

Drafting (and Invalidating) Patent Claims as a Sec. 112 Master: How Claims, Hollow Claims, Ways and Means

September 19, 2018



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Quiz

1. Which of these issues can be decided by the Board in an IPR (for an issued claim)?
 - A. On sale bar.
 - B. Full-scope written description support.
 - C. Accessibility of a publication.

Quiz

2. Which of these method claim elements triggers Sec. 112(f)?
- A. “adhering the mat to the foundation surface”
 - B. “zooming in on the first area of the displayed map”
 - C. “maintaining said state upon the activation of another hyperlink”

Quiz

3. A patent issued from a continuation filed Mar. 17, 2013, with a parent filed Jan. 1, 2010. Only one claim throughout prosecution, and it issued without amendment. Foreign counterpart published July 1, 2010. Which is (are) correct?
- A. Continuation claim is presumed to be entitled to parent's date, but presumption is rebuttable.
 - B. Challenger has initial burden of production to show claim not entitled to parent's filing date.
 - C. Patent owner has burden of persuasion to show claim is entitled to parent's filing date.

Topics

- why some claims should use literal “means for” or “step for” elements
- 112(f) safe haven
- by-law “step for” elements are the dark matter of patent claims
- the intersection of *Williamson* + *Nautilus*
- the intersection of *Nautilus* + *Alice*
- result achieved vs. function performed vs. way (how)
- how claims vs. hollow claims
- full-scope written description / enablement + claim backdating
- free www.patentdefenses.com legal research tool

Section 112(a), (b), (f)

- 112(a): claim needs written description support
- 112(a): claim needs enablement support
- 112(a): disclosure must support “full scope” of a claim
- 112(a): applied to priority app. when backdating a claim
- 112(b): must particularly and distinctly claim invention
- 112(f): construction of function performed claim language
- 112(f): requires linked “structure” / “acts” in disclosure
- 112(f) = conditional safe harbor

Section 112 (a), (b), (f)

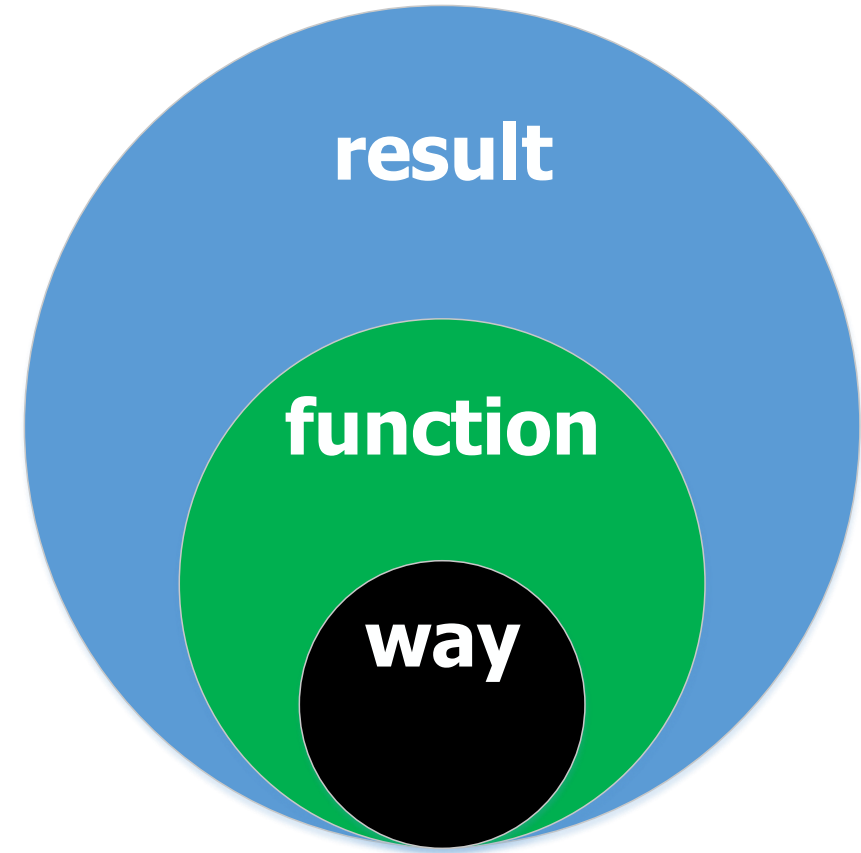
- (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.
- (b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.
- (f) ELEMENT IN CLAIM FOR A COMBINATION.—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.

Recommendations

What	Where	Why
Use “means for” or “step for”	some claims	trigger statutory safe harbor <u>clearly</u>
Recite particular way (how)	some claims	lower 112(b) + 101 risks
Lower level than “machine learning,” “training” and similar labels	most claims	lower 112(a) + 112(b) risks
Disclose particular way for each element of “safe” claim	each app.	support 112(f) elements and “how” claims
No broader than express disclosures in ancestor app.	some claims	“safe” claim backdating
Recite each arguably non-optional element	some claims	“safe” claim backdating + lower 112(a) risks

Shorter

- Some How claims
- Some “means for” / “step for” claims
- How Spec.



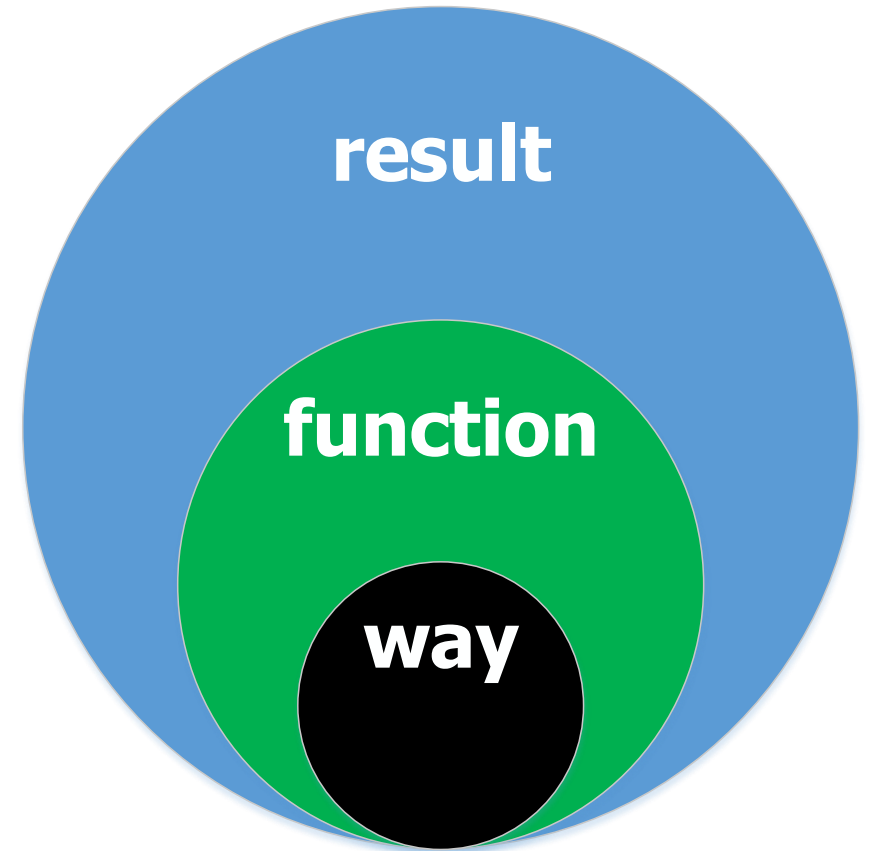
Diversify Claims To Vary Resilience To Sec. 112 Risks

Sec. 112 Risk: claim invalid because:

- 1. claims result or function without particular way (how)**

Patent Claims Must Be Limited To A Particular Way

- “particularly pointing out” mandate + abstractness exclusion =
 - A. a patent claim must be limited to a “particular way” (i.e., how) to achieve a result or perform a function.
 - B. result / pure function / information / idea: not patentable even if novel, brilliant, useful and narrow.



Pretending A Function Is A Way Is Risky

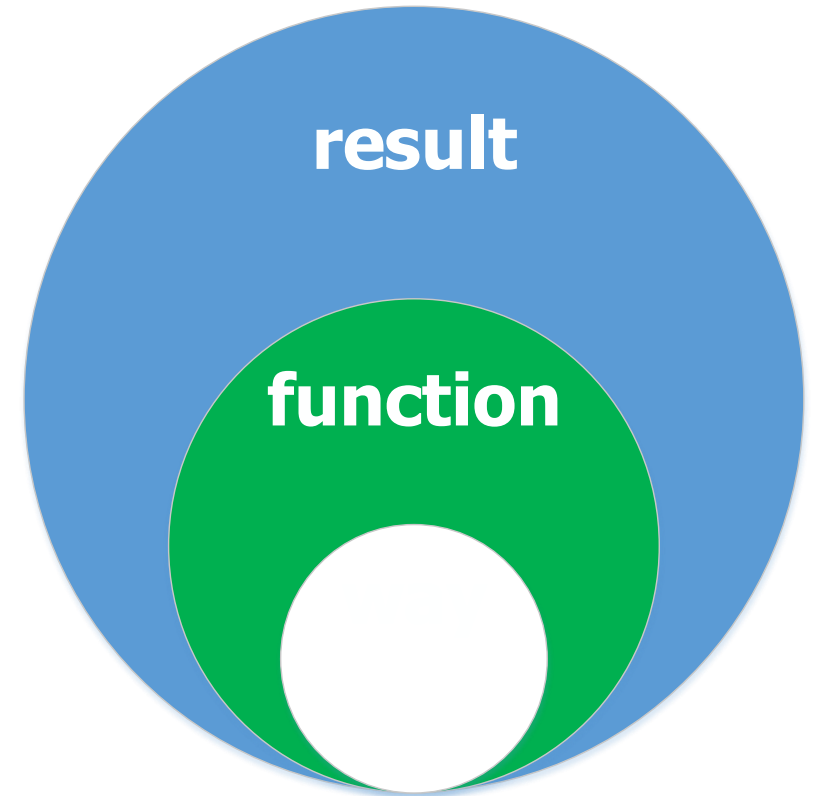
- These are functions or results, not ways (per Fed. Cir.):
 - “zooming in on the first area of the displayed map to about the boundaries of the first area to display a higher level of detail than the displayed map,” [Move, Inc.](#) (Fed. Cir. 02/01/18).
 - “the claim requires the functional results of ‘converting,’ ‘routing,’ ‘controlling,’ ‘monitoring,’ and ‘accumulating records,’ but does not sufficiently describe how to achieve these results in a non-abstract way,” [Two-Way Media](#) (Fed. Cir. 11/01/17).
 - “maintaining said state upon the activation of another of said icons, wherein said maintaining allows use of said Back and Forward navigation functionalities without loss of said state,” [Internet Patents](#) (Fed. Cir. 06/23/15) (Newman, J.).

Pretending A Result Is A Way Is Risky

- Results are not patentable:
 - “A claimed invention must embody a concrete solution to a problem having ‘the specificity required to transform a claim from one claiming only a result to one claiming a way of achieving it.’” [Interval Licensing](#) (Fed. Cir. 07/20/18) (aff’g R. 12(c) invalidity of CRM claims).

17 Hollow Claims; 3 How Claims

- “Claiming a result without reciting what materials produce that result is the epitome of an indefinite claim. Such a claim fails to delineate with any reasonable certainty the requirements of the formulation. ... It is a hollow claim. ... [It] is indefinite for the principal and simple reason that it claims a result without reciting how to achieve that result.”
- [Forest Labs.](#) (Fed. Cir. 12/11/17) (non-precedential) (Lourie, J., concurring).



“Purely Functional” High Risk; “Facially Functional” Low Risk

steering mechanism

vs.

steering wheel

- Pure functional claiming = “indefinite.”
- Facially functional claiming typically OK.

Function Steps vs. How Steps (Acts)

- Prediction: same distinction will extend to method claims:
 - “In general terms, the ‘underlying function’ of a method claim element corresponds to what that element ultimately accomplishes in relationship to what the other elements of the claim and the claim as a whole accomplish. ‘Acts,’ on the other hand, correspond to how the function is accomplished. ... If a claim element recites only an underlying function without acts for performing it, then § 112, ¶ 6 applies even without express step-plus-function language. ...” [Seal-Flex](#) (Fed. Cir. 04/01/99) (Rader, J. concurring).
 - See Patent Defenses: [“Seal-Flex”](#)

Function Steps vs. How Steps (Acts)

A method for constructing an activity mat over a foundation comprising the steps of:

How

spreading an adhesive tack coating for adhering the mat to the foundation over the foundation surface; ...

Function

* * *

- “[I]f this claim limitation had specified only the underlying function, namely, “adhering the mat to the foundation,” without recital of specific acts for “adhering,” § 112, ¶ 6 would have governed, despite the lack of “step for” language.” [J. Rader, 1999.]

Most AI Claims Are Hollow

- IND claim: “... parsing the temporal segment using a parsing model that receives as an input the temporal segment and outputs a second set of parsed medical entities in the temporal segment.”
- DEP claim: “wherein the parsing model is trained with a training data set formed using the enriched medical entity dictionary and medical forum data.”
- Spec: “a parser model is trained using one or more supervised learning algorithms, such as deep neural networks, conditional random field, etc.”
- Spec: describes no specific parsing model.

Patent Defenses

- www.patentdefenses.com
- Mobile-friendly legal research tool
- Law / strategy on substantive patent defenses
- Updated ~ weekly since 2004
- Links to Fed. Cir. (mostly since 2004) and S. Ct. decisions
- Public except password-protected tips

Diversify Claims To Vary Resilience To Sec. 112 Risks For Year 2028

Sec. 112 Risk: claim invalid because:

1. *claims result or function without particular way (how)*
2. [**prediction**] uncertain whether triggers Sec. 112(f)

Prediction: Uncertainty Whether Sec. 112(f) Triggered = Invalid

- Prediction: Uncertainty whether 112(f) triggered will be ruled to violate 112(b) under *Nautilus*:
 - creates zone of uncertainty ...
 - easily avoided by drafter ...
 - but not avoided because drafter wants to cover more than what inventor described
 - E.g., “steering mechanism” not “steering wheel”

112(f) Basics: When Triggered

- Triggered: “purely functional,” “black box,” “generic placeholder”:
 - [Diebold Nixdorf](#) (Fed. Cir. 08/15/18) (“cheque standby unit”)
 - [Advanced Ground Info.](#) (Fed. Cir. 07/28/16) (“symbol generator”)
 - [Media Rights](#) (Fed. Cir. 09/04/15) (“compliance mechanism”)
 - [Williamson](#) (Fed. Cir. 06/16/15) (“distributed learning control module for”)

112(f) Basics: When Triggered

- Not Triggered: function + “definite,” “particular,” “sufficient” structure:
 - [Zeroclick](#) (Fed. Cir. 06/01/18) (“program that can operate the movement of the pointer (0)” and “user interface code being configured to detect one or more locations touched by a movement of the user’s finger on the screen without requiring the exertion of pressure and determine therefrom a selected operation.”)

Often Uncertain Whether Sec. 112(f) Triggered

- Higher-risk claim elements (borderline 112(f)):
 - “processor” / “engine” / “module” for [esp. at point of novelty]
 - placeholder for information
 - “Terms that represent *only* non-structural elements such as information, data, instructions, and software *per se* would not serve as substitutes for ‘means.’” (USPTO [guidance](#) (08/02/13))
 - method step that mirrors 112(f) element in non-method claim
 - recites result achieved rather than function performed

Often Uncertain Whether Sec. 112(f) Triggered

- “Processor configured to” triggered Sec. 112(f):
 - “A gaming machine comprising: a processor configured to execute a game displaying a matrix of symbol containing elements . . . said simulated rotatable reel including at least one section in which a consecutive run of three or more of said symbol containing elements is populated by an identical symbol . . . wherein said identical symbol is selected by virtually spinning a notional, non-visible, inner reel comprising a plurality of said symbols.”
 - [Konami Gaming](#) (D. Nev. 02/21/18) (invalid under Secs. 112(b)/(f) and 101).

Dependent Claim Eliminating Uncertainty Whether Sec. 112(f) Triggered

- IND claim: “... parsing the temporal segment using a parsing model that receives as an input the temporal segment and outputs a second set of parsed medical entities in the temporal segment.”
- DEP Claim: “wherein the parsing step comprises a step for using the temporal segment to output a second set of parsed medical entities in the temporal segment.”

3 “Means For” / “Step For” Claims; Some “Steering Wheel” Claims

- Recommendations:
1. Some claims literally use “means for” or “step for” function [not result]
 - Reduces uncertainty whether Sec. 112(f) triggered
 - (Also possible safe harbor against *Alice*)
 2. Some claims drafted so frivolous to argue they trigger 112/6 (steering wheel claims)

Diversify Claims To Vary Resilience To Sec. 112 Risks For Year 2028

Sec. 112 Risk: claim invalid because:

1. *claims result or function without particular way (how)*
2. *[prediction] uncertain whether triggers Sec. 112(f)*
3. **cannot be backdated to ancestor**

Some Claims Clearly Entitled To Be Backdated

- **“Fundamental Fairness” Requires Not Backdating Claim To Parent That Did Not Fully Support The Claim:** “This court is mindful that continuing applications, such as Affymetrix’s application here, can only receive the benefit of an earlier-filed parent application if that parent fully supports the claims. If not supported in the parent application, fundamental fairness requires that claims to new matter receive, at best, the filing date of the continuing application.” [Agilent](#) (Fed. Cir. 06/04/09) (interference context; no single embodiment had each claim limitation).
- See Patent Defenses: [“Effective Filing Date; Right Of Priority \(Secs. 100 AIA \(FITF\)\) 119, 120, 365.”](#)

D Three Enterprises v. SunModo

(22) Filed: **Sep. 4, 2013**

(65) **Prior Publication Data**

US 2014/0007532 A1 Jan. 9, 2014

Related U.S. Application Data

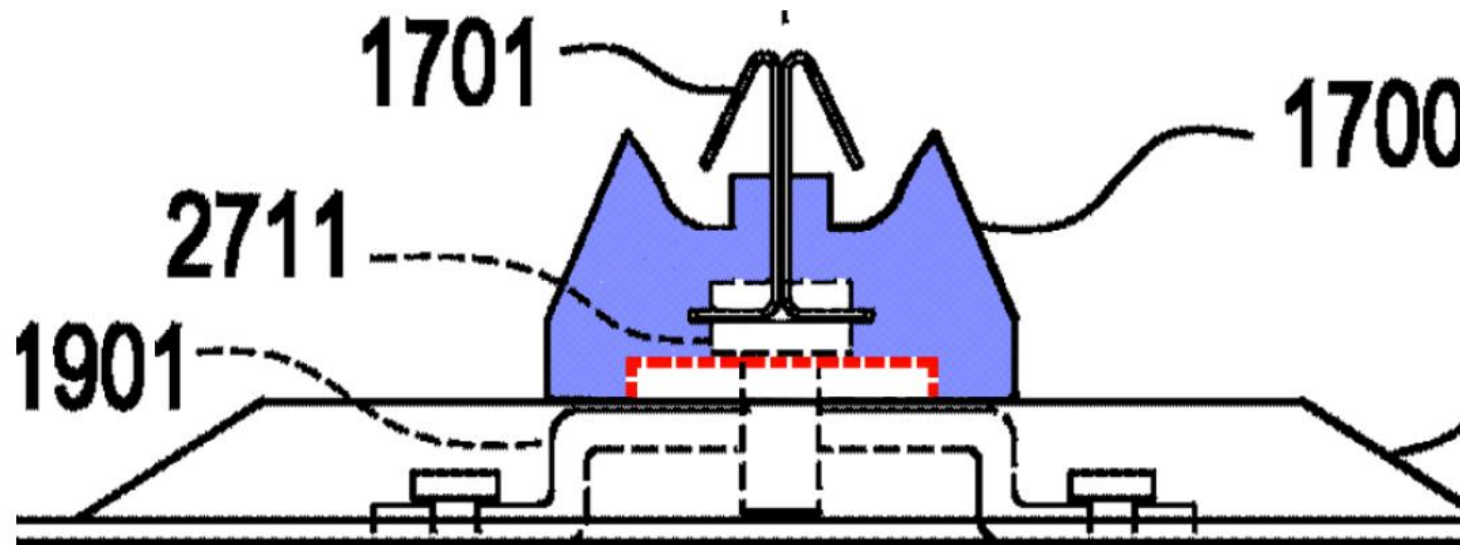
(60) Division of application No. 13/799,359, filed on Mar. 13, 2013, which is a continuation of application No. 13/368,332, filed on Feb. 8, 2012, now Pat. No. 8,448,405, which is a continuation-in-part of application No. 12/700,667, filed on Feb. 4, 2010.

(60) Provisional application No. 61/255,082, filed on Oct. 26, 2009, **provisional application No. 61/150,301, filed on Feb. 5, 2009,** provisional application No. 61/440,847, filed on Feb. 8, 2011.



D Three Enterprises v. SunModo

- Provisional: per Fed. Cir.: only disclosure of a washerless assembly “consistently has one type of attachment bracket,” and did not disclose that bracket as an “optional feature,” and “in no way contemplates the use of other types of attachment brackets in a washerless assembly.”



D Three Enterprises v. SunModo

- D Three (Fed. Cir. 05/21/18) (aff'g Summ. J. invalidity by stipulation (ivo earlier sales of accused products) because patent owner failed to show washer-agnostic claims [not limited to disclosed type of attachment bracket] entitled to priority date.)

Claim Backdating Basics

- No presumption of entitlement to backdate claims
 - [Research Corp. Tech.](#) (Fed. Cir. 12/08/10) (continuation)
- PO must show full scope written description and enablement support
 - [Nintendo](#) (Fed. Cir. 12/27/17) (non-precedential)
 - [Bamberg](#) (Fed. Cir. 03/07/16)
 - [Sitrick](#) (Fed. Cir. 02/01/08)
- Sec. 112(f) element can defeat backdating
 - [Uniloc](#) (Fed. Cir. 10/23/17) (non-precedential)
- Backdoor for arguing Sec. 112 defects in an IPR
 - [Los Angeles Biomedical](#) (Fed. Cir. 02/28/17)

Claim Backdating Basics

- Applies to Continuations too!
 - [Research Corp. Tech.](#) (Fed. Cir. 12/08/10).
 - [In re NTP](#) (Fed. Cir. 08/01/11) (series of “continuation” applications: “for a patent’s claims to be entitled to an earlier priority date, the patentee must demonstrate that the claims meet the requirements of 35 U.S.C. § 120;” rejecting argument that Examiner must have implicitly decided the effective filing date issue).

Consider When Choosing Between PGR and IPR

- Consider PGR against continuation on or after 03/16/13, with parent before 03/16/13, arguing anticipation by intervening reference.
 - Board has put burden of production on petitioner to show at least one claim not entitled to be backdated.
 - But patent owner has burden of production, claim-by-claim, to show claim can be backdated to antedate asserted prior art.

3 Claims Clearly Entitled To Backdating

➤ Recommendations:

1. Make at least some claims no broader than express disclosures in asserted priority application.
 - Beware genus elements
 - Beware purely functional elements
 - Beware “at least” and open-ended elements
2. Make those claims recite each arguably non-optional element in asserted priority application.
 - Check claims in priority app. as filed, for common elements.

Conclusion

- Patents and Portfolios drafted with Sec. 112 claim diversity, including:
 - some “means for” and “step for” claims;
 - some other How claims; and
 - some claims clearly entitled to be backdated to priority app.,

probably will be more valuable in 2028.

Answers to Quiz

1. Which of these issues can be decided by the Board in an IPR (for an issued claim)?

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B. Full-scope written description support. – by ancestor

C. Accessibility of a publication.

Answers to Quiz

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THANK YOU

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