CHAPTER 14 INTELLECTUAL PROPERTY

14.1 INTRODUCTION

The fruits of creative and inventive endeavor must be protected from the economic forces of free competition if society wishes to nurture future endeavors. Such endeavors would not occur if the advantages that accrue to the inventor/creator were dissipated as a result of imitation of the original. Thus, the area of intellectual property law seeks to preserve the benefits of creative and inventive endeavor by restricting other competitors from imitating, copying, appropriating, or otherwise attacking the intellectual work of the originator.

The legal basis for the protection of intellectual property is found in the U.S. Constitution.

The Congress shall have power... To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries. (Article 1, Sec. 8., Cl. 8.)

There are four areas of intellectual property that may affect the design professional:

a. Patents
b. Copyright
c. Trademarks
d. Trade Secrets

14.2 PATENTS

A patent is a temporary but exclusive right which is given under Federal law to the holder (patentee) to make, use, and sell the invention secured by the patent. That right is a monopoly power and it is given in order to encourage the development of new ideas and to provide an incentive to make the invention available to society. In addition, the use of patents provide the possibility that others may extend or develop the invention in ways that do not infringe upon the patent, thereby promoting further development of the original.

Patents may cover:

a. A process or technique of manufacturing
b. A machine
c. A product which is manufactured
d. A combination of matter which possesses qualities not found in the elements individually (e.g. a chemical compound such as a drug)
e. An improvement related to any of the above
f. The "ornamental" design of a product
g. A plant produced by asexual reproduction (not including naturally occurring plants that are newly discovered.

It should be noted that methods of doing business (such as a new accounting technique) are NOT patentable. Similarly, abstract ideas and concepts and scientific laws cannot be patented though applications derived from them may be. Even though an invention falls within one of the above groups it also must fulfill other criteria to be patentable:

a. NOVELTY. The doctrine of anticipation requires that a patent is not issued if prior to the "creation" of the invention, it has been known or used previously in the U.S., previously patented in the U.S. or other country, or described in a printed publication in the U.S. or other country. Further, if within one year prior to the application for the patent, the preceding conditions are met, the patent will not be issued.
b. OBVIOUS. The invention must not be obvious to a person having ordinary skill in the area.
c. UTILITY. Except for design patents, the invention must have utility (be useful).
d. CREATION. The party seeking the patent must be the creator/inventor. This can be a problem when there are several contributors.

e. ABANDONMENT. The invention must not be abandoned prior to the application for the patent. Abandonment can occur by direct action (express) or by implication by the conduct of the creator. For the latter, an excessive delay between the time of creation and application for a patent may constitute abandonment.


Applications for patents are handled by the Patent and Trademark Office of the U.S. department of Commerce. The application includes a specification of the invention with such detail as to enable a person who is skilled in the area to make and use it. The specification is examined by the patent examiner for detail and clarity and against prior patents to see if it meets the tests for patentability. Rejected applications can be amended and resubmitted and rejections can be appealed to the Board of Appeals at the P.T.O. and then to the U.S. Federal Courts (if unsuccessful). It should be noted that in patent suits, the majority of patents are found to be invalid. For example, in one study of patents over the period from 1920 to 1973, the Supreme Court found only 18 percent to be valid, the U.S. Court of Appeals found 35 percent valid, while the trial courts found only 45 percent to be valid. More recently, there is an even stronger tendency to find patents invalid.

Ownership and Transfer of Patents.

Design patents are given for a term of 14 years1 while other patents have a 17 year period of exclusive right to make, use, and sell the invention. The right can be assigned (in whole or in part) to other parties, or licensed. For an employer, if the employee was hired to do creative/inventive work, the rights must be assigned to the employer and the invention must be used solely for the benefit of the employer. Further, even if the employee was not hired for inventive/creative work, the shop right doctrine provides the employer with a non-exclusive royalty-free license to use the invention if it was created on "company time" and using "company facilities". In this situation, the employee will be the holder of the patent and can license or assign the patent to third parties.

Patent Infringement.

Infringement of patent rights can occur in a variety of ways.

a. DIRECT. A third party makes, uses or sells a patented invention without authorization. If the product is substantially equivalent to the protected subject matter a direct infringement also may be found. Designing around the patented invention may allow infringers to escape liability.

b. ACTIVE INDUCEMENT. If one party actively induces another’s infringement of a patent then the inducing party is liable for the infringement.

c. CONTRIBUTORY INFRINGEMENT. Contributory infringement occurs when one party knowingly sells a component of a patented invention (or something useful in employing a patented process) to another party. The component must be a material part of the patented invention and must not be a staple article of commerce.

Because of the highly specialized knowledge required when dealing in patent infringement (and even in obtaining a patent) the inventor/creator would be well advised to obtain the services of a patent attorney.

Defenses.

a. The subject material of the infringement does not fall within the scope of the patent.

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1. Note that a design patent can be challenges with some success if the conditions of novelty etc. are not extraordinary. Further, it is possible to “design around” the patent by changing some of the design elements. The question that is considered in an infringement suit is whether the differences are sufficient to constitute a different design.
b. The infringer may attack the validity of the patent.

c. Equitable estoppel - the patentee knowingly concealed or mis-represented material facts relating to the patent which causes "justifiable and detrimental reliance by the infringer".

d. Laches - The patentee waits for an unreasonable length of time before asserting rights

e. Patentee is guilty of patent misuse by over exploiting the patent monopoly. For example, requiring the purchaser of a license to buy other goods/licenses.

**Remedies.**

The patentee, if successful in a suit, will be awarded damages to compensate for the infringement, court costs, and interest. The damages will not be less than a reasonable royalty for the use of the invention. Treble (punitive) damages also may be awarded. Further, if the infringer applies the patented matter to any product which is sold (or exposed for sale), he/she is liable for the profits realized. Injunctive relief also may be given to prevent the further violation of patent rights.
14.3 COPYRIGHT.

The Copyright Reform Act of 1976 (and Title 17 of the United States Code) governs most copyright and legal issues arising from copyright violations. Copyright law provides restrictive privileges to the creator of original works/intellectual endeavors to prevent unauthorized uses of the work. As such, copyright provides an incentive for innovative activity while stimulating the "free movement of ideas, information and commerce".

Copyright law covers a range of creative endeavors including works of art\(^2\), books, periodicals, musical/dramatic compositions, motion pictures and sound recordings, lectures and computer programs (among others). Architectural designs and drawings are also covered by copyright law.\(^3\) The standard form of agreement between owner and architect (AIA contract 1987 - B141) addresses the fair use of architect’s drawings in Article 6.

6.1 The Drawings, Specifications and other documents prepared by the Architect for this project are instruments of the Architect’s service for use solely with respect to this Project and, unless otherwise provided, the Architect shall be deemed the author of these documents and shall retain all common law, statutory and other reserved rights, including the copyright. The Owner shall be permitted to retain copies, of the Architect’s Drawings, Specifications and other documents for information and reference in connection with the Owner’s use and occupancy of the Project. The Architect’s Drawings, Specifications or other documents shall not be used by the Owner or others on other projects, for additions to this Project or for completion of this Project by others, unless the Architect is adjudged to be in default under this Agreement, except by agreement in writing and with appropriate compensation to the Architect.

6.2 Submission or distribution of documents to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the Architect’s reserved rights.

For a work to be covered by copyright the following conditions must be met.

a. FIXED. The work must be conveyed in a tangible medium of expression that allows perception, reproduction, or communication.\(^4\)

b. ORIGINAL. The work must be the author’s own/original work.

c. CREATIVE. The work must be the result of skill and/or judgement.

d. EXPRESSIVE FORM. While copyright protection does NOT cover intangible ideas, concepts or principles, or discoveries, procedures, and processes (such as systems or methods of operation - which may be protected by Patents or as Trade Secrets), it may provide protection to the material form in which they are expressed.

For a work created after 1978, the copyright lasts for the lifetime of the author plus 50 years and exists even though the copyright is not registered with the Copyright Office, a branch of the Library of Congress. Copyright is initiated by the creation and fixing of a copyrightable work but registration is required prior to commencing a suit for infringement of copyright.

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2. The term works of art includes pictorial, graphic, and sculptural works. These are defined to include "two-dimensional and three-dimensional works of fine, graphic, and applied art; photographs; prints and art reproductions; maps, globes, charts, technical drawings, diagrams, and models. Such works shall include works of artistic craftsmanship insofar as their form but not their mechanical or utilitarian aspects are concerned. ... United States Code, Title 17, Copyrights.

3. An historical note to 17 U.S.C.A states:

"A special situation is presented by architectural works. An architect’s plans and drawings would, of course, be protected by copyright, but the extent to which protection would extend would depend on the circumstances. Purely nonfunctional or monumental structures would be subject to full copyright protection under the bill, and the same would be true of artistic sculpture or decorative embellishment added to a structure. On the other hand, where the only elements of shape in an architectural design are conceptually inseparable from the utilitarian aspects of the structure, copyright protection for the design would not be available." 17 U.S.C.A. S 102 Historical Notes

4. Pertinent to the condition of being in tangible form, an architect has the exclusive right to reproduce the work but this right is NOT extended to the making or construction of the design (17 U.S.C.A. s 113b - see historical note as well). This is because Title 17 "does not afford, to the owner of copyright in a work that portrays a useful article as such, any greater or lesser rights with respect to the making, distribution, or display of the useful article so portrayed than those afforded to such works under the law, whether title 17 or the common law or statutes of a State, in effect on December 31, 1977." That is, while the architect has a right to written representations of the design, the architect cannot prevent anyone from copying a structure based solely upon the observation of the structure since protection extends only to the graphical display (plans, drawings, specifications) of the design.
It should be noted that copyright might be invalidated if the owner does not provide notice of the copyright once the work is published. The form of the notice varies for different kinds of work but generally includes the use of the term "copyright", the year of first publication (or creation of the work) and the name of the copyright owner in a location which will give reasonable notice. Failure to provide notice may result in difficulties in suing for infringement against a party who claims that the infringement was innocent because of reliance upon the absence of the copyright notice.

The holder of the copyright has the exclusive right to:

- reproduce the work
- generate a derivative work (e.g. a movie based on a book)
- distribute/sell copies
- perform or display the work publicly.

Copyright initially is owned by the creator of the work but may be transferred. The rights may be transferred in whole or in part, or licensed and should be evidenced in writing.

**Infringement.**

Copyright infringement occurs when the copyright holder’s exclusive rights are violated. A violation occurs when the infringer "makes, uses, or distributes a literal copy of the work" or when there is a substantial similarity to the original. In the latter case, the holder of the copyright must demonstrate not only the substantial similarity but also that the infringer had access to the work. While access can be proven by reference to the extent of circulation of the original, the condition of "substantial similarity" is considered on a case-by-case judgement.

**Defenses.**

The primary defense to an infringement suit is based on the doctrine of fair use. Fair use is determined by reference to such factors as the purpose and character of the use, the nature of the copyrighted work, the extent of the portion of the work copied (when considered in relationship to the entire work) and the effect of the unlicensed use on the value of the original. Fair use is more likely to be determined when the purpose of the copying is educational in nature and there is no commercial benefit to the infringer.

**Remedies.**

Damages include the owner’s actual damages plus the profits that accrue to the infringer. Alternatively, statutory damages, not to exceed $50,000 can replace the basic remedy. Remedies might also include injunctive relief as well as the award of court costs and attorney’s fees. It should be noted that criminal penalties may occur for willful infringements when the infringer is pursuing commercial advantage.

**14.4 TRADEMARKS.**

Trademarks assist buyers in identifying products and services and thereby provide a reward for the manufacturer whose product is associated with its recognized trademark. Legal protection of the trademark prevents other manufacturers from usurping the benefits that should accrue to the original manufacturer from developing a superior product. Thus, trademark protection provides a stimulant for innovation and improvement in product (service) quality. Trademark pro-

5. With the passage of the Berne Convention Implementation Act of 1988, failure to affix a copyright notice to a work no longer results in the loss of the copyright. It should be noted that a copyright notice is still required for works published prior to adherence by the U.S. to the Berne Copyright Convention. Registration is still a prerequisite to the right to bring a copyright infringement suit.

6. Section 113 c states that "in the case of a work lawfully reproduced in useful articles that have been offered for sale or other distribution to the public, copyright does not include any rights to prevent the making, distribution, or display of pictures or photographs of such articles in connection with advertisements or commentaries related to the distribution or display of such articles, or in connection with news reports." 17 U.S.C.A
tection is provided by the Lanham Act (and other common law trademark doctrines and state statutes) and defines a mark to be any "word, name, symbol, or device, or any combination of these". In some situations, protection has been afforded to label and package designs, arrangements of numbers and letters (e.g. Chanel No. 5, 7-Eleven) and even colors and pictures. The shapes of goods and their containers can also be protected in some circumstances.

There are four kinds of marks defined in the Lanham Act:

a. Trade marks, used to distinguish goods
b. Service marks, used to identify services
c. Certification marks, used to certify the quality etc. of goods
d. Collective marks, used by members of groups/associations

To receive protection under the Lanham Act, the mark must be distinctive. That is, a mark must be suggestive/fanciful. While descriptive or generic marks usually are not protected, they will be afforded protection when they acquire a secondary meaning; that is they become firmly established in the minds of buyers (for example, the word "overnight" - when associated with the package delivery service). Marks that are NOT afforded protection include those that use the flags/insignia of governments; employ the name, signature or portrait of a living person; are immoral, deceptive, or scandalous; or are confusing or deceitful because of the similarity to other previously registered marks.

Registration.

Registration is administered by the U.S. Patent and Trademark Office (PTO). Applications are reviewed by examiners and applications can be contested by other parties who believe that injury will result if the mark is approved. The registered trademark is included in the Principal Register or Supplemental Register, giving nation-wide constructive notice of the owner’s right to use the mark. In addition, inclusion of the mark initiates protection by the U.S. Bureau of Customs against abuse of the mark by importers. The owner of the trademark must file an affidavit with the PTO stating that the mark is in use within a period of six years of the time of registration.

The trademark is afforded protection for a period of 20 years (renewals for additional 20 year periods are also possible) but protection can cease is a third party brings a successful cancellation proceeding (against a mark on the Principal Register) within five years of issuance of registration. There is no time limit for marks on the supplemental register. The transfer of trademark rights is accomplished with greater difficulty that either patents or copyrights. The mark may be licensed by the trademark owner but the owner is required to control the "nature and quality" of the goods and services that are the result of connection with the licensed trademark. The sale or assignment of the mark requires the sale of the goodwill that is associated with the original business/trade.

Trademark protection can be lost if the mark is abandoned, either by express statement/agreement or a failure to use the mark for a period of two years (thereby creating a presumption of abandonment). Protection of the mark may also be lost if the trademark becomes so common that it acquires a generic meaning - that is, it refers to a class of products/services rather than to a specific product/service (e.g. aspirin or Xerox).

Trademark Infringement.

Infringement occurs when one party uses the trademark without the explicit consent of the owner of the mark. In addition, a substantially similar mark, if used in advertisement of products/services in a manner which is likely to confuse or deceive, can constitute infringement.

Remedies.

Remedies include injunctive relief to prevent continued uses of the trademark by infringers of the owner’s rights to use the mark. In some situations, the owner may also receive monetary damages where the extent of such damages can be proven and related to the injury of infringement. Realized profits from the sale of products arising from the trademark infringement may also be awarded to the owner of the mark.
14.5 TRADE SECRETS

While information pertaining to trade processes and manufacturing operations may be protected by patent, in instances the inventor may wish to keep the information a secret (a condition that is not possible when a patent is obtained). In this situation the inventor relies on protection inherent within the trade secrets law. The law seeks to protect innovation by providing assurance that ideas cannot be exploited by others while maintaining free competition. A trade secret is defined as any “formula, process, device, or compilation of information used in business”. The trade secret must provide an advantage to the owner over his/her competitors, who are either unaware of the practice/information or do not employ it in their businesses. According to this definition, not only techniques of operation and manufacturing equipment and processes are covered as trade secrets but also such things as lists of customers. However, it should be realized that to constitute a trade secret, the information must possess some level or originality - though not as much as that required for patentability.

While absolute secrecy is not required, the information must be substantially secret. This requires that the business must prove that very few people were allowed access to the secret and that either they were required to sign nondisclosure agreements or the secret was disclosed on a confidential basis. Thus, if the information is public knowledge or is generally known in the trade, the information cannot be considered a trade secret.

The requirement of secrecy can be violated by independent discovery, as a result of publication (though advertising or by the owner obtaining a patent) or from the analysis of the product by the competition. Misappropriation of the trade secret can only occur if the secret is acquired by improper means (theft, trespassing, wiretapping, spying, bribing, or industrial espionage) or if the confidential relationship is breached. It should be noted that as a result of the agent’s duty of loyalty, an employee of the owner of a trade secret is generally bound not to use or disclose the secret to other parties either during the time of his/her employment or thereafter. The principal defense in a trade secret case is to show that the information was not a secret. This can be done in a professional setting by reference to existing literature in the area and demonstrating that a diligent search could arrive at the trade secret independently.

Trade secrets are often a concern when one or more employees leaves a firm and starts another business (or joins and existing business). The previous employer uses a confidentiality theory as well as the employment contract (which may include a nondisclosure agreement). Under such situations the employee may have had little choice but to sign the nondisclosure agreement and some courts have previously recognized the adhesive nature of such contracts since they are offered on a “take it or leave it” basis. That is, the employment contract may constitute a nonbargain and some courts may refuse to give literal effect to the agreement not to disclose. Alternatively, other courts look at disclosure as being disloyal and interpret disclosure as an attempt by the employee to “cash in” on past employment. Further, such nondisclosure restrictions on employees can be interpreted as unduly oppressive on the rights of employees to practice in their chosen trade or profession. The test that is used is whether restraint on the employee constitutes reasonable restraint after considering the needs of the employee, the employer and the public good.

Trade secrets (and the owner’s rights therein) can be transferred by assignment (sale - the title is transferred) or by licensing (title is retained). Since there is no time limitation on a trade secret, (unlike a patent) the information can be restricted for as long as it is kept secret.

14.6 COMMERCIAL TORTS.

There are also certain intentional torts which can be applied to professional/commercial activities.
Injurious Falsehood.

Injurious falsehood occurs when a competitor makes false statements that disparage a competitor’s business or property that result in economic loss. There are two types of injurious falsehood. One involves property rights in land or other material things and intangibles (referred to as slander of title), while the other disparages the quality of property, things and intangibles (trade libel). Thus, real estate, leases, trademarks, copyright and even the common stock of a company are protected.

In such cases, the plaintiff must prove the falsity of the statement and the fact that it was communicated to a third party. If damages are involved in the suit, the plaintiff must demonstrate that the false statements had a substantial role in the economic loss suffered. The loss can include the loss of prospective business, the cost of counteracting the false statements, losses resulting from existing customers, and the loss in value of the property which has been disparaged.

Interference with Contractual Relations.

In one party acts so as to interfere with another’s performance of a contract, and thereby causing either the loss of some part of the benefit resulting from performance or frustrates (prevents) the party from performing according to the contract, the contracted party is able to sue the interfering party.

Interference can range from threats of violence to mere persuasion but in all cases requires an effect on the performance of an existing contract. For liability to exist, the defendant must intend to cause a breach of contract, a condition which requires that the defendant has knowledge of the existence of the contract or of facts from which the existence of the contract can be inferred. Further, the defendant is liable if his/her behavior is improper or not privileged (requiring malice, spite, or simply the desire to meddle) though a party who interferes with a contract that is illegal or contrary to public policy is not liable. Similarly if the defendant has provided truthful information or requested information/advice, liability will be avoided.

7. Contracts include those which are voidable or terminable at the will of either party (such as employment contracts) but do not include void bargains or contracts to marry.
We must decide today what limits the operation of the federal patent system places on the States' ability to offer substantial protection to utilitarian and design ideas which the patent laws leave otherwise unprotected. In Corp. v. Italia, 777 F. 2d 678 (1985), the Court of Appeals for the Federal Circuit concluded that a California law prohibiting the use of the “direct molding process” to duplicate unpatented articles posed no threat to the policies behind the federal patent laws. In this case, the Florida Supreme Court came to a contrary conclusion. It struck down a Florida statute which prohibits the use of the direct molding process to duplicate unpatented boat hulls, finding that the protection offered by the Florida law conflicted with the balance struck by Congress in the federal patent statute between the encouragement of invention and free competition in unpatented ideas. We granted certiorari to resolve the conflict, and we now affirm the judgment of the Florida Supreme Court.

In September 1976, petitioner Bonito Boats, Inc. (Bonito), a Florida corporation, developed a hull design for a fiberglass recreational boat which it marketed under the trade name Bonito Boat Model 5VBR. App. 5. Designing the boat hull required substantial effort on the part of Bonito. A set of engineering drawings was prepared, from which a hardwood model was created. The hardwood model was then sprayed with fiberglass to create a mold, which then served to produce the finished fiberglass boats for sale. The 5VBR was placed on the market sometime in September 1976. There is no indication in the record that a patent application was ever filed for protection of the utilitarian or design aspects of the hull, or for the process by which the hull was manufactured. The 5VBR was favorably received by the boating public, and "a broad interstate market" developed for its sale.

In May 1983, after the Bonito 5VBR had been available to the public for over six years, the Florida Legislature enacted Fla. Stat. 559.94 (1987). The statute makes "[i]t... unlawful [****9] for any person to use the direct molding process to duplicate for the purpose of sale any manufactured vessel hull or component part of a vessel made by another without the written permission of that other person. " The statute also makes it unlawful for a person to "knowingly sell a vessel hull or component part of a vessel duplicated in violation of subsection (2)." 559.94(3). Damages, injunctive relief, and attorney's fees are made available to "[a]ny person who suffers injury or damage as the result of a violation" of the statute. 559.94(4). The statute was made applicable to vessel hulls or component parts duplicated through the use of direct molding after July 1, 1983. 559.94(5).

On December 21, 1984, Bonito filed this action in the Circuit Court of Orange County, Florida. The complaint alleged that respondent here, Thunder Craft Boats, Inc. (Thunder Craft), a Tennessee corporation, had violated the Florida statute by using the direct molding process to duplicate the Bonito 5VBR fiberglass hull, and had knowingly sold such duplicates in violation of the Florida statute. Bonito sought "a temporary and permanent injunction prohibiting Thunder Craft from continuing to unlawfully duplicate and sell Bonito Boat hulls or components," as well as an accounting of profits, treble damages, punitive damages, and attorney's fees.

Respondent filed a motion to dismiss the complaint, arguing that under this Court's decisions in Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225 (1964), and Compco Corp. v. Day-Brite Lighting, Inc., 376 U.S. 234 (1964), the Florida statute conflicted with federal patent law and was therefore invalid under the Supremacy Clause of the Federal Constitution. The trial court granted respondent's motion, and a divided Court of Appeals affirmed the dismissal of petitioner's complaint.

On appeal, a sharply divided Florida Supreme Court agreed with the lower courts' conclusion that the Florida law impermissibly interfered with the scheme established by the federal patent laws. The majority read our decisions in Sears and Compco for the proposition that "when an article is introduced into the public domain, only a patent can
eliminate the inherent risk of competition and then but for a limited time." Relying on the Federal Circuit's decision in the Interpart case, the three dissenting judges argued that the Florida anti-direct molding provision "does not prohibit the copying of an unpatented item. It prohibits one method of copying; the item remains in the public domain."

Article I, 8, cl. 8, of the Constitution gives Congress the power "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." The Patent Clause itself reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the "Progress of Science and useful Arts." As we have noted in the past, the Clause contains both a grant of power and certain limitations upon the exercise of that power. Congress may not create patent monopolies of unlimited duration, nor may it "authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available."

From their inception, the federal patent laws have embodied a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very life-blood of a competitive economy. Soon after the adoption of the Constitution, the First Congress enacted the Patent Act of 1790, which allowed the grant of a limited monopoly of 14 years to any applicant that "hath... invented or discovered any useful art, manufacture,... or device, or any improvement therein not before known or used." 1 Stat. 109, 110. In addition to novelty, the 1790 Act required that the invention be "sufficiently useful and important" to merit the 14-year right of exclusion. Ibid. Section 2 of the Act required that the patentee deposit with the Secretary of State, a specification and if possible a model of the new invention, "which specification shall be so particular, and said models so exact, as not only to distinguish the invention or discovery from other things before known and used, but also to enable a workman or other person skilled in the art or manufacture... to make, construct, or use the same, to the end that the public may have the full benefit thereof, after the expiration of the patent term." Ibid.

The Patent Act of 1793 carried over the requirement that the subject of a patent application be "not known or used before the application." Ch. 11, 1 Stat. 318, 319. A defense to an infringement action was created where "the thing, thus secured by patent, was not originally discovered by the patentee, but had been in use, or had been described in some public work anterior to the supposed discovery of the patentee." Id., at 322. Thus, from the outset, federal patent law has been about the difficult business "of drawing a line between the things which are worth to the public the embarrassment of an exclusive patent, and those which are not."

Protection is offered to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." 35 U. S. C. 101. Since 1842, Congress has also made protection available for "any new, original and ornamental design for an article of manufacture." 35 U. S. C. 171. To qualify for protection, a design must present an aesthetically pleasing appearance that is not dictated by function alone, and must satisfy the other criteria of patentability. The novelty requirement of patentability is presently expressed in 35 U. S. C. 102(a) and (b), which provide:

"A person shall be entitled to a patent unless --

"(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

"(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country more than one year prior to the date of application for patent in the United States...."

Sections 102(a) and (b) operate in tandem to exclude from consideration for patent protection knowledge that is already available to the public. They express a congressional determination that the creation of a monopoly in such information would not only serve no socially useful purpose, but would in fact injure the public by removing existing knowledge from public use. From the Patent Act of 1790 to the present day, the public sale of an unpatented article has acted as a complete bar to federal protection of the embodied idea. In the case of Pennock v. Dialogue, 2 Pet. 1 (1829), Justice Story applied these principles under the patent law of 1800. The patentee had developed a new technique for
the manufacture of rubber hose for the conveyance of air and fluids. The invention was reduced to practice in 1811, but letters patent were not sought and granted until 1818. In the interval, the patentee had licensed a third party to market the hose, and over 13,000 feet of the new product had been sold in the city of Philadelphia alone. The Court concluded that the patent was invalid due to the prior public sale, indicating that, "if [an inventor] suffers the thing he invented to go into public use, or to be publicly sold for use" "[h]is voluntary act or acquiescence in the public sale and use is an abandonment of his right." The Court noted that under the common law of England, letters patent were unavailable for the protection of articles in public commerce at the time of the application, and that this same doctrine was immediately embodied in the first patent laws passed in this country.

As the holding of Pennock makes clear, the federal patent scheme creates a limited opportunity to obtain a property right in an idea. Once an inventor has decided to lift the veil of secrecy from his work, he must choose the protection of a federal patent or the dedication of his idea to the public at large. As Judge Learned Hand once put it: "[I]t is a condition upon the inventor's right to a patent that he shall not exploit his discovery competitively after it is ready for patenting; he must content himself with either secrecy or legal monopoly." Metallizing Engineering Co. v. Kenyon Bearing & Auto Parts Co., 153 F. 2d 516, 520 (CA2) (1946).

In addition to the requirements of novelty and utility, the federal patent law has long required that an innovation not be anticipated by the prior art in the field. Even if a particular combination of elements is "novel" in the literal sense of the term, it will not qualify for federal patent protection if its contours are so traced by the existing technology in the field that the "improvement is the work of the skillful mechanic, not that of the inventor." Hotchkiss v. Greenwood, 11 How. 248, 267 (1851). In 1952, Congress codified this judicially developed requirement in 35 U. S. C. 103, which refuses protection to new developments where "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art to which said subject matter pertains." The nonobviousness requirement extends the field of unpatentable material beyond that which is known to the public under 102, to include that which could readily be deduced from publicly available material by a person of ordinary skill in the pertinent field of endeavor. Taken together, the novelty and nonobviousness requirements express a congressional determination that the purposes behind the Patent Clause are best served by free competition and exploitation of either that which is already available to the public or that which may be readily discerned from publicly available material.

The applicant whose invention satisfies the requirements of novelty, nonobviousness, and utility, and who is willing to reveal to the public the substance of his discovery and "the best mode... of carrying out his invention," 35 U. S. C. 112, is granted "the right to exclude others from making, using, or selling the invention throughout the United States," for a period of 17 years. 35 U. S. C. 154. The federal patent system thus embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years. "[T]he inventor may keep his invention secret and reap its fruits indefinitely. In consideration of its disclosure and the consequent benefit to the community, the patent is granted. An exclusive enjoyment is guaranteed him for seventeen years, but upon expiration of that period, the knowledge of the invention inures to the people, who are thus enabled without restriction to practice it and profit by its use."


The attractiveness of such a bargain, and its effectiveness in inducing creative effort and disclosure of the results of that effort, depend almost entirely on a backdrop of free competition in the exploitation of unpatented designs and innovations. The novelty and nonobviousness requirements of patentability embody a congressional understanding, implicit in the Patent Clause itself, that free exploitation of ideas will be the rule, to which the protection of a federal patent is the exception. Moreover, the ultimate goal of the patent system is to bring new designs and technologies into the public domain through disclosure. State law protection for techniques and designs whose disclosure has already been induced by market rewards may conflict with the very purpose of the patent laws by decreasing the range of ideas available as the building blocks of further innovation. The offer of federal protection from competitive exploitation of intellectual property would be rendered meaningless in a world where substantially similar state law protections were readily available. To a limited extent, the federal patent laws must determine not only what is protected, but also what is free for all to use. Arkansas Electric Cooperative Corp. v. Arkansas Public Service Commission, 461 U.S. 375, 384
Thus our past decisions have made clear that state regulation of intellectual property must yield to the extent that it clashes with the balance struck by Congress in our patent laws. The tension between the desire to freely exploit the full potential of our inventive resources and the need to create an incentive to deploy those resources is constant. Where it is clear how the patent laws strike that balance in a particular circumstance, that is not a judgment the States may second-guess. We have long held that after the expiration of a federal patent, the subject matter of the patent passes to the free use of the public as a matter of federal law. See Coats v. Merrick Thread Co., 149 U.S. 562, 572 (1893) (“[P]laintiff's right to the use of the embossed periphery expired with their patent, and the public had the same right to make use of it as if it had never been patented”); Kellogg Co. v. National Biscuit Co., 305 U.S. 111 (1938); Singer Mfg. Co. v. June Mfg. Co., 163 U.S. 169 (1896). Where the public has paid the congressionally mandated price for disclosure, the States may not render the exchange fruitless by offering patent-like protection to the subject matter of the expired patent. “It is self-evident that on the expiration of a patent the monopoly created by it ceases to exist, and the right to make the thing formerly covered by the patent becomes public property.” Singer, supra, at 185.

In our decisions in Sears, Roebuck & Co. v. Stiffel Co., 376 U.S. 225 (1964), and Compco Corp. v. Day-Brite Lighting, Inc., 376 U.S. 234 (1964), we found that publicly known design and utilitarian ideas which were unprotected by patent occupied much the same position as the subject matter of an expired patent. The Sears case involved a pole lamp originally designed by the plaintiff Stiffel, who had secured both design and mechanical patents on the lamp. Sears purchased unauthorized copies of the lamps, and was able to sell them at a retail price practically equivalent to the wholesale price of the original manufacturer. Sears, supra, at 226. Stiffel brought an action against Sears in Federal District Court, alleging infringement of the two federal patents and unfair competition under Illinois law. The District Court found that Stiffel's patents were invalid due to anticipation in the prior art, but nonetheless enjoined Sears from further sales of the duplicate lamps based on a finding of consumer confusion under the Illinois law of unfair competition. The Court of Appeals affirmed, coming to the conclusion that the Illinois law of unfair competition prohibited product simulation even in the absence of evidence that the defendant took some further action to induce confusion as to source. This Court reversed, finding that the unlimited protection against copying which the Illinois law accorded an unpatentable item whose design had been fully disclosed through public sales conflicted with the federal policy embodied in the patent laws. The Court stated:

"In the present case the 'pole lamp' sold by Stiffel has been held not to be entitled to the protection of either a mechanical or a design patent. An unpatentable article, like an article on which the patent has expired, is in the public domain and may be made and sold by whoever chooses to do so. What Sears did was to copy Stiffel's design and sell lamps almost identical to those sold by Stiffel. This it had every right to do under the federal patent laws.” 376 U.S., at 231.

A similar conclusion was reached in Compco, where the District Court had extended the protection of Illinois' unfair competition law to the functional aspects of an unpatented fluorescent lighting system. The injunction against copying of an unpatented article, freely available to the public, impermissibly "interfer[ed] with the federal policy, found in Art. I, 8, cl. 8, of the Constitution and in the implementing federal statutes, of allowing free access to copy whatever the federal patent and copyright laws leave in the public domain." Compco, supra, at 237.

The pre-emptive sweep of our decisions in Sears and Compco has been the subject of heated scholarly and judicial debate. See, e.g., Symposium, Product Simulation: A Right or a Wrong?, 64 Colum. L. Rev. 1178 (1964); Lear, Inc. v. Adkins, 395 U.S. 653, 676 (1969) (Black, J., concurring in part and dissenting in part). Read at their highest level of generality, the two decisions could be taken to stand for the proposition that the States are completely disabled from offering any form of protection to articles or processes which fall within the broad scope of patentable subject matter. See id., at 677. Since the potentially patentable includes "anything under the sun that is made by man," Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980), the broadest reading of Sears would prohibit the States from regulating the deceptive simulation of trade dress or the tortious appropriation of private information.
That the extrapolation of such a broad pre-emptive principle from Sears is inappropriate is clear from the balance struck in Sears itself. The Sears Court made it plain that the States “may protect businesses in the use of their trademarks, labels, or distinctive dress in the packaging of goods so as to prevent others, by imitating such markings, from misleading purchasers as to the source of the goods.” Sears, supra, at 232. Trade dress is, of course, potentially the subject matter of design patents. Yet our decision in Sears clearly indicates that the States may place limited regulations on the circumstances in which such designs are used in order to prevent consumer confusion as to source. Thus, while Sears speaks in absolutist terms, its conclusion that the States may place some conditions on the use of trade dress indicates an implicit recognition that all state regulation of potentially patentable but unpatented subject matter is not ipso facto pre-empted by the federal patent laws.

What was implicit in our decision in Sears, we have made explicit in our subsequent decisions concerning the scope of federal pre-emption of state regulation of the subject matter of patent. Thus, in Kewanee Oil Co. v. Bicron Corp., 416 U.S. 470 (1974), we held that state protection of trade secrets did not operate to frustrate the achievement of the congressional objectives served by the patent laws. Despite the fact that state law protection was available for ideas which [*28] clearly fell within the subject matter of patent, the Court concluded that the nature and degree of state protection did not conflict with the federal policies of encouragement of patentable invention and the prompt disclosure of such innovations.

Several factors were critical to this conclusion. First, because the public awareness of a trade secret is by definition limited, the Court noted that “the policy that matter once in the public domain must remain in the public domain is not incompatible with the existence of trade secret protection.” Id., at 484. Second, the Kewanee Court emphasized that “[t]rade secret law provides far weaker protection in many respects than the patent law.” Id., at 489-490. This point was central to the Court's conclusion that trade secret protection did not conflict with either the encouragement or disclosure policies of the federal patent law. The public at large remained free to discover and exploit the trade secret through reverse engineering of products in the public domain or by independent creation. Id., at 490. Thus, the possibility that trade secret protection would divert inventors from the creative effort necessary to satisfy the rigorous demands of patent protection was remote indeed. Ibid. Finally, certain aspects of trade secret law operated to protect noneconomic interests outside the sphere of congressional concern in the patent laws. As the Court noted, “[A] most fundamental human right, that of privacy, is threatened when industrial espionage is condoned or is made profitable.” Id., at 487 (footnote omitted). There was no indication that Congress had considered this interest in the balance struck by the patent laws, or that state protection for it would interfere with the policies behind the patent system.

We have since reaffirmed the pragmatic approach which Kewanee takes to the pre-emption of state laws dealing with the protection of intellectual property. See Aronson, 440 U.S., at 262 (“State law is not displaced merely because the contract relates to intellectual property which may or may not be patentable; the states are free to regulate the use of such intellectual property in any manner not inconsistent with federal law”). At the same time, we have consistently reiterated the teaching of Sears and Compco that ideas once placed before the public without the protection of a valid patent are subject to appropriation without significant restraint. Aronson, supra, at 263.

At the heart of Sears and Compco is the conclusion that the efficient operation of the federal patent system depends upon substantially free trade in publicly known, unpatented design and utilitarian conceptions. In Sears, the state law offered “the equivalent of a patent monopoly,” 376 U.S., at 233, in the functional aspects of a product which had been placed in public commerce absent the protection of a valid patent. While, as noted above, our decisions since Sears have taken a decidedly less rigid view of the scope of federal pre-emption under the patent laws, we believe that the Sears Court correctly concluded that the States may not offer patent-like protection to intellectual creations which would otherwise remain unprotected as a matter of federal law. Both the novelty and the nonobviousness requirements of federal patent law are grounded in the notion that concepts within the public grasp, or those so obvious that they readily could be, are the tools of creation available to all. They provide the baseline of free competition upon which the patent system's incentive to creative effort depends. A state law that substantially interferes with the enjoyment of an unpatented utilitarian or design conception which has been freely disclosed by its author to the public at large impermissibly contravenes the ultimate goal of public disclosure and use which is the centerpiece of federal patent policy.
Moreover, through the creation of patent-like rights, the States could essentially redirect inventive efforts away from the careful criteria of patentability developed by Congress over the last 200 years. We understand this to be the reasoning at the core of our decisions in Sears and Compco, and we reaffirm that reasoning today.

We believe that the Florida statute at issue in this case so substantially impedes the public use of the otherwise unprotected design and utilitarian ideas embodied in unpatented boat hulls as to run afoul of the teaching of our decisions in Sears and Compco. It is readily apparent that the Florida statute does not operate to prohibit "unfair competition" in the usual sense that the term is understood. The law of unfair competition has its roots in the common-law tort of deceit: its general concern is with protecting consumers from confusion as to source. While that concern may result in the creation of "quasi-property rights" in communicative symbols, the focus is on the protection of consumers, not the protection of producers as an incentive to product innovation. Judge Hand captured the distinction well in Crescent Tool Co. v. Kilborn & Bishop Co., 247 F. 299, 301 (CA2 1917), where he wrote: "[T]he plaintiff has the right not to lose his customers through false representations that those are his wares which in fact are not, but he may not monopolize any design or pattern, however trifling. The defendant, on the other hand, may copy plaintiff's goods slavishly down to the minutest detail: but he may not represent himself as the plaintiff in their sale."

With some notable exceptions, including the interpretation of the Illinois law of unfair competition at issue in Sears and Compco, the common-law tort of unfair competition has been limited to protection against copying of nonfunctional aspects of consumer products which have acquired secondary meaning such that they operate as a designation of source. The "protection" granted a particular design under the law of unfair competition is thus limited to one context where consumer confusion is likely to result; the design "idea" itself may be freely exploited in all other contexts. In contrast to the operation of unfair competition law, the Florida statute is aimed directly at preventing the exploitation of the design and utilitarian conceptions embodied in the product itself. The sparse legislative history surrounding its enactment indicates that it was intended to create an inducement for the improvement of boat hull designs. See Tr. of Meeting of Transportation Committee, Florida House of Representatives, May 3, 1983, reprinted at App. 22 ("[T]here is no inducement for [a] quality boat manufacturer to improve these designs and secondly, if he does, it is immediately copied. This would prevent that and allow him recourse in circuit court"). To accomplish this goal, the Florida statute endows the original boat hull manufacturer with rights against the world, similar in scope and operation to the rights accorded a federal patentee. Like the patentee, the beneficiary of the Florida statute may prevent a competitor from "making" the product in what is evidently the most efficient manner available and from "selling" the product when it is produced in that fashion. The Florida scheme offers this protection for an unlimited number of years to all boat hulls and their component parts, without regard to their ornamental or technological merit. Protection is available for subject matter for which patent protection has been denied or has expired, as well as for designs which have been freely revealed to the consuming public by their creators.8

In this case, the Bonito 5VBR fiberglass hull has been freely exposed to the public for a period in excess of six years. For purposes of federal law, it stands in the same stead as an item for which a patent has expired or been denied: it is unpatented and unpatentable. Whether because of a determination of unpatentability or other commercial concerns,

8. In some respects, the protection accorded by the Florida statute resembles that of a so-called "product-by-process" patent. Such a claim is one in which the product is defined at least in part in terms of the method or process by which it is made." D. Chisum, Patents 8.05, p. 8-67 (1988). As long as the end product of the process is adequately defined and novel and nonobvious, a patent in the process may support a patent in the resulting product. See U. S. Patent and Trademark Office, Manual of Patent Examining Procedure 706.03(e) (5th rev. ed. 1986) ("An article may be claimed by a process of making it provided it is definite"). The Florida statute at issue here grants boat hull manufacturers substantial control over the use of a particular process and the sale of an article created by that process without regard to the novelty or nonobviousness of either the end product or the process by which it was created. Under federal law, this type of protection would be unavailable to petitioner absent satisfaction of the requirements of patentability.
petitioner chose to expose its hull design to the public in the marketplace, eschewing the bargain held out by the federal patent system of disclosure in exchange for exclusive use. Yet, the Florida statute allows petitioner to reassert a substantial property right in the idea, thereby constricting the spectrum of useful public knowledge. Moreover, it does so without the careful protections of high standards of innovation and limited monopoly contained in the federal scheme. We think it clear that such protection conflicts with the federal policy "that all ideas in general circulation be dedicated to the common good unless they are protected by a valid patent." Lear, Inc. v. Adkins, 395 U.S., at 668.

That the Florida statute does not remove all means of reproduction and sale does not eliminate the conflict with the federal scheme. In essence, the Florida law prohibits the entire public from engaging in a form of reverse engineering of a product in the public domain. This is clearly one of the rights vested in the federal patent holder, but has never been a part of state protection under the law of unfair competition or trade secrets. See Kewanee, 416 U.S., at 476 ("A trade secret law, however, does not offer protection against discovery by... so-called reverse engineering, that is by starting with the known product and working backward to divine the process which aided in its development or manufacture"); see also Chicago Lock Co. v. Fanberg, 676 F. 2d 400, 405 (CA9 1982) ("A lock purchaser's own reverse-engineering of his own lock, and subsequent publication of the serial number-key code correlation, is an example of the independent invention and reverse engineering expressly allowed by trade secret doctrine"). The duplication of boat hulls and their component parts may be an essential part of innovation in the field of hydrodynamic design. Variations as to size and combination of various elements may lead to significant advances in the field. Reverse engineering of chemical and mechanical articles in the public domain often leads to significant advances in technology. If Florida may prohibit this particular method of study and recomposition of an unpatented article, we fail to see the principle that would prohibit a State from banning the use of chromatography in the reconstitution of unpatented chemical compounds, or the use of robotics in the duplication of machinery in the public domain.

Moreover, as we noted in Kewanee, the competitive reality of reverse engineering may act as a spur to the inventor, creating an incentive to develop inventions that meet the rigorous requirements of patentability. The Florida statute substantially reduces this competitive incentive, thus eroding the general rule of free competition upon which the attractiveness of the federal patent bargain depends. The protections of state trade secret law are most effective at the developmental stage, before a product has been marketed and the threat of reverse engineering becomes real. During this period, patentability will often be an uncertain prospect, and to a certain extent, the protection offered by trade secret law may "dovetail" with the incentives created by the federal patent monopoly. Under the Florida scheme, the would-be inventor is aware from the outset of his efforts that rights against the public are available regardless of his ability to satisfy the rigorous standards of patentability. Indeed, it appears that even the most mundane and obvious changes in the design of a boat hull will trigger the protections of the statute. See Fla. Stat. 559.94(2) (1987) (protecting "any manufactured vessel hull or component part"). Given the substantial protection offered by the Florida scheme, we cannot dismiss as hypothetical the possibility that it will become a significant competitor to the federal patent laws, offering investors similar protection without the quid pro quo of substantial creative effort required by the federal statute. The prospect of all 50 States establishing similar protections for preferred industries without the rigorous requirements of patentability prescribed by Congress could pose a substantial threat to the patent system's ability to accomplish its mission of promoting progress in the useful arts.

Finally, allowing the States to create patent-like rights in various products in public circulation would lead to administrative problems of no small dimension. The federal patent scheme provides a basis for the public to ascertain the status of the intellectual property embodied in any article in general circulation. Through the application process, detailed information concerning the claims of the patent holder is compiled in a central location. The availability of damages in an infringement action is made contingent upon affixing a notice of patent to the protected article. The notice requirement is designed "for the information of the public," Wine Railway Appliance Co.v. Enterprise Railway Equipment Co., 297 U.S. 387, 397 (1936), and provides a ready means of discerning the status of the intellectual property embodied in an article of manufacture or design. The public may rely upon the lack of notice in exploiting shapes and designs accessible to all. See Devices for Medicine, Inc. v. Boehl, 822 F. 2d 1062, 1066 (CA Fed. 1987)("Having sold the product unmarked, [the patentee] could hardly maintain entitlement to damages for its use by a purchaser uninformed that such use would violate [the] patent").
The Florida scheme blurs this clear federal demarcation between public and private property. One of the fundamental purposes behind the Patent and Copyright Clauses of the Constitution was to promote national uniformity in the realm of intellectual property. Since the Patent Act of 1800, Congress has lodged exclusive jurisdiction of actions "arising under" the patent laws in the federal courts, thus allowing for the development of a uniform body of law in resolving the constant tension between private right and public access.

Recently, Congress conferred exclusive jurisdiction of all patent appeals on the Court of Appeals for the Federal Circuit, in order to "provide nationwide uniformity in patent law." H. R. Rep. No. 97-312, p. 20 (1981). This purpose is frustrated by the Florida scheme, which renders the status of the design and utilitarian "ideas" embodied in the boat hulls it protects uncertain. Given the inherently ephemeral nature of property in ideas, and the great power such property has to cause harm to the competitive policies which underlay the federal patent laws, the demarcation of broad zones of public and private right is "the type of regulation that demands a uniform national rule." Ray v. Atlantic Richfield Co., 435 U.S. 151, 179 (1978). Absent such a federal rule, each State could afford patent-like protection to particularly favored home industries, effectively insulating them from competition from outside the State.

Petitioner and its supporting amici place great weight on the contrary decision of the Court of Appeals for the Federal Circuit in Interpart Corp. v. Italia. In upholding the application of the California "antidirect molding" statute to the duplication of unpatented automobile mirrors, the Federal Circuit stated: "The statute prevents unscrupulous competitors from obtaining a product and using it as the 'plug' for making a mold. The statute does not prohibit copying the design of the product in any other way; the latter if in the public domain, is free for anyone to make, use or sell." 777 F. 2d, at 685. The court went on to indicate that "the patent laws say nothing about the right to copy or the right to use, they speak only in terms of the right to exclude." Ibid.

We find this reasoning defective in several respects. The Federal Circuit apparently viewed the direct molding statute at issue in Interpart as a mere regulation of the use of chattels. Yet, the very purpose of antidirect molding statutes is to "reward" the "inventor" by offering substantial protection against public exploitation of his or her idea embodied in the product. Such statutes would be an exercise in futility if they did not have precisely the effect of substantially limiting the ability of the public to exploit an otherwise unprotected idea. As amicus points out, the direct molding process itself has been in use since the early 1950's. Indeed, U. S. Patent No. 3,419,646, issued to Robert L. Smith in 1968, explicitly discloses and claims a method for the direct molding of boat hulls. The specifications of the Smith Patent indicate that "[i]t is a major object of the present invention to provide a method for making large molded boat hull molds at very low cost, once a prototype hull has been provided." App. to Brief for Charles E. Lipsey as Amicus Curiae 15a. In fact, it appears that Bonito employed a similar process in the creation of its own production mold. It is difficult to conceive of a more effective method of creating substantial property rights in an intellectual creation than to eliminate the most efficient method for its exploitation. Sears and Compco protect more than the right of the public to contemplate the abstract beauty of an otherwise unprotected intellectual creation -- they assure its efficient reduction to practice and sale in the marketplace.

Appending the conclusionary label "unscrupulous" to such competitive behavior merely endorses a policy judgment which the patent laws do not leave the States free to make. Where an item in general circulation is unprotected by patent, "[r]eproduction of a functional attribute is legitimate competitive activity." Inwood Laboratories, Inc. v. Ives Laboratories, Inc., 456 U.S. 844, 863 (1982) (White, J., concurring in result). Finally, we are somewhat troubled by the Interpart court's reference to the Mine Safety case for the proposition that the patent laws say "nothing about the right to copy or the right to use." As noted above, the federal standards for patentability, at a minimum, express the congressional determination that patent-like protection is unwarranted as to certain classes of intellectual property. The States are simply not free in this regard to offer equivalent protections to ideas which Congress has determined should belong to all. For almost 100 years it has been well established that in the case of an expired patent, the federal patent laws do create a federal right to "copy and to use." Sears and Compco extended that rule to potentially patentable ideas which are fully exposed to the public. The Interpart court's assertion to the contrary is puzzling and flies in the face of the same court's decisions applying the teaching of Sears and Compco in other contexts. See Power Controls Corp. v. Hybrinetics, Inc., 806 F. 2d 234, 240 (CA Fed. 1986) ("It is well established... that an action for unfair competition cannot be based upon a functional design"); Gemveto Jewelry Co. v. Jeff Cooper Inc., 800F. 2d 256, 259 (CA Fed.
(vacating injunction against copying of jewelry designs issued under state law of unfair competition "in view of the Sears and Compco decisions which hold that copying of the article itself that is unprotected by the federal patent and copyright laws cannot be protected by state law").

Our decisions since Sears and Compco have made it clear that the Patent and Copyright Clauses do not, by their own force or by negative implication, deprive the States of the power to adopt rules for the promotion of intellectual creation within their own jurisdictions. Thus, where "Congress determines that neither federal protection nor freedom from restraint is required by the national interest," Goldstein v. California, 412 U.S. 546, 559 (1973), the States remain free to promote originality and creativity in their own domains.

Nor does the fact that a particular item lies within the subject matter of the federal patent laws necessarily preclude the States from offering limited protection which does not impermissibly interfere with the federal patent scheme. As Sears itself makes clear, States may place limited regulations on the use of unpatented designs in order to prevent consumer confusion as to source. In Kewanee, we found that state protection of trade secrets, as applied to both patentable and unpatentable subject matter, did not conflict with the federal patent laws. In both situations, state protection was not aimed exclusively at the promotion of invention itself, and the state restrictions on the use of unpatented ideas were limited to those necessary to promote goals outside the contemplation of the federal patent scheme. Both the law of unfair competition and state trade secret law have coexisted harmoniously with federal patent protection for almost 200 years, and Congress has given no indication that their operation is inconsistent with the operation of the federal patent laws.

Indeed, there are affirmative indications from Congress that both the law of unfair competition and trade secret protection are consistent with the balance struck by the patent laws. Section 43(a) of the Lanham Act, 60 Stat. 441, <=88> 15 U. S. C. 1125(a), creates a federal remedy for making "a false designation of origin, or any false description or representation, including words or other symbols tending falsely to describe or represent the same...." Congress has thus given federal recognition to many of the concerns that underlie the state tort of unfair competition, and the application of Sears and Compco to nonfunctional aspects of a product which have been shown to identify source must take account of competing federal policies in this regard. Similarly, as Justice Marshall noted in his concurring opinion in Kewanee: "State trade secret laws and the federal patent laws have co-existed for many, many, years. During this time, Congress has repeatedly demonstrated its full awareness of the existence of the trade secret system, without any indication of disapproval. Indeed, Congress has in a number of instances given explicit federal protection to trade secret information provided to federal agencies." Kewanee, supra, at 494. The case for federal pre-emption is particularly weak where Congress has indicated its awareness of the operation of state law in a field of federal interest, and has nonetheless decided to "stand by both concepts and to tolerate whatever tension there [is] between them." Silkwood v. Kerr-McGee Corp., 464 U.S. 238, 256 (1984). The same cannot be said of the Florida statute at issue here, which offers protection beyond that available under the law of unfair competition or trade secret, without any showing of consumer confusion, or breach of trust or secrecy.

The Florida statute is aimed directly at the promotion of intellectual creation by substantially restricting the public's ability to exploit ideas that the patent system mandates shall be free for all to use. Like the interpretation of Illinois unfair competition law in Sears and Compco, the Florida statute represents a break with the tradition of peaceful coexistence between state market regulation and federal patent policy. The Florida law substantially restricts the public's ability to exploit an unpatented design in general circulation, raising the specter of state-created monopolies in a host of useful shapes and processes for which patent protection has been denied or is otherwise unobtainable. It thus enters a field of regulation which the patent laws have reserved to Congress. The patent statute's careful balance between public right and private monopoly to promote certain creative activity is a "scheme of federal regulation... so pervasive as to make reasonable the inference that Congress left no room for the States to supplement it." Rice v. Santa Fe Elevator Corp., 331 U.S. 218, 230 (1947).

Congress has considered extending various forms of limited protection to industrial design either through the copyright laws or by relaxing the restrictions on the availability of design patents. Congress explicitly refused to take this step in the copyright laws, and despite sustained criticism for a number of years, it has declined to alter the patent protections
presently available for industrial design. It is for Congress to determine if the present system of design and utility patents is ineffectual in promoting the useful arts in the context of industrial design. By offering patent-like protection for ideas deemed unprotected under the present federal scheme, the Florida statute conflicts with the "strong federal policy favoring free competition in ideas which do not merit patent protection." Lear, Inc., 395 U.S., at 656. We therefore agree with the majority of the Florida Supreme Court that the Florida statute is preempted by the Supremacy Clause, and the judgment of that court is hereby affirmed.

It is so ordered.
This is an action for copyright infringement arising in the context of the 1982 World's Fair in Knoxville, Tennessee. Plaintiff alleges that the bankrupt, Marc Arion Cardoso, designed the "Tower of Power," a proposed theme structure for the Fair, also known as an "energy exposition." Denton aff. See Appendix, Figs. 1, 2. Plaintiff further says that defendants copied and unlawfully used Cardoso's design in creating and marketing the "Sunsphere" structure that was built on the Fair site. See Appendix, Figs. 3, 4. Plaintiff's structure was never built as originally designed. Defendants now move for summary judgment. They say that, as a matter of law, no substantial similarity exists between the two designs. Both sides have thoroughly briefed the issue and filed copies of the controversial designs.

In order for plaintiff to recover in his infringement action, he must prove that he is the owner of the copyright claimed and that defendants copied his original work. Plaintiff may prove "copying" by showing that defendants had access to his work and that his work and defendants' work are substantially similar. The test for substantial similarity between the works is whether the ordinary lay observer would conclude that one was copied from the other. See Durham Industries, Inc. v. Tomy Corp., 630 F.2d 905, 913 (2nd Cir. 1980); Universal Athletic Sales Co. v. Salkeld, 511 F.2d 904, 907 (3rd Cir. 1975), cert. denied 423 U.S. 863, 46 L. Ed. 2d 92, 96 S. Ct. 122 (1975).

A general impression of similarity in design is not enough to make out an infringement case, however. Copyright protection extends to the "expression" of ideas but not to "ideas" themselves. 17 U.S.C. @ 102(b). The use of plaintiff's ideas alone is therefore not copyright infringement. Likewise, mechanical or utilitarian aspects of work are not protected by copyright. 17 U.S.C. S. 101, 102. If, as a matter of law, no reasonable trier of fact could find that defendants works are substantially similar to the protected aspects of plaintiff's work, summary judgment may be granted for defendants. See Durham Industries, Inc., 630 F.2d 905.

Architectural plans are subject to copyright protection. See Imperial Homes Corp. v. Lamont, 458 F.2d 895 (5th Cir. 1972). As for other protected works, access and substantial similarity are essential elements of a copyright infringement action. <=14> Id. at 900. The House Report on the Copyright Act of 1976 further elaborates on architectural works:

A special situation is presented by architectural works. An architect's plans and drawings would, of course, be protected by copyright, but the extent to which that protection would extend to the structure depicted would depend on the circumstances. Purely non-functional or monumental structures would be subject to full copyright protection under the bill, and the same would be true of artistic sculpture or decorative ornamentation or embellishment added to a structure. On the other hand, where the only elements of shape in an architectural design are conceptually inseparable from the utilitarian aspects of the structure, copyright protection for the design would not be available.


Turning to the designs at issue here, initially we are impressed by the virtual absence of similarity of specific features between Cardoso's and defendants' structural designs. Both parties' designs depict enclosed buildings set atop elevated towers. Cardoso's proposed towers appear to be more enclosed, quite unlike the open steel framework of the Sunsphere tower. Cardoso's towers also appear to have at least twice the number of sides as the six-sided Sunsphere. The bases
of Cardoso's structural designs are broad in relation to the upper towers and the elevated buildings. The Sunsphere's base is much narrower in relation to its tower and the elevated sphere. The projected height of Cardoso's tower is also substantially greater than the Sunsphere's height.

Cardoso proposed two structural designs for the building atop his tower. His saucer-like design is clearly distinguishable from defendants' spherical building. Cardoso's alternative spherical design is similar in shape to defendants' Sunsphere. The sphere dimensions in relation to the respective towers are of different proportions, however.

Despite the obvious distinctive design features, plaintiff asserts that a factual issue as to similarity bars summary judgment. He asserts that expert testimony is necessary to analyze Cardoso's renderings and sketches. In support of the argument that similarities exist, plaintiff says defendants removed a portion of Cardoso's tower base and attached Cardoso's globe design to it. See Fig. 5. he says that the derivative design is substantially similar to the Sunsphere. Indeed, the structures do share more common features after the proposed alteration. We must reject plaintiff's contentions, however.

First, this theory relies on the alteration of a dubious extrapolation of the designs that are the subject of this infringement action. The proposed alterations substantially change the concept and visual impression of plaintiff's originals. Plaintiff seems to be asserting that he has the exclusive right to design and erect a tower with a spherical building on top of it. The use of towers in architectural designs is certainly not unique. See Ex. 4 to Denton Aff., see also Cardoso aff. Likewise, the incorporation of a spherical structure into the design is no more than an "idea." Since ideas are not protected by copyright, plaintiff's arguments are without merit.

We also note the uncontroverted evidence that economic and engineering considerations dictated the height and structural steel design of the Sunsphere tower. Shell aff., Denton aff. To the extent that defendants' Sunsphere design is functional, it cannot be an unlawful infringement. 17 U.S.C. @ 101; H.R. Report No. 94-1476, 94th Cong., 2d Sess. F. 55 (1976).

Three defendants, Community Tectonics, William S. Denton, Jr., and Hubert Bebb, have also moved for summary judgment on the ground that the Sunsphere design is their original work. Denton and Bebb are both architects, officers, and stockholders in Community Tectonics. They say, by affidavit, that they began design proposals for the World's Fair theme structures in 1979. They say that the Sunsphere was their original creation, evolving through many design steps. Denton and Bebb say they never had in their possessions nor had access to any plans, drawings, sketches, artistic renderings, specifications, engineering studies or other pictorial or written representation of any "tower of power" or any other structure bearing any mention of Marc Arion Cardoso or attributable to him in any way.

Bebb aff.; Denton aff. At least one of the defendants admits seeing a newspaper article in August 1977 with a sketch of plaintiff's "Tower of Power." Bebb aff. Defendants deny that plaintiff's sketch influenced their design, however. To the contrary, they say that a sun-like object was simply an appropriate concept for the "energy exposition" structure. Denton aff.; Bebb aff. They further say the Sunsphere tower design was influenced largely by economic and engineering considerations. Shell aff.; Denton aff.

In opposition to defendant's affidavit, plaintiff has filed the affidavit of Marc Cardoso. Cardoso says that Bebb discussed Cardoso's designs

his allegations that defendant KIEE furnished Cardoso's renderings, schematics, drawings and cross-sections to Community Tectonics. Complaint No. 21. Plaintiff may not rest on these allegations alone to defeat defendants' motion as it relates to the originality of their Sunsphere design. Fed.R.Civ.P. 56(e). Even though plaintiff has not taken the depositions of the defendants, he has had the opportunity to pursue other avenues of discovery and has failed to rebut defendants' affidavits. Summary judgment is therefore appropriate as to Community Tectonics, Denton, and Bebb. Summary judgment in favor of the Sunsphere architects on the grounds of originality necessarily precludes recovery against the remaining defendants for further use and marketing of Community Tectonics' Sunsphere.
Plaintiff has also alleged that defendants wrongfully used Cardoso's works to gain financial backing for the Fair even before the Sunsphere architects allegedly copied his designs. While defendants do not dispute the fact that Cardoso's original designs appeared in newspaper articles in 1977, plaintiff's complaint indicates this use was authorized. This and other authorized uses are not copyright infringements. See 17 U.S.C. @ 106. Plaintiff's claims of failure to compensate Cardoso for the initial authorized use of his drawings are common law claims for breach of contract. This Court previously dismissed the pendent state law claims in the predecessor to this case. See Cardoso v. Knoxville International Energy Exposition, Inc., No. 3-82-445 (filed Sept. 21, 1982). These claims should also be dismissed from this case.

We are aware that summary judgment is sparingly granted in copyright infringement cases. See Durham Industries, Inc., 630 F.2d at 918. It is appropriate, however, where there is no evidence from which a jury could find substantial similarity between defendants' designs and plaintiff's copyrighted work. Such is the case here. Defendants' additional theories also support the granting of their motion, as discussed above. Accordingly, it is ORDERED that defendants' motions for summary judgment be, and the same hereby are, granted.

Order Accordingly.
DOUGLAS Q. WICKHAM, Trustee for the Bankruptcy Estate of Marc Arion Cardoso, Plaintiff-Appellant, v. KNOXVILLE INTERNATIONAL ENERGY EXPOSITION, INC., et al, Defendants-Appellees

UNITED STATES COURT OF APPEALS FOR THE SIXTH CIRCUIT

739 F.2d 1094; Copy. L. Rep. (CCH) P25,682; 222 U.S.P.Q. (BNA) 778

PRIOR HISTORY: On Appeal from the United States District Court for the Eastern District of Tennessee, Northern Division.

OPINION: Phillips, Senior Circuit Judge.

This copyright infringement action involves the architecture of the "Sunsphere", the central theme structure of the 1982 World's Fair in Knoxville, Tennessee. The plaintiff-appellant contends that the defendants infringed drawings copyrighted by Marc Arion Cardoso. District Judge Robert L. Taylor granted defendants' motion for summary judgment, finding no substantial similarity between the design of the Sunsphere and Cardoso's copyrighted drawings. We affirm.

I

The plaintiff-appellant, Douglas Q. Wickham, is the trustee in bankruptcy for the estate of Cardoso, the author of the drawings that are the subject of this copyright infringement action. Defendant-appellee Knoxville International Energy Exposition, Inc., (KIEE), is a Tennessee corporation organized for the purpose of recruiting participants and financial commitments for an energy exposition at the World's Fair. Defendant SunSphere, Inc. is a Tennessee corporation organized for the purpose of constructing and operating a thematic attraction at the Fair. Community Tectonics, Inc. is an architectural and engineering firm incorporated under the laws of Tennessee, and a principal shareholder of Sunsphere, Inc. S. H. "Bo" Roberts was the President of KIEE, and defendant W. Stewart Evans was the Executive Director of the Downtown Knoxville Association during the time period relevant to the instant litigation. Defendant William S. Denton is the President of Community Tectonics and a licensed architect. Plaintiff contends that defendants utilized Cardoso's copyrighted drawings in contravention of the copyright laws, 17 U.S.C. @ 101 et. seq.

Plaintiff avers that in August 1977, Cardoso met with the Downtown Knoxville Association and presented his idea for a structure at the 1982 World's Fair. At this meeting he turned over his drawings to Roberts, then President of KIEE. Cardoso filed with the copyright office two different renderings of what he called the "Tower of Power". These two renderings, in reduced form, are reproduced in the Appendix to this opinion in figures A-1 and A-2. The alleged infringing work is reproduced at A-3 of the Appendix. After August 1977 KIEE no further contact with Cardoso. Plaintiff alleged that KIEE furnished Community Tectonics with Cardoso's works and that Tectonics used those designs in developing what came to be known as the Sunsphere, and that defendant Sunsphere, Inc. then utilized the Tectonics' drawings to build the Sunsphere with knowledge that the Tectonics' drawings were derived from Cardoso's design.

Defendants filed motions for summary judgment with supporting affidavits and exhibits contending there was no genuine issue of material fact, in that no substantial similarity existed between the plaintiff's and defendant's works.

II In his comprehensive memorandum opinion, District Judge Taylor stated: "Initially we are impressed by the virtual absence of similarity of specific features between Cardoso's and defendants' structural designs." He further noted:
Both parties' designs depict enclosed buildings set atop elevated towers. Cardoso's proposed towers appear to be more enclosed, quite unlike the open steel framework of the Sunsphere tower. Cardoso's towers also appear to have at least twice the number of sides as the six-sided Sunsphere. The bases of Cardoso's structural designs are broad in relation to the upper towers and the elevated buildings. The Sunsphere's base is much narrower in relation to its tower and the elevated sphere. The projected height of Cardoso's tower is also substantially greater than the Sunsphere's height.

Cardoso proposed two structural designs for the building atop his tower. His saucer-like design is clearly distinguishable from defendants' spherical building. Cardoso's alternative spherical design is similar in shape to defendants' Sunsphere.

In support of his argument that a factual question existed as to substantial similarity, the plaintiff offered alterations of the copyrighted work. The district court rejected these alterations, noting, "[t]he proposed alterations substantially change the concept and visual impression of plaintiff's originals. Plaintiff seems to be asserting that he has the exclusive right to design and erect a tower with a spherical building on top of it. The use of towers in architectural designs is certainly not unique... Likewise the incorporation of a spherical structure into the design is no more than an 'idea.'"

Accordingly, the district court concluded, "there is no evidence from which a jury could find substantial similarity between defendants' designs and plaintiff's copyrighted work."

III

Plaintiff contends that summary judgment was improper because the district court denied plaintiff the opportunity for discovery and because the evidence was insufficient as a matter of law. These essentially are two variations on the same argument. Plaintiff's argument fails under either argument. This Court recognizes that granting summary judgment, particularly in favor of a defendant, is a practice to be used sparingly in copyright infringement cases. See Arnstein v. Porter, 154 F.2d 464 (2d Cir. 1946). 3 M. Nimmer on Copyright, @ 12.10 (rev'd 1983). However, a court may compare the two works and render a judgment for the defendant on the ground that as a matter of law a trier of fact would not be permitted to find substantial similarity. See Durham Industries Inc., v. Tomy Corp., 630 F.2d 905, 918 (2d Cir. 980); 3

Reduced to most fundamental terms two elements are necessary to plaintiff's case in a copyright infringement action: ownership of the copyright by the plaintiff and copying by the defendant. Sid & Marty Krofft Television v. McDonald's Corp., 562 F.2d 1157, 196 U.S.P.Q. (BNA) 97 (9th Cir. 1977); Reyher v. Children's Television Workshop, 533 F.2d 87, 90, 190 U.S.P.Q. (BNA) 387 (2d Cir.) cert. denied 429 U.S. 980, 50 L. Ed. 2d 588, 97 S. Ct. 492,192 U.S.P.Q. (BNA) 64 (1976); 3 Nimmer, supra, at @ 13.01. In order to prove copying by the defendant, the plaintiff must prove access as well as substantial similarity. 3 Nimmer, supra, at @ 13.02. Thus, copying is an essential element of infringement and substantial similarity between the plaintiff's and defendants' works is an essential element of copying. Ideal Toy Corp. v. Fab-Lu, Ltd., 360 F.2d 1021, 149 U.S.P.Q. (BNA) 800 (2d Cir. 1966); Kustoff v. Chaplin, 120 F.2d 551, 49 U.S.P.Q. (BNA) 580 (9th Cir. 1941).

The district court concluded that as a matter of law no trier of fact could conclude that plaintiff's and defendants' works were substantially similar and rendered summary judgment in favor of defendants. On review of a grant of summary judgment pursuant to Fed. R. Civ. P. 56(c), an appellate tribunal must review the evidence in the light most favorable to the party opposing the judgment and determine if a genuine issue of material fact exists. Glenway Industries, Inc. v. Wheelabrator-Frye, Inc., 686 F.2d 415, 417 (6th Cir.1982); Smith v. Hudson, 600 F.2d 60, 63 (6th Cir.) cert. dismissed 444 U.S. 986, 100 S. Ct. 495, 62 L. Ed. 2d 415 (1979).

In the instant case we must determine whether any genuine issue of material fact existed on the question of substantial similarity.

Similarity is determined by a comparison of plaintiff's and defendants' works. "An appellate court may reverse a lower court's grant of summary judgment to the defendant based upon a finding of lack of substantial similarity if the appellate court, upon a comparison of the two works, concludes that absence of substantial similarity is not so clear as to warrant such a conclusion as a matter of law." 3 Nimmer, supra, at @ 12.12.
We conclude that there existed no genuine issue of material fact which precluded the entry of summary judgment. The district court correctly concluded that as a matter of law no substantial similarity existed between plaintiff's and defendants' works. District Judge Taylor pointed out substantial design differences between plaintiff's and defendants' works. Only by significantly altering the plaintiff's designs could any similarity be shown. The "idea" of a tower structure certainly is not copyrightable. Ideas are not protected by copyright, only expressions of ideas. See Mazer v. Stein, 347 U.S. 201, 217, 98 L. Ed. 630, 74 S. Ct. 460, 100 U.S.P.Q. (BNA) 325 (1954). Plaintiff contends that the issue of access is a question of fact in dispute and therefore summary judgement was improper. Even if the question of access be in dispute, the plaintiff must prove copying in order to prevail in a copyright action. To prove copying, the plaintiff must prove access and substantial similarity. The district court correctly concluded there exists no substantial similarity. Therefore, it became unnecessary to resolve the access issue. No amount of proof of access will suffice to show copying if there are no similarities. Sid & Marty Krofft Television v. McDonald's Corp., supra, 562 F.2d 1172; [*1098] Williams v. Kaag Manufacturers, Inc., 338 F.2d 949, 951, 143 U.S.P.Q. (BNA) 369 (9th Cir. 1964). Even though it has been stated that where access is proved, the similarity required to be shown is lessened, see 3 Nimmer, supra at @ 13.03[D], we conclude the district court did not err in holding there was no similarity in the present case.

IV

Comparison of figure A-3 with figures A-1 and A-2 in the Appendix demonstrates that the district court did not err in finding no substantial similarity between plaintiff's and defendants' works. Absent substantial similarity, there can be no infringement. The district court properly granted summary judgment to defendants.

All other contentions of plaintiff-appellant have been considered and are found to be without merit. The judgment of the district court is affirmed. [}