



MEANS PLUS FUNCTION CLAIMING

What Does It Mean to Be a Means, When Are Means Means, and Other Meaningful Questions

By Eric P. Raciti

Most of our faults are more pardonable than the means we use to conceal them.

—François de La Rochefoucauld

The concepts of indefiniteness and functional language have been entangled for a very long time. Indeed, it was this complicated interplay that led to the eventual statutory inclusion of a “means-plus-function” section in the 1952 Patent Act.¹ But, long before the middle of the twentieth century, the American patent system had grappled with issues related to functional claiming and balancing those issues against the public need to know the extent of a patent’s reach. It is not known when the first modern means-plus-function claim was patented, but it is generally known that this claim format was commonly used in the nineteenth century.

What’s the Story behind 35 U.S.C. § 112(f)?

One of the starting points for understanding American means-plus-function claim jurisprudence is an 1840 decision from the hand of Justice Joseph Story while sitting with the circuit court in Massachusetts. The case, *Wyeth v. Stone*,² involved a patent for an ice-cutting machine. Unfortunately, the patent document itself³ was destroyed in the patent office fire of 1836 and was never recovered, but Justice Story’s decision described a situation involving a broad claim of a machine for cutting ice, by means of an apparatus “worked by any other power than human.” The opinion found the claim to be one for an “abstract principle,” resulting in a fatal defect.⁴ It is perhaps comforting to know that we today struggle with these same eternal themes, where giants such as Story once tread. Or perhaps it’s depressing to think that we’ve not moved passed them since the cornerstones of American jurisprudence were laid.

Justice Story discussed the inherent balance between the scope of the patent with its functional language, and the requirements of the specification:

The question here necessarily arises, for what is the patent granted? Is it for the combination of the two machines described in the specification (the cutter and the saw) to cut ice? Or for the two machines separately? Or for the two machines, as well separately, as in combination? Or for any mode whatsoever of cutting ice by means of an apparatus, worked by power, not human, in the abstract, whatever it may be? If it be the latter, it is plain, that the patent is void, as it is for an abstract principle, and broader than the invention, which is only cutting ice by one particular mode, or by a particular apparatus or machinery. In order to ascertain the true construction of the specification in this respect, we must look to the summing up of the invention, and the claim therefor, asserted in the specification; for it is the duty of the patentee to sum up his invention in clear and determinate terms; and his summing up is conclusive upon his right and title.⁵

Eric P. Raciti is a partner at Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, focusing his practice on intellectual property counseling and comprehensive international patent strategies, including strategic patent procurement, portfolio development, competitive intelligence and analysis, post-grant procedures, and litigation. He may be reached at eric.raciti@finnegan.com.

It’s easy to see the main requirements of the first two sections of the modern 35 U.S.C. § 112 in Justice Story’s writing, namely that the full scope of the covered invention must be enabled, and that the metes and bounds of the claims have to be clearly described.

The fact that means-plus-function claims were commonplace throughout the nineteenth and early twentieth centuries does not mean the road was always smooth. Fast-forward to the 1870 Patent Act, which for the first time required applicants to clearly delimit the exact nature of their inventions by listing claims that would be recognizable to a modern reader. Further, although the 1870 act did separately require that the specification be enabling and definite,⁶ Supreme Court decisions did not always recognize these as distinct issues, at least when “functionality” was implicated.⁷ Still, functional claiming and specifically means-plus-function claiming⁸ during this era was, as explained by Judge Helen Nies, motivated by a desire to create broad literal claim scope.⁹

Toward the end of the 1870 Patent Act’s reign, the Supreme Court decided the *Halliburton* case,¹⁰ which brought with it the threat of extinction for functional claim language altogether. The decision appears to have been based primarily on the concern that the use of functional language at the point of novelty could lead to sweeping claim scope that would preempt improvements and artificially extend patent terms.¹¹ The specification¹² was an improvement to prior-art depth finders for oil wells, which are constructed from a string of tubing sections. By adding an acoustic resonator to known pressure-echo depth finders, reflected waves from the couplings between tubing sections were enhanced, enabling their detection by deflection of a diaphragm located in a receiver. Acoustic resonators were known at the time, but the combination was novel. The claim, however, was broader than the disclosed acoustic resonator, reciting “means associated with said [diaphragm] for tuning said [receiver] to the frequency of echoes from the tubing collars of said tubing sections to clearly distinguish the echoes from said couplings from each other.”¹³

The claim was asserted against Halliburton, which employed not an acoustic resonator, but an electric filter.¹⁴ The broad assertion of the claim alarmed the Court, which placed the blame on the “broadness, ambiguity, and overhanging threat” of functional claim language.¹⁵ The unfortunate collateral damage of the Court’s somewhat imprecise pronouncement was the legitimate worry that after *Halliburton*, functional language, at least at the point of novelty,¹⁶ was per se contrary to the Patent Act. Because the patent at issue recited means, the implication was that means-plus-function claims were included in the proscription.

Congress reacted to the *Halliburton* decision by adding a third paragraph to 35 U.S.C. § 112 in the 1952 Patent Act.¹⁷ This later became the sixth paragraph (herein referred to as § 112(6)). Pre-America Invents Act (AIA) § 112(6) and post-AIA § 112(f) are identical and read as follows (emphasis added):

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital

of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

This section of the statute put to rest any argument about means-plus-function's propriety, and even provided a rule of construction to guide the courts interpreting means-plus-function claims. The means-plus-function claim thus arose like a chrome-plated phoenix into the new dawn of the jet age.

When Are Means Means?

Judge Giles Rich's thoughtful analysis under the 1952 Patent Act in *In re Fuetterer*¹⁸ helps to frame the case law history of so-called "functional language" by pointing out that the label "functional" was not always consistently applied by the courts. In fact, Judge Rich cited to sources showing that at least five separate contexts had been identified.¹⁹ The facts of *In re Fuetterer* involved a new formulation for tire treads, which Judge Rich pointed out was a new combination of substances at the point of novelty, and the desired result was preventing tires from skidding on wet pavement. These facts distinguished Fuetterer's application from the case law cited by the U.S. Patent Office, which addressed other types of functionality. The deciding factors for Fuetterer's application were that there was sufficient description in the specification to support in nonfunctional terms the functional claim elements, and the claims did not attempt to impermissibly claim all means to obtain the desired result. In other words, the problem with functional language arises when the function claimed is not supported by the disclosure in nonfunctional terms, or when claims attempt to preempt a result.²⁰

As Judge Rich pointed out, the 1952 act restored the status and interpretation of means-plus-function claims to the status quo ante existing before *Halliburton*.²¹ The judicial diversion of *Halliburton* and its statutory correction placed means-plus-function claiming on a steady path of acceptance that persisted until the 1990s. In a study by Professor Dennis Crouch, at least one means-plus-function claim was present in about 45 percent of patents issued from the late 1950s through the early 1990s, but their use has steadily declined to less than 10 percent of patents in the early 2010s.²²

The reasons for the decline are complex, but can be understood in terms of a shift in the cost-benefit calculation for means-plus-function claims following several decisions in 1996. Essentially, patent drafters came to see that using a generic noun in place of a means-plus-function recitation would avoid claim construction risks. By the mid-1990s, it was becoming clear that the courts were more aggressively policing the meaning of claim terms rather than leaving the issue to a jury. Court construction of claims as a matter of law was rendered compulsory by the Supreme Court in *Markman v. Westview Instruments, Inc.*²³ A trio of Federal Circuit cases addressing means-plus-function claims construction also appeared in 1996 that rendered these claims decidedly less attractive.

Greenberg: "Means" Means Means, and No "Means" Means No Means

In *Greenberg v. Ethicon Endo-Surgery, Inc.*,²⁴ the Federal Circuit confronted claim language in a patent directed to a surgical instrument. In part, the claims required "a radially enlarged

wheel on said sleeve and said wheel and said one handle having a cooperating detent mechanism defining the conjoint rotation of said shafts in predetermined intervals."²⁵ The court here was presented with the question of whether 35 U.S.C. § 112(6) applied at all. Ordinarily this was not a difficult one because claims would use the term "means" in the claim element to invoke § 112(6).²⁶ In *Greenberg*, the drafter did not use the term "means for." Nevertheless, the district court found that the claimed "detent" was equivalent to a conventional means-plus-function formulation and it was accorded the same legal effect—namely, the claim element was construed to mean the structure disclosed in the specification and equivalents thereof.

The Federal Circuit reversed the district court, stating that the fact that a particular mechanism is defined in functional terms is not sufficient to trigger § 112(6). The court noted that the term in question, "detent," was no different than many other generic terms that take their names from the functions they perform, such as "brake," "clamp," or "screwdriver." Although these terms do not call to mind single well-defined structures, what is important is that they have a "reasonably well understood meaning in the art." The court had to tap-dance around the fact that the applicant used the term "detent means" a few times throughout the specification, but the court stated that these were merely "a shorthand way of referring to each of the key structural elements of the invention," described in more detail later in the specification.²⁷

Greenberg explicitly stated that the use of the term "means" is not absolutely required to trigger § 112(6), but did devote some effort attempting to figure out the intent of the claim drafter. The court set forth a principle that "the use of the term 'means' has come to be so closely associated with 'means-plus-function' claiming that it is fair to say that the use of the term 'means' (particularly as used in the phrase 'means for') generally invokes section 112(6), and that the use of a different formulation generally does not."²⁸ The court relied on the general rule, reversing the district court.

In *Greenberg*, the lack of "means" meant no means, but the court established the presumption that "means" means means, and no "means" means no means.

York: "Means" without Function Doesn't Mean Means

Following *Greenberg* closely came *York Products, Inc. v. Central Tractor Farm & Family Center*, concerning a claim using the term "means" followed by a detailed recitation of structure.²⁹ Notwithstanding the principle of *Greenberg*, the court stated that the "mere incantation of the word 'means' in a clause reciting predominantly structure cannot evoke section 112, ¶ 6. Conversely, [t]he recitation of some structure in a means-plus-function element does not preclude the applicability of section 112(6)."³⁰ The court relied on the fact that, in the claim, the word "means" was not sufficiently connected to a recited function, so the *Greenberg* presumption had been rebutted.

In *York*, means didn't mean means.

Cole: "Means" plus Function Doesn't Necessarily Mean Means

Shortly after *York*, the court decided *Cole v. Kimberly-Clark Corp.*,³¹ concerning the claim limitation "perforation means

... for tearing” in a claim directed to disposable training pants typically used by young children. The court found that, to invoke § 112(6), “the alleged means-plus-function claim element must not recite a definite structure which performs the described function,” a result typically achieved by “using only the words ‘means for’ followed by a recitation of the function performed.”³² The court, however, overstepped the *Greenberg* presumption in finding that the term “means” alone does not automatically trigger § 112(6). The court believed that the limitation described the “structure supporting the tearing function” (perforations) as well as its location and extent.³³ Such detailed recitation of structure, the court reasoned, “cannot meet the requirements of the statute,” and the “perfunctory addition of the word ‘means’ did nothing to diminish the precise structural character of this element,” and certainly did not transform the element into a “means-plus-function” element.³⁴ Thus, the majority held that “perforation means . . . for tearing” simply meant “perforations,” which had a straightforward structural definition.

In *Cole*, “means” coupled with function, in apparent satisfaction of the statute, turned out not to mean means.

Can No “Means” Mean Means?

A practitioner reading *Greenberg*, *York*, and *Cole* in 1996 would be understandably disenchanted with the means-plus-function formulation and functional language generally, particularly in light of *Greenberg*’s recognition that generic nouns could perhaps avoid the confused judicial spiderweb altogether. But moving now into the present decade, the issues have not disappeared even with the decrease in overt means-plus-function claims in issued patents. Even claims clearly intended to avoid § 112(6) still find themselves entangled. Patent drafters reading the case law might recall the poem “To a Mouse” by Robert Burns³⁵ and remind ourselves that forward, though we cannot see, we guess and fear! The following case is illustrative of the consequences of faulty vision.

In its 2014 decision in *Robert Bosch, LLC v. Snap-On Inc.*, the Federal Circuit considered whether certain claim elements (“program recognition device” and “program loading device”) should be interpreted as means-plus-function terms under 35 U.S.C. § 112(6), notwithstanding the absence of the word “means” in these elements.³⁶ In finding that the elements were indeed properly interpreted as “means-plus-function” claims, the lack of corresponding structure for the means in the specification doomed the claims as indefinite under 35 U.S.C. § 112(2).³⁷

Robert Bosch LLC asserted a patent against defendants Snap-On and Drew Technologies in the U.S. District Court for the Eastern District of Michigan.³⁸ The patent concerned an automotive diagnostic testing device that evaluates a vehicle’s onboard engine control computer. The device, as claimed, includes a “program recognition device” and a “program loading device.” Although the specification described the functions performed by these devices in detail, it otherwise completely lacked detail regarding their structure. The issued patent had only three pages and no figures, with the “detailed description” taking a total of about a half page.

The Federal Circuit began its analysis by noting that the word “device” is a nonstructural “nonce word,” that is to say,

a word essentially lacking any definite meaning.³⁹ The other terms of the claim, the court noted, were entirely functional, and the specification did “not contain a single reference to the structure” of the devices.⁴⁰ The court then found that because the claims lacked sufficiently definite structure, they fell within the reach of § 112(6).⁴¹

Having determined that the “program recognition device” and “program loading device” were to be interpreted under § 112(6), the court then undertook to identify structure in the specification that performed the claimed functions. This part of the analysis was rather straightforward because, as already mentioned, there was no structure to be found in the specification.

Robert Bosch shows that claims containing only functional descriptions are vulnerable to interpretation under 35 U.S.C. § 112(6), now 35 U.S.C. § 112(f). Without corresponding structural details for performing any claimed functions, starting with how components interconnect and interact, and ending with specific structural details about each component, the claims could be found fatally indefinite.

A New Standard?

Shortly after *Robert Bosch* in November 2014, the Federal Circuit decided *Williamson v. Citrix Online, LLC*.⁴² The panel decision overturned a district court claim construction that treated the term “distributed learning control module” as a means-plus-function expression under 35 U.S.C. § 112(6). The patent in suit described methods and systems for distributed or distance learning, enabling presenters to connect to audiences via virtual classrooms. The patent owner conceded that the district court’s construction rendered the relevant claims invalid as indefinite, and stipulated to final judgment, followed by an appeal.

On appeal, the Federal Circuit held, in line with precedent existing since 2004, that because “distributed learning control module” did not use the word “means,” there existed a strong rebuttable presumption that 35 U.S.C. § 112(6) did not apply. To rebut the presumption, “it must be demonstrated that ‘skilled artisans, after reading the patent, would conclude that [the] claim limitation is so devoid of structure that the drafter constructively engaged in means-plus-function claiming.’”⁴³ In this case, the court found that the word “module” was not the equivalent of “means,” because “module” is a structural term, and that the district court did not consider and give weight to the language of the entire claim.

Accordingly, the Federal Circuit vacated the district court’s entry of final judgment against *Williamson* and remanded the case to the district court. On June 16, 2015, the Federal Circuit withdrew its opinion and substituted a new one including an en banc section (part II.C.1.) addressing the means-plus-function issue. The en banc court reversed the precedent creating a “strong” presumption based on the presence or absence of the word “means.” Instead, the court held that the standard is “whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.”⁴⁴

As before, if the claim language does not meet the standard, § 112(6) (now § 112(f)) applies. Whereas previously the analysis appeared almost strictly literal, precedent such as *Greenberg*

nevertheless included the notion that the claims were to be analyzed by how they were understood by one of skill in the art.⁴⁵ The new standard removes the strong presumption and loosens the tethers of the means-plus-function analysis from the absence of the word “means,” and relies only on the person of skill in the art’s understanding by a preponderance of the evidence.

The Federal Circuit decision, authored by Judge Richard Linn, is not coy about the court’s motivation for its reversal of precedent.

Our consideration of this case has led us to conclude that such a heightened burden is unjustified and that we should abandon characterizing as “strong” the presumption that a limitation lacking the word “means” is not subject to § 112, para. 6. That characterization is unwarranted, is uncertain in meaning and application, and has the inappropriate practical effect of placing a thumb on what should otherwise be a balanced analytical scale. It has shifted the balance struck by Congress in passing § 112, para. 6 and has resulted in a proliferation of functional claiming untethered to § 112, para. 6 and free of the strictures set forth in the statute. Henceforth, we will apply the presumption . . . without requiring any heightened evidentiary showing and expressly overrule the characterization of that presumption as “strong.” We also overrule the strict requirement of “a showing that the limitation essentially is devoid of anything that can be construed as structure.”⁴⁶

The implications of this decision will be felt for many years to come in patent litigation if Judge Linn is correct that there has been a “proliferation of functional claiming untethered to § 112, para. 6 and free of the strictures set forth in the statute.” The question to be answered is at what point in the intersection of functional and structural language the scale tips toward language invoking § 112’s means-plus-function section. Revisiting the language of § 112(6) (now § 112(f)), with the strictures referred to by Judge Linn in italics:

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim *shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.*

Squarely in the crosshairs of the new paradigm⁴⁷ are recitations that do not use the word “means” but instead use “nonce” words, such as “module” in *Williamson* or “device” in *Robert Bosch*. It is difficult to ignore the fact that the technology in the *Williamson* case is software, and the court’s objection to “black box” claim elements will likely be hit hardest in the software and electronics classes. Modern electronic structures are oftentimes quite secondary to their software coding for functionality, and even exacting disclosure of the structure of an electronic component performing a function, such as a “processor,” may not satisfy a court or a patent examiner that adequate structure has been disclosed. The term “processor” could indeed in some situations be a “nonce” word.

Once § 112 is invoked, the court must determine if the structure disclosed in the specification qualifies as

“corresponding structure”—i.e., if the intrinsic evidence clearly links or associates that structure to the function recited in the claim.⁴⁸ Even if the specification discloses corresponding structure, the disclosure must be of “adequate” corresponding structure to achieve the claimed function.⁴⁹

The impact of the *Robert Bosch* and *Williamson* decisions will place the burden on patent drafters, but in a less predictable way than might be hoped for. As Judge Pauline Newman noted in her dissent in *Williamson*, invoking means-plus-function treatment of a claim limitation used to be under the control of the patent draftsman, resident in the choice to use the term “means for” or not. Moving forward, under 35 U.S.C. § 112(b) and (f), “if a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim, a means-plus-function clause is indefinite.”⁵⁰

If means-plus-function treatment is not desired, then specific structural claiming is required to support a functional recitation in the body of the claim. Further, to safeguard against invalidity due to indefiniteness in the event means-plus-function is invoked by a court, then the specification should also contain detailed structural disclosure, clearly linked to the functions recited in the claims. For patents granted with claims using functional language unsupported by detailed specifications, the consequences of falling under § 112(6) (now § 112(f)) are charted by the patentee in this case—death by indefiniteness for lack of definite structure.

Conclusion

The 175-year-old red thread that runs through the functional language jurisprudential journey since Justice Story’s opinion in *Wyeth* through Judge Linn’s en banc *Williamson* opinion is that functional language depends on the scope of the disclosure, whether we couch this requirement in the language of definiteness, written description, or preemption. Functional language cannot, through semantic prowess or accident, result in protection for subject matter that was not in fact invented. If one invents wings of wax, one cannot claim flight to the sun except at his or her own peril. In *Wyeth*, the patentee disclosed a horse-powered apparatus, and claimed cutting ice by all nonhuman means. In *Halliburton*, the patentee disclosed an acoustic resonator, but attempted to cover all means of amplification. In *Greenberg*, the patentee disclosed a ball-in-cup detent, but attempted to cover a ball-in-groove. In *Cole*, the patentee disclosed perforations, but attempted to cover bonded seams. In *Robert Bosch* and *Williamson*, the patentees disclosed no structure at all to support the claimed function. In each of these cases, the judicially identified problem resided in the end with two ingredients under the control of the patentee: first, the adequacy of the disclosure; and second, the decision to accuse infringement. A perceived imbalance resulting from too little of the first ingredient and too much aggressiveness in the second resulted in each of these cases in a patentee loss.

In conclusion, practitioners might contemplate two quotes, one from Judge Rich and the other from David Byrne. Judge Rich wrote “The specification is, thus, the primary basis for construing the claim.”⁵¹ Mr. Byrne, “same as it ever was.”⁵² ■

Endnotes

1. See 35 U.S.C. § 112(f) (originally paragraph three); *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1582 (Fed. Cir. 1996).
2. 30 F. Cas. 723 (C.C.D. Mass. 1840) (No. 18,107).
3. Patents issued before the 1836 Patent Act were not numbered, and were identified by the patentee and the date. These patents have subsequently been numbered using an X-prefix, and are modernly referred to as "X-patents."
4. Before the 1836 Patent Act, patents were issued without separate claims, but patent claims under the 1836 act were not as important as the specification and drawings for determining patent scope. It was not until the 1870 Patent Act that a disciplined listing of distinct claims was required.
5. *Wyeth*, 30 F. Cas. at 727.
6. Patent Act of 1870, ch. 230, § 26, 16 Stat. 198–217 ("[An inventor] shall file in the patent office a written description of the [invention] in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and . . . shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery[.]").
7. See, e.g., *Gen. Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364 (1938); *Holland Furniture Co. v. Perkins Glue Co.*, 277 U.S. 245 (1928); see also William Redin Woodward, *Definiteness and Particularity in Patent Claims*, 46 MICH. L. REV. 755, 772 (1948).
8. See *Cont'l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405 (1908) (implicitly approving means-plus-function claiming).
9. *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1550–58 (Fed. Cir. 1995) (en banc) (Nies, J., dissenting), *rev'd and remanded*, 520 U.S. 17, 41 (1997).
10. *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946).
11. These policy concerns are similar to those elaborated under the doctrine of obviousness-type double patenting, which was not to be cogently explained until Judge Rich's concurring opinion in *In re Zickendraht*, 319 F.2d 225, 229 (C.C.P.A. 1963).
12. U.S. Patent No. 2,156,519 (filed Sept. 7, 1937) (issued May 2, 1939, to Cranford P. Walker).
13. *Halliburton*, 329 U.S. at 8–9.
14. Tellingly, other claims reciting the acoustic resonator structurally were not asserted. The Supreme Court of 1946 was perhaps found wanting other tools that today could have dealt with Walker's broad assertion, such as the written description requirement as applied by the Federal Circuit in *LizardTech, Inc. v. Earth Resource Mapping, Inc.*, 424 F.3d 1336 (Fed. Cir. 2005).
15. *Halliburton*, 329 U.S. at 12.
16. See *Gen. Electric Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 371–72 (1938) (condemning the use of "conveniently functional language at the exact point of novelty").
17. See *In re Donaldson Co.*, 16 F.3d 1189, 1194 (Fed. Cir. 1994) (en banc) ("Congress enacted paragraph six, originally paragraph three [in the 1952 act], to statutorily overrule that holding [in *Halliburton*].").
18. 319 F.2d 259 (C.C.P.A. 1963).
19. *Id.* at 263 n.9.
20. *Id.* at 263.
21. *Id.* at 264 n.11.
22. Dennis Crouch, *The Frequency of Means-Plus-Function Claims*, PATENTLY-O (July 25, 2011), <http://patentlyo.com/patent/2011/07/the-frequency-of-means-plus-function-claims.html>.
23. 517 U.S. 370 (1996).
24. 91 F.3d 1580 (Fed. Cir. 1996).
25. *Id.* at 1581–82.
26. *Id.* at 1583.
27. *Id.* at 1583–84.
28. *Id.* at 1584.
29. 99 F.3d 1568 (Fed. Cir. 1996). The limitation at issue read, in relevant part: "means formed on the upwardly extending liner sidewall portions including a plurality of spaced apart, vertically extending ridge members protruding from the liner sidewall portions and forming load locks." *Id.* at 1573–74.
30. *Id.* at 1574 (citations omitted) (quoting *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1536 (Fed. Cir. 1991)).
31. 102 F.3d 524 (Fed. Cir. 1996).
32. *Id.* at 531.
33. *Id.*
34. *Id.*
35. "The best laid schemes o' mice an' men / Gang aft a-gley." (1785).
36. 769 F.3d 1094 (Fed. Cir. 2014). Claim 1 did contain a passage stating that a connected engine control module is recognized "by means of" the program recognition device, but the Federal Circuit stated this is not a typical "means-plus-function" format. The court therefore found there was no presumption that 35 U.S.C. § 112(6) should apply.
37. See 35 U.S.C. § 112(b).
38. *Robert Bosch LLC v. Snap-On, Inc.*, No. 12-11503, 2013 WL 4042664 (E.D. Mich. Aug. 9, 2013).
39. *Robert Bosch*, 769 F.3d at 1099.
40. *Id.*
41. *Id.* at 1100–01 (distinguishing *Inventio AG v. ThyssenKrupp Elevator Ams. Corp.*, 649 F.3d 1350, 1356 (Fed. Cir. 2011)).
42. 770 F.3d 1371 (Fed. Cir. 2014).
43. *Id.* at 1378 (alteration in original) (quoting *Inventio*, 649 F.3d at 1357).
44. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015).
45. *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed. Cir. 1996).
46. *Williamson*, 792 F.3d at 1349.
47. The "new" paradigm is essentially the state of the law before 2004, when the Federal Circuit established the "strong presumption" in a line of cases beginning with *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354 (Fed. Cir. 2004).
48. *Williamson*, 792 F.3d at 1351–52 (citing *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012)).
49. *Id.* at 1352.
50. *Id.*
51. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (quoting *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 452 (Fed. Cir. 1985)).
52. TALKING HEADS, *Once in a Lifetime, on REMAIN IN LIGHT* (Sire Records 1980).