

## The Wright Brothers: Would Their Patent Survive Today's Patent Law Rigors? Doubtful

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"The patentees, Orville and Wilbur Wright, were the first men to actually fly!" So begins an appellate brief in perhaps Orville and Wilbur Wright's most famous patent infringement case, *Wright Co. v. Herring-Curtiss Co.*, 211 F. 645 (2nd. Cir. 1914). Imagine getting to write a line "the first men to ... fly!" exclamation point included, as the first line of a brief for clients.

On the strength of the facts, and excellence of legal work, the court in the *Wright* case affirmed as valid the central U.S. patent of the Wrights, declared the Wrights to be pioneers in flight, and resolved that airplane wing ailerons and a tail rudder were part of their invention. Creative legal defenses, such as that a rudder of the Curtiss flying machine was not an infringement because it was only used sporadically, were put to rest memorably: *e.g.*, "a machine that infringes part of the time is an infringement."

Flight by the Wright brothers was a dramatic change in the history of the world through invention. That, and the fact that they were driven in part by patent rights, leads to an interesting question in our modern age. Would their same patent survive the rigors of today's patent laws in their case against Curtiss?

The patent talked about is U.S. 821,393, issued in 1906. Claims in patents as we know them now were required, as claims were required in U.S. patents starting in 1870. See *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 379 (1996). Here is claim 7, a primary subject of the Wright legal success, broken up for easier reading—note the "with" and "of" form of claiming, most easily read by reversing the "with" and "of":

7. In a flying machine, the combination,  
with [reversing, "of"]  
an aeroplane, and

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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 [reversing, "with"]

a vertical rudder, and

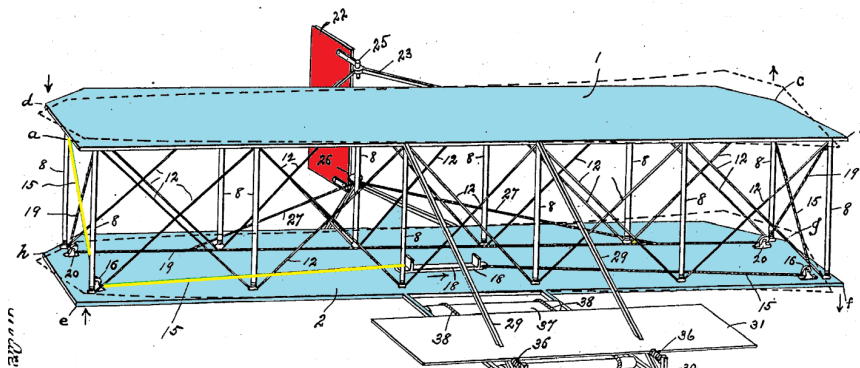
means whereby said rudder is caused to present to the wind that side thereof nearest the side of the aeroplane having the smaller angle of incidence and offering the least resistance to the atmosphere, substantially as described.

The Wrights can be excused for the duplication of claiming "in a flying machine" an "aeroplane," because their patent stated that at the time, an "aeroplane" was what we now call a "wing": "We have used the term 'aeroplane' ... to indicate the supporting surface ... by means of which the machine is sustained in the air ...." With that understanding, claim 7 can be seen to claim the combination of a wing, means for moving portions of the wing, a rudder, and means for presenting a side of the rudder to the wind. There's not much detail in that claim. How would the claim survive today's law?

First is the matter of claim interpretation under *Markman*, both for issues of infringement and validity. See *Markman, and Markman v. Westview Instruments, Inc.*, 52 F. 3d 967, 996 n. 7 (Fed. Cir. 1995)(en banc)(on claim interpretation and invalidity), *aff'd*, 517 U.S. 370 (1996). What did claim 7 cover, by interpretation? That requires considering what the Wrights invented as explained in their patent specification.

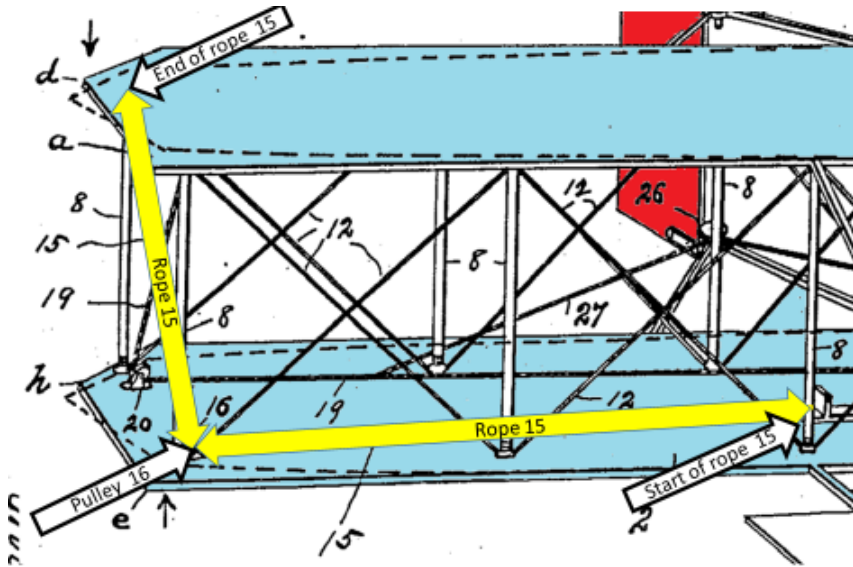
The Wright patent taught one embodiment of invention, a two-wing embodiment. The Wrights mentioned the possibility of a one-wing embodiment, but did not explain it. Fig. 1 of the patented one of the world famous Wright machines (there are several) is below, with blue for the wings, red for the rudder, and a ribbon of yellow to the left and above the lower wing to highlight a rope, #15.

FIG. 1.

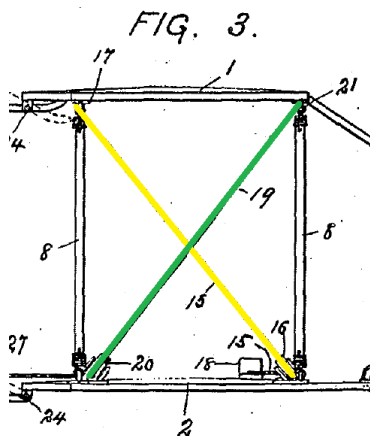


The way flight worked with this flyer, taught the Wrights, was by stabiliz-

ing the flyer in gusts of wind that would tip it up and down from side-to-side. When the wind tilted the flyer, the operator could pull on ropes like the highlighted yellow rope #15, which ran to one of the ends of the lower wing, at the wing's front, around a pulley, #16, and on the diagonal up and to the back end of the upper wing, where its end was attached to the wing. The annotated part of Fig. 1 below clarifies where the highlighted rope #15 goes. (The end of the rope ends under the wing, not over it.) A mirror-image rope #15 is on the other side of the flyer.



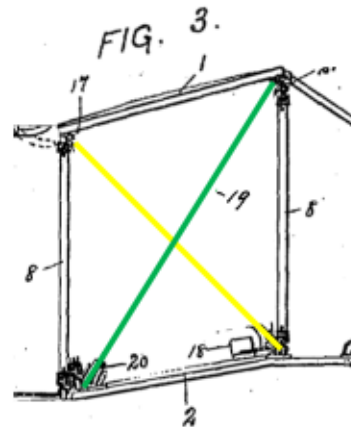
If you looked at the flyer from the end of a wing, you would see a rectangle or "box" at the end, made by the wings and the uprights that joined them. A portion of the patent's Fig. 3 below shows this. The wings are #1 and #2, the uprights are #8.



None of the sides of the box could change length. The wings and uprights could not change dimensions. The wings were cloth over a wood frame. The uprights were also wood. But the joints of the frame were hinges. The box could be pulled together across diagonally opposite corners to change the distances across the corners. Pulling rope #15—yellow again in Fig. 3—from where it started in the middle of the flyer did that. It pulled up on the front end of the lower wing, and down on the rear end of the upper wing, because the rope ran on the diagonal. The pulling up on the front end of the lower wing also raised the front end of the upper wing. The pulling down on the rear end of the up-

per wing also dropped the rear end of the lower wing. The front ends of the wings went up, and the rear ends down—on one side of the wings. An illustration of the change of the box is below.

Rope #19, green, had to lengthen along the opposite diagonal to accommodate the changes to the box that were being made by rope #15. And it did lengthen. Rope #19 ran along the opposite diagonal, then all the way across the back of the bottom wing to the other wing ends, and up the diagonal again. The pulling on rope #15 forced rope #19 to lengthen on the first and pulled ends of the wings, pull on rope #19's other end from across the wing, and at the other ends of the wings, change the shape of the box there, by shortening the length of rope #19 and lengthening the diagonal of another rope #15.



At the other end, the fronts of the wings tipped *down*, and the backs *up*, in response. The wing ends both twisted, the first ones discussed above twisting “counter-clockwise,” and the second ones twisting “clockwise.”

Pull the *other* rope #15, the wings twisted back, and then in opposite twists. Twisting of the wings back and forth, by adjusting the ropes, would result in the tipping of the flyer. That is, if the flyer tipped one way, the twisting could counteract the tipping, and if the flyer tipped the other way, opposite twisting could counteract that other twist.

But that was not all. Pulling the ropes, twisting the wings, raising and lowering the wing ends, also turned the flyer. That was the reason for the rudder. Pivoting the rudder into the wind counteracted the turning of the flyer. The rudder was pivoted by still another rope, a “tiller” rope #27, fastened at its ends to rope #19. The twisting of the wing margins and the pivoting of the rudder worked together. In fact, the twisting and pivoting were caused together by the fastening together of the ropes and the mounting of the ropes to a “cradle” #18, something the operator laid down on and pushed side-to-side with his body. Gusts of wind could no longer so disrupt the flight of the flyer—assuming an alert, trained pilot—to cause it to lose control.

So back to claim 7, for interpretation. Claim 7 has a preamble, “In a flying machine.” That would not likely limit the claim today, however, as preambles seldom limit claims now. No reference to the preamble is made in the “body” of the claim, so that the preamble does not give life or meaning to the claim. The contraptions within the scope of the claims would not be limited to “flying machine(s).” The embodiment of invention is a flying machine, but interpretation of preambles does not look to embodiments.

The claim has something of a *Jepson* format,<sup>1</sup> in seeming to first claim what was old followed by what is new. It does this by claiming a combination “with” an aeroplane and a means (seeming to be the old), “of” a rudder and another means (seeming to be the new). This claim structure implies that the aeroplane and first means were old and it was the combination of them with a rudder and another means that was new. No conclusion is needed here on whether the claim is in *Jepson* form, however. Instead, what is admitted prior art is considered after this.

The claim has some functional language, such as “so as to present to the atmosphere different angles of incidence.” Like the preamble, the functional language would likely not limit the claim today, as functional language often does not do so today.

The claim has—interesting for their use for 1906—its two “means” clauses: “means for moving the lateral portions [of the aeroplane]” and “means whereby said rudder is caused to present to the wind that side thereof [etc.].” These can be called the “moving means” and the “presenting means.” Under means plus function interpretation today, both in court and in broadest reasonable interpretation (BRI), these means clauses would be interpreted to cover their corresponding structures, plus equivalents, performing their functions. The corresponding structures for the first means clause, the moving means clause, would be at least ropes #15, pulleys #16, rope #19, and rope #19’s pulleys #20. The function is to move the “lateral portions,” plural, of the wing, and both sets of ropes and pulleys are needed to move plural “lateral portions.” The structures for the second means clause, the presenting means, would be at least the tiller rope and another pulley, if not also rope #19 again. Both means would possibly include the cradle a pilot laid on. The moving means would also probably include rope-end connections to a wing, since the connections of ropes to the wings were required to accomplish the function of the moving means.

Embedded in the moving means clause, though, are two other matters for claim interpretation. First, what does it mean to “move” in the “moving means” limitation of claim 7? Redundancy of meanings of terms is disfavored in today’s claim interpretation. If the word “moving” were to be interpreted to mean the same thing as causing the lateral portions of the wing to go into “different angular relations” with other parts of the machine, then “moving” and “into different angular relations” are somewhat redundant. The term “moving” is subject today of being interpreted to mean “twisting.”

The Wrights had only one embodiment, and it required two wings for rope mechanisms to work, to move the lateral portions of any wing at all. It was only by having the box shape at the wing ends, a box shape that could be changed, that allowed either end of the wings to be moved. And, it allowed movement only by twisting, and the wings could only be twisted together. Only the diagonals of the ropes and the pulleys connected at the front and rear ends of the two wings allowed the ropes to pull the opposite corners of the wings together, pulling up and down on the front and back ends of the wings. Today’s patent law contemplates limiting claims to the proper scope of the invention

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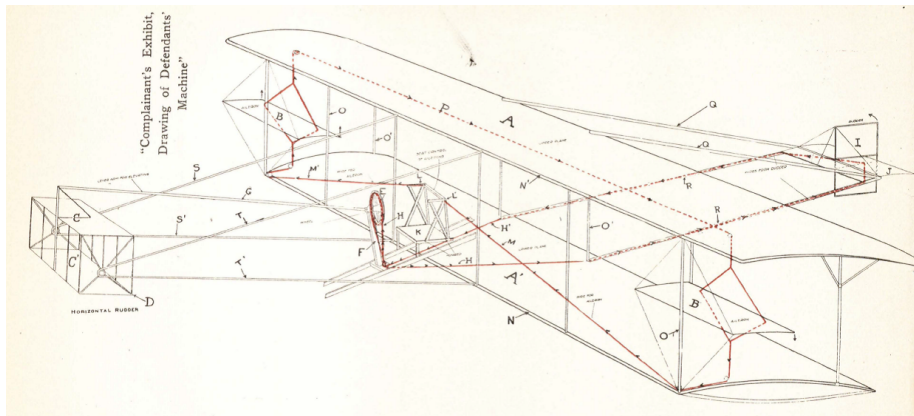
<sup>1</sup> *Ex parte Jepson*, 1917 C.D. 62.

disclosed, and not having them extend beyond the proper scope. The Wrights' claims today might be limited to the coverage of wing-twisting, in bi-planes, planes with two wings, one over the other.

The second matter embedded in the moving means clause is, what is moved? What are the "lateral portions" of the wing and in claim 7 that are moved? The Wright patent uses the term "lateral portion(s)" in several claims (2, 4, 6, 7, 8, 14, 15). Claims also use the terms "margins" (2, 6), "lateral margins" (5, 6), and "lateral marginal portions" (1, 2, 3, 4). "Lateral portions" are thus not necessarily "margins" or "lateral marginal portions." Claim 2 has the series of uprights that are along the wings from side-to-side at the wing "margins," and the specification puts these at the wing edges (p. 2, 1<sup>st</sup> col., ls. 22-25). Since margins are edges, and lateral portions are not necessarily margins, they are not necessarily edges. Claim 2 also has a subset of the uprights at the lateral portions, where the connections are flexible joints. That puts the "lateral portions" at the outside ends of the wings, along their outer and "longitudinal"—front-to-back—limits, although not specifically at their edges. The specification also uses the term "lateral" in describing the movement of the cradle side-to-side across the aeroplane (p. 2, 2<sup>nd</sup> col. ls. 121-122). Under today's standards of claim interpretation, the Wrights' "lateral portions" of wings as in claim 7 are the front-to-back outside portions, not necessarily at the wing edges. The "lateral portions" moved by the moving means, then, are these outside portions.

These issues and their resolution would affect today's Wrights' patent and their case against Curtiss. Perhaps as important for the Wrights' case against Curtiss, under today's law, though, may be that the Wrights were their own lexicographers for the word "aeroplane." They stated that "aeroplane" meant "the supporting-surface or supporting-surfaces [plural, surfaces] by means of which the machine is sustained in the air ...." Because the statement of meaning is clear and unmistakable, the meaning would be credited today in claim interpretation.

Claim construction as needed is complete. Consider next the second step of today's Wrights' case of infringement against Curtiss. Curtiss had more or less copied the Wrights, but apparently also tried a design-around, and/or improved on the Wrights. An image from the Internet of the Curtiss flyer and a confirming image from the Wrights' brief are next. Curtiss has two wings, a rudder, ropes and pulleys for control—but the ropes can be seen to extend to "mini-wings" that are separate from and between the "real" wings. The ropes do not extend to the ends of the real wings to twist the real wings. The mini-wings are represented by the dark shape to the right and between the Curtiss wings in the photograph, and the two of them are marked "B" in the brief's drawing. The mini-wings are pivoted up and down around their front edges by the ropes, which connect to the mini-wings' back edges. They are, in fact, classic examples of what we now know to be ailerons (French for little wing).



With today's law, in the second step of the Wright infringement case, would Curtiss have infringed, or escaped infringement? Infringement might have been literal or equivalent. Curtiss has at least two wings, so that benefits the Wrights, as against the possibility their claims might be limited to bi-planes. Does the Curtiss flyer have the Wrights' function of moving "the lateral portions"—"the" front-to-back outside portions—of a wing, an "aeroplane," into different angular relations to the normal plane of the body of the aeroplane and different angular relations of the lateral portions to each other? If the function is present, does the Curtiss flyer have the corresponding structure the Wrights have, or equivalents? Both depend in part on whether the ailerons, the miniwings, are "the lateral portions of an aeroplane" as referenced in the moving means claim limitation, after claim interpretation.

Arguably, the answer is "no" to both the question of function and the question of corresponding structure, after today's claim interpretation. Taking the function question first, the Curtiss flyer does not "move" "the lateral portions"—the front-to-back outside portions—of a single wing at all. It does not "move" by twisting. It does not move *all* lateral portions as implied by the term "the" portions. And the ailerons are not the two aeroplanes of the Wright flyer. They are not *any* part of the outside portions of those aeroplanes. They are physically separate from the aeroplanes of the Curtiss flyer, and are physically separate from each other. They do not move lateral portions of "an" aeroplane. If the ailerons are themselves considered to each be an aeroplane, then no one aeroplane has plural lateral portions moved relative to each other. There is no

twist in an aeroplane. Had the Wrights had a typical patent specification of today, without express definitions, they might have easily lost against Curtiss on literal infringement, for lack of Curtiss' use of the function of their moving means limitation, as the function would be understood after claim interpretation.

The Wright definition of an "aeroplane," though, credited today, is that the term "aeroplane" means "the supporting surface or supporting surfaces [plural] by means of which the machine is sustained in the air." The four wings, two "real" and two "mini," taken together, could fit the definition of one "aeroplane"—if the mini-wings were proved by the Wrights, by expert testimony, to contribute to sustaining the Curtiss flyer in the air. The same is true of the two ailerons together, that they could fit the definition of one "aeroplane," with the same proof. Separation of a claimed element into parts does not avoid infringement, apart from rare cases; this is arguably not one of those rare cases.

Seeing the two ailerons or the four wings of the Curtiss flyer as one "aeroplane" under the Wrights' express definition still leaves questions, however. Are the Curtiss ailerons part of the "lateral portions," the outside portions, of an "aeroplane," where the aeroplane also has a "body"? The two ailerons together isolated from the "real" wings do not easily allow consideration of their being the "aeroplane," the outside portions of which are moved and are distinct from an identifiable "body" that is a part of the two of them. The four wings together as one four-piece "aeroplane," on the other hand, provide something simpler. Curtiss apparently has, in the two "real" wings, the necessary aeroplane "body" and has, in the ailerons, movement of outside portions of the four-piece aeroplane. Curtiss has the ailerons extending to the outside of the four-piece aeroplane. He appears to have the function of the moving means. Still, if Curtiss moved the ailerons laterally inward from the ends of two real wings, he might have at least a non-literally-infringing alternative to the Wrights' claim. These design-around ailerons would not extend to the outside portions of the wings, and the exact function of moving "the lateral portions" would be absent.

Advancing to the question of whether the Curtiss flyer has or excludes the Wright corresponding structure or equivalents, Curtiss does not have the corresponding structure. Curtiss does not have ropes on diagonals that twist or warp wings. If such ropes are required for the corresponding structure, and they do seem to be required under current law, they are missing from the Curtiss flyer. As said at least twice, Curtiss does not twist wings at all. Under today's tighter laws of claim construction and interpretation of means plus function clauses, with the latter requiring the exact function and corresponding structure or equivalents for infringement, Curtiss has a much better case against literal infringement today than he did in 1914. In a legal environment like today's, with its claim interpretation rigor, and anti-patent sentiment in many quarters, Curtiss might win against literal infringement.

What of infringement by equivalents? Certainly, judged by the claimed subject matter as a whole, the Curtiss flyer is equivalent. Curtiss, like the Wrights, could "actually fly!" But that is not today's law. The *Morse* case, *O'Reilly v.*



*Morse*, 56 U.S. 62 (1853), had already established that claims could not extend to functions without limitations to inventors' modes or mechanisms of accomplishing the functions. But equivalence law today is much more restrictive than the doctrine of *Morse*. Equivalence today must be judged limitation by limitation. Is the Curtiss flyer insubstantially different? Yet again, it does not twist wings. It does not pull together the opposite corners of flexible boxes or rectangles made by the ends of two wings and uprights, to change the positions of any portions of any wings, full-size or mini. It does not have ropes that extend on diagonals from lower wings to upper wings to pull up the front margins of wings while pulling down the back margin of the wings. With Curtiss, pivoting occurs, not twisting, and only pivoting of ailerons, not twisting of wing ends. Current equivalent infringement cases have been lost for less difference of structure. A prime example is *Chiuminatta Concrete Concepts, Inc. v. Cardinal Ind's., Inc.*, 145 F.3d 1303 (Fed. Cir. 1998), on concrete cutting saws, where the difference between rolling on wheels and sliding on a skid blocked a case of equivalent infringement, because of a different "way" in function-way-result analysis. Rolling, not skidding, was the reason for a patent owner's loss. The different "way" was the way of rolling, not skidding. Just as with literal infringement, under today's tighter laws, Curtiss has a much better case against equivalent infringement. Pivoting is not twisting. Curtiss might win again, and his odds might be higher with equivalents than with literal infringement.

Under today's law, the Wright patent then might not have won the day for the Wrights against Curtiss, or anyone else with ailerons, who were not wing-twisting, for that matter. Next, what of validity, especially in *inter partes* review (IPR)? Could the Wrights have kept their patent non-canceled as against a Curtiss petition for review? Before going to IPR, the Wright claims have issues of written description and scope of enablement. The Wright patent does not reflect that the Wrights were in possession of the invention of a single-wing flying machine. It does not enable the full scope of the claims, either. How would the wing of a single-wing plane be twisted? The Wrights do not say how. What could a rope pull against to cause a wing portion to move? The Wrights don't say. Yet claim 7, for example, has "*an* aeroplane," not two. If the claim is not limited to two wings by claim interpretation, it might fail under today's laws of written description and enablement, and be invalid. *Automotive Technologies Int'l., Inc. v. BMW*, is representative of some of this law. 501 F.3d 1274 (Fed. Cir. 2007). These days, claims are not frequently interpreted to preserve their validity, as that canon of interpretation has been put aside in favor of a view that as between the public and the patent drafter, loss falls to the drafter.

Moving to IPR, and again, dismissing the Wright claim preambles, under today's law, their claim 7 did not require a machine that could fly, or even any specific class or type of machine. Claim 7 also does not require any particular size of machine. It especially does not require that the machine carry a pilot. Claim 7 covers, instead, a wing, possibly one in several parts, means for moving portions of the wing, a vertical rudder, and means for "presenting" the rudder. As briefly mentioned above, the language about the moving means that follows is more a "whereby" clause than a claim limitation, and likely to be non-

limiting, especially under broadest reasonable interpretation (BRI): “so as to present to the atmosphere different angles of incidence.” The claim also uses “simultaneous” for the movement caused by the means for moving portions of the wing, and has an absence of a similar temporal limitation as between moving the wing portions and moving the rudder. That would likely cause a BRI that the claim did not limit itself to simultaneous movement of both the wing portions and the rudder. Instead, it would be interpreted to have a BRI scope that allows movement of wing portions at one time, and movement of the rudder at another time.

“Admitted prior art” (APA) is part of IPR. If patent applicants have described prior art, that is their APA. The Wrights described flying machines with aeroplanes as old. Their patent said that, “In flying machines of the character to which [their] invention relate[d] the apparatus is supported in the air by ... aeroplanes ....” So the Wrights admitted that prior art flying machines existed and had aeroplanes that supported the machines in the air.

The Wrights’ patent did not admit the prior art had the rudder or the two moving means. The patent stated, however, that “disturbing forces [would] shift the machine from [its desired] position ....” It continued later to explain that “owing to various conditions of wind pressure and other causes the body of the machine is apt to become unbalanced laterally, one side tending to sink and the other side tending to rise, the machine turning around its central longitudinal axis.” This statement would also be part of the APA, and be an admission by the Wrights that the prior art knew it had a problem of lateral unbalance accompanied by turning.

Today’s obviousness law under *KSR* might pose a real problem for the Wrights. See *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398 (2007). It would have been obvious for the Wrights to have been motivated by a design need or market pressure to solve the problem of controlling flight by pursuing a finite number of identified, predictable solutions, to success. *KSR* at 1742. Think briefly about what the Wrights and the art were thinking, what they faced, and what they were doing, in general. The world wanted to fly; the world was trying to fly. There was worldwide pressure to fly. Many inventors were racing each other to be first to fly. Meanwhile, a side of any flying machine might sink, and the other side rise, the Wrights admitted, and admitted it to be known generally. What were the possible, predictable choices to stop the sinking on one side and the rising on the other? Raising the sinking side and lowering the rising side would seem to have been the first and possibly only identifiable, predictable solution. What did the Wrights do? They raised the sinking side and lowered the rising side. They did the predictable. Also, a flyer might turn. When their flyer turned, they turned the rudder, and that turned the flyer back. Under BRI, the claims do not require that both rebalancing and turning happen at the same time. *KSR*, and a BRI rule against giving the Wright claims the benefits of details they do not expressly include, might today mean that the Wrights’ invention as claimed was obvious to try, and might not result in a sustainable patent.

Much of the Wrights’ lawyer’s brief on validity of the Wright patent was

dedicated to demonstrating that no *person* in the prior art could actually fly. It was largely an effort to show that no one knew, in a flyer carrying a human, to twist the wings while turning with the rudder, *i.e.*, knew to use the raising and lowering of wings and the turning of a rudder at the same time to “right” a flyer. It included critiques of earlier issued patents as lacking enablement. “Defendants prattle about prior art!” it attacked:

Defendants prattle about prior art! There was no flying machine art before the Wright invention. All was speculation. Nothing existed but a paper science. Flying proposals had been legion; flying dogma contradictory, impossible, plausible, was rife, but of *art*, there was nothing—only a long, unbroken, barren field, with not a surviving usable thing to mark the way; nothing save here and there a broken wreck of failure; all mute witnesses that there was no art.

That type of briefing, while fun to read, would not work today, first, because “paper” patents are today the same as non-paper patents, they are all prior art patents, just as all past publications are prior art, without actual reductions to practice. Prior art U.S. patents today are presumed to have been enabling; lawyer assault on them without evidence will not do. Second, it wouldn’t matter today how long a prior art machine flew or whether it carried a human. There was no human compartment, human-weight-support limit, pilot control, or other reference to humans in the Wrights’ patent claims. Third, the Wrights’ lawyer’s argument was peppered with assumptions of claim limitations that are not in the claims, such as movement of the lateral portions of the wings specifically by twisting them. Such arguments today would be met with the response that the arguments do not support the claims for lack of limitations in the claims consistent with the arguments.

Unfortunately for the Wrights, BRI today would decide the fate of the validity of their claims, and aeroplanes were prior art, as in their APA, and both ailerons and rudders were in the prior art, as in the admissions of their own brief. (See also Judge Learned Hand’s statements about a French publication, “Ader,” in *Wright Co. v. Paulhan*, 177 F. 261, 260 (2<sup>nd</sup> Cir. 1910) (“Ader: ... The most serious attack ... permissive suggestion of a rudder ... lateral ends of the wings could be warped ....”)) Claim 7 was also broader than the Wrights’ “commercial embodiment,” far broader. Under today’s “nexus” approach to “secondary” considerations, the Wrights might have had little chance either to prove a nexus between their success and their claimed subject matter, or overcome an obviousness case with objective evidence of nonobviousness.

In IPR, also, *amendments* to claims by the Wrights to match their arguments for patent validity might well not be allowed. In any event, amendments would have given Curtiss intervening rights.

In sum, and on the whole, modern patent law is not friendly to the Wrights or their patent, on infringement, or validity. Of course, the Wrights’ patent attorney might have written a different patent if today’s laws had been in effect. He might have avoided means clauses, as almost all lawyers do now, due

to their complications. He might also have avoided an express definition for "aeroplane," to his *detriment*, however. But what the Wrights invented at the heart of it was wing-warping with timely counteracting rudder movement in a bi-plane. (See Judge Hand again.) The Wrights' patent lawyer would have had great difficulty writing claims that were consistent with the invention and not consistently limiting. The actual Wright claims went beyond the heart of their invention, and Curtiss steered clear of that heart. At the end of analysis, it's doubtful the Wrights could have won a case against Curtiss, as they did, under today's patent laws, one that would have given them both infringement and validity. "The patentees, Orville and Wilbur Wright, were the first men to actually fly!" True. But patent law today has much more emphasis on converting inventions to words and focusing a rigorous analysis on the words, and not as much on the inventions, as compared to the patent law of the 1910s. We are not today without our pioneering inventions, and respect for them and their patents. Still, the law today is so strict against patentees, that if the Wrights' patent had been subject to today's laws, even they, legally, might have fallen from the sky.