

Basic Patent Strategies

An Interactive Workshop

CATALYST
Corporate Finance Lawyers

Workshop Goals

- After this workshop, you will be familiar with:
 - the basic form of patent claims,
 - the patent concepts of “infringement” and “validity”, and
 - the basic strategies that guide patent claim drafting.

CATALYST
Corporate Finance Lawyers

Staking Your Claim

Your Invention

CATALYST
Corporate Finance Lawyers

Staking Your Claim

Your Product

Your Invention

CATALYST
Corporate Finance Lawyers

Staking Your Claim

Your Product

Your Future Competition

Your Invention

CATALYST
Corporate Finance Lawyers

Staking Your Claim

Your Product

Your Future Competition

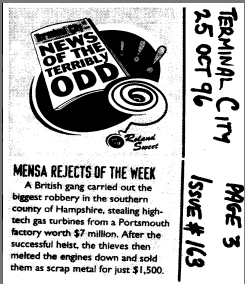
Your Patent

Your Invention

CATALYST
Corporate Finance Lawyers

Staking Your Claim

- Anticipating your competition can be difficult.



CATALYST
Corporate Finance Lawyers

Claiming Your Stake

- How do you patentably define an invention?
 - View the invention at a level of abstraction consistent with invention over the existing state of the art.
 - Identify and name all of the elements needed to make the invention work.
 - Keep these elements to a minimum.

CATALYST
Corporate Finance Lawyers

Claiming Your Stake

- Describe ("limit") each of the identified elements.
 - Limitations necessarily inherent in an element need not be explicitly introduced.
 - For example, a square necessarily has 4 equal sides.
- Describe the relationships between the elements.

CATALYST
Corporate Finance Lawyers

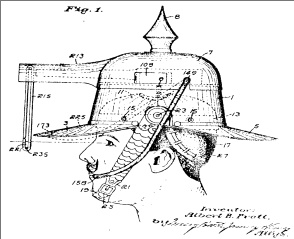
Claiming Your Stake

- Describe the function of each element.
- Describe the end result produced by the co-operation between the elements.

CATALYST
Corporate Finance Lawyers

Refresh

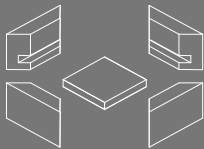
US Patent 1,183,492
 Issued 16 May 1916
 Title: Weapon
 Inventor: A.B. Pratt



CATALYST
Corporate Finance Lawyers

Claiming Your Stake: An Example

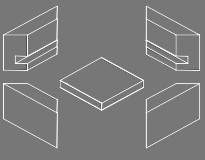
- Imagine that you have just invented the world's first 4-sided box.
- How will you protect this brilliant invention?



CATALYST
Corporate Finance Lawyers

Levels of Abstraction

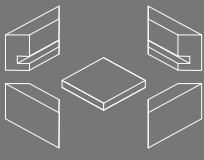
- A vessel for holding things.
- A box having a base and 4 walls.
- A wooden box having a base and 4 grooved and mitred walls.



CATALYST
Corporate Finance Lawyers

Naming the Elements

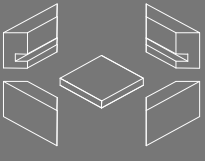
- A base.
- A number of walls.
 - Is 4 the right number of walls?
- Means for joining the walls to the base, unless such joining is inherent in the structure of the base or the walls.



CATALYST
Corporate Finance Lawyers

Limiting the Elements

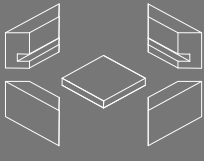
- Explicit Limitations
 - Physical characteristics
 - shape
 - flexibility
 - temperature
 - Chemical characteristics
 - substance
 - state
- Implicit Limitations
 - A square has 4 sides



CATALYST
Corporate Finance Lawyers

Limiting the Base

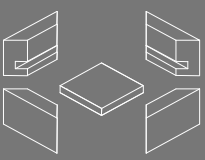
- A base
- A planar base
- A planar base with 4 edges
- A rectangular base
- A square base
- A rigid square base
- A rigid square prismical base
- A rigid wooden square prismical base



CATALYST
Corporate Finance Lawyers

Limiting Each Wall

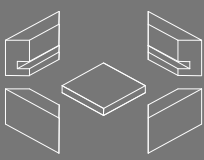
- A wall.
- A 4-sided prism.
- A trapezoidal prism.
- A bilaterally symmetrical trapezoidal prism.



CATALYST
Corporate Finance Lawyers

Limiting The Joining Mean Explicit Structural Limitation

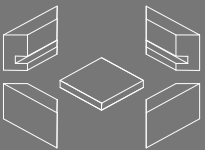
- An angle bracket having a first arm and a second arm that define between them a 90 degree angle.
 - the first arm adapted to engage the first wall, and
 - the second arm adapted to engage the base,
 - such that the angle bracket is operable to retain the base and the first wall in abutting perpendicular disposition.



CATALYST
Corporate Finance Lawyers

Limiting The Joining Mean Explicit Means Limitation

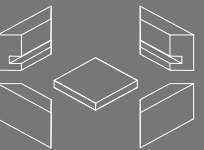
- Means for joining the first wall to first edge of the base, such that the first wall and the base are retained in perpendicular disposition.
- "Means" is interpreted according to the invention description in the patent.



CATALYST
Corporate Finance Lawyers

Limiting The Joining Mean Implicit in the Wall Limitation

- A bilaterally symmetrical trapezoidally prismical wall defining an elongated channel breaching the prism's minor parallel face, the channel being adapted to receive and retain a portion of the first edge of the base and to thereby retain the base in perpendicular disposition to the prism's minor parallel face.



CATALYST
Corporate Finance Lawyers

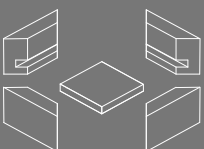
Relationships (Basic Concepts)

- Relationships help to indicate that you have invented a patentable combination, not an unpatentable aggregation.
- Relationships make claims easier to understand.
- Concrete, structural relationships are less vulnerable to attack or misinterpretation.
- Relationships should be completely defined with reference to the claimed elements; claims should be freestanding.

CATALYST
Corporate Finance Lawyers

Relationships (Box Example)

- Means for joining the first wall to the base, such that the first wall and the base are advantageously and perpendicularly disposed.
- A bilaterally symmetrical trapezoidally prismical wall, defining an elongated channel breaching the prism's minor parallel face, the channel being adapted to receive and retain a portion of the first edge of the base, and to thereby retain the base in perpendicular disposition to the prism's minor parallel face.



CATALYST
Corporate Finance Lawyers

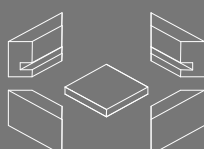
Function (Basic Concepts)

- Function makes your claims easier to understand.
- Function must be supported by the structure you ascribe to the elements and relationships.
- You can't claim results. Your claim will fail if you vaguely describe element or relationship structure, relying on function in place of structure.
- State the purpose of the invention or an element?
- Explain the invention's or an element's structure.

CATALYST
Corporate Finance Lawyers

Function (Box Example)

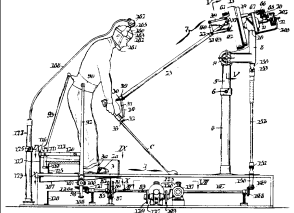
- A vessel for enclosing objects, comprising:
 - a substantially planar base;
 - four prismical walls; and
 - means for joining each wall to an edge of the base, such that each wall is perpendicularly disposed to the base, whereby the four walls form a perimeter circumscribing the base and with the base define an enclosure.



CATALYST
Corporate Finance Lawyers

Refresh

US Patent 2,626,151
 Issued 1953
 Title:
 Golf Practice Apparatus
 Inventor: Unknown



CATALYST
Corporate Finance Lawyers

Validity

- A patent claim is valid if:
 - it defines something that is new and inventive compared to the current body of knowledge,
 - **but without** describing any embodiment of the current body of knowledge.

CATALYST
Corporate Finance Lawyers

Infringement

- A product infringes a patent claim if the product includes all of the elements set forth in the claim.
- If a product includes all but one of the claimed elements, it will not infringe the claim.
- If a product includes all of the claimed elements plus additional inventive or non-inventive elements, the product will still infringe the claim.

CATALYST
Corporate Finance Lawyers

Validity v. Infringement

Patenting is a waste of time and money unless you have clear answers to the following two business questions:

- Validity
 - What precisely have we invented?
- Infringement
 - What aspects of our invention do we want to prevent others from using without our permission?
 - What aspects of our invention are strategic for our company?
 - What aspects of our invention will the marketplace deem valuable.

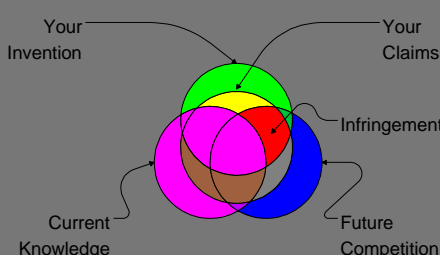
CATALYST
Corporate Finance Lawyers

Validity v. Infringement

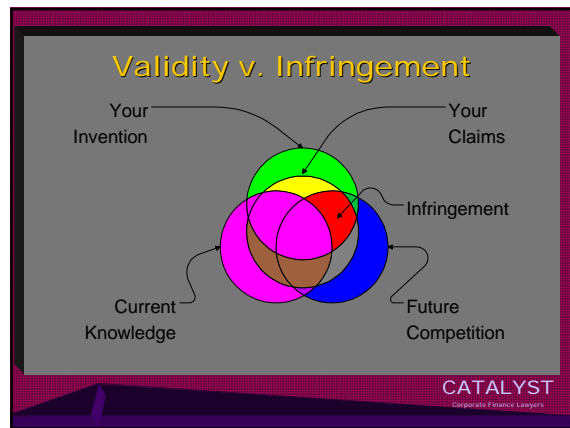
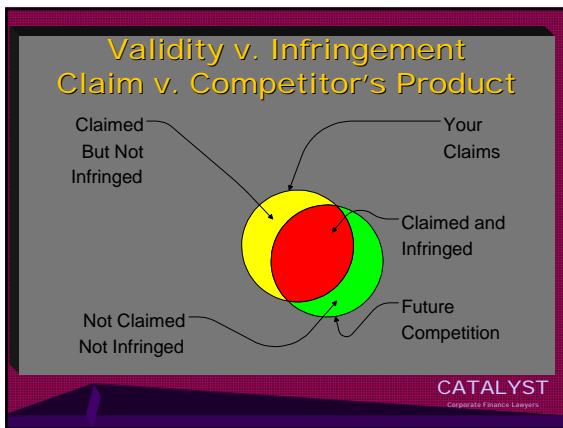
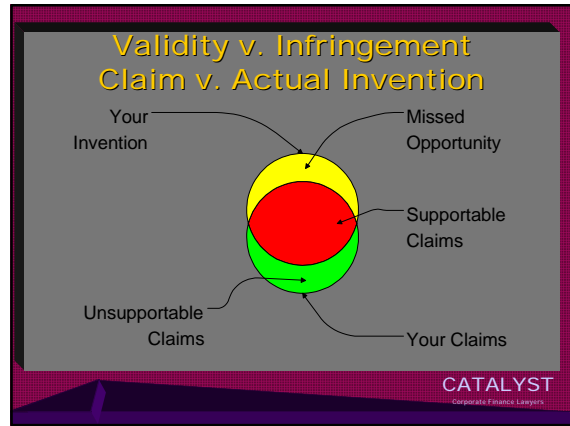
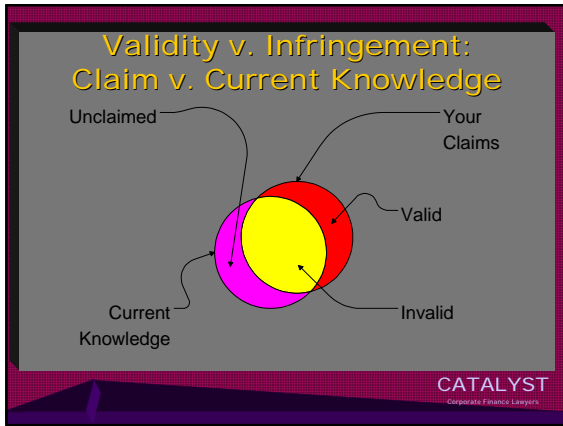
- A broad claim:
 - is more likely to capture competing products as infringements,
 - **but is also** more likely to be ruled invalid as capturing existing technology within its scope.
- A narrow claim:
 - is less likely to capture competing products as infringements,
 - **but is also** less likely to be ruled invalid as capturing existing technology within its scope.

CATALYST
Corporate Finance Lawyers

Validity v. Infringement



CATALYST
Corporate Finance Lawyers



Refresh

US Patent 257,103
Issued 1882
Title: Motor
Inventor: J. Sutliff,

CATALYST
Corporate Finance Lawyers

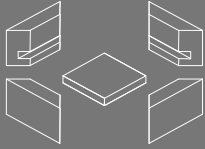
A Workshop Problem

- Assume that the state of the art is the 4-sided box.
- Would the following products infringe a patent claim for the 4-sided box?
- Would the following inventions support valid patent claims in view of the 4-sided box?

CATALYST
Corporate Finance Lawyers

The Claim

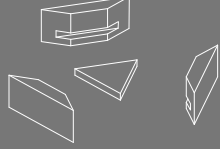
- A vessel for enclosing objects, comprising:
 - a substantially planar base,
 - four prismical walls, and
 - means for joining each wall to an edge of the base, such that each wall is perpendicularly disposed to the base, whereby the four walls and the base define an enclosure.



CATALYST
Corporate Finance Lawyers

The 3-sided Box

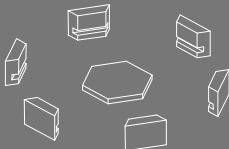
- Facts to consider:
 - The 3-sided box uses less material than the 4-sided box.
 - The 3-sided box is smaller than the 4-sided box.
 - Triangles are the most stable shape; their structure resists deformation.



CATALYST
Corporate Finance Lawyers

The 6-sided Box

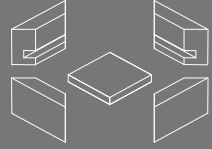
- Facts to consider:
 - Artists consider the 6-sided box more attractive than the 4-sided box.
 - Your company's trademark is a hexagon.
 - Honeycombs are the most efficient subdivision of area.



CATALYST
Corporate Finance Lawyers

The Claim

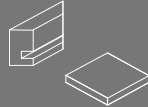
- A vessel for enclosing objects, comprising:
 - a substantially planar base,
 - four prismical walls, and
 - means for joining each wall to an edge of the base, such that each wall is perpendicularly disposed to the base, whereby the four walls and the base define an enclosure.



CATALYST
Corporate Finance Lawyers

The 1-sided Box

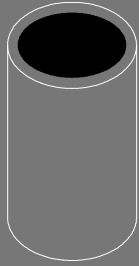
- A claim to a 1-sided box would give you wonderfully broad protection, extending to boxes with an arbitrary number of sides;
- **however**, because a 1-sided box doesn't seem to work, it can't support a patent claim.



CATALYST
Corporate Finance Lawyers

The 1-sided Box?

- How many sides does this box have?
- Are sides the best way to describe this box or do we need to shift abstraction levels?



CATALYST
Corporate Finance Lawyers

Patent Strategies

- Include a range of broad and narrow claims, some favouring infringement, some favouring validity.
- Claim the invention as your competitors will sell it, not as your customers will use it.
 - For example, don't claim batteries or extension cords.

CATALYST
Corporate Finance Lawyers

Patent Strategies

- Claim the invention to maximize the royalty base.
 - For example, include expensive elements in some of the claims.

CATALYST
Corporate Finance Lawyers

Patent Strategies

- File families of patents instead of stretching one patent too thin.
 - A family of narrow patents can work like a wall or a minefield, keeping competitors out of your market.
 - You can litigate one patent in the family without putting the rest of the patents at risk of invalidity.
 - You can more easily subdivide licensees.

CATALYST
Corporate Finance Lawyers

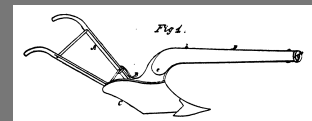
Refresh

US Patent 35,600

Issued 1862

Title:
Combined Plow & Gun

Inventor: Unknown



CATALYST
Corporate Finance Lawyers

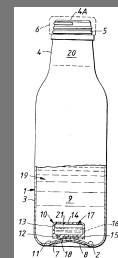
A Case Study

- Draft Beer
 - Beer connoisseurs appreciate the head found on a draft beer.
 - The head is created by the draft serving equipment.
 - A pressurized dispensing line drives gas through the beer to force it from the keg, thereby liberating some of the gas suspended in the beer.
 - Neither a can nor a bottle dispense beer with the same quality of head.

CATALYST
Corporate Finance Lawyers

The Guinness Insert

- A chamber **17** at the bottom of a beer bottle **1** has a tiny orifice **18** through which beer **19** and gas may pass between the chamber **17** and the beer bottle **1**.
- When the bottle **1** is sealed, the beer **19** pressurizes the bottle **1** to a pressure above atmospheric. The chamber **17** fills with beer **16** until the chamber **17** headspace **21** balances the bottle **1** headspace **20**.
- When the bottle **1** is opened, the headspace **20** disappears, and the pressure differential causes beer **16** and gas to be expelled from the chamber **17**, which encourages the surrounding beer **19** in the bottle **1** to release suspended gas.



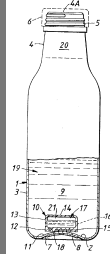
CATALYST
Corporate Finance Lawyers

The Guinness Claim

– A beverage package, comprising:

- a sealed container having a primary chamber containing beverage having gas in solution therewith and forming a primary headspace comprising gas at a pressure greater than atmospheric; ...

[continued on next slide]

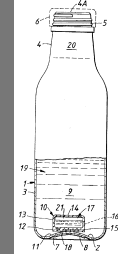


CATALYST
Corporate Finance Lawyers

The Guinness Claim (Continued)

- an insert located in the primary chamber and having a secondary chamber with a volume less than that of the primary chamber and a restricted orifice through which the second chamber communicates with the beverage in the primary chamber, said secondary chamber comprising gas at a pressure greater than atmospheric so that the pressure within the primary and secondary chambers are substantially at equilibrium, ...

[continued on next slide]



CATALYST
Corporate Finance Lawyers

The Guinness Claim (Continued)

- said package being openable to open the primary headspace to atmospheric pressure and the secondary chamber being arranged so that on said opening the pressure differential caused by the decrease in pressure at the primary headspace causes at least one of the beverage or gas (preferably beverage) in the secondary chamber to be ejected by way of the restricted orifice into the beverage of the primary chamber and said ejection causes gas in the solution to be evolved and form, or assist in the formation of, a head of froth on the beverage; and ...

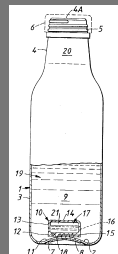
[continued on next slide]



CATALYST
Corporate Finance Lawyers

The Guinness Claim (Continued)

- means to retain said insert at a predetermined location in the primary chamber of the container.



CATALYST
Corporate Finance Lawyers

The Problem

- The new insert works well with regular beer but works too well with lighter beer.
 - Beer and gas expelled from the chamber at the bottom of the container liberate gas from the surrounding light beer.
 - This liberation causes a chain reaction, and so much gas is liberated that a flat beer with a great head is dispensed.

CATALYST
Corporate Finance Lawyers

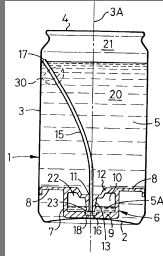
The Task

- Improve the packaging for use with light beer.

CATALYST
Corporate Finance Lawyers

Solution 1

- The downward facing orifice in the chamber 10 is replaced by a tube 15 that extends upwardly through the can 1, such that the gas and beer 5A expelled from the chamber 10 interact with only the top portion of beer 20 in the can 1.

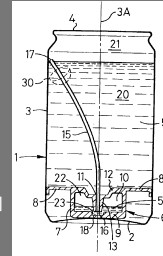


CATALYST
Corporate Finance Lawyers

Claim for Solution 1

- A beverage package, comprising:
 - a sealed container having a primary chamber containing beverage having gas in solution therewith and forming a primary headspace comprising gas at a pressure greater than atmospheric; ...

[continued on next slide]

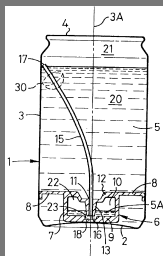


CATALYST
Corporate Finance Lawyers

Claim for Solution 1 (Continued)

- a secondary chamber containing gas at a pressure greater than atmospheric and having a seating which receives one end of a tube extending within the primary chamber so that the secondary end of the tube opens into the primary chamber at a position remote from the bottom of the primary chamber and said one end of the tube communicates or is to communicate with the secondary chamber for the secondary chamber to communicate with the primary chamber by way of the tube, ...

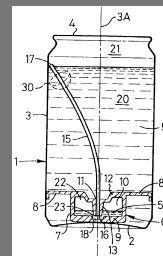
[continued on next slide]



CATALYST
Corporate Finance Lawyers

Claim for Solution 1 (Continued)

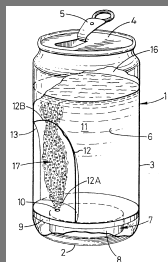
- and wherein said package is openable to open the primary headspace to atmospheric pressure and said opening creates a pressure differential causing gas and/or beverage in the secondary chamber and tube to be ejected by way of the tube into the primary chamber to cause evolution of gas from solution in the beverage for developing froth in the primary headspace.



CATALYST
Corporate Finance Lawyers

Solution 2

- The hollow insert 7 includes a baffle 12 adjacent the wall of the can 1. The beer 11 and gas expelled from the insert 7 flow upward between the baffle 12 and the can 1 wall, isolated from most of the beer 11 until the top portion of the can 1 is reached.

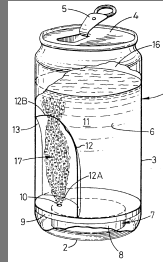


CATALYST
Corporate Finance Lawyers

Claim for Solution 2

- A beverage package, comprising:
 - a container having a sealed chamber containing beverage having gas in solution and forming a headspace containing gas at a pressure greater than atmospheric pressure; ...

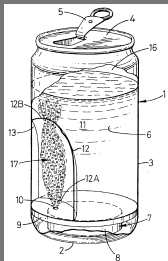
[continued on next slide]



CATALYST
Corporate Finance Lawyers

Claim for Solution 2 (Continued)

- a baffle plate means in said chamber and extending upwardly within the beverage, said baffle plate means having upwardly extending longitudinal side edges located adjacent to an upstanding side wall of the container for a minor portion by volume of the beverage in the container to be located between said baffle plate means and said side wall;...

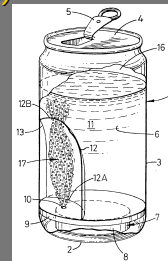


[continued on next slide]

CATALYST
Corporate Finance Lawyers

Claim for Solution 2 (Continued)

- initiator means located within the chamber submerged in the beverage and which in response to a pressure differential developed on opening the headspace to atmospheric pressure, causes gas in solution to be liberated from beverage in said minor portion between the baffle plate means and the side wall for said liberated gas to develop froth in the headspace, and wherein said baffle plate means acts to restrain or impede the development of bubble formation for said froth development by the initiator means to the liberation of gas from a minor proportion by volume of the volume of beverage in the chamber.



CATALYST
Corporate Finance Lawyers

Other Potential Solutions

- Optimize the can for shaking
 - Add a grip
 - Make it overflow resistant
- Optimize the can for pouring from a height
- Include a straw with the can so that a user can blow bubbles into the can
- Include a floating fizzy tablet for dropping into the can

CATALYST
Corporate Finance Lawyers

Resources

- Patent Your Own Invention in Canada
 - Self-Counsel Press, 2nd edition 1991
 - Sheldon Burshtein
- Landis on Mechanics of Patent Claim Drafting
 - Practising Law Institute, 4th edition, 1996
 - Robert C. Faber
- Manual of Patent Office Practice
 - Canadian Patent Office

CATALYST
Corporate Finance Lawyers

Workshop Goals

- After this workshop, you will be familiar with:
 - the basic form of patent claims,
 - the patent concepts of “infringement” and “validity”, and
 - the basic strategies that guide patent claim drafting.

CATALYST
Corporate Finance Lawyers

Basic Patent Strategies

An Interactive Workshop

CATALYST
Corporate Finance Lawyers