

THE JOHN MARSHALL REVIEW OF INTELLECTUAL PROPERTY LAW



HOW THE INTERNET HAS REMOVED THE HISTORICAL RATIONALE FOR “NON-ANALOGOUS ARTS”

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ABSTRACT

The growth of the Internet has affected countless aspects of daily life, including the patent system. Internet-based legal research has grown considerably, given the convenience of general search agents such as Google, legally-focused search agents such as Westlaw and Lexis, and patent-focused search agents such as the PAIR system of the United States Patent and Trademark Office. These legal research tools have not only made it easier to find prior art, they have also expanded the volume of information that is available to one of ordinary skill in the art. Consequently, the traditional rules of so-called “analogous arts” are changing. The Internet has made it easier to render unpatentable an invention that has a parallel in some other field. If the inventor through a routine Internet search could find prior art that has even a remote correlation to the invention, then that invention may be rendered unpatentable. The conflicting case law suggests that a new standard may be necessary to define “analogous arts” in light of a world that has changed faster than the law.

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INTRODUCTION

This paper suggests that computer searching for prior art, combined with the strict application of the case law of intended use, effectively eliminates "non-analogous arts." Two inconsistent Court of Appeals for the Federal Circuit ("CAFC") opinions are used to illustrate the dire need to bring order and certainty to determining the pertinence of prior art.

Inventors, patent practitioners and patent examiners are hamstrung by the current state of the law which fails to define when prior art in a different field of endeavor can be, will be, or must be regarded as analogous, i.e., "pertinent." A two-prong test is currently being applied to "define the scope of analogous prior art: (1) whether the art is from the same *field of endeavor*, regardless of the problem addressed and (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is *reasonably pertinent* to the particular problem with which the inventor is involved".¹ This article will illustrate that inventors and patent practitioners are not certain as to how far afield to go in searching for "pertinent" prior art in evaluating patentability.² Patent examiners are also uncertain as to what can be used as "pertinent" prior art.³ As the examples used in this paper illustrate, the United States Patent & Trademark Office ("USPTO") rejected an application on the basis that a toothbrush was pertinent to a hair brush; on appeal, the CAFC affirmed two to one, with the dissenting member arguing that a toothbrush is not pertinent to a hair brush.⁴ However, in a separate case, that one member, together with two different judges of the CAFC, prevailed to reverse a rejection by the USPTO on the basis that a "drawer" container divided by plates to separate small articles was not pertinent to a "cup" container divided by plates to

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¹ *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (emphasis added); *see also In re Klein*, 647 F.3d 1343, 1348 (Fed. Cir. 2011); U.S. PAT. & TRADEMARK OFFICE, U.S. DEPT OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE § 2141.01(a) (8th ed. Rev. 9, Aug. 2012) [hereinafter MPEP].

² *See infra* Part III.

³ *See, e.g., infra* Part IV.A.

⁴ *Bigio*, 381 F.3d at 1327–28.

separate sugar and water.⁵ Such contradictory and subjective opinions clearly illustrate that the public is entitled to more certainty in the law and that the profession cannot expertly serve the public without a more objective and reliable definition of “pertinent” prior art. To this end, such an objective and more reliable definition of “pertinent” prior art is readily available by adhering to and combining legal precedent with digital computer searching.

I. BACKGROUND

A. Legal Tests

An early U.S. Supreme Court case opined, “where the alleged novelty consists in transferring a device from one . . . industry to another . . . we are bound to inquire into the remoteness of relationship of the two industries.”⁶ The basis for analogous arts resides in the remoteness of an inventor working in one industry or field of endeavor from knowledge of the state of the art in another industry, i.e., the second industry is too remote from the inventor’s field of endeavor.⁷ The issue is whether or not the inventor in one field of art would or should be reasonably expected to search in the second and seemingly unrelated art for a solution.⁸ A law journal article published over one hundred years ago recognizes that whether prior art is analogous or too remote “is a question of fact, upon which opinions may well differ.”⁹ Compounding the difference in factual interpretations, the underlying tools in searching prior art for a solution have significantly changed in the intervening years to include a wider array of prior art to be factually considered.¹⁰

In the early agrarian country of the 1800s, a wheat farmer in Kansas working in the art of irrigation might not be held knowledgeable of the art of rinsing devices used by dentists in New York. The wheat farmer did not have ready access to dental rinsing devices in the 1800s but would now, via the Internet. The CAFC has recently “reminded . . . the PTO that it is necessary to consider ‘the reality of the circumstances’ . . . in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.”¹¹ The “reality of the circumstances” is that the Kansas farmer is no longer “remote” from the New York dentist. It is no longer a variable and subjective appraisal of facts to determine where a person skilled in the art would or should search, because the Internet renders digital and objective such factual interpretations. The prior art

⁵ *Klein*, 647 F.3d at 1352.

⁶ *C. & A. Potts & Co. v. Creager*, 155 U.S. 597, 606 (1895).

⁷ *In re GPAC Inc.*, 57 F.3d 1573, 1578 (Fed. Cir. 1995).

⁸ *Id.*

⁹ William B. Whitney, *Patentable Processes*, 19 HARV. L. REV. 30, 45 (1905).

¹⁰ *Patent Application Information Retrieval*, U.S. PAT. & TRADEMARK OFFICE, portal.uspto.gov/pair/PublicPair (last visited Aug. 18, 2013); *Advanced Patent Search*, GOOGLE, www.google.com/advanced_patent_search (last visited Aug. 18, 2013).

¹¹ *In re Bigio*, 381 F.3d 1320, 1326 (Fed. Cir. 2004) (quoting *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992)).

available via the Internet is significantly more inclusive than local libraries. Instead, the foundation of “pertinence” resides in the search parameters, i.e., the terminology an inventor or practitioner would use in searching for prior art via the Internet.

B. Judge Rich’s Wall of Prior Art Now Includes all of the Internet

Judge Rich was a primary architect in drafting 35 U.S.C. § 103 in 1952¹² and stated later that “the proper way to apply the 103 obviousness test . . . is to first picture the inventor as working in his shop with the prior art references—which he is presumed to know—hanging on the walls around him.”¹³ Judge Rich considered it obvious, or a mere use of common sense by the fictitious inventor, to select and combine known elements displayed on the wall with no change in function of each element. When the elements of a combination produce the predicted results for which they were selected, the combination is not patentable,¹⁴ and the Internet renders all known elements readily discoverable.

In *KSR*, the Court stated that “modern technology counsels against” nonobviousness just because of a lack of “discussion” in the prior art literature.¹⁵ Modern Internet database searching allows that fictitious inventor to search by element names, structure, function, and result.¹⁶ Such searching includes scholarly resources in addition to searching prior art patents.¹⁷ Because of modern technology, Judge Rich’s “inventor’s wall” now includes all of the information available by searching the Internet. It is a mere matter of common sense and routine for the fictitious inventor to search the Internet and select and combine known elements without producing a new function, i.e., to produce predictable results.

Using the modern world of the Internet to establish Judge Rich’s wall of prior art removes the issue of “remoteness” and digitally and objectively renders “reasonably pertinent” consistent by holding an inventor constructively knowledgeable of prior art resulting from a search conducted on the Internet. In other words, the field of search replaces the elusive field of endeavor, i.e., the demise of “non-analogous arts.”

¹² Jeffrey A. Lefstin, *The Constitution of Patent Law: The Court of Customs and Patent Appeals and the Shape of the Federal Circuit’s Jurisprudence*, 43 LOY. L.A. L. REV. 843, 858 n.62 (2010).

¹³ *Application of Winslow*, 365 F.2d 1017, 1020 (C.C.P.A. 1966).

¹⁴ Hal Milton & Patrick R. Anderson, *The KSR Standard for Patentability*, 89 J. PAT. & TRADEMARK OFF. SOC’Y 616, 616–19 (2007).

¹⁵ *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 419 (2007).

¹⁶ See generally Paul Schwander, *An Evaluation of Patent Searching Resources: Comparing the Professional and Free Online Databases*, 22 WORLD PAT. INFO. 147, 151 (2000).

¹⁷ Robert S. Blasi, *Responding to Bilski v. Kappos: Hoping For The Best, Planning For the Worst*, 2010 WL 6243302 at *7 (“Prior art searching has become an area dominated by specialty search firms, and new electronic resources for prior art searches, such as Google Patents, Google Scholar, and free patents online have made prior art search accessible to non-experts.”).

C. *The Inventor's Constructive Notice of Prior Art*

In accordance with Judge Rich's wall of prior art, the inventor "is presumed to know" of the prior art on the wall.¹⁸ The issue is the scope or pertinence of the art included on that wall. In Judge Rich's view, the inventor is presumed to have knowledge or constructive notice of anticipatory prior art under 35 U.S.C. § 102, as well as "reasonably pertinent" prior art. Certainly, an invention cannot be held patentable just because the inventor did not have actual knowledge of prior art, e.g., the inventor did not search the prior art.¹⁹ The USPTO is clearly allowed to apply prior art of which the inventor had no previous knowledge.²⁰ In the reality of circumstances, the digital interpretation of pertinence is based on where the USPTO searches, not where an inventor would search in making the invention.²¹ Pertinence is also based on where the inventor or inventor's agent would search to evaluate the novelty of the invention, which in theory should be the same as the USPTO search. In many of the circumstances of actual practice, the pertinence of prior art is determined by triers of fact after submitting the patent application, rather than by where the inventor should have or did actually search.²² Most inventors rely on accumulated knowledge and do not search for ideas in making an invention; they only search or have their practitioner search to evaluate patentability of the invention after the invention is complete.²³

To define what is new and being applied for in a patent application can only be determined in relationship to the most pertinent prior art.²⁴ In the reality of the circumstances of present day practice, a reasonable search via the Internet determines what is pertinent prior art regardless of the field of endeavor.²⁵ It can be argued that the case law requires a search in the patent preparation process.²⁶ In accordance with *Graham v. John Deere Co.*, the fact finder should determine:

["T]he scope and content of the prior art," and [then] ascertain the "differences between the prior art and the claims at issue . . ." In accordance [with] 35 U.S.C. § 112, a patent application "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."²⁷

¹⁸ *Winslow*, 365 F.2d at 1020.

¹⁹ *Id.*

²⁰ *Id.*

²¹ MPEP, *supra* note 1 § 904.02.

²² *Id.*

²³ Gene Quinn, *Patent Searching 101: A Patent Search Tutorial*, IPWATCHDOG.COM (Mar. 17, 2012, 7:30 AM), <http://www.ipwatchdog.com/2012/03/17/patent-searching-101-a-patent-search-tutorial/id=22851/>.

²⁴ MPEP, *supra* note 1 § 904.02.

²⁵ Quinn, *supra* note 23.

²⁶ Hal Milton, *Patent Preparation Mandated by the Law*, 89 J. PAT. & TRADEMARK OFF. SOC'Y 809, 813 (2007).

²⁷ *Id.* at 813 (quoting *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966)); *id.* at 809 (quoting 35 U.S.C. § 112 (2006)).

The only way these mandates can be met is in relationship to reasonably pertinent prior art, which requires a search of the prior art. That search of the prior art is now done on the Internet via a computer.²⁸ The rationale of Judge Rich imputes constructive knowledge to the inventor of all prior art found in a standard search of Internet databases.

Just as it is incumbent upon a patent practitioner to advise an inventor of the tests for patentability, the patent practitioner is also duty-bound to advise the inventor that the patent application will be evaluated for patentability relative to the most pertinent prior art that can be found.²⁹ The only manner in which the patent practitioner can satisfactorily draft a patent application to meet these tests is to be aware of that prior art from a search by element name, structure, function or result.³⁰ For a patent practitioner to prepare a patent application without a search of the prior art is tantamount to a medical doctor setting a broken bone without the benefit of an X-ray. In days past, the doctor did not have the benefit of seeing a broken bone, and the patent agent had limited access to all of the publications in the world. Technology has since changed the standard of care for both doctors and patent practitioners. Therefore, it is time for recognition of that change in the law of non-analogous arts to thereby "provide greater certainty in the law, and hence greater predictability and greater respect for the rule of law."³¹ It is incumbent upon the law to move from a variable/subjective appraisal of facts to a digital/objective analysis of facts to render the law commensurate with modern technology. For example, in criminal cases, many fact situations were historically interpreted under subjective legal tests, whereas more sophisticated technology, such as DNA, allows a new digital legal test and brings more certainty to the law.

II. A THRESHOLD ISSUE IN THE DEFINITION OF THE "FIELD OF ENDEAVOR"

A threshold issue in claim interpretation often arises to ascertain the remoteness of the "field of endeavor" before getting to "reasonably pertinent." The interpretation issue frequently arises when terms in a claim attempt to imply an intended use, external function, or selective use.³² The recitations in claims of intended use or selective use usually occur in the recitation of an adjective to identify

²⁸ See *supra* text accompanying note 10 (identifying two common Internet search mechanisms for reviewing prior art).

²⁹ See *Allergan Inc. v. Barr Labs. Inc.*, No. 09-333-SLR-LPS, 2010 WL 3328270, at *1 (D. Del. Aug. 18, 2010) (citing *In re Spalding Sports Worldwide, Inc.*, 203 F.3d 800, 805 (Fed. Cir. 2000)) (stating that an attorney must know the prior art to evaluate patentability and properly prepare a patent application).

³⁰ See *generally* Schwander, *supra* note 16. The author practiced in Class 74, sub-classes 501 et seq. over forty years and every new invention was searched even though we thought we knew the prior art.

³¹ ANTONIN SCALIA & BRYAN A. GARNER, *READING LAW: THE INTERPRETATION OF LEGAL TEXTS* xxix (2012).

³² See, e.g., *In re Bigio*, 381 F.3d 1320, 1324-25 (Fed. Cir. 2004).

an element and/or an implied use.³³ An intended or selective use or external function does not necessarily occur in all uses of the claimed elements and is distinguished from an inherent or internal function, which always occurs internally between positively recited elements.³⁴

Courts have held that an intended use is not appropriate for determining the actual scope of patentability.³⁵ The Supreme Court opined in *KSR* that “familiar items may have obvious uses beyond their primary purposes.”³⁶ The United States Court of Customs and Patent Appeals (“C.C.P.A.”) has held that, “If we are to exclude references on the ground that they are selected from a non-analogous art, the claims must positively include those limitations which are asserted to distinguish the claimed apparatus from the apparatus shown in such art.”³⁷ In 1997, the CAFC reviewed an apparatus claim for use with popcorn, wherein we have underlined the intended use recitations:

1. A dispensing top for passing only several kernels of a popped popcorn at a time from an open-ended container filled with popped popcorn, having a generally conical shape and an opening at each end, the opening at the reduced end allows several kernels of popped popcorn to pass through at the same time, and means at the enlarged end of the top to embrace the open end of the container, the taper of the top being uniform and such as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake of a package when the top is mounted on the container.³⁸

The CAFC opined:

Although Schreiber is correct that Harz does not address the use of the disclosed structure to dispense popcorn, the absence of a disclosure relating to function does not defeat the Board’s finding of anticipation. It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable.³⁹ Accordingly, Schreiber’s

³³ See *Tech. Licensing Corp. v. Videotek, Inc.*, No. C 01-04204 CRB, 2002 WL 32166568, at *4 (N.D. Cal. Nov. 14, 2002).

³⁴ See *Ludlow Mfg. & Sales Co. v. Dolphin Jute Mills*, 50 F. Supp. 395, 398 (D.N.J. 1943).

³⁵ See *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 402–03 (2007).

³⁶ *Id.* at 402.

³⁷ *Application of Sebald*, 268 F.2d 430, 432 (C.C.P.A. 1959).

³⁸ *In re Schreiber*, 128 F.3d 1473, 1475 (Fed. Cir. 1997).

³⁹ See *In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990) (“The discovery of a new property or use of a previously known composition, even when that property and use are unobvious from the prior art, can not [sic] impart patentability to claims to the known composition.”); *Titanium Metals Corp. of Am. v. Banner*, 778 F.2d 775, 782 (Fed. Cir. 1985) (finding that a composition claim for a newly discovered property of an old alloy did not satisfy section 102 because the alloy itself was not new); *In re Pearson*, 494 F.2d 1399, 1403 (C.C.P.A. 1974) (holding that the intended use of an old composition does not render composition claim patentable); *In re Zierden*, 411 F.2d 1325, 1328 (C.C.P.A. 1969) (“[M]ere statement of a new use for an otherwise old or obvious composition cannot render a claim to the composition patentable.”); *In re Sinex*, 309 F.2d 488, 492 (C.C.P.A. 1962)

contention that his structure will be used to dispense popcorn does not have patentable weight if the structure is already known, regardless of whether it has ever been used in any way in connection with popcorn.⁴⁰

It is important to note that Judge Newman dissented from the above opinion:

The Federal Circuit has held, over and over, that every claim limitation is important and none can be ignored—and now proceeds to ignore several express limitations. Thus the panel incongruously holds that a claim that requires, explicitly and precisely, a container of popcorn and a dispenser that passes only a few kernels of popcorn before jamming, is “anticipated” by an oil can of a different shape as illustrated in a reference that neither shows nor suggests a container filled with popcorn or the jamming of the dispenser upon dispensing the popcorn.⁴¹

Notwithstanding the position of Judge Newman, the cases are clear that stating the intended use of invention will not limit the scope of the claims;⁴² only structure which is specifically and positively recited as included after the non-limiting preamble can limit an invention regardless of use, known or undiscovered.⁴³ The preamble “should contain language which . . . suggests the subject matter of the claim, and not a use or purpose of that subject matter.”⁴⁴

There has been a lack of application of this settled case law that the recitation of an intended or implied field of use neither limits a claim to that “field of endeavor,” nor excludes otherwise “reasonably pertinent” prior art. The existing case law should be more consistently applied to hold that a recitation in a claim of intended use is given only an identifying meaning and does not limit the field of endeavor or field of search to thereby prevent prior art from being deemed reasonably pertinent. The steadfast application of this rule will bring more certainty to what prior art is “reasonably pertinent,” as well as to bring claims more in line with 35 U.S.C. § 112. Such certainty of prior art that is not remote and can be considered to be pertinent should be based on the reality of the circumstances of searching on the Internet.

(stating that the statement of intended use in an apparatus claim failed to distinguish over the prior art apparatus); *In re Hack*, 245 F.2d 246, 248 (C.C.P.A. 1957) (“[T]he grant of a patent on a composition or a machine cannot be predicated on a new use of that machine or composition.”); *In re Benner*, 174 F.2d 938, 942 (C.C.P.A. 1949) (“[N]o provision has been made in the patent statutes for granting a patent upon an old product based solely upon discovery of a new use for such product.”).

⁴⁰ *Id.* at 1477 (citations omitted).

⁴¹ *Id.* at 1480 (Newman, J., dissenting).

⁴² *See, e.g., Johnson Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 990–91 (Fed. Cir. 1999).

⁴³ *See Regent Jack Mfg. Co. v. United States*, 292 F.2d 868, 881–82 (Fed. Cl. 1961).

⁴⁴ Stephen P. Koch, *Interpreting Claim Preambles: An Analytic Framework*, 11 TEX. INTELL. PROP. L.J. 117, 137 (2002).

A. The Relationship of Intended Use to Internal and Inherent Functional Phrases

An inventory or catalog form of an assembly claim would contain no functional language and no connections between elements, i.e., the claim would only recite what the elements are and not how the elements operate or what they do. For example, the elements of a ball used in a baseball game could be listed in such a catalog of parts:

A ball comprising:

a core of solid material,

a length of yarn,

a cover, and

stitching.

The disassociated elements are not combined or interconnected and do not constitute a ball. They are but separate and unconnected elements which may be individually stored in storage bins dedicated to like elements. Such a failure “to interrelate essential elements . . . may be rejected under 35 U.S.C. 112.”⁴⁵

But the claim can avoid being a catalog of parts by reciting how the elements are connected or interrelated but without any function, i.e., the static state (with added underlines):

a core of solid material,

a length of yarn disposed tightly in tension to define a winding about said core,

a cover including complementary sections surrounding said winding, and

stitching interconnecting said sections of said cover.

The internal function of a claim is that function occurring between the elements positively recited in the claim.⁴⁶ An example of the added internal function would be:

a core of solid material,

a length of yarn disposed tightly in tension to define a winding about said core for reacting with said core and absorbing impact energy and rebounding,

⁴⁵ MPEP, *supra* note 1 § 2172.01.

⁴⁶ *Id.* § 2173.05(g).

a cover including complementary sections surrounding and retaining said winding in position about said core, and

stitching interconnecting said sections of said cover and tensioning said cover over said winding.

The internal functions of “retaining said winding in position” and “tensioning said cover over said winding” occur between the positively recited elements as the ball rests in steady state. In addition, internal functions may also include functions that inherently occur between positively recited elements in response to use or operation of the recited elements.⁴⁷ The recitation “for reacting with said core and absorbing impact energy and rebounding” is an inherent function which occurs inherently when the ball is impacted by an outside force by a bat during use; i.e., every time the ball is impacted with an outside force this function always occurs. There is no choice in whether or not this function occurs during impact in the use of the recited elements, without exception. A claim should cover the product leaving the loading dock of the manufacturer or on the desk as a trophy—the connected or interrelated baseball elements per se—and not depend upon the choice of use by the purchaser.

In contradistinction, an intended use results from a choice among a plurality of possible uses or external functions of the recited elements; it is not inherent. For example, it is a choice to use a hair brush as a toothbrush and there is nothing inherent in the structure or operation of a hair brush to prevent it from being used for cleaning. An intended use usually relies upon an element which is not positively recited in the claim but is an element upon which the intended use depends.⁴⁸ For example, “hair” is not positively recited and is an outside element upon which the use is intended, but does not exclude the use of the positively recited elements on elephant tusks or clothing to remove lint. An intended use of the baseball elements claimed above is recited in the same claim form as in the divided container to feed birds to be discussed hereinafter:⁴⁹

a core of solid material,

a length of yarn disposed tightly in tension to define a winding about said core for reacting with said core and absorbing impact energy and rebounding,

a cover including complementary sections surrounding and retaining said winding in position about said core, and

stitching interconnecting said sections of said cover and tensioning said cover over said winding,

⁴⁷ *Id.* § 2163.07(a).

⁴⁸ *Id.* § 2114(II).

⁴⁹ U.S. Patent No. 8,147,119 (filed July 24, 2002) (regarding the patent at issue in *In re Klein*).

wherein said cover is adapted to receive and maintain autographs in ink, and wherein said cover may receive a coating over the cover and for preventing oxidation and coloring of the cover and allows the ball to be displayed as a trophy in an adverse environment.

This recitation of intended use adds no structure, but only a choice of use by the ultimate user. The USPTO and the courts should not allow such a claim in a patent when the prior art discloses a ball including a core, a winding, and a cover, but wherein the cover is of a material which cannot “receive and maintain autographs in ink” nor includes “a coating of the autographs.”

In summary, an intended use of an assembly is an external function that occurs in its intended environment of use or utility and should not limit the interpretation of a claim and certainly not limit the interpretation to that intended field of endeavor (use). An internal function is a function that inherently occurs internally between the elements regardless of the ultimate intended use of the combination of elements. The only function in a claim that should be limiting in interpretation is the internal function attributable to the interaction of the elements positively recited in the claim. The congruity of interpreting an intended use to limit the field of endeavor for pertinent prior art is that infringement of that external function cannot be determined by examining the accused product on the competitor’s loading dock. The infringement can only be determined after the external function occurs in use by the ultimate end user. Is there no infringement if the hair brush is used for cleaning? The ultimate result is chaos, let alone uncertainty for the public.

B. Adjectives Identify and do not Specify

It is important to appreciate that an adjective does not specify structure in an element; the adjective merely identifies the element. Merely identifying an element by an adjective does not technically attribute physical characteristics to that element. A “steel baffle” is not necessarily made of metal.⁵⁰ Likewise, the recitation of “a plastic conduit” does not positively limit the conduit to plastic. The proper recitation is “a conduit of plastic material.” The “plastic” adjective merely identifies the conduit and distinguishes that conduit from a second or another conduit recited in the claim, e.g., a “metal conduit.” That the conduit consists of plastic is a structural limitation and must be positively recited. A “wood bat” is not technically limiting; it should be recited as a “bat of wood.” As the cases illustrate, some will interpret a wood bat to be limited to wood, while others will not.⁵¹ If a “wood bat” is meant to distinguish from a bat of another material, the wood limitation should be recited more positively or be emphasized more than with just an adjective, i.e., a bat consisting of wood.

⁵⁰ See *Phillips v. AWH Corp.*, 363 F.3d 1207, 1213–14 (Fed. Cir. 2004). In *Phillips*, the claim construction issue was whether the term “baffle” included both those angled at 90 degrees and other than 90 degrees. *Id.* The majority opinion held that the plain meaning of the term did not limit “baffles” to only those at 90 degrees. *Id.*

⁵¹ See *infra* Part IV.

As another example, a liquid container is not technically limited in structure to being impervious to liquid, but is only identified and distinguished from any other container recited in the claim, i.e., from an air breathing container. An examiner in the USPTO is entitled to interpret the liquid container as a first container and the air breathing container as a second container.⁵² Regardless of what adjective precedes "container," the adjective can be interpreted only to identify and distinguish the container from other containers. A container identified by an adjective may be interpreted to cover any container until the actual distinguishing physical attributes of the container are positively recited in the claims. In order for the liquid container to be limited to a container only for a liquid, it must be recited as a container impervious to liquid for retaining liquid therein. Otherwise, a recitation of a liquid container could be interpreted to cover any container whether or not it is impervious to a liquid. Similarly, the "air breathing container" must be recited as an air breathing container being porous for allowing the passage of air there through. These examples are doctrinaire but illustrate the need to limit the interpretation of adjectives only to identify and not to specify structure or intended use to avoid the diverse and varied results exemplified by the following CAFC opinions.

III. TWO DIVERSE ANALOGOUS ART CAFC OPINIONS

As recognized over one hundred years ago, the subjective appraisal of the "field of endeavor" and "reasonably pertinent" to render prior art non-analogous varies widely among those making that judgment.⁵³ This variance is clearly illustrated in two inconsistent CAFC opinions in appeals from the USPTO.⁵⁴ In addition, these cases illustrate the threshold problem of claim interpretation to initially define the "field of endeavor."

A. *In re Bigio*

1. *The USPTO Claim Interpretation*

Bigio's patent application claimed a "hair brush."⁵⁵ The claimed hair brush features an allegedly unique shape, namely an hourglass configuration for both the bristle substrate (14) and the overall bristle array (25).⁵⁶ The claims recited a "hair brush" in the preamble and "hair brush bristles" in the positive recitations, but in both recitations, "hair" was used only as an adjective to identify and was not

⁵² MPEP, *supra* note 1 § 2111.

⁵³ Whitney, *supra* note 9, at 45.

⁵⁴ *In re Bigio*, 381 F.3d 1320, 1322 (Fed. Cir. 2004); *In re Klein*, 647 F.3d 1343, 1345 (Fed. Cir. 2011).

⁵⁵ *Bigio*, 381 F.3d at 1322.

⁵⁶ *Id.* at 1323; U.S. Patent No. 7,448,111 (filed Mar. 16, 2007).

accompanied by any structure in the claim requiring use only on “hair.”⁵⁷ The USPTO Examiner and the Board of Patent Appeals and Interferences (“BPAI”) construed the term “hair brush” to include “not only brushes that may be used for human hair on [a] scalp, but also brushes that may be used for hairs [o]n other parts of animal bodies (e.g. human facial hair, human eyebrow hair, or pet hair).”⁵⁸ By this interpretation, the BPAI relied upon the intended use or external function of the brush as expressed only in the adjective “hair.” This allowed the rationale that the toothbrush could be used on facial hair, e.g., to color a beard.

By this interpretation, the Examiner and the BPAI, at least inferentially, gave a distinguishing limitation to the adjective “hair” in the claims, i.e., limited the claim to brushes for brushing hair, notwithstanding the fact that no structure was recited limiting the brush for use only on “hair.”⁵⁹ The claim was interpreted by the BPAI to be limited to brushes for any kind of hair and that the toothbrushes could be used to brush hair.⁶⁰ Instead of relying on the use of the brush for hair, the examiner, the BPAI, and the court could have and should have recognized that the potential uses of the brush are not so limited, e.g., the brushes could be used for the cleaning of elephant tusks, bathrooms, cooking grills, leather, and tires, etc. Had the existing case law of intended use denying any such limitation to “hair” been rigidly applied, there would have been no need to argue that toothbrushes could be used to brush hair. Any brush having the same shape is in the field of brushes and is reasonably pertinent to any other brush regardless of intended use. The only issue should have been whether the structure recited in the claims is found in another brush regardless of the intended use. The recitation of the adjective “hair” before “brush” to imply an intended use, without additional recitation in the claim of structure requiring that intended use, should have been given only an identifying or distinguishing meaning. Such a positive recitation would have rendered moot whether or not a toothbrush can be used to brush hair, i.e., the adjective “hair” does not further limit the field of brushes, nor exclude other brushes from being reasonably pertinent.

2. The USPTO Rejection on the Merits

The examiner rejected Bigio’s application as obvious in view of three references, each disclosing a particular configuration of a toothbrush.⁶¹ The issue before the BPAI was the rejection under 35 U.S.C. § 103 as “unpatentable over Flemming” (GB 17,666) “in view of either Tobias” (D424,303) “or Cohen” (D140,438).⁶² The BPAI held that disclosure of the toothbrush of Flemming met all of the structural limitations of the Bigio claims and that the teachings of Tobias and Cohen were cumulative to the teachings of Flemming.⁶³ Indeed, the Flemming patent discloses the distinguishing

⁵⁷ *Bigio*, 381 F.3d at 1323–24; Patent No. ‘111; *supra* note 56.

⁵⁸ *Bigio*, 381 F.3d at 1323–24.

⁵⁹ *Ex parte Bigio*, No. 2002-0967, at 4 (B.P.A.I. Jan. 24, 2003).

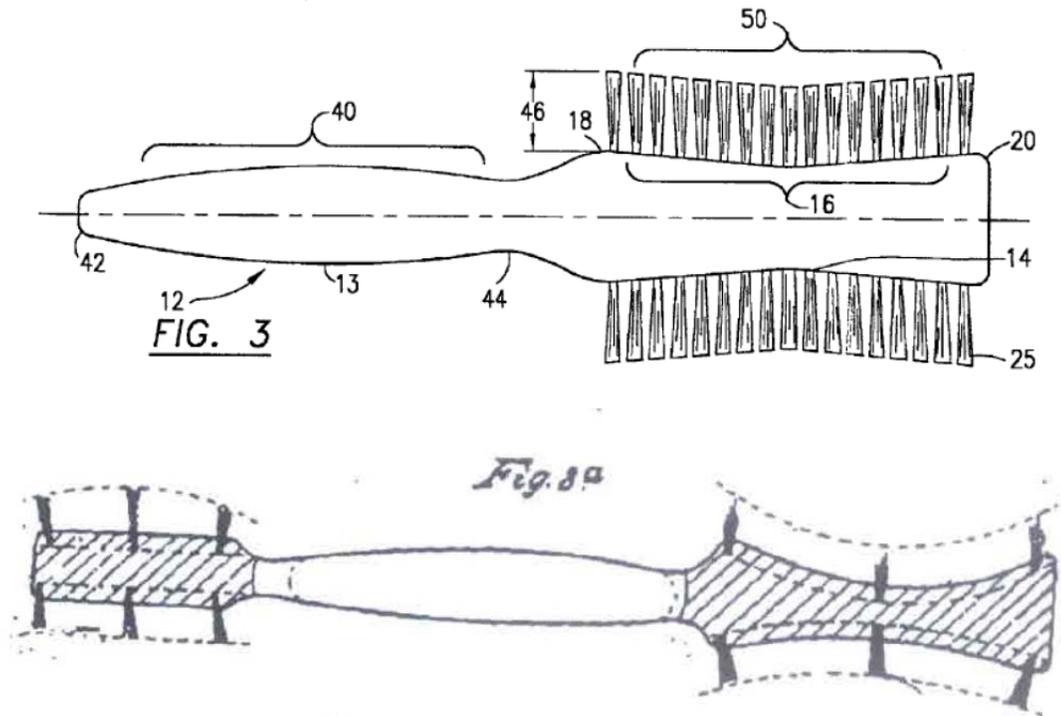
⁶⁰ *Id.* at 5.

⁶¹ *Id.* at 2.

⁶² *Id.* at 2.

⁶³ *Id.* at 7.

structural limitations in the Bigio claim of a bristle substrate (14) having an hourglass shape and carrying bristles (25) in an hourglass shape as shown by comparing Figure 3 of Bigio⁶⁴ to Figure 8a⁶⁵ of Flemming:



In reaching this reading of the claims, the BPAI referred to a dictionary definition of “hairbrush” and reasoned that it is “required to give the term ‘hair brush’ its broadest reasonable meaning in its ordinary usage.”⁶⁶

The BPAI went on to say “that Flemming’s toothbrush may easily be used for brushing hair” and cited *In re Sinex* for the proposition “that a statement of intended use in a claim fails to distinguish over the prior art.”⁶⁷ The rigid application of this statement would not have limited the brush to any specific use, i.e., there was no need to state that the toothbrush could be used only on hair.

However, the issue sent to the CAFC was whether the art of toothbrushes was analogous to Bigio’s hair brush, and, more specifically, whether toothbrushes were from the same field of endeavor as hair brushes, i.e., the remoteness of toothbrushes from hair brushes.⁶⁸ If toothbrushes are not too remote, toothbrushes become pertinent to hair brushes.

⁶⁴ U.S. Patent No. 6,739,016 fig. 3 (filed Sept. 17, 2001).

⁶⁵ Gr. Brit. Patent No. 17,666 fig. 8a (filed Sept. 21, 1895).

⁶⁶ *Ex parte* Bigio, No. 2002-0967, at 4 (B.P.A.I. Jan. 24, 2003).

⁶⁷ *Id.* at 5–6.

⁶⁸ *In re* Bigio, 381 F.3d 1320, 1324 (Fed. Cir. 2004).

3. *The Majority Opinion*

The Court reiterated the credence given by the USPTO to the word “hair” as limiting the “field of endeavor” to structures for brushing hair:

In this case, the Board reached its assessment of the field of the invention with reference to the function and structure of the invention. Specifically, the Board concluded that Flemming’s toothbrush was in Bigio’s field of endeavor because “the structural similarities between toothbrushes and small brushes for hair would have led one of ordinary skill in the art working in the specific field of hairbrushes to consider all similar brushes including toothbrushes.” The Board thus correctly set the field of the invention by consulting the structure and function of the claimed invention as perceived by one of ordinary skill in the art.⁶⁹

However, the CAFC went on to opine:

At the outset, the word “hair” preceding “brush” throughout the body of the claim does not alone limit the claim to brushes for scalp hair. At best, the word “hair” carries the meaning that the claimed invention involves brushing some kind of hair. The claim, however, does not specify or limit the claim to any particular kind of hair.⁷⁰

The Court affirmed the BPAI interpretation of “hair brush” and stated, “that term may reasonably encompass more than a grooming device for scalp hair.”⁷¹ This dictum by the Court is clearly subjective and nonsensical. If the adjective “hair” “does not specify the kind of hair to be groomed,”⁷² why does it limit the claim to hair at all? If the claim is not limited to use on scalp hair, the claim is not limited to any use. Could the hair brush be used on fur? Indeed, it is what it is, not what it does; the “hair” brush is simply a brush regardless of its intended use without recited structure limiting its use only to brushing hair. That hair cannot be split.

The majority stated that the BPAI opinion was in keeping with the counsel of Judge Rich in a predecessor C.C.P.A. opinion, to which the majority quoted and added emphasis: “The differences are mere change of size and substitution of material of the most obvious kind, *on a par with the differences between a hairbrush and a toothbrush.*”⁷³

4. *The Dissent*

Notwithstanding this relevant dictum of Judge Rich, Judge Newman opined:

⁶⁹ *Id.* at 1326.

⁷⁰ *Id.* at 1325.

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.* at 1327 (quoting *In re Wolfe*, 251 F.2d 854, 856 (C.C.P.A. 1958) (emphasis added)).

I respectfully dissent. The toothbrush art is not analogous to the hair brush art. Bigio's patent application is directed to a hair brush, and his claims are limited to a hair brush. A brush for hair has no more relation to a brush for teeth than does hair resemble teeth.

The mode and mechanics of brushing teeth cannot reasonably be viewed as analogous to the mode and mechanics of brushing hair.⁷⁴

Clearly there is a wide variance in the subjective appraisal of what is non-analogous art among sophisticated and experienced judges. Even Judge Newman has been inconsistent. In a chemical case in 1990 involving a composition having in use "normally tacky pressure-sensitive adhesive-properties admitted to be different from hardness and abrasion resistance"⁷⁵ of the same prior art composition, Judge Newman opined:

The discovery of a new property or use of a previously known composition, even when that property and use are unobvious from the prior art, can not impart patentability to claims to the known composition. Thus, the initial inquiry is to the novelty of the composition

As we observed *supra*, discovery of an unobvious property *and use* does not overcome the statutory restraint of section 102 when the claimed composition is known When the claimed compositions are not novel they are not rendered patentable by recitation of properties, whether or not these properties are shown or suggested in the prior art.⁷⁶

As alluded to above, the threshold issue has resided in claim interpretation to first determine the definition of the "field of endeavor" before getting to "reasonably pertinent." That threshold issue here resided in the word "hair" used as an adjective.

In accordance with Judge Newman's rationale, infringement of the Bigio hair brush claim cannot be determined until the brush is used to comb hair. If the Bigio hair brush is used to clean elephant tusks, would there be no infringement?

B. In re Klein

1. The USPTO Claim Interpretation

The threshold issue with Klein is also the interpretation of claims to define the "field of endeavor." The only structures or elements positively recited in the broadest claim are: a container (11) adapted to receive water, receiving means affixed to the container (referring to the various "rails" numbered 15, 16, and 17 and labeled H, O,

⁷⁴ *Id.* at 1327.

⁷⁵ *In re Spada*, 911 F.2d 705, 707 (Fed. Cir. 1990).

⁷⁶ *Spada*, 911 F.2d at 709 (emphasis added) (citations omitted).

and B in Fig. 1), and a divider (21) movably held by the receiving means (rails).⁷⁷
The broadest claim of the Klein application is directed to:

A convenience nectar mixing and storage device for use in the preparation of sugar-water nectar for feeding hummingbirds, orioles or butterflies, said device comprising:

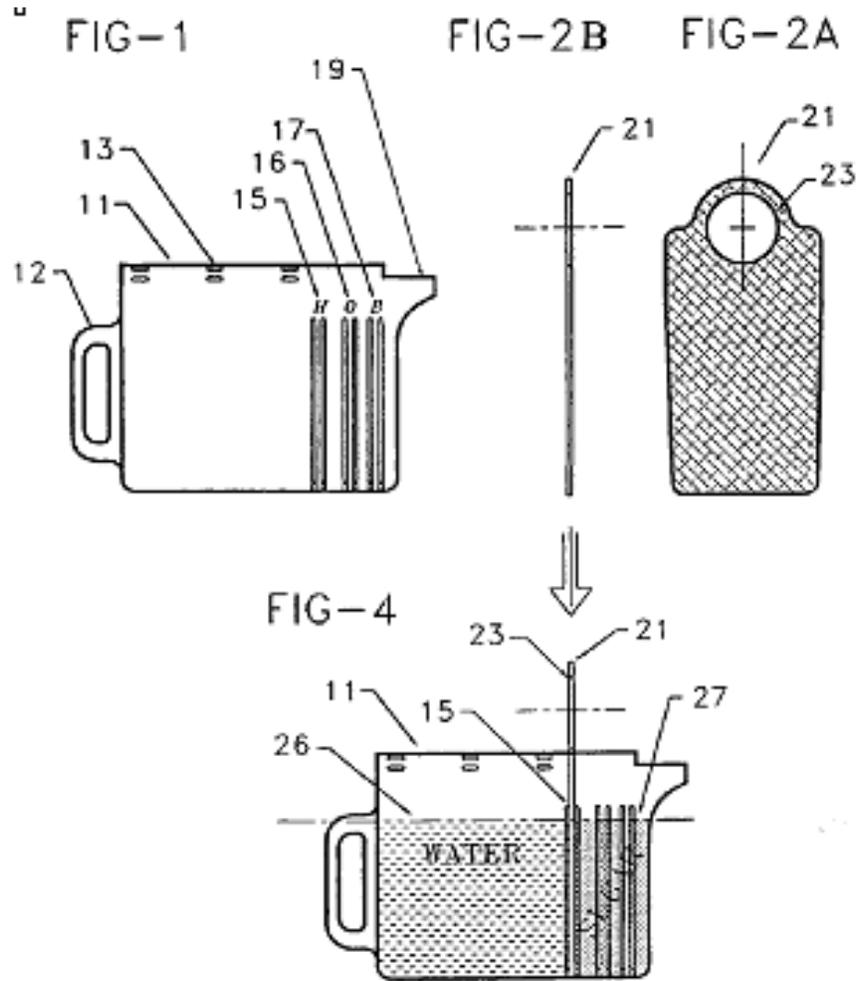
a container that is adapted to receive water,

engagement means fixed or fitted to said container,

a divider adapted to be movably held by said engagement means for forming a compartment within said container, wherein said compartment has a volume that is proportionately less than a volume of said container.⁷⁸

⁷⁷ U.S. Patent 8,147,119 figs. 1–4 (filed July 24, 2002).

⁷⁸ U.S. Patent Application No. 10/200,747 at 6 (filed Feb. 28, 2006).



The last recitation above is inherent and redundant because the divider inherently forms a compartment in the container less than the volume of the entire container. More importantly, this claim continues by reciting additional non-structural and intended use language in the form of the intended use of the baseball cover example above:

[B]y a ratio established for the formulation of sugar-water nectar for hummingbirds, orioles or butterflies, wherein said compartment is adapted to receive sugar, and wherein said divider is movable from said engagement

means allows mixing of said sugar and water to occur to provide said sugar-water nectar.⁷⁹

Although the claim implies that the divider (21) seals with the container (11) to hold water for “mixing of said sugar and water,” there is absolutely no positive recitation of structure to support that sealing function, e.g., a resilient divider to perfect a seal between the divider (21) and the container (11) to prevent leakage of water into the sugar compartment.

The examiner correctly gave no weight to the non-structural and intended use recitations:

With regard to use of the device as a nectar mixing and storage device and with particular respect to claims . . . recitations of intended use have not been afforded any patentable weight because it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. The claim language . . . of intended use . . . impart[s] no structure to the claimed apparatus. It is well settled that the intended use of an apparatus is not germane to its patentability.⁸⁰

2. *The USPTO Rejection on the Merits*

The three primary patents relied upon by the examiner each disclose a container with a removable divider: (1) Roberts 580,899⁸¹ is directed to an apparatus comprising receptacles designed to receive “statement-cards” and removable partitions that would subdivide the receptacles into compartments; (2) O’Connor 1,523,136⁸² is directed to a tool tray having dividers that were readily removable, and that was adapted to contain comparatively small articles, e.g., drills, reamers, bits, etc., or hardware supplies such as bolts or nuts; and (3) Kirkman 2,985,333⁸³ is directed to a drawer with removable partitions for dividing the drawer into two or more compartments of varying size. Figure 1 from the Kirkman ‘333 patent⁸⁴ (shown below) is generally representative of the type of devices disclosed in each of the three patents:

⁷⁹ *Id.*

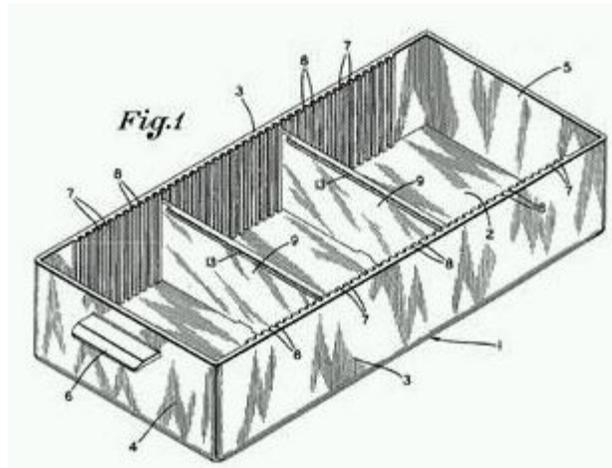
⁸⁰ Examiner’s Non-Final Rejection of U.S. Patent Application No. 10/200,747 15 (Jan. 30, 2004)[hereinafter Non-Final Rejection].

⁸¹ U.S. Patent No. 580,899 1.64 (filed Aug. 26, 1895).

⁸² U.S. Patent No. 1,523,136 1.8 (filed June 19, 1920).

⁸³ U.S. Patent No. 2,985,333 col.2 1.5 (filed Feb. 23, 1960).

⁸⁴ ‘333 Patent, *supra* note 83, fig. 1.



The two secondary patents relied upon by the examiner included: Greenspan 2,787,268⁸⁵ directed to a blood plasma bottle having compartments for dried plasma and water separated by a wall with a plug, wherein the plug could be removed to allow for mixing; and De Santo 3,221,917⁸⁶ similarly teaching two compartments designed to hold two different types of fluid that could be mixed together by removing a valve in the partition separating the compartments. Thus, each reference was capable of holding a liquid and was directed to “containers that facilitate the mixing of two separated substances together.”⁸⁷

The examiner searched for containers having dividers removably inserted into rails,⁸⁸ the only structure recited in the broadest claim. The rejection under 35 U.S.C. § 102 over Kirkman is exemplary: the patent to Kirkman discloses a device including a slidably removable divider (9) for dividing a container (1) into multiple compartments of a predetermined volume and a series of engagement rails (8) sized to receive the divider (9) and located to divide the volume of the container into multiple compartments each of a predetermined volume.⁸⁹ The Court summarized the BPAI opinion:

According to the Board, “[t]hose of skill in the art would have had reason to use the known ratios with the available containers having movable dividers to achieve the correct proportions of water and sugar and to mix the ingredients for different nectars.” The Board rejected Mr. Klein’s argument that the five cited references are non-analogous art. In doing so, the Board found that the prior art was properly relied upon by the examiner because it is reasonably pertinent to the problem Mr. Klein addresses, which the

⁸⁵ U.S. Patent No. 2,787,268 col.2 l.12 (filed Mar 16, 1956).

⁸⁶ U.S. Patent No. 3,221,917 col.2 l.19 (filed July 2, 1963).

⁸⁷ *In re Klein*, 647 F.3d 1343, 1352 (Fed. Cir. 2011).

⁸⁸ Non-Final Rejection, *supra* note 80, at 14–15.

⁸⁹ ‘899 Patent, *supra* note 81, l.64; ‘333 Patent, *supra* note 83, col.2 l.5.

Board found to be “making a nectar feeder with a movable divider to prepare different ratios of sugar and water for different animals.”⁹⁰

3. *The CAFC’s Opinion*

The opinion of the three-judge panel, including Judge Newman, is consistent with Judge Newman’s dissent in *In re Bigio*⁹¹ above. In contradistinction to the Bigio hair brush decision, here the CAFC gave credence to the recitations of intended use. The *Klein* opinion stated:

[T]hat the Board’s conclusory finding that Roberts, O’Connor, and Kirkman are analogous is not supported by substantial evidence. The purpose of each of Roberts, O’Connor, or Kirkman is to separate solid objects. An inventor considering the problem of “making a nectar feeder with a movable divider to prepare different ratios of sugar and water for different animals,” would not have been motivated to consider any of these references when making his invention, particularly since none of these three references shows a partitioned container that is adapted to receive water or contain it long enough to be able to prepare different ratios in the different compartments.⁹²

The court itself was conclusory in stating that Klein “would not have been motivated to consider any” container to receive water and a divider to divide the container into compartments. Clearly, the rules of claim interpretation to define the field of endeavor differ substantially between *In re Bigio* and *In re Klein*. The “reality of the circumstances” is that inventors, patent practitioners, and patent office examiners cannot and should not operate under Judge Newman’s rationale.

IV. THE DIGITAL AND OBJECTIVE INTERNET SEARCHING FOR DETERMINING “REASONABLY PERTINENT”

A. Reasonable Search Results = Reasonably Pertinent

As illustrated by the two opinions above, the factual determination of “pertinence” is a subjective appraisal over which experienced judges differ. It is impossible for such a judge to precisely and objectively get inside an inventor’s head and determine in an objective manner where the inventor would have looked; how far is remote? The fact question of “remoteness” of the second field of art depends upon the sophistication of a particular inventor. Under the law, the inventor is a fictitious person, held to a fictitious standard, allowing a judge to subjectively appraise the

⁹⁰ *Klein*, 647 F.3d at 1347 (citations omitted).

⁹¹ *In re Bigio*, 381 F.3d 1320, 1327–28 (Fed. Cir. 2004).

⁹² *Klein*, 647 F.3d at 1350–51.

facts and judge where that particular inventor should have searched. This subjective appraisal of the inventor's fact situation is certainly problematic. In this appraisal of the facts, it does not matter to the ultimate trier of fact as to where the inventor or the inventor's practitioner actually searched. What matters to that trier of fact is the prior art developed in a *post hoc* search and opined to be pertinent. It did not matter where Bigio or Klein actually searched or what they had knowledge of; only an appraisal of the prior art developed in the *post hoc* examination process by the USPTO was determinative.

Notwithstanding varying judicial opinions, inventors, patent practitioners, and patent office examiners are much more constrained in the actual factual determination of the "field of endeavor" and "reasonably pertinent" by dependency on digital and objective facts resulting from the use of the Internet and search programs to find pertinent prior art. The Internet eliminates "the remoteness of relationship of the two industries" by eliminating a distinction between the "field of endeavor" and "reasonably pertinent" as found in a reasonable search.⁹³ As a general proposition, any prior art produced in a reasonable search on the Internet by element name, structure, function, or result, should be "reasonably pertinent," thereby eliminating "remoteness," "field of endeavor," and "analogous" as determinative factors. In the reality of circumstances created by the digital world of the Internet, the "field of endeavor" has been replaced by a reasonable field of search, which, in turn, determines pertinence.

The fictitious inventor should be held to a standard of a reasonable search of the Internet with the digital and objective search results being deemed "reasonably pertinent." If the hair brush search leads to tooth brushes in general, then tooth brushes are, *ipso facto*, "reasonably pertinent," and if the bird feeder search leads to containers with removable dividers, then such containers are, *ipso facto*, "reasonably pertinent."

B. Using the USPTO Tutorial for Conducting a Search of the Prior Art

As a guidepost for conducting a reasonable search to determine which art is "reasonably pertinent" to an invention, the USPTO has generated a tutorial on its website to aid inventors in performing a patentability search.⁹⁴ The pertinent parts of the tutorial include an explanation of the U.S. Patent Classification ("USPC")⁹⁵ and a classification search.⁹⁶ The tutorial informs the inventor that in addition to world-wide patents, the USPTO searches include websites and databases.⁹⁷ In

⁹³ *C. & A. Potts & Co. v. Creager*, 155 U.S. 597, 606 (1895); *In re Kylstra*, 87 F.2d 487, 488 (C.C.P.A. 1937).

⁹⁴ *Conducting a Patent Search at a PTDL*, U.S. PAT. & TRADEMARK OFF., <http://www.uspto.gov/web/offices/ac/ido/ptdl/CBT/> (last visited Aug. 19, 2013) [hereinafter *USPTO Tutorial*].

⁹⁵ See *Examiner Handbook to the U.S. Patent Classification System*, UNITED STATE PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/patents/resources/classification/handbook> (last modified Jan. 1, 2013) (explaining the purpose of the USPC system and how it is used).

⁹⁶ *USPTO Tutorial*, *supra* note 94.

⁹⁷ *Id.*

addition, the inventor is advised that images of patents are available from 1790 but keyword searching is only available in patents since 1976.⁹⁸ The “classification system is an arrangement of hierarchical categories used to organize ‘things’ by their characteristics and relationships.”⁹⁹ In the examples of the USPC, the tutorial lists class “15, Brushing, scrubbing, and general cleaning” and specifically states that a “tooth or nail brushes” are classified under class 015, sub-class 167.1.¹⁰⁰ This is interesting because the Bigio hair brush patent 6,739,016 was eventually issued in the same class 015, and a very close sub-class 160,¹⁰¹ the pertinence of which will become clearer hereinafter in connection with the “standard” Bigio “hair brush” search.

The tutorial continues by admonishing against a total reliance upon a keyword search because of inconsistent uses of terminology, names becoming obsolete, and different meanings in different fields of art.¹⁰² Instead, the tutorial suggests a search by description, function, result, structure and/or use, i.e., element name, structure, function and/or result.¹⁰³ Each of these terms is then looked up in the index to the USPC to note potential classes and sub-classes.¹⁰⁴ The tutorial provides an example of a dog feeding bowl which leads to the class 119 of Animal Husbandry and the 72+ sub-classes, which will be reviewed hereinafter in connection with the Klein bird feeder search.¹⁰⁵

The tutorial refers to the class definitions and the references therein that point to other appropriate classes and subclasses.¹⁰⁶ The tutorial teaches the actual searching process and retrieval of patents found in the search.¹⁰⁷ A review of the classes and subclasses searched and the references cited in a pertinent patent is also suggested.¹⁰⁸

C. Applying the Digital/Objective Search to Bigio’s Hair Brush

Both hair brushes and tooth brushes are classified in the same class 15 relating generally to brushes of any kind.¹⁰⁹ Obviously, some patents classified in class 15 relate to an invention applicable to various kinds of brushes, thereby rendering all brushes reasonably pertinent to any specific brush regardless of the respective

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ ‘016 Patent, *supra* note 64.

¹⁰² *USPTO Tutorial*, *supra* note 94.

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *USPTO Tutorial*, *supra* note 94.

¹⁰⁹ U.S. PATENT & TRADEMARK OFFICE, CLASS 15 BRUSHING, SCRUBBING, AND GENERAL CLEANING, *available at* www.uspto.gov/web/patents/classification/uspc015/sched015.pdf [hereinafter CLASS 15].

intended uses. Nevertheless, we will assume Bigio made a search in accordance with the USPTO tutorial.

The previously mentioned reasonable search standard was repeated to determine the pertinence for the Bigio brush design, using the TotalPatent database, provided by LexisNexis,¹¹⁰ and the European Patent Office Database, provided by Espace.¹¹¹

In the search, relevant keywords were determined based on a complete examination of the physical structure, essential function, intended use, and end result of all comprising elements of the Bigio hair brush design. The following keywords were determined to be relevant: bristle, quill, shaft, scalp, fluff, clean, primp, brush, groom, head, substrate, elliptical cross-section, and hourglass shape.

Next, relevant United States patent classifications were determined by searching for each of the identified keywords within the Index to the United States Patent Classification ("USPC") System. Likewise, international patent classifications could be identified using the World Intellectual Property Organization ("WIPO")¹¹² International Patent Classification ("IPC")¹¹³ Official Publication. The following U.S. patent classifications were determined to be relevant:

15/160: Brushing, scrubbing, and general cleaning / brush or broom . . . special work

15/186: Brushing, scrubbing, and general cleaning / . . . individual-bristle mount

15/159.1: Brushing, scrubbing, and general cleaning / brush or broom

15/164: Brushing, scrubbing, and general cleaning / brush or broom . . . special work . . . hollow-ware cleaners

15/167.1: Brushing, scrubbing, and general cleaning / brush or broom . . . special work . . . tooth or nail brush

132/120: Toilet / comb . . . with brush or bristles¹¹⁴

Next, a search was conducted within each of these classifications for patents issued prior to the filing date of Bigio's patent application (November 30, 1999) serial number 09/451,747. The following references, which were relied upon by the

¹¹⁰ *TotalPatent*, LEXISNEXIS, <https://www.lexisnexis.com/totalpatent/signonForm.do> (last visited Aug. 19, 2013).

¹¹¹ *EPO - Espace EP*, EUR. PAT. OFF., <http://www.epo.org/searching/subscription/ep.html> (last visited Aug. 19, 2013).

¹¹² WORLD INTELLECTUAL PROP. ORG., <http://www.wipo.int/portal/index.html.en> (last accessed Aug. 29, 2013).

¹¹³ *International Patent Classification (IPC)*, WORLD INTELLECTUAL PROP. ORG., <http://www.wipo.int/classifications/ipc/en/> (last accessed Aug. 29, 2013).

¹¹⁴ CLASS 15, *supra* note 109.

examiner in the rejection of the Bigio application, were also identified in the search (among many other references):

US D424,303 (Tobias)¹¹⁵

US D140,438 (Cohen)¹¹⁶

Furthermore, the search uncovered two other references, US 5,165,760 to Gueret¹¹⁷ and US 4,888,844 to Maggs.¹¹⁸ Both of these patents cite the Flemming patent (GBD 17,666) which was utilized as a primary reference against the Bigio application.¹¹⁹ Inventors are held to have constructive knowledge of all analogous art to the field of their endeavor, which includes publications which are cited against the prior art found in a search.¹²⁰ Therefore, references cited against pertinent references should also be considered pertinent. The search conducted for brushes analogous to the Bigio brush, conducted in accordance with the USPTO tutorial, uncovered not only toothbrushes but the exact references relied upon by the examiner, BPAI, and Federal Circuit in their respective findings that the Bigio invention was not patentable.

D. Applying the Digital/Objective Search to Klein's Birdfeeder

In accordance with the aforementioned reasonable search standard for determining reasonable pertinence, a search was conducted for Klein's bird feeder design using the TotalPatent patent search engine provided by the LexisNexis Group, and the Espacenet patent search engine provided by the European Patent Office.

Similarly to carrying out the Bigio hair brush search, relevant keywords were determined based upon examination of the structure, function, and result of all of the elements of Klein's bird feeder design. The following keywords were determined to be relevant: container, receptacle, holder, compartment, plastic, transparent, divider, separator, partition, vertical, seal, groove, guide, rail, indicia, sugar, water, food, feed, liquid, bird, animal, mix, proportion, ratio, slide.

Next, relevant United States patent classifications were determined by searching for each of the identified keywords within the Index to the United State Patent Classification ("USPC") System. Likewise, International patent classifications could be identified using the International Patent Classification ("IPC") Official Publication of the World Intellectual Property Organization ("WIPO"). The following U.S. patent classifications were determined to be relevant:

¹¹⁵ U.S. Patent No. D424,303 (filed Mar. 11, 1999).

¹¹⁶ U.S. Patent No. D140,438 (filed Mar. 22, 1944).

¹¹⁷ U.S. Patent No. 5,165,760 (filed Apr. 12, 1991).

¹¹⁸ U.S. Patent No. 4,888,844 (filed Aug. 31, 1988).

¹¹⁹ *Ex parte* Bigio, No. 2002-0967, at 2 (B.P.A.I. Jan. 24, 2003).

¹²⁰ Trial Motion, Memorandum and Affidavit, Waddington N.A., Inc. v. Sabert Corp., 2010 WL 978517 (D.N.J. Feb. 1, 2010) (No. 209CV04883).

119/51.01: Animal Husbandry / Feeding Device

119/72: Animal Husbandry / Watering or liquid feed device¹²¹

220/532: Receptacles / Vertical partition received in groove or notch in the container

220/500: Receptacles / Compartmented Container

220/533: Receptacles / Plural partition-receiving grooves or notches¹²²

206/219: Special receptacle or package / For mixing

206/221: Special receptacle or packaging / For mixing, means to manipulate without rupture¹²³

426/635: Food or edible material: Processes, compositions, and products /Animal Food¹²⁴

366/603: Agitating / Animal food Mixer

366/130: Agitating / Operator Supported Mixing Chamber type¹²⁵

127/14: Sugar, Starch, and Carbohydrates/Mixing tanks.¹²⁶

Next, a search was conducted within each of these classifications for patents issued prior to the filing date of Klein's provisional patent application (Aug. 2, 2001). All five references relied upon the examiner were identified in the search:

US 1,423,135¹²⁷

US 580,899¹²⁸

¹²¹ U.S. PATENT & TRADEMARK OFFICE, CLASS 119 ANIMAL HUSBANDRY, *available at* <http://www.uspto.gov/web/patents/classification/uspc119/sched119.htm>.

¹²² U.S. PATENT & TRADEMARK OFFICE, CLASS 220 RECEPTACLES, *available at* <http://www.uspto.gov/web/patents/classification/uspc220/sched220.htm>.

¹²³ U.S. PATENT & TRADEMARK OFFICE, CLASS 206 SPECIAL RECEPTACLE OR PACKAGE, *available at* <http://www.uspto.gov/web/patents/classification/uspc206/sched206.htm>.

¹²⁴ U.S. PATENT & TRADEMARK OFFICE, CLASS 426 FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS, AND PRODUCTS, *available at* <http://www.uspto.gov/web/patents/classification/uspc426/sched426.htm>.

¹²⁵ U.S. PATENT & TRADEMARK OFFICE, CLASS 366 AGITATING, *available at* <http://www.uspto.gov/web/patents/classification/uspc366/sched366.htm>.

¹²⁶ U.S. PATENT & TRADEMARK OFFICE, CLASS 127 SUGAR, STARCH, AND CARBOHYDRATES, *available at* <http://www.uspto.gov/web/patents/classification/uspc127/sched127.htm>.

¹²⁷ U.S. Patent No. 1,423,135 (filed May 14, 1921).

¹²⁸ '899 Patent, *supra* note 81.

US 2,985,333¹²⁹

US 3,221,917¹³⁰

US 2,787,268¹³¹

The search conducted for art analogous to the Klein bird feeder, done in accordance with the USPTO tutorial, uncovered the exact references relied upon by the examiner, BPAI, and Federal Circuit in their respective findings that the Klein invention was not patentable. Utilizing the USPTO tutorial, one can conclude that the art relied upon by the examiner, BPAI, and Federal Circuit is “reasonably pertinent” to the invention and was therefore properly considered.

V. THE REALITY OF THE CIRCUMSTANCES POINT TO “PERTINENT” PRIOR ART BEING DEFINED BY A REASONABLE SEARCH ON THE INTERNET

Starting at the end of the patenting process, an applicant for a patent cannot obtain that patent if the claimed invention is found to exist in the prior art, regardless of whether or not the inventor actually looked in the prior art for a solution in making the claimed invention.¹³² Therefore, an inventor is held to have constructive knowledge of all prior art that can be found from a search via the Internet. Searching on the Internet by element name, structure, function, or result eliminates remoteness and renders all resulting prior art to be *ipso facto* pertinent and analogous, i.e., Internet searching eliminates non-analogous art.

Inherent in any application is a formal request for something specific. In a patent application that something specific is defined by the claims “particularly pointing out and distinctly claiming”¹³³ the differences over “the content of the prior art.”¹³⁴ The drafting of patent claims is an acquired skill traditionally held by patent practitioners qualified by the USPTO. The only manner in which a patent practitioner can ethically exercise this skill is to know the pertinent prior art resulting from a search via the Internet. In fact, a prior art search is within the standard of care of a professional patent application preparer.

In addition, the USPTO and the courts should adhere to well-founded legal principle in claim interpretation that a claim must stand or fall upon the elements positively recited therein and be unaffected by inferred or intended use language. The CAFC should sit *en banc* and expressly deny any argument of non-analogous art based upon remoteness.

In order to prevent inconsistent opinions such as *In re Klein* and *In re Bigio*, the patent system is ripe for a coordinated application of existing case law, USPTO rules

¹²⁹ ‘333 Patent, *supra* note 83.

¹³⁰ U.S. Patent No. 3,221,917 (filed July 2, 1963).

¹³¹ U.S. Patent No. 2,787,268 (filed Mar. 16, 1956).

¹³² See *Application of Winslow*, 365 F.2d 1017, 1020 (C.C.P.A. 1966).

¹³³ 35 U.S.C. § 112(b) (2012).

¹³⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); 35 U.S.C. § 103 (2006).

and guidelines, and commonly used Internet search engines to bring greater certainty to the law regarding "pertinent" prior art, and hence greater predictability and greater respect for patent law. That coordination could use these guidelines:

1. The mere recitation of an intended use, either by external function or by an adjective, cannot limit the field of endeavor to prevent prior art from another field of endeavor being reasonably pertinent.
2. An applicant for a patent is held to constructive knowledge of all prior art which is found in a reasonable search on the Internet using standard terminology in element name, structure, function or result.
3. All prior art found in that reasonable search on the Internet is reasonably pertinent, regardless of the field of endeavor.

If the quality of patents is to improve and more certainty is to be brought to patent litigation, inventors and practitioners should be held to these available and realistic digital and objective guidelines to define pertinent prior art. Internet searching for prior art combined with these guidelines effectively eliminates "non-analogous arts."