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## **Harold E. Morehouse Flying Pioneers Biographies Collection - Bell, Frank M.**

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## Wrights Victorious In Courts At Home And Abroad Judge Hazel Substains Infringement Suit Against Curtiss

PROBABLY all of our readers are aware of the now famous opinion rendered by Judge John Hazel in the suit of the Wright Company against the Herring-Curtiss Company and Glen H. Curtiss, in the United States District Court at Buffalo, on February 27.

In view of the world-wide interest in this case, we have attempted to print the opinion in full, but for lack of space have had to abridge it. It is probably the most interesting document of its kind that has ever been set in type.

The opinion is overwhelmingly in favor of the Wright Company, and Judge Hazel sets forth that the defendants have infringed on the four claims of the patent which were sued upon and grants the decree sought by the Wright Company; but in view of the importance of the case further grants a stay pending an appeal, if it is immediately sought.

Following one day after the decision in favor of the Wright Company given by the Supreme Court of Germany at Leipzig, and preceding a similar decision by the Supreme Court of France, which is final, by fourteen days, the interest of the entire aeronautic world centers in the Wright Company.

The decision, lengthy and technical throughout shows a full consideration of all the points involved. Prior patents are carefully reviewed and all the intricacies of the four claims sued upon are fully set forth.

Among the prior patents brought into the suit were the Henson British patent of 1842, the Maxim British patent of 1889, the Manchester British patent, the Harte British patent of 1870, the Mouillard French patent of 1897, the Boulton British patent of 1868, the revived Mattuleth patent of 1900, the Schroeder German patent of 1894, and the Adder article published in France in 1893.

Despite the fact that many of the patents considered various features of the claims under suit Judge Hazel decided that from an examination of these prior patents it is evident that they do not show the patented combination of the complainant's construction.

The attorneys for the Wright Company were H. A. Toulmin of Dayton, Ohio; Frederick P. Fish and Edmond Wetmore, of New York. There appeared for the Curtiss interests Emerson R. Newall, of New York, and J. Edgar Bull, of Boston.

In his opinion Judge Hazel says in part:

"At this date, owing to articles in daily papers and periodicals in regard to notable flights in this country and abroad by the late Wilbur Wright, Orville Wright, defendant; Glenn H. Curtiss, and other venturesome aviators, the aeroplane and the modus operandi thereof are reasonable familiar to the intelligent public. That such structures are supported in their flight by the reaction of the air against an inclined surface, and that the advancing air presses against the plane surface, thereby inclining them to rise, while at the same time a resistance to forward motion is encountered which is overcome by the propelling motor, are facts now reasonably familiar to us."

"There are eighteen claims in the patent, but claims 3, 7, 14, and 15 only are infringed, and they read as follows:

"3. In a flying machine, a normally flat aeroplane having lateral marginal portions capable of movement to different positions above or

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in their flight by the reaction of the air against an inclined surface, and that the advancing air presses against the plane surface, thereby inclining them to rise, while at the same time a resistance to forward motion is encountered which is overcome by the propelling motor, are facts now reasonably familiar to us."

"There are eighteen claims in the patent, but claims 3, 7, 14, and 15 only are infringed, and they read as follows:

"3. In a flying machine, a normally flat aeroplane having lateral marginal portions capable of movement to different positions above or below the normal plane of the body of the aeroplane, such movement being about an axis extending in the line of flight, whereby said lateral marginal portions may be moved to different angles relatively to the normal plane of the body of the aeroplane, and also to different angles relatively to each other, so as to present to the atmosphere different angles of incidence, and means for continuously adjusting such movement to said lateral marginal portions, substantially as described.

"7. In a flying machine, the combination with an aeroplane, and for continuously moving the lateral portions thereof into different angular relations to the normal plane of the body of the aeroplane, and to each other, so as to present to the atmosphere different angles of incidence, of a vertical rod, and means whereby said rod is caused to present to the wind that side thereof nearest the side of the aeroplane bearing the smaller angle of incidence and allowing the least resistance to the atmosphere, substantially as described.

"14. In a flying machine comprising supported horizontal aeroplanes, means for moving the opposite lateral portions of said aeroplanes to different angles to the normal plane thereof, a vertical rod, means for moving said vertical rod, and means whereby said rod is caused to present to the wind that side thereof nearest the side of the aeroplane bearing the smaller angle of incidence and allowing the least resistance to the atmosphere, substantially as described.

"15. In a flying machine comprising supported horizontal aeroplanes, means for moving the opposite lateral portions of said aeroplanes to different angles to the normal plane thereof, a vertical rod, means for moving said vertical rod, and means whereby said rod is caused to present to the wind that side thereof nearest the side of the aeroplane bearing the smaller angle of incidence and allowing the least resistance to the atmosphere, substantially as described.

"The defendants are: (1) That the patent is not entitled to a broad construction; (2) that it is broadly construed it is invalid in view of the prior art; (3) that it properly construed as to its scope the defendants do not infringe; and (4) that in any event defendants' mode of flying is on different principle from complainant's.

"The record is replete with publications and oral testimony, showing that the principal object of the use of the aeroplanes before the invention in suit was the inability to maintain lateral balance, due to disturbing aerial forces which caused the aeroplanes from their intended course. Indeed, this was the prevailing condition upon which human flight depended and the one with which the inventors had to cope.

"Black, indeed, prior to the Wright patent had been written on the subject of aerial machinery by Professor Lanchester, of the Smithsonian Institution; Octave Chanute, and others, and there were a number of patents in this country and in foreign countries disclosing efficient and patentable efforts by inventors to achieve success in aerial navigation with heavier-than-air machines, but all such efforts for one reason or another were abortive, and the wisdom of the inventors and experimenters substantiated. The prior art taught that Lanchester, Lilienthal, Chanute, Moiré and others had fully and judiciously endeavored to solve the difficulties and remedy the imperfections in aeroplanes. Flying machines of various kinds

below the normal plane of the body of the aeroplane, such movement being about an axis transverse to the line of flight, whereby said lateral marginal portions may be moved to different angles relatively to the normal plane of the body of the aeroplane, and also to different angles relatively to each other, so as to present to the atmosphere different angles of incidence, and means for simultaneously imparting such movement to said lateral marginal portions, substantially as described.

"7. In the flying machine, the combination with an aeroplane, and means for simultaneously moving the lateral portions thereof into different angular relations to the normal plane of the body of the aeroplane and to each other so as to present to the atmosphere different angles of incidence, of a vertical rudder, and means whereby said rudder is caused to present to the wind that side thereof nearest the side of the aeroplane having the smaller angle of incidence and offering the least resistance to the atmosphere, substantially as described.

"14. A flying machine comprising superposed connected aeroplanes, means for moving the opposite lateral portions of said aeroplane to different angles to the normal planes thereof, a vertical rudder, means for moving said vertical rudder toward that side of the machine presenting the smaller angle of incidence and the least resistance to the atmosphere, and a horizontal rudder provided with means for presenting its upper or under surface to the resistance of the atmosphere, substantially as described.

"15. A flying machine comprising superposed connected aeroplanes, means for moving the opposite lateral portions of said aeroplane to different angles to the normal planes thereof, a vertical rudder, means for moving said vertical rudder toward that side of the machine presenting the smaller angle of incidence and the least resistance to the atmosphere, and a horizontal rudder provided with means for presenting its upper or under surface to the resistance of the atmosphere, said vertical rudder being located at the rear of the machine and said horizontal rudder at the front of the machine, substantially as described.

"The defenses are: (1) That the patent is not entitled to a broad construction; (2) that if it is broadly construed it is invalid in view of the prior art; (3) that if properly construed as to its scope the defendants do not infringe, and (4) that in any event defendants' mode of flying is on different principle from the complainant's.

"The record is replete with publications and oral testimony, showing that the principal obstacle to the use of the aeroplane before the invention in suit was the inability to maintain lateral balance, due to disturbing aerial forces which swerved the aeroplane from its intended course. Indeed, this was the perplexing problem upon which human flight depended and the none with which the patentees had to cope.

"Much, indeed, prior to the Wright patent had been written on the subject of aerial machinery by Professor Lanley, of the Smithsonian Institution; Octave Chanute, and others, and there were a number of patents in this country and in foreign countries disclosing diligent and painstaking efforts by inventors to achieve success in aerial navigation with heavier-than-air machines, but all such efforts for one reason or another were abortive, and the intentions of the inventors and experimentors miscarried. The prior art taught that Langley, Lilienthal,

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