13 Tex. Intell. Prop. L.J. 243

Texas Intellectual Property Law Journal
Spring 2005

Article

CÉZANNE AND RENOIR: ANALOGOUS ART IN PATENT LAW

Lance Leonard Barry[a1]

Table of Contents

*244 Introduction

The curator of the WebMuseum has described the art of Cézanne[1] and the art of Renoir[2] as "analogous."[3] Patent attorneys, agents, and examiners (collectively "patent practitioners"), however, have a different understanding of "analogous art." For them, the question of whether art is analogous arises frequently during patent prosecution, litigation,[4] and examination.[5] Cases in federal appellate and district courts addressing analogous art are "legion."[6]

The question of whether art is analogous asks whether it is too remote to be treated as prior art.[7] In short, analogous art is simply that which is not too remote to be treated as prior art.[8] Analogous art is also called "pertinent,"[9] "relevant,"[10] or ***245** "applicable."[11] Conversely, art that is too remote to be treated as prior art is called "nonanalogous" or "remote."[12]

Novelty and nonobviousness are the two criteria for patentability vis-à-vis prior art.[13] The question of analogous art is not germane to that of anticipation.[14] If a claim can be "read on" a piece of prior art, the fact that the prior art is drawn from a "different" art is immaterial.[15]

In contrast, the question of analogous art is "subsumed" under that of nonobviousness.[16] Nonobviousness is determined based on several factual inquiries.[17] The first factual inquiry, which addresses the "scope and content of the prior art,"[18] includes the question of analogous art.[19] More specifically, analogous art relates to the scope of the prior art.[20] Accordingly, a finding of the relevance of prior art is a finding of the scope of the prior art.[21]

Given the ubiquity of the question of analogous art and its importance in determining obviousness, it is imperative that patent practitioners understand the ***246** guidance available on the question. The three parts of this article aim to increase their understanding. Part I considers the breadth of analogous art. Part II enumerates the criteria for analogous art. Part III addresses evidence of analogous art.

I. Breadth

Nonobviousness is not determined from the viewpoint of a layman[22] but from that of a person having ordinary skill in the art to which the subject matter pertains.[23] Expecting a person to be aware of every teaching in every art, however, is unrealistic;[24] no one could possibly be aware of every teaching in every art.[25] Consequently, a party seeking or defending a patent is not charged with knowledge of all arts[26] but only of the analogous arts.[27]

Common sense must be employed in deciding where a person having ordinary skill in the art would have looked for teachings;[28] the "reality of the circumstances" surrounding the making of an invention must be considered.[29] Of course, the reality is that the ambit of applicable art has widened by disciplines unheard of a half-century ago.[30] In today's world, questions arising in a particular industry are answered not only by those inside the industry but by those trained in scientific fields having no "necessary relationship" thereto.[31] "[T]echnological breakthroughs [resulting] from the cross-fertilization of minds trained in different disciplines [are] common."[32] For example, the 1970s and 1980s saw a merger of the fields of computer science and data communications.[33] The merger erased the boundaries between data processing and data transmission and between data, voice, and video ***247** communications.[34] It also blurred the lines between single-processor computers, multi-processor computers, local networks, metropolitan networks, and long-haul networks.[35]

In view of such cross-fertilization, courts generally take an expansive view of what constitutes analogous art.[36] At the top level of the judiciary, the United States Supreme Court gives "wide latitude" to findings on the scope of the prior art.[37] At the

trial level, the United States District Court for the Northern District of Illinois has held that the modern profusion of separate technical disciplines and corresponding fields "requires a broad application from one field of art to another."[38] Similarly, the United States District Court for the District of Minnesota explained that the scope of the prior art "must be afforded a wide latitude."[39]

The simpler the art, the broader the scope afforded to analogous art.[40] In particular, "the mechanical arts are not so well compartmentalized."[41] When considering a simple mechanical invention, therefore, "a broad spectrum of prior art must be explored."[42] For a simple mechanical device using universally known principles, specifically, the scope of analogous art is broadened to that of "mechanics itself."[43]

Black & Decker Manufacturing Co. v. Ever-Ready Appliance Manufacturing Co.[44] offers an example of a simple mechanical device. Black & Decker Manufacturing Co. involved a patent covering a "foldable" step stool. Black & Decker Manufacturing ("Black & Decker") sued Ever-Ready Appliance Manufacturing ("Ever-Ready") for patent infringement. Ever-Ready countered that the patent was ***248** invalid.[45] To support its counterclaim, the defendant relied on a reference disclosing a folding stool.[46]

At trial, the United States District Court for the Eastern District of Missouri noted that the patent-in-suit claimed a "simple mechanical device using universally known elements and principles."[47] Therefore, it found that the relevant prior art was "the field of mechanics itself."[48]

On appeal to the United States Court of Appeals for the Eighth Circuit ("Eighth Circuit"), Black & Decker argued that because the reference described a foldable stool to be used as a seat, whereas its patent covered a foldable stool to be used as a ladder, the reference was not relevant.[49] The Eighth Circuit disagreed with Black & Decker.[50] Instead, it agreed with the trial court that because the step stool was a simple mechanical device using universally known elements and principles, the relevant prior art was the field of mechanics itself.[51]

Although the trend is to widen the scope of the prior art considered analogous,[52] individual judges or panels of judges may buck the trend. Wang Laboratories, Inc. v. Toshiba Corp.[53] offers an example of a "rather narrow view" of analogous art.[54] Wang Laboratories, Inc. involved patents covering single in-line memory modules ("SIMMs") containing nine memory chips. Eight of the chips stored data; the other chip stored a bit used for error detection. Packaged in plastic, leaded chip carriers, the nine chips were mounted on an epoxy-glass printed circuit board ("PCB").[55]

Wang Laboratories ("Wang") sued Toshiba and NEC for patent infringement.[56] The defendants answered that the patents were invalid as obvious.[57] To ***249** support their counterclaim, Toshiba and NEC relied on a patent owned by Allen-Bradley and the patent's commercial counterpart, the X9 SIMM (collectively the "Allen-Bradley art").[58] Allen-Bradley's patent disclosed a SIMM containing nine memory chips mounted in a row. Eight of the chips stored data; the other chip stored a bit used for error detection. The X9 comprised nine memory chips encapsulated in ceramic, in-line packages mounted on an epoxy-glass PCB. Allen-Bradley manufactured and sold the X9 for use in its 9-bit programmable controller.[59] During trial, a jury concluded that the patents-in-suit were not invalid.[60]

On appeal to the United States Court of Appeals for the Federal Circuit ("Federal Circuit"), Toshiba and NEC argued that the Allen-Bradley art was analogous to the claimed subject matter.[61] The Federal Circuit rejected the argument with the following explanation:

> The Allen-Bradley art is not in the same field of endeavor as the claimed subject matter merely because it relates to memories. It involves memory circuits in which modules of varying sizes may be added or replaced; in contrast, the subject patents teach compact modular memories. Thus, based on the evidence of record, the jury could reasonably have found that the first criterion of the analogous art test has not been met and that the prior art and the claimed subject matter are not in the same field of endeavor.[62] The appellate court was further persuaded by expert testimony. Specifically, Dr. Frey testified that Wang's SIMMs were designed for use in personal computers ("PCs"), while the X9 was developed for use in a controller of large industrial machinery and could not be used in a PC.[63]

The Federal Circuit reasoned that "Wang's SIMMs were designed to provide compact computer memory with minimum size, low cost, easy repairability, and easy expandability."[64] In contrast, the appellate court viewed Allen-Bradley's patent as related "to a memory circuit for a larger, more costly industrial controller."[65] Thus, the Federal Circuit held that, "there is

substantial evidence in the record to support a finding that the Allen-Bradley prior art . . . is not analogous."[66]

*250 II. Criteria

Two criteria having evolved,[67] a determination of whether a reference is analogous art is "two-fold."[68] First, one considers whether the reference lies withinthe field of the inventor's endeavor.[69] Second, one considers whether the reference is reasonably pertinent to a particular problem with which the inventor was involved.[70]

If a reference satisfies either criterion, it is analogous art. The possibility that art is analogous, i.e., that a person having ordinary skill in the art "might" look to it, however, is insufficient.[71] If it is not within field of the inventor's endeavor, and is not reasonable pertinent to the particular problem the inventor was involved with, the reference is not analogous art.[72]

A. Field of Endeavor

The first criterion for analogous art is whether it is within the field of an inventor's endeavor regardless of any problem addressed.[73] If a reference falls within this field, the reference is analogous.[74] A field of endeavor can encompass multiple technologies.[75] Because of the aforementioned merger of computer science and data communications,[76] for example, computer technology and data communications technology lie within the same field of endeavor.

A functional point of view should be used for the first criterion.[77] In re Kylstra[78] offers a prototypical example of the functional viewpoint. Kylstra filed a ***251** patent application claiming a counter for indicating the number of rounds fired by a machine gun.[79] The counter was designed for installation on an airplane having a gun mounted a considerable distance from an operator. The operating circuit of the counter was arranged in parallel with the firing mechanism of the gun so that it counted only when the gun was fired.[80]

A patent examiner rejected the applicant's claims.[81] In doing so, he "principally relied [on a] patent to Cravath."[82] The patent disclosed a step-by-step operated counter for use with a street car.[83] By counting the number of rotations of a wheel of the street car, the counter measured the distance traveled thereby.[84]

On appeal to the United States Court of Customs and Patent Appeals ("CCPA"),[85] Kylstra argued that a distance register for a street car was not analogous to an ammunition counter for a machine gun.[86] The CCPA was not so persuaded. It acknowledged that the operation of a street car and the firing of a machine gun were "widely different" and that a "person probably would not look to one of them for instruction in the other."[87] Viewing the "actual" field of endeavor as numbering or counting,[88] however, the court found the patent to be analogous art.[89]

In re Johenning[90] offers another example of the functional view. Johenning filed a patent application claiming a method of forming a corner piece of a waterbed mattress by injection molding.[91] The Board of Patent Appeals and Interferences ("Board") rejected the applicant's claims.[92] In doing so, the Board relied, inter ***252** alia, on a patent to Saputo.[93] The patent disclosed a lightweight foundation for a waterbed, air bed, or other flotation sleep system.[94]

On appeal to the Federal Circuit, Johenning argued that Saputo was nonanalogous art.[95] His argument focused on the different characteristics of a waterbed frame and a waterbed mattress.[96] More specifically, the applicant-appellant argued that the frame was rigid, whereas the mattress was flexible.[97] The Federal Circuit disagreed. Viewing the inventions of Johenning and Saputo as both directed to critical components of a waterbed per se, the court found both to be encompassed within the field of waterbed manufacturing.[98]

Individual judges or panels of judges, of course, may choose not to take a functional point of view toward the first criterion. Litton Systems, Inc. v. Honeywell Inc.[99] offers an example of such a choice. Litton Systems involved a patent covering a method for forming an almost perfectly reflective mirror. Specifically, ion beam sputtering was used to coat a "substrate with multiple layers of [different] materials."[100] The resultant mirror constituted an essential component of a "ring-laser gyroscope ('RLG[]') used for navigational control of aircraft."[101]

Litton Systems sued Honeywell for patent infringement.[102] Honeywell countered that the patent was invalid.[103] At trial, the jury rejected Honeywell's counterclaim,[104] but the United States District Court for the Central District of California ("Central

District of California") declared the patent invalid as a matter of law.[105] ***253** More specifically, it found the patent obvious over, inter alia, a paper by Molitor.[106] The paper described propulsion systems for space vehicles.[107]

On appeal, the Federal Circuit reasoned that while an RLG scientist worked with optics and the interaction of optical waves with solids, space propulsion did not address the interaction of optical waves with solids.[108] The appellate court viewed the fields as "at best, distant cousins."[109] Therefore, it held that "a reasonable jury could find that Molitor is not analogous art."[110]

B. Particular Problem

The second criterion for analogous art is whether it is reasonably pertinent to a particular problem with which the inventor was involved.[111] Reasonable pertinence is judged independently from the first criterion, namely, field of endeavor.[112] Similarities or differences between the field of a reference and that of an inventor are not important for the second criterion; it is the problems addressed by the reference and the inventor that matter.[113] If a reference addresses the same problem as the inventor, any other use of the reference's invention is "immaterial."[114] Accordingly, reasonable pertinence can encompass technologies more diverse than those within the same field of endeavor.[115]

In determining whether a reference satisfies the second criterion, one looks to the problems confronting the inventor.[116] A reference is reasonably pertinent if, because of the matter with which it deals, it logically would have commended itself to the inventor's attention in considering a problem.[117] The purposes of both the invention and the prior art are important in determining whether the reference is reasonably ***254** pertinent to a problem that the inventor was trying to solve.[118] If a reference addresses the same purpose as the claimed invention, the reference relates to the same problem.[119] Consequently, the inventor may have been motivated to consider the reference when making his invention. If the reference relates to a different purpose, the inventor would have had less motivation to consider it.[120]

In re Cademartori[121] offers a prototypical example of reasonable pertinence. Cademartori filed a patent application claiming a paint roller for use on rough surfaces. The roller comprised a handle, a rotatable drum, and a sponge-like sleeve featuring perpendicular slits. The slits divided the sleeve into independently deformable segments, which were useful for painting rough surfaces.[122]

A patent examiner rejected the applicant's claims.[123] In doing so, he relied principally on a reference to Bridgford and one to Guggenheim.[124] Bridgford disclosed a paint roller featuring radial slits in its sponge for painting on chain link fences.[125]

Guggenheim disclosed a sponge.[126] Mutually perpendicular cuts divided the surface of the sponge into independent blocks. When the sponge was used to clean a "non-flat" surface such as moldings on a wall, the blocks moved apart to conform to the shape of the moldings.[127] Guggenheim disclosed that its sponge cleaned better than ordinary sponges whose surfaces, which formed a single block, could be deformed only with difficulty.[128]

On appeal to the CCPA, Cademartori argued that Guggenheim was nonanalogous art.[129] His argument emphasized that the secondary reference's sponge was intended for cleaning rather than painting.[130] The CCPA was not so persuaded.[131] ***255** Concluding that the applicant-appellant's problem in painting rough surfaces resulted from the failure of a (regular) roller's sponge to conform to such surfaces, the court found that the same problem attended the cleaning of rough surfaces with a sponge.[132] Given the common problem, the CCPA concluded that applying the lesson taught with respect to cleaning sponges to painting rollers would have been obvious.[133]

In re Paulsen[134] offers another example of reasonable pertinence. Paulsen requested reexamination of a patent covering a laptop computer contained within a compact metal case. The computer featured a "clam shell" configuration. More specifically, a hinge connecting the computer's display to the body of the computer enabled the display to swing from a closed, latched position for carrying and protection to an open, erect position for operating.[135]

A patent examiner rejected the applicant's claims.[136] In doing so, he relied on references directed to, inter alia, "hinges and latches as used in a desktop telephone directory, a piano lid, a kitchen cabinet, a washing machine cabinet, a wooden furniture cabinet, [and] a two-part housing for storing audio cassettes."[137]

On appeal to the Federal Circuit, Paulsen argued that the references pertained to fields of endeavor unrelated to computers.[138] His argument emphasized that the references dealt with such articles as cabinets and washing machines rather than portable

computers.[139] Although it did not dispute that the references were not in the same field of endeavor as computers, the appellate court opined that the problems faced by the patentee-appellant "were not unique to portable computers."[140] More specifically, these problems "concerned how to connect and secure the computer's display housing to the computer while meeting certain size constraints and functional requirements."[141] Turning to the prior art, the Federal Circuit observed that the references disclosed "various means of connecting a cover (or lid) to a device so that the cover [was] free to swing radially along the connection axis" and "means of securing the cover in an open or closed position."[142] Given the nature of ***256** the problems confronted by Paulsen, the appellate court found that one of ordinary skill in the art "would have consulted the mechanical arts for housings, hinges, latches, springs, etc."[143]

Beyond offering another example of reasonable pertinence, Ex parte Gaechter[144] illustrates that prior art need only be reasonably pertinent to one problem with which an inventor was involved. Gaechter filed a patent application claiming a geodesic measuring staff used for surveying.[145] The staff featured a bar-code that could be sighted from different directions without manual correction and that enabled a theodolite to detect tilting. Because the cross-section of the staff was circular, the bar-code extended completely around the circumference of the staff. When the staff was tilted, an image of the bar-code projected to a theodolite had a curved shape, which allowed the theodolite to detect and compensate for the tilting.[146]

A patent examiner rejected the applicant's claims.[147] In doing so, he relied on a patent to Gaechter and one to Neeley.[148] Gaechter's patent disclosed a circular, geodesic measuring staff featuring a bar-code.[149] Neeley's patent taught the extending of a bar-code around the perimeter of a test tube so that it could be scanned from any direction.[150]

On appeal to the Board, neither the examiner nor the applicant-appellant asserted that Neeley was in the field of Gaechter's endeavor.[151] Their disagreement concerned the second criterion.[152] Specifically, Gaechter emphasized that the object ***257** of his invention was to detect inclinations of a measuring staff.[153] Asserting that the test tube in Neeley could not be inclined, the applicant-appellant argued that the patent did not address the object of his invention.[154]

The Board rejected the argument.[155] It noted that besides the problem of detecting inclinations, Gaechter also addressed the problem of reading a bar-code from different directions.[156] The Board observed that "Neeley also face[d] the problem of reading . . . a bar-code--albeit a bar-code on a test tube--from different directions."[157] Given the common problem (of reading a bar-code from different directions), the Board found that Neeley was analogous art.[158] In doing so, it held that a reference need not be "reasonably pertinent to each and every problem with which an inventor [was] involved; reasonable pertinence to a single such problem suffices."[159]

If a reference is not pertinent to any problem with which an inventor was involved (and is not in the field of the inventor's endeavor), of course, the reference is nonanalogous art.[160] Baxter Diagnostics, Inc. v. AVL Scientific Corp.[161] offers an example of nonanalogousness. Baxter Diagnostics Inc. involved a patent covering a sensor for measuring the concentration of gases, such as carbon dioxide (CO_2), in blood. More specifically, a vessel held a sample of blood to be tested. "Within the vessel, a silicone diffusion membrane that [was] selectively permeable by certain gases separate[d] the analyte[162] from the blood."[163] If the analyte was CO_2, it reacted with water embedded in the membrane to change the pH of the water. A fluorescent indicating dye, also embedded in the membrane, detected the change in pH. To learn "the concentration of the gas, a technician interrogate[d] the dye with a monochromatic light and [read] the wavelength of the light [emitted by the dye]."[164] The wavelength varied according to the change in pH.[165]

***258** AVL Scientific sued Baxter Diagnostics ("Baxter") for patent infringement.[166] Baxter answered that the patent was invalid.[167] To support its counterclaim, the defendant relied on, inter alia, an article by Volmar and Widder.[168] The article disclosed "the use of B methyl umbelliferone, a pH-sensitive dye, as a fluorescent indicator in alkalimetry and acidimetry. In layman's terms, it describe[d] the dye's ability to measure the pH change in solutions."[169] Volmar and Widder noted that the dye was effective in measuring the pH change of a solution when carbonic acid was introduced; "[i]t [did] not, however, mention using the dye to detect gases."[170]

The Central District of California began with the question of analogous art.[171] Finding that measuring the pH change in solutions was outside the field of creating optical sensors, it turned to the issue of reasonable pertinence.[172] The court noted that the purpose of the patent was to measure the concentration of gases in a sample, while the purpose of the article was to discuss a fluorescent dye that accurately reflected pH-change in solutions.[173] It viewed these purposes as "dissimilar."[174] An inventor designing a device to measure CO_2 in blood, reasoned the Central District of California, was "unlikely to have considered an article that [did] not even mention gas detection."[175]

III. Evidence

In deciding whether art is analogous, a "fertile imagination" cannot substitute for a lack of evidence.[176] Nor can the argument of counsel take the place of evidence. ***259** [177] Accordingly, this part of the article addresses four sources of evidence of analogousness: the specification, the inventor, those in the art, and the USPTO.

A. Evidence from the Specification

When seeking a patent, an applicant must provide a complete disclosure of the invention to be patented.[178] More specifically, an application for a patent must include a "specification,"[179] which is a "written description of the invention . . . and of the manner and process of making and using the same . . . ."[180] Evidence from the specification can be useful in determining whether art is analogous. Such evidence can be found in a statement of the field of the invention, an indication of the problems facing the prior art, or in the claims.

1. Field of the Invention

The specification should include a Background of the Invention section,[181] which states the "field of art to which the invention pertains."[182] Such a statement is often included in a subsection labeled "Field of the Invention,"[183] "Field,"[184] or the like, but need not be so demarcated.[185] Regardless of its labeling vel non, the statement can be used as evidence of the field of endeavor against which prior art is to be compared.[186]

In re Grout[187] offers an example of using a statement in an applicant's specification to evidence the field of endeavor to which his invention pertained. Grout filed a patent application claiming a "Honeycomb Foundation Supporting Means."[188]

***260** A patent examiner rejected the applicant's claims.[189] In doing so, he relied on references to Hartman, Palmer, and Anderson.[190] The first reference disclosed a "comb foundation support for a beehive."[191] The other references taught the "use of an elongated compressible resilient strip having outwardly diverging leg sections mounted in a slot for fastening a web or sheet of material in the slot."[192]

On appeal to the CCPA, Grout argued that while his invention pertained to the beekeeping art, Palmer and Andersen pertained to different, nonanalogous arts.[193] The court was not so persuaded.[194] It noted that the applicant-appellant's specification included the following statements: "'[t]his invention generally relates to honeycomb foundation supporting means. More particularly this invention relates to novel means for securing foundation webs within honeycomb foundation frames.'"[195] Based on these statements, the CCPA found that the field of the Grout's endeavor "may be described as fastening means."[196]

May v. American Southwest Waterbed Distributors, Inc.[197] offers another example of using a statement in an inventor's specification to evidence the field of endeavor to which his invention pertained. May involved a patent covering a holder for a waterbed liner.[198]

May sued American Southwest Waterbed Distributors for patent infringement.[199] American Southwest countered that the patent was invalid.[200] To support its counterclaim, the defendant relied on references disclosing "clip-type holders."[201]

At trial in the United States District Court for the Northern District of Texas ("Northern District of Texas"), May argued that because the patent solved a problem ***261** related to a bed, his field of endeavor should be "bedding fasteners."[202] The court disagreed.[203] It noted that May had filed a continuation patent application on a nearly identical device.[204] The specification of that application described the device as a "holder for mounting valances, ruffles, draperies, window treatments or for holding memos, notes, or other pieces of paper, as well as holding water bed liners."[205] Accordingly, the Northern District of Texas found the field of May's endeavor to be "fasteners and holders."[206] On appeal, the United States Court of Appeals for the Fifth Circuit ("Fifth Circuit") affirmed the trial court's decision.[207]

2. Problems of the Prior Art

Besides stating the field to which an invention pertains, the Background of the Invention ordinarily describes the state of the prior art.[208] Furthermore, the problems of the prior art solved by the invention are often indicated therein.[209] Such an indication

can be used as evidence of the particular problem with which the inventor was involved and against which prior art is to be compared.[210]

Union Carbide Corp. v. American Can Co.[211] offers an example of using statements in an inventor's specification to evidence the particular problem with which he was involved. Union Carbide Corp. involved a patent covering a package of wicket-holed, flattened plastic bags used for packaging meat.[212] The bags were secured into a bundle by a member that served as a handle for transporting the bags and that was convertible into a bag-dispensing wicket arrangement.[213]

Union Carbide sued American Can for patent infringement.[214] American Can answered that the patent was invalid.[215] To support its counterclaim, the defendant ***262** relied on references disclosing the severability of a binding member into erect wickets.[216]

At trial in the United States District Court for the Northern District of Illinois ("Northern District of Illinois"), the plaintiff argued that the references were from an art different from that practiced by the patentee and, thus, were nonanalogous.[217] Finding the question of the inventor's field of endeavor to be "somewhat amorphous," the court turned to the problem with which the inventor was involved.[218] It noted a pair of statements in the specification of the patent.[219] Based on a statement that "[t]he desiderata of flattened, stacked, wicket holed, slippery packaging bags is that they be held bundled, with their wicket holds in registration, as a unitary package, during packing, shipping, unpacking, and installation at a packing station," the Northern District of Illinois found that a problem with which Union Carbide was concerned was "the problem of binding."[220] Based on statements that "[p]ackaging operations in industry, particularly in the meat packing industry, involve the use of flexible plastic packaging sheets or bags held on wickets passing through wicket holes . . . for one at a time removal and utilization at a packing station," the court found that another problem with which the inventor was concerned was "dispensing the bags singly . . . ."[221]

3. Claims

The specification must conclude with one or more claims pointing out the subject matter that the inventor regards as his invention or discovery.[222] The claims provide "a convenient starting point for determining the relevant art,"[223] and are accorded the "polestar position" in such a determination.[224] In other words, the scope of the claims trumps that of the drawings, the title, and the rest of the specification. ***263** [225] It also trumps arguments by the inventor about the scope of the prior art.[226] Accordingly, claims can be used as evidence of the scope of the prior art.

L.D. Schreiber Cheese Co. v. Clearfield Cheese Co.[227] offers an example of using claims to evidence the scope of the prior art. L.D. Schreiber Cheese Co. involved a patent covering an alternate, offset arrangement of cheese slices in a stack.[228] The cheese industry had faced a problem in separating slices of processed cheese, namely, the slices stuck together.[229] Aimed at solving the problem, the patented arrangement offered an extended edge to help in separating the slices.[230]

L.D. Schreiber Cheese sued Clearfield Cheese for patent infringement.[231] Clearfield Cheese countered that the patent was invalid.[232] To support its counterclaim, the defendant relied on, inter alia, references disclosing a package of uniform rectangular sheets of toilet paper and the vertical stacking of slices of flexible synthetic materials in an alternative offset arrangement.[233]

At trial in the United States District Court for the Western District of Pennsylvania ("Western District of Pennsylvania"), the plaintiff argued that the prior art should be limited to the cheese industry or the sliced food manufacturing and packaging industry.[234] The court rejected the argument.[235] It noted that patented claims were not restricted to slices of cheese or food, but extended to a "flexible plastic material, such as cheese."[236] Based on the claims, inter alia, the Western District of Pennsylvania found the analogous art to include stacking and separation of flexible, nonfood items.[237]

***264 B. Evidence from the Inventor**

With analogousness being judged in terms of an inventor's field of endeavor and the problem with which he was involved, evidence from the inventor himself can be useful in determining whether art is analogous. Such evidence includes what the inventor said, what the inventor did, and what the inventor knew.

1. What the Inventor Said

While some things an inventor said can be used against him as prior art,[238] other things he said can be used against him as evidence of analogous art. Such statements may be as obvious as an inventor's admission of what is "the relevant prior art"[239] or his admission that a certain art is "one of the most analogous arts."[240]

Other statements are less obvious. In re Shearman[241] offers an example of a less obvious statement used as evidence of analogous art. Shearman filed a patent application claiming a ceramic sheath for enclosing the sensing tip of a thermocouple used to measure the temperature of molten metal in a melting furnace.[242] The applicant asserted that his sheath allowed temperatures in melting furnaces to be monitored for longer periods than possible with thermocouples enclosed in prior protective tubes.[243]

***265** A patent examiner rejected Shearman's claims as obvious over, inter alia, a reference to Kreig.[244] The reference related to a thermocouple well used in the tubes of heaters in which petroleum oils were cracked and distilled.[245]

On appeal to the CCPA, the applicant-appellant argued that because Kreig's thermocouple well was used in the tubes of oil heaters rather than in furnaces for melting metal, the reference was nonanalogous art.[246] The court was not so persuaded.[247] It noted Kreig's "disclosure of the prevention of pitting, corrosion and erosion of the thermowell" and statements in Shearman's brief that these were the same difficulties with which he was dealing.[248] Accordingly, the CCPA found that the reference was analogous art.[249]

International Glass Co. v. United States[250] offers an example of an even less obvious statement used as evidence of analogous art. International Glass Co. involved a patent covering a method for holding workpieces, particularly those difficult to manage, to a work station.[251] In essence, workpieces were frozen to the station.[252] The invention was particularly useful when grinding, polishing, or buffing glass, plastics, or metals to manufacture gem stones.[253]

International Glass sued the United States for patent infringement.[254] More specifically, the plaintiff contended that Boeing Aircraft Company ("Boeing") and Rohr Corporation ("Rohr"), both of which made airplane parts for the defendant, ***266** had infringed the patent.[255] The United States answered that the patent was invalid.[256] The suit was referred to a Trial Commissioner.[257]

Whereas Boeing and Rohr used an "ice chuck" process to machine honeycomb material, International Glass conceded that the patent did not mention honeycomb among the workpieces to which its invention was applicable.[258] The plaintiff argued, however, that the patented claims read on the ice chuck process because honeycomb pieces were "difficultly manageable workpieces" and the surfaces thereof were "given 'precision treatment.'"[259]

In support of its counterclaim, the defendant relied on, inter alia, art disclosing that biological specimens to be sliced were frozen to a work platform and that fish to be skinned were frozen to conveyor belts.[260] The plaintiff argued that the prior art was nonanalogous.[261] The Commissioner noted that while International Glass would dismiss the prior art relating to biological specimens and fish carcasses as nonanalogous art, it would construe its claims to include honeycomb despite "very significant differences" between honeycomb and gem stones and their respective treatments.[262] Opining that International Glass "cannot have it both ways," i.e., broadly construing its claims to make out infringement and narrowly construing them to avoid invalidity, the Commissioner found the prior art to be analogous.[263]

2. What the Inventor Did

Besides things he said, some things an inventor did can be used against him as evidence of analogous art. For example, his use of a component from a certain art can be used as evidence that the art is analogous. Such use may comprise incorporating ***267** the component into his invention[264] or using the component as a starting point for the invention.[265]

Similarly, an inventor's "consultation" of a certain art can be used as evidence that the art is analogous. Such consultation may be as active as researching the art for a solution[266] or as passive as attending a presentation that prompted an idea for an invention.[267]

Pentec, Inc. v. Graphics Controls Corp.[268] offers an example of using an inventor's consultation of, and selection of a component from, a certain art as evidence of analogous art. Pentec, Inc. involved a patent to Hubbard covering a pen arm having an "integrally molded hinge member" for folding over against the pen's body.[269] In contrast, prior recording

instruments included metal "bucket" pens, each affixed permanently to a pen arm, with refillable liquid ink supplies.[270]

Pentec sued Graphics Controls for a declaration of patent invalidity and noninfringement.[271] To support its claim, the plaintiff relied on, inter alia, a patent teaching an integrally molded plastic connector folded over and snapped closed, a patent teaching a tube closure device using bendable arms connected by integral hinges, and articles addressing the design and advantages of plastic fasteners and hinges.[272] The defendant countered for patent infringement.[273] After a bench trial, the Central District of California declared the patent-in-suit invalid.[274]

***268** On appeal to the Federal Circuit, Graphics Controls argued that the "hinge and fastener art" was not analogous to the "pen art."[275] The appellate court disagreed.[276] It noted Hubbard's admission that "he had read and collected literature describing the advantages of 'living hinges,' and had thought of those articles" when he was tasked to design a fastener for the pen.[277] At a deposition read into the record, moreover, the inventor admitted that he had selected a plastic hinge from the literature and incorporated it into a plastic bucket pen for securing it on a pen arm.[278] Based on the admissions, inter alia, the Federal Circuit concluded that the Central District of California's finding that the fastener and hinge art were analogous was not clearly erroneous.[279]

3. What the Inventor Knew

Besides things he said or did, some things an inventor knew can be used against him as evidence of analogous art. Specifically, an inventor's "knowledge" of a certain art can be used as evidence that the art is analogous.[280] Such knowledge may be shown by experience in the art[281] or by training therein.[282]

I.U. Technology Corp. v. Research-Cottrell, Inc.[283] offers an example of using an inventor's knowledge of a certain art as evidence that the art is analogous. I.U. Technology Corp. involved a patent covering a method for stabilizing scrubber sludge and fly ash to make a "cementitious material." Hardening permanently, the cementitious material would not reslurry when subjected to water or agitation. Accordingly, it could be deposited safely in a land fill, used for an embankment or road base, or used in bricks.[284]

I.U. Technology ("IUT") sued Research-Cottrell for patent infringement.[285] Research-Cottrell answered that the patent was invalid.[286] After a jury trial, the ***269** Northern District of Texas adjudged the patent invalid.[287] In doing so, it found that "'cement chemistry was the most pertinent art and the field of art to which the patent pertains.'"[288]

On appeal to the Fifth Circuit, IUT argued that the art to which the subject matter of the patent pertained was that of scrubber sludge waste disposal.[289] The appellate court rejected the argument.[290] Although it admitted that users of the patented method included those in the field of scrubber sludge waste disposal, the Fifth Circuit noted that the background of the patentee approached, if not equaled, that of an expert in cement chemistry.[291] Specifically, the patentee, Minnick, had done research with cement and had chaired three committees with ties to the cement industry.[292] He had obtained 25-to-30 patents involving fly ash and lime, both relevant elements in cement chemistry.[293] Minnick had also conducted or supervised research in the development of new and improved uses of lime, also important to the cement industry.[294] Accordingly, the Fifth Circuit agreed with the trial court that cement chemistry was the most pertinent art.[295]

C. Evidence from those in the Art

With obviousness being determined from the viewpoint of a person having ordinary skill in the art to which the subject matter pertains, evidence from those in the art can be useful in determining whether art is analogous. Such evidence includes what they wrote, what they did, and what they said.

1. What They Wrote

"Patents are part of the literature of the art and are relevant for all they contain."[296] Accordingly, statements in patents and other technical literature can be used as evidence of analogous art. Such statements may be as obvious as noting an ***270** "analogy between cells and liposomes"[297] or "specif[ying] that 'there is little difference between a clutch and a brake' . . . ."[298]

Other statements are less obvious. General Metals Powder Co. v. S.K. Wellman Co.[299] offers an example of using a less obvious statement to evidence analogous art. General Metals Powder Co. involved a patent covering a "friction article[] . . .

adapted to withstand service conditions encountered in relatively moving bodies in contact with each other such as in brakes, clutches and similar devices. "[300] The friction article featured a "network" of metal in the interstices of which graphite and other nonmetallic minerals were dispersed.[301]

General Metals Powder ("General Metals") sued The S.K. Wellman Company and Samuel K. Wellman (collectively "Wellman") for patent infringement.[302] Wellman countered that the patent was invalid.[303] To support its counterclaim, the defendant relied on, inter alia, a reference to Gilson.[304] The reference "'relate[d] to bearing materials and comprise[d] a coherent, spongy or porous body of metal having finely divided-carbonaceous material, preferably graphite, distributed throughout its mass.'"[305]

On appeal to the United States Court of Appeals for the Sixth Circuit ("Sixth Circuit"), General Metals argued that because the "bearing" field in which Gilson was used was a different field from that of clutches and brakes, the reference was nonanalogous art.[306] The appellate court was not so persuaded.[307] It relied on patents to Judy, Sherwood, and Perks.[308] Judy referred to metallic compositions of copper and lead as ideal for many purposes, "such as 'bearings, brake linings and clutch plates' . . . ." Sherwood stated that a process for manufacturing porous metal was applicable "to the manufacture of 'bearings, bushings, brushes, brake linings and other articles' . . . ." Perks disclosed that a composite friction material of asbestos and metal, or of combinations of powdered metals was "usable in 'brakes, ***271** clutches, piston rings, etc.' . . . ." Based on the three patents, inter alia, the Sixth Circuit found "that bearings, brakes and clutch linings all lie within the same art."[309]

2. What They Did

Besides things they wrote, some things that those in the art did can be used as evidence of analogous art. For example, the manufacturing of certain products, and their display at the same trade shows by the same manufacturers can be used as evidence that the products are analogous.[310] The use of certain materials by the same manufacturers for the same purpose can similarly be used as evidence that the materials are analogous.[311]

Technologies to which those in an art looked can also be used as evidence that those areas are analogous.[312] Conversely, the lack of interest in a technology by those in an art can be used as evidence that the technology was not analogous.[313] ITT Corp. v. United States[314] offers an example of referencing a technology as evidence ***272** of analogousness. ITT Corp. involved patents covering fiber optic connectors.[315] ITT sued the United States for infringement thereof.[316] The defendant answered that the patents were invalid.[317]

The United States Claims Court ("Claims Court") began with the question of whether electrical connectors were analogous to fiber optic connectors.[318] The United States offered three items as evidence of analogousness.[319] First, an inventor who held patents relating to both electrical and fiber optic inventions testified that one of the allegedly infringing fiber optic connectors originally had been designed from an electrical connector and still employed a "contact retaining clip" therefrom.[320] Second, an article in Electronic Components described a fiber optic connector developed by modifying an electrical connector.[321] Third, another patent disclosed an electrical connector modified into a fiber optic connector.[322] Based on the items, inter alia, the Claims Court concluded that "electrical connectors, and to some extent the parts in those connectors, formed the starting point for connector production in the fiber optic art and arguably may have assisted in resolving problems in the new art."[323] Therefore, the court found electrical connectors to be analogous art.[324]

3. What They Said

Besides things they did or wrote, some things those in the art said can be used as evidence of analogous art. More specifically, the testimony of an expert witness can be used as evidence of analogous art. The weight given such evidence, however, depends on the qualifications of the witness. Knowledge, skill, experience, training, or education may qualify a witness as an expert possessing scientific, ***273** technical, or other specialized knowledge.[325] Among such experts, testimony from a person having ordinary skill in the art is the most convincing sort of testimony.[326] A person skilled in an inventor's art, however, need not possess the same skill in another art to testify to whether the latter art is analogous.[327]

In contrast, testimony from a person without skill in the relevant art is discounted.[328] Rather than being given "controlling weight," the weight accorded to testimony from a witness having only "limited experience" in the art should be "substantially circumscribed."[329]

Qualification as a "typical 'patent expert'" does not qualify a person as an expert in a particular art.[330] Informal training

undergone in preparation for testimony also fails to qualify a person as an expert in a particular art.[331] Mere examination of references selected by counsel is similarly insufficient.[332]

When it comes to an expert's background, Orthopedic Equipment Co. v. United States[333] illustrates that actions speak louder than words. Orthopedic Equipment Co. involved a patent covering a "business order control system." Orthopedic Equipment sued the United States for infringement thereof.[334] The defendant countered that the patent was invalid.[335] After trial, the Claims Court adjudged the patent invalid.[336]

On appeal to the Federal Circuit, Orthopedic Equipment argued that the relevant art was "warehousing."[337] The appellate court disagreed.[338] It noted that the plaintiff-appellant had chosen as its chief witness a person whose primary experience was in computer hardware, a component of "information processing systems ***274** hardware."[339] In his testimony, the witness, Mr. Nikolali, relied on his experience with computers, not on any expertise with warehousing.[340] In fact, Nikolai possessed no expertise in warehousing.[341]

If Orthopedic Equipment believed that the relevant art was warehousing, reasoned the Federal Circuit, it "would have sought to rebut the defendant's . . . charge of obviousness in the art of information processing systems hardware by demonstrating the nonobviousness of the claims in the art of warehousing."[342] The appellate court explained that "[t]o do the latter appellants could not advance the testimony of Mr. Nikolai, who was totally unfamiliar with the warehousing art."[343] Accordingly, the Federal Circuit found that the relevant art was information processing systems hardware.[344]

Besides the qualifications of a witness, the weight given his testimony depends on the contents thereof. An expert witness may testify "in the form of an opinion or otherwise."[345] Lack of factual support for an opinion, however, renders the opinion "of little probative value."[346] Such unsupported conclusions are "not helpful" in determining whether art is analogous.[347] Alone, the conclusions cannot even raise a material issue of fact to defeat a motion for summary judgement.[348]

To be helpful, an expert's testimony must be based on "sufficient facts or data."[349] In United States Surgical Corp. v. Hospital Products International PTY Ltd.,[350] for example, an explanation that "the functions and materials of the paper staplers [were] different from those in the surgical field," helped persuade the United States District Court for the District of Connecticut that paper staplers were not analogous to surgical staplers.[351] In Stanley Works v. McKinney Manufacturing Co.,[352] an expert's testimony that although he had worked with float switches in the ***275** oil business and door-monitoring devices in the security business, he never thought to link the two technologies, helped persuade the United States District Court for the District of Delaware that the former was not analogous to the latter.[353]

D. Evidence from the USPTO

The USPTO possesses technical knowledge and expertise in determining when the conditions for patentability have been satisfied.[354] As such, evidence from the USPTO can be used in determining whether art is analogous. Such evidence may be drawn from patent examination or patent classification.

1. Patent Examination

Whether a reference is analogous is a question of fact.[355] When made by a jury or a trial judge, a finding of analogousness vel non is reviewed under the "clearly erroneous" standard.[356] When made by the USPTO, however, such a finding is reviewed under a more deferential standard, namely, substantial evidence.[357] Accordingly, an examiner's finding that a reference was nonanalogous (during examination of a patent application) is sufficient to raise a genuine issue of analogousness vel non in a subsequent invalidity action (concerning the issued patent).[358]

The type of art cited by the USPTO during examination can also be used as evidence of analogous art during a subsequent invalidity action.[359] George C. Moore Co. v. Liberty Fabrics of New York, Inc.[360] offers an example of using art cited by the USPTO as evidence of the scope of the prior art. George C. Moore Co. involved a patent covering a flat, elastic fabric used for manufacturing girdles.[361]

George C. Moore ("Moore") sued Liberty Fabrics of New York for patent infringement.[362] Liberty answered that the patent was invalid.[363]

***276** At trial in the United States District Court for the Eastern District of Virginia ("Eastern District of Virginia"), the plaintiff attempted to distinguish the knitting and weaving technologies in order to exclude certain patents cited by the defendant.[364] The court rejected the attempt.[365] It noted that during examination of Moore's patent application, the USPTO had cited references that included "both weaving and warp knitting technologies."[366] Based on these citations inter alia, the Eastern District of Virginia found no line of demarcation between knitting and weaving. To the contrary, it found the analogous art to comprise "the weaving and knitting arts . . . ."[367]

Of course, the USPTO's citation or omission of certain art during patent examination is rarely, if ever, conclusive. It must be weighed along with all the other evidence in deciding the question of analogous art.[368]

2. Patent Classification

To help determine the patentability of inventions, the USPTO maintains the United States Patent Classification System ("USPCS").[369] The USPCS categorizes patents and other printed publications into more than 400 "classes" of technology.[370] Each class, in turn, is subdivided into "subclasses."[371]

Being "based upon particular properties and not accidents,"[372] the USPCS can provide some evidence of analogousness.[373] That said, considerations in forming a system of classification differ from those relating to a person of ordinary skill seeking a solution for a particular problem.[374] For example, patents are classified in the ***277** USPCS based on what is claimed, not by what is disclosed.[375] Consequently, evidence of classification is neither "conclusive"[376] nor "determinative."[377] To the contrary, such evidence is "inherently weak" and of "limited value."[378]

In re Certain Stabilized Hull Units[379] offers an example of using patent classification as evidence of analogous art. Certain Stabilized Hull Units involved a patent covering a unit of a sonar system used to find fish.[380] More specifically, an acoustic transducer was enclosed in a watertight housing. A lift mechanism raised and lowered the housing within an elevator well to advance the transducer to a scanning position below the keel of a boat and to retract the housing to a rest position within the well when not in use. The claims-at-issue concerned guide members attached to the housing and abutting the inner walls of the well to prevent lateral movement of the housing within the well while permitting free flow of water past the housing as it was raised and lowered.[381]

Western Marine Electronics sued Furuno Electrico Co. of Japan and Furuno U.S.A., Inc. (collectively "Furuno") for patent infringement.[382] Furuno countered that the patent was invalid.[383] To support its counterclaim, the defendant relied on references concerning guide members on oil well drilling equipment.[384]

The United States International Trade Commission ("ITC" or "Commission") began with the question of whether guide members in oil well drilling equipment were analogous to guide members for stabilized hull units.[385] It found that the oil well drilling technology of the references was outside the field of the patentee's endeavor.[386] Continuing its inquiry, the ITC viewed the problem addressed by the ***278** claims as "not one solely of stabilizing a sonar unit, but one of moving an object within a well that contains a liquid,"[387] i.e., "a guiding problem."[388] The Commission noted that the references were classified "in PTO Class 308, 'machine elements, bearings and guides.'"[389] Therefore, found the ITC, the references dealt with the same problem as the patentee.[390]

In contrast, Bott v. Four Star Corp.[391] offers an example of the limited value that may be ascribed to patent classification as evidence of analogous art. Thinking "it would be the starting point in determining analogous art,"[392] the United States District Court for the Eastern District of Michigan requested an excerpt from the USPTO's Manual of Classification.[393] The parties, however, "paid no attention to it in their proofs," and the court determined the question of analogous art without further reference thereto.[394]

Conclusion

This article sought to increase understanding of analogous art in three parts. The first part considered the breadth of analogous art. It explained that courts generally take an expansive view of what constitutes analogous art. The second part enumerated the two criteria for analogous art. More specifically, a reference is analogous art if it lies within the field of the inventor's endeavor or is reasonably pertinent to a particular problem with which he was involved. The third part addressed evidence of analogous art. It explored evidence from the specification, the inventor, those in the art, and the USPTO. Armed

with the article, patent attorneys, agents, and examiners should have a greater awareness of analogous art . . . and a different outlook on Cezanne and Renoir!

Footnotes

[a1] The author is an Electrical Administrative Patent Judge ("APJ") at the USPTO. Before becoming an APJ, he worked as an Electrical Engineering Primary Examiner at the USPTO and lectured and developed courses on obviousness for the USPTO's Patent Academy. Before joining the USPTO, the author was a Senior Electrical Engineer at Booz Allen & Hamilton.
Judge Barry belongs to the Virginia State Bar and the Bar of the District of Columbia. He earned a J.D. degree from the George Mason University School of Law, an M.S. degree in electrical engineering from Johns Hopkins University, and a B.E.E. degree in electrical engineering from The Catholic University of America. The author has been recognized by Who's Who in American Law since 2003.
The opinions expressed herein are solely the author's and do not necessarily represent those of the United States Patent and Trademark Office. The author thanks his colleague Stuart S. Levy for reviewing a draft of this article.

[1] Paul Cézanne was a "French painter, one of the greatest of the Post-Impressionists, whose works and ideas were influential in the aesthetic development of many 20th-century artists and art movements, especially Cubism." Paul Cézanne, Encyclopaedia Britannica Online, at http:// www.britannica.com/eb/article?tocId=9022192 (last visited Mar. 9, 2005).

[2] Pierre-Auguste Renoir was a "French painter originally associated with the Impressionist movement." Pierre-Auguste Renoir, Encyclopaedia Britannica Online, at http://www.britannica.com/eb/article?tocId=9063208 (last visited Mar. 9, 2005).

[3] Nicolas Pioch, Renoir, Pierre-Auguste: Portrait of Victor Chocquet, WebMuseum, at http://www.ibiblio.org/wm/paint/auth/renoir/portraits/chocquet (July 16, 2002).

[4] Ronald B. Coolley, The Procedures for Determining Analogous Art, 19 IDEA 161, 162 (1978).

[5] Donald S. Chisum, Chisum on Patents § 5.03[1][a][ii][C] (2001). See also U.S. Pat. & Trademark Off., Manual of Patent Examining Procedures § 2141.01(a) (8th ed., 2d rev. 2004) [hereinafter M.P.E.P.] ("The examiner must determine what is 'analogous prior art' for the purpose of analyzing the obviousness of the subject matter at issue.").

[6] Twin Disc, Inc. v. United States, 10 Cl. Ct. 713, 732 (1986).

[7] In re Sovish, 769 F.2d 738, 741 (Fed. Cir. 1985).

[8] Robert L. Harmon, Patents and the Federal Circuit 158 (5th ed. 2001).

[9] Burgess Cellulose Co. v. Wood Flong Corp., 431 F.2d 505, 509 (2d Cir. 1970).

[10] Black & Decker Mfg. Co. v. Ever-Ready Appliance Mfg. Co., 518 F. Supp. 607, 613 (E.D. Mo. 1981).

[11] In re Shearman, 435 F.2d 589, 591 (C.C.P.A. 1971).

[12] John W. Schlicher, Patent Law, Legal and Economic Principles § 5:6 (2d ed. 2003).

[13] See U.S. Dept. of State, Introduction to Intell. Prop. Rts.: The U.S. Patent Sys., USINFO, at http:// usinfo.state.gov/products/pubs/intelprp/patent.htm (last visited Mar. 30, 2005).

[14] In re Self, 671 F.2d 1344, 1351 (C.C.P.A. 1982); Twin Disc, Inc. v. United States, 10 Cl. Ct. 713, 728 (1986).

[15] John Gladstone Mills, III, et al., Patent Law Basics § 9:21 (2003).

[16] Martin J. Adelman, 1 Patent Law Perspectives § 2.3[10] (2004). See also Idacon, Inc. v. Cent. Forest Prods., Inc., 1986 WL 15837, at *16 (E.D. Okla. 1986) ("The determining of obviousness under 35 U.S.C. § 103 will not include nonanalogous art.").

[17] Graham v. John Deere Co., 383 U.S. 1, 17 (1966).

[18] Joy Tech., Inc. v. Quigg, 732 F. Supp. 227, 232 (D.D.C. 1990). The other factual inquiries address the differences between the prior art and the claims at issue, the level of ordinary skill in the pertinent art, and any objective evidence of secondary considerations. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443, 447 (Fed. Cir. 1986). The "scope" of the prior art refers to whether art is relevant; the "content," what the art would have taught a person of ordinary skill in the art. Joy Tech., 732 F. Supp. at 232-33.

[19] Heidelberger Druckmaschinen AG v. Hantscho Com. Prods., Inc., 21 F.3d 1068, 1071 (Fed. Cir. 1994).

[20] See Monarch Knitting Mach. Corp. v. Sulzer Morat GMBH, 139 F.3d 877, 881 (Fed. Cir. 1998); Schneider (Europe) AG v. Scimed Life Sys., Inc., 852 F. Supp. 813, 853 (D. Minn. 1994) ("A prior art reference is within the scope of applicable prior art ....") (emphasis added). But see Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1568 n.9 (Fed. Cir. 1987) ("Whether something legally within the prior art is 'analogous' is a fact question on 'content' of the prior art.").

[21] Cathodic Prot. Serv. v. Am. Smelting & Ref. Co., 594 F.2d 499, 507 (5th Cir. 1979); Estate of Stoller v. Ford Motor Co., 784 F. Supp. 506, 513 (N.D. Ill. 1992).

[22] Dann v. Johnston, 425 U.S. 219, 229 (1976).

[23] 35 U.S.C. § 103(a) (2004).

[24] Hilary K. Dobies, New Viability in the Doctrine of Analogous Art, 34 IDEA 227, 228 (1994) (citing Union Carbide Corp. v. Am. Can Co., 724 F.2d 1567, 1572 (Fed. Cir. 1984); In re Pagliaro, 657 F.2d 1219, 1224 (C.C.P.A. 1981); In re Wood, 599 F.2d 1032, 1036 (C.C.P.A. 1979)).

[25] Wood, 599 F.2d at 1036.

[26] In re Van Wanderham, 378 F.2d 981, 986 (C.C.P.A. 1967). In other words, there is a limit to how far afield a party may go in gathering references relied upon as prior art. Ling-Temco-Vought, Inc. v. Kollsman Instrument Corp., 372 F.2d 263, 268 n.1 (2d Cir. 1967).

[27] See In re Gorman, 933 F.2d 982, 986 (Fed. Cir. 1991) (citing In re Seranker, 702 F.2d 989, 994 (Fed. Cir. 1983)) ("When the references are all in the same or analogous fields, knowledge thereof by the hypothetical person of ordinary skill is presumed ....").

[28] In re Oetiker, 24 U.S.P.Q.2d (BNA) 1443, 1446 (Fed. Cir. 1992).

[29] Wood, 599 F.2d at 1036.

[30] Graham v. John Deere Co., 383 U.S. 1, 18 (1966).

[31] Geo. J. Meyer Mfg. Co. v. San Marino Elec. Corp., 422 F.2d 1285, 1288 (9th Cir. 1970).

[32] Weather Eng'g Corp. of Am. v. United States, 614 F.2d 281, 286-87 (Ct. Cl. 1980).

[33] William Stallings, Data and Computer Communications 2 (4th ed. 1994).

[34] Id.

[35] Id.

[36] Litton Sys., Inc. v. Honeywell Inc., CV 90-93 MRP, 1995 WL 366468, at *18 (C.D. Cal. Jan. 6, 1995).

[37] Cathodic Prot. Serv. v. Am. Smelting & Ref. Co., 594 F.2d 499, 507 n.16 (5th Cir. 1979).

[38] Sargent Indus., Inc. v. Sundstrand Corp., 189 U.S.P.Q. (BNA) 225, 232 (N.D. Ill. 1975).

[39] Cardiac Pacemakers, Inc. v. Cordis Corp., 549 F. Supp. 564, 567 (D. Minn. 1982). See also Tapco Prods. Co. v. Van Mark Prods. Corp., 446 F.2d 420, 427 (6th Cir. 1971) ("[T]he choice of 'machine designing' generally (although a broad category) as the pertinent prior art, seems appropriate.").

[40] In re Certain Steel Toy Vehicles, 197 U.S.P.Q. (BNA) 873, 880 (Int'l Trade Comm'n 1978).

[41] Metallurgical Int'l v. Kawecki Berylco Indus., 348 F. Supp. 825, 835 (E.D. Pa. 1972).

[42] Stevenson v. Int'l Trade Comm'n, 612 F.2d 546, 550 (C.C.P.A. 1979) (citing In re Heldt, 433 F.2d 808 (C.C.P.A. 1970)).

[43] Skee-Trainer, Inc. v. Garelick Mfg. Co., 361 F.2d 895, 898 (8th Cir. 1966).

[44] 518 F. Supp. 607 (E.D. Mo. 1981).

[45] Id. at 608.

[46] Id. at 610.

[47] Id. at 613.

[48] Id.

[49] Id. at 613-14.

[50] Black & Decker Mfg., 518 F. Supp. at 613.

[51] Id. See also Plastic Container Corp. v. Cont'l Plastics of Okla., 515 F. Supp. 834, 849 (W.D. Okla. 1981) (reaching the same result regarding "the subject mater of containers and closures therefor").

[52] Endeveco Corp. v. Chi. Dynamic Indus., Inc., 268 F. Supp. 640, 655 (N.D. Ill. 1967); Twin Disc, Inc. v. United States, 10 Cl. Ct. 713, 733 (1986).

[53] 993 F.2d 858 (Fed. Cir. 1993).

[54] Irah H. Donner, Patent Prosecution 513 (3d ed. 2003).

[55] 993 F.2d at 861.

[56] Id. at 860.

[57] Id. at 863.

[58] Id. at 864.

[59] Id.

[60] Id. at 860.

[61] Wang Labs., Inc. v. Toshiba Corp., 993 F.2d 858, 864 (Fed. Cir. 1993).

[62] Id.

[63] Id.

[64] Id. at 865.

[65] Id.

[66] Id.

[67] In re Clay, 966 F.2d 656, 658 (Fed. Cir. 1992). The two criteria "set forth a pragmatic approach to applying the standard of patentability created by Congress." In re Nillsen, 851 F.2d 1401, 1403 (Fed. Cir. 1988).

[68] In re Wood, 599 F.2d 1032, 1036 (C.C.P.A. 1979).

[69] In re Deminski, 796 F.2d 436, 442 (Fed. Cir. 1986).

[70] Id. The criteria focus on the field or problem of an inventor seeking or defending a patent; analogousness of a reference vis-à-vis another reference is not the question. Parties sometimes overlook the distinction. See, e.g., In re Metz, No. 97-1263, 1998 WL 670185, at *5 (Fed. Cir. Sept. 22, 1998) (appellant arguing that an article is not analogous to admitted prior art).

[71] See Asahi/Am., Inc. v. MFRI, Inc., 36 F. Supp. 2d 618, 620 (S.D.N.Y. 1999) ("While one designing thermoplastic piping systems might look to metal piping systems for some guidance ... no simple or obvious correlation exists between the two.") (emphasis added).

[72] Irwin M. Aisenberg, Modern Patent Law Precedent 31-32 (4th ed. 1997).

[73] In re Clay, 966 F.2d 656, 659 (Fed. Cir. 1992).

[74] Dobies, supra note 24, at 230.

[75] Lance Leonard Barry et al., Obviousness Under 35 U.S.C. 103: Basic 8 (4th rev. 1988) (document internal to USPTO).

[76] See supra Part I.

[77] See M.P.E.P., supra note 5, § 904.01(c) ("It depends upon the necessary essential function or utility of the subject matter covered by the claims, and not upon what it is called by the applicant.").

[78] 87 F.2d 487 (C.C.P.A. 1937).

[79] Id. at 489.

[80] Id. at 487.

[81] Id.

[82] Id. at 488.

[83] Id.

[84] In re Kylstra, 87 F.2d 487, 488 (C.C.P.A. 1937).

[85] The CCPA was the predecessor of the Federal Circuit in reviewing patentability appeals from the USPTO. Lance Leonard Barry, Precedent for Ex Parte Patent Prosecution, 78 J. Pat. & Trademark Off. Soc'y 841, 844-45 (1996).

[86] In re Kylstra, 87 F.2d at 488.

[87] Id.

[88] Id.

[89] Id.

[90] 1994 WL 374505 (Fed. Cir. July 15, 1994).

[91] Id., at *1.

[92] Id.

[93] Id.

[94] U.S. Patent No. 4,734,946 (issued Apr. 5, 1988).

[95] Johenning, 1994 WL 374505, at *2.

[96] Id.

[97] Id.

[98] Id. See also M.P.E.P., supra note 5, § 904.01(c) ("[A] tea mixer and a concrete mixer may both be regarded as relating to the mixing art, this being the necessary function of each.").

[99] 87 F.3d 1559 (Fed. Cir. 1996) (Litton I), vacated by 520 U.S. 1111 (1997) (relevant holdings regarding obviousness reinstatedby Litton II, 140 F.3d 1449 (Fed. Cir. 1998)).

[100] Id. at 1563.

[101] Id.

[102] Id. at 1565.

[103] See id.

[104] Id.

[105] Litton I, 87 F.3d at 1566.

[106] See Litton Sys., Inc. v. Honeywell Inc., CV 90-93 MRP, 1995 WL 366468, at *24 (C.D. Cal. Jan. 6, 1995) ("Molitor, although not necessary to complete the already strong case of obviousness ... serves to cement the conclusion of obviousness."), aff'd in part,vacated in part, 140 F.3d 1449 (Litton II).

[107] Litton Sys., Inc., 87 F.3d at 1567.

[108] Id. at 1568.

[109] Id.

[110] Id.

[111] In re Clay, 966 F.2d 656, 659 (Fed. Cir. 1992).

[112] See id. at 658-59.

[113] Toro Co. v. Textron, Inc., 499 F. Supp. 241, 248 (D. Del. 1980).

[114] In re Sevold, 241 F.2d 729, 731 (C.C.P.A. 1957).

[115] Barry, supra note 75, at 9. One commentator opined that the breadth of the second criterion makes a nonanalogousness attack usually doomed to failure. Irving Kayton, 1 Patent Practice 5-33 (PRI 1992).

[116] Orthopedic Equip. Co. v. United States, 702 F.2d 1005, 1009 (Fed. Cir. 1983).

[117] Clay, 966 F.2d at 659.

[118] Id.

[119] Id.

[120] Id.

[121] 397 F.2d 992 (C.C.P.A. 1968).

[122] Id. at 993.

[123] Id.

[124] Id. at 994.

[125] Id.

[126] Id.

[127] In re Cademartori, 397 F.2d 992, 994 (C.C.P.A. 1968).

[128] Id. at 995.

[129] Id.

[130] Id.

[131] Id.

[132] Id.

[133] In re Cademartori, 397 F.2d 992, 995 (C.C.P.A. 1968).

[134] 30 F.3d 1475 (Fed. Cir. 1994).

[135] Id. at 1478.

[136] Id.

[137] Id. at 1481.

[138] Id.

[139] Id.

[140] In re Paulsen, 30 F.3d 1475, 1481 (Fed. Cir. 1994).

[141] Id. at 1481-82.

[142] Id. at 1482.

[143] Id. (quoting language from the Board). See also In re Napier, 55 F.3d 610, 614 (Fed. Cir. 1995) (finding the problem of reducing shear-generated noise from an aircraft's propulsion engine reasonably pertinent to the problem of reducing combustion noise from

an aircraft's non propulsion auxiliary power unit); Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1573-74 (Fed. Cir. 1983) ("Medtronic's contention that a pacemaker designer in 1964 would not have looked to Case or Goda, solely because those patents disclose circuits used in high power, high frequency devices, is not persuasive. Faced with a rate-limiting problem, one of ordinary skill in the art would look to the solutions of others faced with rate-limiting problems."); In re Miller, 311 F.2d 955, 959 (C.C.P.A. 1963) (finding that one skilled in the "blow molding plastic bottle producing art" would have looked to the "blow molding glass bottle producing art" for solutions); Gallagher v. Quigg, 8 U.S.P.Q.2d (BNA) 1437, 1439 (D.D.C. 1988) (finding that the problem of generating lift in aircraft reasonably pertinent to the problem of lightening the load on a truck).

144 65 U.S.P.Q.2d (BNA) 1690 (Bd. Pat. App. & Int. 2002).

145 Id.

146 Id. at 1690-91.

147 Id. at 1691.

148 Id.

149 Id.

150 U.S. Patent No. 5,164,575 (issued Nov. 17, 1992).

151 Ex parte Gaechter, 65 U.S.P.Q.2d (BNA) 1690, 1691 (Bd. Pat. App. & Int. 2002).

152 Id. at 1692.

153 Id.

154 Id.

155 Id.

156 Id.

157 Ex parte Gaechter, 65 U.S.P.Q.2d (BNA) 1690, 1692 (Bd. Pat. App. & Int. 2002).

158 Id.

159 Id.

160 See Baxter, 924 F. Supp. 994, 1008 (C.D. Cal. 1996).

[161] Id.

[162] An "analyte" is "[t]he specific compound being measured in a chemical analysis." McGraw-Hill Dictionary of Scientific and Technical Terms 88 (5th ed. 1994).

[163] Baxter Diagnostics, Inc., 924 F. Supp. at 1000.

[164] Id.

[165] Id.

[166] Id. at 999.

[167] Id.

[168] Id. at 1006.

[169] Baxter Diagnostics, Inc. v. AVL Scientific Corp., 924 F. Supp. 994, 1008 (C.D. Cal. 1996).

[170] Id.

[171] Id.

[172] Id.

[173] Id.

[174] Id.

[175] Id. See also In re Watter, 147 F.2d 685, 687 (C.C.P.A. 1945) ("[T]he problem of stretching a metal skin smoothly over the surface of an aeroplane part is not analogous to that encountered in the application of a string to a bow."); In re Pagliaro, 657 F.2d 1219, 1225 (C.C.P.A. 1981) (finding that a demonstration that caffeine is more soluble in serum than in water is pertinent to neither decaffeination of a vegetable material nor to preparation of a beverage).

[176] In re Way, 514 F.2d 1057, 1062 (C.C.P.A. 1975).

[177] In re Budnick, 537 F.2d 535, 537 (C.C.P.A. 1976) (citing In re Schulze, 346 F.2d 600 (C.C.P.A. 1965); In re Cole, 326 F.2d 769 (C.C.P.A. 1964)).

[178] M.P.E.P., supra note 5, § 608.

[179] 35 U.S.C. § 111(a)(2)(A) (2005); 37 C.F.R. § 1.51(b)(1) (2004).

[180] M.P.E.P., supra note 5, § 608.01.

[181] 37 C.F.R. § 1.77(b)(5) (2004).

[182] M.P.E.P., supra note 5, § 608.01(c)(1).

[183] M.P.E.P., supra note 5, § 608.01(c)(1).

[184] In re Gentile, No. 93-1086, 1993 WL 393318, at *2 (Fed. Cir. Oct. 5, 1993).

[185] See, e.g., Joy Tech., Inc. v. Quigg, 732 F. Supp. 227, 233 (D.D. C. 1990) (relying on a statement of the field of invention without mention of a specific label).

[186] Estate of Stoller v. Ford Motor Co., 784 F. Supp. 506, 514-15 (N.D. Ill. 1992). See also Gentile, 1993 WL 393318, at *2 ("The Board found the field of the claimed invention to be ... stated in the paragraph of the application's specification entitled 'Field.'") (emphasis added).

[187] 377 F.2d 1019 (C.C.P.A. 1967).

[188] Id. at 1020.

[189] Id.

[190] Id.

[191] Id.

[192] Id.

[193] In re Grout, 377 F.2d 1019, 1020-21 (C.C.P.A. 1967).

[194] Id. at 1021.

[195] Id. (emphasis added).

[196] Id.

[197] 218 U.S.P.Q. (BNA) 433 (N.D. Tex. 1982).

[198] Id. at 435.

[199] Id.

[200] Id.

[201] Id. at 436.

[202] Id. at 435.

[203] May v. Am. Southwest Waterbed Distribs., Inc., 218 U.S.P.Q. (BNA) 433, 436 (N.D. Tex. 1982).

[204] Id.

[205] Id.

[206] Id.

[207] May v. Am. Southwest Waterbed Distribs., Inc., 715 F.2d 1567, 1572 (5th Cir. 1983).

[208] M.P.E.P., supra note 5, § 608.01(c).

[209] M.P.E.P., supra note 5, § 608.01(c).

[210] Union Carbide Corp. v. Am. Can Co., 724 F.2d 1567, 1572 (Fed. Cir. 1984) ("The court looked to the problem addressed by the inventor, as stated by him in his patent application ... to establish the scope and content of the art ...."); Litton Sys., Inc. v. Honeywell Inc., CV 90-93 MRP, 1995 WL 366468, at *16 (C.D. Cal. Jan. 6, 1995) ("The problem that Wei was trying to solve is identified in the patent itself.").

[211] 558 F. Supp. 1154 (N.D. Ill. 1983).

[212] Id. at 1155.

[213] Id.

[214] Id.

[215] Id.

[216] Id. at 1157.

[217] Id.

[218] Union Carbide Corp. v. Am. Can Co., 558 F. Supp. 1154, 1160 (N.D. Ill. 1983).

[219] Id.

[220] Id.

[221] Id.

[222] 37 C.F.R. § 1.75(a) (2005).

[223] Orthopedic Equip. Co. v. United States, 702 F.2d 1005, 1008 (Fed. Cir. 1983).

[224] I.U. Tech. Corp. v. Research-Cottrell, Inc., 641 F.2d 298, 304 (5th Cir. 1981). See also 60 Am. Jur. 2d Patents § 196 (2003) ("In determining what is analogous prior art, the claims are important.").

[225] See MacLaren v. B-I-W Group, Inc., 535 F.2d 1367, 1372 (2d Cir. 1976) ("It is a fundamental rule of patent law that the scope of protection granted by a patent is defined by the language of its claims rather than by its title, specifications, exhibits or by the commercial embodiments of the claimed invention.").

[226] Cf In re Schulze, 346 F.2d 600, 602 (CCPA 1965) (citing In re Cole, 326 F.2d 769, 773 (CCPA 1964) ("Argument in the brief does not take the place of evidence in the record.").

[227] 540 F. Supp. 1128 (W.D. Pa. 1982).

[228] Id. at 1131.

[229] Id.

[230] Id.

[231] Id.

[232] Id.

[233] L.D. Schreiber Cheese Co. v. Clearfield Cheese Co., 540 F. Supp. 1128, 1133 (W.D. Pa. 1982).

[234] Id.

[235] Id.

[236] Id.

[237] Id. at 1135. See also Digitronics Corp. v. N.Y. Racing Ass'n, Inc., 553 F.2d 740, 745 (2d Cir. 1977) ("[T]he elements of the invention for which novelty is claimed relate to solid state electronic data processing generally, not merely to totalisators. Thus the scope of the prior art in this case, in which the hypothetical reasonable person must be ordinarily skilled, and hence which the inventors here could reasonably be expected to have consulted, encompasses data processing generally and is not restricted to the totalisator business.").

[238] Lance Leonard Barry, Anything You Say Can Be Used Against You: Admissions of Prior Art, 82 J. Pat. & Trademark Off. Soc'y 347, 347 (2000).

[239] MacLaren v. B-W-I Group, Inc., 535 F.2d 1367, 1373 (2d Cir. 1976).

[240] Freeman v. Minn. Mining & Mfg. Co., 693 F. Supp. 134, 153 (D. Del. 1988). See also Joy Techs., Inc. v. Quigg, 732 F. Supp. 227, 234 (D.D.C. 1990) ("The Commissioner has submitted evidence showing that the inventor and his attorneys considered excavating equipment and locomotives to be pertinent to the '864 invention."). Contra Ryko Mfg. Co. v. Nu-Star, Inc., 950 F.2d 714, 716 (Fed. Cir. 1991) (determining that the concession of both parties, which was accepted by the district court, that "the pertinent art encompassed automatic car washing systems" was "too broad").
Courts disagree over whether an inventor's admission that a reference is prior art is also an admission that the reference is analogous art. Compare Wang Labs., Inc. v. Toshiba Corp., 993 F.2d 858, 865 (Fed. Cir. 1993) ("Wang did not stipulate that this art was analogous. Wang acknowledged only that it was prior art, not analogous prior art."), with Litton Sys., Inc. v. Honeywell Inc., CV 90-93 MRP, 1995 WL 366468, at *17 (C.D. Cal. Jan. 6, 1995) (explaining that because the most important references were admitted to be prior art, the parties' subsequent arguments concerning the scope and definition of the pertinent prior art were "largely inconsequential in resolving the issue of obviousness").

[241] 435 F.2d 589 (C.C.P.A. 1971).

[242] Id. at 589.

[243] Id. at 590.

[244] Id.

[245] Id.

[246] Id. at 591.

[247] In re Shearman, 435 F.2d 589, 591 (C.C.P.A. 1971).

[248] Id.

[249] Id. See also In re Certain Stabilized Hull Units, 218 U.S.P.Q. (BNA) 752, 757 (U.S. Int'l Trade Comm'n 1982) ("Mr. Sublett, the inventor, testified that the problem to be solved by claim 12 was finding a way to mount the sound dome rigidly inside a well 'so that it still slides up and down, and then also allows room for the water to move back and forth.' (TR 568.) The references from the well-drilling field submitted by Furuno deal with a similar problem: the stabilization of a 'sucker-rod' inside a tube or well while allowing free movement of fluid around the stabilizing guide structure. The problems are clearly similar and the solution to one is pertinent to the other.").

[250] 408 F.2d 395 (Ct. Cl. 1969).

[251] Id. at 396-97.

[252] Id.

[253] Id.

[254] Id. at 396.

[255] Id.

[256] Int'l Glass Co. v. United States, 408 F.2d 395, 404 (Ct. Cl. 1969).

[257] Id. at 396.

[258] Id. at 399.

[259] Id.

[260] Id. at 404.

[261] Id. at 404-05.

[262] Int'l Glass Co. v. United States, 408 F.2d 395, 405 (Ct. Cl. 1969).

[263] Id.

[264] Cont'l Can Co. v. Old Dominion Box Co., 393 F.2d 321, 325 (2d Cir. 1968) ("Weiss testified that in a general sense, he took his lock from another type of folding carton and incorporated it into a wrap-around carton.").

[265] ITT Corp. v. United States, 10 Cl. Ct. 321, 329 (1986) ("[P]roduction of fiber optics began with the use of a standard electrical connector.").

[266] Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535 (Fed. Cir. 1983) ("Slade himself referred to a standard textbook on conductive carbon black in rubber when he began his search for a solution.").

[267] Litton Sys., Inc. v. Honeywell Inc., CV 90-93 MRP, 1995 WL 366468, at *16 (C.D. Cal. Jan. 6, 1995) ("Wei himself testified that he first conceived the idea of using ion beam sputter deposition to manufacture ring laser gyroscope mirrors after hearing a presentation on the use of the process in semiconductor applications.").

[268] 776 F.2d 309 (Fed. Cir. 1985).

[269] Id. at 311-12.

[270] Id. at 311.

[271] Id.

[272] Id. at 314.

[273] Id.

[274] Pentec, Inc. v. Graphics Controls Corp.,776 F.2d 309, 314 (Fed. Cir. 1985).

[275] Id. at 313.

[276] Id. at 314.

[277] Id.

[278] Id.

[279] Id.

[280] Ex parte Goodyear Tire & Rubber Co., 230 U.S.P.Q. (BNA) 357, 359 (Bd. Pat. App. & Int. 1985).

[281] George C. Moore Co. v. Liberty Fabrics of N.Y., Inc., 173 U.S.P.Q. (BNA) 761, 763 (E.D. Va. 1972) ("Mr. Siciliano himself was experienced in both weaving and knitting ....").

[282] Digitronics Corp. v. N.Y. Racing Ass'n, Inc., 553 F.2d 740, 745 (2d Cir. 1977).

[283] 641 F.2d 298 (5th Cir. 1981).

[284] Id. at 301.

[285] Id. at 299.

[286] Id.

[287] Id. at 299.

[288] Id. at 302.

[289] I.U. Tech. Corp. v. Research-Cottrell, Inc., 641 F.2d 298, 302 (5th Cir. 1981).

[290] Id. at 303.

[291] Id.

[292] Id.

[293] Id.

[294] Id.

[295] I.U. Tech. Corp. v. Research-Cottrell, Inc., 641 F.2d 298, 304 (5th Cir. 1981).

[296] In re Young, 927 F.2d 588, 591 (Fed. Cir. 1991) (citing In re Lemelson, 397 F.2d 1006, 1009 (C.C.P.A. 1968)).

[297] Liposome Co. v. Vestar, Inc., 1994 WL 738952, at *25 (D. Del. Dec. 20, 1994).

[298] Ex parte Goodyear Tire & Rubber Co., 230 U.S.P.Q. (BNA) 357, 359 (Bd. Pat. App. & Int. 1985).

[299] 157 F.2d 505 (6th Cir. 1946).

[300] Id. at 504.

[301] Id.

[302] Id. at 506.

[303] Id.

[304] Id. at 508.

[305] Gen. Metals Powder Co. v. S.K. Wellman Co., 157 F.2d 505, 510 (6th Cir. 1946).

[306] Id.

[307] Id.

[308] Id.

[309] Id. See also In re Gorman, 933 F.2d 982, 987 (Fed. Cir. 1991) ("Gorman argues that the references showing ice cream in a mold or wrapper on a stick and the references showing candy in a mold or wrapper on a stick are not analogous, for they require different conditions of production. However, the Copeman reference shows the close relationship of these arts, stating that his elastomeric mold may be used for 'frozen confections and other solid confections.' We conclude that the ice cream on a stick and candy on a stick arts are analogous ...."); Litton Sys., Inc. v. Honeywell Inc., CV 90-93 MRP, 1995 WL 366468, at *16 (C.D. Cal. Jan. 6, 1995) ("Nearly all cited references discuss both optics and microelectronics.").

[310] Lindemann Maschinefabrik GMBH v. Am. Hoist & Derrick Co., 730 F.2d 1452, 1460 (Fed. Cir. 1984). See also Al-Site Corp. v. Opti-Ray Inc., 841 F. Supp. 1318, 1325 n.7 (E.D.N.Y. 1993) ("[T]he display methods for clip-on sunglasses (without temples) is in the same field of endeavor as evidenced by the fact that some of the display cases in the Cool Ray catalogs portray systems for displaying sunglasses with temples and clip-ons without temples side-by-side. Accordingly, this Court finds that design methods for displaying sunglasses and clip-on sunglasses are analogous art ....").

[311] Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535 (Fed. Cir. 1983) ("The record reflects that PTFE and rubber are used by the same hose manufacturers to make hoses and that the same and similar problems have been experienced with both.").

[312] L.D. Schreiber Cheese Co. v. Clearfield Cheese Co., 540 F. Supp. 1128, 1135 (W.D. Pa. 1982) ("[P]ersons of ordinary skill in the cheese art at the time of the Meng invention would look to non-food items for solutions to the very problem which the Meng invention sought to solve.").

[313] Libbey-Owens-Ford Co. v. BOC Group, Inc., 655 F. Supp. 897, 912-13 (D.N.J. 1987) ("Dr. Penfold testified that when he was attempting to build a high speed sputter coating apparatus ..., he never considered ionic vacuum pumps to have any relevance at all to problems facing him. He conducted literature searches while attempting to design a high rate sputter coating apparatus but never considered looking at papers on ionic vacuum pumps. He stated he did not know anyone in the field who ever suggested modifying ionic vacuum pumps to operate as sputter coating devices."); Aero Indus. Inc. v. John Donovan Enters.- Fla., 80 F. Supp. 2d 963, 975 (S.D. Ind 1999) ("The two designers of the allegedly infringing product testified that they did not refer to vehicle trunk liners, window shades, or pickup truck bed liners when trying to design a new one-piece air return bulkhead for Aero.").

[314] 10 Cl. Ct. 321, 329 (1986).

[315] Id. at 324-27.

[316] Id. at 322.

[317] Id.

[318] Id. at 327.

[319] See id. at 329-30.

[320] ITT Corp. v. United States, 10 Cl. Ct. 321, 329 (1986).

[321] Id.

[322] Id. at 330 n.3.

[323] Id. at 330.

[324] Id. at 329-30. See also Orthopedic Equip. Co. v. United States, 702 F.2d 1005, 1008 (Fed. Cir. 1983) ("[T]echnology used for the routing of signals in the early models of information processing systems hardware was borrowed from telephone line-switching technology."); United States Surgical Corp. v. Hosp. Prods. Int'l PTY Ltd., 701 F. Supp. 314, 334 (D. Conn. 1988) ("[I]n a passing, and somewhat innocuous reference in the Scientific American article, paper staplers were mentioned as part of the evolution of surgical staplers, perhaps suggesting that the paper stapling art has lent itself to the surgical field.").

[325] Fed. R. Evid. 702.

[326] SAB Industri AB v. Bendix Corp., 199 U.S.P.Q. (BNA) 95, 102 (E.D. Va. 1978); Freeman v. Minn. Mining & Mfg. Co., 693 F. Supp. 134, 153 (D. Del. 1988).

[327] Ex parte Dussaud, 7 U.S.P.Q.2d (BNA) 1818, 1819 (Bd. Pat. App. & Int. 1988).

[328] Union Carbide Corp. v. Am. Can Co., 724 F.2d 1567, 1572 (Fed. Cir. 1984).

[329] Universal Athletic Sales Co. v. Am. Gym, Recreational & Athletic Equip. Corp., 546 F.2d 530, 538 (3d Cir. 1976).

[330] In re Deters, 515 F.2d 1152, 1155 (C.C.P.A. 1975).

[331] Union Carbide Corp., 558 F. Supp. at 1160.

[332] Universal Athletic Sales Co., 546 F.2d at 537.

[333] 702 F.2d 1005 (Fed. Cir. 1983).

[334] Id. at 1006.

[335] Id.

[336] Id.

[337] Id. at 1009.

[338] Id.

[339] Orthopedic Equip. Co. v. United States, 702 F.2d 1005, 1009 (Fed. Cir. 1983).

[340] Id.

[341] Id.

[342] Id.

[343] Id.

[344] Id. at 1009-10.

[345] Fed. R. Evid. 702.

[346] In re Altenpohl, 500 F.2d 1151, 1158 (C.C.P.A. 1974).

[347] Cable Elec. Prods., Inc. v. Genmark, Inc., 770 F.2d 1015, 1024 (Fed. Cir. 1985).

[348] Union Carbide Corp. v. Am. Can Co., 724 F.2d 1567, 1572 (Fed. Cir. 1984).

[349] Fed. R. Evid. 702.

[350] 701 F. Supp. 314 (D. Conn. 1988).

[351] Id. at 334.

[352] 520 F. Supp. 1101 (D. Del. 1981).

[353] Id. at 1106 n.15.

[354] Plastic Container Corp. v. Cont'l Plastics of Okla., Inc., 708 F.2d 1554, 1557 (10th Cir. 1983).

[355] In re Clay, 966 F.2d 656, 658 (Fed. Cir. 1992) (citing Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1568 n.9 (Fed. Cir. 1987)).

[356] Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 1535 (Fed. Cir. 1983).

[357] In re Zurko, 258 F.3d 1379, 1384 (Fed. Cir. 2001).

[358] Finish Eng'g Co. v. Zerpa Indus., Inc., 806 F.2d 1041, 1043-44 (Fed. Cir. 1986).

[359] Orthopedic Equip. Co. v. United States, 702 F.2d 1005, 1008-09 (Fed. Cir. 1983).

[360] 173 U.S.P.Q. (BNA) 761 (E.D. Va. 1972).

[361] Id. at 762.

[362] Id. at 761.

[363] Id.

[364] Id. at 763.

[365] Id.

[366] George C. Moore Co. v. Liberty Fabrics of N.Y., Inc., 173 U.S.P.Q. (BNA) 761, 763 (E.D. Va. 1972).

[367] Id.

[368] See United States Surgical Corp. v. Hosp. Prods. Int'l PTY Ltd., 701 F. Supp. 314, 334 (D. Conn. 1988) ("Even though paper staplers, particularly the Cavanagh and Greenfield patents, were cited during the prosecution of the '533, the Court is not persuaded that anyone other than those with less than ordinary skill in the art would refer to paper staplers."); ITT Corp. v. United States, 10 Cl. Ct. 321, 327 (1986) (finding the electrical art analogous despite the USPTO's non-citation of electrical art).

[369] 35 U.S.C. § 8 (2002); M.P.E.P., supra note 5, § 902.01.

[370] 35 U.S.C. § 8 (2002); M.P.E.P., supra note 5, § 902.01.

[371] M.P.E.P., supra note 5, § 902.01.

[372] Lemelson v. Mossinghoff, 1985 WL 1787, at *5 (D.D.C. Mar. 26, 1985).

[373] In re Ellis, 476 F.2d 1370, 1372 (C.C.P.A. 1973).

[374] In re Mlot-Fijalkowski, 676 F.2d 666, 670 n.5 (C.C.P.A. 1982).

[375] Mfrs. Sys., Inc. v. ADM Indus., Inc., 198 U.S.P.Q. (BNA) 223, 238 (N.D. Ind. 1978), aff'd, 615 F.2d 741 (7th Cir. 1979).

[376] Nat'l Filters, Inc. v. Research Prods. Corp., 384 F.2d 516, 520 (5th Cir. 1967).

[377] L.D. Schreiber Cheese Co. v. Clearfield Cheese Co., 540 F. Supp. 1128, 1136 (W.D. Pa. 1982).

[378] Mlot-Fijalkowski, 676 F.2d at 670 n.5. Contra In re Certain Steel Toy Vehicles, 197 U.S.P.Q. (BNA) 873, 880 (Int'l Trade Comm'n 1978) ("[I]t is important to note that the Schofield patent itself was cross-referenced by the Patent Office to Class 301, subclass 6D, a class and subclass that contains patents on wheels and axles for land vehicles.").

[379] 218 U.S.P.Q. (BNA) 752, 757 (Int'l Trade Comm'n 1982).

[380] Id. at 755.

[381] Id. at 756-57.

[382] Id. at 754.

[383] Id.

[384] Id.

[385] In re Certain Stabilized Hull Units, 218 U.S.P.Q. (BNA) 752, 757 (Int'l Trade Comm'n 1982).

[386] Id.

[387] Id.

[388] Id.

[389] Id.

[390] Id.

[391] 218 U.S.P.Q. (BNA) 358 (E.D. Mich. 1983).

[392] Id. at 369 n.45.

[393] Id. The USPTO describes the Manual of Classification as the "key" to the USPCS. M.P.E.P., supra note 5, § 902.01.

[394] Bott v. Four Star Corp., 218 U.S.P.Q. (BNA) 358, 369 (E.D. Mich. 1983).