

DROIT AMERICAIN DES BREVETS

Mise à jour

Octobre 2015

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Cabinet Oblon

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OUTLINE

- 1) Provisional Applications
- 2) Subject-Matter Eligibility under 35 USC 101 – update
- 3) « means-plus-function » limitations under 35 USC 112(f)
- 4) Analogous prior art for obviousness analysis under 35 USC 103

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La demande provisoire

- Première demande, ne peut pas revendiquer de priorité
- Abandonnée automatiquement après 12 mois
 - Une demande régulière doit être déposée dans les 12 mois
- Pas d'examen sur le fond
- Non publiée
- **Ne déclenche pas la durée de 20 ans**
- Permet de créer une date de priorité si la description est suffisante
 - critères similaires que pour suffisance de description dans toute demande
 - 35 USC 112(a)

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La demande provisoire

- Période de grâce calculée à partir de la date de la demande provisoire
- Permet d'entrer dans l'art antérieur à la date de dépôt
 - La demande régulière publiée ou brevetée entre dans l'état de la technique à la date de dépôt de la demande provisoire sous l'article 102(e) pre-AIA et 102(b) AIA ...
 - Si la description de la demande régulière était présente dans la demande provisoire, et
 - Sous la loi pre-AIA, si l'objet des revendications de la demande régulière brevetée était décrit dans la demande provisoire
 - (*Dynamic Drinkware v. Nat. Graphics* (CAFC, Sept 2015) – décision critiquée)
 - Quid de la demande régulière publiée?
 - Quid sous AIA?

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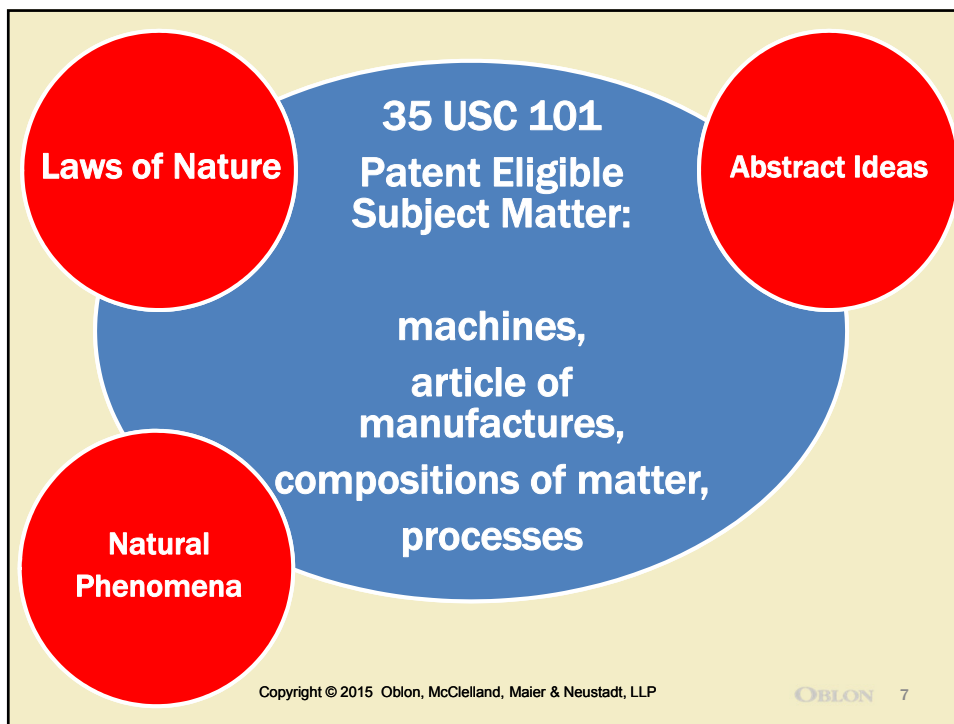
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OUTLINE

- 1) Provisional Applications
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35 USC 101 Patent Eligible Subject Matter:

**machines,
article of
manufactures,
compositions of matter,
processes**



Alice v. CLS Bank (Sup. Ct., June 2014)

- Relying on its precedent in *Mayo v. Prometheus* (2012), Supreme Court defines a **new standard** to decide if a claim is directed to patent eligible subject matter:
 - Step 1: Is the claim “directed to” an abstract idea, a law of nature, or a natural phenomenon?
 - Step 2: Do other limitations of the claim “significantly” limit the scope of the claim?



New standard for exceptions to patent eligibility:

Question at end of 2014:

How big is this new hole?

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Alice v. CLS Bank

“directed to” an abstract idea?

Step 1: Is the claim “directed to” an abstract idea, a law of nature, a natural phenomenon?

- Is the gist of the claimed invention an abstract idea, a law of nature or a natural phenomenon?
 - Mathematical algorithm, formula, relation
 - Fundamental economic or longstanding financing practice
 - Business method and method of organizing human activities

How big is the new hole?



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Alice v. CLS Bank

Step 2: significant limitations?

Step 2: Do other limitations of the claim “significantly” limit the scope of the claim?

- Is it possible to meaningfully practice the abstract idea without infringing the claim? (“Preemption”)
- Claimed invention solves a “technical problem” or improves an existing process

How big is the new hole?



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Alice v. CLS Bank

Step 2: significant limitations?

Step 2: Do other limitations of the claim “significantly” limit the scope of the claim?

- **Not** significant limitations:
 - A particular field of use
 - Conventional or generic components, such as computers components
 - Well-known, routine steps

How big is the new hole?



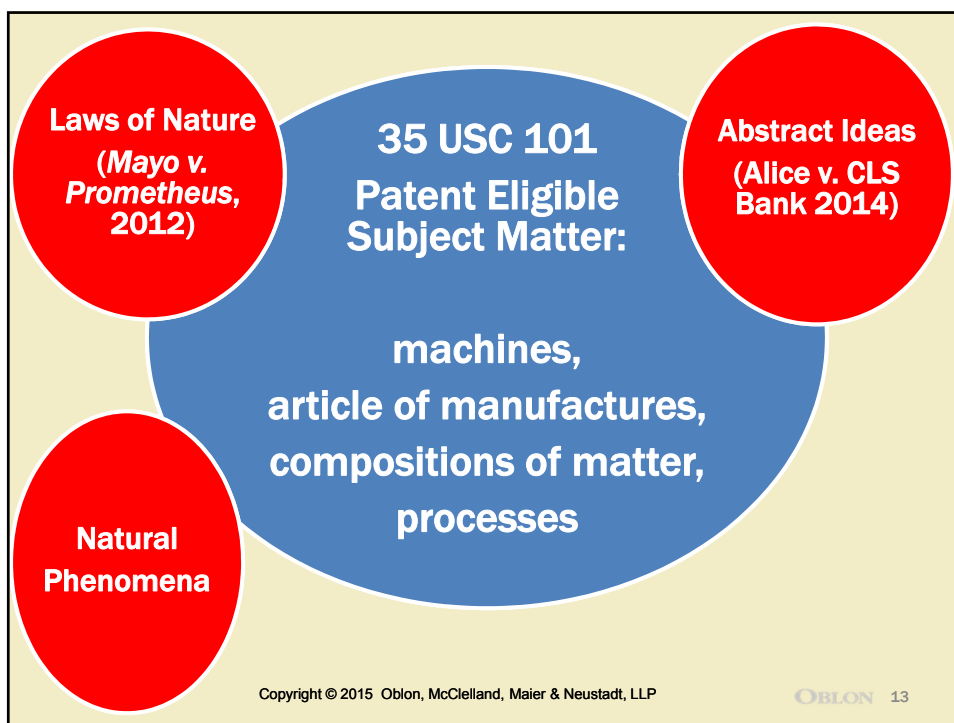
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Consequences of Alice/Mayo as of October 2015



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Consequences of Alice/Mayo

Court Decisions on §101

	14 months Pre-Alice	14-months Post-Alice
Decisions of invalidity	42% (37 decisions)	70% (86)
Number of invalidated patents	73	186

Courts invalidated more patents in 14 months post-Alice than 5 years pre-Alice!

**Texas still reluctant to invalidate (30%)
Delaware (85%, N. California 75%)
CAFC reviewed few decisions so far (about 20), but 90% of invalidation!**

Source: R. Sach, IPLaw360 – Sept 2, 2015

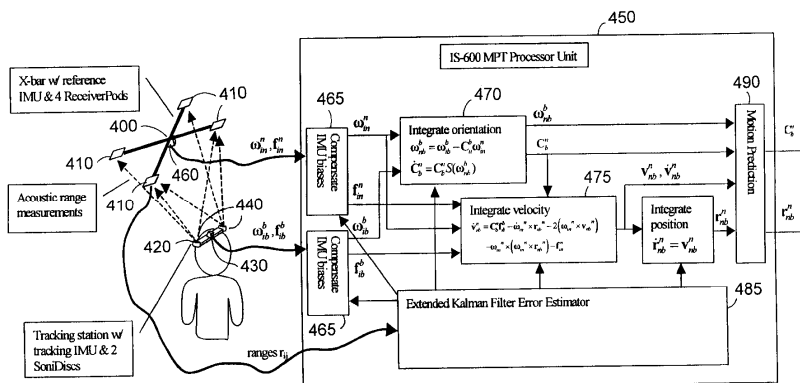
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Consequences of Alice/Mayo as of October 2015

- District Courts are applying Alice/Mayo aggressively and broadly
 - e-commerce
 - Computer technology
 - Even traditional technologies!
- *Thales Visionix v. USA (July 23, 2015, Fed. Ct. Claims)*
- *Exergen v. Thermomedics (Sept 15 2015, Mass)*

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Thales Visionix v. USA (July 23, 2015, Fed. Ct. Claims)



US Patent 6,474,159 to tracking system used in helmet-mounted displays

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Thales Visionix v. USA (July 23, 2015, Fed. Ct. Claims)

1. A system for tracking the motion of an object relative to a moving reference frame, comprising:
a first inertial sensor mounted on the tracked object;
a second inertial sensor mounted on the moving reference frame; and
an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.

Thales Visionix v. USA

Step 1 of Alice: Claim 1 is “directed to mathematical equations for determining the relative position of a moving object to a moving reference frame.”

1. A system for tracking the motion of an object relative to a moving reference frame, comprising:
a first inertial sensor mounted on the tracked object;
a second inertial sensor mounted on the moving reference frame; and
an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.

Claim Invalid under §101

Step 1: "the navigation equation is a complex mathematical concept ... However, the solution lies in the mathematical formulae, not the devices listed in the system claim. ... The claims are directed to the abstract idea of tracking two moving objects, and incorporate laws of nature governing motion, both of which are ineligible for patent protection."

23,

Claim invalid under §101

a second inertial sensor mounted on the moving reference frame; and

an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.

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Thales Visionix v. USA (July 23, 2015, Fed. Ct. Claims)

Claim invalid under §101

1. A system for tracking the motion of an object relative to a moving reference frame, comprising:

a first inertial sensor mounted on the tracked object;

a second inertial sensor mounted on the moving reference frame; and

an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.

an element adapted to receive signals from said first and second inertial sensors and configured to determine an orientation of the object relative to the moving reference frame based on the signals received from the first and second inertial sensors.

Step 2 of Alice: Claim 1 only describes **generic** inertial sensors that are well known in the field of motion tracking

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Thales Visionix v. USA (July 23, 2015, Fed. Ct. Claims)

Claim invalid under §101

1. A system for tracking the motion of an object relative to a moving reference frame, comprising:

a first inertial sensor mounted to the reference frame;
 a second inertial sensor mounted to the object;
 reference frame; and
 an element adapted to receive data from the second inertial sensors and determine the orientation of the object relative to the reference frame based on the signals from the second inertial sensors.

Step 2: the claimed system does not track a moving object in a specific way. "The claims allow for the application of the navigation equation in almost endless environments, and are not limited to a fighter jet and a pilot's helmet."

Exergen v. Thermomedics (Sept 15 2015, Mass)

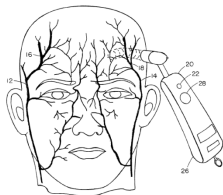


FIG. 1

Using equations 7 and 9 and solving for T_c :

$$T_c = (R_1 + R_2) / R_1 (T_s - T_a) + T_a \quad (10)$$

and finally:

$$T_c = k(T_s - T_a) + T_a \quad (11)$$

which is the precise form of the heat balance equation programmed into arterial heat balance instruments, with $(R_1 + R_2) / R_1$ expressed as the k-Factor.

The k Factor can be rewritten as follows:

$$k = \frac{R_1 + R_2}{R_1} = 1 + \frac{R_2}{R_1} = 1 + (h/pc) \quad (12)$$

Accordingly, in either form, equation 6 or 11, it can be seen that the weighting coefficient h/pc is applied to the difference of surface and ambient temperature.

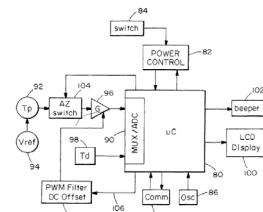


FIG. 3

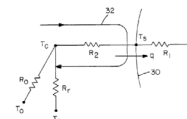


FIG. 4

Exergen v. Thermomedics **(Sept 15 2015, Mass)**

51. A method of detecting human body temperature comprising:
measuring temperature of a region of skin of the forehead;
and
processing the measured temperature to provide a body temperature approximation based on heat flow from an internal body temperature to ambient temperature.

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Exergen v. Thermomedics **(Sept 15 2015, Mass)**

**Claim invalid
under §101**

51. A method of detecting human body temperature comprising:
measuring temperature of a region of skin of the forehead;
and
processing the measured temperature to provide a body temperature approximation based on heat flow from an internal body temperature to ambient temperature.

Claims directed to applying mathematical models of natural thermodynamic relationship

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Exergen v. Thermomedics

(Sept 15 2015, Mass)

Claim invalid under §101

51. A method of detecting human body temperature comprising:

measuring temperature of a region of skin of the forehead; and
processing the measured temperature to provide a body temperature approximation based on heat flow from an internal body temperature to ambient temperature.

Merely applies the natural thermodynamic relationship to a particular field of use (forehead)

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Consequences of Alice

USPTO Rejections
(% of application with §101 rejections)

	Pre-Alice	Post-Alice
E-Commerce Art Units	35%	88%
Non-Ecommerce	7%	8%
Biotech	13%	21%
PTAB CBM	N/A	26

Allowance rate for E-Commerce applications went from 18% to 5%!

Source: R. Sach, IPLaw360 – Sept 2, 2015

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What's next?



- Will the CAFC and USPTO use Alice/Mayo against computer technology and traditional technologies?
- USPTO is being relatively prudent and is waiting to see how the CAFC will react to the many upcoming appeals from District Court decisions of invalidity
- CAFC is likely to push back and reverse some of these decisions

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- 1) Provisional Applications
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Means-Plus-Function (MPF) Limitations 35 USC 112(f):

- 35 USC **112(f)**: MPF limitations are limited to the structures, corresponding to the claimed function, disclosed in the specification and their equivalents
- Two potential problems highlighted by various court decisions in the past years:
 - **Narrow scope** – if specification discloses **only few** examples of structures
 - Claim **invalid** as being indefinite if **no** structure is disclosed (35 USC 112(b))

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What is a Means-Plus-Function (MPF) Limitation?

- General rule: The **presence** of the word “means” creates a presumption that the limitation is an MPF and that **112(f) applies**
 - **Means for recording images ...**
- Presumption rebutted: when the limitation describes sufficient structure to perform the function (112(f) does not apply)
 - Means for recording **images including a camera**

...

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What is a Means-Plus-Function (MPF) Limitation?

- General rule: The **absence** of “means” creates a presumption that the limitation is **NOT** an MPF and that **112(f) does not apply**
 - A **camera** configured to record images ...
- Presumption **is not strong** and can be rebutted: when the word(s) used instead of “means” is generic and does not connote sufficient structure to for performing the claimed function, as understood by one of ordinary skill in the art (112(f) applies)
 - A **unit for recording** images ...
 - See *Williamson v. Citrix* (CAFC 2015) and *Media Rights Tech v. Capital One Financial* (CAFC, Sept 4, 2015)

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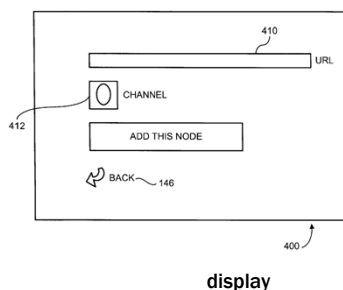
Williamson v. Citrix (CAFC, En Banc, June 2015)

Claims
invalid under
§112(b)

8. A system for conducting distributed learning among a plurality of computer systems coupled to a network, the system comprising:

...

a distributed learning control module for receiving communications transmitted between the presenter and the audience member computer systems and for relaying the communications to an intended receiving computer system and for coordinating the operation of the streaming data module.



Williamson v. Citrix (CAFC, En Banc, June 2015)

Claims
invalid under
§112(b)

8. A system for conducting distributed learning among a plurality of computer systems coupled to a network, the system comprising:

...
a distributed learning control module for receiving communications transmitted between the presenter and the audience member computer systems and for relaying the communications to an intended receiving computer system and for coordinating the operation of the streaming data module.

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“Module” is a generic word for software or hardware and is a substitute for “means”

The specification or prosecution history does not suggest that “distributed learning control” connotes any particular structure

The rest of the claim does not recite any structure for performing the functions of the module

This is a MPF limitation

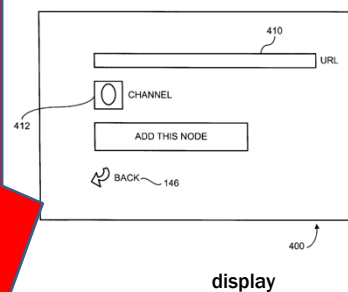
Williamson v. Citrix (CAFC, En Banc, June 2015)

Claims
invalid under
§112(b)

The functions of the module must be implemented with a special purpose computer (programmed). Thus, the specification must disclose an **algorithm** for programming a computer to perform the claimed function.

The specification and drawings do not provide any algorithm describing how the claimed function are performed

Not enough structure disclosed = claim invalid as being indefinite



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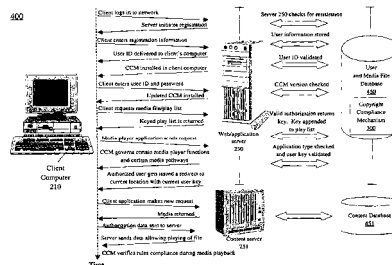
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Media Rights Tech. v. Capital One Financial (CAFC, Sept 4, 2015)

Claims invalid under §112(b)

A method of preventing unauthorized recording of electronic media comprising: activating a **compliance mechanism** in response to receiving media content by a client system, said **compliance mechanism** coupled to said client system, said client system having a media content presentation application operable thereon and coupled to said **compliance mechanism**;

...



Media Rights Tech. v. Capital One Financial (CAFC, Sept 4, 2015)

Claims invalid under §112(b)

A method of preventing unauthorized recording of electronic media comprising: activating a **compliance mechanism** in response to receiving media content by a client system, said **compliance mechanism** coupled to said client system, said client system having a media content presentation application operable thereon and coupled to said **compliance mechanism**;

...

“mechanism” does not connote any more structure than “means”
 “compliance mechanism” is a MPF limitation
 The specification does **not** provide a sufficient **algorithm** for how to perform each of the functions of the compliance mechanism
 Claims are invalid

Recommendations

- Disclose structure, hardware, algorithms for each claimed functions
 - Avoid “black box”
 - Merely repeating the function is not enough
 - Disclose exhaustive list of structures
 - Disclose **how** (algorithm) to perform each claimed function **fully**
 - For computer implemented MFP, need **both** a **computer** and an **algorithm** that causes the computer to perform the function
 - Disclose links between structure and claimed functions

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Recommendations

- Include non-MPL limitations
 - Especially when specification does not provide much structure
 - Use terms that suggest structure to one skilled in the art
 - **Circuitry**, detector, connector, processor, displays
 - Avoid overly generic placeholders
 - Unit, device, mechanism, module, element, member, etc
- But keep *some* MPF claims
 - Narrow can be good
 - Equivalents never lost by estoppel
- Address examiner’s comments on MPF

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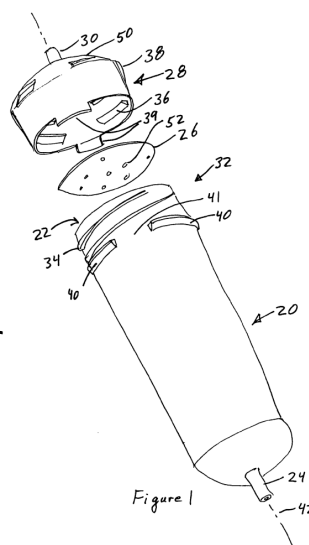
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Analogous prior art used in obviousness analysis

*Scientific Plastic Products v.
Biotage* (CAFC, Sept 2014)

Claims directed to cartridges for
low pressure liquid
chromatography (LPLC) with a
re-sealable screw-on cap

U.S. Patent Jun. 3, 2008 Sheet 1 of 8 US 7,381,327 B2



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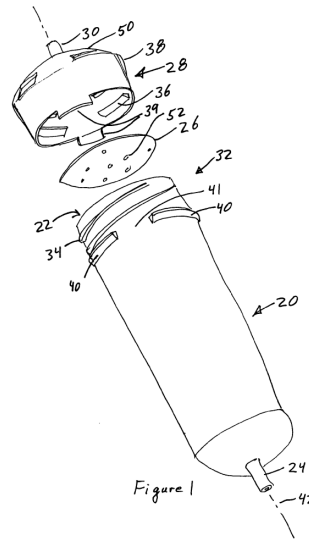
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Analogous prior art used in obviousness analysis

U.S. Patent Jun. 3, 2008 Sheet 1 of 8 US 7,381,327 B2

The claimed cartridge has a tapered lip on cartridge that corresponds to a taper on the screw on cap

Tapered lip helps create a better seal to avoid leakage



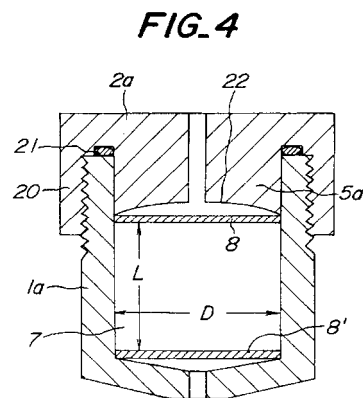
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Analogous prior art used in obviousness analysis

Prior art (D1) discloses all the claimed features, except for the tapered lip

D1 discloses an O-ring to prevent leakage in LPLC cartridges



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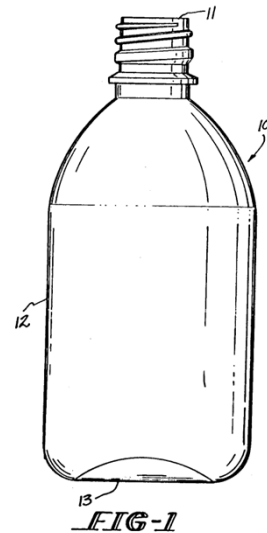
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Analogous prior art used in obviousness analysis

Prior art (D2) discloses tapered lip

D2 directed to threaded bottle caps for **carbonated beverages**

Court finds claims obvious in view of D1 + D2



Secondary reference

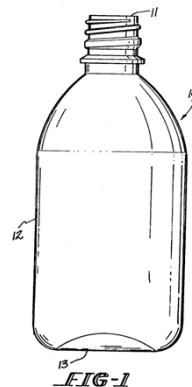
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Analogous prior art used in obviousness analysis

Question on appeal: Is D2 analogous prior art?

In KSR (2007), the Sup. Court held that "when a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field **or a different field.**"



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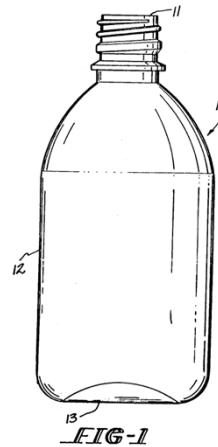
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Analogous prior art used in obviousness analysis

Prior art references must be **analogous** to the claimed invention

One of ordinary skill in the art would only look to prior art:

- In the same field of the invention, **or**
- **Outside the field**, if reference reasonably pertinent to the problem the inventor was trying to solve



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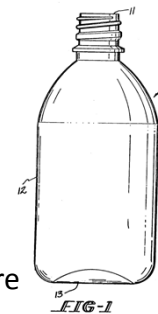
Analogous prior art used in obviousness analysis

CAFC holds that:

1) D2 is **outside the field** of cartridges for low pressure liquid chromatography (LPLC)

2) Inventor was trying to provide a seal between a container and a re-sealable cap

3) D2 is analogous prior art because it is **reasonably pertinent to the problem the inventor was trying to solve**



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Analogous prior art used in obviousness analysis



See also *In re Bigio* (CAFC 2004)

A toothbrush is analogous to a hairbrush (same filed of brushes)

See generally MPEP 2141 for several examples of analogous prior art in different fields

Even D1 can be from outside field of invention

But, see *Circuit Check v. QXQ* (CAFC, July 2015)

What is common knowledge is not necessarily analogous

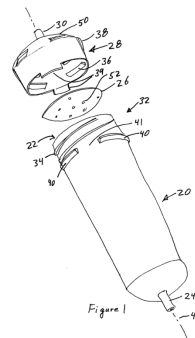
Rock carving and keying cars are not analogous to circuit board marking

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Analogous prior art used in obviousness analysis

U.S. Patent Jun. 3, 2008 Sheet 1 of 8 US 7,581,327 B2



Practice Tips:

- Non-analogous prior art is a weak argumer the USPTO
- Consider defining in the specification the problem to be solved in a very narrow way
- Duty of disclosure: Disclose known references to the USPTO even those outside the field of the invention if they address same or similar problem faced by inventor

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DROIT AMERICAIN DES BREVETS

Mise à jour

Octobre 2015

Philippe Signore,
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