Utility and Enablement

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Syllabus

- Updated syllabus will be available online
  - SUBJECT TO CHANGE! Always consult the online syllabus!


Patent Drafting Assignment

Grading

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Metrics tracked:
- Number of pages
- Word count
- # of claims
- # of drawings
- Formatting (Y/N)
- Classifications
- Fields
- References
Utility
Statutory Provisions on Utility

35 U.S.C. §101
• “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent …”

35. U.S.C. §112(a)
• “The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such … terms as to enable any person skilled in the art … to make and use the same …”

Overview of Utility

• 3 Types: Operability, Beneficial, Practical
• Practical = Specific & Substantial
  • Substantial: “significant and presently available benefit to the public” (Fisher)
  • Specific: “well-defined and particular benefit to the public” (Fisher)
  • “specific to the subject matter claimed” (MPEP §2107.01)
• Credible (MPEP §2107 addition): “from the perspective of one of ordinary skill in the art in view of the disclosure and any other evidence of record”

Credible Utility

• Unless an “incredible” claim of utility is stated, utility as asserted in the application is presumed to be present and credible
• No known utility
  • Newman v. Quigg, 877 F.2d 1575 (Fed. Cir. 1989) (claims to a perpetual motion machine ruled inoperable)
  • In re Swartz, 232 F.3d 862 (Fed. Cir. 2000) (claims of utility and operability of cold fusion ruled inoperable)
  • Fusion produces a tremendous amount of heat

Beneficial Utility

• Bedford v. Hunt, 3 F. Cas. 37 (C.C.D. Mass. 1817) (J. Story famously noted that “[t]he law … does not look to the degree of utility.”)
• William C. Robinson, The Law of Patents (1890) (“[w]hen actual utility exists, its degree is unimportant. However slight the advantage which the public have received from the inventor, it offers a sufficient reason for his compensation.”)

Lowell v. Lewis
(C.C.D. Mass. 1817)

Question: whether patented pump needed to be “a better pump than the common pump”

J. Story’s jury charge
• “All that the law requires is, that the invention should not be frivolous or injurious to the well-being, good policy, or sound morals of society.”
• “[W]hether it be more or less useful is a circumstance very material to the interests of the patentee, but of no importance to the public.”
**Juicy Whip v. Orange Bang**  
(Fed. Cir. 1999)

**Background**

- Juicy Whip obtained patent for beverage dispenser with visible “reservoir bowl” that served as apparent source of liquid.
- Claim 1 of patent recited bowl and “quantity of fluid visible within said bowl cooperating to create the visual impression that multiple servings of the dispensed beverage are stored within said bowl.”
- District Court “concluded that the invention lacked utility because its purpose was to increase sales by deception.”

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**J. Bryson’s opinion for the Court**

- “The threshold of utility is not high: An invention is ‘useful’… if it is **capable of providing some identifiable benefit**.”
- “The fact that customers may believe they are receiving fluid directly from the display tank does not deprive the invention of utility.”
- “The requirement of ‘utility’… is not a directive to the USPTO or the courts to serve as arbiters of deceptive trade practices.”

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**Brenner v. Manson (1966)**

**Background**

- Ringold patented a process for developing a known steroid.
- Manson’s patent application for the same process was rejected 3 months later, but he could show he conceived of the invention first.
- Manson cited a Ringold article that appears to have cited Manson’s discovery.
- USPTO rejected on utility basis, CCPA reversed.

**J. Fortas’ opinion for the Court**

- “[A] patent is **not a hunting license**. It is not a reward for the search, but compensation for its successful conclusion. “[A] patent system must be related to the world of commerce rather than to the realm of philosophy.”
Brenner v. Manson (1966)

- Priority fight did not occur, even though “Manson was a Johnny-come-lately applicant who filed three months after a patent had already been issued to other inventors and more than three years after he claimed to have invented the process”
- To prove that he had invented in 1956, Manson had to prove he established a utility for his process at the time
- Justices Harlan and Douglas (in dissent) expressed concern about the impact of the decision on chemical research

In re Brana, (Fed. Cir. 1995)

- USPTO’s argument
  - Patent claimed based on efficacy of compounds in vivo in 2 mouse models of lymphocytic leukemias (P388 and L1210 cell lines implanted into mice)
  - USPTO determined that P388 and L1210 were cell lines, NOT diseases
  - No reasonable expectation that the claimed compounds had practical utility (i.e., antitumor activity in humans)
  - The claimed invention has not been shown to treat a disease, and therefore NO UTILITY has been established

J. Plager’s opinion for the Court

- FDA approval … is not a prerequisite for finding a compound useful within the meaning of the patent laws. Usefulness in patent law, and … in the context of pharmaceutical inventions, necessarily includes the expectation of further research and development.

Classic Markush Claim

- “… Wherein X is selected from the group consisting of A, B, C, D …”
  - e.g., “A suit of attire, including an article of clothing, wherein said article of clothing is selected from the group consisting of shirt, sweater, or sweatshirt . . . .”

An article of clothing, selected from the group consisting of
- Shirts
- Shoes
- Pants

A chemical entity selected from the group consisting of
- Carbon
- COOH
- CH(6)

We claim:

1. A compound of the formula,

wherein X, Y, and Y’ are identical or different and are each H, NG, NH₂, C₁₋₃-alkylamino, di-C₁₋₃-alkylamino, NH—C₁₋₃-alkyl, OH, C₁₋₃-alkoxy, halogen, tribromomethyl, C₁₋₃-alkyl-formyl, C₁₋₃-alkyl-carbonyl, ureyl, C₁₋₃-alkylurey, and A is a C₆H₄₋₃.
In re Brana, (Fed. Cir. 1995)

J. Plager’s opinion for the Court

• Were we to require Phase II testing in order to prove utility, the associated costs would prevent many companies from obtaining patent protection on promising new inventions, thereby eliminating an incentive to pursue, through research and development, potential cures in many crucial areas such as the treatment of cancer.

Specific Utility

• In re Diedrich, 318 F.2d 946 (C.C.P.A. 1963) (Equally obscure expression “useful for ‘technical and pharmaceutical purposes’” failed to establish specific utility)

• In re Kirk, 376 F.2d 936 (C.C.P.A. 1967) (“the nebulous expressions ‘biological activity’ or ‘biological properties’ appearing in the specification [do not] convey an ... explicit indication of the usefulness of the compounds and how to use them”)

• Process Control Corp. v. HydReclaim Corp., 190 F.3d 1350 (Fed. Cir. 1999) (Utility requires that a claimed invention exhibit basic workability, or operability. It excludes from the patent system inventions that have no practical function.)

In re Fisher (Fed. Cir. 2005)

Background

• Various claims for expressed sequence tags (ESTs)

• Alleged uses included service as:
  • “molecular marker[s]”;
  • mRNA, polymorphism, or nucleic acid detectors;
  • “primers”;
  • means to locate “promoters” or to regulate protein expression.

• USPTO rejected Claim 1 for lacking “support by a specific and substantial utility,” BPAI affirmed

Claim 1

• A substantially purified nucleic acid molecule that encodes a maize protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 5.
**In re Fisher (Fed. Cir. 2005)**

C.J. Michel’s opinion for the Court

- Substantial utility
  - “significant and presently available benefit to the public”
- Specific utility
  - “well-defined and particular benefit to the public”

J. Rader’s dissent

- “ESTs are research tools” that, like microscopes, “take a researcher one step closer to identifying and understanding a previously unknown and invisible structure.”
- “The proper tool for assessing sufficient contribution to the useful arts is the obviousness requirement.”

**In re Fisher (Fed. Cir. 2005)**

C.J. Michel’s opinion for the Court

- “Fishers alleged uses are so general as to be meaningless”
- Alleged uses are “hypothetical” (and thus not substantial) and “not specific.”
  - “there was no known use for the proteins produced as final products resulting from processes involving the claimed ESTs”
  - “Essentially, the claimed ESTs act as no more than research intermediates that may help scientists to isolate the particular underlying protein-encoding genes ….”
  - “Any EST … has the potential to perform any of the alleged uses.”

**Mini-Utility Fact Patterns (Pt. 1): “Useful” Under the Patent Act?**

1. Elevator that lifts heavy objects without using any energy.
2. Twirling office toy used by many to waste time at work.
3. Radar detector used by motorists to evade law enforcement.
4. Doorstop made of ice.
5. Process for making doorstop made of ice.

**Mini-Utility Fact Patterns (Pt. 2): “Useful” Under the Patent Act?**

6. A steroid that has no known use other than its ability to be used to fill a container that can then be used as a doorstop
7. A process for producing a large quantity of a particular steroid that has no known use other than its ability to be used to fill a container that can then be used as a doorstop
8. A device for determining whether certain DNA matches the nucleotide sequence of a particular known strip of DNA where nothing is known about the latter strip other than its genetic sequence
9. A device for determining whether certain DNA matches the particular nucleotide sequence of any one of an array of thousands of strips of DNA
Enablement

Disclosure Requirements: §112(a)

• Specification Requirements of §112(a)
  • Written Description
  • Enablement
    • Ordinary Artisan
    • "Undue Experimentation" Test
    • Best Mode

"Undue Experimentation" Test

"[T]o enable claims … pursuant to §112, the … specification must teach those of ordinary skill … ‘how to make and use the full scope of the claimed invention without undue experimentation.’"

Liquid Dynamics Corp. v. Vaughan Co.
449 F.3d 1209, 1224 (Fed. Cir. 2006).

"Undue Experimentation" Test

• Cedarapids, Inc. v. Nordberg, Inc. (Fed. Cir. 1997): overturned district court determination that the patent for rock crusher technology was not enabling, because the disclosure was sufficient to enable one skilled in the art to practice the invention

• Automotive Technologies International, Inc. v. BMW of North America, Inc. (Fed. Cir. 2007): patent for electronic side impact sensing for deployment of an occupant protection apparatus (such as an airbag) was invalid for lack of enablement (describing only a “conceptual view” of the electronic sensor at issue)

Incandescent Lamp Patent (1895)

Background

Sawyer & Man applied for patent for incandescent lamp (or lamp part) using:
• “carbonized fibrous or textile material” in “arch or horseshoe shape” (claim 1)
• “carbonized fibrous material” (claim 2)
• “carbonized paper” (claim 3)

Edison worked on “high resistance” filaments & discovered particularly useful bamboo.

J. Brown’s opinion for the Court

• What did S&M invent and enable?
  • S&M had not “discovered in fibrous and textile substances a quality common to them all …, as distinguishing them from other materials.”

• Separate prior-art concern
  • Prior-art use of “wood charcoal” in incandescent and arc lights
Enablement Linked to Utility

“If a patent claim fails to meet the utility requirement because it is not useful or operative, then it also fails to meet the how-to-use aspect of the enablement requirement.

Process Control Corp. v. HydReclaim Corp.
190 F.3d 1350 (Fed. Cir. 1999)

Underlying Policy Argument for Specific/Substantial Utility

“Allowing ideas, research proposals, or objects only of research to be patented has the potential to give priority to the wrong party and to ‘confer power to block off whole areas of scientific development, without compensating benefit to the public.’”

Brenner v. Manson
383 U.S. at 534

15 Minute Break