrights forestalled what may well have been more collaborative and productive progress in aircraft design.

The Wrights were granted patent number 821,393 on May 22, 1906 after a protracted exchange with the United States Patent Office (Worrel, 1979). The original application had been submitted, in basic form, after the successful flights of the 1902 glider and was prosecuted by the brothers themselves (Worrel, 1979). When the patent examiner dismissed the invention as "inoperative", the Wrights sought professional assistance, and the next several years were spent drafting, and redrafting, their patent application with the help of Springfield, Ohio attorney Harry Toulmin (Johnson, 2004). The patent itself specified 18 distinct technologies to which it laid claim, describing the means by which their airplane was built, and more importantly, how it was controlled (U.S. Patent No. 821,393, 1906).

In contrast to copyrights, or other proprietary information, the primary purpose of a patent system is to encourage innovation in exchange for sharing information about new inventions, consequently promoting further technological development (Cho, 2010). In the U.S., the granting of a patent does not require that the inventor actually produce a product based on the invention (Johnson, 2004). Rather, it grants the patent holder the right to legally block others from doing so in pursuit of

commercial enterprise (Merges & Nelson, 1994). This element of the patent system can have tremendous negative effect on commerce and development, and effectively undermine the underlying purpose of patents by allowing activity that can block an entire market from expansion (Cho, 2010). Such was the case with the manufacture and development of the airplane as the Wrights sought to block access to technology they deemed their own through legal action between 1909 and 1917 (Bittlingmayer, 1988).

The argument over primacy of technology and the rightful ownership of patents thereof was not a struggle first seen in the development of the airplane. Concurrent to the Wrights' litigation, Henry Ford was waging a courtroom battle with George Selden over the patent rights to the automobile (Shulman, 2002). Although he emerged from the prolonged battle as the victor, Ford had spent considerable time and resources in the process (Simanaitis, 2004). Prior to Ford's experience with patent litigation, none other than Alexander Graham Bell, a close associate of Glenn Curtiss through the Aerial Experiment Association (AEA), was involved in a complicated legal scuffle over his seminal invention, the telephone. Ironically, Bell's situation stood in stark contrast to the

Wright Patent

battle over the airplane as he fought off competing products from Western Union (Hayward, 1912). Bell was able to secure monopolistic control over manufacture and sales of the telephone until his patent expired in 1893 (Hayward, 1912).

The first shot in the battle over the Wright patent was aimed squarely at Glenn Curtiss, his exhibitions being the most public, and his affiliation with both Alexander Graham Bell and Lt. Thomas Selfridge being particularly exasperating to the Wrights (Shulman, 2002). Selfridge, working with the AEA, had in 1908 written the Wrights seeking information in pursuit of developing a flying machine with his fellow experimenters. Assured by Selfridge that his efforts were in no way aimed at commercial endeavors, the Wrights shared their patent and other information with the young Lieutenant (Kelly, 1989). Bell and others (the brothers presumed with the intent of gaining information that would help the AEA), while Orville still lay in the hospital with grave injuries, walked uninvited into the hangar that held the tangled remains of the Wright flyer that was so recently destroyed in a crash at the U.S. Army trials, killing Lt. Selfridge, Orville's passenger (Tobin, 2003).

While Curtiss was certainly the primary target of the Wrights' legal strategy, many others fell into their sights as they too operated competing aircraft without extending due consideration to the Wright company. Claude Grahame-White, the noted aviator and historian, was one of those toward whom the Wrights directed their considerable legal powers. White settled with the Wright Company in 1911 for \$17,000; but along with him, Paulhan, Farman, and Bleriot were also subjects of the Wright litigation machine, as injunctions against manufacture or exhibition flight of any non-licensed machine were granted by the courts (Johnson, 2004).

Between 1909 and 1912, when Wilbur died of typhoid, the Wrights spent a great deal of their time embroiled in one facet or another of their patent litigation efforts; so much so that it interfered with their demonstration and licensing efforts (Crouch, 1989). Orville Wright once estimated that he had spent some \$152,000 on litigation costs alone (Johnson, 2004). The Wrights, however, were not the only ones whose time was devoted in large part to dealing with the courts.

Following the receipt of their U.S. patent in 1906, the Wrights were somewhat slow to put their aircraft into marketable production, as they had done abroad (Johnson, 2004). The effect of this was such as to discourage production by anyone but the Wrights either by legal

means or because their competitors were reluctant to accept a contract based on the proposed royalties, fees, and potential fines the Wrights would surely impose (Bittlingmayer, 1988). Under normal circumstances, the holder of a basic patent would be expected to function as the primary buyer of improvement patents (Johnson, 2004). When the market for improvement is limited, as it was by the Wrights, many economists agree that the improvement patents (and by association, innovation as a whole) cease to flourish (Heller & Eisenberg, 1998). Louis Paulhan, in an interview given to *Auto* magazine in 1910, summed up the general mood of those aviators outside the Wright camp by saying:

They are veritable birds of prey. They have pounced upon me upon my arrival in New York and did not fail to let me go... Besides they are not gentlemen... thus it is that the Wrights preventing Curtiss from making the slightest sale of apparatus, is making a very poor advertisement for himself. Paulhan, 1910, para. 1-3)

Summarizing the effect of the Wright lawsuits, Herbert Johnson noted, "The Wrights' failure to develop industrial capacity, coupled with their preoccupation with litigation, severely restricted their capacity to enter the market for improvement patents" (2004). As a result, the Wrights stubborn pursuit of market control seriously impeded the technological progress of the airplane (Johnson).

Not only did the struggle over the Wright patent take its toll on the aviation industry, discouraging scientists, engineers, and visionaries from advancing the art, it also repressed the Wrights themselves, squelching potential innovations to their machines in the name of patent protection. There was considerable risk to the Wrights in filing a patent with any amendments which could conceivably be viewed by a patent examiner as new material (Worrel, 1979). If an ongoing application were to include any modifications to the existing scope of the document, it was likely to be rejected on the basis that a new application would be required, and the newer patent application date would therefore apply (Johnson, 2004). As such, the Wrights were reluctant to make substantive changes to their design during the three years that passed while their patent application was reviewed (Johnson, 2004; Worrel, 1979). Even subsequent to 1906, the Wrights, as holders of what Judge Hazel deemed a pioneering patent, had little incentive to develop or integrate improvements in their design unless greater

marketability could justify the expense (Johnson, 2004).

While Curtiss also held crucial patents (assigned to him by the AEA) on the airplane that improved the design, engines, and flight controls, the Wrights were able to block him from producing aircraft (Bittlingmayer, 1988). Curtiss could not exercise the same authority so long as the Wright brothers' airplanes did not include any of his, or others', enhancements, thus stalling the technological development of their flying machines and eventually contributed to the Wrights' obsolescence (Lampe, 2009). So suppressed was the aircraft industry by the Wrights' actions that in 1917, with involvement in World War I looming on the horizon, the federal government orchestrated the creation of a patent pool to assign license fees to its members and to effectively restart the American

aviation industry (Johnson, 2004).

The Wright brothers' contributions to the development of manned flight are inarguably clear. They were a rare breed of aviator and were able to succeed where many others had trod before, and failed. Their contribution to the advancement of flight, however, is not as deserving of praise. Even Octave Chanute, friend and mentor to the Wrights, lamented in a letter to Wilbur, "I am afraid, my friend, that you usually sound judgment has been warped by the desire for great wealth" (Shulman, 2002, p. 54). By doggedly pursuing litigation, whether to protect the monetary or moral obligations they felt they were owed for their invention, the Wrights hindered growth and innovation in the very industry they helped to create. →

Benjamin (B.J.) Goodheart is an aviation professional with over 15 years of experience in the field. His diverse background began in aviation line service and has expanded to roles in aviation safety and loss control, training, and professional flying. He currently works in the aviation insurance industry as a claims and loss control manager. His career has spanned from tiny operators to major airlines, and has afforded him a wide variety of opportunities to practice within his passion. He holds a B.S. in Aeronautical Science and a Master of Science in Safety Science from Embry-Riddle Aeronautical University, several professional aviation certifications, and Airline Transport Pilot and flight instructor certificates. B.J. also serves as president of an aviation nonprofit organization, Mercy Wings Network. B.J. is currently pursuing a Ph.D. in Aviation.

References

- Bittlingmayer, G. (1988). Property rights, progress, and the aircraft patent agreement. *The Journal of Law and Economics*, 31(1), 227-248.
- Cho, M. (2010). Patently unpatentable: Implications of the myriad court decision on genetic diagnostics. *Trends in Biotechnology, In Press, Corrected Proof* DOI: 10.1016/j.tibtech.2010.08.005.
- Crouch, T. D. (1989). *The Bishop's Boys: A life of Wilbur and Orville Wright*. New York, NY: W. W. Norton and Company.
- Hayward, C. B. (1912). *Aeronautical practice: Part II*. Chicago, IL: American School of Correspondence.
- Heller, M. A., & Eisenberg, R. S. (1998). Can patents deter innovation? The anticommons in biomedical research. *Science*, 280, 698-701.
- Johnson, H. A. (2004). Wright patent wars and early American aviation. *Journal of Air Law and Commerce*, 69(21), 21-63.
- Kelly, F. C. (1989). *The Wright brothers*. Mineola, NY: Dover Publications.
- Lampe, R. L. (2009). *Essays on the economics of innovation* (Doctoral dissertation). Available from ProQuest Dissertations and Theses. (AAT 3382766)
- Merges, R. P., & Nelson, R. R. (1994). On limiting or encouraging rivalry in technical progress: the effect of patent scope decisions. *Journal of Economic Behavior and Organization*, 25, 1-24.
- Paulhan, L. (1910). *Interview given by Paulhan to correspondent of "Auto," 8 April 1910*. The Wilbur and Orville Wright Papers at the Library of Congress; Scrapbooks; January 1910-December 1913: page 0037. Library of Congress, Manuscript Division, Washington, D.C.
- Shulman, S. (2002). *Unlocking the sky: Glenn Hammond Curtiss and the race to invent the airplane*. New York, NY: HarperCollins Publishers.
- Simanaitis, D. J. (2004). A tangled tale of the Wright brothers, attorney Selden, and Mr. Ford. In *Proceedings of the 2004 SAE Motorsports Engineering Conference and Exposition. Session: Historical - Part 2*. Dearborn, MI: Society of Automotive Engineers.
- Tobin, J. (2003). *To conquer the air: The Wright brothers and the great race for flight*. New York, NY: Free Press.
- Worrel, R. K. (1979). Wright brothers' pioneer patent. *American Bar Association Journal*, 65, 1512-1518.
- Wright, O., & Wright, W. (1906). *U.S. Patent No. 821,393*. Washington, D.C.: U.S. Patent and Trademark Office.