

## Hall '626 patent items

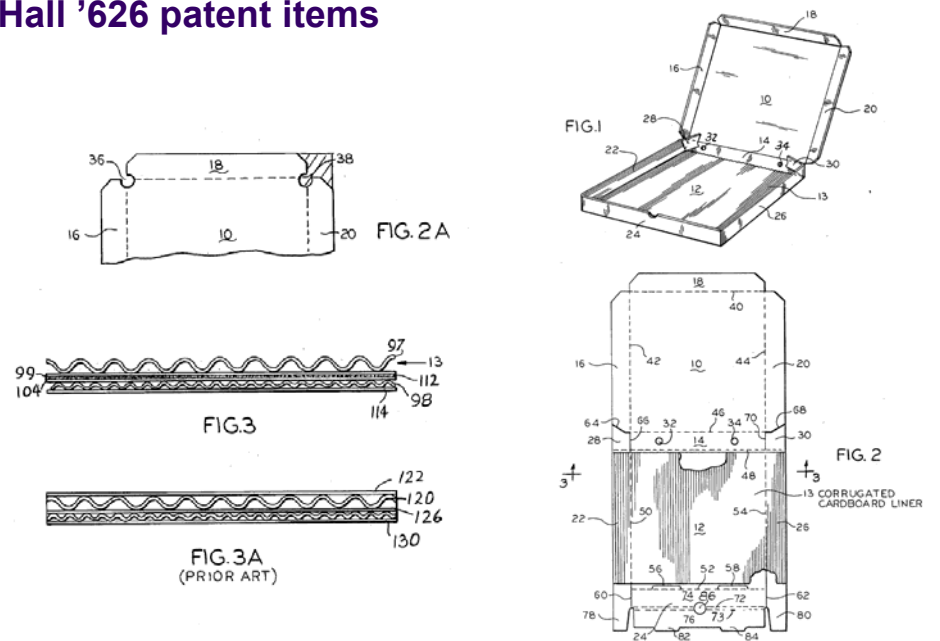
Claim 1 element/limitation	Label	Snippets from the claim
box upper member	A	
box lower member	B	"comprising three laminated layers"
lower member first layer (bottom/outside)	C	"flat on its interior side"
lower member second layer (middle; barrier layer means)	D	"resistant to at least moisture and being spread across the said first flat interior surface" "said first and second flat surfaces being bonded together in a face to face relationship with said barrier layer means interposed therebetween"
lower member third layer (inside; flutes on its upper side)	E	
flutes	F	"plurality of spaced parallel flutes"
ridges	G	"flutes comprising a plurality of upwardly directed ridges defining therebetween upwardly directed open channels, said ridges forming means for supporting an article above the bottoms of said channels"
venting means	H	"located in a side wall of said box at the ends of said channels, the dimensions of said box being such that heat from an article resting on said flutes escapes through said ventilation means via said channels"

Claim 1: A box comprising upper and lower members which close or open relative to each other to form a covered box, a bottom of said box being formed by said lower member and comprising three laminated layers, a first and outside one of said three laminated layers forming a supporting layer having a first and substantially flat surface on its interior side, a second and intermediate one of said three laminated layers extending over at least a substantial portion of said first flat interior surface, said second layer comprising barrier layer means resistant to at least moisture and being spread across the said first flat interior surface, a third and inside one of said three layers having a second and substantially flat surface on its lower side with a plurality of spaced parallel flutes upstanding on its upper side, said first and second flat surfaces being bonded together in a face to face relationship with said barrier layer means interposed therebetween, said flutes comprising a plurality of upwardly directed ridges defining therebetween upwardly directed open channels, said ridges forming means for supporting an article above the bottoms of said channels, and venting means formed in said box and located in a side wall of said box at the ends of said channels, the dimensions of said box being such that heat from an article resting on said flutes escapes through said ventilation means via said channels.

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## Hall '626 patent items



**U.S. Pat. No. 4,677,798 (Phillips)**

**United States Patent** [19]

[11] **Patent Number:** **4,677,798**

**Phillips**

[45] **Date of Patent:** **Jul. 7, 1987**

[54] **STEEL SHELL MODULES FOR PRISONER DETENTION FACILITIES**

[76] **Inventor:** Edward H. Phillips, P.O. Box 979, Fort Collins, Colo. 80522

[21] **Appl. No.:** 852,021

[22] **Filed:** Apr. 14, 1986

[51] **Int. Cl.<sup>4</sup>** ..... E04H 3/08

[52] **U.S. Cl.** ..... 52/106; 52/79.4; 52/79.9; 52/144; 52/404; 109/79

[58] **Field of Search** ..... 52/106, 79.1, 79.4, 52/79.5, 79.9, 79.12, 144, 243, 404; 109/78, 79

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

1,100,804	6/1914	White .	
3,312,019	4/1967	Faerber .....	52/106
3,722,152	3/1973	Schlatter et al. ....	52/106 X
3,769,766	11/1973	Speidel .....	52/79.4
3,899,043	8/1975	Hall .....	52/79.9 X
4,494,348	1/1985	Kastelic .....	52/404 X

*Primary Examiner*—J. Karl Bell  
*Attorney, Agent, or Firm*—Laurence R. Brown

[57] **ABSTRACT**

Vandalism resistant building modules suitable for deten-

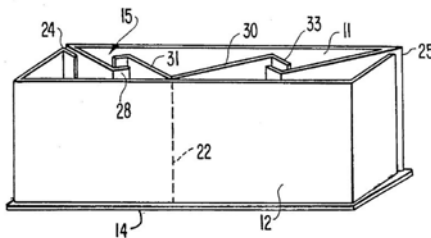
tion and secured storage facilities provide good architectural properties and significant resistance to noise, fire and impact. Thus, steel shell modules are welded together to produce steel inner and outer walls. The modules contain strengthening and bullet deflecting internally directed steel baffles and various types of insulating materials. Construction is facilitated by providing modules that are welded together along only two lines coinciding with mating end positions on the steel plate inner and outer walls. Three steel panel pieces are formed into a module, each being partly triangular in cross section so that only one weld seam between two of the panels is required in assembling the three pieces which thereby form the internal baffles at angles for deflecting bullets. The baffles form an intermediate barrier between the walls and flanges at the ends of the module between which an insulating rope is compressed to provide a thermal and sound barrier between the inner and outer steel walls. Different types of internally disposed insulating materials may be disposed on either side of the intermediate barrier thus to provide the best combination of impact, fire and sound resistant properties.

**26 Claims, 18 Drawing Figures**

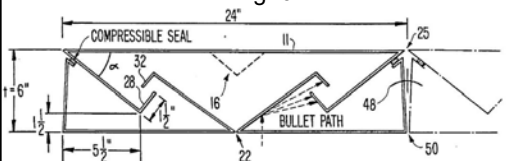
**Phillips v. AWH Corp., 415 F.3d 1303 (Fed. Cir. 2005) (en banc)**

- Degree of influence on meaning for the claim term “baffle” from:
  - The dictionary
  - The disclosure (“specification”)
  - Function intended for structure recited in the claim
- Internal versus External sources of meaning and context

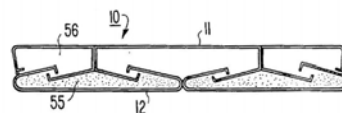
**FIG. 2.**



**Fig. 6**



**Fig. 7**

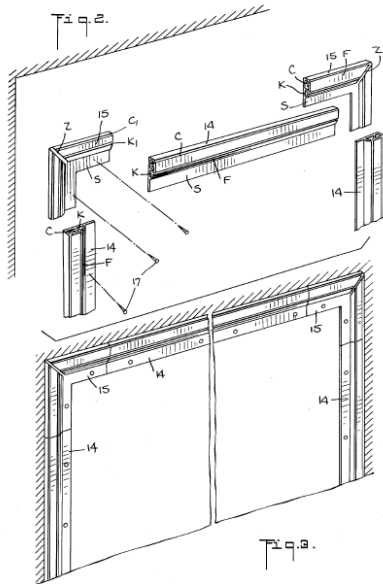


Claim Interpretation – Sources / Canons / Procedure		
Source(s)		Canons
Plain meaning	Dictionaries	Claim / Specification relationship - Don't read a limitation into a claim - One may look to the written description to define a term already in a claim limitation Presumptive breadth - Claim should be interpreted 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 - Patentee can't construe narrowly before the PTO and broadly in court
Specification	The specification can be used to enlighten the court as to the meaning of a claim term	
Prosecution history	Effect on claim construction? - considered if in evidence	
Extrinsic Evidence	Proper to resort to extrinsic evidence?	
<ul style="list-style-type: none"> <li>● Procedure               <ul style="list-style-type: none"> <li>● <u>Markman</u> – 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</li> </ul> </li> </ul>		

Claim construction canons
<ul style="list-style-type: none"> <li>● Ordinarily, each claim in a patent has a different scope; ordinarily, a dependent claim has a narrower scope than the claim from which it depends; and, ordinarily, an independent claim has a broader scope than a claim that depends from it. (these generalizations are referred to as the doctrine of claim differentiation);</li> <li>● Ordinarily, claims are not limited to the preferred embodiment disclosed in the specification;</li> <li>● Ordinarily, different words in a patent have different meanings;</li> <li>● Ordinarily, the same word in a patent has the same meaning;</li> <li>● Ordinarily, the meaning should align with the purpose of the patented invention;</li> <li>● Ordinarily, general descriptive terms are given their full meaning;</li> <li>● If possible, claims should be construed so as to preserve their validity;</li> <li>● Ordinarily, absent broadening language, numerical ranges are construed exactly as written;</li> <li>● Ordinarily, absent recitation of order, steps of a method are not construed to have a particular order; and</li> <li>● Absent highly persuasive evidentiary support, a construction should literally read on the preferred embodiment.</li> </ul>

## Unique Concepts v. Brown, 939 F.2d 1558 (Fed. Cir. 1991)

U.S. Patent April 19, 1977 Sheet 2 of 7 4,018,260



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- “right angle corner border pieces”
- preformed versus mitering?
- examiner interview?
- dissent

## Claim preamble

- Role in the claim
  - 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”
- Hypo – “A food-carrying box comprising . . .” from claim 1 of Hall '626 patent

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Claims - Transitional phrases		
Type	Words	Meaning / Notes
Open	Comprising [the steps of]	"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"

- Synonyms for "comprising"
  - including, having, characterized by, being, composed of, comprised of, containing
- Examples
  - 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

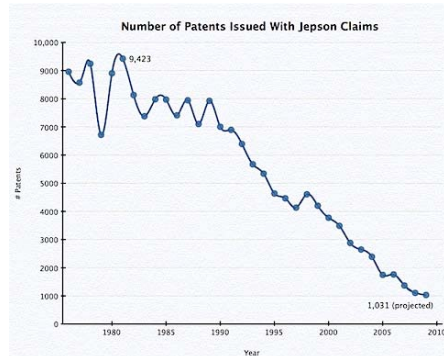
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Jepson claims – <u>In re Fout</u> (CCPA 1982)
<ul style="list-style-type: none"> <li>• Claim 1 of application:           <ul style="list-style-type: none"> <li>• In a process for producing a decaffeinated vegetable material suitable for consumption 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, <b>the improvement which comprises</b></li> </ul> <p style="margin-left: 40px;">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.</p> </li> <li>• <u>Held</u>: Claim is obvious.</li> </ul>

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## Jepson claims

- 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
- How does a Jepson claim help an applicant?



## “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 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.

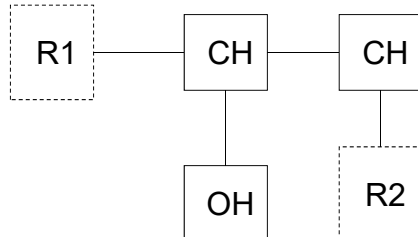
### Claim 5

- 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
- Potential Downside
  - Prior art showing any single embodiment will invalidate claim
  - Cf. multiple dependent claims (inference is that a multiple dependent claim contains separate claims)

## Hypothetical patent claim – scope example

A **firewall** for restricting transmission of **email messages** between a first site and a plurality of second sites in accordance with a plurality of administrator selectable policies, **said firewall comprising**:

    a **email message transfer protocol relay** for causing said **email messages** to be transmitted between said first site and selected ones of said second sites; **and**

    a **plurality of policy managers**, responsive to said relay, for enforcing administrator selectable policies, **said policies comprising**

        at least a first source/destination policy, at least a first content policy and at least a first virus policy, said policies characterized by a plurality of administrator selectable criteria, and a plurality of administrator selectable exceptions to said criteria, **said policy managers comprising**,

        - an access manager for restricting transmission of **email messages** between said first site and said second sites in accordance with **said source/destination policy**;

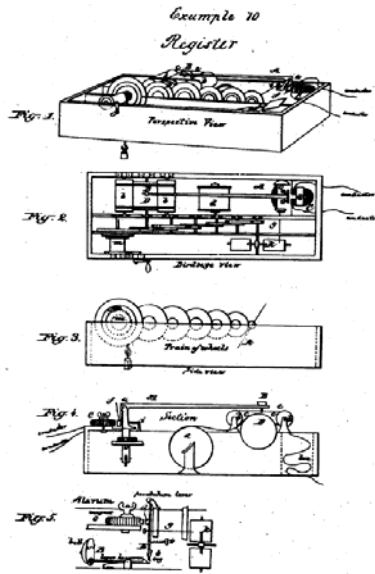
        - a content manager for restricting transmission of **email messages** between said first site and said second sites in accordance with **said content policy**; and

        - a virus manager for restriction transmission of **email messages** between said first site and said second sites in accordance with **said virus policy**.





**O'Reilly v. Morse, 56 U.S. 62 (1854)**



- “the essence of my invention being the use of the motive power of the electric or galvanic current, which I call electro-magnetism, however developed for marking or printing intelligible characters, signs, or letters, at any distances, being a new application of that power of which I claim to be the first inventor or discoverer”

- scope
- enablement
- eligibility

**Specification Requirements – Objective Disclosure Requirements**

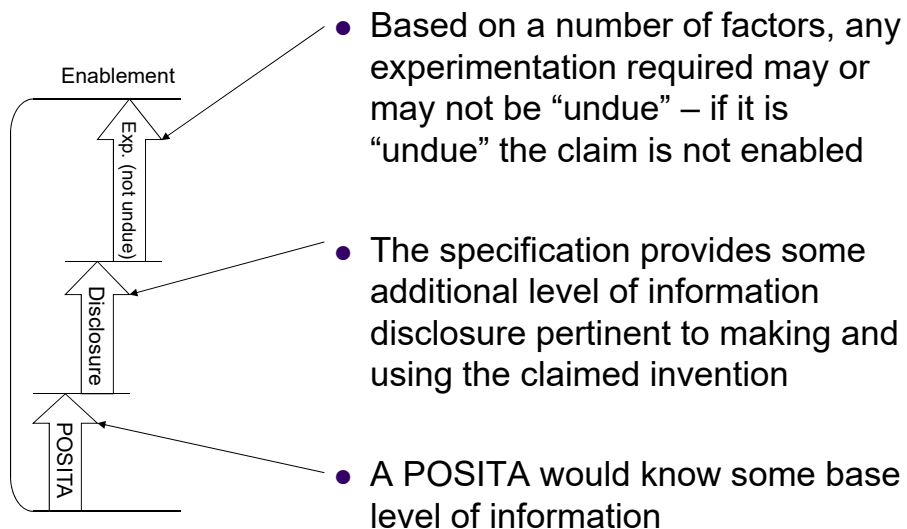
- Enablement is the central doctrine
  - It fulfills the “public disclosure” part of the patent bargain
  - It helps delimit the boundaries of patent protection by ensuring that the scope of a patent claim accords with the extent of the inventor’s technical contribution
- Written description doctrine
  - Historical role in policing new matter
  - Role as a standalone requirement

§§ 112(a)-(b) Language	
(a) <b>In General</b> .-The specification shall contain a <b>written description</b> of the invention, and of the <u>manner and process of making and using it</u> , in such full, clear, concise, and exact terms as to <b>enable</b> any person skilled in the art to which it pertains, or with which it is most nearly connected, to <u>make and use</u> the same,	Written Description requirement  Enablement requirement
and shall set forth the <b>best mode</b> contemplated by the inventor or joint inventor of carrying out his invention.	Best Mode requirement (subjective in part) [ But, AIA impact ]
(b) <b>Conclusion</b> .-The specification shall conclude with one or more claims <b>particularly pointing out and distinctly claiming</b> the subject matter which the inventor or joint inventor regards as the invention.	Definiteness requirement

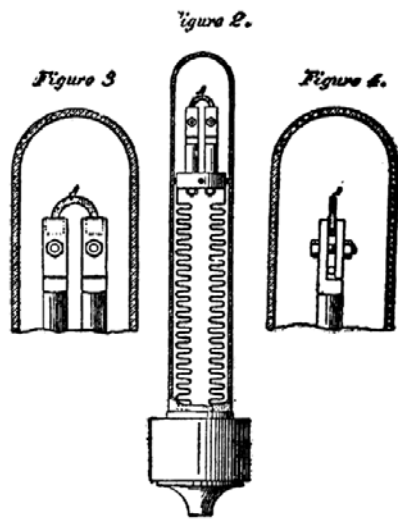
### Presumption of validity

35 U.S.C. § 282      Presumption of validity; defenses.  
A patent shall be presumed valid. Each claim of a patent (whether in independent [or] dependent . . . form) shall be presumed valid independently of the validity of other claims; . . . dependent claims shall be presumed valid even though dependent upon an invalid claim. . . . The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

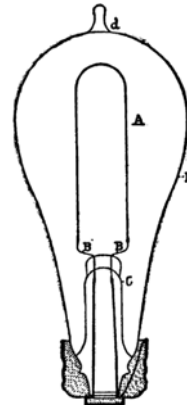
### How to think about Enablement



### The Incandescent Lamp Case (1895)



- Claims
  - "... carbonized fibrous or textile material . . ."
  - "... incandescing conductor of carbonized fibrous material . . ."
  - "... carbonized paper . . ."
- AID
  - carbonized bamboo

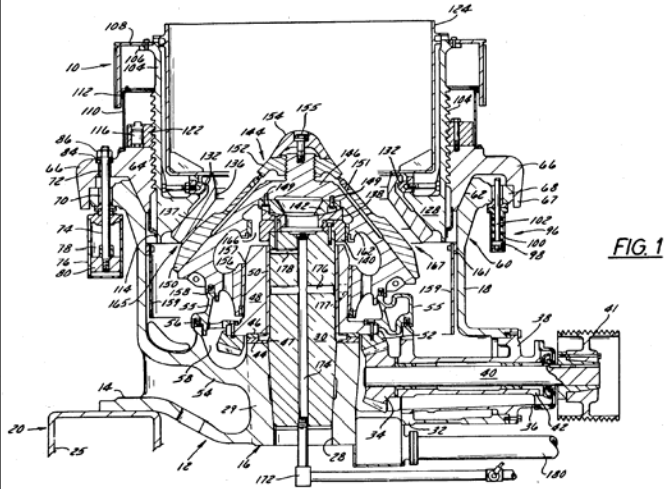


### Enablement – undue experimentation – Wands factors

- quantity of experimentation necessary
- amount of direction or guidance provided
- presence or absence of working examples
- nature of the invention
- state of the prior art
- relative skill of those in the art
- predictability or unpredictability of the art
- the breadth of the claims

**Cedarapids v. Nordberg (Fed. Cir. 1997)**

- Mechanical device; not unpredicable art
- One disclosed embodiment for 7 foot crusher
  - speed: up to 100% increase; throw: up to 40% increase



**Automotive Tech. Intl. v. BMW (Fed. Cir. 2007)**

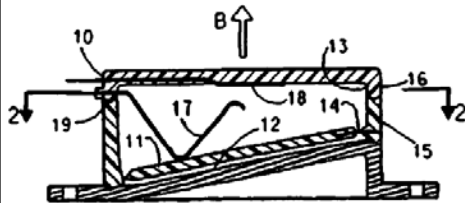


FIG. 1

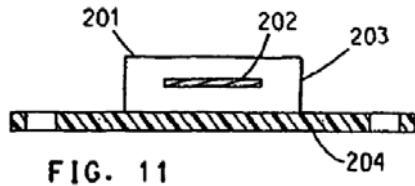


FIG. 11

- claim construction
- Enablement issue with construed claim
  - Mechanical embodiment
  - Electronic embodiment
- Note 3, pg. 119, influenced by AIA

**Ariad Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336 (Fed. Cir. 2010)**

Possession Test: whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date

The term "possession," however, has never been very enlightening. . . . "possession as shown in the disclosure" is a more complete formulation. . . .

This inquiry, as we have long held, is a question of fact. Thus, we have recognized that determining whether a patent complies with the written description requirement will necessarily vary depending on the context. Specifically, the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology. For generic claims, we have set forth a number of factors for evaluating the adequacy of the disclosure, including "the existing knowledge in the particular field, the extent and content of the prior art, the maturity of the science or technology, [and] the predictability of the aspect at issue."

The law must be applied to each invention at the time it enters the patent process, for each patented advance has a novel relationship with the state of the art from which it emerges. . . .

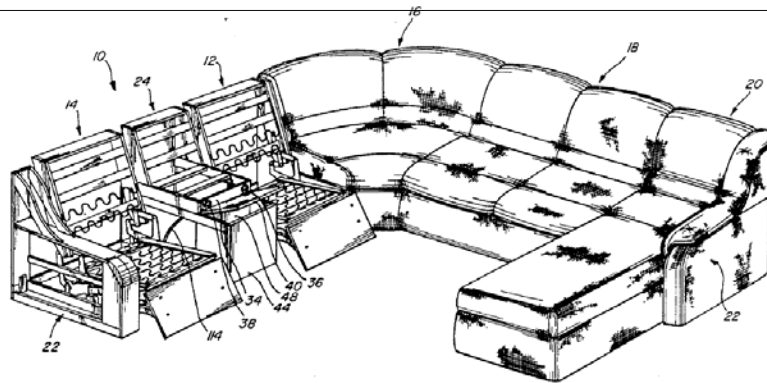
There are, however, a few broad principles that hold true across all cases. We have made clear that the written description requirement does not demand either examples or an actual reduction to practice; a constructive reduction to practice that in a definite way identifies the claimed invention can satisfy the written description requirement. Conversely, we have repeatedly stated that actual "possession" or reduction to practice outside of the specification is not enough. Rather, as stated above, it is the specification itself that must demonstrate possession. And while the description requirement does not demand any particular form of disclosure, or that the specification recite the claimed invention in haec verba, a description that merely renders the invention obvious does not satisfy the requirement.

- Original claims versus later-added/ revised claims
- Three "hypothesized" types of molecules with the potential to reduce NF- $\kappa$ B activity in cells: decoy, dominantly interfering, specific inhibitor
  - Disclosure of any specific molecules of these types?

**Gentry Gallery v. Berkline Corp., 134 F.3d 1473 (Fed. Cir. 1998)**

1. A sectional sofa comprising:

- a pair of reclining seats disposed in parallel relationship with one another in a double reclining seat sectional sofa section being without an arm at one end . . . ,
- each of said reclining seats having a backrest and seat cushions and movable between upright and reclined positions . . . ,
- a *fixed console* disposed in the double reclining seat sofa section between the pair of reclining seats and with the console and reclining seats together comprising a unitary structure,
- said console including an armrest portion for each of the reclining seats; said arm rests remaining fixed when the reclining seats move from one to another of their positions,
- and a *pair of control means*, one for each reclining seat; *mounted on the double reclining seat sofa section* . . .



## Best Mode

Little remains of the best mode requirement after the AIA. As a longstanding feature of U.S. patent law, the pre-AIA best mode requirement was unique in at least two ways. First, it was a feature of U.S. patent law that made our law an outlier among the patent systems of the world. Second, the best mode requirement was unique within U.S. patent law because whether the inventor had a “best mode” is a subjective inquiry. One would ask: did the inventor have a mental belief that there was a “best” way to practice the invention? This subjective inquiry is in contrast to the POSITA’s objective perspective with which the other requirements for patentability are evaluated.

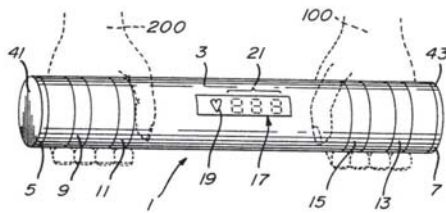
Some believed that the best mode was oftentimes a trap for the unwary and served little additional purpose on top of the other disclosure requirements. Leading up to the AIA’s enactment, many believed that eliminating the best mode requirement would benefit the patent system. However, the elimination was implemented in an awkward way: the best mode requirement remained in section 112, but was eliminated for use as a defense in section 282. Thus, patent applicants must still disclose a best mode, but there is virtually no practical enforcement of the requirement. One commenter appraised the situation as follows:

*The legislative history provides no explanation for Congress’s failure to simply repeal the best-mode requirement entirely. Nor is one apparent.*

Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 580, 584 (2012).

Those opposing removal of best mode from the U.S. patent system would sometimes cite the idea that its requirement would force disclosure of some of the trade secrets potentially associated with the invention. The patent instrument, however, can oftentimes omit many important secrets from disclosure because it must only enable and describe a prototype. The cases show a consistent stance against expanding the disclosure requirements to force manufacturing or production information from the patentee. This means, practically, that often a patent owner can keep as a trade secret some of the more useful commercial information related to scaling production to mass-market quantities or overcoming other manufacturing challenges. Should the disclosure requirements allow such a “loophole”? Is it unfair to call it a loophole when the claims do not cover those practical aspects of manufacturing the apparatus recited by the claim?

## Nautilus v. Biosig 134 S. Ct. 2120 (2014)



- Claim term at issue
  - “spaced relationship”
- Revising the standard

In place of the “insolubly ambiguous” standard, we hold that a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.

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other graphics and legends. The paper insert would be rolled up with the graphics on the top surface and slid into the tubular member which would comprise a transparent material so that all of the information inscribed on the insert would be seen through the top surface of the tubular member.

Further, although the electrodes have been illustrated as rings, other configurations have been described, this was for the purpose of illustrating, but not limiting, the invention. Various modifications, which will come readily to the mind of one skilled in the art, are within the scope of the invention as defined in the appended claims.

I claim:

1. A heart rate monitor for use by a user in association with exercise apparatus and/or exercise procedures, comprising:

an elongate member;

electronic circuitry including a difference amplifier having a first input terminal of a first polarity and a second input terminal of a second polarity opposite said first polarity;

said elongate member comprising a first half and a second half;

a first live electrode and a first common electrode mounted on said first half in spaced relationship with each other;

a second live electrode and a second common electrode mounted on said second half in spaced relationship with each other;

said first and second common electrodes being connected to each other and to a point of common potential;

said first live electrode being connected to said first terminal of said difference amplifier and said second live electrode being connected to said second terminal of said difference amplifier;

a display device disposed on said elongate member; wherein, said elongate member is held by said user with one hand of the user on said first half contacting said first live electrode and said first common electrode, and with the other hand of the user on said second half contacting said second live electrode and said second common electrode;

whereby, a first electrogram signal will be detected between said first live electrode and said first common electrode, and a second electrogram signal of substantially equal magnitude and phase to said first electrogram signal will be detected between said second live electrode and said second common electrode;

so that, when said first electrogram signal is applied to said first terminal and said second electrogram signal is applied to said second terminal, the first and second electrogram signals will be subtracted from each other to produce a substantially zero electrogram signal at the output of said difference amplifier;

and whereby a first electrogram signal will be determined between said first live electrode and said first common electrode and a second electrogram signal of substantially equal magnitude but of opposite phase to said first electrogram signal will be detected between said second live electrode and said second common electrode;

so that, when said first electrogram signal is applied to said first terminal and said second electrogram signal is applied to said second terminal, the first and second electrogram signals will be added to each other to produce a non-zero electrogram signal at the output of said difference amplifier;

means for measuring time intervals between heart pulses on detected electrogram signals;

means for calculating the heart rate of said user using said measure time intervals;

said means for calculating being connected to said display device;

whereby, the heart rate of said user is displayed on said display device.

2. A monitor as defined in claim 1 wherein said elongate member comprises a hollow cylindrical member; said electronic circuitry being housed in the interior of said hollow cylindrical member.

3. A monitor as defined in claim 2 wherein said first live electrode comprises a first ring member of a conductive material mounted on said first half of said elongate member, and wherein said first common electrode comprises a second ring member of a conductive material mounted on said first half of said elongate member and spaced from said first ring member;

and wherein said second live electrode comprises a third ring member of a conductive material mounted on said second half of said elongate member and wherein said second common electrode comprises a fourth ring member of a conductive material mounted on said second half of said elongate member and spaced from said third ring member.

4. A monitor as defined in claim 3 and wherein said means for measuring time intervals comprises a bandpass filter; the output of said difference amplifier being connected to an input of said bandpass filter;

a threshold limiter; the output of said bandpass filter being connected to an input of said threshold limiter;

and wherein said means for calculating the heart rate comprises:

a microprocessor; the output of said threshold limiter being connected to an input of said microprocessor;

the output of said microprocessor being connected to said display device.

5. A monitor as defined in claim 4 wherein said display device comprises:

a rate indicator adapted to be illuminated each time a heart pulse of the user is detected; and

a rate rate indicator comprising a numerical indication of the pulse rate of the user.

6. A monitor as defined in claim 3 and comprising a bandpass filter; the output of said difference amplifier being connected to an input of said bandpass filter;

and wherein the interior of said hollow cylindrical member is waterproofly sealed.

7. A monitor as defined in any one of claims 1 or 4 and including a band means for mounting the monitor on the foot;

said band means including a base and an oppositely extending member.

8. A monitor as defined in any one of claims 1 or 4 and including a means for mounting said monitor on a wrist;

**Halliburton Energy Servs. v. M-I LLC, 514 F.3d 1244 (Fed. Cir 2008) [ NOT ASSIGNED ]**

1. A method for conducting a drilling operation in a subterranean formation using a *fragile gel* drilling fluid comprising:  
 (a) an invert emulsion base;  
 (b) one or more thinners;  
 (c) one or more emulsifiers; and  
 (d) one or more weighting agents, wherein said operation includes running casing in a borehole.  
 (emphasis added).

- Claim construction of “fragile gel”
  - no or low organophilic clay or lignite issue
  - Preamble phrase; why is it limiting?
  - Two aspects of the claim construction
    - 1) A gel that easily transitions to a liquid state upon the introduction of force (e.g., when drilling starts) and returns to a gel when the force is removed (e.g., when drilling stops); and
    - 2) At rest, is capable of suspending drill cuttings and weighting materials
- Is “fragile gel” definite?
  - A POSITA cannot determine how quickly the fluid will return to the liquid state, or its capacity for suspending drill cuttings and weighting materials
  - compared to “synergistically effective amount”

**Example for a preamble phrase that is limiting**

Preamble phrase “fragile gel” is not limiting; it remains like the rest of the preamble language: describing a general purpose, context, field, or use for the invention	Preamble phrase “fragile gel” is found to be limiting (by admission in this case; but various legal tests allow parties to argue that preamble language is limiting)
A – invert emulsion base	A – invert emulsion base
B – thinner(s)	B – thinner(s)
C – emulsifier(s)	C – emulsifier(s)
D – weighting agent(s)	D – weighting agent(s)
E – fluid is visco-elastic	E – fluid is visco-elastic
	F – fluid is a fragile gel

**Claim definiteness – Orthokinetics (Fed. Cir. 1986) (Markey) [ Not Assigned ]**

- 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.

