

Patent Law

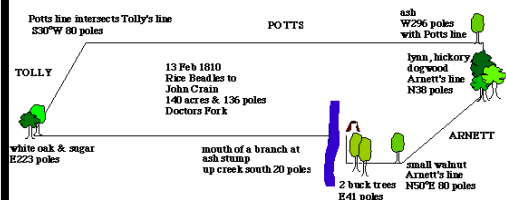
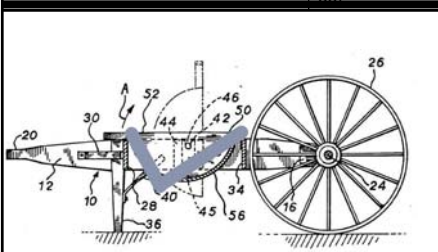
- Slides for Module 7
- Claims

Peripheral claiming – an analogy to “regular” property law

Claim 1	Label
1. A wheelbarrow . . . comprising	
a frame having two . . . rails . . . and at least one cross brace . . .	frame [10]
an axle . . .	axle [24]
a wheel . . . [with] minimum diameter of 30 inches	wheel [26]
a pair of mounting brackets . . . mounted . . . Intermediately . . .	brackets [42, 44]
a box having a semicylindrical closed bottom, upstanding side walls having a C-shaped bottom edge . . . Including a pair of axially aligned pivot posts . . .	box [50]
a support . . .	support [36, 38]

JONES sells 140 acres and 36 poles of land in HAYES County on WEST Fork to SMITH for 200 dollars. Land bounded as follows...:

- Beginning at the mouth of a branch at an ash stump
- thence up the creek S 20 poles to 2 beach
- thence east 41 poles to a small walnut in Arnett's line
- thence north 50 east 80 poles to a linn hickory dogwood in said line
- thence north 38 poles to an ash
- thence west 296 poles with Potts's line till it intersects with Tolly's line
- thence south 30 west 80 poles to a whiteoak and sugar
- thence east 223 poles to beginning....



Claims – definiteness requirement

§ 112

[¶1] 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,

Written Description
requirement.

Enablement requirement.

and shall set forth the **best mode** contemplated by the inventor of carrying out his invention.

Best Mode requirement.

[¶2] The specification shall conclude with one or more claims ***particularly pointing out and distinctly claiming*** the subject matter which the applicant regards as his invention.

Definiteness
requirement.

- Various issues fall under the definiteness requirement
 - Omnibus/formal claims (as in Ex parte Fressola)
 - Antecedent basis – a claim recitation that lacks antecedent basis renders the claim indefinite
 - First: a/an Later: said/the
 - Inferential claiming – claim that fails to positively recite an element, i.e., refers to the element only “inferentially” may be indefinite

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Ex parte Fressola (PTO 1993)

- method and system of producing stereographic images of celestial objects which use distance information to offset one of two images produced on a display device
- Claim 42
 - A system for the display of stereographic three-dimensional images of celestial objects ***as disclosed in the specification and drawings herein.***
- Rejected as “failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention”

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Ex parte Fressola (PTO 1993)

- Progression of claims

- From omnibus to
- Expression of cooperative relationship of the elements
- “central” definition to “peripheral” definition
 - Central definition involves the drafting of a narrow claim setting forth a typical embodiment coupled with broad interpretation by the courts to include all equivalent constructions
 - Peripheral definition involves marking out the periphery or boundary of the area covered by the claim and holding as infringements only such constructions as lie within that area.



Ex parte Fressola (PTO 1993)

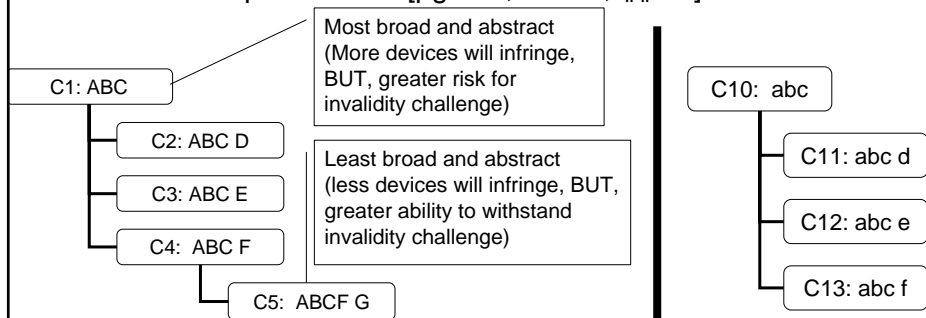
- Claim 42

- Invalid because it relies entirely on incorporation by reference (“IBR”)
 - No exception applies because the system can be described in words without reference to the specification and drawings
- Impossible to determine how much of the specification to incorporate
- Even if IBR were allowed, the specification does not particularly point out and distinctly define what invention is covered by claim 42
 - 19 figures, 147 pages, 45 pages of code, 73 pages of data
 - Why, with all this detail, does the specification not “particularly point out and distinctly define” the claimed invention?
 - Impact of describing process steps in Pascal code?
- Public notice function of the claim

Ex parte Fressola (PTO 1993)

• Notes

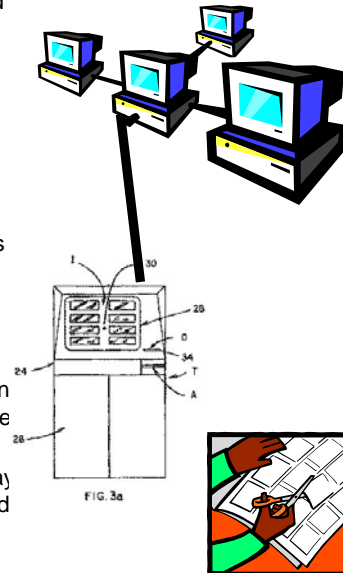
- Even though omnibus claims are not allowed, there is interplay between the claims and the specification
 - Interpret claims in light of the specification
 - Use of §112¶6 in claims
- One sentence rule
- Use of multiple claims – [pg 533, note 3, ¶¶2-4]



- Role in the claim **Claim preamble**
 - States the general use or purpose of the invention
 - Helps to show the area of technology
- Under what conditions does it limit the claim?
 - Difficult rule to state
 - Issue arises in the claim construction process
 - Depends on importance of the preamble to give meaning to the claim
 - A preamble term serves as a limitation "when it matters"
 - Preamble has the import that the claim as a whole assigns to it
 - Other ways to formulate the test – the preamble is limiting when
 - It is "essential to point out the invention defined by the claim"
 - The body of the claim refers back to terminology in the preamble
 - A preamble term "recites not merely a context in which the invention may be used, but the essence of the invention without which performance of the recited steps is nothing but an academic exercise"

Catalina Mktg. Int'l v. Coolsavings.com, Inc. (Fed. Cir. 2002) (Rader)

- 1. A system [sic] for controlling the selection and dispensing of product coupons at a plurality of remote terminals ***located at predesignated sites such as consumer stores*** wherein each terminal comprises:
 - activation means for activating such terminal for consumer transactions;
 - display means operatively connected with said activation means for displaying a plurality of coupons available for selection;
 - selection means operatively connected with said display means provided to permit selection of a desired displayed coupon by the consumer;
 - print means operatively connected with said selection means for printing and dispensing the coupon selected by the consumer; and
 - control means operatively connected with said display means for monitoring each consumer transaction and for controlling said display means to prevent the display of coupons having exceeded prescribed coupon limits.



Catalina Mktg. Int'l v. Coolsavings.com, Inc.

- 1. A system [sic] for controlling the selection and dispensing of product coupons at a plurality of remote terminals ***located at predesignated sites such as consumer stores*** wherein each terminal comprises:
 - activation means . . . ;
 - display means . . . ;
 - selection means . . . ;
 - print means . . . ; and
 - control means
- 25. A system for controlling the selection and dispensing of product coupons at a plurality of remote terminals ***located at predesignated sites such as consumer stores***, comprising:
 - a plurality of free standing coupon display terminals ***located at predesignated sites such as consumer stores***, each of said terminals being adapted for
 - bidirectional data communication with a host central processing unit; each of said terminals comprising
 - activation means . . . ;
 - display means . . . ;
 - selection means . . . ;
 -

Catalina Mktg. Int'l v. Coolsavings.com, Inc.

- Prosecution activity
 - Amendments in response to obviousness rejection
 - Catalina did not argue that the location of terminals in stores distinguished the invention from the prior art, but did state that their invention involved terminals “located in stores” for dispensing coupons “on-site”
- Potentially infringing system
 - Coolsaving’s internet-based coupon review and printing web site
- Issues
 - Was the preamble phrase “**located at predesignated sites such as consumer stores**” a limitation?
 - If so, was the district court’s claim construction correct?
 - This was the only claim term the court construed to conclude that there was no literal or DOE infringement

Catalina Mktg. Int'l v. Coolsavings.com, Inc.

Limit?		Does not limit
Does	Recites essential structure or steps , or if it is “ necessary to give life, meaning, and vitality ” to the claim	a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention (patentability of apparatus or composition claims depends on the claimed structure, not on the use or purpose of that structure)
Does	Jepson claiming (“the improvement comprising”)	
May	Dependence on a particular disputed preamble phrase for antecedent basis may limit claim scope because it indicates a reliance on both the preamble and claim body to define the claimed invention	preamble language merely extolling benefits or features of the claimed invention does not limit the claim scope without clear reliance on those benefits or features as patentably significant
Does	the preamble is essential to understand limitations or terms in the claim body	
May	Recites additional structure or steps underscored as important by the specification	
Does	clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention	the claim body describes a structurally complete invention such that deletion of the preamble phrase does not affect the structure or steps of the claimed invention

Catalina Mktg. Int'l v. Coolsavings

- Shoe Polish HYPO [pg. 539]

A
A composition for polishing shoes
comprising
[shoe polish]



Inherent in the normal use of the polish to shine shoes

B
A method to repel water on shoes
comprising
[rubbing the shoe polish into shoes]

B
A method to grow human hair
comprising
[rubbing the shoe polish on bare human skin]

Catalina Mktg. Int'l v. Coolsavings.com, Inc.

	Claim 1	Claim 25
Recites essential structure or steps , or if it is " necessary to give life, meaning, and vitality " to the claim	No – no use of the phrase " located at predesignated sites such as consumer stores " to define the invention	Repeated in claim body, thus is limiting
Jepson claiming ("the improvement comprising")	No	No
Dependence on a particular disputed preamble phrase for antecedent basis may limit claim scope because it indicates a reliance on both the preamble and claim body to define the claimed invention	No	Mostly
the preamble is essential to understand limitations or terms in the claim body	No	No
Recites additional structure or steps underscored as important by the specification	No	???
clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art transforms the preamble into a claim limitation because such reliance indicates use of the preamble to define, in part, the claimed invention	No – getting past the obviousness rejection was based on amendments in the claim body, the examiner considered terminal location insignificant	No

Claim Interpretation – Sources / Canons / Procedure		
Source(s)		Canons
Plain meaning	Dictionaries	Claim / Specification relationship - Don't read a limitation into a claim - One may look to the written description to define a term already in a claim limitation Presumptive breadth - Claim should be interpreted so as to preserve validity - If a claim is subject to two viable interpretations, the narrower one should apply Others - Inventor's interpretations after issuance are given no weight - Claim differentiation
Specification	The specification can be used to enlighten the court as to the meaning of a claim term	
Prosecution history	Effect on claim construction?	
Extrinsic Evidence	Proper to resort to extrinsic evidence?	

- Procedure
 - Markman – the meaning of the claims is a question of law, and thus subject to de novo review and a matter for the judge, not the jury

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Claims - Transitional phrases		
Type	Words	Meaning / Notes
Open	Comprising [the steps of] <u>Also:</u> including containing characterized by	“having at least” The most common and desirable Does not exclude additional, unrecited elements or method steps
Closed	consisting of	“having only” Closes the claim to the inclusion of other elements (except impurities)
Partially closed	consisting essentially of	“having nothing else that affects operation” Limits the scope of the claim to the specified elements “and those that that do not materially affect the basic and novel characteristics”
<ul style="list-style-type: none"> Examples <ul style="list-style-type: none"> Open: ABCX is within the scope of coverage of an open claim to ABC Closed: ABCX is NOT Partially closed: If element X would NOT materially change the composition, then ABCX IS within the scope of the partially closed claim to ABC 		

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More claim rules

- Claim body
 - Elements and interaction among elements
 - Words/terms of art, for example: integral, extrinsic, approximately, horizontal, solid.
 - Antecedent basis
 - 1. A combustion enhancement device, comprising:
 - a housing which defines an interior chamber;
 - at least one magnet disposed within said interior chamber;
 - a far infrared ray generating composition comprising [. . .] disposed within said interior chamber; and
 - said [at least one magnet] [magnet(s)] having polarization in a range of approximately 10-40.

● Claim body

More claim rules

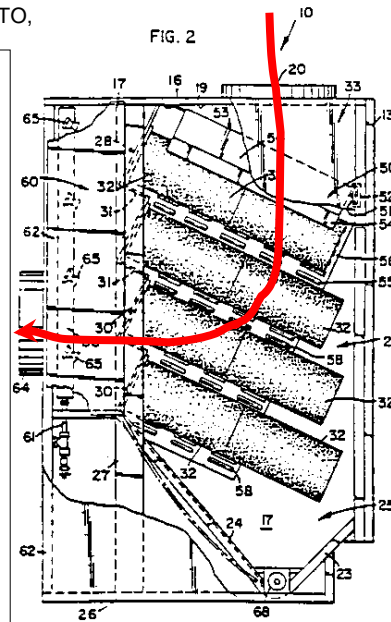
- 1. A combustion enhancement device, comprising:
 - a housing which defines an interior chamber;
 - at least one magnet disposed within said interior chamber;
 - a far infrared ray generating composition comprising [. . .] disposed within said interior chamber; and
 - said [at least one magnet] [magnet(s)] having polarization in a range of approximately 10-40.
- Dependent claims
 - Must further limit
 - Further comprising - add "elements"
 - A combustion enhancement device as in claim 1, further comprising a sleeve internal to said housing
 - Wherein – add "limitations"
 - A combustion enhancement device as in claim 2, wherein said housing is made of metal.
 - Multiple dependent claims
 - A combustion enhancement device as in claim 2 or 3, further comprising . . .

More claim rules	
§112	
[¶3] A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form.	
[¶4] Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.	
[¶5] A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.	
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Functional Claiming	
<ul style="list-style-type: none"> Specifically authorized by statute <ul style="list-style-type: none"> But, a claim with a single means clause is forbidden 	
§112	
[¶6] 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	“means plus function” or “step plus function” (step-plus-result) claims
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In re Donaldson (Fed. Cir. 1994) (en banc) (Rich)

- ended controversy as to whether §112¶6 applied to PTO,
- PTO rejected claim 1, Federal Circuit reversed
- 1. An air filter assembly [10] for filtering air laden with particulate matter, said assembly [10] comprising:
 - a housing having a clean air chamber [60] and a filtering chamber [22], said housing having an upper wall [16], a closed bottom [26], and a plurality of side walls [17, 62] depending from said upper wall [16];
 - a clean air outlet [64] from said clean air chamber [60] in one of said side walls [62];
 - a dirty air inlet [20] to said filtering chamber [22] positioned in a wall [16] of said housing in a location generally above said clean air outlet [64];
 - means [28] separating said clean air chamber [60] from said filtering chamber [22] including means mounting a plurality of spaced-apart filter elements [32] within said filtering chamber [22], with each of said elements [32] being in fluid communication with said air outlet [64];
 - pulse-jet cleaning means [65], intermediate said outlet [64] and said filter elements [32], for cleaning each of said filter elements [32]; and
 - a lowermost portion [25] in said filtering chamber [22] arranged and constructed for the collection of particulate matter, said portion [25] having **means [24], responsive to pressure increases in said chamber [22] caused by said cleaning means [65], for moving particulate matter in a downward direction** to a bottommost point [68] in said portion [25] for subsequent transfer to a location exterior to said assembly [10].



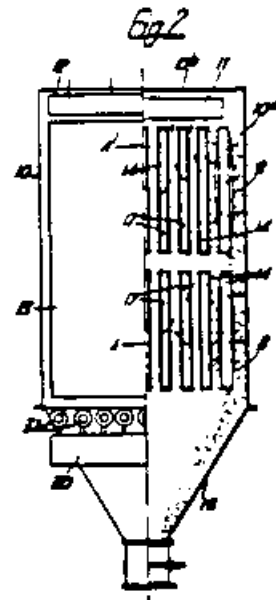
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In re Donaldson (Fed. Cir. 1994) (en banc) (Rich)

- Did prior art gas filtering device have the “means [24]”?
- How did the PTO interpret the means?
 - It refused to import any limitations into the claim
- Federal Circuit response
 - No exemption in §112¶6 for the PTO
 - “deference” to PTO is not warranted here
 - Alleged PTO reasons why §112¶6 was added to statute are not correct and do not support an exception to applying §112¶6 before the PTO.
 - Holding that §112¶6 applies does not conflict with the doctrine that claims are “given their broadest possible meaning” before the PTO
 - There is still some limit to “broadest possible”



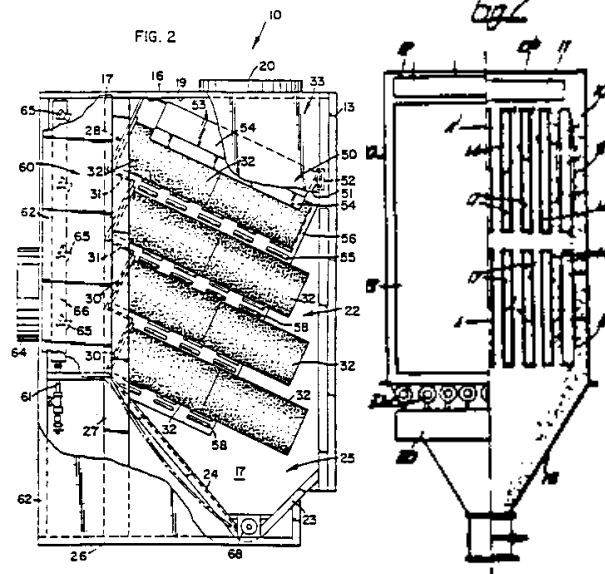
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In re Donaldson (Fed. Cir. 1994) (en banc) (Rich)

- Application to the present case
 - “means [24]” map to the diaphragm-wall
 - Prior art reference has rigid walls, so not obvious to make flexible wall from difference with PA
 - PTO counters that PA walls “vibrate” and thus are §112 ¶6 equivalents
 - The court dismisses the “vibration” theory as mere speculation & unsupported assertions
 - Even if they vibrate, may not be “equivalent”

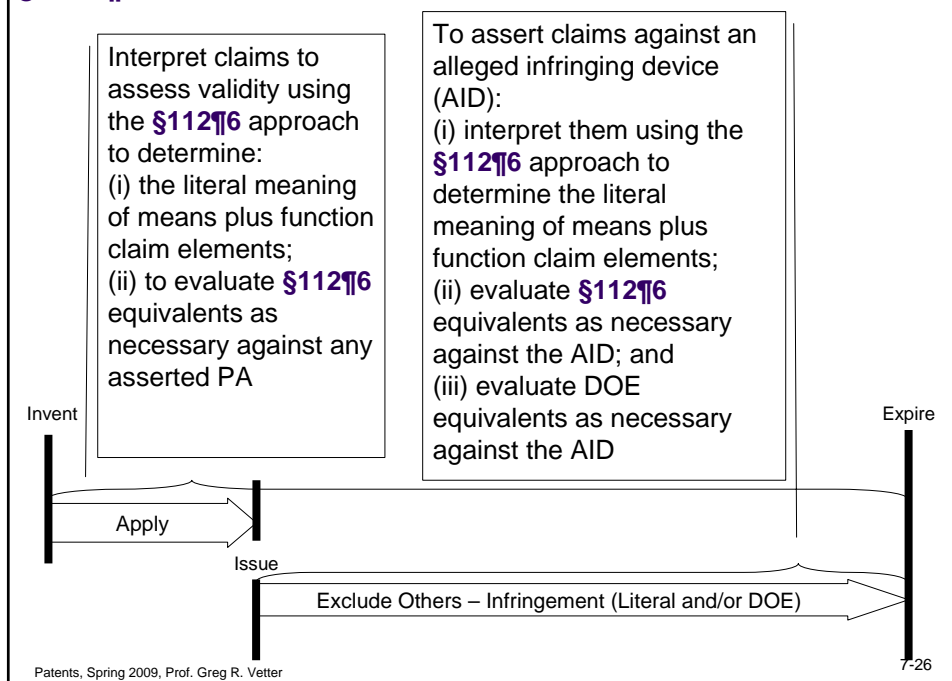


§112 ¶6 - Means + Function Claims

- Cover structure disclosed in the specification
 - Are they narrower or more broad than “regular” claim elements/limitations?
 - Differences between PTO versus courts?
 - PTO – allowed broadest reasonable interpretation (for claims generally, including §112 ¶6 elements in claims)
 - BUT, PTO is required to apply the §112 ¶6 approach to determining the meaning of means plus function elements
- Is it really a means + function element/limitation?

Claim element/limitation	Embodiment in the specification / Structure to use to construe the M+F claim element/limitation	
1. A data processing system for managing a financial services configuration of a portfolio established as a partnership, each partner being one of a plurality of funds, comprising:		
(a) computer processor means for processing data;	[a personal computer including a CPU]	A
(b) storage means for storing data on a storage medium;	[a data disk]	B
(c) first means for initializing the storage medium;	[an arithmetic logic circuit configured to prepare the data disk to magnetically store selected data]	C
(d) second means for processing data regarding assets in the portfolio and each of the funds from a previous day and data regarding increases or decreases in each of the funds, [sic, funds'] assets and for allocating the percentage share that each fund holds in the portfolio;	[an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases or decreases based on specific input, allocate the results on a percentage basis, and store the output in a *1372 separate file]	D
(e) third means for processing data regarding daily incremental income, expenses, and net realized gain or loss for the portfolio and for allocating such data among each fund;	[an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in a separate file]	E
(f) fourth means for processing data regarding daily net unrealized gain or loss for the portfolio and for allocating such data among each fund; and	[an arithmetic logic circuit configured to retrieve information from a specific file, calculate incremental increases and decreases based on specific input, allocate the results on a percentage basis and store the output in a separate file]	F
(g) fifth means for processing data regarding aggregate year-end income, expenses, and capital gain or loss for the portfolio and each of the funds.	[an arithmetic logic circuit configured to retrieve information from specific files, calculate that information on an aggregate basis and store the output in a separate file]	G
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§112 ¶6 - Means + Function Claims



§112 ¶6 - Means + Function Claims

- How is a §112 ¶6 equivalent different from a DOE equivalent?
 - Function
 - Function-Way-Result
 - DOE – substantially similar function, way and result
 - §112 ¶6 – **identical** function, substantially similar way and result
 - Insubstantial Differences
 - DOE – substantially similar function, insubstantial structural differences
 - §112 ¶6 – **identical** function, insubstantial structural differences
 - “After arising” technology
 - DOE covers “after arising” technology
 - §112 ¶6 equivalents do not

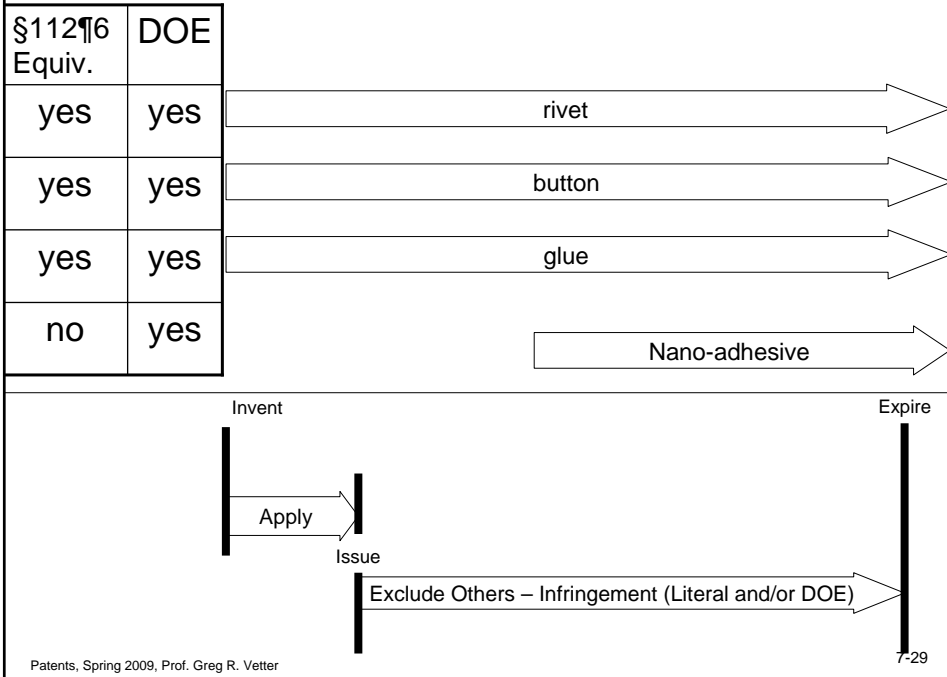
§112 ¶6 - Means + Function Claims

Literal		§112 ¶6 Equiv.	DOE
Find the structure in the specification that implements the function	F-W-R approach or test (tripartite test)	Identical Function	Substantially Similar Function (SSF)
		SS Way	SS Way
		SS Result	SS Result
	Insubstantial Differences approach or test	Iden. Funct.	SSF
		Insubstantial Differences	Insub. Diff.
More Broad			

Patents, Spring 2009, Prof. Greg R. Vetter

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§112 ¶6 - Means + Function Claims



Al-Site Corp. v. VSI Int'l, Inc. (Fed. Cir. 1999) (Rader)

• Literal infringement of the '532 patent

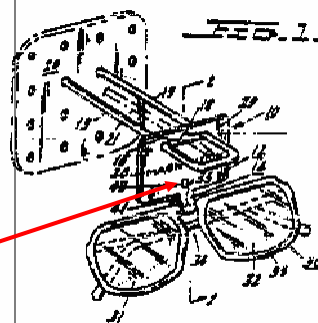
- 8. A pair of eyeglasses and hanger means for removably mounting said eyeglasses on a horizontally extending cantilevered support;

said eyeglasses including first and second lenses positioned side by side with a nose gap open at one end disposed therebetween, a bridge extending across said gap at its other end, and temples operatively connected to said lenses at pivot points disposed remote from said nose gap;

said hanger means including a body having aperture means adapted to receive a horizontally extending cantilevered support, an extension projecting from a bottom edge portion of said body and bent to pass through said gap and form a loop that encircles said bridge, and **fastening means** in engagement with said extension to maintain said loop closed;

said loop being proportioned to cooperate with said eyeglasses for preventing separation of said hanger means from said eyeglasses without opening said loop, and for permitting a customer to try on said eyeglasses while said hanger means is mounted thereto;

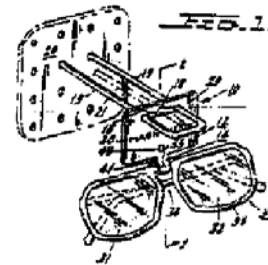
with said temples folded, said eyeglasses constituting an elongated unit having its longitudinal axis positioned horizontally and below said body when said eyeglasses are mounted on a horizontally extending cantilevered support by said hanger means.



- fastening means disclosed in the specification
 - Rivet
 - button
- Accused Infringing Device (VSI Version 1)
 - glue

Al-Site Corp. v. VSI Int'l, Inc.

- Literal infringement of the '532 patent
- §112 ¶6 analysis
 - Literal
 - The glue is not a rivet or a button
 - Thus, there is no literal infringement
 - §112 ¶6 equivalents (or "structural equivalents") analysis
 - F-W-R approach
 - The function is identical
 - The function is to fasten such that the extension encircles the nose bridge of the eyeglasses and is held in place
 - The function fastens the extension in a closed loop
 - The "Way" is substantially similar
 - This is the element most often at issue in the F-W-R test
 - The way is substantially similar because it connects the extension to the body
 - The "Result" is substantially similar
 - The closed loop is kept closed
 - Insubstantial Differences approach (used by the court)
 - Function analysis is the same
 - The structural differences are insubstantial
 - Expert testified that a rivet, glue, or staple were all "equivalent"



Patent embodiment

Al-Site Corp. v. VSI Int'l, Inc.

- Rules for claim drafters to invoke the strictures of §112 ¶6
 - If the word "means" appears in a claim element in combination with a function, it is presumed to be a means-plus-function element to which §112 ¶6 applies.
 - Nevertheless, according to its express terms, §112 ¶6 governs only claim elements that do not recite sufficient structural limitations
 - Therefore, the presumption that §112 ¶6 applies is overcome if the claim itself recites sufficient structure or material for performing the claimed function
 - For example, "perforation means for tearing"
 - Although use of the phrase "means for" (or "step for") is not the only way to invoke §112 ¶6, that terminology typically invokes §112 ¶6 while other formulations generally do not
 - Therefore, when an element of a claim does not use the term "means," treatment as a means-plus-function claim element is generally not appropriate
 - However, when it is apparent that the element invokes purely functional terms, without the additional recital of specific structure or material for performing that function, the claim element may be a means-plus-function element despite the lack of express means-plus-function language
 - For example, one court interpreted "lever moving element" and "movable link member" under §112 ¶6)

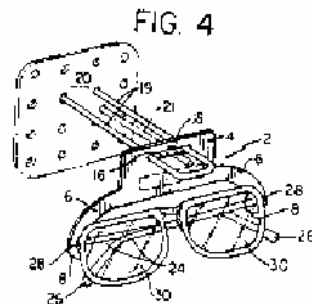
Al-Site Corp. v. VSI Int'l, Inc.

• Infringement of the other three patents

Element	Language in Claim	Properly a M+F Claim?
Eyeglass hanger member ('345 & '726)	"made from flat sheet material," and having an "opening means formed ... below [its] upper edge." ('345) "an attaching portion attachable to a portion of said frame of said pair of eyeglasses to enable the temples of the frame [to be opened and closed]." ('726)	No - no use of "means," sufficient structure
"attaching portion attachable to a portion of said frame of said pair of eyeglasses" ('726)	The element language itself supplies structural, not functional terms	No – no use of "means"
Eyeglass contacting member ('911)	having an encircling portion adapted to encircle a part of said frame of said pair of eyeglasses. ('911)	No - no use of "means," sufficient structure
means for securing a portion of said frame of said eyeglasses to said hanger member ('345)		YES

Al-Site Corp. v. VSI Int'l, Inc.

- The final issue relates to the "means for securing" from the '345 patent
 - means for securing a portion of said frame of said eyeglasses to said hanger member
- This element was held to properly be a means plus function element
- But, Magnivision (Al-Site's successor in interest) alleges error because the jury instruction did not include "or equivalents thereof" when referring to the rivet or button fastener
 - Although Magnaivision obtained a jury DOE verdict, it argues that with a proper jury instruction, it would have obtained a §112¶6 literal infringement verdict (which includes §112¶6 "equivalents")

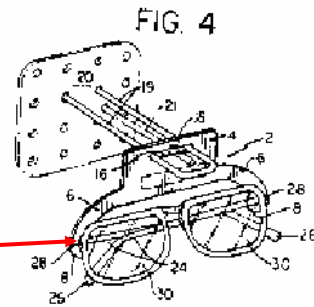


Alleged infringing device

Means for Securing jury instr:
 - "a mechanically fastened loop that goes around the nose bridge of the glasses ... **or an equivalent thereof.**"
 - "[t]he means for securing can be formed from a separate extension or integral extension and includes either the rivet fastener or the button and hole fastener."

AI-Site Corp. v. VSI Int'l, Inc.

- In essence, the court says that
 1. Knowing the differences between §112¶6 equivalents and DOE equivalents, AND
 2. Knowing that the parties agreed that the function was identical, AND
 3. Knowing that there is no after arising technology (the holes in the accused device are not after-arising technology) THEN
 4. Logically, we can hold that the jury's DOE verdict also indicates a finding of §112¶6 equivalence
- AS A RESULT
 - Any error from the slightly wrong jury instruction is harmless
- What is the logic the court applies in step 4?

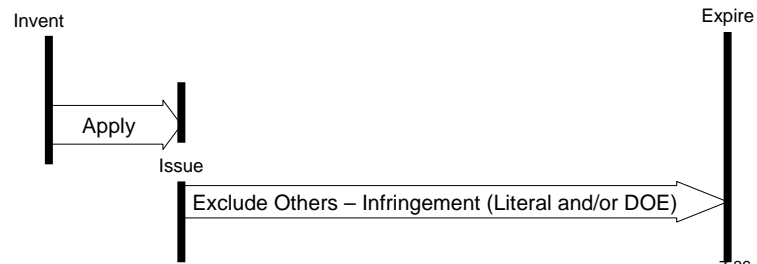


Alleged infringing device

Are the holes
“means for securing”
under §112¶6?

Notes for AI-Site

- Where to draw the line for after developed technology?
 - The words of a claim are fixed upon its issuance
 - From this the court measures “after” from date of issuance
 - What about the filing date?



Notes for AI-Site

- Step plus function – concurrence by Judge Rader in Seal-Flex (1999)
 - Same general methodology as means plus function claims
 - Difficulty is distinguishing acts from functions
 - Step = Act Means = Structure & Material
 - But, “step” can introduce an act or function
 - So, by itself, “step” does not invoke a “step plus function” presumption
 - Nor does “step of,” BUT, “step for” does
 - “step for” presumption subsequently applied by the Federal Circuit
- Step plus function – look for recitation of a “result”
 - §112¶6 applies to functional method claims reciting a particular result, but not the specific act, technique or procedure used to achieve the result
 - Examples
 - Reducing the coefficient of friction of the resulting film
 - Interpret under §112¶6 by going to the specification to see how the coefficient of friction was reduced
 - Raising the pH of the resultant pulp to about 5.0 to precipitate
 - Interpret under §112¶6 by going to the specification to see how the pH was raised

§112

[¶6] 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

“means plus function” or
“step plus function” (step-
plus-result) claims

Notes for AI-Site

- Recognizing a functional claim
 - Additional structural description may only describe what the “means for joining” DOES not what it IS structurally
 - For the presumption triggered by “means” to apply, that word must be connected to some recited function
 - “perforation means for tearing”

Functional claim language outside of §112¶6

- Typically invoked by works like “whereby” “so that” or “for”
- Explains various items
 - function of the claimed subject matter
 - Inter-cooperation of elements
 - End results
 - Manner in which the subject matter is intended to be employed
- Functional differences in a claim may not differentiate the claim from a prior art reference containing all of the structure recited
 - Harkens back to inherency doctrine
- Functional language in a claim, without the recitation of the structure that performs the function, may make the claim broader than can be supported by the specification, and therefore, invalid under §112¶1

Jepson claims – In re Fout (CCPA 1982)

- Applicants claim improvement over Pagliaro process
 - For decaffeinating vegetable material, such as coffee
 - Process involves using fatty material to separate caffeine from the vegetable material
 - There is a “regeneration” step
 - Applicant’s process claims the Pagliaro process, but with regeneration via evaporative distillation instead of aqueous extraction
 - Rejected on “the preamble in view of Barch and Waterman”
 - {1} *scope & content of the prior art*
 - {2} *ascertain differences*
 - {3} *assess level of skill of a POSITA*
 - {4} *“secondary” or objective indicia*

Jepson claims – In re Fout (CCPA 1982)

● References

- Waterman - teaches suspending solid material in vegetable oil, then subjecting the material to evaporative distillation
 - The reference states: "Solid alkaloids usually regarded as non-volatile, such as caffeine may be recovered in pure form under the present invention, avoiding the usual more tedious physical and chemical processes. Fine ground tea or coffee is suspended in oil and transmitted through the still, the alkaloids distilling over and being condensed."
- Barch - teaches a decaffeination process in which caffeine is removed from a solvent by evaporating the solvent, which is then recirculated

Jepson claims – In re Fout (CCPA 1982)

● Claim 1 of application:

- In a process for producing a decaffeinated vegetable material suitable for consumption in beverage form wherein caffeine-containing vegetable material is extracted with a volume of recirculating liquid, water-immiscible edible fatty material in a decaffeination zone for a period of time sufficient to transfer caffeine from said vegetable material into said fatty material, and wherein the caffeine-laden fatty material resultant from extraction is separated from said vegetable material and is conveyed to a regeneration zone for removal of caffeine prior to recirculation to said decaffeination zone, **the improvement which comprises**

subjecting the caffeine-laden fatty material in said zone to regenerative vaporization conditions such as to vaporize caffeine from said fatty material and further to vaporize from said fatty material any fatty material degradation products present therein.

● §102 is not the only source of Prior Art

- Party admissions can also be PA
- Certain art may be PA to one inventive entity, but not to the general public

● In light of the references, the claim is obvious

Jepson claims – In re Fout (CCPA 1982)

- Rebutting the presumption
 - Reading & Bates v. Baker Energy (Fed. Cir. 1984)
 - Preamble recited the applicant's prior invention
 - Flout distinguished because the admitted preamble there was from a different inventive entity
- How does the Jepson claim help a patent examiner?
 - 1. The combination of A, B & C'
 - 2. In the combination of elements A, B & C, the improvement which comprises use of C' as the element C

“Markush” Claim elements/limitations

- There is a way of describing a claim element/limitation where adding items increases the scope of the claim
 - This occurs when a “Markush” group is used
 - Name is from a case which allowed listing of items in the alternative in specific situations
 - Traditionally used to claim chemical compounds, can now be applied in any claim
- Example (compare the two claims on the next overhead)

“Markush” Claim elements/limitations

Claim 4

- A seating apparatus, comprising:
- (a) a horizontal seat; and
- (b) three legs each having one end connected to the bottom of said horizontal seat.
- (c) said connection between said legs and bottom of said horizontal seat being a slim **brass** metal piece partially traversing some of said leg and said seat.

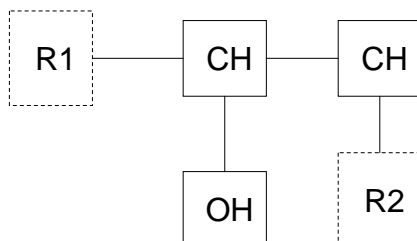
Claim 5

- A seating apparatus, comprising:
- (a) a horizontal seat; and
- (b) three legs each having one end connected to the bottom of said horizontal seat.
- (c) said connection between said legs and bottom of said horizontal seat being a slim metal piece partially traversing some of said leg and said seat, **wherein the metal of said slim metal piece is brass, steel, iron, or tin.**
- Alternative language for element/limitation 5(c):
- (c) said connection between said legs and bottom of said horizontal seat being a slim metal piece partially traversing some of said leg and said seat, **wherein the metal of said slim metal piece is selected from the group consisting of brass, steel, iron, and tin.**

Example in a hypothetical chemical compound claim

claim

A compound of the formula



wherein R1 is hydrogen or methyl, and R2 is chlorine, bromine or iodine.

Compounds covered by the claim

Rest of the Molecule	R1	R2
CH-CH OH	H	C
CH-CH OH	H	B
CH-CH OH	H	I
CH-CH OH	M	C
CH-CH OH	M	B
CH-CH OH	M	I

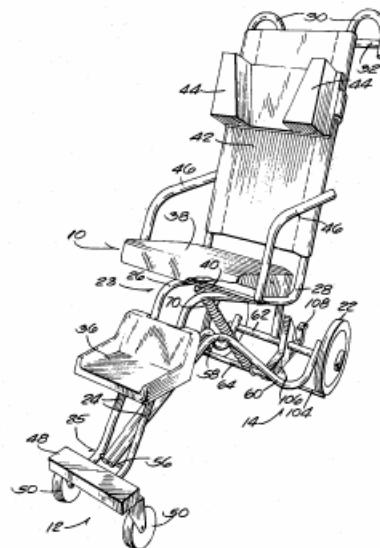
“Markush” Claim

- Requirements for use

- Ordinarily, the members of the group must belong to a recognized class
- Also permissible in a process or combination claim if
 - The members of the group are disclosed in the specification to possess a property in common which is mainly responsible for their function in the claimed relationship, and
 - It is clear from their nature or the prior art that all possess the property

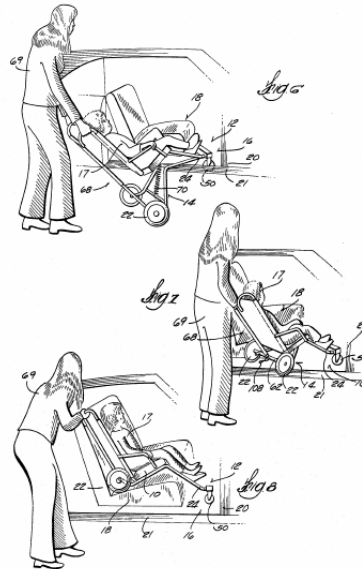
Claim definiteness – Orthokinetics (Fed. Cir. 1986) (Markey)

- Jury said patent was not invalid for indefiniteness
 - “so dimensioned”
- Dist. Ct. granted JNOV invalidating the patent
- Federal Circuit reversed



Claim definiteness – Orthokinetics (Fed. Cir. 1986) (Markey)

- 1. In a wheel chair having a seat portion, a front leg portion, and a rear wheel assembly, the improvement wherein said front leg portion is **so dimensioned** as to be insertable through the space between the doorframe of an automobile and one of the seats thereof whereby said front leg is placed in support relation to the automobile and will support the seat portion from the automobile in the course of subsequent movement of the wheel chair into the automobile, and the retractor means for assisting the attendant in retracting said rear wheel assembly upwardly independently of any change in the position of the front leg portion with respect to the seat portion while the front leg portion is supported on the automobile and to a position which clears the space beneath the rear end of the chair and permits the chair seat portion and retracted rear wheel assembly to be swung over and set upon said automobile seat.



Claim definiteness – Orthokinetics (Fed. Cir. 1986) (Markey)

- In granting JNOV, the dist. Court stated:
 - The D's expert testimony "clearly and convincingly establishes that claim 1 of the patent does not describe the invention in 'full, clear, concise and exact terms'" because one cannot tell whether a chair infringes unless one tests the chair on vehicles "ranging from a Honda Civic to a Lincoln Continental to a Checker cab."
 - Fundamental concern expressed is the public notice function of the claim
- Federal Circuit
 - Mixes §112¶1 with §112¶2
 - Test is whether those skilled in the art would understand what is claimed when the claim is read in light of the specification
 - The phrase "so dimensioned" is as accurate as the subject matter permits
 - Here, POSITAs would realize that the dimensions could be easily obtained

Notes – Orthokinetics

- Words of degree in claims
 - About, approximately, “close to” “substantially equal” . . .
 - Does the patent’s specification provide some standard for measuring that degree
 - Does the level of imprecision with the words of degree create a risk of reading on the prior art?
- Potential for ambiguity as to whether functional language other than §112¶6 (whereby, etc.) is limiting or merely states a necessary result
 - “whereby the fluid will not directly engage the device and electrical connection means at high velocity, and the connectors will be secured against appreciable displacement by the fluid”