

Patent Law

- Slides for Module 3
- Utility

Utility

- Requirement derives from the word “useful” in 35 U.S.C. §101
- Should the invention merely be useful for some practical purpose, or should it be superior to known technologies?
- Is the demonstration that it may lead to future inventions sufficient?
- Should other factors be assessed, such as:
 - social,
 - economic, or
 - environmental factors?
- Or, should the utility requirement be a “narrowly focused celebration of technical skill”

Utility – three categories

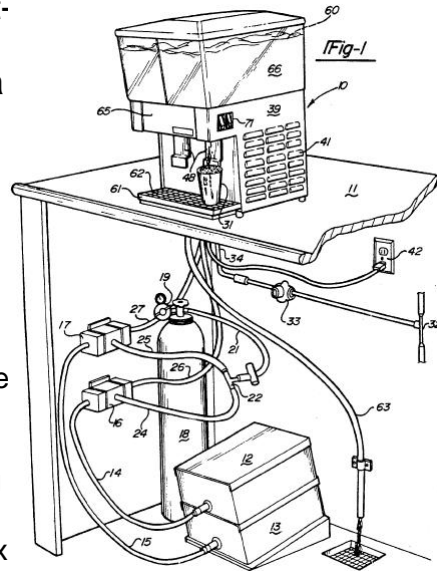
- General Utility
 - Operable or capable of any type of use
 - Can the invention really do anything? Machines for mere amusement do have utility
- Specific Utility
 - Does the invention work to solve the problem it is designed to solve?
 - Also called “inoperable doctrine” [note 2, pg. 141]
 - Some question as to whether this arises from utility requirement or statutory definiteness requirement (part of the fifth element of patentability, specification support)
- “Moral” Utility
 - From Justice Story’s opinion, Lowell v. Lewis (1817)
 - Example application – gambling devices
 - Lessening application

Lowell v. Lewis

- P can’t recover if “usefulness” of the invention is of a mischievous or injurious tendency
 - inventions that poison, promote debauchery, or facilitate private assassination
- D asserts a sweeping doctrine, that the invention must be a better pump than a common pump, even if the new pump can be applied with advantage
- Law only requires that the invention be
 - (i) not frivolous or
 - (ii) not injurious to well being, good policy or sound morals of society
 - So, useful is in contraindication of mischievous or immoral
 - Not useful would include to promote debauchery, private assignation or poison.
- If usefulness is very limited, the penalty for the inventor is no market success
 - The legal test for usefulness does not include a threshold “amount” of usefulness

Juicy Whip v. Orange Bang

- Juicy Whip's patent is for "post-mix" beverage dispenser that simulates the presentation of a "pre-mix" beverage dispenser
- District court, on S/J, held patent invalid
 - Purpose is to increase sales by deception
 - Other claimed usefulness (eliminating need to clean) is not independent of deceptive purpose and thus insufficient to raise a GIMF
 - Improves prior art only by making the product more saleable
 - Is merely an imitation of a pre-mix dispenser



Juicy Whip v. Orange Bang

- Utility threshold is not high
 - merely need some identifiable benefit, useful result, or beneficial end
- District court applied two pre-1952 Second Circuit cases about creating artificial impressions of higher quality
 - "Spotting" unspotted tobacco leaves
 - "Seaming" seamless hosiery
- These cases do not represent the modern state of the utility doctrine
 - The fact that one product can be altered to make it look like another is in itself a specific benefit sufficient to satisfy the utility requirement
 - Product imitation is not unusual
 - It is not unlawful to display the simulated beverage
 - Utility requirement is not meant to make the courts or the PTO be arbiters of deceptive trade practices

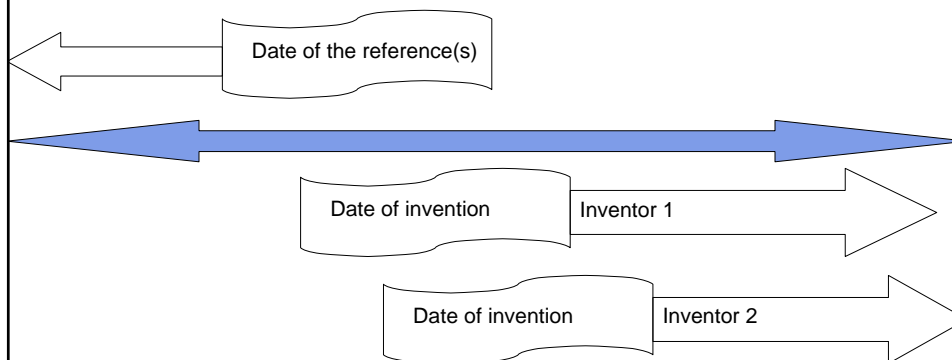


Utility in Chemistry and Biotech

- Chemistry and Biotech raise certain issues in various areas of patent law that may not be of concern in other areas of technology
- The analysis of some patent law issues for Chemistry and Biotech are more difficult or require consideration of additional factors
- Specific to the utility requirement, chemists and biotech practitioners often generate new compounds without preexisting knowledge of their precise use

Dates of Invention and Prior Art References

- Notions of date of invention are introduced by Brenner v. Manson
- More on both concepts later – but the general framework is shown below



Brenner v. Manson

- Upon receiving Manson's application, the PTO rejects it for lack of utility
 - Claim is to a process that produces a composition of matter, specifically a steroid
- Manson requests an "interference" to prove he invented before Ringold/Rosenkranz
- PTO says no and the Board affirms
- CCPA disagrees
 - the claimable process is itself useful even if there is no use for the resulting output of the process

Brenner v. Manson

- Manson's arguments for utility
 - The claimed process makes a known compound, i.e., the process produces the result intended and such result is not detrimental to the public interest
 - Should this standard by itself be sufficient to meet the utility requirement?
 - The resulting compound is generally useful for scientific investigation and research
 - The resulting compound is useful as a possible object of future scientific inquiry
 - The resulting known compound should be deemed useful because it is a "homologue" (similar in a specific, chemically defined way) to a compound that has shown some effectiveness in treating tumors in mice

Brenner v. Manson

- Homologue argument
 - Supreme court does not want to overturn the factual findings which question whether Manson has made a showing that the steroid will exhibit the tumor inhibiting effect in mice
 - Problem is **unpredictability** in the steroid field countering the typical ability to predict the behavior of homologues
- General use for research / intended result arguments
 - Too broad a meaning for “useful” to take Story’s language to mean that an invention is useful if it is not positively harmful
 - Worries about the notice function of the claims inform the analysis
 - **since the patent needs to put people on notice of claimed subject matter, that adds to the meaning of “useful”**
 - **need specific benefit (describable) in currently available form**
 - **without this, insufficient justification to permit patentee to engross what may prove to be a broad field**
 - **Patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.**
- These rejections of Manson’s arguments apply to a process claim when the result of a process is not useful, and would apply “equally to the patenting of the product by the process”

Brenner v. Manson - Harlan

- Wants to reject narrow definition of “useful” and follow the CCPA
- The majority is mixing up
 - Issues of claim scope with usefulness
 - Issues of definiteness with usefulness
- Majority’s focus on completion of search begs question of whether generating an intermediate research object is “useful”
- Focus on drafting techniques minimizing positive disclosure effects is not a problem limited to this patent or class of inventions
- Negative impact of majority’s decision on chemical research, less incentive to patent and disclose intermediate research outputs

Brenner v. Manson - Implications

- Useful versus “known to be useful”
- Later discovered uses
 - iodine
 - nitroglycerine
- Is usefulness effectiveness?
 - Federal Circuit - it is possible for an invention to be less effective than existing devices, yet still meet the usefulness criteria

Claim elements/limitations

- In claims using the transition word “comprising,” adding more elements/limitations makes the claim more narrow (i.e., there are a smaller number of items that might be covered by the claim)
 - There are other ways to make the claim more narrow, this is not the only way
- For example, arrange these three claims from most to least broad:

Claim 1

- A device for supporting objects, comprising:
- (a) a horizontal support member; and
- (b) three vertical support members each having one end connected to the same face of said horizontal support member.

Claim 3

- A **seating apparatus**, comprising:
- (a) a horizontal **seat**;
- (b) three **legs** each having one end connected to the **bottom** of said horizontal **seat**; and
- (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.

Claim 2

- A **seating apparatus**, comprising:
- (a) a horizontal **seat**; and
- (b) three **legs** each having one end connected to the **bottom** of said horizontal **seat**.

“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.

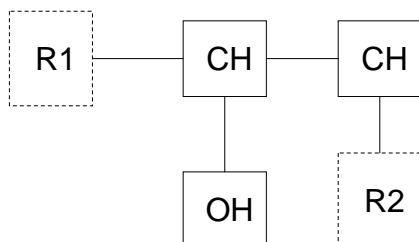
Claim 5

- 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



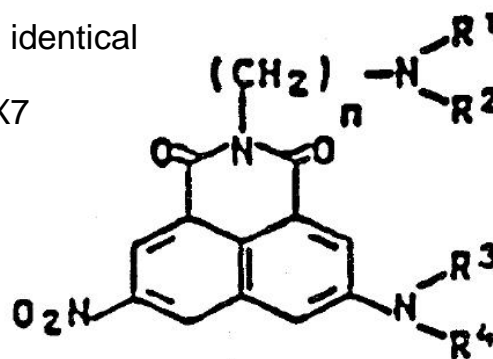
wherein R1 is hydrogen or methyl, and R2 is chlorine, bromine or iodine.

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

In re Brana

- Application is rejected by examiner and affirmed by Board
 - Application is directed to “5-nitrobenzo[de]isoquinoline-1,3-dione” compounds
 - n is 1 or 2, R1 & R2 are identical or different, and are from the group X1-X7
 - Same for R3 & R4, different group
- Better antitumor properties than the prior art



In re Brana



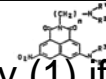
- Original application rejected on obviousness
 - Rebutted by declaration of Dr. Keilhauer, who said the claimed compounds were far more effective than the prior art compounds against the two tumor models
 - Final rejection anyway on different grounds
- Continuation application
 - Rejected on §112¶1 basis – with a “utility” underpinning
 - Two reasons according to Board
 - Application did not allege a sufficiently specific use
 - Applicant did not prove that the compounds were useful

In re Brana



- Utility requirement is explicit in §101, and implicit in §112¶1 – if the claimed invention does not have utility, the specification cannot enable one to use it
- A sufficiently specific use was alleged through the comparison of the claimed compounds to the compounds recited in the article, where the article stated that the article's compounds were effective against two leukemia disease “models” in mice, and the application disclosure stated that the claimed compounds were more effective than the article's compounds
- As to proving usefulness, the PTO has the burden to generate evidence to show that a POSITA would reasonably doubt the utility – only then does burden shift to applicant
 - The PTO's references did not shift the burden because they only called into question the predictive value of the disease models, not the effectiveness of the claimed compound against the models
 - In addition, even if the PTO had shifted the burden, the applicant's expert report was sufficient to prove usefulness of antitumor activity against the tumor models
 - **Unpredictability** of chemical compounds performance in the human body does not necessarily discredit evidence of success in structurally similar compounds
 - Statistically valid proof that a compound exhibits an alleged pharmaceutical property with standard experimental animals is enough
 - FDA process shows why compounds at this development stage are useful (screening for safety and effectiveness for the next stage), but FDA approval is not necessary to meet the utility requirement

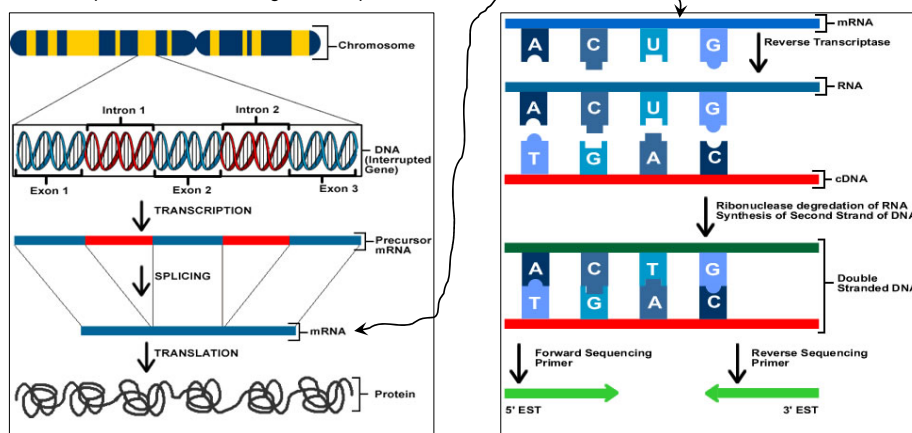
In re Brana – Note on PTO utility guidelines



- “An invention has a well established utility (1) if a [POSITA] would immediately appreciate why the invention is useful based on the characteristics of the invention . . . , and (2) the utility is specific, substantial and credible”
 - Excludes “throwaway, insubstantial, or nonspecific” utilities, such as, the use of a complex invention as landfill
 - Need only one credible assertion of specific and substantial utility for each claimed invention
- More stringent than Brana?

In re Fisher – ESTs

- “An Expressed Sequence Tag is a tiny portion of an entire gene that can be used to help identify unknown genes and to map their positions within a genome.”
- “ESTs are powerful tools in the hunt for known genes because they greatly reduce the time required to locate a gene.”
 - <http://www.ncbi.nlm.nih.gov/About/primer/est.html>



Note that the date of “July 19, 2000” on the bottom of page 4 is likely wrong as to the year.