Intellectual Property
Fall 2010
Professor Grimmelmann

Reading Packet 1: Trade Secret and Patent

Casebook Readings

Please read pages 937–50 (*Learning Curve*), 954 (note 1), and 979 (Uniform Trade Secrets Act excerpts) in the casebook.

Tom Cruise Problem

In January of 2008, the gossip blog Gawker posted a nine-minute video made by Tom Cruise for the Church of Scientology. In the video, which was filmed at a Church event in 2004, Cruise speaks directly to the camera and explains why he is a member of the Church, as the *Mission: Impossible* theme plays in the background.* A few sample excerpts:

> "Being a Scientologist, when you drive past an accident, it's not like anyone else, it's, you drive past, you know you have to do something about it. You know you are the only one who can really help. That's what drives me."
>
> "We are the authorities on getting people off drugs. We are the authorities on the mind. We are the authorities on improving conditions. We can rehabilitate criminals. We can bring peace and unite cultures. That once you know these tools and you know that they work, it's not good enough that I'm just doing Ok."
>
> "So it's our responsibility to educate, create the new reality."

The video is used by the Church for motivational purposes. It is shown to audiences who have passed certain levels of the training, instruction, and "auditing" that the Church requires members to undergo. The Church requires donations from members in exchange for some (but not all) of these activities. The Church takes the position that its doctrines and materials should not be shared with outsiders, who will not be able to properly understand them. Before Gawker posted it, the video had been circulating informally among a few reporters investigating the Church.

Since Gawker's post, millions of users have seen the video, tens of thousands have downloaded it, and a few hundred have reposted it elsewhere on the Internet. The Church has just sent Gawker a cease-and-desist letter demanding that Gawker remove the video from the Internet.

You are an associate at the law offices of Hungadinger and McCormick. Nick Denton, the editor of Gawker, has consulted with your firm. The senior partner, Charles H. Hungadinger, knowing of your IP background, has referred the matter to you. Advise Denton on the legal status of the video and how you think Gawker should respond.

Doll Problem

You are Assistant to the General Counsel at MGA Entertainment, a toy company specializing in fashion-forward dolls with attitude. Isaac Larian, the CEO, has asked for your opinion on conversations that the the company has been having with Carter Bryant, who is an

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* You can view the video at http://www.youtube.com/watch?v=UFBZ_uAbxS0.

employee of Mattel, a competing toy company, where he designs fashion and hair for their Barbie dolls. Several weeks ago, Bryant approached two MGA employees with a pitch for a new multi-ethnic line of dolls with oversized eyes, pouty lips, heavy eyeliner, and trendy clothes. The employees, who thought Bryant's idea was a winner, approached Larian, who took a meeting with Bryant and looked at sketches and other concept art Byrant had prepared. Larian agrees, and thinks that Bryant's idea could be huge.

Larian would like to hire Bryant to design and launch a new line of dolls for MGA. has asked you whether this would be a good idea, and how to go about the legal side of things. What is your advice to Larian now, what information do you need to gather (and from whom), and how could what you learn change your answers?

CLASS 2: MISAPPROPRIATION

Casebook Readings

Please read pages 954–55 (note 2) and 960–65 (*Christopher*) in the casebook.

United States v. Lange
312 F.3d 263 (7th Cir. 2002)

EASTERBROOK, *Circuit Judge*. Matthew Lange has been convicted of violating 18 U.S.C. § 1832, part of the Economic Espionage Act of 1996. This statute makes it a felony to sell, disseminate, or otherwise deal in trade secrets, or attempt to do so, without the owner's consent. Lange stole computer data from Replacement Aircraft Parts Co. [RAPCO], his former employer, and attempted to sell the data to one of RAPCO's competitors. He allows that his acts violated § 1832, if the data contained "trade secrets," but denies that the data met the statutory definition:

> the term "trade secret" means all forms and types of financial, business, scientific, technical, economic, or engineering information, including patterns, plans, compilations, program devices, formulas, designs, prototypes, methods, techniques, processes, procedures, programs, or codes, whether tangible or intangible, and whether or how stored, compiled, or memorialized physically, electronically, graphically, photographically, or in writing if—(A) the owner thereof has taken reasonable measures to keep such information secret; and (B) the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, the public[.]

18 U.S.C. § 1839(3). Lange's appeal requires us to apply this definition.

RAPCO is in the business of making aircraft parts for the aftermarket. It buys original equipment parts, then disassembles them to identify (and measure) each component. This initial step of reverse engineering, usually performed by a drafter such as Lange, produces a set of measurements and drawings. Because this case involves an effort to sell the intellectual property used to make a brake assembly, we use brakes as an illustration.

Knowing exactly what a brake assembly looks like does not enable RAPCO to make a copy. It must figure out how to make a substitute with the same (or better) technical specifications. . . . Aftermarket manufacturers must experiment with different alloys and compositions until they

achieve a process and product that fulfils requirements set by the Federal Aviation Administration for each brake assembly. Completed assemblies must be exhaustively tested to demonstrate, to the FAA's satisfaction, that all requirements have been met; only then does the FAA certify the part for sale. For brakes this entails 100 destructive tests on prototypes, bringing a spinning 60-ton wheel to a halt at a specified deceleration measured by a dynamometer. Further testing of finished assemblies is required. It takes RAPCO a year or two to design, and obtain approval for, a complex part; the dynamometer testing alone can cost $ 75,000. But the process of experimenting and testing can be avoided if the manufacturer demonstrates that its parts are identical (in composition and manufacturing processes) to parts that have already been certified. What Lange, a disgruntled former employee, offered for sale was all the information required to obtain certification of several components as identical to parts for which RAPCO held certification. Lange included with the package—which he offered via the Internet to anyone willing to pay his price of $ 100,000—a pirated copy of AutoCAD, the computer-assisted drawing software that RAPCO uses to maintain its drawings and specifications data. One person to whom Lange tried to peddle the data informed RAPCO, which turned to the FBI. Lange was arrested following taped negotiations that supply all the evidence necessary for conviction—if the data satisfy the statutory definition of trade secrets.

One ingredient of a trade secret is that "the owner thereof has taken reasonable measures to keep such information secret". Lange contends that the proof fell short, but a sensible trier of fact (in this bench trial, the district judge) could have concluded that RAPCO took "reasonable measures to keep [the] information secret". RAPCO stores all of its drawings and manufacturing data in its CAD room, which is protected by a special lock, an alarm system, and a motion detector. The number of copies of sensitive information is kept to a minimum; surplus copies are shredded. Some information in the plans is coded, and few people know the keys to these codes. Drawings and other manufacturing information contain warnings of RAPCO's intellectual-property rights; every employee receives a notice that the information with which he works is confidential. None of RAPCO's subcontractors receives full copies of the schematics; by dividing the work among vendors, RAPCO ensures that none can replicate the product. This makes it irrelevant that RAPCO does not require vendors to sign confidentiality agreements; it relies on deeds (the splitting of tasks) rather than promises to maintain confidentiality. Although, as Lange says, engineers and drafters knew where to get the key to the CAD room door, keeping these employees out can't be an ingredient of "reasonable measures to keep [the] information secret"; then no one could do any work. So too with plans sent to subcontractors, which is why dissemination to suppliers does not undermine a claim of trade secret. See Rockwell Graphic Systems, Inc. v. DEV Industries, Inc., 925 F.2d 174, 177 (7th Cir. 1991).

The second ingredient is that "the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, the public[.]" According to Lange, all data obtained by reverse engineering some other product are "readily ascertainable . . . by the public" because everyone can do what RAPCO did: buy an original part, disassemble and measure it, and make a copy. The prosecutor responds to this contention by observing that "the public" is unable to reverse engineer an aircraft brake assembly.

The prosecutor's assumption is that the statutory reference in § 1839(3) to "the public" means the *general* public—the man in the street. Ordinary people don't have AutoCAD and 60-ton flywheels ready to hand. But is the general public the right benchmark?

A problem with using the general public as the reference group for identifying a trade secret is that many things unknown to the public at large are well known to engineers, scientists, and others whose intellectual property the Economic Espionage Act was enacted to protect. This makes the general public a poor benchmark for separating commercially valuable *secrets* from obscure (but generally known) information. Suppose that Lange had offered to sell Avogadro's number for $ 1. Avogadro's number, 6.02×10^{23}, is the number of molecules per mole of gas. It is an important constant, known to chemists since 1909 but not to the general public (or even to all recent graduates of a chemistry class). We can't believe that Avogadro's number could be called a trade secret. Other principles are known without being comprehended. Most people know that $E = mc^2$, but a pop quiz of the general public would reveal that they do not understand what this *means* or how it can be used productively.

One might respond that the context of the word "public" addresses this concern. The full text of § 1839(3)(B) is: "the information derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, the public". Avogadro's number and other obscure knowledge is not "generally known to" the man in the street but might be deemed "readily ascertainable to" this hypothetical person. It appears in any number of scientific handbooks. Similarly one can visit a library and read Einstein's own discussion of his famous equation. See Albert Einstein, *Relativity: The Special and General Theory* (1920). Members of the general public can ascertain even abstruse information, such as Schrodinger's quantum field equation, by consulting people in the know—as high school dropouts can take advantage of obscure legal rules by hiring lawyers. . . .

Section 1839(3)(B) as a whole refers to the source of economic value—that the information is not known to or easily discoverable by persons who could use it productively. . . . And for purposes of this case those people would be engineers and manufacturers of aircraft parts, who have ample means to reverse engineer their competitors' products. It is by keeping secrets from its rivals that RAPCO captures the returns of its design and testing work. Thus it is unnecessary here to decide whether "general" belongs in front of "public"—for even if it does, the economically valuable information is not "readily ascertainable" to the general public, the educated public, the economically relevant public, or any sensible proxy for these groups. . . .

Lange wants us to proceed as if all he tried to sell were measurements that anyone could have taken with calipers after disassembling an original-equipment part. Such measurements could not be called trade secrets if, as Lange asserts, the assemblies in question were easy to take apart and measure. But no one would have paid $100,000 for metes and bounds, while Lange told his customers that the data on offer were worth more than that asking price. Which they were. What Lange had, and tried to sell, were the completed specifications and engineering diagrams that reflected all the work completed *after* the measurements had been taken: the metallurgical data, details of the sintering, the results of the tests, the plans needed to produce the finished goods, everything required to get FAA certification of a part supposedly identical to one that had been approved. Those details "derived independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable through proper means by, the public[.]" Every firm other than the original equipment manufacturer and RAPCO had to pay dearly to devise, test, and win approval of similar parts; the details unknown to the rivals, and not discoverable with tape measures, had considerable "independent economic value . . . from not being generally known". A sensible trier of fact could determine that Lange

tried to sell trade secrets. It was his customer's cooperation with the FBI, and not public access to the data, that prevented closing of the sale. . . .

Problem 14-1

Please do problem 14–1, at page 955 of the casebook.

Flaming Moe's Problem

Moe Szyslak is the owner of Moe's Tavern, where the specialty drink is a "Flaming Moe." Moe mixes the drinks in a back room, then sets them on fire in front of the customer.

(1) A representative from Tipsy McStagger's Good-Time Drinking and Eating Emporium meets with Moe to discuss licensing the recipe. As part of the negotiations, Moe tells them how it's made. Tipsy McStagger's breaks off talks and start selling its own version. What result?

(2) The Tipsy's rep orders a Flaming Moe, pours it into a thermos, and uses a gas chromatograph to analyze its chemical composition. By so doing, they learn that the secret ingredient is cough syrup. What result?

(3) The Tipsy's rep goes to Moe's Tavern and bribes a bartender to tell them the formula. What result?

(4) Same facts as in (3), except that anyone who tastes the drink can recognize that it's cough syrup. Tipsy's still bribes the bartender to tell them. What result?

Locksmith Problem

You represent the Chicago Lock Company, whose "Ace" series of locks is used in vending machines, burglar alarms, and other high-security settings. Ace locks use an unusual cylindrical key that requires specialized equipment to cut. Each lock has a serial number printed on it; the company uses a secret formula to translate the configuration of tumblers inside the lock into a serial number. The company's policy is that it will sell replacement keys only to the registered owner of a lock with a given serial number. All Ace locks and keys are stamped "Do Not Duplicate."

For years, locksmiths have known how to analyze Ace locks. After a few minutes poking at the lock with their tools, they can write down the configuration of pins and tumblers inside the lock. They can then go back to their toolkits and grind a replacement key, which will open the lock. If the locksmiths keep the configuration information on file, they can grind replacement keys in the future without needing to go back to the lock and analyze it again. Individual locksmiths have, for years, kept such files for their local customers.

Recently, Morris and Victor Fanberg, two locksmiths, published a book entitled "A-Advanced Locksmith's Tubular Lock Codes." They asked locksmiths around the country to send them lists of Ace lock serial numbers and the corresponding tumbler configurations. Based on that information, they were able to program a computer to reconstruct Chicago's secret formula. The book contains a table that shows how to turn an Ace serial number into a key configuration,

which any locksmith with the proper equipment could then use to cut a key opening the lock with that serial number.

Because the serial numbers on Ace locks are frequently printed on the outside, Chicago is concerned that the publication of this book will undermine the security of Ace locks. It has asked you whether it can and should sue the Fanbergs for damages and to halt publication of the book. What is your advice? Is there anything further it would be helpful for you to know?

CLASS 3: PATENTS, THE PTO, AND CLAIMS

Casebook Readings

Please read pages 655–61 (introduction), 685–93 (*Datamize*), and 823-27 (*Larami*) in the casebook, and §§ 101, 154 of the Patent Act.

Worm Questions

Please read U.S. Patent No. 4,800,666 (at the end of this packet) closely, giving great care to the claims at the end. Then answer the following questions:

(1) Who is the inventor?

(2) What, in your own words, does this invention do?

(3) How long did it take the Patent Office to issue this patent after it was filed?

(4) For whom does M. Jordan work and what role did he or she play with regard to this patent? For whom does Frank J. Dykas work, and what role did he play with regard to this patent?

(5) Is this patent still in effect?

(6) What do "Int. Cl." and "U.S. Cl." stand for? What is the significance of the numbers next to them?

(7) Which parts of this patent document are the *specification*? Which part are the *claims*?

(8) How many claims does this patent have? How many of them are independent, and how many of them are dependent?

(9) What is the difference between claims 1 and 2 on the one hand and claim 3 on the other? Don't they end up describing the same thing? (Hint: no.)

(10) In 1995, could the Plano Molding company make and sell to fishing stores aluminum boxes that contain sharp-grained sand with a grain size of 1/25 of an inch? How does it affect your answer if Plano is familiar with this patent? If it has never heard of the patent or Loren Lukehart?

(11) In 1995, could the Plano Molding company make and sell to fishing stores aluminum boxes that contain a dense and slimy mud which makes earthworms easier to hold on to?

(12) In 1995, could the Plano Molding company make and sell to fishing stores aluminum boxes that contain sharp-grained sand with a grain size of 1/10 of an inch?

(13) Suppose that you have discovered that if sharp-grained sand is mixed with rubbing alcohol at a ratio of 10 to 1, the mixture also has an immobilizing effect on slugs. Draft a hypothetical claim for the process of using this sand-alcohol mixture to immobilize slugs. [This may be hard. Use claim (3) of the Lukehart patent as a model.]

(14) You are drafting claims for a patent application for an industrial dye that turns certain plastics an attractive shade of blue. Your client has tested it, with success, on PETE, HDPE, PEEK, and PVDC (all semi-crystalline plastics). You could draft a *broad* claim that refers to "plastic" or you could draft a *narrow* claim that refers to "a plastic selected from the group of PETE, HDPE, PEEK, and PVDC." What is the difference between these two versions? In what sense is the former broader than the latter? What are the advantages of a broad claim? What are the disadvantages? Strategically, which should you choose? Do you *have* to choose —are there any other options?

(15) If Maine's game laws prohibit the use of live earthworms as bait, what effect does this patent have on fishing in Maine?

CLASS 4: STATUTORY SUBJECT MATTER AND UTILITY

Casebook Readings

Please read pages 693–705 (*Chakrabarty*) in the casebook.

Adrenaline Problem

The year is 1900. For a long time, physicians and scientists have believed that the adrenal gland contains some substance capable of increasing heart rate and triggering a fight-or-flight response in the nervous system, and that it releases this substance into the bloodstream in response to stress. The most practical way of using this substance was to take dried adrenal glands from animals and grind them up into a powder. Whatever the substance was, the powder would contain it.

Toward the end of the 19th century, chemistry finally reached the point at which it became possible to imagine isolating the substance. Jokichi Takamine was the first to succeed in doing so, using a variety of reactions and solvents to take adrenal glands and extract the substance in a purified form. Takamine named the substance "Adrenalin"* and applied for a patent claiming: (a) the process of extracting Adrenalin from adrenal glands, (b) the composition of matter Adrenalin, and (c) the composition of matter Adrenalin in purified form.

What is the difference between these three types of claims, and which of them should he be allowed?

Bilski v. Kappos
561 U.S. ___ (2010)

JUSTICE KENNEDY delivered the opinion of the Court ...

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* Today, it is referred to as "adrenaline" in most of the world and "epinephrine" in the United States. Would you care to guess why?

The question in this case turns on whether a patent can be issued for a claimed invention designed for the business world. The patent application claims a procedure for instructing buyers and sellers how to protect against the risk of price fluctuations in a discrete section of the economy. Three arguments are advanced for the proposition that the claimed invention is outside the scope of patent law: (1) it is not tied to a machine and does not transform an article; (2) it involves a method of conducting business; and (3) it is merely an abstract idea. The Court of Appeals ruled that the first mentioned of these, the so-called machine-or-transformation test, was the sole test to be used for determining the patentability of a "process" under the Patent Act, 35 U. S. C. §101.

I

Petitioners' application seeks patent protection for a claimed invention that explains how buyers and sellers of commodities in the energy market can protect, or hedge, against the risk of price changes. The key claims are claims 1 and 4. Claim 1 describes a series of steps instructing how to hedge risk. Claim 4 puts the concept articulated in claim 1 into a simple mathematical formula. Claim 1 consists of the following steps:

> "(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumers;
>
> "(b) identifying market participants for said commodity having a counter-risk position to said consumers; and
>
> "(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions." App. 19–20.

The remaining claims explain how claims 1 and 4 can be applied to allow energy suppliers and consumers to minimize the risks resulting from fluctuations in market demand for energy. For example, claim 2 claims "[t]he method of claim 1 wherein said commodity is energy and said market participants are transmission distributors." Id., at 20. Some of these claims also suggest familiar statistical approaches to determine the inputs to use in claim 4's equation. For example, claim 7 advises using well-known random analysis techniques to determine how much a seller will gain "from each transaction under each historical weather pattern." Id., at 21.

The patent examiner rejected petitioners' application, explaining that it "'is not implemented on a specific apparatus and merely manipulates [an] abstract idea and solves a purely mathematical problem without any limitation to a practical application, therefore, the invention is not directed to the technological arts.'" App. to Pet. for Cert. 148a. The Board of Patent Appeals and Interferences affirmed, concluding that the application involved only mental steps that do not transform physical matter and was directed to an abstract idea. Id., at 181a–186a.

The United States Court of Appeals for the Federal Circuit heard the case en banc and affirmed. The case produced five different opinions. ...

This Court granted certiorari. 556 U. S. ___ (2009).

II

A

Section 101 defines the subject matter that may be patented under the Patent Act:

> "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 therefor, subject to the conditions and requirements of this title."

Section 101 thus specifies four independent categories of inventions or discoveries that are eligible for protection: processes, machines, manufactures, and compositions of matter. "In choosing such expansive terms . . . modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope." *Diamond v. Chakrabarty*, 447 U. S. 303, 308 (1980). ... The Court's precedents provide three specific exceptions to §101's broad patent-eligibility principles: "laws of nature, physical phenomena, and abstract ideas." Chakrabarty, supra, at 309. While these exceptions are not required by the statutory text, they are consistent with the notion that a patentable process must be "new and useful." And, in any case, these exceptions have defined the reach of the statute as a matter of statutory stare decisis going back 150 years. The concepts covered by these exceptions are "part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none." *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, 333 U. S. 127, 130 (1948).

The §101 patent-eligibility inquiry is only a threshold test. Even if an invention qualifies as a process, machine, manufacture, or composition of matter, in order to receive the Patent Act's protection the claimed invention must also satisfy "the conditions and requirements of this title." §101. Those requirements include that the invention be novel, see §102, nonobvious, see §103, and fully and particularly described, see §112.

The present case involves an invention that is claimed to be a "process" under §101. Section 100(b) defines "process" as:

> "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material."

The Court first considers two proposed categorical limitations on "process" patents under §101 that would, if adopted, bar petitioners' application in the present case: the machine-or-transformation test and the categorical exclusion of business method patents.

B

1

Under the Court of Appeals' formulation, an invention is a "process" only if: "(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing." 545 F. 3d, at 954. This Court has "more than once cautioned that courts 'should not read into the patent laws limitations and conditions which the legislature has not expressed.'" ...

The Court of Appeals incorrectly concluded that this Court has endorsed the machine-or-transformation test as the exclusive test. ...

This Court's precedents establish that the machine-ortransformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are

processes under §101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible "process."

2

It is true that patents for inventions that did not satisfy the machine-or-transformation test were rarely granted in earlier eras, especially in the Industrial Age, as explained by Judge Dyk's thoughtful historical review. See 545 F. 3d, at 966–976 (concurring opinion). But times change. Technology and other innovations progress in unexpected ways. For example, it was once forcefully argued that until recent times, "well-established principles of patent law probably would have prevented the issuance of a valid patent on almost any conceivable computer program." *Diehr*, 450 U. S., at 195 (STEVENS, J., dissenting). But this fact does not mean that unforeseen innovations such as computer programs are always unpatentable. See id., at 192–193 (majority opinion) (holding a procedure for molding rubber that included a computer program is within patentable subject matter). Section 101 is a "dynamic provision designed to encompass new and unforeseen inventions." *J. E. M. Ag Supply, Inc. v. Pioneer HiBred Int'l, Inc.*, 534 U. S. 124, 135 (2001). A categorical rule denying patent protection for "inventions in areas not contemplated by Congress . . . would frustrate the purposes of the patent law." *Chakrabarty*, 447 U. S., at 315.

The machine-or-transformation test may well provide a sufficient basis for evaluating processes similar to those in the Industrial Age—for example, inventions grounded in a physical or other tangible form. But there are reasons to doubt whether the test should be the sole criterion for determining the patentability of inventions in the Information Age. As numerous amicus briefs argue, the machine-or-transformation test would create uncertainty as to the patentability of software, advanced diagnostic medicine techniques, and inventions based on linear programming, data compression, and the manipulation of digital signals.

In the course of applying the machine-or-transformation test to emerging technologies, courts may pose questions of such intricacy and refinement that they risk obscuring the larger object of securing patents for valuable inventions without transgressing the public domain. ...

It is important to emphasize that the Court today is not commenting on the patentability of any particular invention, let alone holding that any of the above-mentioned technologies from the Information Age should or should not receive patent protection. This Age puts the possibility of innovation in the hands of more people and raises new difficulties for the patent law. With ever more people trying to innovate and thus seeking patent protections for their inventions, the patent law faces a great challenge in striking the balance between protecting inventors and not granting monopolies over procedures that others would discover by independent, creative application of general principles. Nothing in this opinion should be read to take a position on where that balance ought to be struck.

C

1

Section 101 similarly precludes the broad contention that the term "process" categorically excludes business methods. The term "method," which is within §100(b)'s definition of "process," at least as a textual matter and before consulting other limitations in the Patent Act and this Court's precedents, may include at least some methods of doing business. See, e.g., Webster's New International Dictionary 1548 (2d ed. 1954) (defining "method" as "[a]n orderly procedure

or process ... regular way or manner of doing anything; hence, a set form of procedure adopted in investigation or instruction"). The Court is unaware of any argument that the "'ordinary, contemporary, common meaning,'" *Diehr*, supra, at 182, of "method" excludes business methods. Nor is it clear how far a prohibition on business method patents would reach, and whether it would exclude technologies for conducting a business more efficiently.. ...

The argument that business methods are categorically outside of §101's scope is further undermined by the fact that federal law explicitly contemplates the existence of at least some business method patents. Under 35 U. S. C. §273(b)(1), if a patent-holder claims infringement based on "a method in [a] patent," the alleged infringer can assert a defense of prior use. For purposes of this defense alone, "method" is defined as "a method of doing or conducting business." §273(a)(3). ...

2

Interpreting §101 to exclude all business methods simply because business method patents were rarely issued until modern times revives many of the previously discussed difficulties. At the same time, some business method patents raise special problems in terms of vagueness and suspect validity. ... The Information Age empowers people with new capacities to perform statistical analyses and mathematical calculations with a speed and sophistication that enable the design of protocols for more efficient performance of a vast number of business tasks. If a high enough bar is not set when considering patent applications of this sort, patent examiners and courts could be flooded with claims that would put a chill on creative endeavor and dynamic change. ...

III

Even though petitioners' application is not categorically outside of §101 under the two broad and atextual approaches the Court rejects today, that does not mean it is a "process" under §101. Petitioners seek to patent both the concept of hedging risk and the application of that concept to energy markets. App. 19–20. Rather than adopting categorical rules that might have wide-ranging and unforeseen impacts, the Court resolves this case narrowly on the basis of this Court's decisions in *Benson*, *Flook*, and *Diehr*, which show that petitioners' claims are not patentable processes because they are attempts to patent abstract ideas. Indeed, all members of the Court agree that the patent application at issue here falls outside of §101 because it claims an abstract idea.

In Benson, the Court considered whether a patent application for an algorithm to convert binary-coded decimal numerals into pure binary code was a "process" under §101. 409 U. S., at 64–67. The Court first explained that "'[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.'" Id., at 67 (quoting *Le Roy*, 14 How., at 175). The Court then held the application at issue was not a "process," but an unpatentable abstract idea. "It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting . . . numerals to pure binary numerals were patented in this case." 409 U. S., at 71. A contrary holding "would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself." Id., at 72.

In *Flook*, the Court considered the next logical step after *Benson*. The applicant there attempted to patent a procedure for monitoring the conditions during the catalytic conversion

process in the petrochemical and oil-refining industries. The application's only innovation was reliance on a mathematical algorithm. 437 U. S., at 585–586. *Flook* held the invention was not a patentable "process." The Court conceded the invention at issue, unlike the algorithm in *Benson*, had been limited so that it could still be freely used outside the petrochemical and oil-refining industries. 437 U. S., at 589–590. Nevertheless, *Flook* rejected "[t]he notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process." Id., at 590. The Court concluded that the process at issue there was "unpatentable under §101, not because it contain[ed] a mathematical algorithm as one component, but because once that algorithm [wa]s assumed to be within the prior art, the application, considered as a whole, contain[ed] no patentable invention." Id., at 594. As the Court later explained, *Flook* stands for the proposition that the prohibition against patenting abstract ideas "cannot be circumvented by attempting to limit the use of the formula to a particular technological environment" or adding "insignificant postsolution activity." *Diehr*, 450 U. S., at 191–192.

Finally, in *Diehr*, the Court established a limitation on the principles articulated in *Benson* and *Flook*. The application in *Diehr* claimed a previously unknown method for "molding raw, uncured synthetic rubber into cured precision products," using a mathematical formula to complete some of its several steps by way of a computer. 450 U. S., at 177. *Diehr* explained that while an abstract idea, law of nature, or mathematical formula could not be patented, "an application of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." Id., at 187. *Diehr* emphasized the need to consider the invention as a whole, rather than "dissect[ing] the claims into old and new elements and then . . . ignor[ing] the presence of the old elements in the analysis." Id., at 188. Finally, the Court concluded that because the claim was not "an attempt to patent a mathematical formula, but rather [was] an industrial process for the molding of rubber products," it fell within §101's patentable subject matter. Id., at 192–193.

In light of these precedents, it is clear that petitioners' application is not a patentable "process." Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk: "Hedging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class." 545 F. 3d, at 1013 (Rader, J., dissenting). The concept of hedging, described in claim 1 and reduced to a mathematical formula in claim 4, is an unpatentable abstract idea, just like the algorithms at issue in *Benson* and *Flook*. Allowing petitioners to patent risk hedging would preempt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.

Petitioners' remaining claims are broad examples of how hedging can be used in commodities and energy markets. *Flook* established that limiting an abstract idea to one field of use or adding token post-solution components did not make the concept patentable. That is exactly what the remaining claims in petitioners' application do. These claims attempt to patent the use of the abstract idea of hedging risk in the energy market and then instruct the use of well-known random analysis techniques to help establish some of the inputs into the equation. Indeed, these claims add even less to the underlying abstract principle than the invention in *Flook* did, for the *Flook* invention was at least directed to the narrower domain of signaling dangers in operating a catalytic converter.

* * *

Today, the Court once again declines to impose limitations on the Patent Act that are inconsistent with the Act's text. The patent application here can be rejected under our precedents on the unpatentability of abstract ideas. The Court, therefore, need not define further what constitutes a patentable "process," beyond pointing to the definition of that term provided in §100(b) and looking to the guideposts in *Benson*, *Flook*, and *Diehr*.

And nothing in today's opinion should be read as endorsing interpretations of §101 that the Court of Appeals for the Federal Circuit has used in the past. See, e.g., State Street, 149 F. 3d, at 1373; AT&T Corp., 172 F. 3d, at 1357. It may be that the Court of Appeals thought it needed to make the machine-or-transformation test exclusive precisely because its case law had not adequately identified less extreme means of restricting business method patents, including (but not limited to) application of our opinions in *Benson*, *Flook*, and *Diehr*. In disapproving an exclusive machine-or-transformation test, we by no means foreclose the Federal Circuit's development of other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text.

The judgment of the Court of Appeals is affirmed.

Tax Strategy Problem

Claim 1 of U.S. Patent No. 6,567,790 reads:

> A method for minimizing transfer tax liability of a grantor for the transfer of the value of nonqualified stock options to a family member grantee, the stock options having a stated exercise price and a stated period of exercise, the method performed at least in part within a signal processing device and comprising:
>
> establishing a Grantor Retained Annuity Trust (GRAT);
>
> funding said GRAT with assets comprising stock options, the stock options having a determined value at the time the transfer is made;
>
> setting a term for said GRAT and a schedule and amount of annuity payments to be made from said GRAT; and
>
> performing a valuation of the stock options as each annuity payment is made and determining the number of stock options to include in the annuity payment.

How will the world be different because this patent was granted? As a policy matter, should tax strategies be patentable? As a legal matter, are they?

Juicy Whip, Inc. v. Orange Bang, Inc.
185 F.3d 1364 (Fed. Cir. 1999)

Bryson, Circuit Judge

Juicy Whip, Inc., is the assignee of United States Patent No. 5,575,405, which is entitled "Post-Mix Beverage Dispenser With an Associated Simulated Display of Beverage." [JG: A diagram from the patent is at the end of this packet.] A "post-mix" beverage dispenser stores beverage syrup concentrate and water in separate locations until the beverage is ready to be dispensed. The syrup and water are mixed together immediately before the beverage is

dispensed, which is usually after the consumer requests the beverage. In contrast, in a "pre-mix" beverage dispenser, the syrup concentrate and water are pre-mixed and the beverage is stored in a display reservoir bowl until it is ready to be dispensed. The display bowl is said to stimulate impulse buying by providing the consumer with a visual beverage display. A pre-mix display bowl, however, has a limited capacity and is subject to contamination by bacteria. It therefore must be refilled and cleaned frequently.

The invention claimed in the '405 patent is a post-mix beverage dispenser that is designed to look like a pre-mix beverage dispenser. The claims require the post-mix dispenser to have a transparent bowl that is filled with a fluid that simulates the appearance of the dispensed beverage and is resistant to bacterial growth. The claims also require that the dispenser create the visual impression that the bowl is the principal source of the dispensed beverage, although in fact the beverage is mixed immediately before it is dispensed, as in conventional post-mix dispensers. . . .

The threshold of utility is not high: An invention is "useful" under section 101 if it is capable of providing some identifiable benefit.

To be sure, since Justice Story's opinion in *Lowell v. Lewis*, 15 F. Cas. 1018 (C.C.D. Mass. 1817), it has been stated that inventions that are "injurious to the well-being, good policy, or sound morals of society" are unpatentable. As examples of such inventions, Justice Story listed "a new invention to poison people, or to promote debauchery, or to facilitate private assassination." Id. at 1019. Courts have continued to recite Justice Story's formulation, but the principle that inventions are invalid if they are principally designed to serve immoral or illegal purposes has not been applied broadly in recent years. For example, years ago courts invalidated patents on gambling devices on the ground that they were immoral, but that is no longer the law. . . .

We decline to follow [older cases invalidating patents on deceptive products as lacking utility], as we do not regard them as representing the correct view of the doctrine of utility under the Patent Act of 1952. The fact that one product can be altered to make it look like another is in itself a specific benefit sufficient to satisfy the statutory requirement of utility.

It is not at all unusual for a product to be designed to appear to viewers to be something it is not. For example, cubic zirconium is designed to simulate a diamond, imitation gold leaf is designed to imitate real gold leaf, synthetic fabrics are designed to simulate expensive natural fabrics, and imitation leather is designed to look like real leather. In each case, the invention of the product or process that makes such imitation possible has "utility" within the meaning of the patent statute, and indeed there are numerous patents directed toward making one product imitate another. See, e.g., U.S. Pat. No. 5,762,968 (method for producing imitation grill marks on food without using heat); U.S. Pat. No. 5,899,038 (laminated flooring imitating wood); U.S. Pat. No. 5,571,545 (imitation hamburger). Much of the value of such products resides in the fact that they appear to be something they are not. Thus, in this case the claimed post-mix dispenser meets the statutory requirement of utility by embodying the features of a post-mix dispenser while imitating the visual appearance of a pre-mix dispenser.

The fact that customers may believe they are receiving fluid directly from the display tank does not deprive the invention of utility. Orange Bang has not argued that it is unlawful to display a representation of the beverage in the manner that fluid is displayed in the reservoir of the invention, even though the fluid is not what the customer will actually receive. Moreover, even

if the use of a reservoir containing fluid that is not dispensed is considered deceptive, that is not by itself sufficient to render the invention unpatentable. The requirement of "utility" in patent law is not a directive to the Patent and Trademark Office or the courts to serve as arbiters of deceptive trade practices. Other agencies, such as the Federal Trade Commission and the Food and Drug Administration, are assigned the task of protecting consumers from fraud and deception in the sale of food products.

Of course, Congress is free to declare particular types of inventions unpatentable for a variety of reasons, including deceptiveness. Cf. 42 U.S.C. § 2181(a) (exempting from patent protection inventions useful solely in connection with special nuclear material or atomic weapons). Until such time as Congress does so, however, we find no basis in section 101 to hold that inventions can be ruled unpatentable for lack of utility simply because they have the capacity to fool some members of the public.

CLASS 5: REDUCTION TO PRACTICE

Casebook Readings

Please read pages 670–78 (*National Recovery Technologies*), 725–32 (*Rosaire*), and 781–85 (*Egbert*) in the casebook, and §§ 102, 112 of the Patent Act.

Problem 10-1

Please do problem 10–1, at page 726 of the casebook.

More Worm Questions

Look again at the Lukehart patent (at the end of this packet).

(1) Suppose that from 1960 to 1972, the Acme Corporation sold the Bait-o-Matic, a grey egg-shaped plastic container containing sharp-grained sand with a grain size of 1/25 of an inch designed to be used to immobilize earthworms. Which claims, if any, of the Lukehart patent are invalid because they were anticipated by the Bait-o-Matic?

(2) Look back at questions (10), (11), and (12) from the first patent class. Do your answers to any of them change if the Bait-o-Matic is prior art for the Lukehart patent?

(3) Look back at questions (13) and (14) from the first patent class. How do the doctrines discussed in today's class change your strategy, if at all, when drafting patent claims?

Pleistocene Park Problem

Crichton Industries, a biotechnology firm, has been attempting to clone a wooly mammoth (an elephant-like mammal that became extinct about 3,500 years ago) from scattered preserved DNA fragments. Crichton made only slow progress at first; the available mammoth DNA fragments were too short and too numerous to combine into a complete DNA sequence using standard laboratory techniques.

Then, on January 1, 2004, Crichton's lead researcher attended a lecture given by mathematician Rube Goldblum discussing efficient ways to arrange books in libraries. She realized that the method Goldblum was describing could be used to arrange DNA fragments and compile complete DNA sequences. Using Goldblum's technique, on February 2, 2005, Crichton's team compiled a complete wooly mammoth DNA sequence.

Meanwhile, Goldblum published (on March 3, 2006), an academic paper explaining how to apply his book-sorting method to the problem of DNA compilation. An executive at Spielberg Genetics, a competing biotechnology firm, read the paper and decided to try the technique on the wooly mammoth problem. Spielberg compiled its own complete wooly mammoth DNA sequence on April 4, 2007. Because the two companies started from different fragments, their sequences were only about 98% identical.

On May 5, 2008, Crichton proudly announced to the world that its scientists, using confidential artificial insemination techniques, had enabled a modern elephant to give birth to a wooly mammoth, which had the DNA sequence Crichton had compiled using the Goldblum method.

The next day (May 6, 2008) Spielberg filed a patent application which disclosed its complete DNA sequence and contained two claims:

(1) "a process for DNA sequence compilation, comprising applying the Goldblum algorithm to a multiplicity of DNA fragments

(2) "the process of claim 3, wherein the multiplicity of DNA fragments each have the DNA sequence of wooly mammoth DNA"

Crichton filed its own patent application on June 7, 2008. Its application also had two claims:

(1) "a wooly mammoth"

(2) "the wooly mammoth of claim 1, having the DNA sequence [of Crichton's wooly mammoth]"

You are an examiner for the USPTO, which has declared an interference between the two applications. Which claims, if any, in these applications should you allow, and why?

CLASS 6: OBVIOUSNESS

Casebook Readings

Please read pages 745–55 (*Graham*) in the casebook, and § 103 of the Patent Act.

Even More Worm Questions

(1) What is the problem the Lukehart patent tries to solve? Would you have framed the problem in this way? What is the method the Lukehart patent describes for solving that problem? Would you have thought of that method? Having had the method described to you, would you have expected it to work? How much testing would be necessary to discover

whether it works or not? Is the invention something that someone who was not specifically searching for a solution to this problem might nonetheless stumble upon?

(2) Are the claims in the Lukehart patent obvious in light of the prior art it describes? In light of any other prior art of which you are aware?

(3) Consider the invention described in question (13) from the first patent class. Is it obvious in light of the Lukehart patent?

KSR Problem

Read *KSR v. Teleflex* and the notes that follow (pages 756–73) in the casebook. Read Parts I and III closely. Your job is to decide whether the Supreme Court got this case right on the specific facts before it. (I will be explaining the law.). In relevant part, claim 4 of the patent in suit reads on:

- A **pedal**
  - that is **adjustable**
  - and has a **fixed pivot**,
- and a **sensor**
  - that is **in the pedal**
  - and mounted on a **fixed position**

The Court had before it a number of pieces of prior art, and had to decide whether claim 4 was obvious in light of them. Please look closely at the Court's descriptions of the following prior art:

- **Asano**
- **'936**
- **Smith**
- **'068**
- **Rixon**

Which of the characteristics of claim 4, listed above, do each of these prior art references disclose? *Make a chart.* Using your chart as a guide, explain whether the Federal Circuit or the Supreme Court was more persuasive in its obviousness analysis.

CLASS 7: INFRINGEMENT AND REMEDIES

Casebook Readings

Please read pages 823–27 (*Larami*) (yes, again) and 867–78 (*Jazz Photo*) in the casebook, and §§ 271, 283, 284 of the Patent Act.

eBay Inc. v. MercExchange, L.L.C.

JUSTICE THOMAS delivered the opinion of the Court.

...

I

Petitioner eBay operates a popular Internet Web site that allows private sellers to list goods they wish to sell, either through an auction or at a fixed price. Petitioner Half.com, now a wholly owned subsidiary of eBay, operates a similar Web site. Respondent MercExchange, L. L. C., holds a number of patents, including a business method patent for an electronic market designed to facilitate the sale of goods between private individuals by establishing a central authority to promote trust among participants. See U. S. Patent No. 5,845,265. MercExchange sought to license its patent to eBay and Half.com, as it had previously done with other companies, but the parties failed to reach an agreement. MercExchange subsequently filed a patent infringement suit against eBay and Half.com in the United States District Court for the Eastern District of Virginia. A jury found that MercExchange's patent was valid, that eBay and Half.com had infringed that patent, and that an award of damages was appropriate.

Following the jury verdict, the District Court denied MercExchange's motion for permanent injunctive relief. 275 F. Supp. 2d 695 (2003). The Court of Appeals for the Federal Circuit reversed, applying its "general rule that courts will issue permanent injunctions against patent infringement absent exceptional circumstances." 401 F. 3d 1323, 1339 (2005). We granted certiorari to determine the appropriateness of this general rule. 546 U. S. 1029 (2005).

II

According to well-established principles of equity, a plaintiff seeking a permanent injunction must satisfy a four-factor test before a court may grant such relief. A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction. The decision to grant or deny permanent injunctive relief is an act of equitable discretion by the district court, reviewable on appeal for abuse of discretion.

These familiar principles apply with equal force to disputes arising under the Patent Act. As this Court has long recognized, "a major departure from the long tradition of equity practice should not be lightly implied." Nothing in the Patent Act indicates that Congress intended such a departure. To the contrary, the Patent Act expressly provides that injunctions "may" issue "in accordance with the principles of equity." 35 U. S. C. § 283.[2]

To be sure, the Patent Act also declares that "patents shall have the attributes of personal property," § 261, including "the right to exclude others from making, using, offering for sale, or selling the invention," § 154(a)(1). According to the Court of Appeals, this statutory right to exclude alone justifies its general rule in favor of permanent injunctive relief. 401 F. 3d, at 1338. But the creation of a right is distinct from the provision of remedies for violations of that right. Indeed, the Patent Act itself indicates that patents shall have the attributes of personal property "[s]ubject to the provisions of this title," 35 U. S. C. § 261, including, presumably, the provision that injunctive relief "may" issue only "in accordance with the principles of equity," § 283. ...

Neither the District Court nor the Court of Appeals below fairly applied these traditional equitable principles in deciding respondent's motion for a permanent injunction. Although the District Court recited the traditional four-factor test, it appeared to adopt certain expansive principles suggesting that injunctive relief could not issue in a broad swath of cases. Most notably, it concluded that a "plaintiff's willingness to license its patents" and "its lack of commercial activity in practicing the patents" would be sufficient to establish that the patent holder would not suffer irreparable harm if an injunction did not issue. Id., at 712. But traditional equitable principles do not permit such broad classifications. For example, some patent holders, such as university researchers or self-made inventors, might reasonably prefer to license their patents, rather than undertake efforts to secure the financing necessary to bring their works to market themselves. Such patent holders may be able to satisfy the traditional four-factor test, and we see no basis for categorically denying them the opportunity to do so. To the extent that the District Court adopted such a categorical rule, then, its analysis cannot be squared with the principles of equity adopted by Congress. ...

In reversing the District Court, the Court of Appeals departed in the opposite direction from the four-factor test. The court articulated a "general rule," unique to patent disputes, "that a permanent injunction will issue once infringement and validity have been adjudged."The court further indicated that injunctions should be denied only in the "unusual" case, under "exceptional circumstances" and "`in rare instances . . . to protect the public interest.'" Just as the District Court erred in its categorical denial of injunctive relief, the Court of Appeals erred in its categorical grant of such relief.

Because we conclude that neither court below correctly applied the traditional four-factor framework that governs the award of injunctive relief, we vacate the judgment of the Court of Appeals, so that the District Court may apply that framework in the first instance. In doing so, we take no position on whether permanent injunctive relief should or should not issue in this particular case, or indeed in any number of other disputes arising under the Patent Act. We hold only that the decision whether to grant or deny injunctive relief rests within the equitable discretion of the district courts, and that such discretion must be exercised consistent with traditional principles of equity, in patent disputes no less than in other cases governed by such standards.

Accordingly, we vacate the judgment of the Court of Appeals and remand the case for further proceedings consistent with this opinion.

CHIEF JUSTICE ROBERTS, with whom JUSTICE SCALIA and JUSTICE GINSBURG join, concurring.

... From at least the early 19th century, courts have granted injunctive relief upon a finding of infringement in the vast majority of patent cases. This "long tradition of equity practice" is not surprising, given the difficulty of protecting a right to *exclude* through monetary remedies that allow an infringer to *use* an invention against the patentee's wishes—a difficulty that often implicates the first two factors of the traditional four-factor test. This historical practice, as the Court holds, does not *entitle* a patentee to a permanent injunction or justify a general rule that such injunctions should issue. ...

JUSTICE KENNEDY, with whom JUSTICE STEVENS, JUSTICE SOUTER, and JUSTICE BREYER join, concurring.

... In cases now arising trial courts should bear in mind that in many instances the nature of the patent being enforced and the economic function of the patent holder present considerations quite unlike earlier cases. An industry has developed in which firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees. For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent. When the patented invention is but a small component of the product the companies seek to produce and the threat of an injunction is employed simply for undue leverage in negotiations, legal damages may well be sufficient to compensate for the infringement and an injunction may not serve the public interest. In addition injunctive relief may have different consequences for the burgeoning number of patents over business methods, which were not of much economic and legal significance in earlier times. The potential vagueness and suspect validity of some of these patents may affect the calculus under the four-factor test.

One-Click Problem

It is October 6, 2010. Judge Minderbinder of the Southern District of New York has just entered the following findings of fact and conclusions of law at the close of a bench trial in *Innovation Holdings LLC v. Amazon.com, Inc.*

> This case involves United States Patent No. 7,260,411 ("the '411 patent"), which issued on September 28, 1999, and is currently assigned to plaintiff Innovation Holdings (Innovation). Innovation purchased the patent from its inventor, Robert Daneeka, for $25,000, in 2008. Innovation does not engage in business directly; instead, it appears to purchase patents that it thinks have unrecognized value, and then recover its investment by licensing rights under the patents to various companies. Where licensing negotiations fail, Innovation does not hesitate to file suit. *See* [string cite listing seventeen active patent infringement lawsuits filed by Innovation, six of which concern the '411 patent.] Such happened in the present case; Innovation negotiated with defendant Amazon.com, Inc (Amazon), and filed suit when Amazon proved unwilling to pay the licensing fee sought by Innovation.
>
> Inovation's patent is directed to a method and system for "single action" ordering of items in a client/server environment such as the Internet. ...
>
> The '411 patent describes a method and system in which a consumer can complete a purchase order for an item via an electronic network using only a "single action," such as the click of a computer mouse button on the client computer system. Innovation developed the patent to cope with what it considered to be frustrations presented by what is known as the "shopping cart model" purchase system for electronic commerce purchasing events. In previous incarnations of the shopping cart model, a purchaser using a client computer system (such as a personal computer executing a web browser program) could select an item from an electronic catalog, typically by clicking on an "Add to Shopping Cart" icon, thereby placing the item in the "virtual" shopping cart. Other items from the catalog could be added to the shopping cart in the same manner. When the shopper completed the selecting process, the electronic commercial event would move to the check-out counter, so to speak. Then, information regarding the purchaser's identity, billing and shipping addresses,

and credit payment method would be inserted into the transactional information base by the soon-to-be purchaser. Finally, the purchaser would "click" on a button displayed on the screen or somehow issue a command to execute the completed order, and the server computer system would verify and store the information concerning the transaction.

As is evident from the foregoing, an electronic commerce purchaser using the shopping cart model is required to perform several actions before achieving the ultimate goal of the placed order. The '411 patent sought to reduce the number of actions required from a consumer to effect a placed order. ...

How, one may ask, is the number of purchaser interactions reduced? The answer is that the number of purchaser interactions is reduced because the purchaser has previously visited the seller's web site and has previously entered into the database of the seller all of the required billing and shipping information that is needed to effect a sales transaction. Thereafter, when the purchaser visits the seller's web site and wishes to purchase a product from that site, the patent specifies that only a single action is necessary to place the order for the item. In the words of the written description, "once the description of an item is displayed, the purchaser need only take a single action to place the order to purchase that item." ...

Notwithstanding Amzon's claims of invalidity by reason of obviousness, lack of enablement, and statutory bar, I find that the '411 patent was validly issued. ...

Amazon's "1-Click" feature presents a button on each product page that causes an order to be initiated. The item is immediately prepared for shipment, and the customer's credit card or other payment information is immediately charged. I find that this process requires only a "single action" to be initiated by the customer once the product page is displayed, and therefore find that Amazon's 1-Click feature infringes the '411 patent. ...

Innovation has now moved for a permanent injunction and requested expedited hearing; Amazon has argued that money damages at law will suffice. Using *eBay* as a guide, prepare arguments for both sides in arguing that a permanent injunction should, or should not, issue. I will ask you take one side or the other in class, but you should of course be familiar with the arguments your opponents will raise and be ready to counter them. [Hint: Think about both sides' strategies and business models—that may help you frame arguments for them, or for their opponents.]

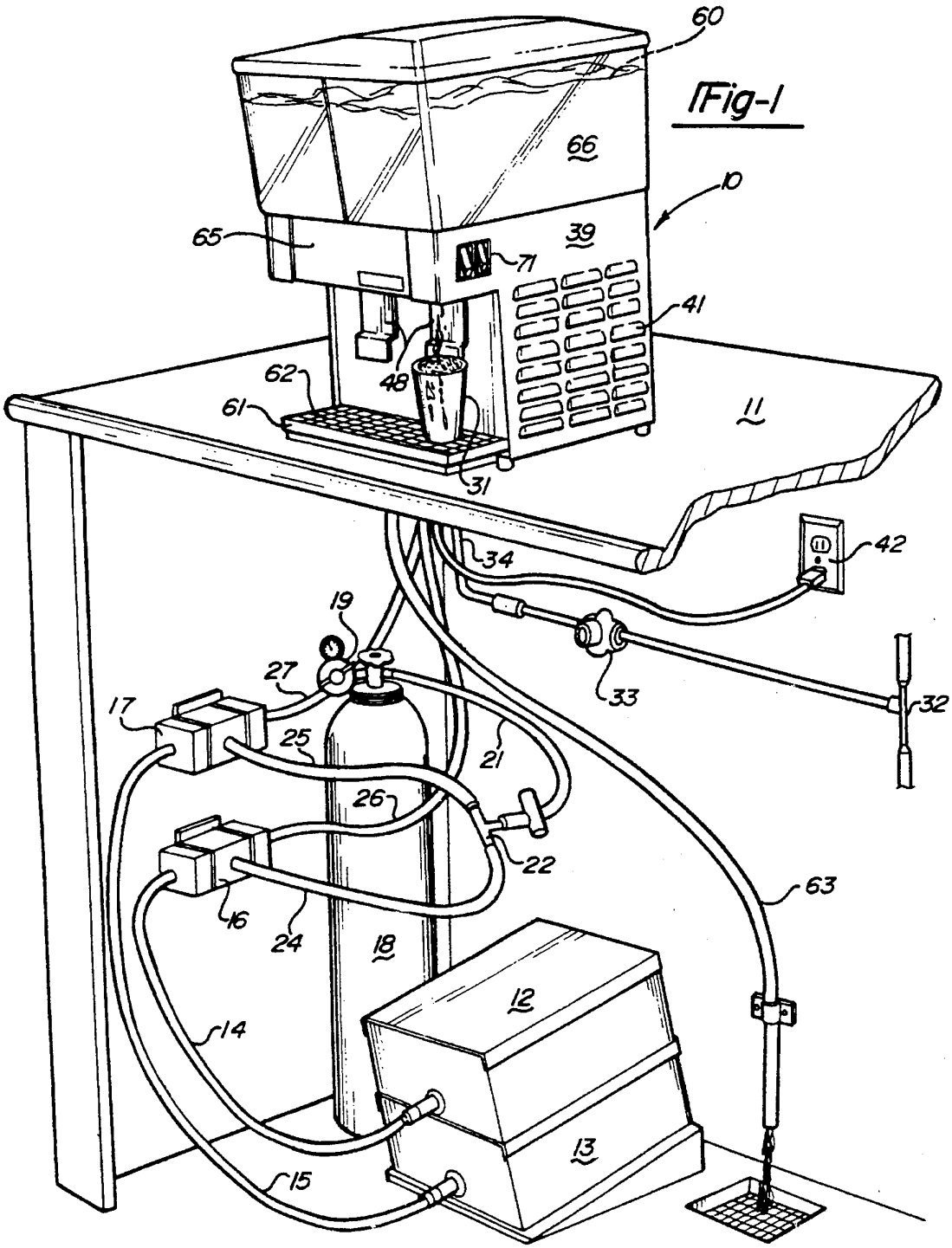
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Fig-1

United States Patent [19]

Lukehart

[11] **Patent Number: 4,800,666**

[45] **Date of Patent: Jan. 31, 1989**

[54] **METHOD AND APPARATUS FOR TEMPORARILY IMMOBILIZING AN EARTHWORM**

[76] Inventor: **Loren Lukehart,** 4391 Greer, Boise, Id. 83703

[21] Appl. No.: **161,144**

[22] Filed: **Feb. 26, 1988**

[51] **Int. Cl.**[4] **A01K 97/02**

[52] **U.S. Cl.** **43/4;** 43/4.5; 43/55

[58] **Field of Search** 43/4, 4.5, 54.1, 55, 43/56, 57.1

[56] **References Cited**

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Primary Examiner—M. Jordan
Attorney, Agent, or Firm—Frank J. Dykas

[57] **ABSTRACT**

Method and apparatus for immobilization of an earthworm **13** to facilitate the baiting of a fishing hook. To immobilize the earthworm, the earthworm is partially coated with sharp grained sand **11** having a grain size of less than 1/20th of an inch. The apparatus **10** for carrying out the method consists of rectangular container **12** and a reservoir of sharp grained sand **11** and cover **14.** Placing earthworm **13** in the apparatus **10** and allowing earthworm **13** to at least partially coat itself with sharp grained sand **11,** results in the temporary immobilization of earthworm **13.** Earthworm **13** is then impaled on the fishing hook by the fisherman. As soon a the baited hook is immersed in water, the sand is rinsed from earthworm **13** and it resumes wiggling.

3 Claims, 1 Drawing Sheet

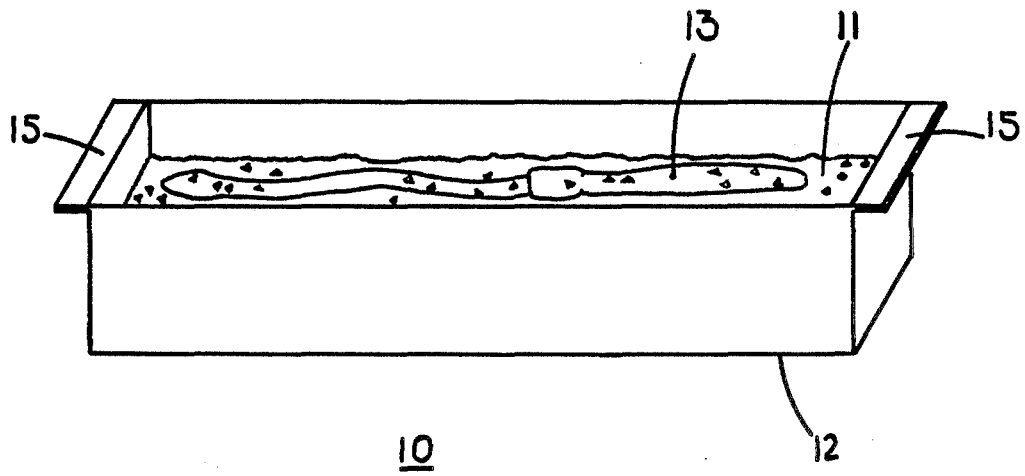


FIG. 1

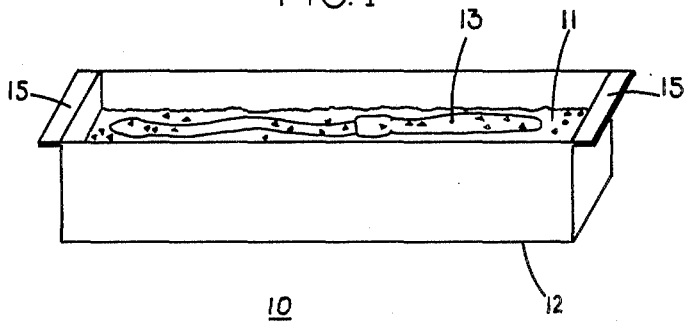


FIG. 2

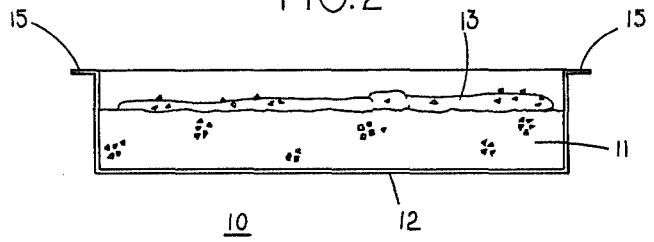
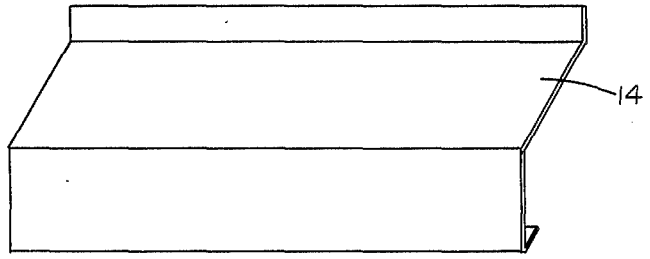


FIG. 3



METHOD AND APPARATUS FOR TEMPORARILY IMMOBILIZING AN EARTHWORM

BACKGROUND OF THE INVENTION

1. Technical Field.

This invention relates to the immobilization of live bait for use in fishing. In particular, the invention relates to a method and apparatus for the dewiggling of earthworms.

2. Background Art.

The use of live bait in fishing has long been known to be one of the most effective means for catching fish. The problem with live bait is that any creature has a natural tendency to resist the baiting process. A further complication in the specific case of earthworms is that they are naturally slimy. The ability of the earthworm to curl its body in almost any direction, connected with the fact that it is coated with slimy film, makes it extremely difficult for the fisherman to impale the earthworm with the fishing hook.

GRAHAM, U.S. Pat. No. 2,257,879, discloses a bait box having a compartment that is filled with a dry sand. The worm is dropped into the dry sand which adheres to the worm's body which makes it easier for the fisherman to hold onto the worm. The problem with the method is that the worm is still able to wiggle and curl its body, making it difficult for the fisherman to impale the worm on the fishing hook.

Accordingly, it is the object of this invention to provide a means for immobilizing an earthworm and thereby facilitating the impalement of the earthworm on a fishing hook by the fisherman.

DISCLOSURE OF INVENTION

These objects are accomplished by coating the earthworm with small sharp grained sand. Small sharp grained sand, as opposed to regular dry sand, has a dramatic affect on the worm's ability to curl its body.

A small rectangular container of sufficient length to harbor an earthworm is partially filled with sharp grained sand having a grain size equal or less than 1/20th of an inch. The rectangular container is also fitted with a removable cover which prevents sand spillage during transport. To dewiggle a worm, the fisherman has to simply set the worm in the rectangular container on top of the sharp grained sand. During the worm's natural locomotion process, the sand becomes partially imbedded in the earthworm and causes an immediate reaction wherein the earthworm completely relaxes. The earthworm is then effectively dewiggled and ready to be impaled onto the fishing hook.

Once the sand coated earthworm is immersed in water, the sand rinses free and the earthworm resume its normal wiggly character.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a top perspective view of the container and sand reservior with a worm.

FIG. **2** is a sectional side view of the container and sand reservoir with a worm.

FIG. **3** is a perspective view of the container cover.

BEST MODE FOR CARRYING OUT INVENTION

Referring to FIGS. **1**, **2** and **3**, an apparatus for the immobilization of earthworms is generally designated as

10 and is illustrated in its preferred embodiment. The first and only step in the immobilization of an earthworm by the preferred method is to coat the earthworm with small sharp grained sand **11** having a grain size equal to or less than 1/20th of an inch by momentarily depositing earthworm **13** on sand **11**.

The preferred apparatus for the immobilization of an earthworm has a reservoir of sharp grained sand **11** having a grain size equal to or less than 1/20th of an inch, and a rectangular container **12** for housing the sand reservoir.

Sand reservoir container **12** is sized for transverse insertion into a standard bait box, not shown. Retainer lips **15** are attached to and extend perpendicularly out from the top edges of the ends of container **12**. Retainer lips **15** are sized for cooperative engagement with the top edges of the sides of the bait box, so that when container **12** is transversely inserted into a bait box it is held suspended above the bottom of the bait box which contains a mixture of live worms and humus material.

Cover **14** is contoured to provide for a seal for sand reservoir container **12** and is held in place by the lid of the standard bait box.

To immobilize earthworm **13**, one merely deposits earthworm **13** on top of sand **11**. During the earthworm's natural locomotion process individual grains of sand **11** become partially imbedded in earthworm **13** and causes an immediate immobilizing reaction in earthworm **13**. As a result earthworm **13** will rapidly straighten out and become immobilized. Since earthworm **13** is covered with grains of sand **11**, it is not only immobilized, but also easy to pick up and handle.

Once earthworm **13** has been impaled upon the fisherman's hook, not shown, and immersed in water, said **11** washes off earthworm **13** and earthworm **13** will resume wiggling.

While there is shown and described the present preferred embodiment of the invention, it is to be distinctly understood that this invention is not limited thereto but may be variously embodied to practice within the scope of the following claims.

Accordingly, what I claim is:

1. An apparatus for temporarily immobilizing an earthworm which comprises:

a container for housing the a reservoir of sand;

a reservoir of sharp sand having a grain size of 1/20th of an inch or less.

2. The apparatus of claim **1** wherein said container further comprises:

a rectangular shaped container for holding a reservoir of sand, said rectangular container having a length slightly less than the width of a standard bait box;

retainer lips attached to and extending perpendicularly from the ends of said rectangular container for cooperative engagement with the top edges of the sides of a standard bait box for transversely suspending and supporting the rectangular container within the bait box;

a cover for cooperative engagement with the rectangular shaped container for containing the sand.

3. A method for immobilizing an earthworm which comprises partially coating said earthworm with a sharp grained sand having a grain size equal to or less than 1/20th of an inch.

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