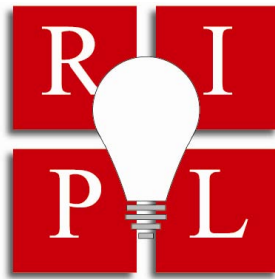


THE JOHN MARSHALL REVIEW OF INTELLECTUAL PROPERTY LAW



CATEGORIES OF ANTI-OBVIOUSNESS CASE LAW: (1) LAUNDRY LISTS; (2) REDUNDANT ADVANTAGES; AND (3) ADVANTAGE NOT NEEDED AND NOT RELEVANT

TOM BRODY

ABSTRACT

Obviousness rejections are most commonly rebutted by arguments that the prior art fails to disclose all the claim elements or that the examiner had failed to assert a proper rationale for combining references. Additional rebuttal strategies include those based on Federal Circuit case law on: (1) Non-analogous art, (2) Rendering the prior art unsatisfactory for its intended purpose, (3) Proposed modification cannot change the principle of operation of a reference, (4) Redundant advantages, (5) Advantage provided by the secondary reference is not needed by and not relevant to the primary reference, (6) Disparate references, (7) Context differs between cited references, (8) Teaching away, (9) Claims with Ranges under *In re Boesch*, and (10) Laundry List disclosure in prior art reference. With the exception of arguments based on, “Claims with Ranges under *In re Boesch*,” all of the rebuttal strategies in this list are based on case law invoked only in rebuttal arguments, and rarely or never invoked when the examiner imposes an obviousness rejection. Most of these ten rebuttal strategies require comparing the prior art references with each other, where the rebuttal argument asserts that the references are somewhat incompatible with each other. The present article provides the first published review of Laundry List rebuttal arguments, and refines the author's previously published accounts of the anti-obviousness rebuttal strategies relating to Redundant Advantage and to Advantage Not Needed and Not Relevant.

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CATEGORIES OF ANTI-OBVIOUSNESS CASE LAW: (1) LAUNDRY LISTS; (2) REDUNDANT ADVANTAGES; AND (3) ADVANTAGE NOT NEEDED AND NOT RELEVANT

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CATEGORIES OF ANTI-OBVIOUSNESS CASE LAW: (1) LAUNDRY LISTS; (2) REDUNDANT ADVANTAGES; AND (3) ADVANTAGE NOT NEEDED AND NOT RELEVANT

TOM BRODY*

I. INTRODUCTION

This article provides guidance for rebutting rejections under 35 U.S.C. §103 based on a review of cases from the Federal Circuit, and on opinions from the Patent Trial and Appeal Board (PTAB) and its predecessor, Board of Patent Appeals and Interferences (BPAI). Guidance from the Board (PTAB; BPAI) is more extensive than guidance from the Federal Circuit for most issues that arise in patent prosecution. The Federal Circuit adopted the cases from the Court of Customs and Patent Appeals (CCPA) as precedent.^{1,2}

Cases from the Federal Circuit establish *stare decisis*, while cases from the Board can be used to predict what will actually happen to a claim during prosecution.³ This article only concerns rejections under 35 U.S.C. §103 (obviousness), and does not concern rejections under 35 U.S.C. §102 (anticipation).

A. Events leading to the drafting of this article

The events leading up to the drafting of this article are as follows:

* © Tom Brody 2018. The author has prosecuted 250 patent applications, mainly in the life sciences, organic chemistry, and medical devices fields. The author is a registered patent agent at Baker Hostetler LLP in Costa Mesa, CA. He received a Ph.D. in biochemistry at the University of California at Berkeley and conducted post-doctoral research on a DNA repair gene in 1994-1995, also at U.C. Berkeley. The author can be contacted at dnarepairgene@gmail.com. This article does not constitute legal advice and it does not establish or suggest any relation between the author or the reader. The author is the recipient of the 2016 Rossman Memorial Award, presented by the *Patent and Trademark Office Society*. The Award was presented on February 10, 2016 at the USPTO in Alexandria, VA.

¹ Steven Flanders (2010) *THE FEDERAL CIRCUIT-A JUDICIAL INNOVATION, ESTABLISHING A US COURT OF APPEALS*. Twelve Tables Press, New York, NY.

² *South Corporation v. The United States*, 690 F.2d 1368 (Fed. Cir. 1982).

³ Tom Brody, *Rebutting obviousness rejections by way of anti-obviousness case law*, 99 J. PAT. & TRADEMARK OFF. SOC'Y. 1 (2017); Tom Brody, *Claims to ranges, the result-effective variable, and In re Applied Materials*, 98 J. PAT. & TRADEMARK OFF. SOC'Y. 618 (2016); Tom Brody, *Enabling claims under 35 U.S.C. §112 to methods of medical treatment or diagnosis, based on in vitro cell culture models and animal models*, 97 J. PAT. & TRADEMARK OFF. SOC'Y. 328 (2015); Tom Brody, *Rebutting obviousness rejections based on impermissible hindsight*, 96 J. PAT. & TRADEMARK OFF. SOC'Y. 427 (2014); Tom Brody, *Functional elements in patent claims, as construed by the Board of Patent Appeals And Interferences*, 13 J. MARSHALL REV. INTELL. PROP. L. 251 (2014); Tom Brody, *Negative claim limitations in patent claims*, 41 AIPLA QUART. J. 29 (2013); Tom Brody, *Obviousness in patents following the U.S. Supreme Court's decision of KSR International Co. v. Teleflex, Inc.*, 92 J. PAT. & TRADEMARK OFF. SOC'Y. 26 (2010); Tom Brody, *Functional elements can ensure allowance of genus claims*, 90 J. PAT. & TRADEMARK OFF. SOC'Y. 621 (2008); Tom Brody, *Preferred embodiments in patents*, 9 J. MARSHALL REV. INTELL. PROP. L. 398 (2009).

(1) From one of the cases in the author's own patent prosecution work, the author noticed that every time he added a new element to a claim by way of amendment, the patent examiner responded by using that new claim element as a guide for hunting for another prior art reference that disclosed the same element, followed by imposing another § 103-rejection.

(2) The author arrived at the impression that this type of behavior might correspond to a doctrine known as impermissible hindsight.

(3) The author read about 500 cases from PTAB which contained the term "hindsight," and discovered that about ten different fact-patterns were considered by the Board to involve impermissible hindsight or hindsight reconstruction. The results of this inquiry were published in an article in the year 2014.⁴ In recognition of this article, the author received the 2016 Rossman Memorial Award at a ceremony at the *United States Patent and Trademark Office*. The author incorporated the teachings from this published article into some of his rebuttals against § 103-rejections, and the result was success in overcoming these rejections. The teachings used in these rebuttals relied on two categories of anti-obviousness case law: (1) *Redundant Advantages*, and (2) *Advantage Not Needed and Not Relevant*.

(4) The author realized that within the ten categories of obviousness rejections that are considered by the Board to be based on impermissible hindsight, there exists a subset of rejections that can be rebutted based on "anti-obviousness" case law. This subset of case law, together with exemplary opinions from the Board, is described in the cited article.⁵ With the exception of *Claims with Ranges* doctrine, anti-obviousness case law is invoked only in rebuttal arguments, and rarely or never in rejections. *Claims with Ranges* doctrine is invoked in obviousness rejections and also in rebuttal arguments.⁶

Most of the categories of anti-obviousness case law establish how relationships between: (1) The cited primary reference and (2) The secondary reference, can compel the Board to reverse the rejection. But some types of anti-obviousness case law, such as "teaching away," establish how reversal can be based on relationships between these two things: (1) A cited prior art reference; and (2) The rejected claim.

Table 1 discloses all of the categories of anti-obviousness case law, known to the author, together with exemplary opinions from the Board that apply the relevant case law. Rebuttal strategies concerning claims with ranges, based on *In re Boesch*,⁷ have been reviewed.⁸

⁴ Tom Brody, *Rebutting obviousness rejections based on impermissible hindsight*, 96 J. PAT. & TRADEMARK OFF. SOC'Y. 427 (2014).

⁵ Tom Brody, *Rebutting obviousness rejections by way of anti-obviousness case law*, 99 J. PAT. & TRADEMARK OFF. SOC'Y. 1 (2017).

⁶ Tom Brody, *Claims to ranges, the result-effective variable, and In re Applied Materials*, 98 J. PAT. & TRADEMARK OFF. SOC'Y. 618 (2016).

⁷ *In re Boesch*, 617 F.2d 272 (CCPA 1980).

⁸ Tom Brody, *Claims to ranges, the result-effective variable, and In re Applied Materials*, 98 J. PAT. & TRADEMARK OFF. SOC'Y. 618 (2016).

B. Legal basis for rebuttal arguments against §103-rejections

The most frequent basis for reversing obviousness rejections is silence of the cited prior art references in disclosing one or more of the elements of the claim. Assessing the prior art's disclosure is one of the Graham factors. *Graham v. John Deere*⁹ held that:

[u]nder § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.¹⁰

Another frequent basis for reversal is the demonstration that the examiner had not asserted the required rationale to combine references. *In re Kahn*¹¹ held that obviousness rejections must be accompanied by an assertion of a “rationale” for combining the prior art references. *In re Kahn, supra*, held that “rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”¹² The Patent Office issued a set of Guidelines¹³ for examining patents, which requires the examiner to identify one or more rationales for establishing a *prima facie* case of obviousness. The rationales are disclosed in the footnote.¹⁴

An analysis of file histories reveals that examiner's rejections following the *KSR*¹⁵ decision, demonstrates that the most commonly asserted rationale is: *motivation to combine with a reasonable expectation of success* (Teaching-Suggestion-Motivation (TSM) test). This analysis was based only on examiner's rejections that dated immediately after the *KSR* decision until about 24 months after the *KSR* holding. The facts demonstrate that, following the *KSR* decision, the TSM test accounted for 85 – 90% of all of the rationales set forth by patent examiners in imposing

⁹ 383 U.S. 1, 17 (1966).

¹⁰ 383 U.S. 1, 17 (1966).

¹¹ *In re Kahn*, 441 F.3d 977 (Fed. Cir. 2006).

¹² *In re Kahn*, 441 F.3d 977 (Fed. Cir. 2006).

¹³ Examination Guidelines for Determining Obviousness under 35 U.S.C. § 103 In View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.* (Federal Register, Vol. 72, No. 195, pages 57, 526 – 57, 535).

¹⁴ (A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) “Obvious to try” - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

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

§ 103-rejections.¹⁶ In utilizing the TSM-test, the rationale to combine references with each other most commonly takes the form of the examiner's assertion that the secondary reference provides some advantage to the primary reference.¹⁷ The fact that the providing of some "advantage" is the most common rationale to combine, was demonstrated by a review of rejections in 200 file histories, selected from the fields of mechanical devices and biotechnology.¹⁸ The issue of the examiner's assertion of "advantage" has direct relevance to this article's account of rebuttal arguments relating to *Redundant Advantages* and to rebuttal arguments relating to *Advantage Not Needed and Not Relevant*.

"Hindsight" is alternatively known as "impermissible hindsight" and "hindsight reconstruction." Hindsight finds a basis in *Graham v. John Deere*.¹⁹ *Graham v. John Deere*, which provides a comment on "legal inferences and subtests," where the comment states that, "Such inquiries may lend a helping hand to the judiciary which, as Mr. Justice Frankfurter observed, is most ill-fitted to discharge the technological duties cast upon it by patent legislation."²⁰ Commenting further on these legal inferences and subtests, the *Graham v. John Deere* opinion stated that, "They may also serve to **'guard against slipping into use of hindsight,'** *Monroe Auto Equipment Co. v. Heckethorn Mfg. & Sup. Co.*, 332 F.2d 406, 412 (1964), and to resist the temptation to read into the prior art the teachings of the invention in issue." (emphasis added)

The issue of impermissible hindsight has direct relevance to this article's accounts of rebuttal strategies, because of the fact that the Board's basis for reversal typically rests on Federal Circuit case law on impermissible hindsight. Impermissible hindsight encompasses about ten different fact-patterns (ten unique fact-patterns used as a basis to impose obviousness rejections), where a subset of these fact-patterns involve the examiner's use of "picking and choosing."²¹

C. Conclusory rationale to combine references

Where the patent examiner establishes a *prima facie* case of obviousness, and where the asserted rationale to combine is something more than being merely a conclusory rationale, it is the case that rebuttal arguments based on anti-obviousness case law can result in reversal. In other words, for a rebuttal based on anti-obviousness case law to prevail, it is not whatsoever necessary that the obviousness rejection be weakened by its basis on a rationale that is merely conclusory. This power and ability of rebuttals utilizing anti-obviousness case law is demonstrated

¹⁶ Tom Brody, *Obviousness in patents following the U.S. Supreme Court's decision of KSR International Co. v. Teleflex, Inc.*, 92 J. PAT. & TRADEMARK OFF. SOC'Y. 26 (2010).

¹⁷ Tom Brody, *Obviousness in patents following the U.S. Supreme Court's decision of KSR International Co. v. Teleflex, Inc.*, 92 J. PAT. & TRADEMARK OFF. SOC'Y. 26 (2010).

¹⁸ Tom Brody, *Obviousness in patents following the U.S. Supreme Court's decision of KSR International Co. v. Teleflex, Inc.*, 92 J. PAT. & TRADEMARK OFF. SOC'Y. 26 (2010).

¹⁹ *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966).

²⁰ *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966).

²¹ Tom Brody, *Rebutting obviousness rejections based on impermissible hindsight*, 96 J. PAT. & TRADEMARK OFF. SOC'Y. 427 (2014).

by the cited article.²² In other words, the cited article demonstrates that an argument based on anti-obviousness case law can succeed, even when the examiner had asserted a well-articulated rationale to combine references.

II. TABLE OF FACT-PATTERNS COVERED BY ANTI-OBVIOUSNESS CASE LAW

Table 1 provides names for the various fact-patterns that are encompassed by anti-obviousness case law. Most of the applicable rebuttal arguments involve comparing two prior art references with each other. For rebuttal arguments based on “teaching away,” “non-analogous art,” and “context,” the rebuttal argument can involve comparing: (1) One of the cited prior art references with; (2) The claim.²³ Also, for some fact-patterns that arise during patent prosecution, it is possible to draft either type of rebuttal argument (comparing two prior art references with each other; comparing one prior art reference with a claim).²⁴ For rebuttal arguments based on claims with ranges under *In re Boesch*, and for rebuttal arguments based on laundry list-style arguments, the rebuttal argument compares the disclosure in prior art references with the claim.²⁵

Federal Circuit case law is somewhat sparse, where the facts of the case involve two prior art references under the fact-pattern where there is *Redundant Advantages* or under the fact-pattern where there is, *Advantage Not Needed and Not Relevant*. Thus, this author suggest that attorneys and agents consider citing the relevant Federal Circuit case law when using rebuttal arguments relating to *Redundant Advantages* or to *Advantage Not Needed and Not Relevant*, together with several exemplary PTAB cases that illustrate the application of the Federal Circuit case law.

Table 1. Fact-patterns covered by anti-obviousness case law. Here, the term “fact-pattern” refers to what is encompassed by the claims and what is disclosed by the cited prior art references

	Fact-pattern	Cases from Federal Circuit
		Exemplary applications in PTAB opinions
1	Non-analogous art	<i>In re Oetiker</i> , 977 F.2d. 1443 (Fed. Cir. 1992)

²² Tom Brody, *Rebutting obviousness rejections by way of anti-obviousness case law*, 99 J. PAT. & TRADEMARK OFF. SOC’Y. 1 (2017).

²³ Tom Brody, *Rebutting obviousness rejections based on impermissible hindsight*, 96 J. PAT. & TRADEMARK OFF. SOC’Y. 427 (2014).

²⁴ Tom Brody, *Rebutting obviousness rejections based on impermissible hindsight*, 96 J. PAT. & TRADEMARK OFF. SOC’Y. 427 (2014).

²⁵ Tom Brody, *Claims to ranges, the result-effective variable, and In re Applied Materials*, 98 J. PAT. & TRADEMARK OFF. SOC’Y. 618 (2016).

		<i>Ex parte Dente</i> , Appeal No. 2011-011730, September 1, 2011, Ser. No. 11/600,401; <i>Ex parte Gacek</i> , Appeal No. 2013-007250, January 15, 2016, Ser. No. 12/095,923; <i>Ex parte Haas</i> , Appeal No. 2005-1738, Ser. No. 10/046,897; <i>Ex parte Rollat-Corvol</i> , Appeal No. 2009-003,513, November 2, 2009, Ser. No. 09/719,101
2	Rendering the prior art unsatisfactory for its intended purpose	<i>In re Gordon</i> , 733 F.2d 900 (Fed. Cir. 1984) <i>Ex parte Chen</i> , Appeal No. 2005-1173, Ser. No. 10/134,793; <i>Ex parte Glidewell</i> , Appeal No. 2008-5112, December 12, 2008, Ser. No. 11/187,648; <i>Ex parte Salinas</i> , Appeal No. 2013-010433, January 22, 2016, Ser. No. 12/659,221; <i>Ex parte Field</i> , Appeal No. 2009-015300, April 7, 2011, Ser. No. 10/909,070; <i>Ex parte Holland</i> , Appeal No. 2011-002444, April 29, 2013, Ser. No. 12/141,452
3	Proposed modification cannot change the principle of operation of a reference	<i>In re Ratti</i> , 270 F.2d 810 (CCPA 1959) <i>Ex parte Andersson</i> , Appeal No. 2009-011471, July 28, 2010, Ser. No. 10/673,689; <i>Ex parte Gacek</i> , Appeal No. 2013-007250, January 15, 2016, Ser. No. 095,923; <i>Ex parte Mandrusov</i> , Appeal No. 2008/000114, July 23, 2008, Ser. No. 10/235,211; <i>Ex parte Wilkins</i> , Appeal No. 2013-004614, June 10, 2015, Ser. No. 11/734,325
4	Redundant advantages	<i>Kinetic Concepts, Inc., v. Smith and Nephew, Inc.</i> , 688 F. 3d. 1342 (Fed. Cir. 2012) For relevant PTAB cases, see the text appearing below
5	Advantage provided by the secondary reference is not needed by and not relevant to the primary reference	<i>In re Wesslau</i> , 353 F.2d 238 (1965); <i>In re Hedges</i> , 783 F.2d 1038 (Fed. Cir. 1986), <i>In re Kamm</i> , 452 F.2d 1052 (CCPA 1972), <i>W.L. Gore and Assocs., Inc. v. Garlock, Inc.</i> , 721 F.2d 1540, and <i>Bausch and Lomb, Inc. v. Barnes-Hind/ Hydrocurve, Inc.</i> , 796 F.2d 443 (Fed. Cir. 1986). For relevant PTAB cases, see the text appearing below
6	Disparate references	<i>In re Wesslau</i> , 353 F.2d 238 (1965); <i>In re Hedges</i> , 783 F.2d 1038 (Fed. Cir. 1986), <i>In re Kamm</i> , 452 F.2d 1052 (CCPA 1972), <i>W.L. Gore and Assocs., Inc. v. Garlock, Inc.</i> , 721 F.2d 1540, and <i>Bausch and Lomb, Inc. v. Barnes-Hind/ Hydrocurve, Inc.</i> , 796 F.2d 443 (Fed. Cir. 1986).

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

		<i>Ex parte Fukuda</i> , Appeal No. 2005/002035, Ser. No. 10/281,417, October 6, 2005; <i>Ex parte Lam</i> , Appeal No. 2006-1990, August 28, 2006, Ser. No. 10/678,231; <i>Ex parte Michaels</i> , Appeal No. 2006-3175, December 12, 2006, Ser. No. 10/419,601; <i>Ex parte Safinya</i> , Appeal No. 2004-2078, November 23, 2004, Ser. No. 09/754,509; <i>Ex parte Schultz</i> , Appeal No. 2009/001044, Ser. No. 11/127,978, March 25, 2009, <i>Ex parte Shatwell</i> , Appeal No. 2010/004127, Ser. No. 10/504,204; <i>Ex parte Withers</i> , Appeal No. 2005-1011, July 26, 2005, 09/921,588
7	Context	<i>Interconnect Planning Corp. v. Feil</i> , 774 F.2d 1132 (Fed. Cir. 1985) <i>Ex parte Anma</i> , Appeal No. 2005-0189, May 5, 2005, Ser. No. 09/683,997; <i>Ex parte Fan</i> , Appeal No. 1997-3649, January 10, 2001, Ser. No. 08/432,450; <i>Ex parte Inamura</i> , Appeal No. 2008-3640, December 12, 2008, Ser. No. 10/718,202; <i>Ex parte Larson</i> , Appeal No. 2006-0042, February 4, 2005, Ser. No. 10/441,438; <i>Ex parte Peterson</i> , Appeal No. 2006-0704, December 7, 2006, Ser. No. 10/060,697; <i>Ex parte Safinya</i> , Appeal No. 2004-2078, November 23, 2004, Ser. No. 09/754,509
8	Teaching away	<i>In re Gurley</i> , 27 F.3d 551 (Fed. Cir. 1994); <i>In re Fulton</i> , 391 F.3d 1195 (Fed. Cir. 2004); <i>In re Deminski</i> , 796 F.2d 436 (Fed. Cir. 1986); <i>In re Urbanski</i> , 809 F.3d 1237, 1241 (Fed. Cir. 2016); <i>In re Spinnoble</i> , 405 F.2d. 578 (CCPA 1969)

		<p><i>Ex parte</i> Brunner, Appeal No. 2006-1078, August 31, 2006, Ser. No. 09/425,694; <i>Ex parte</i> Dey, Appeal No. 2010/000924, Ser. No. 11/199,785; <i>Ex parte</i> Fan, Appeal No. 1997-3649, January 10, 2001, Ser. No. 08/432,450; <i>Ex parte</i> Nordlin, Appeal No. 2008-2785, March 25, 2009, Ser. No. 11/103,296; <i>Ex parte</i> Ramberg, Decision On Request For Rehearing, Appeal No. 2009-001121, April 7, 2010, Ser. No. 10/131,881; <i>Ex parte</i> Rambert, Appeal No. 2009-00121, June 25, 2009, Ser. No. 131,881; <i>Ex parte</i> Ross, Appeal No. 2009-002659, December 29, 2009, Ser. No. 10/246,898; <i>Ex parte</i> Streich, Appeal No. 2013-000187, November 5, 2003, Ser. No. 09/134,109; <i>Ex parte</i> Sipka, Appeal No. 2011-007060, June 11, 2012, Ser. No. 10/651,136; <i>Ex parte</i> Withers, Appeal No. 2005-1011, July 26, 2005, 09/921,588</p>
	<p>Often, when the Board reverses a rejection on the basis of teaching away, the Board cites <i>In re Sponnoble</i>,²⁶ which recites fact-pattern that, “we believe that the multi-reference rejection affirmed below is improper for reasons existing within the disclosures of the references themselves, namely, that the references themselves teach away from the combination . . . [t]hus, a combination of either Lockhart or Bujan with Jensen alone would produce a seemingly inoperative device.” Conversely,²⁷ when the Board affirms a rejection (and refuses the inventor's teaching away argument), the Board often cites <i>Depuy Spine, Inc. v. Medtronic Sofamore Danek, Inc.</i>²⁸ for its rule that, “[a] reference does not teach away, however, if it merely expresses a general preference for an alternative invention but does not ‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed. <i>In re Fulton</i>, 391 F.3d 1195, 1201 (Fed. Cir. 2004).”</p>	
9	<p>Claims with ranges under <i>In re Boesch</i> The order of the cited PTAB cases relating to claims with ranges is the</p>	<p><i>In re Applied Materials</i>, 692 F.3d 1289 (Fed. Cir. 2012); <i>In re Boesch</i>, 617 F.2d 272 (CCPA 1980); <i>In re Antonie</i>, 559 F.2d 618 (CCPA 1977); <i>In re Geisler</i>, 116 F.3d 1465 (Fed. Cir. 1997); <i>In re Peterson</i>, 315 F.3d 1325 (Fed. Cir. 2003); <i>Titanium Metals Corp. v. Banner</i>, 778 F.2d 775 (Fed. Cir. 1985)</p>

²⁶ *In re Sponnoble*, 405 F.2d 578, 597 (CCPA 1969).

²⁷ The author’s generalizations were determined by searches on PTAB using the query terms “away” AND “sponnoble” or “away” AND “depuy,” and reviewing the first 50 hits (July 21, 2016).

²⁸ *Depuy Spine, Inc. v. Medtronic Sofamore Danek, Inc.*, 567 F.3d 1314, 1327 (Fed. Cir. 2009).

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

	<p>same as in the cited article.²⁹</p>	<p><i>Ex parte Brereton</i>, Appeal No. 2011-008148, Ser. No. 10/538,816, August 12, 2013; <i>Ex parte Brust</i>, Appeal No. 2013-002292, Ser. No. 2/234,753, November 4, 2014; <i>Ex parte Kumazaki</i>, Appeal No. 2009-007273, Ser. No. 10/106,790, November 30, 2010; <i>Ex parte Zasloff</i>, Appeal No. 2007-0055, Ser. No. 10/053,299, January 24, 2007; <i>Ex parte Hossainy</i>, Appeal No. 2009-007316, Ser. No. 10/108,004, November 5, 2010; <i>Ex parte Borland</i>, Appeal No. 2010-007846, Ser. No. 11/471,282, July 24, 2012; <i>Ex parte Ferren</i>, Appeal No. 2011-000928, Ser. No. 11/072,698, January 31, 2013; <i>Ex parte Favet</i>, Appeal No. 2009-003756, Ser. No. 10/821,125, February 23, 2010; <i>Ex parte Gagliardi</i>, Appeal No. 2004/005190, Ser. No. 10/669,610, March 25, 2010; <i>Ex parte Knox</i>, Appeal No. 2011-002230, Ser. No. 12/146,976, February 27, 2013; <i>Ex parte Kodali</i>, Appeal No. 2009-014,507, Ser. No. 10/934,098, March 28, 2011; <i>Ex parte Kyocera Corporation</i>, Appeal No. 2009-009405, Reexamination No. 90/007,804, October 30, 2009; <i>Ex parte Lanzendorfer</i>, Appeal No. 2006-1383, Ser. No. 10/025,065, August 31, 2006; <i>Ex parte Lee</i>, Appeal No. 2009-013830, Ser. No. 11/543,798, February 26, 2010; <i>Ex parte Pitt</i>, Appeal No. 2010-003568, Ser. No. 10/471,309, August 13, 2009; <i>Rockwool International v. Knauf Insulation</i>, Appeal No. 2015-001256, Reexamination Control No. 95/000,675, May 1, 2015; <i>Ex parte Rottwinkel</i>, Appeal No. 2009-013079, Ser. No. 11/486,733, September 10, 2010; <i>Ex parte Sugiura</i>, Appeal No. 2008-4783, Ser. No. 10/381,600, March 30, 2009; <i>Ex parte Thiebaud</i>, Appeal No. 2013-007480, Ser. No. 11/988, 209, April 28, 2015.</p>
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²⁹ Tom Brody, *Claims to ranges, the result-effective variable, and In re Applied Materials*, 98 J. PAT. & TRADEMARK OFF. SOC'Y. 618 (2016).

10	Laundry list	<p>Case law useful for rebutting rejections based on prior art's disclosure of a claim element in a laundry list include, <i>In re O'Farrell</i>, 853 F.2d 894 (Fed. Cir. 1988) and <i>Medichem S.A. v. Rolabo S.L.</i>, 437 F.3d 1157 (Fed. Cir. 2006). Case law useful for imposing obviousness rejections that are based on a laundry list disclosure, includes <i>Merck & Co., v. Biocraft Labs., Inc.</i>, 874 F.2d 804 (Fed. Cir. 1989).</p> <p><i>Ex parte Bonner</i>, Appeal No. 2014-005298, June 27, 2016, Ser. No. 12/915,859; <i>Ex parte Chopra</i>, Appeal No. 2014-007825, July 1, 2016, Ser. No. 13/456,619; <i>Ex parte Katiyar</i>, Appeal No. 2011-006375, June 17, 2013, Ser. No. 11/099,267; <i>Ex parte Lajoie</i>, Appeal No. 96-2311, November 27, 1998, Ser. No. 08/139,057; <i>Ex parte McMichael</i>, Appeal No. 2009-002709, June 25, 2009, Ser. No. 10/624,328; <i>Ex parte Senderoff</i>, Appeal No. 2003-0338, November 19, 2003, Ser. No. 08/486,451; <i>Ex parte Zerbe</i>, Appeal No. 2006-0442, June 6, 2006, Ser. No. 10/123,142</p>
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III. FEDERAL CIRCUIT CASE LAW RELATING TO LAUNDRY LISTS

The Federal Circuit has used the term “laundry list” when contemplating § 103-rejections based on lengthy lists in prior art references. In this situation, the cited prior art reference includes a laundry list-type disclosure of one or more chemicals, structures, or compositions that correspond to elements in the rejected claim. For example, *Insite Vision, Inc. v. Sandoz, Inc.*, 783, 863 (Fed. Cir. 2015) recites, “selecting from the **laundry list** of potential active ingredients.” (emphasis added). To give another example of the Federal Circuit’s use of the term “laundry list,” *MercExchange, LLC v. eBay, Inc.*, 401 F.3d 1323, 1335 (Fed. Cir. 2005) recites, “the Keller article that describes how to make the system is not a mere **laundry list** of factors.” (emphasis added).

Moreover, *Otsuka Pharmaceutical Co., Ltd. v. Sandoz, Inc.*,³⁰ referred to, “the far more nebulous disclosure that the trillions of carbostyryl compounds encompassed by the ‘416 patent . . . the ‘416 patent’s “**laundry list**” of potential central nervous system controlling effects to mean that every carbostyryl derivative disclosed in the ‘416 patent is a potential antipsychotic.” (emphasis added).

³⁰ *Otsuka Pharmaceutical Co., Ltd. v. Sandoz, Inc.*, 678 F.3d 1280, 1293 – 1294 (Fed. Cir. 2012).

A. Anti-inventor implications of Merck & Co., v. Biocraft Labs., Inc.

Using the query terms “laundry list” and “lengthy list” the author acquired and then reviewed all the opinions from the Board having one of these query terms. In many of these opinions, the Board refused the inventor’s laundry list-based rebuttal arguments and affirmed the rejection. The most frequently cited basis for affirming the § 103-rejection is *Merck & Co., v. Biocraft Labs., Inc.*,³¹ which sets for the following rule:

That the ‘813 patent discloses a multitude of effective combinations does not render any particular formulation less obvious. This is especially true because the claimed composition is **used for the identical purpose** taught by the prior art. See *In re Corkill*, 771 F.2d 1496, 1500, 226 USPQ 1005, 1008 (Fed. Cir.1985) (obviousness rejection of claims affirmed in light of prior art teaching that “hydrated zeolites will work” in detergent formulations, even though “the inventors selected the zeolites of the claims from among thousands' of compounds”); *In re Susi*, 440 F.2d 442, 445, 169 USPQ 423, 425, 58 CCPA 1074 (1971) (obviousness rejection affirmed where the disclosure of the prior art was “huge, but it undeniably include[d] at least some of the compounds recited in **appellant's generic claims** and it is of a **class of chemicals to be used for the same purpose** as appellant's additives”). (emphasis added).

In the above excerpt, please note the recitations of “used for the identical purpose” and “class of chemicals to be used for the same purpose.” The rule of *Merck v. Biocraft* is reproduced on a routine basis in opinions from the Board where the Board affirmed the rejection. But the rule of *Merck v. Biocraft* also includes guidance for rebutting § 103-rejections. This guidance is evident from the **highlighted phrases** in the cited excerpt. The guidance is that, if possible, the inventor should argue that:

- The chemical that is disclosed in the cited prior art is **not in the same class** as the chemical that is recited in the inventor’s claim
- The purpose of the chemical disclosed by the cited prior art is **not the same purpose** as the chemical in the inventor's claim

Because of its overwhelmingly anti-inventor power, this author suggests that attorneys and agents refrain from citing *Merck & Co., v. Biocraft Labs., Inc.* when drafting a rebuttal. On the other hand, as stated above, *Merck v. Biocraft* does suggest two avenues for drafting rebuttal strategies, namely, arguments relating to “not in the same class” of chemicals, and relating to “not used for the same purpose.” Attorneys and agents are free to draft arguments for “not in the same class” or “not the same purpose” without mentioning *Merck v. Biocraft*.

As form of shorthand, in this article the author usually refers to laundry lists as those containing a laundry list of “chemicals.” However, it should be understood that the author’s comments on laundry lists of “chemicals” also apply to lists of structures that are part of a device, to lists of compounds, and to lists of anything else that might

³¹ *Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989).

be used as a claim element, such as laundry lists of fabrics made of polyester, rubber, polyacrylate, cotton, silk, or wool, or lists of fasteners, such as, bolts, rivets, hammer-drive anchors, socket screws, cotter pins, epoxy glue, snaps, or buttons.

B. The rule of In re Baird.

*In re Baird*³² is applicable to § 103-rejections based on disclosures taking the form of a laundry list. *In re Baird* concerned a claim requiring a species, and a prior art reference disclosing a genus that encompassed that species. The genus disclosed by the Knapp prior art reference was, “diphenols.” The species encompassed by this genus was, “bisphenol A.”

In *In re Baird*, the claim under review read, “A flash fusible toner comprising . . . bisphenol A . . . containing an aliphatic hydrodicarboxylic acid selected from . . . succinic acid, glutaric acid, and adipic acid.” Thus, it can be seen that the claim recited a genus as well as three different species. For orientation, please note that the word “fruit” is a genus term while species that are encompassed by this genus term include apples, berries, oranges, and grapes.

The Knapp reference failed to disclose any of the species recited by the claim, but instead provided a generic formula. In the words of the Federal Circuit, “The Knapp formula contains a broad range of variables and thus encompasses a large number of different diphenols, which is bisphenol A.” The Knapp reference did not disclose “bisphenol A” but the examiner reasoned that, bisphenol A, “may be easily derived from the generic formula . . . in Knapp” (*In re Baird* at 382). The Federal Circuit did not accept the examiner’s conclusory reasoning, and reversed the § 103-rejection.

This author suggests that, when needing to rebut a § 103-rejection based on a laundry list disclosure, the attorney or agent should make certain that the prior art/claim relationship is one of genus/species. In this situation, *In re Baird* would be on-point. *In re Baird* is also likely to be on-point, where the prior art contains only one genus term (and not a laundry list of genus terms), and where this one genus term encompasses a species in the claim.

In re Baird also contains a rule that can be cited in rebuttal arguments where the prior art discloses a laundry list of chemicals and where one of these is exactly the same as the species of chemical that is required by the claim (species in prior art matching species in the claim). This rule relates to prior art references that state that one or more species in a laundry list are “preferred” and where the preferred chemical is other than a chemical that is required by the claim. *In re Baird*’s teaching of how the obviousness analysis can make use of the prior art’s disclosure that some chemicals are “preferred,” is shown here:

Given the vast number of diphenols encompassed by the generic diphenol formula in Knapp, and the fact that the diphenols that Knapp specifically discloses to be “typical,” “preferred,” and “optimum” are different from . . . bisphenol A, we conclude that Knapp does not teach or fairly suggest the selection of bisphenol A. See *In re Bell*, 991 F.2d 781 (Fed. Cir.

³² *In re Baird*, 16 F.3d 380 (Fed. Cir. 1994).

1993) (DNA sequence would not have been obvious in view of prior art reference suggesting a nearly infinite number of possibilities and failing to suggest why among all those possibilities one would seek the claimed sequence). A disclosure of millions of compounds does not render obvious a claim to three compounds, particularly when that disclosure indicates a preference leading away from the claimed compounds. (emphasis added).

C. Issue of “laundry list” as it applies to 35 U.S.C. § 102 (anticipation) and 35 U.S.C. § 112 (written description).

Some PTAB cases that include the term “laundry list” do not concern obviousness, but instead concern rejections under 35 U.S.C. § 102 (anticipation) or under 35 U.S.C. § 112 (written description). Case law regarding disclosures in the prior art taking the form of long lists, in the context of § 102-rejections, includes *In re Gleave*,³³ and *Perricone v. Medis Pharmaceutical Corp.*³⁴ Case law regarding “laundry list” disclosures, as it applies to written description, include *Fujikawa v. Wattanasin*.³⁵ But this article does not concern § 102-rejections and it does not concern rejections for lack of written description.

IV. CATEGORY OF ANTI-OBVIOUSNESS CASE LAW RELATING TO LAUNDRY LISTS (BOARD REVERSED THE REJECTION)

A. Ex parte Bonner.³⁶

Ex parte Bonner concerned a claim to a medical device.

1. The claim and the disclosures of the cited prior art references.

This opinion concerned a §103-rejection against a claim that read:

Claim 1. A medical device . . . comprising: a catheter . . . and an implantable medical device having a housing and a fixation member operatively coupled to said housing having an unengaged state when in . . . lumen of said catheter . . . and a magnetic element being configured to magnetically engage said implantable medical device and to pass through said lumen of said catheter, said magnetic attraction between said magnetic element and said

³³ *In re Gleave*, 560 F.3d 1331 (Fed. Cir. 2009).

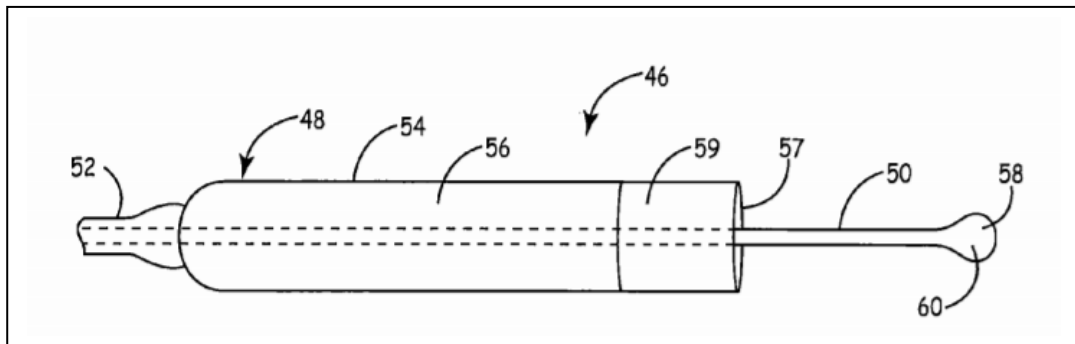
³⁴ *Perricone v. Medis Pharmaceutical Corp.*, 432 F.3d 1368 (Fed. Cir. 2005).

³⁵ *Fujikawa v. Wattanasin*, 93 F.3d 1559 (Fed. Cir. 1996).

³⁶ *Ex parte Bonner*, PTAB Appeal No. 2014-005298, Ser. No. 12/915,859 (June 27, 2016).

implantable medical device being less than said fixation force engaging said tissue of said patient.³⁷

The implantable medical device was a pacemaker for the heart. The drawing shows catheter (48), lumen of catheter (56), and magnetic element (50). The term “lumen” refers to the open volume that is inside a tubular object or structure, such as the lumen of the intestines. The term “lumen” can also apply to the open volume inside tubular medical devices, such as catheters.



The cited prior art references included Kveen (U.S. Pat. No. 7,840,281) and Frassica (U.S. Pat. App. No. 2007/0005041). Kveen concerns an electrode used in a pacemaker for the heart. The Kveen device is used to deliver the electrode. It has a magnet that holds the electrode when it is being inserted into the heart. The Kveen delivery system has an “anchor” that is used to **push the electrode** and detach it from the magnet. But the Kveen reference does not disclose any pulling force. The examiner cited the Frassica reference for its **disclosure of pulling**.³⁸

The relevant part of Frassica (¶ 0306) reads:

[0306] Connecting and disconnecting of the stent 1200 from the delivery 1210 and/or retrieval elements 1220 may be conducted via wireless signal, **push/pull** of a wire or cable, inflation/deflation of a balloon or bladder, screwing/unscrewing of threaded elements, thermal expansion/contraction, swelling/shrinking, on/off tapered elements, magnetizing/ demagnetizing, wrapping/ unwrapping elements, sticking/unsticking, grabbing/releasing **and/or other methods which will be apparent to those skilled in the art** in view of the present disclosure.³⁹ (emphasis added).

³⁷ *Id.*

³⁸ Final Rejection, May 9, 2013, Ser. No. 12/915,859 (15 pages).

³⁹ U.S. Patent App. No. 2007/0005041 of Frassica, ¶ 0306.

2. Characterizing the prior art's disclosure as an open-ended laundry list.

The Board's opinion illustrates the fact that, where the disclosure in a prior art reference takes the form of an open-ended laundry list, this makes the rebuttal argument more persuasive in the eyes of the Board. Referring to the open-endedness nature of the Frassica laundry list, the Board wrote that, "Frassica discloses a minimum of 22 different ways to release a medical implant, and **implies that more ways are contemplated.**" (emphasis added) (See Frassica at ¶ 0306).

Referring to the Frassica disclosure as a "laundry list," the inventor argued that, "This laundry list of just about every attachment/detachment mechanism."⁴⁰ Further characterizing the open-ended nature of Frassica's laundry list, the inventor further argued that, "So the choice is not just between magnetic options but among all attachments and detachment options." *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Labs, Inc.*, 520 F.3d 1358 (Fed. Cir. 2008) states that, "KSR posits a situation with a finite . . . small or easily traversed number of options that would convince an ordinary skilled artisan of obviousness."⁴¹ The Board reiterated and agreed with the inventor's argument that the Frassica disclosure takes the form of, "a laundry list of just about every attachment/detachment mechanism."

3. Federal Circuit case law for use in laundry list-style arguments.

Citing the relevant case law from the Federal Circuit, the inventor invoked "obvious to try" doctrine. Obvious to try doctrine is set forth by many cases, for example, by *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litigation*,⁴² which provides the rule:

Evidence of obviousness, especially when that evidence is proffered in support of an "obvious-to-try" theory, is insufficient unless it indicates that the possible options skilled artisans would have encountered were "finite," "small," or "easily traversed," and that skilled artisans would have had a reason to select the route that produced the claimed invention. *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364 (Fed. Cir. 2008) (citing *KSR*, 550 U.S. at 421, 127 S. Ct. 1727).

This author points out that *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Labs, supra*, is well-suited for supporting rebuttal arguments that characterize the prior art's disclosure as taking the form of a "laundry list." This is because *Ortho-McNeil v. Mylan* characterizes a disclosure in the prior art that is "small" as being a type of disclosure that would convince an ordinary skilled artisan of obviousness (in other words, the *Ortho-McNeil* opinion implies that if a list is "not small," then the existence of a claim element in this "not-small-list" cannot be used to establish a *prima facie* case of obviousness).

⁴⁰ Brief on Appeal, December 9, 2013, Ser. No. 12/915,859 (16 pages).

⁴¹ Brief on Appeal, December 9, 2013, Ser. No. 12/915,859 (16 pages).

⁴² *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litigation*, 676 F.3d 1063, 1072 (Fed. Cir. 2012).

Continuing to describe the examiner's basis of rejection, the Board wrote: "Based on this finding, the Examiner determines that . . . [g]iven these finite number of options, there would be a reasonable expectation that pulling the delivery device back would have a reasonable expectation of success." Focusing further on the examiner's basis of rejection, the Board found that it invoked the doctrine of "obvious to try" as set forth by MPEP § 2143(E).

The inventor argued,

This is clearly not the . . . small and finite number of alternatives that *KSR* suggested might support . . . obviousness. For a finite number of predictable solutions, when obvious to try rationale is applied, under Federal Circuit case law 'finite' means 'small or easily traversed' . . . [t]his case does not present such a small and easily traversed number of options,⁴³ citing *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Labs, Inc.*⁴⁴

4. MPEP as a basis for laundry list-style rebuttal arguments.

The Board's opinion wrote,

The Manual of Patent Examining Procedure (MPEP) instructs Examiners that in support of an 'obvious to try' rationale, the Examiner must find that at the time of the invention there had been a recognized problem or need in the art and that at that time there were a finite number of identified, predictable potential solutions to the recognized need or problem. See MPEP §2143(E).

The relevant part from MPEP §2143(E) is shown here:

"Obvious To Try" – Choosing From a Finite Number of Identified, Predictable Solutions, With a Reasonable Expectation of Success. To reject a claim based on this rationale, Office personnel must resolve the Graham factual inquiries. Then, Office personnel must articulate the following: (1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem; (2) a finding that there had been **a finite number of identified, predictable potential solutions to the recognized need or problem**; (3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success. (emphasis added).

The take-home lessons from *Ex parte Bonner* are the following:

- In drafting rebuttal arguments, the attorney or agent should point out, if possible, that the prior art's laundry list disclosure was open-ended. In *Ex parte Bonner*, the open-endedness of the list took the form of the

⁴³ Brief on Appeal, December 9, 2013, Ser. No. 12/915,859 (16 pages).

⁴⁴ *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Labs, Inc.*, 520 F.3d 1358 (Fed. Cir. 2008).

writing, “and/or other methods which will be apparent to those skilled in the art.”

- *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Labs, Inc.*⁴⁵ and MPEP § 2143(E) provides a basis for laundry list-style arguments that is likely to be accepted by PTAB.

B. *Ex parte Chopra*.⁴⁶

Ex parte Chopra concerned a type of ink containing crystalline diurethane. The § 103-rejection was based on combining Allen (U.S. Pat. App. No. 2008/0302272) with Bui (U.S. Pat. No. 6,528,613). The examiner cited Bui reference for its disclosure of a crystalline diurethane obtained from a reaction of hexamethylene-1,6-**diisocyanate** with benzyl **alcohol**.

1. *The laundry list.*

The Board referred to the Bui disclosure as taking the form of, “**large numbers** of . . . nucleophiles . . . including both **alcohols** and amines -- and **large numbers** of mono- and **diisocyanates**. See at Col. 5, l. 18 – Col. 8, l. 9.” (emphasis added) An excerpt from Frassica’s humongous laundry list is reproduced below. This particular excerpt discloses **diisocyanates** (Col. 7, l. 43 – Col. 8, l. 9, of Frassica). As can be seen, the excerpt discloses many types of monoisocyanates, many types of diisocyanates, and many types of triisocyanates:

mono-, di- and other poly-isocyanates. Examples of monoisocyanates include octadecylisocyanate; octylisocyanate; butyl and t-butylisocyanate; cyclohexyl isocyanate; adamantyl isocyanate; ethylisocyanatoacetate; ethoxycarbonylisocyanate; phenylisocyanate; alphas-methylbenzyl isocyanate; 2-phenylcyclopropyl isocyanate; benzylisocyanate; 2-ethylphenylisocyanate; benzoylisocyanate; meta and para-tolylisocyanate; 2-, 3-, or 4-nitrophenylisocyanates; 2-methoxyphenyl isocyanate; 3-methoxyphenyl isocyanate; 4-methoxyphenylisocyanate; ethyl 4-isocyanatobenzoate; 2,6-dimethylphenylisocyanate; 1-naphthylisocyanate; (naphthyl) ethylisocyanates; and the like. Examples of **diisocyanates** include isophorone diisocyanate (IPDI); toluene diisocyanate (TDD); diphenylmethane-4,4'-diisocyanate (MDI); hydrogenated diphenylmethane-4,4'-diisocyanate (H.sub.12 MDI); tetra-methyl xylene diisocyanate (TMXDI); hexamethylene-1,6-diisocyanate (HDI); hexamethylene-1,6-diisocyanate; naphthylene-1,5-diisocyanate; 3,3'-dimethoxy-4,4'-biphenyldiisocyanate; 3,3'-dimethyl-4,4'-bimethyl-4,4'-biphenyldiisocyanate; phenylene diisocyanate; 4,4'-biphenyldiisocyanate; trimethylhexamethylene diisocyanate; tetramethylene xylene diisocyanate; 4,4'-methylenebis(2,6-diethylphenyl isocyanate); 1,12-diisocyanatododecane; 1,5-diisocyanato-2-methylpentane;

⁴⁵ *Ortho-McNeil Pharmaceutical, Inc. v. Mylan Labs, Inc.*, 520 F.3d 1358 (Fed. Cir. 2008).

⁴⁶ *Ex parte Chopra*, PTAB Appeal 2014-007825, Ser. No. 13/456,619 (July 1, 2016).

1,4-diisocyanatobutane; and cyclohexylene diisocyanate and its isomers; uretidione dimers of HDI; and the like. Examples of triisocyanates or their equivalents include the trimethylolpropane trimer of TDI, and the like, isocyanurate trimers of TDI, HDI, IPDI, and the like, and biuret trimers of TDI, HDI, IPDI, and the like. Examples of higher isocyanate functionalities include copolymers of TDI/HDI, and the like, as well as MDI oligomers.⁴⁷

2. Reversal based on disclosure taking the form of a laundry list.

The Board referred to the “long list” of Bui and complained that, “Neither Bui nor the examiner provided any reason to select the alcohol and diisocyanate . . . from the **long list in Bui**. Thus, we cannot affirm the examiner’s rejection.” (emphasis added) The Board cited *In re Baird*⁴⁸ for the rule, “A **disclosure of millions of compounds** does not render obvious a claim to three compounds, particularly when that disclosure indicates a preference leading away from the claimed compounds.” (emphasis added)

Turning to the Appeal Brief, the inventor referred to the prior art’s disclosure takes the form of a broad selections, arguing,

Bui discloses **a very broad selection** of alcohols and amines for use in reaction with isocyanates . . . Bui at most generally teaches reactions between isocyanates and **broad selections** of alcohols and amines, and Bui does not provide any motivation or reasons as to how one . . . would arrive at the presently claimed crystalline diurethane compounds.⁴⁹

3. Reversal based on different purpose or preference.

As part of its opinion, the Board agreed with and referred to the inventor’s Appeal Brief, for its argument for non-obviousness based on different purpose.⁵⁰ The Appeal Brief argued, “Moreover . . . Bui teaches urethane amide compounds, **not the crystalline diurethane compounds as presently claimed.**”⁵¹ Different purpose doctrine, as it applies to disclosures taking the form of a laundry list, finds a basis in *In re Baird*, which refers to the situation where a prior art reference is a, “disclosure indicates **a preference leading away from the claimed compounds.**” (emphasis added)

4. Reversal based on “obvious to try” doctrine.

The opinion stated that its reversal was based on the reasons set forth in the inventor’s Appeal Brief. The inventor argued:

⁴⁷ U.S. Pat. No. 6,528,613 of Bui (Col. 5, l. 18 – Col. 8, l. 9).

⁴⁸ *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994).

⁴⁹ *Chopra*, Appeal Brief, at 10.

⁵⁰ *Id.*

⁵¹ *Id.* at 7.

In *KSR*, the Supreme Court stated that a combination may be obvious if a combination was **obvious to try**. In view of this obvious to try test, the Federal Circuit determined that the claimed compounds would not have been **obvious to try**, since the prior art did not identify predictable solutions, but rather a broad range of compounds. *Takeda Chemical Ind., Ltd. v. Alphapharm Pty., Ltd.* 429 F.3d 1350, 1356, 1359 (Fed. Cir. 2007) . . . [h]ere, Bui does not provide a ‘finite number of identified, predictable solutions,’ but a broad selection of reactants.⁵² (emphasis added)

Continuing inventor argued that, “Here, Bui does not provide a ‘finite number of identified, predictable solutions,’ but a broad selection of reactants.” This particular argument invokes “obvious to try” doctrine, as is evident from the teaching in MPEP § 2143(E) that:

“Obvious To Try” – Choosing From a Finite Number of Identified, Predictable Solutions, With a Reasonable Expectation of Success. To reject a claim based on this rationale . . . Office personnel must articulate the following . . . a finding that there had been **a finite number of identified, predictable potential solutions to the recognized need or problem**; (3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success.⁵³ (emphasis added)

The take-home lessons from *Ex parte Chopra* include the following:

- **Need to assess size of the list of chemicals.** The disclosure in *Ex parte Chopra* took the form of a humongous laundry list, thus rendering the rebuttal argument somewhat easier than arguments shown in other PTAB opinions, where the laundry lists were of only modest size. Thus, an attorney or agent drafting a laundry list-style argument based on a list of chemicals taking the form of only a dozen or so chemicals, should consider using other rebuttal techniques, instead of arguments that characterize the prior art as a “laundry list” disclosure.
- **Utility in arguing that the chemicals in the laundry list are for a different purpose than the claim under review.** *Ex parte Chopra* provides a good application of arguments referring to different purpose or different preference. The Board cited *In re Baird* for its disclosure of different preference, as a basis for reversing the rejection, writing that, “Neither Bui nor the Examiner provided any reason to select the alcohol and diisocyanate that form the basis for the Examiner’s rejection from the long lists in Bui. Thus, we cannot affirm the Examiner’s rejection. See *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994) (‘A disclosure of millions of compounds does not render obvious a claim to three compounds, particularly when that disclosure indicates a **preference leading away from the claimed compounds.**)”

⁵² *Id.* at 10.

⁵³ Manual of Patent Examining Procedure (MPEP) § 2143(E).

- **Utility in arguing that the prior art’s laundry list-type disclosure did not identify predictable solutions.** *Ex parte Chopra* shows the utility of arguing that “the prior art did not identify **predictable solutions**, but rather a broad range of compounds. *Takeda Chemical Ind., Ltd. v. Alphapharm Pty., Ltd.* 429 F.3d 1350, 1356, 1359 (Fed. Cir. 2007).”⁵⁴

*C. Ex parte Katiyar.*⁵⁵

Ex parte Katiyar concerned an electrode for welding. The claim required that the electrode be an, “electrode having a reduced moisture pickup-properties.”

1. The obviousness rejection.

The references cited in the obviousness rejection were US 6,339,209 of Kotecki, US 3,848,109 of Zvanut, and US 4,045,593 of Hill. As part of the § 103-rejection, the examiner wrote that, “Kotecki discloses the invention . . . but does not disclose moisture control, colloidal silica, or mesh or particle size as claimed.”

The Hill reference was cited for its disclosure of compounds for moisture control. Thus, the basis for the § 103-rejection was also that, “Hill teaches the use of a coating to make a material moisture resistant . . . it would have been obvious . . . to . . . choose reduced moisture filler materials as taught by Zvanut in the Kotecki electrode because this mitigates porosity in the weld metal.”⁵⁶

2. The Board’s characterization of the prior art laundry lists.

But regarding the examiner’s use of the Hill reference, the Board levied various complaints against the logic of the examiner's rejection, writing:

Neither the examiner nor the referenced prior art provides any discussion as to the combinability . . . of the **long list of compounds** . . . disclosed in the cited references to yield the specific moisture resistant compound called for in claim 1 . . . [w]e know from Zvanut, however, that . . . the chemistry and physics of welding are very complex . . . the cited prior art . . . presents a **vast number** of possible chemical compounds that could be constructed from a **vast number** of constituent compounds. The examiner cites no guidance as to why one . . . would select the specific compounds recited in the claims, and why one would have a reasonable expectation such combination would be successful. The examiner appears to have . . . selected from a **myriad of**

⁵⁴ *Id.*

⁵⁵ *Ex parte Katiyar*, Appeal No. 2011-006375, June 17, 2013, Ser. No. 11/099,267.

⁵⁶ *Ex parte Katiyar*, Appeal No. 2011-006375, June 17, 2013, Ser. No. 11/099,267.

possible components of various types of . . . chemicals in order to reconstruct the claimed subject matter.⁵⁷ (emphasis added)

The Appeal Brief and the Hill reference provide details on the “long list of compounds.” The Appeal Brief pointed out that the Hill reference discloses, “The flux covered electrodes are made resistant to moisture . . . by treating with . . . at least one material taken from the class of silicon bearing materials consisting of colloidal amorphous solid silicas, quaternary ammonium colloidal silica sols, and soluble silicas of lithium and potassium.”⁵⁸ The colloidal silica compounds, colloidal silica sols, and soluble silicas are disclosed in Hills column 2, lines 1 – 3 and lines 25 – 47.

3. Mingled in the Board’s characterization of the prior art’s laundry list, the Board included various reasons for reversal, where each reason finds a basis in Federal Circuit case law.

As can be seen from the excerpt, the Board gave the following reasons why the § 103-rejection should be reversed:

- The field of the relevant technology is “very complex,” apparently invoking “reasonable expectation of success” doctrine
- The cited prior art disclosed a “vast number of constituent compounds” for use in constructing a “vast number of possible chemical compounds,” apparently invoking the concept that the laundry list was open-ended and infinite
- The Board expressly referred to the doctrine of “reasonable expectation of success,” writing that “the examiner cites no guidance . . . why one would have a reasonable expectation such combination would be successful”
- The Board referred to the lack of “guidance” in the cited prior art, apparently invoking the Federal Circuit’s rule that, “the prior art did not identify predictable solutions, but rather a broad range of compounds. *Takeda Chemical Ind., Ltd. v. Alphapharm Pty., Ltd.* 429 F.3d 1350, 1356, 1359 (Fed. Cir. 2007)”

The take-home lessons from *Ex parte Katiyar*, if they apply to rebutting § 103-rejections that make use of “laundry list” arguments, are as follows:

- **Technology complex or unpredictable.** The attorney or agent should hunt for statements in the cited prior art references that the relevant technology is “very complex” or “unpredictable.” Statements such as these can support the rebuttal argument that the claim is not obvious because the skilled artisan would not have had a reasonable expectation of success.
- **Prior art fails to provide guidance.** The attorney or agent should contemplate the cited prior art references, and determine if the facts of the case can support the rebuttal argument that the prior art does not provide guidance for arriving at the claim under review. Arguments of

⁵⁷ *Ex parte Katiyar*, Appeal No. 2011-006375, June 17, 2013, Ser. No. 11/099,267.

⁵⁸ Appeal Brief, October 8, 2010, Ser. No. 11/099,267.

this sort may be supported by *In re Baird*,⁵⁹ which teaches, “Given the vast number of diphenols encompassed by the generic diphenol formula in Knapp, and the fact that the **diphenols that Knapp specifically discloses to be ‘typical,’ ‘preferred,’ and ‘optimum’ are different from . . . bisphenol A**, we conclude that Knapp does not teach or fairly suggest the selection of bisphenol A . . . [a] disclosure of millions of compounds does not render obvious a claim to three compounds, particularly when that disclosure indicates a **preference leading away from the claimed compounds.**” (emphasis added) Also, arguments regarding lack of guidance can be supported by the Federal Circuit’s rule that, “the prior art did not identify **predictable solutions**, but rather a broad range of compounds. *Takeda Chemical Ind., Ltd. v. Alphapharm Pty., Ltd.* 429 F.3d 1350, 1356, 1359 (Fed. Cir. 2007)” (emphasis added).

D. *Ex parte Kolter*.⁶⁰

Ex parte Kolter concerned an excipient for oral drugs. Excipients are carriers used in drug formulations (pills, tablets, liquid formulations) and can take the form of a salt solution, solubilizer, surfactant, and the like.⁶¹

The Claim read,

Claim 1. A dosage form comprising preparations of slightly water-soluble active substances in a polymer matrix comprising a polyether copolymer and at least one **slightly water-soluble polymer**, the polyether copolymer being obtained by free radical polymerization of a mixture of from 30 to 80% by weight of N-vinylactam, from 10 to 50% by weight of vinyl acetate and from 10 to 50% by weight of a polyether (emphasis added).

The point of novelty of the invention was that the “slightly water-soluble polymer” prevented undesirable crystal formation, during long term storage, of the drug (the “active substances”).

1. *The prior art references.*

The cited prior art references were Metoglu (U.S. Patent App. No. 2010/0204425), Kolter (U.S. Patent App. No. 2008/02481117), and Leuner (2000) Improving drug solubility for oral delivery using solid dispersions, *Eur. J. Pharm. Biopharm.* 50:47-60. Mertoglu disclosed all of the elements of the claim, but not “slightly water-soluble polymer.” Kolter and Leuner reference were cited for their disclosures of the “slightly water-soluble polymer.” In assessing obviousness of the claim element “slightly water-soluble polymer,” the examiner and the inventor agreed that the analysis should be

⁵⁹ *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994).

⁶⁰ *Ex parte Kolter*, Appeal No. 2014-009359, August 12, 2016, Ser. No. 13/319,575.

⁶¹ Van Hoogevest et. al., *Review - An update on the use of oral phospholipid excipients*, 108 *EUR. J. PHARM. SCI.* 1, 1 – 12 (2017).

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

based on a “slightly water-soluble polymer” taking the form of ethyl acrylate or of methyl methacrylate. (This agreement was based on the inventor’s election of a species, in response to a Restriction Requirement imposed by the examiner).

2. Prior art’s disclosures of the “slightly water-soluble polymers,” ethyl acrylate and methyl methacrylate.

Regarding the Leuner reference, the Board observed that, “Leuner then describes several ‘polymer carriers’ used to formulate such solutions, including polyacrylates and polymethacrylates. See *id.* at 52 – 57 (Carriers).” Regarding the Kolter reference, the Board observed that, “Out of the examples of water-soluble polymers, Kolter states that ‘[i]t is also preferred to use alkyl methacrylates or alkyl acrylates’ as the polymeric matrix excipients. *Id.* at ¶57.”

3. The Board observed that methacrylate was disclosed in a “laundry list” or one of a “broad class.”

The opinion observed that the Leuner reference disclosed the claim element in a laundry list, and that the Kolter reference disclosed the same claim element in a laundry list. Also, the opinion observed that Kolter’s disclosure characterized the polymethacrylates as being disclosed by Kolter as something distinct from what was required by the claim.

What made the Kolter disclosure distinct from the claim, was that Kolter stated that polymethacrylates were “water-soluble” (in contrast, the claim required that polymethacrylates be “slightly water-soluble”). In other words, the claim’s recitation of “slightly water-soluble polymer” encompassed the species, polymethacrylate, and the Kolter reference disclosed polymethacrylate, but Kolter’s characterization of its polymethacrylate was that it was something “water-soluble.”

The opinion observed,

Indeed, we find that neither Leuner nor Kolter reasonably suggests a correlation between the stability of a polymer matrix and the addition of the presently-claimed ethyl acrylate and methyi methacrylate polymer. Leuner only discloses polyacrylates and **polymethacrylates as one of a laundry list of polymers** . . . Leuner 55 (para. 3.2.5); see also Appeal Br. 13. And even then, it is unclear on this record whether Leuner suggests the same polymer carriers for a solid solution as for a solid dispersion. Leuner 55 (para. 3.2.5). Moreover, Kolter only discloses a **broad class** of water-soluble polymers including polyacrylates and **polymethacrylates**, rather than the slightly water-soluble polymers presently claimed. Kolter paras. 38-41, see also Appeal Brief 14.

4. *The prior art discloses one of the claim elements (polymethacrylates) but disclosed it as something distinct from what was required by the claim.*

As stated above, the Board observed that, although the Kolter reference disclosed “polymethacrylates,” the Kolter reference characterized polymethacrylates as something that is a “water-soluble polymers.” This way of characterizing polymethylacrylates weakens the use of the Kolter reference as a basis for imposing an obviousness rejection, because the claim requires that polymethacrylate be “slightly water-soluble.”

5. *The prior art admits that there is not any reasonable expectation of success.*

The Board contemplated the prior art references and detected admissions in the Leuner reference and in the Kolter reference that there was not any reasonable expectation of success. The opinion wrote, “Kolter describes the formulation of poorly water-soluble drugs as ‘extremely difficult,’” Kolter, ¶ 2; and Leuner characterizes the same as “one of the most frequent and greatest challenges to formulation scientists,” Leuner, 47 (Introduction).

6. *Reversal based on rule of In re Cyclobenzaprine regarding “reason to select.”*

The Board found that the Leuner reference did not suggest any correlation between polymer matrix stability and adding ethyl acrylate polymer and methyl methacrylate polymer. In other words, the Board found that the Leuner reference failed to disclose any reason to choose the relevant chemical from the lists in the Leuner reference. The Board characterized these lists a “laundry lists,” and complained that, “the examiner has not provided . . . evidence that one . . . ordinary skill would have had a reason to select . . . ethylacrylate and methylacrylate from the **laundry lists** disclosed by Leuner.” (emphasis added)

The Board reversed the § 103-rejection, citing *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*⁶² for its rule that, “evidence of obviousness, especially when that evidence is proffered in support of an ‘obvious-to-try’ theory, is insufficient unless it indicates that the possible options . . . were finite, small . . . and that the skilled artisans would have had a reason to select the route that produced the claimed invention.”

The take-home lessons from *Ex parte Kolter* are that:

- **Technology being “extremely difficult” or as presenting “greatest challenges.”** The attorney or agent should consider scrutinizing the cited prior art references to see if they characterize the relevant technology as something that is “extremely difficult” or as something that presents “greatest challenges.” If the disclosure is like this, the attorney or agent

⁶² *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1072 (Fed. Cir. 2012).

should consider a rebuttal that argues lack of any reasonable expectation of success.

- **Laundry list silent on any reason to select.** The attorney or agent should consider contemplating the laundry lists and determine that they are silent on any reason to select, and then base the rebuttal on *In re Cyclobenzaprine, supra*.
- **Rebuttal argument based on fact that the prior art characterized the claim element in a way distinct from the claim.** *Ex parte Kolter* illustrates the fact-pattern where one of the reasons for reversal was that the prior art disclosed one of the claim elements as being a “water-soluble polymer” whereas, in contrast, the claim required that this particular claim element be a “slightly water-soluble polymer.”

*E. Ex parte Lajoie.*⁶³

Ex parte Lajoie concerned a formulation containing a fungicide and an insecticide. The claim read:

Claim 42. An aqueous pesticide formulation having . . . a fungicidal ingredient selected from . . . alkali metal and ammonium bicarbonate . . . a **water-soluble polyhydroxy compatibility enhancing ingredient** . . . between 0.01-10 weight percent of an insecticidal ingredient. (emphasis added)

The Board’s opinion centered around the prior art’s disclosure of a “water-soluble polyhydroxy compatibility enhancing ingredient” called, “o-dihydroxybenzene.”

The § 103-rejection was based on combining the Wellinga reference, the Misato reference, and the Koch reference. According to the opinion, Koch (U.S. Patent No.4,324,799) was cited for its, “disclosure of o-dihydroxybenzene among a **large number** of possible fungicidal partners.” The list was in column 9, line 56 to column 14, line 6, of the Koch reference. A view of this list reveals that it discloses over 300 different chemicals.

The Board held that, “a person . . . would not have selected from Koch’s **lengthy list** of possible fungicidal partners . . . without the impermissible use of appellants’ disclosure as a guide” (emphasis added). The Board concluded that, “we believe that the § 103-rejection is predicated on the impermissible use of hindsight and must be reversed.” The take-home lesson from this case is that the attorney or agent has the option of invoking case law relating to impermissible hindsight, when drafting a rebuttal against a rejection based on a laundry list-style disclosure.

The date of the Board’s decision in *Ex parte Lajoie* was November 27, 1998. This date is long after cases from the Federal Circuit that are frequently cited by the Board when it refuses to be persuaded by rebuttal arguments referring to laundry list-type disclosures in the prior art. These frequently cited cases, which can be used against

⁶³ *Ex parte Lajoie*, Appeal No. 96-2311, November 27, 1998, Ser. No. 08/139,057.

the inventor, are *Merck & Co., v. Biocraft Labs., Inc.*,⁶⁴ *In re Corkill*,⁶⁵ and *In re Susi*.⁶⁶ For reasons unknown, the Board in *Ex parte Lajoie* refrained from considering or citing any of these three anti-inventor cases.

Regarding these cases, in addition to holding that obviousness can still be found where a chemical is disclosed, in the prior art, in a lengthy list, these cases further held that obviousness is especially evident where the goal of the chemical in the prior art was **for the same as the purpose** as that of the chemical in the claim. *Merck & Co., v. Biocraft Labs., Inc.*,⁶⁷ included the teaching that obviousness, “is especially true because the claimed composition is **used for the identical purpose** taught by the prior art.” Consistently, *In re Susi*⁶⁸ affirmed the obviousness rejection and referred to the fact that the chemical disclosed by the prior art, “is of a class of chemicals to be used for the **same purpose** as appellant’s additives.” (emphasis added)

Now, turning to *Ex parte Lajoie* and to the fact that the prior art reference (Koch, US 4,324,799) disclosed the chemical, o-dihydroxybenzene, it can be seen that the Koch reference disclosed that o-dihydroxybenzene was **used for the same purpose** as that set forth by the inventor’s claim. As disclosed by the Koch reference, this purpose of Koch’s o-dihydroxybenzene was for use as a “fungicidal partner.” To this end, Koch recited, “mixed formulations with other pesticidal active compounds, such as, for example, insecticides . . . or fungicides, are also possible, if desired . . . [t]he following compounds may be mentioned as examples of **possible fungicidal partners** in the mixture” (U.S. Patent No. 4,324,799 col. 6 l. 51 – 58). (emphasis added)

Ex parte Lajoie provides the take-home lessons that:

- Rebuttal arguments that refer to the prior art’s disclosure of a chemical buried in a laundry list can succeed in persuading the Board to reverse a rejection under 35 U.S.C. § 103. In *Ex parte Lajoie*, the prior art’s disclosure of o-dihydroxybenzene buried in a laundry list of over 300 fungicidal partners.
- The fact-pattern of *Ex parte Lajoie* was such that it should have persuaded the Board to affirm the rejection, where the rejection was based on *Merck & Co., v. Biocraft Labs.* The dramatic silence of the opinion regarding *Merck & Co., v. Biocraft Labs.*, suggest that attorneys and agents should consider drafting laundry list-style rebuttal arguments (in the situation where the prior art’s laundry list is very lengthy), even where a consideration of *Merck & Co., v. Biocraft Labs.*, suggests that the rebuttal will fail.

⁶⁴ *Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804 (Fed. Cir. 1989).

⁶⁵ *In re Corkill*, 771 F.2d 1496 (Fed. Cir.1985).

⁶⁶ *In re Susi*, 440 F.2d 442 (CCPA 1971).

⁶⁷ *Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804 (Fed. Cir. 1989).

⁶⁸ *In re Susi*, 440 F.2d 442, 445 (CCPA 1971).

*F. Ex parte McMichael.*⁶⁹

This opinion provides the following take-home lessons:

- Rebuttal arguments can have enhanced persuasiveness, where it can be argued that the rejection was based on the examiner's selection from one claim element from a first laundry list, and of another claim element from a totally separate laundry list.
- Rebuttal arguments can have enhanced persuasiveness, where it can be argued that the prior art reference fails to make any connection between the element in the first list and the element in the second list. In detail, this sentence refers to a structure, chemical, compound, or disease in the first list that corresponds to one of the claim elements. Also, this sentence refers to a structure, chemical, compound or disease in the second list that corresponds to a different one of the claim elements.
- Rebuttal arguments can have enhanced persuasiveness, where it can be argued that most of the structures, chemicals, or compounds in the laundry list are disclosed by the prior art reference as being for a purpose totally irrelevant to the claim (to the claim under rejection).

1. The nature of the first laundry list.

In *Ex parte McMichael*, the claim under review was to a method for using nerve growth factor as a drug to treat psychological disorders, such as depression, anxiety, and panic attack.

The claim read: "Claim 1. A method of alleviating symptoms of a psychological condition selected from . . . depression, **anxiety disorders**, panic attacks . . . comprising administering . . . nerve growth factor." (emphasis added)

The inventor argued that the Frey US2003/0072793 prior art "discloses a laundry list of more than forty . . . agents . . . but fails to disclose or suggest that any one of the forty . . . agents disclosed is for the treatment of any one disorder." In other words, the inventor argued that the Frey reference failed to make any connection between any one drug and any particular disease. The inventor further argued, "most of the forty . . . agents would not be expected to be therapeutic for most of the seventeen . . . conditions listed in paragraph 0169 [of Frey]." Paragraphs 0168 and 0169 are reproduced here:

[0168] Disorders of the Central Nervous System.

[0169] The present method can be employed to deliver agents to the brain for diagnosis, treatment or prevention of disorders or diseases of the CNS, brain, and/or spinal cord. These disorders can be neurologic or psychiatric disorders. These disorders or diseases include brain diseases such as Alzheimer's disease, Parkinson's disease, Lewy body dementia, multiple sclerosis,

⁶⁹ *Ex parte McMichael*, Appeal No. 2009-002709, June 25, 2009, Ser. No. 10/624,328.

epilepsy, cerebellar ataxia, progressive supranuclear palsy, amyotrophic lateral sclerosis, affective disorders, **anxiety disorders**, obsessive compulsive disorders, personality disorders, attention deficit disorder, attention deficit hyperactivity disorder, Tourette Syndrome, Tay Sachs, Nieman Pick, and other lipid storage and genetic brain diseases and/or schizophrenia. The method can also be employed in subjects suffering from or at risk for nerve damage from cerebrovascular disorders such as stroke in the brain or spinal cord, from CNS infections including meningitis and HIV, from tumors of the brain and spinal cord, or from a prion disease. The method can also be employed to deliver agents to counter CNS disorders resulting from ordinary aging (e.g., anosmia or loss of the general chemical sense), brain injury, or spinal cord injury. (emphasis added) (see, paras. 0168-0169 of Frey US2003/0072793)

As can be seen, Frey's ¶ 00169 is a laundry list of disorders of the nervous system, where the list includes "anxiety disorders." Please note that the laundry list included disorders not having even a remote relation to "anxiety disorders," such as Alzheimer's disease, multiple sclerosis, and spinal cord injury. In contrast, the claim recited a very small list of related psychological disorders, which included anxiety disorders. To reiterate, the claim read: "Claim 1. A method of alleviating symptoms of a psychological condition selected from . . . depression, **anxiety disorders**, panic attacks . . . comprising administering . . . nerve growth factor."

2. The nature of the second laundry list.

In addition to containing a disease laundry list (Frey's paras. 0168-0169), the Frey reference included a drug laundry list. Frey's drug laundry list was spread out over paragraphs 0041, 0042, 0043, 0045, and 0051. This list of drugs included nerve growth factor (as is required by Claim 1), as shown below:

an inorganic molecule, a peptide, a peptoid, a protein, a lipid, a carbohydrate, a nucleic acid . . . a stimulant, a sedative, an hypnotic, an analgesic, an anticonvulsant, an antihypertensive, an antiemetic, and anxiolytic, an antidepressant, . . . a vitamin or nutrient, an enzyme inhibitor, an antioxidant, a free radical scavenger, a metal chelating agent . . . an antineoplastic, an anti-inflammatory . . . a neurotransmitter, a neuromodulator, a nootropic, a receptor agonist or antagonist . . . an antiviral, an antibacterial, an antifungal . . . **nerve growth factor (NGF)**, neurotrophins . . . fibroblast growth factors . . . insulin . . . ciliary neurotrophic factor . . . estrogen . . . basic fibroblast growth factor . . . antisense molecules. (emphasis added)

3. Prior art fails to correlate the first laundry list with the second laundry list.

The opinion reiterated the inventor's argument that the Frey reference fails to correlate any particular disorder ("mode of drug administration") with any particular

drug (“agents disclosed”). To this end, the opinion wrote that, “Given the extensive variety of therapeutic agents . . . combine with the wide variety of . . . disorders . . . an ordinary artisan would have viewed Frey as simply providing separate lists of . . . disorders and drugs.”⁷⁰

4. Case law that can be cited, as to the need for prior art to provide motivation or direction to select from the laundry list.

To support its reversal of the § 103-rejection, the Board cited *In re O’Farrell*⁷¹ and *Medichem S.A. v. Rolabo S.L.*⁷² In this author’s opinion, this particular combination of Federal Circuit cases may be applicable when rebutting most or perhaps all obviousness rejections based on laundry lists in the prior art. In other words, although *Ex parte McMichael* concerned an obviousness rejection based on combining two shopping lists, this author believes that the following excerpt from *Ex parte McMichael* can be quoted, in its entirety, and applied in rebuttals to § 103-rejections involving only one laundry list. The quotable excerpt is:

Thus, as our reviewing court has stated, “[o]bviousness does not require absolute predictability of success For obviousness under § 103, all that is required is a reasonable expectation of success.” *In re O’Farrell*, 853 F.2d 894, 903-04 (Fed. Cir. 1988). [T]o have a reasonable expectation of success, **one must be motivated to do more than merely to “vary all parameters** or try each of numerous possible choices until one possibly arrived at a successful result, where **the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful.**” Similarly, prior art fails to provide the requisite “reasonable expectation” of success where it teaches merely to pursue a “general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it.” *Medichem S.A. v. Rolabo S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (quoting *O’Farrell*, 853 F.2d at 903 – 04). (emphasis added)

*G. Ex parte Senderoff.*⁷³

Ex parte Senderoff concerned a composition of proteins. The claim read, “Claim 21. A method of stabilizing an aqueous solution of **thromboprotein** comprising adding to said solution a stabilizing amount of **histidine.**” (emphasis added)

⁷⁰ *Ex parte McMichael*, Appeal No. 2009-002709, June 25, 2009, Ser. No. 10/624,328.

⁷¹ *In re O’Farrell*, 853 F.2d, 903 – 04 (Fed. Cir. 1988).

⁷² *Medichem S.A. v. Rolabo S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006).

⁷³ *Ex parte Senderoff*, Appeal No. 2003-0338, November 19, 2003, Ser. No. 08/486,451.

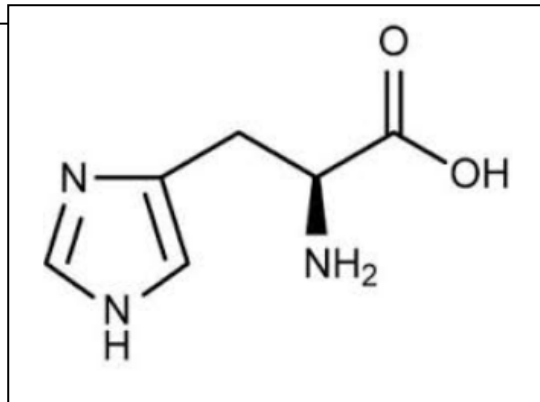
1. *The cited prior art reference.*

The claim was rejected in view of only one reference, Prestelski (U.S. Pat. No. 5,580,856). Prestelski was cited for its disclosures of thrombomodulin and histidine. Thrombomodulin is a protein that counteracts blood clotting.⁷⁴ The structure of thrombomodulin is shown below.⁷⁵ Thrombomodulin is a protein of 575 amino acids. The large picture is the amino acid sequence of thrombomodulin. The smaller picture is the amino acid, histidine.

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1 mlgvlvlgal alaglgfpap aepqpggsqc vehdcfalyp gpatflnasq icdglrghlm
61 tvrsvaadv islllndgg vgrrrlwigl qlppgcgdpk rlgplrgfqw vtgdnntsys
121 rwarldlnga plcgplcvav saaeatvpse piweeqqcev kadgflcefh fpatcrplav
181 epaaaaavs itygtpfaar gadfqalpvq ssaavaplgl qlmctappga vqghwareap
241 gawdcsveng gcehacnaip gaprcqcpag aalqadgrsc tasatqscnd lcehfvcvnp
301 dqpgsyscmc etgyrllaadq hrcevdvddci lespcpqrc vntqggfech cypnydlvdg
361 ecvepvdpcf ranceyqcqp lnqtsylcvc aegfapiphe phrcqmfcng tacpadcdpn
421 tqascepeg yilddgfict didecenggf csgvchnlpg tfecicgpds alarhigtcd
481 dsgkvdggds gsgpppspt pgstltpav glvhsgllig isiaslclvv allallchlr
541 kkqgaarakm eykcaapske vvlqhvrtter tpqrl

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2. *Prestelski's laundry list containing thrombopoietin.*

A view of the Prestelski reference reveals that the word “thrombopoietin” occurs only once and that it resides in the following list:

The present invention may suitably be applied to any protein subjected to freeze-drying or other forms of drying such as spray-drying and air drying. Exemplary proteins for use in the present invention include, but are not limited to, growth factors, hormones, enzymes, clotting factors, structural proteins, complement factors, antibodies and antigens; pesticides (e.g.,

⁷⁴ Wenzel, J. et. al., *Thrombomodulin--a new target for treating stroke at the crossroad of coagulation and inflammation*, 21 CURR. MED. CHEM. 2025, 2025 – 2034 (2014).

⁷⁵ Huma thrombomodulin, GenBank Acc. No. AAB59508.1.

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

herbicides and fungicides) and bacterial toxins. Specifically, such proteins include Erythropoietin; Granulocyte Colony Stimulating Factor; Granulocyte Macrophage Colony Stimulating Factor; Epidermal Growth Factor; Acidic Fibroblast Growth Factor; Basic Fibroblast Growth Factor; Keratinocyte Growth Factor; Interferon-alpha; Interferon-gamma; Interleukins (IL alpha, IL-1 beta, IL-2, IL-3, IL-4, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11); Factor VIII; Antithrombin III; Insulin; Tumor Necrosis Factor-alpha; Tumor Necrosis Factor-beta; Transforming Growth Factor-beta; Tissue Plasminogen Activator; Platelet-derived Growth Factor; Urokinase; Streptokinase; Peroxidase; RNA Polymerase; T7 DNA Polymerase; Taq DNA polymerase; Fibrinogen; Thrombin; Alcohol dehydrogenase; Alkaline phosphatase; Arginase; Ascorbate oxidase; Cholesterol esterase; Cholinesterase; Collagenase; DNase I; DNase II; Enterokinase; Glucose-6-phosphate dehydrogenase; Glucose oxidase; Glucose Isomerase; Glutamate dehydrogenase; Glyceraldehyde-3-phosphate dehydrogenase; Hexokinase; Lactate Dehydrogenase; Malate dehydrogenase; PEP carboxylase; RNase A; Soybean trypsin inhibitor; Urease; Xanthine oxidase; Superoxide dismutase; Fibronectin; Restriction Endonucleases; Reverse transcriptase; M-MuLV; Monoclonal Antibodies; OKT3; HA-1A; BMA 031; CAMPATH-1; anti-TAC; **Thrombopoietin**; subtilisins; Bacillus thuringiensis crystal protein and the like. (emphasis added) (see U.S. Patent No. 5,580,856 col. 6, l. 21 to col. 7, l. 4, of Prestelski)

Although thrombopoietin is a species, the list includes names that are genus names. Each of these genus names encompasses from about a dozen different species of proteins to about 100,000 different species of proteins. The genus names in the laundry list are, “growth factors, hormones, enzymes, clotting factors, structural proteins, complement factors, antibodies and antigens; pesticides (e.g., herbicides and fungicides) and bacterial toxins.”

For example, the genus word “clotting factors” encompasses all of these species: prothrombin, thrombin, von Willebrand factor, protein C, protein S, as well as blood clotting factors V, VII, VIII, IX, X, XI, XII, and XIII in their non-activated and activated forms.⁷⁶

3. Prestelski's laundry list that contains histidine.

Prestelski also discloses “histidine” in a laundry list that includes genus names and species names. This laundry list takes the form,

Exemplary osmolytes include, but are not limited to, amino acids (e.g., **histidine**, salts of histidine, glycine, salts of aspartic acid, salts of glutamic acid, salts of lysine, salts of arginine, serine, proline, alanine); polyhydric

⁷⁶ BRODY, T., NUTRITIONAL BIOCHEMISTRY, 2nd ed., Elsevier, Inc., New York, NY (1999); Brody, T. and Suttie, J.W., *Evidence for the glycoprotein nature of vitamin K-dependent carboxylase from rat liver*, 923 BIOCHIM. BIOPHYS. ACTA. 1, 1 – 7 (1987); Brody, T. and Suttie, J.W., *Glutamate carboxylase: assays, occurrence, and specificity*, METHODS ENZYMOL. 107, 552 – 563 (1984).

alcohols (e.g., sorbitol, inositol, mannitol, xylitol and glycerol); sugars (trehalose, lactose, sucrose, glucose, galactose, maltose, mannose and fructose) and methylamines (e.g., trimethylamine-N-oxide, N,N-dimethylglycine, aminobutyric acid, taurine, sarcosine, betaine or salts thereof).

See, U.S. Pat. No. 5,580,856 col. 4, l. 30 – 52, of Prestrelki.

4. *The Board's characterization of the Prestrelski laundry list.*

The opinion wrote,

With respect to the proteins, Prestrelski presents a **long laundry list of proteins**, of which thromboprotein is just one. There is nothing in the examples or the remainder of the reference that would lead one to the combination of thrombopoeitin and histidine. A broad disclosure of a genus comprising hundreds if not thousands of protein compositions does not render any particular species of composition that falls within the genus obvious. See *In re Jones*, 958 F.2d 347, 350 . . . (Fed. Cir. 1992); *In re Baird*, 16 F.3d 380, 382-83 . . . (Fed. Cir. 1994). (emphasis added)

5. *Board's statement that Prestrelski is silent on any reason to combine.*

As stated above, the Board's reasons for reversal included its statement that, "There is nothing in the examples or the remainder of the reference that would lead one to the combination of thrombopoeitin and histidine." For drafting a rebuttal argument against § 103-rejections, the Board's reasons for reversal can be used when the disclosure in the prior art takes one of the forms shown in the bullet points:

- a first claim element in a first laundry list and a second claim element in the same laundry list
- a first claim element in a first laundry list and a second claim element in a second laundry list
- a first claim element in a laundry list and a second claim element as an isolated entity (not in any laundry list)

The take-home lessons from *Ex parte Senderoff* also include the following:

- **Plurality of laundry lists in one reference.** The attorney or agent should review all of the claim elements, one by one, and determine how many of these are disclosed in the cited prior art references in a laundry list. If one or more claim elements is disclosed in a laundry list, and not also disclosed in one of the Examples and not also disclosed in one of the claims of the prior art patent, then the attorney or agent should consider drafting a laundry list-style rebuttal argument. If two of the claim elements are disclosed in a laundry list, then the attorney or agent should

consider drafting an argument making use of a multiplication, as illustrated by *Ex parte Zerbe*.⁷⁷

- **Laundry lists that include one or more genus words.** If the prior art's laundry list includes one or more genus words, then the attorney or agent should consider arguing that each genus word effectively increases the number of species that are encompassed by the laundry list by, for example, a dozen, about 100, about 1,000, about 10,000, or about a million chemicals.
- **Prior art's disclosure of a genus word cannot render obvious a claim's requirement for a species.** In the situation where the claim element under review is a species, and where the examiner utilizes the prior art's disclosure of a genus word as allegedly rendering obvious this species, then the attorney or agent should consider drafting this argument. The argument is that under *In re Baird*,⁷⁸ a genus cannot render obvious a species.

H. *Ex parte Zerbe*.⁷⁹

This opinion discloses the situation where a claim requires two different chemicals, and where one of the cited prior art references contains a laundry list that contains both of these chemicals, arguments making use of arithmetic can expand the effective length of the prior art's laundry list by many thousand-fold. The arithmetic that increasing the effective length of the laundry list increases the persuasiveness of the rebuttal argument.

*Ex parte Zerbe*⁸⁰ concerned water-soluble films for taking by mouth, such as films flavored with menthol. The claim required hydroxypropyl cellulose, modified starch, a surfactant, and a flavoring. The claim also required that the film disintegrate rapidly in water. The claim read:

Claim 1. A breath freshening comestible comprising:
a film containing at least one hydroxypropyl cellulose;
at least one modified starch; at least one surfactant; and
at least one flavor ingredient, the amounts of the **hydroxypropyl cellulose, modified starch**, surfactant, flavor ingredien⁸¹ (emphasis added).

The cited references describe modified starch used in food products, and distinguish modified starch from starch that is not modified.⁸² The § 103-rejection was

⁷⁷ *Ex parte Zerbe*, Appeal No. 2006-0442, June 6, 2006, Ser. No. 10/123,142.

⁷⁸ *In re Baird*, 16 F.3d 380, 382 – 83 (Fed. Cir. 1994).

⁷⁹ *Ex parte Zerbe*, Appeal No. 2006-0442, June 6, 2006, Ser. No. 10/123,142.

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² Ioffe, M.L. et. al., *Influence of modified starches on the stability of beef jerky analogs during storage*, 67 J. FOOD SCI. 682 – 687 (2002); Zasytkin, D. and Porzio, M., *Glass encapsulation of flavours with chemically modified starch blends*, 21 J. MICROENCAPSUL. 385 – 397 (2004); Bosscher, D. et. al.,

based on combining Zerbe US 5,948,430 with Leung US 6,596,298. The inventor provided the following five different rebuttal arguments (i-v), shown in the Board's opinion and in the Appeal Brief (see below).⁸³

1. Disclosure in prior art takes the form of a long list.

The Leung reference disclosure of the claim elements hydroxypropyl cellulose and modified starch, occurred in a lengthy list of 33 different chemicals. The Leung list is reproduced here. Although the word “modified starch” does not occur in the Leung reference, it is the case that Leung does name several types of modified starches. This list reads:

The film-forming agent used in the films according to the present invention can be selected from the group consisting of pullulan, hydroxypropylmethyl cellulose, hydroxyethyl cellulose, **hydroxypropyl cellulose**, polyvinyl pyrrolidone, carboxymethyl cellulose, polyvinyl alcohol, sodium alginate, polyethylene glycol, xanthan gum, tragacanth gum, guar gum, acacia gum, arabic gum, polyacrylic acid, methylmethacrylate copolymer, carboxyvinyl polymer, amylose, high amylose starch, **hydroxypropylated high amylose starch**, dextrin, pectin, chitin, chitosan, levan, elsinan, collagen, gelatin, zein, gluten, soy protein isolate, whey protein isolate, casein and mixtures thereof. A preferred film former is pullulan, in amounts ranging from about 0.01 to about 99 wt %, preferably about 30 to about 80 wt %, more preferably from about 45 to about 70 wt % of the film and even more preferably from about 60 to about 65 wt % of the film. (emphasis added) (see Leung, U.S. Patent No. 6,596,298 col. 4 l. 64 to col. 5 l. 8).

The **bold font** in the laundry list highlights the chemicals that corresponded to two of the chemicals in the claim under review. Regarding the laundry list, the inventor pointed out that the disclosed type of “modified starch” was hydroxypropylated high amylose starch.⁸⁴ What identifies this as a modified starch, and not as a naturally-occurring starch, is the term “hydroxypropylated.” The term “hydroxypropylated” means that the starch contains a hydroxypropyl group and that this group was chemically attached to the starch by way of a laboratory procedure involving hydroxypropylation.

The excerpt from the inventor's argument stating that two claim elements under review resided in Leung's laundry list read, “only a relative few would include the specifically listed modified starch (hydroxypropylated high amylose starch) . . . and hydroxypropyl cellulose.”⁸⁵

Availabilities of calcium, iron, and zinc from dairy infant formulas is affected by soluble dietary fibers and modified starch fractions, 19 J. NUTRITION 641 – 645 (2003).

⁸³ Appeal Brief, Ser. No. 10/123,142 (June 6, 2005).

⁸⁴ Appeal Brief, Ser. No. 10/123,142 at 7 (June 6, 2005).

⁸⁵ *Id.*

2. Prior art discloses a preference for a chemical that is not required by the claim.

The Leung patent repeatedly disclosed that an ingredient called “pullulan” is a preferred ingredient. The claim under review did not mention pullulan and did not require pullulan. The Appeal Brief reveals the inventor’s argument that,

the Leung patent lists 33 known food grade film-foaming agents including two film-forming polymers meeting the claim requirements (hydroxypropyl cellulose and a modified starch). This **lengthy list** of possible ingredients, especially when considered in view of the preference for pullulan and the 39 examples (containing pullulan or polyvinyl pyrrolidone) . . . is merely an invitation to experiment with the use of film-forming agents other than the **preferred** pullulan.⁸⁶ (emphasis added)

Please note that the word “pullulan” occurred not only in the laundry list, but also in the EXAMPLES section in a prior art patent. The existence of “pullulan” in the EXAMPLES section of Leung rightfully supports the argument that “pullulan” was preferred by the Leung reference.

Regarding preference, the Leung reference recited that, “the **preferred** film-forming ingredient, pullulan, forms a thin layer” (Leung, col. 4 l. 12 – 13), “A **preferred** film polymer is pullulan in amounts ranging from about 0.01% to about 99 %” (emphasis added) (see Leung, col. 5 l. 8 – 10), and “This film **preferably** comprises pullulan, thymol, methyl silicate, eucalyptol, and menthol” (Leung, col. 3 l. 46 – 47). The excerpt from the Board’s opinion, which concerns this preference for pullulan, is as follows.

The Board agreed with the inventor, writing,

Appellants argue that Leung’s lengthy list of possible ingredients, especially when considered in view of the **preference** for pullulan and the . . . examples . . . containing pullulan . . . , none of which contains either hydroxypropyl cellulose or a modified starch, is merely an invitation to experiment with the use of film-forming agents other than the **preferred** pullulan. (emphasis added)

3. The ingredients listed in the claim are not disclosed in any of the embodiments disclosed in the prior art’s EXAMPLES section.

Although the claim under review required “hydroxypropyl cellulose” and “modified starch,” and although both of these compounds were disclosed in Leung’s lengthy list, it was not the case that either of these chemicals appeared in the EXAMPLES section of the Leung patent. This means that the Leung patent was silent regarding any preference for “hydroxypropyl cellulose” or for “modified starch.”

If one or both of these chemicals had been disclosed in the EXAMPLES section or, alternatively in one of Leung’s claims, this could have served as a basis to argue that the Leung patent showed a preference for that chemical. But the absence of either of

⁸⁶ Appeal Brief, Ser. No. 10/123,142 (June 6, 2005); 37 C.F.R. § 41.37.

these chemicals in the EXAMPLES section or in the claim set supported the argument that the Leung reference failed to show any preference for “hydroxypropyl cellulose” or for “modified starch.”

The same sort of take-home lesson occurs in *Ex parte Pridgen*,⁸⁷ as described at a later point in this article, which demonstrates that residence of a structure, chemical, or composition in the claim of the cited prior art reference constitutes a disclosure that this same structure, chemical, or composition is preferred.

4. Unrelatedness of a first chemical in the list to a second chemical in the same list.

In Leung’s list, the terms “hydroxypropyl cellulose” and “hydroxypropylated high amylose starch” (the modified starch) were listed as independent ingredients and there was not any indication that these were to be used together.⁸⁸ To this end, the inventor argued that, “There are 33 listed film-forming polymers. None of these 33 possibilities would meet the claim requirement for **both** hydroxypropyl cellulose and a modified starch.”⁸⁹ (emphasis in original)

5. Calculation made possible by the fact that the prior art’s list disclosed two different chemicals that are required by the claim.

The lengthy list in the Leung prior art reference contained 33 different chemicals, where two of these chemicals corresponded to two of the chemicals required by the claim. The inventor calculated the number of possible combination of two chemicals, which could be created by picking and choosing from the list of 33 different chemicals. The calculation was: $[32 \text{ times } 33]/[2]$, giving the answer of 528 different combinations of two different chemicals. The calculation effectively expanded the length of the list from only 33 different choices to 528 different choices, thus dramatically reducing the obviousness of the choice of “hydroxypropyl cellulose” in combination with “modified starch.”⁹⁰

Ex parte Zerbe provides the following take-home lessons:

- If possible, the attorney or agent should argue that one or more claim elements resided in a laundry list in a cited prior art reference.
- If possible, the attorney or agent should argue that the prior art reference discloses a preference for a chemical that is not required by the claim.
- Where the attorney or agent finds a need to argue that the prior art reference shows a preference for a chemical other than any chemical required by the claim under review, this rebuttal argument can establish that the prior art shows this preference where the chemical resides in the EXAMPLES section of the prior art reference, or that the chemical resides

⁸⁷ *Ex parte Pridgen*, Appeal No. 2016-007679, Ser. No. 14/459,905 (Mar. 17, 2017).

⁸⁸ Appeal Brief, Ser. No. 10/123,142, 7 (June 6, 2005).

⁸⁹ *Id.*

⁹⁰ *Id.*

in the claim set of the prior art reference (if the reference is a patent), or if the prior art reference expressly states that the chemical is "preferred."

- The attorney or agent should consider reviewing the cited prior art reference, and drafting the argument that ingredients listed in the claim are not disclosed as being "preferred" by the prior art reference, and are not disclosed in the EXAMPLES section or in the claim set of the prior art reference.
- This concerns two chemicals disclosed by the prior art's laundry list, where these two chemicals correspond to two of the chemicals required by the claim. If the two chemicals in the laundry list are disclosed as being unrelated and distinct entities, then the attorney or agent should consider stating that they are disclosed in the laundry list as being unrelated and distinct entities. For example, a laundry list's disclosure of two chemicals as being unrelated might take the form, "carboxymethyl cellulose, polyvinyl alcohol, sodium alginate, polyethylene glycol, xanthan gum, tragacanth gum, guar gum, acacia gum." But in contrast, a laundry list's disclosure of two chemicals that are related and not distinct might take the form, "carboxymethyl cellulose, polyvinyl alcohol, sodium alginate, polyethylene glycol, xanthan gum, tragacanth gum, and a mixture of guar gum and acacia gum." It is readily apparent that the recitation of "a mixture of guar gum and acacia gum" establishes relatedness.
- Calculation made possible by the fact that the prior art's list discloses two different chemicals that are required by the claim. The calculation increases the effective size of the laundry list, thereby increasing the persuasiveness of the rebuttal argument.

I. Conclusions.

This concerns PTAB cases where the inventor had drafted a laundry list-style argument to rebut an obviousness rejection, and where the argument succeeded in persuading the Board to reverse. The take-home lessons are revealed by the bullet points, as shown above at the end of the account of each PTAB case.

V. CATEGORY OF ANTI-OBVIOUSNESS CASE LAW RELATING TO LAUNDRY LISTS (BOARD AFFIRMED THE REJECTION)

A. Introduction.

This discloses essentially all of the PTAB cases that contained the term "laundry list" or "lengthy list" where the Board affirmed the obviousness rejection, and where the opinion cited *Merck & Co., v. Biocraft Labs., Inc.*⁹¹ The opinions are listed below, with reasons why the Board refused the laundry list-based argument and affirmed the rejection.

⁹¹ *Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804 (Fed. Cir. 1989).

*B. Ex parte Ellington.*⁹²

The facts of the case illustrate the situation where the Board's affirmation of the § 103-rejection was based on the fact the prior art discloses that the chemicals in the prior art reference have a "common purpose" with the inventor's claims. The Federal Circuit has held that obviousness is enhanced, in this situation, as is evident from *Merck & Co., v. Biocraft Labs., Inc.*,⁹³ which provided the rule that, "That the '813 patent discloses a multitude of effective combinations does not render any particular formulation less obvious. This is especially true because the claimed composition is **used for the identical purpose** taught by the prior art."⁹⁴ (emphasis added)

The claim was to a hair conditioner. The claim read:

Claim 1. A process for treating a keratinous substrate comprising contacting the keratinous substrate with a composition containing:

- a) at least one quaternary ammonium polymer;
- b) at least one fatty quaternary agent;
- c) at least one nonionic surfactant . . . wherein the composition is substantially anhydrous.⁹⁵

The prior art reference cited in the § 103-rejection against Claim 1 was Calello (U.S. Patent No. 6,277,358). The examiner observed that Calello disclosed all of these claim elements: (1) keratinous substrate (hair); (2) quaternary ammonium polymer; (3) fatty quaternary agent; (4) nonionic surfactant; and (5) anhydrous.⁹⁶

The inventor argued that the claim was not obvious, because Calello disclosed various hair conditioners in a laundry list. The Board agreed with the inventor's characterization of the Calello reference, writing, "Appellants characterize Calello's disclosure of optional hair conditioning agents as a 'laundry list.' Calello did provide detailed lists of conditioners for use."⁹⁷ A view of the Calello reference reveals that it does, in fact, contain a huge laundry list that encompasses thousands of different chemicals. The laundry list is shown below, in part. Shown in bold are two of the chemicals that are required by the claim (quaternary ammonium polymer; nonionic surfactant). See Calello, U.S. Patent No. 6,277,358 col. 16 l. 60 to col. 20 l. 50; laundry list.

Hair Conditioners. In addition to the ranges of cross-linkable polymer, cross-linking agent, and blocking agent mentioned above, hair conditioning agents in accordance with the invention generally comprise 0.1-20% cationic conditioning agent, 0.1-30% fatty alcohol, 0.001-10% nonionic surfactant, and 5-95% water. Suitable cationic conditioning agents are cationic polymers, **quaternary ammonium salts or the salts of fatty**

⁹² *Ex parte Ellington*, Appeal No. 2012-002445, Ser. No. 11/939,012 (Jan. 16, 2013).

⁹³ *Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989).

⁹⁴ *Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804 (Fed. Cir. 1989).

⁹⁵ *Ex parte Ellington*, Appeal No. 2012-002445, Ser. No. 11/939,012 (Jan. 16, 2013).

⁹⁶ *Id.* at Examiner's Answer (Sept. 16, 2011).

⁹⁷ *Ex parte Ellington*.

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

amines . . . Particularly preferred is where the cationic conditioning agent is selected from trimethylsilylamodimethicone, cetrimonium chloride, behentrimonium chloride, di(behenamidopropyl dimethyl amine) dimer dilinoleate, di(linoleamidopropyl dimethyl amine) dimer linoleate, or mixtures thereof . . . Hair conditioning compositions may contain, preferably 0.5-10%, more preferably 1-8% of a fatty alcohol having the formula RCH_2OH wherein R is a straight or branched chain saturated or unsaturated alkyl having at least about 6 to 30 carbon atoms. Examples of fatty alcohols suitable for use include behenyl alcohol, C_{9-15} alcohols, caprylic alcohol, cetearyl alcohol, cetyl alcohol, coconut alcohol, decyl alcohol, lauryl alcohol, cetyl alcohol, myristyl alcohol, oleyl alcohol, palm alcohol, stearyl alcohol, tallow alcohol, and the like. The preferred compositions of the invention include a mixture of cetyl and stearyl alcohols . . . Hair conditioning compositions also generally contain about 0.001-10%, preferably 0.01-8%, more preferably 0.01-5% of a nonionic surfactant or emulsifier. Suitable **nonionic surfactants** include alkoxyated alcohols, or ethers, formed by the reaction of an alcohol with an alkylene oxide, usually ethylene or propylene oxide. Preferably the alcohol is a fatty alcohol having 6 to 30 carbon atoms, and a straight or branched, saturated or unsaturated carbon chain.

The inventor reasonably argued that, “Calello contains no disclosure . . . which would motivate a routiner to want to choose [from Calello reference] . . . a quaternary ammonium polymer and a fatty quaternary and combine these with a nonionic surfactant.” Also, the inventor argued that, “it is impermissible within the framework of 35 U.S.C. § 103 to pick and choose from any one reference only so much of it as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests.”⁹⁸

Unfortunately for the inventor, the Board applied the “Identical Purpose Doctrine” that is set forth by *Merck & Co., v. Biocraft Labs., Inc.*,⁹⁹ “That the ‘813 patent discloses a multitude of effective combinations does not render any particular formulation less obvious. This is especially true because the claimed composition is **used for the identical purpose** taught by the prior art.” (emphasis added) To this end, the Board wrote:

Appellants characterize Calello’s disclosure of optional hair conditioning agents as a “laundry list.” Calello did provide detailed lists of conditioners for use. The fact that Calello explicitly provided many choices does not make following Calello’s suggestions any less obvious. See *Merck*, 874 F.2d at 807. If “laundry list” is intended to mean an aggregation of random items, it is unpersuasive because it improperly discounts Calello’s explicit suggestions that (i) **hair conditioning agents are desirable** in a composition used as a hair conditioner.¹⁰⁰ (emphasis added)

The take-home lessons from *Ex parte Ellington* are:

⁹⁸ Appeal Brief, Ser. No. 11/939,012 (June 17, 2011).

⁹⁹ *Biocraft Labs., Inc.*, 874 F.2d at 807.

¹⁰⁰ *Ex parte Ellington*.

- Where the attorney or agent contemplates drafting a laundry list-style rebuttal argument, the argument should state (if possible) that the structures, chemicals, or compositions disclosed in the prior art's laundry list are for a purpose that is not the same as the purpose as the inventor's claims.
- If the attorney or agent is contemplating using a "picking and choosing" rebuttal argument (as did the attorney in *Ex parte Ellington*), the argument should contemplate drafting an argument (if possible) that the two references are in non-analogous arts,¹⁰¹ or that the combination renders the structure, chemical, or composition of the second reference unsatisfactory for its intended purpose,¹⁰² or that the combination results in redundant advantages, or that the advantage provided by one reference is not needed by and not relevant to the second reference. Unfortunately for the inventor, these types of rebuttal strategies were not available, because the § 103-rejection was based on only one reference (Calello), rather than being based on any combination of references.

C. *Ex parte Jain*.¹⁰³

Ex parte Jain is distinguished by the Board's contemplation of the small size of the laundry list, and by the Board's quotation from *Pfizer, Inc. v. Apotex, Inc.*,¹⁰⁴ which provides guidance on the size of laundry lists. The obviousness rejection was based on combining the Waldeck reference with the Sims reference. The following provides the relevant excerpts from *Ex parte Jain*. The first excerpt is the from the inventor's argument that the Sims reference discloses a laundry list of twenty-three chemicals. The second excerpt is from the Board's statement that a laundry list of only twenty-three chemicals does not constitute a laundry list, where the Board cited *Pfizer, Inc. v. Apotex, Inc.*, *supra*, for its opinion that even a list of 53 chemicals is too small to be characterized as a laundry list.

The relevant laundry list, in its totality, was:

For oral administration the active components may be admixed with a pharmaceutically acceptable **diluent** such as lactose, starch, sucrose, cellulose, magnesium stearate, dicalcium phosphate, calcium sulfate, mannitol, sodium bicarbonate, potassium bicarbonate, citric acid, glycine, sodium citrate, pectin, sodium tartrate, alginic acid, calcium stearate, bismuth subnitrate, bismuth subgallate, bismuth subcarbonate, bismuth subsalicylate, hydroxypropyl methylcellulose, and in a liquid composition, ethyl alcohol. (Sims, U.S. Patent No. 5,288,507 col. 5 l. 5 – 12).

The inventor's argument was:

¹⁰¹ *In re Oetiker*, 977 F.2d 1443 (Fed. Cir. 1992).

¹⁰² *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984).

¹⁰³ *Ex parte Jain*, Appeal No. 2011-013081, Ser. No. 11/311,220 (Nov. 13, 2012).

¹⁰⁴ *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348 (Fed. Cir. 2007).

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Appellants argue that “Sims discloses a laundry list of possible pharmaceutically acceptable diluents—twenty-three acceptable diluents in all,” and contend “one of ordinary skill in the art could just as easily pick one of the other equally preferable diluents disclosed in Sims.”

Unfortunately for the inventor, the Board did not find that this laundry list rendered the diluent of the claim as being non-obvious. To the contrary, the Board concluded that this type of laundry list rendered the diluent as obvious, writing:

This only means that at least twenty-three choices of diluent would have been obvious. Appellants provide no evidence that any one of those twenty-three would have had some unexpected result. *See Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1363 (Fed. Cir. 2007) (characterizing genus of 53 FDA-approved anions as “small,” and finding that “one of ordinary skill in the art would have favorably considered benzene sulphonate because of its known acid strength, solubility, and other known chemical characteristics”). As in the *Pfizer* case, so also in this case: one of ordinary skill in the art would have considered calcium salts, sodium bicarbonate, and docusate sodium favorably because Waldeck or Sims recommended them.

*D. Ex parte Mantelle.*¹⁰⁵

In *Ex parte Mantelle* concerned a composition for treating attention deficit disorder and hyperactivity. The composition was a skin lotion containing methylphenidate. The cited references demonstrate that methylphenidate is used for treating attention deficit disorder and hyperactivity.^{106, 107} The claim language included the recitation, “methylphenidate in an adhesive carrier . . . and non-functional . . . **acrylic polymers** having no more than . . . 5 wt % of acid functional monomers.”¹⁰⁸ (emphasis added)

1. The prior art references.

The cited references included Quan (U.S. Pat. No. 5,601,839), which was cited for its disclosure of acrylic adhesives, and Miranda (U.S. Pat. No. 5,656,286), which was cited for its disclosure of methylphenidate. The opinion concerned two separate lists in the Quan reference. One of the lists was a long list, and it occurred at Column 6, line 52 to Column 7, line 4 of the Quan reference. The other list was a short list, and it occurred in Claim 12 of the Quan reference.

¹⁰⁵ *Ex parte Mantelle*, Appeal No. 2015-005868, Ser. No. 14/192,260 (June 9, 2017).

¹⁰⁶ Pliszka, S.R. et. al., *Efficacy and safety of HLD200, delayed-release and extended-release methylphenidate, in children with attention-deficit/hyperactivity disorder*, 27 J. CHILD ADOLESC. PSYCHOPHARMACOL. 474 – 482 (2017).

¹⁰⁷ Newcorn, J.H. et. al., *Randomized, double-blind, placebo-controlled acute comparator trials of lisdexamfetamine and extended-release methylphenidate in adolescents with attention-deficit/hyperactivity disorder*, 31 CNS DRUGS. 999 – 1014 (2017).

¹⁰⁸ *Ex parte Mantelle*.

An unusual aspect of the *Ex parte Mantelle* opinion, is that the Board referred to a seemingly innocuous disclosure in one of the prior art references, which read, “those skilled in the art can readily . . . select suitable combinations of polymers and drugs for a particular application.”¹⁰⁹ The danger of this particular disclosure is its ability to compel affirmation of the § 103-rejection. This danger is described below.

2. *The long list.*

The inventor referred to Quan’s long list, writing, “Quan teaches that a broad range of polymers can be used.”¹¹⁰ Referring to Quan’s long list, the inventor argued, “Thus, while Quan’s laundry list may include ‘**polyacrylates**’ that might read on the claimed **acrylic polymers**, the reference as a whole provides no teaching, suggestion, guidance . . . to select . . . the claimed acrylic polymers when formulating methylphenidate in particular.”¹¹¹ The inventor referred to Quan’s laundry list, which occurred in col. 6, line 52 to col. 7, line 4 of the Quan reference.¹¹² This list is reproduced below:

Suitable polymers that can be used in the biocompatible polymeric layer of the matrix patch include pressure-sensitive adhesives . . . [s]uitable adhesives for use in the matrix patch include **acrylic adhesives** including cross-linked and uncross-linked acrylic copolymers; vinyl acetate adhesives; natural and synthetic rubbers including polyisobutylenes, neoprenes, polybutadienes, and polyisoprenes; ethylenevinylacetate copolymers; polysiloxanes; polyacrylates; polyurethanes; plasticized weight polyether block amide copolymers, and plasticized styrene-rubber block copolymers. Preferred contact adhesives for use in the matrix patch herein are **acrylic adhesives**, such as TSR (Sekisui Chemical Co., Osaka, Japan) and DuroTak^{RT} adhesives (National Starch & Chemical Co., Bridgewater, N.J.), and polyisobutylene adhesives such as ARcareTM MA-24 (Adhesives Research, Glen Rock, Pa.). (emphasis added) (see Quan, U.S. Patent No. 5,601,839 col. 6 l. 52 to col. 7 l. 4)

3. *The applicable case law.*

The *Ex parte Mantelle* opinion refers to two contrasting rules of law, each of which is described in *KSR*. The first rule of law, which concerns the TSM-test, was invoked by the inventor. The relevant excerpt is from *KSR* at 1731, and it is:

The TSM test captures a helpful insight: A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art. Although common sense directs

¹⁰⁹ *Id.*

¹¹⁰ Brief on Appeal, Ser. No. 14/192,260, 10 (Jan. 28, 2015).

¹¹¹ *Id.*

¹¹² *Id.* at 9.

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

caution as to a patent application claiming as innovation the combination of two known devices according to their established functions, **it can be important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements** as the new invention does. (emphasis added) (*KSR* at 1731)

The contrasting rule of law recited in *KSR*, which was cited by the Board in its affirmation of the rejection, was that, “The **combination of familiar elements according to known methods** is likely to be obvious when it does no more than yield predictable results.” (*KSR* at 1739) (emphasis added)

That the inventor invoked the TSM-test is shown by the following. The inventor’s rebuttal argument, as reiterated by the Board was that:

Appellants contend, while Quan’s **laundry list** may include ‘polyacrylates’ that might read on the claimed acrylic polymers, the reference as a whole provides no teaching, suggestion, guidance or reason to select and use the claimed acrylic polymers when formulating methylphenidate in particular.¹¹³ (emphasis added)

4. The Board’s affirmation of the § 103-rejection.

The Board affirmed the rejection. Unfortunately for the inventor, in imposing the rejection, the examiner referred to a small list in the Quan reference. This list resided in Claim 12 of the Quan patent. Quan’s Claim 12 recited, “a biocompatible polymer layer, wherein said biocompatible polymer is an adhesive selected from the group consisting of acrylics, vinyl acetates, natural and synthetic rubbers, ethylenevinylacetate copolymers, polysiloxanes, **polyacrylates**, polyurethanes, plasticized polyether block amide copolymers, plasticized styrene-rubber block copolymers, and mixtures thereof” (see Quan, at Claim 12) (emphasis added). This list contains about ten different chemicals.

Because of the existence of this small list, it can be seen that the inventor’s laundry list-style argument based on the large list was doomed to failure. Also unfortunately for the inventor, in affirming the rejection, the Board referred to Quan’s small list, writing, “Moreover, the examiner contends . . . one of ten embodiments in Quan is the embodiment . . . [with] polyacrylates.”

The Board further based its affirmation of the § 103-rejection on a seemingly innocuous statement in one of the prior art references, regarding the level of the skilled artisan. The Board wrote, “those skilled in the art can readily . . . select suitable combinations of polymers and drugs for a particular application . . . [which] therefore evidences that the ordinary artisan, aware of known polyacrylate adhesives, had the ability to select suitable polymers from the finite number of predictable alternatives.

This disclosure did not occur in the Quan reference, instead it occurred in the Miranda reference -- but which reference contained this statement did not matter to the Board. The Board referred to Miranda’s disclosure that, “**those skilled in the art can readily . . . select suitable** combinations of polymers and drugs for a particular

¹¹³ *Ex parte* Mantelle.

application.” This statement occurs in *Miranda*, U.S. Patent No. 5,656,286 col. 9 l. 25 – 26. (emphasis added)

The Board affirmed the § 103-rejection, writing, “We do not find the ‘laundry list’ argument persuasive. Simply because Quan and *Miranda* ‘discloses a multitude of effective combinations does not render any particular formulation less obvious.’” *Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989). In affirming the § 103-rejection, the Board quoted from *KSR*’s holding that, “The **combination of familiar elements according to known methods** is likely to be obvious when it does no more than yield predictable results.” (*KSR* at 1739) (emphasis added)

The take-home lessons from the *Ex parte Montelle* opinion are as follows:

- **Need to see if prior art reference discloses the chemical of interest in both large and small lists.** Before drafting a rebuttal argument based on the prior art’s disclosure of a chemical (or other substance) in a lengthy list, and before invoking the concept “laundry list” in the rebuttal, the attorney or agent should make certain that the same prior art reference does not disclose the same chemical in a short list
- **Need to see if the prior art reference discloses the chemical of interest as being preferred.** Before drafting a rebuttal argument, the attorney or agent should also make sure that the prior art reference does not disclose the chemical as being “preferred.” A prior art reference can disclose a chemical (or other substance) as being “preferred” by way of the word “preferred,” by including in an example, or by including in one of the claims.

*E. Ex parte Mielke.*¹¹⁴

The invention was a cosmetic, and the claim required that the cosmetic contain “soy extract that comprises one or more isoflavonoids.” The claim read, “Claim 30. A dermatological or cosmetic . . . emulsion, wherein the emulsion comprises one or more bioquinones and a **soy extract that comprises one or more isoflavonoids.**”¹¹⁵ (emphasis added)

The cited prior art references were Gervasio, WIPO Patent App. No. WO2004/000242 filed June 25, 2002) and Allec, U.S. Patent App. No. 2002/0064540 (filed July 13, 2000).

In drafting the rebuttal argument, the inventor focused on the Gervasio reference and asserted that the § 103-rejection should be reversed because Gervasio’s disclosure of the **soy extract** took the form of disclosure buried in a huge laundry list. The inventor characterized Gervasio’s laundry list as, “Further, the ‘soya extracts’ mentioned in Gervasio . . . are buried in the following laundry list . . . in the passage from page 8, line 4, to page 9, line 14.”¹¹⁶ A view of this excerpt of Gervasio reveals

¹¹⁴ *Ex parte Mielke*.

¹¹⁵ U.S. Patent App. No. 2006/0002885A1 (filed Sept. 8, 2004).

¹¹⁶ Appeal Brief, Ser. No. 10/935,246, 7 (Sept. 26, 2014) (under 37 C.F.R. §41.37 (2018)).

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that it indeed is a huge laundry list, extending extends from page 8 (line 2) all the way to page 15 (line 17).¹¹⁷ Gervasio's laundry list is disclosed, in part, below:

clover extracts, coumestrol, daidzein, dang gui extract, darutoside, debromo laurinterol, 1-decanoyl-glycero-phosphonic acid, dehydrodicreoso . . . 7-hydroxylated sterols, hydroxyethyl isostearyloxy isopropanolamine, hydroxy- tetra methyl piperidinyloxy, hypotaurine, ibukijakou extract, isoflavones . . . kinetin, kohki extract, lectins, lichochalcone LF15 (available from Maruzen), licorice extracts, lignan, lumisterol, lupenes, luteolin, lysophosphitidic acid, naringenin, neotigogenin, o- desmethylangoiensin, oat beta glucan, oleanolic acid, placenta extracts, pratensein, pregnenolone, pregnenolone acetate, pregnenolone succinate, **soya extracts**, spleen extracts, tachysterol, tigogenin, vitex extract, yam extract, yamogenin, zeatin, hyaluronic acid. (emphasis added) (see Gervasio, col. 8 l. 2 to col. 15 l. 17)

The Board complained that, "We are not persuaded by Appellants' contention that Gervasio encompasses thousands, if not millions . . . of different topical cosmetic compositions and that soy extracts mentioned in Gervasio are buried in a laundry list of . . . anti-ageing agents." Unfortunately for the inventor, the Board observed that the Gervasio reference disclosed a type of soy isoflavone in a much smaller list, where this list took the form of examples in the EXAMPLES section of the Specification (Examples 2 and 11). To this end, the Board wrote that, "although soy extracts are mentioned in a laundry list by Gervasio, the use of **genistein**, which is a . . . soy isoflavone, is clearly disclosed and exemplified by Gervasio . . . [in] Examples 2 and 11." Gervasio's Example 11 is reproduced below:

Example 11 – Hand and Body Moisturizer	
Ingredients	% by weight
Carbomer	1.5
Coenzyme Q.sub.10	0.2
Cyclomethicone/dimethiconol	3.0
Genistein	0.2
Glycerin	1.8
Glyceryl monostearate	11.0
Glycolic acid	0.2
Hyaluronic acid	8.0
Mineral oil	12.5
Octyl salicylate	2.5
Peg-75	1.0
Polyglyceryl-4-isostearate	1.5
Propylene glycol	2.0
Squalene	1.5
Total additives (perfume, preservative, stabilisation)	0.8
Water	qsf 100

¹¹⁷ Appeal Brief, Ser. No. 935,246 (Sept. 26, 2014).

The Board cited *Merck & Co., Inc. v. Biocraft Labs, supra*, and affirmed the rejection. The take-home lessons are as follows:

- **Need to scrutinize the cited reference for large and small lists that disclose the claim element of interest.** In contemplating drafting a rebuttal argument that invokes a laundry list-style of one of the claim elements in a cited prior art reference, the attorney or agent needs to scrutinize the prior art reference to see if it also discloses that same structure, chemical, or compound in the form of a very small list in the same prior art reference, or in one of the examples of the reference, or in one of the claims of the same prior art reference (if the reference is a patent). If the same structure, chemical, or compound is found in a very small list, in a claim, or in one of the examples, the attorney or agent should refrain from expecting that the laundry list argument will succeed.
- **Need to scrutinize the prior art reference for disclosures of species of the claim element of interest, in the situation where the claim element recites a genus.** In *Ex parte Mielke*, the claim element under review was, “soy extract that comprises one or more isoflavonoids.” The term “isoflavonoids” is the name of a genus of chemicals. In drafting the rebuttal argument, the inventor failed to take note of the fact that the prior art reference disclosed a species of isoflavonoid (genistein), and failed to take note of the fact that genistein was disclosed, not in any laundry list, but in one of the working examples. Thus, the take-home lesson is that, in drafting a rebuttal argument, the attorney or agent needs to take into account whether the claim recites any genus terms that refer to a structure, chemical, or compound, and then scrutinize whether the cited prior art reference discloses any species that are encompassed by this genus. The cited reference demonstrates that genistein is a type of isoflavonoid.¹¹⁸

F. *Ex parte Misner*¹¹⁹

Ex parte Misner shows the situation where the Board affirmed the § 103-rejection based on two cases. The Board relied on *Merck & Co., Inc. v. Biocraft Labs, supra*, for its teaching that, “the [prior art] patent discloses a multitude of effective combinations does not render any particular formulation less obvious.” Also, the Board relied on *KSR Int’l. Co. v. Teleflex, Inc.*,¹²⁰ for its teaching that, “when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.”

Ex parte Misner concerned a claim to an antiperspirant stick made of an antiperspirant, palm kernel oil, and a gellant. The § 103-rejection was based on

¹¹⁸ Danciu C et al (2017) Main isoflavones found in dietary sources as natural anti-inflammatory agents. *Curr. Drug Targets*. doi: 10.2174/1389450118666171109150731.

¹¹⁹ *Ex parte Misner*, Appeal No. 2015-004709, December 14, 2016, Ser. No. 12/671,715.

¹²⁰ *KSR Int’l. Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007).

combining four prior art references, including Dayan, U.S. Patent App. No. 2008/0193393. The Board reiterated the inventor's argument that, "palm kernel oil is one member of a laundry list of oils in Dayan and . . . there is no disclosure or suggestion to select palm kernel oil from this list . . . too much picking and choosing is needed."¹²¹

A view of the Dayan reference reveals that its disclosure of "palm kernel oil" does, in fact, take place in a laundry list of over 60 oils. See Dayan at ¶ 0037, reproduced below. Moreover, Dayan's laundry list can be seen to be open-ended, in view of the fact that this list states that, "Additional oils are listed in the CFTA Handbook" and further in view of the statements, "The identity of the oil is not limited" and "and mixtures thereof." Dayan's ¶ 0037 reads:

[0037] The identity of the oil is not limited. Examples of useful oils include, but are not limited to, rice bran oil, lanolin oil, linseed oil, coconut oil, olive oil, menhaden oil, castor oil, soybean oil, tall oil, rapeseed oil, palm oil, neatsfoot oil, eucalyptus oil, peppermint oil, rose oil, clove oil, lemon oil, pine oil, orange oil, almond oil, apricot kernel oil, avocado oil, chaulmoogra oil, cherry pit oil, cocoa butter, cod liver oil, corn oil, cottonseed oil, egg oil, ethiodized oil, grape seed oil, hazel nut oil, hybrid safflower oil, hydrogenated castor oil, hydrogenated coconut oil, hydrogenated cottonseed oil, hydrogenated menhaden oil, hydrogenated palm kernel oil, hydrogenated palm oil, hydrogenated peanut oil, hydrogenated shark liver oil, hydrogenated soybean oil, hydrogenated vegetable oil, jojoba oil, mink oil, moringa oil, olive husk oil, **palm kernel oil**, palm oil, peach kernel oil, peanut oil, pengawar djambi oil, safflower oil, sesame oil, shark liver oil, shea butter, sunflower seed oil, sweet almond oil, vegetable oil, walnut oil, wheat bran lipids, wheat germ oil, and mixtures thereof. Additional oils are listed in the CFTA Handbook, pages 23, 26, and 27, incorporated herein by reference. (emphasis added)

The Board was not persuaded by the inventor's argument and affirmed the rejection. This failure may have been due to the fact that the inventor failed to describe the length of Dayan's laundry list and to state that the length of the list was open-ended. Regarding the rebuttal value of a laundry list that is "open-ended," please see the earlier narratives in this article regarding *Ex parte Bonner*¹²² and *Ex parte Senderoff*.¹²³

The inventor in *Ex parte Misner* argued that the § 103-rejection had been based on "picking and choosing."¹²⁴ The inventor argued, "Too much picking and choosing is needed from among all the variables with no direction provided to make these selections." But the inventor did not go a step further to argue that this "picking and choosing" excluded one or more relevant parts of the prior art reference.

Regarding the case law on "picking and choosing," *In re Wesslau*, 353 F.2d 238, 241 (CCPA 1965) reads, "It is impermissible within the framework of section 103 to

¹²¹ *Ex parte Misner*, Appeal No. 2015-004709, Ser. No. 12/671,715 (Dec. 14, 2016).

¹²² *Ex parte Bonner*, Appeal No. 2014-005298, Ser. No. 12/915,859 (June 27, 2016).

¹²³ *Ex parte Senderoff*, Appeal No. 2003-0338, Ser. No. 08/486,451 (Nov. 19, 2003).

¹²⁴ Appeal Brief Under 37 C.F.R. 41.37, Ser. No. 12/671,715.

pick and choose from any one reference only so much of it as will support a given position, **to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests** to one of ordinary skill in the art.” (emphasis added)

More recent case law reiterates the same rule. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*,¹²⁵ teaches:

Barnes-Hind selected a single line out of the Caddell specification to support the above assertion: “one way in which this [forming ridgeless depressions] can be achieved is to use a laser with high enough intensity to vaporize the plate material without melting it.” Col. 5, lines 53-54. This statement, however, was improperly taken out of context. As the former Court of Customs and Patent Appeals held: It is impermissible within the framework of section 103 to **pick and choose** from any one reference only so much of it as will support a given position **to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests** to one skilled in the art. *In re Wesslau*, 353 F.2d 238, 241, 147 USPQ 391, 393 (CCPA 1965); *see also In re Mercer*, 515 F.2d 1161, 1165-66, 185 USPQ 774, 778 (CCPA 1975). A full appreciation of Caddell’s statement requires consideration of the immediately following sentences in the same paragraph and the paragraph after that. Viewed in that context, it is apparent that Caddell’s ideal printing plate would have no ridges around the depression. (emphasis added)

The inventor invoked the “picking and choosing” doctrine, but did not go a step further by describing how the examiner’s rejection “excluded . . . other parts necessary to the full appreciation of what such reference fairly suggests.” Details of how to rebut § 103-rejections by demonstrating that the examiner had “excluded . . . other parts necessary to the full appreciation of what such reference fairly suggests” are illustrated by arguments that combining the two references resulted in redundant advantages, provided advantages that were not needed and not relevant, were in non-analogous arts, or rendered one of the references unsatisfactory for its intended purpose.

The above statements are based on the assumption that combining the Dayan reference with one of the other prior art references in *Ex parte Misner* resulted in redundant advantages, provided advantages that were not needed and not relevant, were in non-analogous arts, or rendered one of the references unsatisfactory for its intended purpose.) The take-home lessons from *Ex parte Misner* are:

- **Advantage of arguing that laundry list is open-ended.** If a laundry list in a cited prior art reference is set forth in a way that is open-ended, then the attorney should considering stating this in rebutting the § 103-rejection.
- **Issue of an incomplete “picking and choosing” argument.** If the attorney is under the impression that the § 103-rejection was based on “picking and choosing,” then the attorney should determine if it is possible to argue that combining the references resulted in redundant advantages,

¹²⁵ *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 448 (Fed. Cir. 1996).

provided advantages that were not needed and not relevant, were in non-analogous arts, or rendered one of the references unsatisfactory for its intended purpose.

- **Need to argue that there is not an identical purpose.** As one of its reasons for affirming the rejection, the opinion referred to the purpose of the claim and of the Dayan reference (each disclosing palm kernel oil) and the purpose of the Potechin (disclosing palm oil), and stated, “In this case, both the palm oil and palm kernel oil are used in antiperspirant compositions.” This statement by the Board invokes the “common purpose” doctrine of *Merck & Co. v. Biocraft Labs., Inc.*,¹²⁶ which sets forth the rule that:

That the ‘813 patent discloses a multitude of effective combinations does not render any particular formulation less obvious. This is especially true because the **claimed composition is used for the identical purpose taught by the prior art.** See *In re Corkill*, 771 F.2d 1496, 1500, 226 USPQ 1005, 1008 (Fed.Cir.1985) (obviousness rejection of claims affirmed in light of **prior art teaching that “hydrated zeolites will work” in detergent formulations**, even though “the inventors selected the zeolites of the claims from among thousands of compounds”); *In re Susi*, 440 F.2d 442, 445, 169 USPQ 423, 425, 58 CCPA 1074 (1971) (obviousness rejection affirmed where the disclosure of the prior art was “huge, but it undeniably include[d] at least some of the compounds recited in appellant's generic claims and it is of a class of chemicals to be **used for the same purpose as appellant’s additives**”)¹²⁷ (emphasis added)

Thus, if possible, the attorney or agent should argue that the chemical that resides in a laundry list is disclosed by the prior art reference as having a purpose that is not the same as the corresponding chemical in the claim.

*G. Ex parte Pridgen.*¹²⁸

Ex parte Pridgen concerned a combination drug for treating chronic fatigue syndrome. The claim required the following:

- A kit . . . for treating . . . conditions, comprising:
- a therapeutically-effective amount of famciclovir . . . celecoxib, and printed directions for administration of famciclovir and celecoxib to obtain . . . therapeutic outcome
- wherein famciclovir and celecoxib are . . . in a dosage amount therapeutically effective to treat . . . fibromyalgia, chronic fatigue syndrome, and irritable bowel syndrome, and
- printed directions . . . instruction sheet for treatment of . . . fibromyalgia, chronic fatigue syndrome, and irritable bowel syndrome

¹²⁶ *Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989).

¹²⁷ *Id.*

¹²⁸ *Ex parte Pridgen*, Appeal No. 2016-007679, Ser. No. 14/459,905 (Mar. 17, 2017).

The § 103-rejection was based on combining Maziasz, WIPO Patent App. No. WO2004/056349, with Remington (2005) *The Science and Practice of Pharmacy*. Maziasz was cited for its disclosure of all the claim elements, except for instructions for administering these compounds for treating a chronic disease selected from fibromyalgia, chronic fatigue syndrome, and irritable bowel syndrome. Remington was cited for its disclosure instructions for administering these compounds for treating a chronic disease selected from fibromyalgia, chronic fatigue syndrome, and irritable bowel syndrome.

In the Board's words, the basis of the obviousness rejection was that, "The Examiner finds that Maziasz teaches a combination of celecoxib and famciclovir in separate formulations, but does not explicitly disclose a kit with instructions for administering these compounds for treating a chronic disease selected from fibromyalgia, chronic fatigue syndrome, and irritable bowel syndrome."

Regarding the Maziasz reference, the Board stated that, "Appellant . . . argues that the examiner impermissibly singles out **celecoxib and famciclovir** from a **laundry list** of possible COX-2 inhibitors / anti-viral combinations disclosed in Maziasz WO2004/056349." (emphasis added)

The inventor in the Reply Brief argued that, "Maziasz teaches **2016 different two-way combinations of antiviral agent and COX-2 inhibitor.**" The inventor's Reply Brief provided the arithmetic for arriving at the number "2016," where this was "8 antiviral agents x 252 COX inhibitors = 2016." The inventor further argued that, "there are many groups of COX-2 inhibitors suggested by Maziasz . . . see, paragraphs 0066, 0067, 0077, 0081, 0083, 0084, etc. of Maziasz . . . an ordinary skilled artisan would have obtained no clue on COX-2 inhibitor selection, because of the **huge disclosure.**"¹²⁹ (emphasis added)

Unfortunately for the inventor, the Board observed that one of the disclosures in the Maziasz reference, namely, Claim 13 of Maziasz, constituted a disclosure of **celecoxib** as part of a small genus of COX-2 inhibitors. Claim 13 also disclosed a tiny genus of anti-viral agents, including **famciclovir**. The fact these two drugs occurred in one of the claims of the Maziasz reference demonstrates that they are preferred, at least for the purposes of the obviousness inquiry. Claim 13 of the Maziasz prior art reference is reproduced below:

WO 2004/056349	154	PCT/US2003/040615
<p>13. The composition of claim 12 wherein the cyclooxygenase-2 selective inhibitor is selected from the group consisting of celecoxib, deracoxib, valdecoxib, rofecoxib, lumiracoxib, etoricoxib, and parecoxib; and the anti-herpes virus agent is selected from the group consisting of acyclovir, famciclovir, and valaciclovir.</p>		

The take-home lessons from *Ex parte Pridgen* are as follows:

¹²⁹ Reply Brief, Ser. No. 14/459,905 (Aug. 10, 2016).

- **Rebuttal value of multiplication.** Where the prior art patent contains two different laundry lists, where one laundry list contained one claim element and the other laundry list contains another claim element, it might also be useful to make the same sort of calculation as made by the inventor in *Ex parte Pridgen*.¹³⁰ The calculation was, “8 antiviral agents x 252 COX inhibitors = 2016.”¹³¹
- **Disclosure of a claim element in the EXAMPLES section of the prior art patent, or in one of the claims of a prior art patent, can prevent laundry list-style arguments from working.** Laundry list-style arguments should be made with caution where the prior art discloses the chemical in question (or other substance in question), in the form of a laundry list but where the same prior art reference also discloses the same chemical in the EXAMPLES section of the prior art patent or discloses the same chemical in the claim set of the prior art patent. In other words, laundry list-style arguments will likely fail, where the same prior art reference discloses a preference for the chemical in question, where this preference takes the form of disclosure of the chemical in the EXAMPLES section or in the claim set, of the prior art patent. This fact-pattern was also a topic in *Ex parte Senderoff*¹³² and *Ex parte Zerbe*.¹³³

H. *Ex parte Sabio*.¹³⁴

Ex parte Sabio concerned a composition for making concrete structures. The claim required, cement, hydraulic binder, and two different kinds of plasticizers. The claim read:

Claim 1. A rapid hydraulic binder, comprising . . . calcium silicate hydrate seeds; a **first superplasticizer**; and a **second superplasticizer** . . . which has a delayed plasticizing effect in comparison with the **first superplasticizer** so that a maximum plasticizing action at 20°C of the **second superplasticizer** is subsequent to the maximum plasticizing action at 20°C of the **first superplasticizer**, wherein the **second superplasticizer** comprises a hydrolyzable polymer that is of the poly(alkylene oxide)polycarboxylate type. (emphasis added)

The § 103-rejection was based on combining the Nicoleau reference (WO2010/026155) with RheoTEC Z-60 Product Data Sheet. Nicoleau disclosed all of the elements of the claim, but not a second plasticizer taking the form of poly(alkylene oxide)polycarboxylate. RheoTEC Z-60 Product Data Sheet was cited for its disclosure of poly(alkylene oxide)polycarboxylate.

¹³⁰ Reply Brief, Ser. No. 14/459,905 (Aug. 10, 2016).

¹³¹ *Ex parte Pridgen*, Appeal No. 2016-007679, Ser. No. 14/459,905 (Mar. 17, 2017).

¹³² *Ex parte Senderoff*, Appeal No. 2003-0338, Ser. No. 08/486,451 (Nov. 19, 2003).

¹³³ *Ex parte Zerbe*, Appeal No. 2006-0442, Ser. No. 10/123,142 (June 6, 2006).

¹³⁴ *Ex parte Sabio*, Appeal No. 2016-001204, Ser. No. 13/642,263. (Jan. 27, 2017).

According to the Board, the inventor had argued that the Nicoleau reference discloses, “including additives in batching water provides nothing more than a **laundry list** of possible additives.” (emphasis added) In the Appeal Brief, the inventor referred to the Nicoleau reference and argued, “These passages do nothing more than recite **laundry lists** of possible additives, and while including plasticizers, no mention is made with respect to superplasticizers, let alone the claimed relationship between the two superplasticizers.”¹³⁵ (emphasis added) The inventor stated that the laundry list resided on page 17 (lines 14-16), page 35 (lines 4-7, and page 43 (lines 15-23) of Nicoleau. These excerpts from the Nicoleau reference are reproduced below:

15	materials are produced. Usually the batching water can contain a wide range of additives like for example plasticizers, hardening accelerators, retarders, shrinkage reducing additives, air entrainers and/or defoamers. It is advantageous to produce the hardening
5	The compositions, preferably aqueous hardening accelerator suspensions can also contain any formulation component typically used in the field of construction chemicals, preferably defoamers, air entrainers, retarders, shrinkage reducers, redispersible powders, other hardening accelerators, anti-freezing agents and/or anti-efflorescence agents.
15	400 kg of cement 78 kg of quartz sand 0/0.5 97 kg of quartz sand 0/1 732 kg of sand 0/4
20	301 kg of gravel (4/8) 681 kg of gravel (8/16) 148 litres of water if the water-to-cement ratio (W/C) is 0.37 and additives like for example plasticizer and accelerator

Unfortunately for the inventor, the Board observed that Nicoleau’s alleged laundry list was only a tiny list, and thus not at all a laundry list. To this point, the Board wrote, “Moreover, **Nicoleau describes only six types of additives**, two of which include air trainers and plasticizers.” (emphasis added) Regarding the claim's requirement for, “**second superplasticizer** . . . which has a delayed plasticizing effect in comparison with the **first superplasticizer**,” (emphasis added) the Board held that this function was inherent in the poly(alkylene oxide)polycarboxylate that was disclosed in the RheoTEC Z-60 Product Data Sheet.

¹³⁵ Appeal Brief under 37 C.F.R. § 41.37, Ser. No. 13/642,263, 9 (May 18, 2015).

Because of the fact that Nicoleau’s disclosure of “plasticizer” did not reside in any laundry list, and because the Nicoleau plasticizer had the same function (function of delaying plasticizing) as the plasticizer in the claim, the Board affirmed the rejection. In affirming the rejection, the Board cited *Merck & Co. v. Biocraft Labs., Inc.*¹³⁶ for its rule that, “That the ’813 patent discloses a multitude of effective combinations does not render any particular formulation less obvious. This is especially true because the claimed composition is used for the identical purpose.” The take-home lessons from *Ex parte Sabio* are:

- **Rebuttal arguments using the term “laundry list” can be seen as an invitation to reject the claim under *Merck v. Biocraft*.** In drafting rebuttal arguments, the attorney or agent needs to exercise restraint in using a laundry list-style argument. As shown in *Ex parte Sabio*, the argument making use of a laundry list-style argument backfired against the inventor. Even though the list in the cited prior art reference was too short to be considered a “laundry list,” the Board noticed the rebuttal’s use of the term “laundry list,” and as a consequence, moved forward and rejected the claim, citing *Merck v. Biocraft* for its anti-inventor rule that, “patent discloses a multitude of effective combinations does not render any particular formulation less obvious.” In other words, the mere use of the term “laundry list” in a rebuttal argument can be understood by the Board as an invitation to reject the claim under *Merck v. Biocraft*.

*I. Ex parte Veyland.*¹³⁷

This opinion illustrates use of a harsh rule from *KSR* (harsh to inventors), that, “When a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another . . . the combination must do more than yield a predictable result” (*KSR* at 416). The Board cited *KSR* for this rule, where the Board’s opinion reiterated the examiner’s rationale to combine references. The examiner’s rationale was that, “the substitution of one known vulcanization accelerator for another is . . . obvious when it does not more than yield predictable results.”

In *Ex parte Veyland*, the claim was to a rubber composition for making tires. The claim required that the rubber composition include:

- diene elastomer
- reinforcing filler
- copper carboxylate
- a vulcanization accelerator consisting of a Sulphur compound selected from MBTS, DCBS, and TBSI

¹³⁶ *Biocraft Labs., Inc.*, 874 F.2d at 807.

¹³⁷ *Ex parte Veyland*, Appeal No. 2015-004535, Ser. No. 12/809,777 (Mar. 22, 2017).

The § 103-rejection was based on combining the Nakamura reference with the Chassagnon reference. In detail, Nakamura discloses all of the elements of the claim, but not MPTS, DCBS, or TBSI. Chassagnon was cited for its disclosure of MBTS, DCBS, and TBSI. The examiner's basis of rejection was to start with Nakamura, then to get rid of Nakamura's CBS or TBBS, and then to substitute these with Chassagnon's CBS or TBBS.

Claim 1 requires selection of one compound from the group consisting of MBTS, DCBS, and TBSI, as shown below. The claim elements copper(II) carboxylate, MBTS, DCBS, and TBSI, are highlighted in bold, because these particular claim elements were argued by the inventor to reside in "laundry lists" in the cited prior art references. The claim read:

Claim 1. A rubber composition based on at least one diene elastomer, containing less than 0.5 phe of zinc, phe signifying parts per hundred parts of elastomer, and based on at least: - one reinforcing filler; - one sulphur and primary vulcanization accelerator-based crosslinking system, comprising a **copper (II) carboxylate** of formula: $(RCOO)_2Cu$, wherein the primary vulcanization accelerator is selected from the group consisting of 2-mercaptobenzothiazyl disulphide [**MBTS**], N,N-dicyclohexyl-2-benzothiazyl sulphenamide [**DCBS**], and N-tert-butyl-2-benzothiazyl sulphenimide [**TBSI**], and mixtures thereof, in which R represents a hydrocarbon-based group chosen from linear or branched, cyclic or non-cyclic alkyls having from 1 to 13 carbon atoms, aryls, aralkyls or alkarylks having from 1 to 13 carbon atoms.¹³⁸

The claim includes the term, "phe." Phe means, parts per hundred parts of elastomer.

1. Claim element requiring a sulphur compound (disclosure by Chassagnon reference).

Regarding the Chassagnon reference, the inventor argued that its disclosure of MBTS, DCBS, and TBSI (compounds required by the claim) resided in Chassagnon's laundry list. The inventor's Appeal Brief argued that, "MBTS . . . DCBS . . . and . . . TBSI are mentioned among a laundry list of Chassagnon."¹³⁹ The relevant part of Chassagnon is reproduced here:

¹³⁸ *Id.*; see also U.S. Patent App. No. 2011/0028598A1, Claim 1 (filed Dec. 21, 2007).

¹³⁹ Appeal Brief, Ser. No. 12/809,777 (Nov. 14, 2014).

[0095] Any compound capable of acting as a vulcanisation accelerator for the diene elastomers in the presence of sulphur, in particular accelerators of the type of thiazoles and their derivatives, and accelerators of the type thiurams, zinc dithiocarbamates, can be used as accelerator (primary or secondary). These accelerators are more preferably selected from among the group consisting of 2-mercaptobenzothiazyl disulphide (abbreviated to "MBTS"), N-cyclohexyl-2-benzothiazyl sulphenamide (abbreviated to "CBS"), N,N-dicyclohexyl-2-benzothiazyl sulphenamide ("DCBS"), N-tert. butyl-2-benzothiazyl sulphenamide ("TBBS"), N-tert. butyl-2-benzothiazyl sulphenimide ("TBSI"), zinc dibenzylthiocarbamate ("ZBEC") and mixtures of these compounds.

But a view of this "laundry list" reveals that it takes the form of only a half dozen compounds and thus is not at all a laundry list. As such, it can be seen that this part of the inventor's rebuttal strategy was poorly conceived.

2. Claim element requiring a copper carboxylate (disclosure by Nakamura reference).

The following concerns the claim element, copper (II) carboxylate. To provide scientific background, copper (II) carboxylate is a genus, while one species of this genus is "copper octanoate." Octanoic acid (species) is one type of carboxylic acid (genus), and for this reason, copper octanoate is a species of the genus, copper carboxylate.

The Board reiterated and agreed with the examiner's basis of rejection, as it applies to the claim element, "copper (II) carboxylate." In the Board's words, "Nakamura teaches a rubber composition comprising . . . a fatty acid salt such as copper octanoate, which corresponds to the Appellants' copper (II) carboxylate having the specified formula" (Nakamura, E.P. Patent App. No. 08/64606A1, col. 10 l. 3—15 (filed Nov. 28, 1995)). The Board did not contemplate the length of Nakamura's laundry list, and did not remark on the length of Nakamura's laundry list. The relevant excerpt from Nakamura EP 0864606 is reproduced below. As one can see, "copper octanoate" is disclosed in the list, where it is disclosed as being part of a group of compounds that is "preferred" and where another separate group of compounds are disclosed as being, "particularly preferred":

Among these fatty acid salts, **copper octanoate**, potassium octanoate, lithium dodecanoate, lithium octenoate, sodium octenoate, calcium octenoate, barium octenoate, iron octenoate, cobalt octenoate, copper octenoate, zinc octenoate, lithium stearate, sodium stearate, potassium stearate, rubidium stearate, cesium stearate, beryllium stearate, magnesium stearate, calcium stearate, strontium stearate, barium stearate, lead stearate, chromium stearate, manganese stearate, iron stearate, cobalt stearate, nickel stearate,

cadmium stearate, zinc stearate, lithium laurate, sodium laurate, potassium laurate, rubidium laurate, cesium laurate, beryllium laurate, magnesium laurate, calcium laurate, strontium laurate, barium laurate, zinc laurate, iron laurate, sodium oleate, potassium oleate, magnesium oleate, calcium oleate, zinc oleate, sodium eicosanoate and calcium eicosanoate are **preferred**; and lithium octenoate, sodium octenoate, calcium octenoate, barium octenoate, lithium stearate, sodium stearate, potassium stearate, rubidium stearate, cesium stearate, beryllium stearate, magnesium stearate, calcium stearate, strontium stearate, barium stearate, lithium laurate, sodium laurate, potassium laurate, rubidium laurate, cesium laurate, beryllium laurate, magnesium laurate, calcium laurate, strontium laurate, barium laurate, sodium oleate, potassium oleate, magnesium oleate and calcium oleate are **particularly preferred**.¹⁴⁰ (emphasis added)

In the Appeal Brief, the inventor referred to a huge laundry list where half of the chemicals were labeled as “preferred” and where the other half were labeled as “particularly preferred.” The inventor argued that the copper octanoate in this laundry list was disclosed as being preferred, in contrast to other chemicals in the list that were particularly preferred.” In the laundry list, the positions of the terms “preferred” and “particularly preferred” are shown in **bold font**.

In the inventor’s own words, “This person also must pick copper octanoate from the huge amount of specific examples.”¹⁴¹ Regarding the particularly preferred compounds, the inventor argued that, “Nakamura has specifically discloses that alkali metal salts and alkaline earth metals salts are particularly preferred.”¹⁴² Thus, the inventor's argument had these two parts:

- Nakamura's chemical (copper octanoate) resided in a laundry list. This copper octanoate corresponded to the claim element, “copper (II) carboxylate” (copper octanoate is type of copper (II) carboxylate) and thus can potentially render obvious the claim element. The inventor argued that obviousness cannot be found, because Nakamura’s “copper octanoate” resided in a laundry list.
- In the same laundry list, Nakamura stated that other compounds (alkali metal salts and alkaline earth metal salts) were particularly preferred over the compounds (such as copper octanoate) that resided in the huge laundry list. The inventor argued that Nakamura cannot render obvious “copper octanoate” because Nakamura identified another group of chemicals as particularly preferred.

3. The Board refused the inventor’s laundry list argument.

The Board refused the inventor’s argument for non-obviousness, based on the laundry list disclosures in the Nakamura reference and the Chassagnon reference. To

¹⁴⁰ See E.P. Patent App. No. 08/64606A1 at Fatty acid salt.

¹⁴¹ Appeal Brief, Ser. No. 12/809,777, 11 (Nov. 14, 2014).

¹⁴² *Id.*

this end, the Board wrote, “Furthermore, the mere fact [t]hat the [reference] discloses a multitude of effective combinations does not render any particular formulation less obvious.” *Id.* at 807; see also *In re Corkill*, 111 F.2d 1496, 1500 (Fed. Cir. 1985).

4. The Board refused the inventor’s argument about “preferred.”

The Board refused the inventor’s argument that Nakamura’s use of the term “particularly preferred” to refer to one group of chemicals rendered less obvious another group of chemicals that were labeled as being “preferred.”

The Board concluded, “As explained by our reviewing court, ‘in a section 103 inquiry, ‘the fact that a specific [embodiment] is taught to be preferred is not controlling, since all disclosures of the prior art, including unpreferred embodiments, must be considered.’” *Merck & Co. Inc. v. Biocraft Labs. Inc.*, 874 F.2d 804, 807 (Fed. Cir. 1989).

J. Ex parte Wang.¹⁴³

Ex parte Wang concerned a thermoplastic starch that is created by debranching of starch catalyzed by enzymes. The claim required a,

web comprising . . . fibers, wherein the fibers contain a thermoplastic starch formed from . . . enzymatically debranched starch and from . . . enzymatically debranched starch and from . . . at least one plasticizer starch and from . . . at least one plasticizer . . . wherein the enzymatically debranched starch is formed by reacting a native starch with an enzyme . . . wherein the enzyme includes an **isoamylase or a pullulanase**.¹⁴⁴ (emphasis added)

In the Appeal Brief, the inventor argued that, “Isoamylase and pullulanase are included in a **laundry list** of possible enzymes for use in the enzymatic decomposition of . . . starch.” (See Muller, U.S. Patent App. No. 2005/0070703, ¶ 0030). The relevant part of Muller’s para. 0030 reads:

[0030] A further group of networking polysaccharides can be obtained by . . . enzymatic decomposition, especially by debranching. Amylases such as α -amylase, β -amylase, glucoamylase, α -glucosidase, exo- α -glucanase, cyclomaltodextrin, glucoamylase, **pullulanase**, **isoamylase**, amylo-1,6-glucosidase or a combination of these amylases can be used for the enzymatic decomposition.¹⁴⁵ (emphasis added)

¹⁴³ *Ex parte Wang*, Appeal No. 2014-006587, Ser. No. 12/337,798 (Mar. 28, 2017).

¹⁴⁴ U.S. Patent App. No. 2010/0159777, Claim 11 (filed Dec. 18, 2008).

¹⁴⁵ It is interesting to point out that the spelling of “pullulanase” in the *Muller* application is not correct. For reasons unknown, the spelling error in Muller was never an issue in this file history. In the rejections, the examiner spelled pullulanase incorrectly (incorrectly as pullulunase, with the letter

A closer view of this paragraph reveals that the so-called laundry list consists of only one genus name (“amylases”) plus names of nine species that reside in this genus. The Board affirmed the rejection. The take-home lesson is as follows:

- **Rebuttal arguments using the term “laundry list” can be viewed as an invitation to reject the claim under *Merck v. Biocraft*.** Attorneys and agents should refrain from using laundry list-style arguments in rebutting § 103-rejections, in the situation where the claim element in question is disclosed by the prior art reference residing in a short list. In *Ex parte Wang*, the claim element resided in a small list. Despite the fact that there was not any laundry list, the inventor still used a laundry list-style argument, where this inspired the Board to affirm the rejection, where the affirmation was based on *Merck v. Biocraft*. This same sort of backfiring against the inventor is shown above in *Ex parte Sabio*.¹⁴⁶

K. Ex parte Weidinger,¹⁴⁷

This opinion illustrates typical reasons why laundry list-style argument sometimes fail: (1) The list is too small to be characterized as a laundry list and; (2) The prior art disclosed an advantage of one of the chemicals in the list, thus establishing that this chemical is preferred.

Ex parte Weidinger concerned a material made of rubber layers. The claim read:

Claim 1. A material comprising at least one layer A . . . of expanded elastomer . . . wherein layer A comprises a styrene substituted organic polymer, which is present in the formulation in at least 30 phr - related to a total elastomeric polymer content of 100 parts per hundred rubber (phr) - and layer A furthermore comprises at least 10 phr of a chlorinated organic polymer of thermoplastic or thermoplastic elastomer nature-related to the styrene substituted organic polymer - and layer A additionally comprises greater than 60 phr of halogenated paraffin, halogenated fatty acid substituted glycerine, or any combination thereof.¹⁴⁸

The cited references were Katsunori, U.S. Patent App. No. 2009/0169860; and Miura, U.S. Patent App. No. 2003/0109621. The examiner’s asserted rationale to combine references was that, “one would have incorporated the amount of chlorinated paraffin into the material of Katsunori according to Miura in order to provide sound insulation members exhibiting high vibration damping performance and high sound insulation.”

“u”), while in the rebuttal arguments, the attorney spelled pullulanase correctly (with the letter “a”). This author would have used this spelling error as part of the rebuttal argument, and he would have drafted an argument that the Muller reference never discloses “pullulanase.”)

¹⁴⁶ *Ex parte Sabio*.

¹⁴⁷ *Ex parte Weidinger*, Appeal No. 2015-00357, Ser. No. 13/303,593 (July 5, 2016).

¹⁴⁸ *Id.*; U.S. Patent App. No. 2012/0135221A1, Claim 1 (filed Nov. 30, 2010).

The Board's opinion reiterated the inventor's argument. Turning to the Appeal Brief, it can be seen that the inventor had argued,

Katsunori discloses the . . . sheet may include one of eleven rubber based resins, one of seven crystalline resins . . . and one of eighteen softeners. See Katsunori, paragraphs 0050, 0054-0057, and 0066. In total, **there are over 1,300 combinations** of these elements which may be formed from the lists provided in Katsunori . . . Katsunori merely provides a **laundry list** of materials with no teaching or suggestion for the combination of a styrene substituted organic polymer, a chlorinated organic polymer, and a halogenated paraffin, as required by claim 1. (emphasis added)

As might be self-evident, the inventor's calculation of the "**over 1,300 combinations**" was based on multiplying 7 crystalline resins x 11 rubber based resins x 18 softeners, where 7 x 11 x 18 equals 1,386 different combinations.

Katsunori's list of seven crystalline resins is reproduced below (please also note the occurrence here, of the word, "preferably"):

[0054] The crystalline resin is preferably at least one resin selected from polyolefin-based resins such as polyethylene-based resin and polypropylene-based resin, ethylene-vinyl acetate copolymers, poly(vinyl acetate), ethylene-vinyl chloride copolymers, poly(vinyl chloride), and poly(vinylidene chloride).

Regarding what the inventor considered to be a laundry list of seven choices for crystalline resins, the examiner stated that this "is not a laundry list of materials," and pointed out that one of these seven resins (polyvinyl chloride) is required by the claim.

Regarding rebuttal arguments using this type of calculation, please note that this type of argument was used successfully, as disclosed above in the account of *Ex parte Zerbe*.¹⁴⁹ In *Ex parte Zerbe*, calculation was: [32 times 33]/[2], giving the answer of 528 different combinations of two different chemicals. This calculation from *Ex parte Zerbe* effectively expanded the length of the list from only 33 different choices to 528 different choices.¹⁵⁰

Unfortunately for the inventor, the Board in *Ex parte Weidinger* had no interest in the inventor's calculation leading to "over 1,300 combinations."

The Board referred to the Examiner's Answer¹⁵¹ for its reasons to affirm the § 103-rejection. The examiner wrote that, "The list of eleven rubbers is not a laundry list of materials."¹⁵² The Board also accepted the examiner's observation that the Katsunori reference discloses one of the claimed rubber compounds as "preferred." The examiner referred to ¶ 0050 of Katsunori, and wrote, "that particularly, at least one rubber selected from nitrile-butadiene rubber, styrene-butadiene copolymer, butyl rubber, and chloroprene rubber, is preferred because of the excellent cushioning property and durability."

¹⁴⁹ *Ex parte Zerbe*, Appeal No. 2006-0442, Ser. No. 10/123,142 (June 6, 2006).

¹⁵⁰ *Id.* at Appeal Brief, 7.

¹⁵¹ Examiner's Answer, Ser. No. 13/303,593 (Nov. 17, 2014).

¹⁵² *Id.*

The list of eleven rubbers is shown in Katsunori’s ¶ 0050, reproduced below. This paragraph also shows the disclosure that some of these eleven rubbers are “preferred”:

[0050] The rubber-based resin in the present invention is not particularly limited, if it has rubber elasticity at room temperature. Examples thereof include at least one rubber selected from chloroprene rubber (CR), isoprene rubber (IR), butyl rubber (IIR), nitrile rubber (nitrile-butadiene rubber) (NBR), natural rubber, styrene-butadiene copolymer rubber (SBR), butadiene rubber (BR), urethane rubber, fluororubber, acrylic rubber, and silicone rubber. Particularly, at least one rubber selected from **nitrile-butadiene rubber (NBR), styrene-butadiene copolymer rubber (SBR), butyl rubber (IIR) and chloroprene rubber (CR) is preferred** because of the excellent cushioning property and durability thereof.¹⁵³ (emphasis added)

The take-home lessons from *Ex parte Weidinger* are:

- **Danger to rebuttal arguments that refer to any small list as a “laundry list.”** Where a claim element, such as a particular chemical, is disclosed by a prior art reference, and where this disclosure resides in a small list, the attorney or agent should refrain from characterizing the small list as a laundry list.
- **Danger to rebuttal arguments where the prior art uses the word, “preferred.”** Where a claim element, such as a particular chemical, is disclosed by a prior art reference either in a small list or as a laundry list, and where the list discloses that same chemical as being “preferred” or “advantageous,” the attorney or agent should refrain from expecting any rebuttal argument to succeed, where the rebuttal argument invokes the length of the list, or invokes failure of the reference to provide guidance for selecting that chemical.

L. Conclusions regarding PTAB opinions where the Board affirmed the rejection based on Merck & Co., v. Biocraft Labs.

This concerns PTAB cases that affirmed an obviousness rejection, where inventor had used a laundry list-style argument, and where the Board’s affirmation was based on *Merck & Co., v. Biocraft Labs. Inc.*¹⁵⁴ The take-home lessons are shown above in the bullet points that accompany the above-described opinions. Other PTAB opinions of the same type, that is, where the Board affirmed the rejection based on *Merck v. Biocraft*, are identified in the footnote.¹⁵⁵ Where the attorney or agent contemplates

¹⁵³ U.S. Patent App. No. 2009/0169860 at ¶ 0050.

¹⁵⁴ *Merck & Co., v. Biocraft Labs., Inc.*, 874 F.2d 804 (Fed. Cir. 1989).

¹⁵⁵ *Ex parte Brown*, Appeal No. 2011-010398, Ser. No. 11/824,517 (Sept. 28, 2012); *Ex parte Bui*, Appeal No. 2012-002,434, Ser. No. 11/972,143 (Dec. 19, 2012); *Ex parte Cantor*, Appeal No. 2008-0590, Ser. No. 10/405,974 (Nov. 7, 2008); *Ex parte Cush*, Appeal No. 2012-003937, Ser. No. 10/546,898 (Oct. 24, 2013); *Ex parte De La Mettrie*, Appeal No. 2005-0241, Ser. No. 09/004,831 (Feb. 9, 2005); *Ex parte Hausch*, Appeal No. 2015-004104, Ser. No. 11/927,536 (Nov. 17, 2016); *Ex parte Hood*, Appeal No.

drafting a rebuttal focusing on the prior art's disclosure of a claim element in a lengthy list, this author suggests that this rebuttal approach may be more successful where the argument NOT use the term "laundry list," but instead that the rebuttal be based on other Federal Circuit case law that is applicable where the prior art's disclosure takes the form of a lengthy list. These other sources of Federal Circuit case law, together with the rule of law, are shown be the bullet points:

- *Medichem S.A. v. Rolabo S.L.*, 437 F.3d 1157 (Fed. Cir. 2006) ("prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful")
- *Takeda Chemical Ind., Ltd. v. Alphapharm Pty., Ltd.*, 429 F.3d 1350 (Fed. Cir. 2007) ("the claimed compounds would not have been obvious to try, since the prior art did not identify predictable solutions, but rather a broad range of compounds")
- *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063 (Fed. Cir. 2012) ("evidence of obviousness . . . is insufficient unless it [prior art] indicates . . . that the skilled artisans would have had a reason to select the route that produced the claimed invention")

VI. INTRODUCTION TO REDUNDANT ADVANTAGES; ADVANTAGE NOT NEEDED AND NOT RELEVANT

The author devised query terms with the goal of detecting all of the relevant PTAB cases relating to the fact-patterns of: (1) *Redundant Advantages*; and (2) *Advantage Not Needed and Not Relevant*. This article cites and reproduces all of the relevant opinions detected by the search. The reasons for describing as many relevant PTAB cases as possible are as follows:

- As shown below, the Board's opinions do not uniformly cite any one particular Federal Circuit case as a basis for reversal, where the issue is *Redundant Advantages* or *Advantage Not Needed and Not Relevant*. This is in striking contrast to reversals based on, for example, Rendering the Prior Art Unsatisfactory for its Intended Purpose, where the only cited case is *In re Gordon, supra*. A greater number of PTAB opinions provides a greater variety of applicable Federal Circuit case law that reasonably

2011-013292, Ser. No. 11/546,067 (Apr. 23, 2013); *Ex parte* Keski, Appeal No. 2016-001601, Ser. No. 11/195,983 (May 3, 2017); *Ex parte* Li, Appeal No. 2015-000067, Ser. No. 13/674,425 (May 27, 2016); *Ex parte* Martin, Appeal No. 2009-009915, Ser. No. 10/988,997 (Jan. 29, 2010); *Ex parte* Oehms, Appeal No. 2015-001704, Ser. No. 12/679,567 (Sept. 28, 2016); *Ex parte* O'Hagan, Appeal No. 2014-002707, Ser. No. 13/041,042 (Oct. 27, 2016); *Ex parte* Pinzon, Appeal No. 2007-1609, Ser. No. 09/733,900 (Nov. 16, 2007); *Ex parte* Rekhi, Appeal No. 2011-000977, Ser. No. 11/262,672 (Aug. 23, 2011); *Ex parte* Schwalm, Appeal No. 2009-008,783, Ser. No. 11/077,199 (Nov. 13, 2009); *Ex parte* Talebi, Appeal No. 2014-009785, Ser. No. 13/217,845 (May 2, 2016); *Ex parte* Uemura, Appeal No. 2013-011057, Ser. No. 11/989,030 (May 3, 2016); *Ex parte* Wenjie, Appeal No. 2009-003109, Ser. No. 11/170,643 (Feb. 25, 2010); *Ex parte* Zahrobsky, Appeal No. 2008-4988, Ser. No. 10/774,917 (Apr. 8, 2009).

encompasses the fact-pattern of *Redundant Advantages* or the fact-pattern of *Advantage Not Needed and Not Relevant*.

- In the unlikely situation where doubt is cast on whether any case law from the Federal Circuit case law encompasses the issues of (1) *Redundant Advantages* or (2) *Advantage Not Needed and Not Relevant*, it might reasonably be argued that PTAB opinions firmly and conclusively establish that Federal Circuit case law does, in fact, encompass the fact-patterns of: (1) *Redundant Advantages* and, (2) *Advantage Not Needed and Not Relevant*, providing that the PTAB opinion in question does, in fact, base the holding on a relevant Federal Circuit case.
- Where the goal is to draft an Appeal Brief, the availability of a greater number of published PTAB opinions enhances the chance of finding a PTAB opinion with a fact-pattern similar to the fact-pattern facing the attorney in her own case. Where a close match is found, the attorney may be justified in expecting her rebuttal argument to succeed.

VII. REDUNDANT ADVANTAGES

In all of the PTAB cases described below, the Board's analysis leading to the decision to reverse the § 103-rejection involved comparing the prior art references with each other. Regarding rebuttal arguments that invoke *Redundant Advantages*, the most relevant Federal Circuit case law may be *Kinetic Concepts, Inc., v. Smith and Nephew, Inc.*¹⁵⁶

Kinetic Concepts v. Smith and Nephew discloses the fact-pattern where an advantage provided by one prior art reference is redundant with an advantage already possessed by another prior art reference. The court observed that the two references disclosed devices that served the same function (to drain wounds), and that each device independently operated effectively. The court wrote that, “[b]ecause each device independently operates effectively, a person . . . who was merely seeking to create a better device to drain fluids from a wound, would have no reason to combine the features of both devices into a single device.” The opinion concluded that, “[o]n the basis of this evidence, hindsight provides the only discernable reason to combine the prior art references.”¹⁵⁷

In drafting rebuttal arguments based on *Redundant Advantages*, the attorney or agent first needs to detect the examiner's assertion of the advantage that constitutes the rationale to combine references. *In re Kahn, supra*, requires that § 103-rejections be based on a rationale for combining the prior art references. Then, the argument needs to point out that the secondary reference possesses this advantage. And finally, the argument needs to point out that the primary reference already possesses this advantage. The rebuttal argument needs to conclude that this situation establishes that the rationale to combine, as required by *In re Kahn, supra*, had not been properly asserted and that the grounds for the § 103-rejection have been overcome.

¹⁵⁶ *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*, 688 F.3d. 1342 (Fed. Cir. 2012).

¹⁵⁷ *Id.* at 1369.

*A. Ex parte Bakshi.*¹⁵⁸ *Redundant Advantages*

Ex parte Bakshi concerned a computer method for delivering targeted on-line advertising in a non-intrusive manner. The claimed invention reduces on-line distractions that draw the user's attention away from the advertising.

Radziewicz was the primary reference and Hashimoto was the secondary reference.¹⁵⁹ Radziewicz disclosed all of the elements of the claim, except for, "the module controlling presentation of the dynamic content." Hashimoto was cited by the examiner for its disclosure of this claim element. The examiner's asserted rationale to combine was, "in order to control the display of advertising messages at certain times."

The inventor argued that, "the combination of Radziewicz and Hashimoto as proposed by the examiner makes no sense, because there would be **no need** to download the executable module of Radziewicz to retrieve and display the advertising messages of Radziewicz." (emphasis added). Consistent with this, the inventor further argued, "**Radziewicz already served the purpose** that the examiner contends would be served by incorporating the features of Hashimoto." (emphasis added)

The Board agreed with the inventor's arguments, writing that, "**Radziewicz already controls** the information which will be displayed to the user" (emphasis added). The Board characterized the rejection as based on "hindsight" and reversed the rejection. The opinion cited *In re Hedges*,¹⁶⁰ which teaches that, "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *In re Wesslau*, 353 F.2d at 241, 147 USPQ at 393.

*B. Ex parte Burns.*¹⁶¹ *Redundant Advantages*

Ex parte Burns discloses the fact-pattern where the examiner's asserted rationale to combine was that the primary reference will further benefit from a doubling-up of that advantage. In other words, in this situation the examiner is already aware that the primary reference already possesses the advantage provided by the secondary reference. This author suggests that patent attorneys and agents be vigilant and take care to rebut rejections based on doubling of an advantage. The examiner's assertion that benefit would be provided by doubling-up took the form that it would, "further reinforce the horseshoe."

The primary reference was Paar and the secondary reference was Filliez. Paar disclosed all of the elements of the claim, except for, "a pliable, metal rod-like reinforcer embedded in the flexile molded material between opposing hoof-contacting and ground-contacting surfaces, the reinforcer extending from one caudal end, through the anterior segment, to the other caudal end of the horseshoe." The examiner cited the Filliez reference for its disclosure of this claim element.

¹⁵⁸ *Ex parte Bakshi*, Appeal No. 2001-2542, Ser. No. 09/000,760 (Sept. 24, 2003).

¹⁵⁹ *See generally* U.S. Patent No. 5,854,897 (filed Dec. 27, 1996).

¹⁶⁰ *In re Hedges*, 783 F.2d 1038, 1041 (Fed. Cir. 1986).

¹⁶¹ *Ex parte Burns*, Appeal No. 2016-000351, Ser. No. 13/843,754.

The Examiner's asserted rationale to combine was that the structure provided by the Filliez device would, "further reinforce the horseshoe." The Board's opinion reiterated the inventor's argument that, "Adding the Filliez metal **would be unnecessary (redundant)** . . . because Paar's rubber tread is intended to be forced against the metal flange of the horseshoe body . . . and . . . there is **no need for further reinforcing** by the Filliez pair of longitudinal wires." (emphasis added)

The Board focused on the examiner's asserted rationale that doubling-up would provide an advantage to the primary reference. To this end, the Board wrote that, "the examiner does not . . . explain how modifying . . . the rubber material of Paar with reinforcer of Filliez would further reinforce . . . the rubber material or why a skilled artisan would double up on reinforcers . . . i.e., include both spring steel retaining bar of Paar and reinforcer of Filliez . . . in Paar's horseshoe." The Board characterized the rejection as being based on "impermissible hindsight," citing *In re Kahn*.¹⁶² The take-home lesson is that, attorneys and agents need to be vigilant for any assertion, by the examiner, that the doubling-up of advantages is an acceptable rationale to combine references. Where the examiner uses this as a rationale to combine, the attorney or agent should consider arguing that this is not a prior rationale and that, as a result, the grounds for the rejection have been overcome.

C. *Ex parte Chandrachood*.¹⁶³ *Redundant Advantages*

Ex parte Chandrachood illustrates how to rebut an obviousness rejection based on the combination of several prior art references, and not on just two prior art references. What is shown, is a rebuttal strategy that separates the references into two groups:

- **Group 1.** A single reference that provides an alleged advantage; and
- **Group 2.** All of the other references combined, where these references allegedly need the advantage

The rebuttal argument concluded that the references combined in the group do not need the alleged advantage that is provided by the single reference.

Ex parte Chandrachood concerned a plasma reactor. The claim required:

- vacuum chamber
- pedestal for supporting a workpiece
- passages through the pedestal forming a matrix of rows and columns
- optical fibers and a sensor to detect light

The § 103-rejection was based on combining these references: Kholodenko, Hanaoka, Mashiro, and Gondo. The examiner's asserted rationale to combine reference was, "it would have been obvious to control horizontal gas injections for . . . control of gas over the substrate according to etching depth . . . to have even more

¹⁶² *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

¹⁶³ *Ex parte Chandrachood*, Appeal No. 2013-000202, Ser. No. 11/589,598 (Mar. 9, 2015).

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

uniformity and efficient gas utilization.” As can be seen, the alleged advantage for combining references was, “to have even more uniformity and efficient gas utilization.”

Regarding combining the Kholodenko reference with the Hanaoka reference, the Board reiterated the inventor's argument that, “there is **no showing that Hanaoka . . . needs any improvement** because Hanaoka’s radial inner and outer gas injection zones **appear to be ably served by Hanaoka’s apparatus.**” (emphasis added) Then, the Board added that,

Because the combination of Hanaoka, Masahiro, and Godo **already operates effectively** in its radial control configuration, a person . . . who was merely seeking to create a better plasma reactor, would have no reason to add the circumferential control features of . . . Kholodenko to the combination of Hanaoka, Masahiro, and Gondo.

citing *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.*¹⁶⁴

*D. Ex parte Dalton.*¹⁶⁵ *Redundant Advantages*

Ex parte Dalton concerned a type of lock for securing cabinets, drawers, and desks. This type of lock (“cam lock”) uses a “cam” that rotates and contacts a “strike,” where the strike is part of a frame. Ramsauer was the primary reference and Anastasiadis was the secondary reference. Ramsauer disclosed all of the elements of the claim, except for, “stop pads of . . . different thicknesses, for selective removal support . . . on said locking bar.” Anastasiadis was cited for its disclosure of this claim element.

The examiner’s asserted rationale to combine references was to, “benefit in additional means of adjustability.” The inventor argued that this benefit provided by Anastasiadis was redundant with an advantage already possessed by the Ramsauer device. The Board reiterated the inventor’s argument as, “there is no logical reasoning to support adding a plurality of stop pads of different thicknesses, because Ramsauer **already has . . . a spring-loading screw adjustment** mechanism.” (emphasis added) The inventor’s argument continued, “in Ramsauer . . . both the bolt and the back-engaging device are adjustable to enable fine-tuning of tolerances between the door leaf and a frame.” Regarding redundant advantages, the opinion wrote that, “providing a plurality of stop pads with different thicknesses to Ramsauer . . . would be **unnecessary and redundant.**” (emphasis added)

The Board characterized the rejection as having been based on “hindsight,” and reversed the rejection. Although the Board did not cite any case law, it might be noted that “hindsight” is a well-established doctrine in the obviousness inquiry. The argument in the inventor’s Reply Brief established that the basis for the § 103-rejection was based on impermissible hindsight. The Reply Brief cited *Bausch & Lomb v. Barnes-Hind/Hydrocurve*¹⁶⁶ for the rule against “picking and choosing.” To quote from *Bausch & Lomb v. Barnes-Hind/Hydrocurve*, “It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it

¹⁶⁴ *Kinetic Concepts*, 688 F.3d at 1369.

¹⁶⁵ *Ex parte Dalton*, Appeal No. 2014-006999, Ser. No. 13/523,318 (July 14, 2016).

¹⁶⁶ *Bausch & Lomb v. Barnes-Hind/Hydrocurve*, 796 F.2d 443 (Fed. Cir. 1986).

as will support a given position to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests” *Bausch & Lomb* at 448.

*E. Ex parte Fritsche.*¹⁶⁷ *Redundant Advantages*

In *Ex parte Fritsche* concerned an air vent for a vehicle ventilation system. The figure from the inventor’s patent, as it eventually issued, shows air flow (14), swirl generator (15), connecting sleeve (6), and various other parts of the air vent.

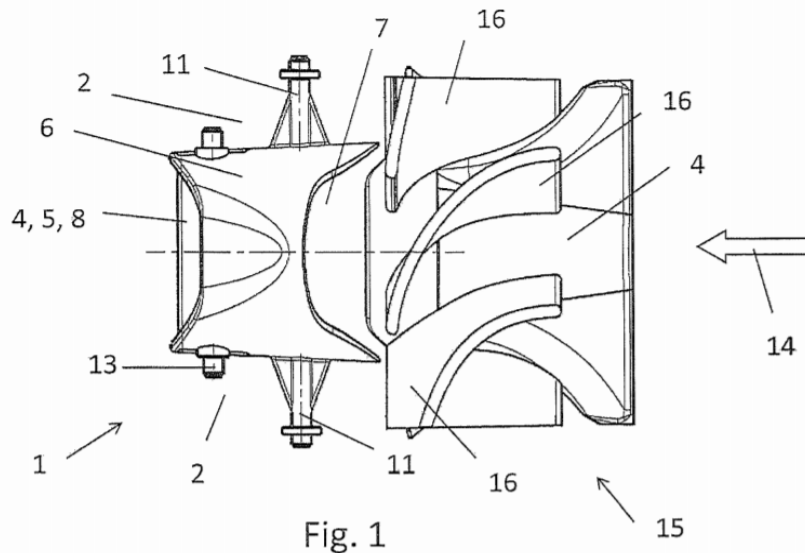


Fig. 1

The primary reference was Lee and the secondary reference was Malott. Lee disclosed all of the elements of the claim, except for, “at least one movable connecting sleeve with at least one air guiding wall.” Malott was cited for its disclosure of this claim element. The examiner’s asserted rationale to combine references was for the advantage that it, “allows for air flow to be distributed to different parts of an automobile with a simple adjustment.”

The Board reversed the § 103-rejection because of redundant advantages, writing that, “Lee already provides such a movable section **that achieves the same function.**” (emphasis added) The structure in the Lee device that performed this same function was, in the Board’s words, a “miniature fan . . . that is clipped to an air vent in a vehicle.” The Board based its reversal on *KSR Int’l Co. v. Teleflex, Inc.*¹⁶⁸ for its rule that rejections under 35 U.S.C. § 103 require a “rational underpinning.”

Although reversal was based on a prominent case (*KSR*), this author suggests that rebuttals that employ redundant advantage arguments should make use of case law more directly addressing the fact-pattern where a second reference provides a

¹⁶⁷ *Ex parte Fritsche*, Appeal No. 2015-001835, Ser. No. 12/912,992 (Nov. 14, 2016).

¹⁶⁸ *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007).

redundant advantage to the primary reference, that is, *Kinetic Concepts, Inc., v. Smith and Nephew, Inc.*¹⁶⁹

*F. Ex parte Henn.*¹⁷⁰ *Redundant Advantages*

Ex parte Henn provides the fact-pattern relating to redundant advantages where the structure provided by the first reference was similar to the structure that was provided by the second reference. Both structures worked in the same way (both were filters). This case illustrates the situation where the examiner argued that more of the same is better, and where the inventor was able to counteract this in a rebuttal arguing that more of the same is superfluous.

The claim was to a method that required use of two different pore sizes. The claim read,

A process comprising . . . providing a process feedstream [of] . . . an aromatic component and . . . bringing the process feed stream into contact with a first zeolite and a second zeolite, wherein the first zeolite and a second zeolite, wherein the first zeolite has a . . . pore size of 0.3 to 0.5 nm, and . . . the second zeolite has a . . . pore size of 0.6 to 0.8 nm.

The claim was rejected in view of the combination of Venkat (U.S. Patent No. 6,617,482) and Gajda (U.S. Patent No. 5,744,686).

The examiner's asserted rationale to combine references was as follows. Gajda disclosed a pore size under 0.55 nm, and Venkat disclosed a pore size greater than 0.56 nm, in equipment used for an alkylation process. The examiner asserted that using both pore sizes would be, "expected to remove more contaminants having different sizes."

In the Appeal Brief, the inventor argued that,

one of ordinary skill . . . reading Venkat would appreciate its disclosed zeolites as an alternative to, or replacement for, the known adsorbents described in Gajda. There is nothing in either reference to indicate that a better purification would be achieved . . . with both the adsorbent of Gajda and the adsorbent of Venkat. In other words, ***one of ordinary skill . . . upon reading Venkat, would have no reason to employ both adsorbents as Venkat would be interpreted by one of ordinary skill . . . as suggesting that doing so would be redundant and superfluous.***¹⁷¹ (emphasis in original)

The Board reiterated the inventor's argument that, "the . . . Venkat reference . . . notes that zeolites having pores with . . . dimensions greater than . . . 0.56 nm . . . perform better than Gajda's smaller pore zeolites." Developing this point, the inventor further argued that, "one . . . would have no reason to employ

¹⁶⁹ *Kinetic Concepts*, 688 F.3d. 1342.

¹⁷⁰ *Ex parte Henn*, Appeal No. 2012-003297, Ser. No. 11/663,326 (Apr. 29, 2013).

¹⁷¹ *Henn*, Appellant's Brief on Appeal, Ser. No. 11/663,326 (May 16, 2011).

both adsorbants as Venkat would . . . be **redundant and superfluous.**” (emphasis added) The Board agreed with the inventor and reversed the rejection.

*G. Ex parte Meinass.*¹⁷² *Redundant Advantages*

Ex parte Meinass concerned a machine that provides bubble-free liquid carbon dioxide. The claim required:

- liquid CO₂ storage tank
- evaporator
- condenser

The § 103-rejection was based on combining Messer (U.S. Patent No. 1,521,385) with Heichberger (U.S. Patent No. 4,498,303). Heichberger disclosed all the elements of the claim, but not, “an evaporator that converts liquid CO₂ . . . into gaseous CO₂.” Messer was cited for its disclosure of this claim element. The examiner’s asserted rationale to combine references was, “for the purpose of achieving a greater purity carbon dioxide.”

The Board reiterated the inventor’s argument, which was that, “there is no need for modifying the system of Heichberger by Messer . . . because Heichberger’s system . . . only requires supply of gaseous CO₂ at one location that is, the condenser.” The Board continued with its reiteration of the inventor’s argument, which was that,

modifying Heichberger to introduce an additional gaseous CO₂ supply . . . **would have no purpose in the system of Heichberger . . . Heichberger already supplies higher CO₂ purity** to a location that requires it . . . Messer . . . would be of no concern or benefit to Heichberger. (emphasis added)

The Board accepted this rebuttal argument and reversed the rejection, citing *KSR* for its rule that the examiner must, “identify a reason that would have prompted a person . . . to combine the elements in the way the claimed invention does” (*KSR* at 418). The Board also based its reversal on *In re Kahn*’s holding that in, “rejections on obviousness grounds . . . there must be some articulated reasoning and some rationale underpinning.”¹⁷³

*H. Ex parte Meoli.*¹⁷⁴ *Redundant Advantages*

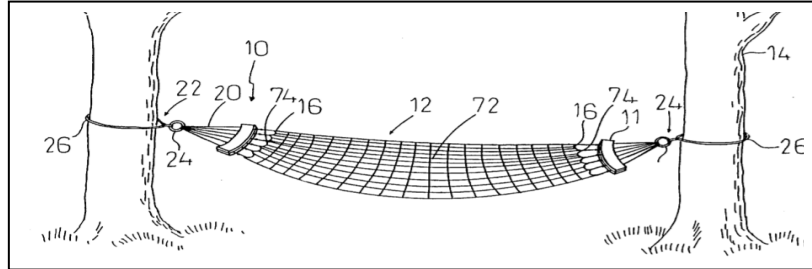
Ex parte Meoli concerned a spreader bar for spreading apart the cords connecting the body supporting member of a hammock. As illustrated in the drawing, structure (12) is a hammock; structure (10) is a spreader bar; structure (11) is a spreader bar; and structure (20) refers to suspension cords. Also, structure (14) is a tree. Although

¹⁷² *Ex parte Meinass*, Appeal No. 2011-003085, Ser. No. 11/493,963 (May 1, 2013).

¹⁷³ *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

¹⁷⁴ *Ex parte Meoli*, Appeal No. 98-1204, Ser. No. 08/609,551 (Sept. 29, 1998).

the “tree” is not part of the invention, it is the case that the “tree” constitutes what is traditionally known in patent law as the “workpiece” of the invention.¹⁷⁵



Nickerson was the primary reference and Lloyd was the secondary reference. Nickerson provided all of the elements of the claim, except for “spreader bar that is curved horizontally and longitudinally.” Lloyd was cited for its disclosure of this claim element.

The examiner’s asserted rationale to combine the Nickerson reference with the Lloyd reference, according to the opinion, was that, “in view of Lloyd, it would have been obvious to curve the spreader bar of Nickerson horizontally and outwardly . . . to increase the body supporting area of the hammock.” The Board referred to the Lloyd reference which showed a spreader bar that is curved horizontally and longitudinally, as is required by the claim. Then, the Board turned its attention to the Nickerson reference, and observed that, “the function of extending the hammock at each end **already is being performed by Nickerson’s vertically curved spreader bars.**” (emphasis added)

In view of the redundant advantages that were shared by Nickerson and Lloyd, the Board held that there did not exist any rationale to combine references, stating, “we fail to perceive any teaching . . . in the references . . . which would have led one . . . to modify the Nickerson spread bars in the manner proposed by the Examiner.” The Board characterized the rejection as having been based on both “hindsight” and on “picking and choosing,” writing that, “one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art,” citing *In re Fritch*.¹⁷⁶ Accordingly, the Board reversed the rejection.¹⁷⁷

*I. Ex parte Richard.*¹⁷⁸ *Redundant Advantages*

Ex parte Richard concerns microspheres that are hydrogel particles. The hydrogel particles were made of a crosslinked polymer and a drug (“a therapeutic agent”). The claim required that the hydrogel particles have property known as, “lower critical solution temperature (LCST).” This particular property resulted in hydrogel

¹⁷⁵ Tom Brody, *Rebutting obviousness rejections based on impermissible hindsight*, 96 J. PAT. & TRADEMARK OFF. SOC’Y. 427 (2014).

¹⁷⁶ *In re Fritch*, 972 F.2d 1260, 1266 (Fed. Cir. 1992).

¹⁷⁷ *Ex parte Meoli*, Appeal No. 98-1204, Ser. No. 08/609,551 (Sept. 29, 1998).

¹⁷⁸ *Ex parte Richard*, Appeal No. 2016-004425, Ser. No. 12/195,806 (Nov. 8, 2017).

expanding or shrinking in response to temperature changes, that is, when exposed to different temperatures after injection in the patient. The particles are introduced into the bloodstream and used to block circulation of small blood vessels, for medical treatment of hemorrhages.

The claim was as follows:

Claim 22. An injectable medical composition comprising temperature sensitive hydrogel particles that comprise a crosslinked polymer and a therapeutic agent,

said hydrogel particles having an ex vivo LCST that is below normal body temperature and whose LCST increases in vivo after injection into a subject from below normal body temperature to above body temperature,

wherein 95 vol% of the hydrogel particles have a longest linear cross-sectional dimension between 30 micrometers and 5000 micrometers.

The § 103-rejection was based on combining the Hennink reference with the D'Emanuele reference. Hennink disclosed most of the elements of the claim, but not, "the preparation of hydrogel particles . . . that . . . are **crosslinked**." (emphasis added) The fact that the Hennink composition is not crosslinked is set forth in the opinion as, "Hennink's composition differs from the composition of the rejected claims in that Hennink does not "explicitly teach the preparation of hydrogel particles from these polymers or that they are crosslinked, as recited in independent claim 22." The D'Emanuele reference was cited for its disclosure of this particular claim element. For this claim element, the D'Emanuele reference was cited for its disclosure of drug-delivering hydrogel-based particles made of **crosslinked** poly(N-isopropyl acrylamide).

The examiner's rationale for combining references was that, "Hennink's polymers would be useful as drug delivery vehicles when treated in the same way . . . **crosslinking** of such polymers yields a shrinking or swelling due to exposure to a temperature above or below the LCST, respectively." (emphasis added) In other words, the examiner had proposed to modify the Hennink polymer to be crosslinked, and where the crosslinking caused the hydrogels to have the desired property of temperature responsiveness. The examiner cited D'Emanuele for its disclosure of crosslinked polymers that shrink in response to temperature change.

The Board observed that D'Emanuele reference achieved controlled release of drugs, and that the Hennink reference each achieved controlled release of drugs, and that different mechanisms were used to achieve controlled release in the D'Emanuele reference and in the Hennink reference. From these facts, the Board concluded that the two references had redundant advantages, and that the fact of the redundant advantages destroyed the examiner's asserted rationale to combine references. To this end, the opinion stated, "Although we thus acknowledge that it was known in the art that crosslinked polymers having an LCST could provide controlled drug release, Hennink's polymers **already provide a controlled release of drug**, due to the hydrolysis of the ester groups on the polymers." (emphasis added)

The Board reversed, writing that,

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

Hennink's polymers **already provide a controlled release of drug**, due to the hydrolysis of the ester groups on the polymers . . . [w]e are not persuaded . . . that the examiner has adequately explained why an ordinary artisan would have used crosslinking to modify Hennink's polymers **to have a property they already possess**. (emphasis added)

The opinion concluded, "We are not persuaded that a . . . skilled artisan would have been motivated to modify Hennink's polymers to have the properties described in D'Emanuele."

The Board cited *Unigene Laboratories, Inc. v. Apotex, Inc.*¹⁷⁹ for its teaching that, "Obviousness requires more than a mere showing that the prior art includes separate references covering each separate limitation in a claim." The Board also cited *KSR* for its teaching that, obviousness requires determining, "whether there was an apparent reason to combine the known elements in the fashion claimed" *KSR* at 418.

*J. Ex parte Sadamitsu.*¹⁸⁰ *Redundant Advantages*

Ex parte Sadamitsu concerned a silicon wafer with an interstitial oxygen concentration of 8×10^{17} atoms/cm³ or less, and a resistance of 100 (ohms)(cm), or more. The obviousness rejection was based on combining the Koronchuk reference with the Morita reference. Koronchuk was cited for its disclosure of all the claim elements, except that the wafer has a "BMD density of less than or equal to 5×10^{17} pieces/cm³." Morita was cited for its disclosure of this claim element.

The examiner's asserted rationale to combine was that the Morita reference provides the advantage where, "a BMD density within the claimed range . . . because a BMD density within the wafer of less than 5×10^{17} pieces/cm³ is expected to **exhibit a higher IG effect**." (emphasis added)

The opinion observed that, "Koronchuk's wafer is **already disclosed** as having both high resistivity and high gettering effect." (emphasis added) Morita defines "IG effect" as meaning an "intrinsic gettering effect." The Board reversed the rejection, citing *KSR* for the rule that obviousness requires a "reason to combine the known elements in the fashion claimed" *KSR* at 418. Thus, this opinion discloses yet another example of the fact-pattern where reversal was based on redundant advantages.

*K. Ex parte Saiki.*¹⁸¹ *Redundant Advantages*

Ex parte Saiki concerned a magnetic recording machine, where information was recorded on a magnetic disc. Noguchi was the primary reference and Kondo was the secondary reference. Noguchi disclosed all of the elements of the claim, except for, "read/write signal processor being connected to the read/write amplifier by a plurality of lines." Kondo was cited for its disclosure of this claim element.

¹⁷⁹ *Unigene Laboratories, Inc. v. Apotex, Inc.*, 655 F.3d 1352, 1360 (Fed. Cir. 2011).

¹⁸⁰ *Ex parte Sadamitsu*, Appeal No. 2010-004917, Ser. No. 10/985,880 (Feb. 28, 2012).

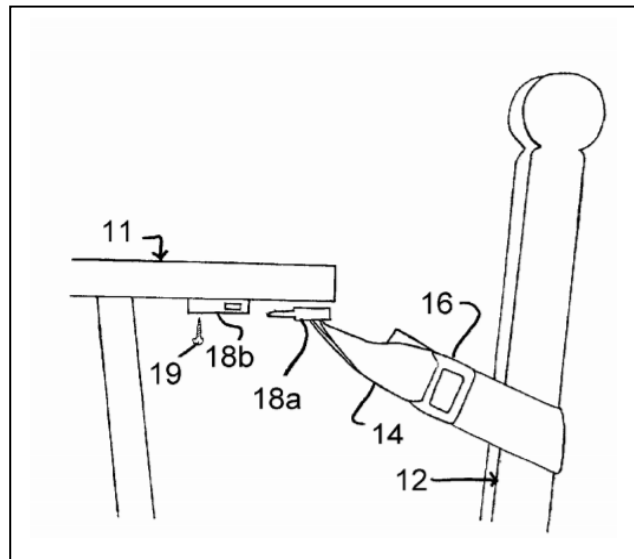
¹⁸¹ *Ex parte Saiki*, Appeal No. 2000-0373, Ser. No. 08/450,245 (Jan. 31, 2002).

The examiner's asserted rationale to combine references was, "to provide a data transmitting apparatus which can correct errors."

The Board observed that, "Noguchi has error correction circuitry . . . and there is **no indication that there is any problem therewith**. Therefore, there would have been no reason . . . to add an error correction circuit to Noguchi." (emphasis added) The Board characterized the rejection as being based on "impermissible hindsight" and also as being based on the examiner having, "picked and chosen only certain elements of each reference and arranged them in the . . . manner as claimed by appellants." Accordingly, the Board reversed the rejection.

*L. Ex parte Salerno.*¹⁸² *Redundant Advantages*

Ex parte Salerno concerned safety straps for securing chairs under a table in order to prevent infants from climbing up on the chair, thereby risking injury. The figure shows table (11), adjustable slide buckle to adjust strap length (16), chair attachment part that is a strap (14), chair (12), male coupler (18a), female coupler, and (19) screw to connect male coupler to underside of table.



The claim required: "a length adjustable chair attachment strap of cloth or plastic." The claim also required, "a table attachment part . . . to attach to an underside of the . . . table."

Apel was the primary reference and Albanese was the secondary reference. Apel disclosed all of the elements of the claim, but was silent regarding the claim's requirement for, "chair attachment is a strap or cloth or plastic designed to be

¹⁸² *Ex parte Salerno*, Appeal No. 2011-004947, Ser. No. 12/359,805 (Sept. 25, 2013).

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

detachably looped about a leg, a brace, a rail, a spindle, or an arm of a chair.” The examiner cited Albanese for its disclosure of this claim element.

The examiner’s asserted rationale to combine the references was, “in order to adjust the strap to loop around any part of the chair for providing enhanced and flexible attachment.”

The Board observed that the Apel device already had this advantage, writing that,

Apel’s nursery chair **already has a screw or pin . . .** that fastens the chain . . . to the chair, thereby fastening the chair to a table. The reason proffered by the examiner to modify the teachings of Apel to include the strap of Albanese . . . is **already performed by the screw or pin . . .** of Apel. (emphasis added)

The Board reversed, writing that,

the examiner’s rejection appears to be the result of hindsight analysis. See *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) . . . ‘rejections on obvious grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’.

M. Ex parte Sutterlin.¹⁸³ *Redundant Advantages*

Ex parte Sutterlin illustrates how one may conduct a *Redundant Advantages* analysis where a § 103-rejection is based on combining three references. The opinion described the basis of the § 103-rejection, which involved combining:

- West reference plus Downey reference with
- Dockery reference

The examiner’s asserted rationale to combine a structure from the Dockery references into a structure formed by the combination of West plus Downey, was the advantage of, “to eliminate redundant RF transmitters and antenna of West/Downey to reduce the hardware complexity and cost.”

The Board reiterated the inventor’s rebuttal argument, which was that, “the system taught by West in view of Downey, would not suggest incorporating the teachings of Dockery because **communication signals are already coupled between separate lines with a wireless link**, which includes the use of a transmitter and receiver.” (emphasis added) The inventor also argued that, “the system taught by West in view of Downey, would not suggest incorporating the teachings of Dockery because **communication signals are already successfully coupled between separate lines with a wireless link.**” (emphasis added)

The Board reversed the rejection, and concluded that,

Thus we agree with appellants . . . that in the system taught by West and Downey, communications signals are already successfully coupled between

¹⁸³ *Ex parte Sutterlin*, Appeal No. 2002-1318, Ser. No. 08/693,662 (Feb. 24, 2004).

separate lines with a wireless link . . . and that there is no need for the antenna taught in Dockery, that is, there is no reason to delete the RF transmitter from the combined teachings of West and Downey.

The Board concluded that the examiner's basis of rejection had been based on "hindsight." The Board cited *W.L. Gore v. Garlock, Inc.*¹⁸⁴ for its teaching that obviousness cannot be found where the rejection was based on hindsight.

N. Ex parte Toy,¹⁸⁵ *Redundant Advantages*

In *Ex parte Toy*, the primary reference was the "admitted prior art" and the secondary reference was the Chambers reference. The admitted prior art disclosed all of the elements of the claim, except for "a concentric slot in the ring extending from a surface of the ring through said center to a point past said center." The Chambers reference was cited for its disclosure of this claim element.

This author points out that the term "admitted prior art" refers to statements in the inventor's specification that a particular structure or chemical has already been disclosed in a publication (either with or without identifying the actual publication). A view of the inventor's specification reveals that it discloses the structure of the "admitted prior art" in its recitation, "FIG. 6 is a radial section of a conventional solid O-ring of the prior art with dimensions for insertion into a cavity."¹⁸⁶ Further details on the nature of the concept, "applicant's admitted prior art," are disclosed by *In re NTP, Inc.*¹⁸⁷

The examiner's asserted rationale to combine references was that the structure supplied by the Chambers reference provided the advantage of, "to permit compression of the O-ring." The Board refused to accept this as a suitable rationale for combining references, writing that, "the admitted prior art O-ring has no need for a slot to be compressed or deformed, as **it already possesses this capability.**" (emphasis added)

Although the Board refrained from citing any case law from the Federal Circuit to support its reversal of the § 103-rejection, the Board did invoke the body of case law on impermissible hindsight by its writing that, "The only suggestion to combine these . . . teachings in the manner proposed by the examiner stems from hindsight knowledge . . . [t]he use of such hindsight knowledge to support an obviousness rejection is . . . impermissible."

VIII. ADVANTAGE NOT NEEDED AND NOT RELEVANT

The PTAB opinions described below reveal the situation where an advantage provided by a structure from the device of the secondary reference was an advantage not needed and not relevant to the device of the primary reference. A glance at these

¹⁸⁴ *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1984).

¹⁸⁵ *Ex parte Toy*, Appeal No. 2004-000931, Ser. No. 10/180,355 (Apr. 21, 2004).

¹⁸⁶ See U.S. Pat. No. 6,776,422.

¹⁸⁷ *In re NTP, Inc.*, 654 F.3d 1279 (Fed. Cir. 2011).

PTAB opinions reveals that reversal was often based on one or more of the following cases from the Federal Circuit:

- *In re Omeprazole Patent Litigation*, 536 F.3d 1361 (Fed. Cir. 2008)
- *W.L. Gore, Inc. v. Garlock*, 721 F.2d 1540 (Fed. Cir. 1983)
- *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132 (Fed. Cir. 1985)

In drafting rebuttal arguments based on *Advantage Not Needed and Not Relevant*, the attorney or agent first needs to detect the examiner's assertion of the advantage that constitutes the rationale to combine references. *In re Kahn, supra*, requires that § 103-rejections be based on a rationale for combining the prior art references. Then, the argument needs to point out that the secondary reference possesses this advantage. And finally, the argument needs to point out that the primary references has no need for this advantage and that the alleged advantage is not relevant to the primary reference. The rebuttal argument needs to conclude that this situation establishes that the rational to combine, as required by *In re Kahn, supra*, had not been properly asserted and that the grounds for the § 103-rejection have been overcome.

*A. Ex parte Blow.*¹⁸⁸ *Advantage Not Needed and Not Relevant*

Ex parte Blow concerned fiber optic cables. Corning was the primary reference and Evans was the secondary reference. Corning provided all of the elements of the claim, but not a "NALM optical interferometer." Evans was cited for its disclosure of this element. The examiner's asserted rationale to combine references was, "for improving overall signal integrity."

The Board's attention turned to the Corning device, and the Board determined that,

the addition of a NALM optical interferometer to the optical interferometer to the optical fiber transmission line in Corning **would serve no purpose**, since the optical pulses . . . in Corning are **not in need of reshaping** . . . it is the presence of the negative dispersion fiber segment already present in the dispersion managed line of Corning, which functions to reshape the pulses that have exited the . . . fiber. (emphasis added)

The Board reversed and concluded that, "for us to accept the examiner's conclusions . . . we would have to improperly selectively ignore significant portions of . . . the Evans reference . . . any attempt to combine them [Corning; Evans] could only come from . . . hindsight."

¹⁸⁸ *Ex parte Blow*, Appeal No. 2007-003811, Ser. No. 10/250,890 (Mar. 28, 2008).

*B. Ex parte Burak.*¹⁸⁹ *Advantage Not Needed and Not Relevant*

Ex parte Burak concerned a method for compressing medical images (radiology images) and for overcoming the problem of maintaining quality (details; resolution) of the medical images during electronic transmission. Ohhashi was the primary reference and Novik was the secondary reference. Ohhashi disclosed all of the elements of the claim except for, “the reconstructed image is a decompressed image.” Novik was cited for its disclosure of this claim element.

The inventor argued that, “the images of Ohhashi have no decompression associated with them so that there is no basis for applying the decompression of Novik to these images.” The Board agreed with the inventor’s argument, writing that, “**Ohhashi has nothing to do with compression and decompression** schemes for image data transmission . . . [t]here is **no loss of image quality that needs to be rectified** in Ohhashi.” (emphasis added) The Board reversed the rejection, writing, “Therefore, not only is the proposed combination of Ohhashi and Novik an apparent attempt to reconstruct the claimed invention in hindsight, but we can see no useful purpose which would be served by combining these teachings.”

The opinion cited *In re Hedges*.¹⁹⁰ *In re Hedges* sets forth the rule that picking and choosing is impermissible, in its recitation that:

The teachings are to be viewed as they would have been viewed by one of ordinary skill. *Kimberly-Clark v. Johnson & Johnson*, 745 F.2d 1437, 1454, 223 USPQ 603, 614 (Fed.Cir.1984); *In re Mercier*, 515 F.2d 1161, 1165, 185 USPQ 774, 778 (CCPA 1975). “It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” *In re Wesslau*, 353 F.2d at 241, 147 USPQ at 393.

*C. Ex parte Conway.*¹⁹¹ *Advantage Not Needed and Not Relevant; Redundant Advantages*

Ex parte Conway reversed the rejection on two grounds:

- *Advantage Not Needed and Not Relevant*, and
- *Redundant Advantages*

Ex parte Conway concerned the combination of a catheter and an introducer. Catheters are flexible hoses for inserting into the veins of patients, or for inserting into the urethra. An introducer is a rigid cylinder that holds the catheter within, where

¹⁸⁹ *Ex parte Burak*, Appeal No. 2004-0823, Ser. No. 09/555,391 (Jan. 21, 2005).

¹⁹⁰ *In re Hedges*, 783 F.2d 1038, 1041 (Fed. Cir. 1986).

¹⁹¹ *Ex parte Conway*, Appeal No. 2015-002702, Ser. No. 13/047,175 (Feb. 28, 2017).

the introducer is used to guide the catheter into the patient's body.^{192,193} The use of introducers for guiding the introduction of a catheter into a patient's body is best illustrated by the Seldinger technique.¹⁹⁴

Rowan was the primary reference and House was the secondary reference. Rowan disclosed all of the elements of the claim, except for, “a tubular body flaring at both first and second ends.” The examiner cited the House reference for its disclosure of this claim element. The examiner's asserted rationale to combine references was that importing the structure from the House device into the Rowan device would, “make the catheter easier to manipulate.”

The Board observed that the primary reference (Rowan) did not have any need for the advantage provided by the secondary reference (House), writing that, “**the examiner has not identified any problem in the device of Rowan** that would be improved . . . by House.” In detail, the Board observed that, “the Rowan catheter is designed to slide . . . inside the Rowan introducer, there is little friction.” (emphasis added)

The Board went a step further and cited Federal Circuit case law teaching that obviousness cannot be found where the secondary reference provides an advantage not needed by the primary reference. To this end, the Board cited, *In re Omeprazole Patent Litigation*.¹⁹⁵ The inventor's Appeal Brief made the same argument, and also cited *In re Omeprazole Patent Litigation*, as a basis for that argument. The relevant excerpt from *In re Omeprazole Patent Litigation*¹⁹⁶ is:

The court further found that a person of ordinary skill in the art would not have inferred from the '495 European application that a negative interaction would occur. Based on those findings, the court concluded that a person of ordinary skill **would have had no reason to apply** a subcoating to the tablets shown in Example 12 of the '495 European application . . . [b]ased on that evidence, the district court reasonably concluded that a person of ordinary skill in the art **would not have seen any need** to apply to Example 12 of the '495 European application the teachings of the references disclosing subcoatings. (emphasis added)

Regarding redundant advantages, the Board wrote that, “Rowan . . . discloses that [the] introducer . . . is fitted over the patient's penis and remains stationary as user slides catheter into the patient's urethra . . . [t]herefore, **Rowan's introducer and catheter are already easy to manipulate.**” (emphasis added) In completing its narrative on redundant advantages, the Board concluded that the rejection was based on “hindsight,” citing *In re Kahn*.¹⁹⁷

¹⁹² Bennett, C.J. et. al., *The effect of urethral introducer tip catheters on the incidence of urinary tract infection outcomes in spinal cord injured patients*, 158 J. UROL. 519 – 521 (1997).

¹⁹³ Dawson, E.A. et. al., *Impact of introducer sheath coating on endothelial function in humans after transradial coronary procedures*, 3 CIRC. CARDIOVASC. INTERV. 148 – 156 (2010).

¹⁹⁴ Seldinger, S.I., *Catheter replacement of the needle in percutaneous arteriography; a new technique*, 39 ACTA RADIOLOGICA. 368 – 376 (1953).

¹⁹⁵ *In re Omeprazole Patent Litigation*, 536 F.3d 1361 (Fed. Cir. 2008).

¹⁹⁶ *Id* at 1380.

¹⁹⁷ *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

*D. Ex parte Fryer.*¹⁹⁸ *Advantage Not Needed and Not Relevant; Redundant Advantages*

In *Ex parte Fryer* the Board reversed the § 103-rejection for two reasons:

- *Advantage Not Needed and Not Relevant*; and
- *Redundant Advantages*

Marchesani was the primary reference and Mills was the secondary reference. Marchesani disclosed all of the elements of the claim, except for, “the wiping material being withdrawn in a direction perpendicular to the axis of the roll, wherein the roll freely rotates with the roll housing portion as the sheets of the wiping material are unwound from the roll.” Mills was cited for its disclosure of this claim element.

The examiner’s asserted rationale to combine references was that the structure from the Mills reference provided the advantage of, “minimizing evaporative losses of the outer tissues of the roll.” The Board observed that the device of the Marchesani reference does not need this advantage, writing that,

Marchesani is **not specifically concerned with evaporative losses . . .** the issue of evaporation is irrelevant with respect to Mills’ dry gauze and . . . there is no teaching or suggestion by Mills . . . that dispensing from the outside of the roll is advantageous for preventing moisture loss. (emphasis added)

In addition to observing that the Marchesani device has no need for the advantage provided by the Mills reference, the Board observed that the Marchesani device already possesses this advantage. To this end, the Board wrote that, “Marchesani’s bag and centrally dispensed roll of moist tissues **already has sufficient structure . . . to maintain an adequately moist environment** for the centrally dispensed roll of moist tissues.” (emphasis added)

The Board reversed on the basis that the rejection was based on hindsight, writing that the, “rejection appears to be the result of impermissible hindsight.” See *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

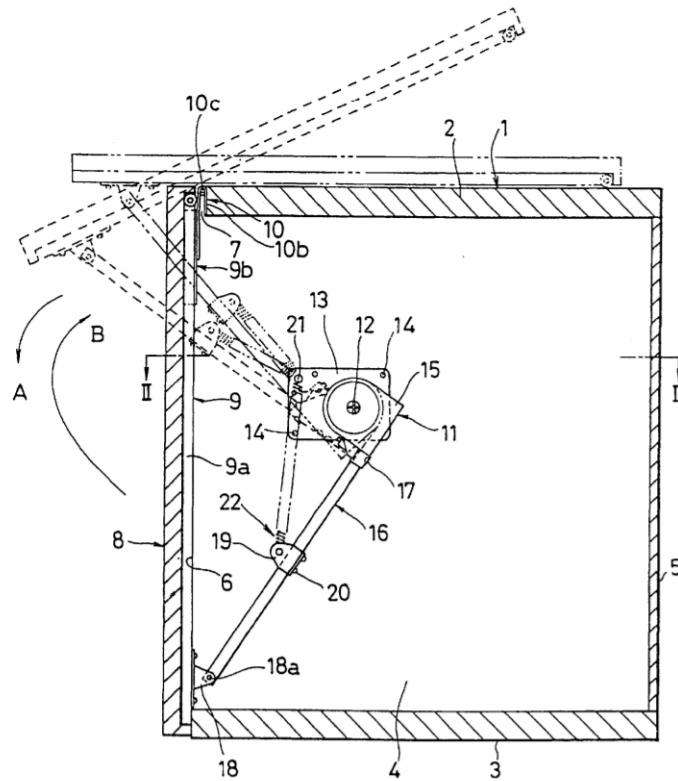
*E. Ex parte Kawanabe.*¹⁹⁹ *Advantage Not Needed and Not Relevant*

Ex parte Kawanabe concerned an overhead door suspended from the top of a cabinet, and capable of being lifted and placed on the roof of the cabinet. The figure shows cabinet (1), overhead door (8), stay (16), spring hook (21), and tension spring (22).

¹⁹⁸ *Ex parte Fryer*, 2010-010327, November 21, 2012, Ser. No. 12/290,586.

¹⁹⁹ *Ex parte Kawanabe*, Appeal No. 1998-1937, Ser. No. 08/518,509 (Jan. 30, 2001).

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant



Carson was the primary reference and Holmes was the secondary reference. Carson disclosed all of the elements of the claim, except for, “a pair of stay holding tension springs, each spring being connected between a point upwardly and forwardly displaced from the base end of a stay.” Holmes was cited for its disclosure of this claim element. The examiner’s asserted rationale to combine references was to provide “the advantage of urging the door toward the open position to provide easy lifting of the door when opening.”

Among the reasons for reversing the rejection, was that, “given that Carson’s invention is directed to a . . . lightweight application of an overhead door as compared to that of Holmes, there is **no . . . need for a complex counterbalance arrangement** like that of Holmes in Carson.” (emphasis added) The Board reversed the rejection and characterized it as being based on hindsight, citing *Interconnect Planning Corp. v. Feil*.²⁰⁰

F. Ex parte Kharazi.²⁰¹ Advantage Not Needed and Not Relevant

Ex parte Kharazi concerned a method for making a semiconductor shield composition, where the method involved adding an elastomer, adding particulate

²⁰⁰ *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143 (Fed. Cir. 1985).

²⁰¹ *Ex parte Kharazi*, Appeal No. 2001-000772, Ser. No. 09/052,429 (Sept. 30, 2002).

carbon black, mixing and melting, adding more carbon black, followed by extruding or by forming pellets. Unger was the primary reference. Kotani reference and Rubber Technology reference were the secondary references. Unger disclosed all of the claim elements, but not the additive amounts used in the first and second steps and not adding carbon black in both steps. Also, Unger did not disclose anything about a “semiconductor shield.” Kotani was cited for its disclosure of “semiconductor shield” and Rubber Technology was cited for its disclosure of the steps of adding, mixing, and heating.

The examiner’s asserted rationale to combine references was, “for the benefit of forming a uniform mixture by melt mixing.”

The inventor argued that the Unger method does not need the methods disclosed by Rubber Technology. The Board reiterated the inventor’s argument that, “there would have been no reason . . . to use a melter in the method of Unger since nothing is being melted in the . . . [Unger] method . . . [t]herefore, **it does not need to be rendered flowable** . . . in the mixing unit by the application of heat.” (emphasis added) The Board cited two Federal Circuit cases for their warnings against impermissible hindsight, and reversed the rejection. The cases were *In re Geiger*²⁰² and *Interconnect Planning Corp. v. Feil*.²⁰³ The relevant part of *Interconnect Planning* complains about § 103-rejections based on combining features that reside in disparate contexts in the two prior art references. The relevant excerpt reads:

In the court’s 1982 analysis of the original claims, to which the court referred in its 1984 decision, the court had identified “six principal features which plaintiff argues are not obvious” and explained why the court concluded that these features are obvious by referring to various prior art references showing **various of the features in various contexts** . . . [a]s we have observed, it is the emphasis on the obviousness of “features”, rather than the claimed telephone system as a whole, that constitutes the flaw in the application of section 103 to the Feil claims. (emphasis added) *Interconnect Planning* at 1141.

To explain this basis of rebuttal, where the secondary reference describes a feature in a context mandating that the feature is needed, and where the primary reference describes a context where that same feature would be out of place and not needed, then the rebuttal argument can arguably rely on *Interconnect Planning, supra*.

G. Ex parte Malaver.²⁰⁴ *Advantage Not Needed and Not Relevant*

Ex parte Malaver concerned an implantable medical device that requires electric power. The claimed medical device acquires power via induction (electrical power transmitted through the patient’s intact skin) instead of via implanted wires. The use of induction instead of wires avoids the problems of infections.

²⁰² *In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987).

²⁰³ *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132 (Fed. Cir. 1985).

²⁰⁴ *Ex parte Malaver*, Appeal No. 2010-007581, Ser. No. 11/214,908 (Aug. 6, 2012).

Drake was the primary reference and Swanson was the secondary reference. Drake provided all of the elements of the claim, except for the “shaft thread” and the “magnetic thread.” Swanson was cited for its disclosure of these claim elements.

The examiner’s asserted rationale to combine was, “to remove debris from the threads.” The inventor argued that, “**Drake does not recognize that there is a problem with dirt or debris accumulating in the threads** which makes it difficult to unscrew the magnetic device.” (emphasis added) The Board agreed with the inventor’s rebuttal argument, characterized the rejection as based on hindsight, and reversed the rejection.

H. Ex parte Mathys.²⁰⁵ Advantage Not Needed and Not Relevant

Ex parte Mathys concerned a mixing machine that included “flow obstacles” and “vortex spheres.” These structures cause viscous fluids to experience “radial and axial inhomogeneities.”

The obviousness rejection was based on combining the Fleischli reference with the Lloyd reference and, alternatively, on combining the Seah reference with the Lloyd reference. Fleischli disclosed all of the elements of the claim but not, “geometrically modified areas in a surface or edge of each primary flow obstacle (vanes).” The Lloyd reference was cited for its disclosure of a “fluid mixing apparatus where a lip or rib . . . at the edge of a cone surface accelerated mixing.” The examiner’s asserted rationale to combine was to “further accelerate the mixing via additional turbulence at the edges of Fleischli’s primary vane.”

The Board observed that the Fleischli device, “**does not involve the type of mixing device that Lloyd teaches . . . would benefit.**” (emphasis added) In detail, the Board observed that the “boundary wall edge lip and bead” of Lloyd could not benefit the Fleischli device. Accordingly, the Board reversed the rejection based on combining Fleischli with Lloyd.

The Board conducted the same sort of analysis, regarding combining Seah with Lloyd, and concluded that Lloyd could not provide any benefit to the Seah device. The Board characterized the rejection as having been based on “hindsight reconstruction.” The Board cited *In re Warner*²⁰⁶ and reversed the rejection.

I. Ex parte Nakamura.²⁰⁷ Advantage Not Needed and Not Relevant

Ex parte Nakamura concerned a diamond that is doped with boron. The claim was to a, “diamond p-type semiconductor having . . . boron in an amount not exceeding 100 ppm.” Tsuji, (U.S. Pat. No. 5,328,548), was the primary reference and Anthony (U.S. Pat. No. 5,451,430) was the secondary reference. Tsuji disclosed all the elements of the claim, except for, “adding boron into the carbonaceous material . . . used in forming the synthetic diamonds . . . to form a boron-doped diamond.” Anthony was

²⁰⁵ *Ex parte Mathys*, Appeal No. 2007-003844, Ser. No. 10/832,881 (Sept. 18, 2007).

²⁰⁶ *In re Warner*, 379 F.2d 1011, 1017 (CCPA 1967).

²⁰⁷ *Ex parte Nakamura*, Appeal No. 2005-001458, Ser. No. 09/732,799 (Sept. 29, 2005).

cited for its disclosure of this claim element. The examiner's rationale to combine was, "to enhance the properties of the diamond."

In the Appeal Brief the inventor argued, "Therefore, nothing in this reference [Tsuji] suggests that any advantage would be gained by the addition of boron thereto and, in fact, this reference teaches away from the . . . claimed invention in that it states that **impurities are undesirable** in . . . single diamond crystals."²⁰⁸ (emphasis added)

The Board complained that, "the examiner has not substantiated why one . . . would have been led to turn to Anthony's teachings . . . by including boron as an additive for forming diamonds, especially in the face of Tsuji's teaching regarding the **avoidance of metal inclusions** in the formation of diamonds." (emphasis added) Regarding Tsuji's teaching to avoid metal inclusions, the opinion wrote,

Tsuji informs one of ordinary skill in the art that the synthetic diamond made should be **free from metallic inclusions** and irregular shaped crystals and that a further improvement can be realized if nitrogen impurity is eliminated. See, e.g., column 3, line 2-21 and column 4, line 39 through column 5, line 4 of Tsuji. (emphasis added)

Turning to the Tsuji reference, one can see its teaching to avoid metal inclusions, "The present invention . . . uses a carbon source containing at least 99.9 atomic % of carbon . . . and which is capable of producing excellent single diamond crystals . . . that are **free from metal inclusions**."²⁰⁹

The Board characterized the rejection as based on "impermissible hindsight," and cited *Grain Processing Corp. v. American Maize-Products Co.*²¹⁰ for the rule that, "Care must be taken to avoid hindsight reconstruction by using the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit." The Board reversed the rejection.

Regarding a fine point, the Board seems to have overlooked the fact the inventor had only argued that the Tsuji reference warned against "inclusions" or "impurities" and that the inventor had not mentioned anything about Tsuji's warning against inclusions or impurities that were "metal." In other words, the real warning in the Tsuji reference was about "metal inclusions." Boron is not a metal, and hence it seems that the inventor had intentionally overlooked this fact in order to be able to make the argument that the Tsuji reference warns against impurities in general. The cited references disclose that boron is not a metal.²¹¹ The inventor had glossed over the fact that boron is not a metal, as shown by the following excerpt from the inventor's Appeal Brief:²¹²

Column 4, lines 59-67 of this reference [Tsuji] discloses that . . . improvements in thermos-conductivity can be obtained if the diamond impurity is completely eliminated. Therefore, nothing in this

²⁰⁸ *Nakamura*, Appeal Brief, Ser. No. 09/732,799 (Apr. 1, 2003).

²⁰⁹ U.S. Pat. No. 5,328,548 col. 3 l. 2 – 10 (emphasis added).

²¹⁰ *Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907 (Fed. Cir. 1988).

²¹¹ G. WULFSBERG, *FOUNDATIONS OF INORGANIC CHEMISTRY*, UNIVERSITY SCIENCE BOOKS, Sausalito, CA, 461 (2017); see also U.S. Pat. No. 8,703,639 col. 13 l. 41; and U.S. Pat. No. 6,603,039 col. 10 l. 35.

²¹² *Nakamura*, Supplemental Appellant's Brief on Appeal, Ser. No. 09/732,799 (Apr. 1, 2003).

reference suggests that any advantage would be gleaned by the addition of boron thereto and, in fact, this reference teaches away from the presently claimed invention in that it states that impurities are undesirable in . . . single diamond crystals.²¹³

*J. Ex parte Rose.*²¹⁴ *Advantage Not Needed and Not Relevant; Redundant Advantages*

Ex parte Rose discloses the fact-pattern where the Board reversed the § 103-rejection for two reasons:

- *Advantage Not Needed and Not Relevant*; and
- *Redundant Advantages*

Yohe was the primary reference, but Yohe did not disclose the claim element, “the sidewall of the base plate to include a plurality of openings.” Waterer, the secondary reference, provided this claim element. The examiner’s asserted rationale to combine was that the element from Waterer provided the advantage of, “in order to allow aeration and drainage.” The Board refused this rationale, writing that, “Yohe, however, **does not give any indication that the drain perforations are inadequate** for their intended purpose.” (emphasis added)

In addition, the Board doubted that the structure from Waterer would even work, when imported into the Yohe device, writing, “Moreover, the lack of any opening in the bottom of the Yohe flower pot . . . casts considerable **doubt on the examiner’s contention that the addition of openings . . . would allow or improve aeration.**” (emphasis added) This second basis of reversal invokes “reasonable expectation of success” doctrine. Reasonable expectation of success doctrine is frequently used by the Federal Circuit for reversing rejections under 35 U.S.C. § 103, such as *Kinetic Concepts, Inc. v. Smith & Nephew, Inc.* 688 F.3d 1342, 1360 (Fed. Cir. 2012).²¹⁵

In the Appeal Brief the inventor reiterated the examiners rationale to combine, writing that the examiners asserted rationale was, “to allow aeration and drainage in the Yohe device.”²¹⁶ Regarding *Advantage Not Needed and Not Relevant*, the inventor argued that, “Even if you . . . take the Waterer teaching [the structure from the Waterer device] and say the openings [openings in the Waterer structure] provide a generic means for drainage, one has to keep in mind that the Yohe false bottom **already allows for draining.**”²¹⁷ (emphasis added)

²¹³ *Nakamura*, Supplemental Appellants’ Brief on Appeal.

²¹⁴ *Ex parte Rose*, Appeal No. 2005-1009, Ser. No. 10/193,027 (June 2, 2005)

²¹⁵

A party seeking to invalidate a patent on the basis of obviousness must ‘demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.’

Procter & Gamble Co. v. Teva Pharm. USA, Inc., 566 F.3d 989, 994 (Fed. Cir. 2009) (quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)).

²¹⁶ *Rose*, Appeal Brief, Ser. No. 10/193,027, (Jan. 22, 2004).

²¹⁷ *Id.*

*K. Ex parte Symons.*²¹⁸ *Advantage Not Needed and Not Relevant*

Ex parte Symons concerned a magnetic focusing system for an electron beam. The focusing system included a traveling wave tube, magnets, pole pieces for focusing, and a beam tunnel. The pole pieces functioned to direct magnetic flux for focusing the beam.

The primary reference was Veith and the secondary reference was Scott. Veith disclosed all of the elements of the claim, except for the “non-magnetic spacers between adjacent pole pieces.” Scott was cited for its disclosure of this claim element. The examiner's asserted rationale to combine was that other focusing systems, “in the same field of endeavor” had “the advantageous benefits of the vacuum sealing spacers.”

The Board's attention turned the fact that the Veith structure could not possibly benefit from the spacers of Scott. On this point, the Board observed that, “There is no vacuum tight envelope around tunnel in Veith, because whatever envelope there is, is provided by soft iron plates which enclose the bar magnet structure. Thus, there **would have been no need** to provide non-magnetic spacers . . . in Veith.” (emphasis added)

Developing this point, the Board added that, “the non-magnetic spacers in the cylindrical geometry focusing system of Scott simply **do not lend themselves for use** in the rectangular geometry focusing system of Veith.” (emphasis added) The Board characterized the rejection as having been based on “impermissible hindsight” and on “picking and choosing.”

The Board also invoked the anti-obviousness case law doctrine of Context. To this end, the Board complained that, “Veith does not require a vacuum seal within the tunnel bore . . . while any desirability of a vacuum seal in Scott . . . is entirely within the **context** of a cylindrical geometry focusing system.” (emphasis added) Here, the Board was contrasted the context of the Veith system with that of the Scott system. Further relying on the Context argument as a basis for reversal, the Board wrote, “We agree with appellant that the non-magnetic spacers in the cylindrical geometry focusing system of Scott simply do not lend themselves for use in the rectangular system of Veith.”

For accounts of “context” as one of the doctrines of anti-obviousness case law, please see *Interconnect Planning Corp. v. Feil*,²¹⁹ as described at an earlier point in this article, as well as the cited review articles.²²⁰

*L. Ex parte Vetesnik.*²²¹ *Advantage Not Needed and Not Relevant*

Ex parte Vetesnik concerned an apparatus to anchor workers busy constructing buildings and to prevent them from falling. The apparatus included a post made of coaxial cylindrical tubes that fit within each other, and a groove and projecting screw

²¹⁸ *Ex parte Symons*, Appeal No. 96-1474, Ser. No. 08/041,765 (Mar. 14, 2002).

²¹⁹ *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132 (Fed. Cir. 1985).

²²⁰ Tom Brody, *Rebutting obviousness rejections by way of anti-obviousness case law*, 99 J. PAT. & TRADEMARK OFF. SOC'Y. 1 (2017); Tom Brody, *Rebutting obviousness rejections based on impermissible hindsight*, 96 J. PAT. & TRADEMARK OFF. SOC'Y. 427 (2014).

²²¹ *Ex parte Vetesnik*, Appeal No. 2008-3965, Ser. No. 10/407,904. (Feb. 5, 2009).

to prevent rotation. The claim required a post made of, “a plurality of coaxial cylindrical tubes.” The claim also required a, “groove, being mounted on the inner tube, and the projecting element, being . . . fixed to the outer tube, preventing relative rotation of the outer tube and the inner tube.”

The primary reference was Baziuk and the secondary references were Murten and Tobako. Regarding the combination of structures proposed by the examiner, the Board complained that, “The only reason that one . . . would modify Baziuk with the groove and projecting element shown in Tobako is if Baziuk’s square tubes were replaced with the Murten cylindrical tubes as proposed by the examiner.”

The Board further complained that, “The Baziuk reference, having square tubing, is not faced with the problem of preventing rotation, and therefore **presents no reason for making the proposed modification** of adding the groove and projecting element of Tobako. The examiner has . . . created a problem, that is, by changing the square tubes of Baziuk to the cylindrical tubes of Murten, in order to solve it with the groove and projecting element of Tobako.” (emphasis added)

The excerpt reading, “presents no reason for making the proposed modification” means the following. It means that the Tobako reference provided a structure, where this structure was not needed by and not relevant to the Baziuk reference.

The Board characterized the rejection as based on hindsight and reversed the rejection, where the reversal was based on case law forbidding § 103-rejections to be based on hindsight and on picking and choosing. The cited case law included, *W.L. Gore v. Garlock, Inc.*²²² and *Interconnect Planning Corp. v. Feil*.²²³

*M. Ex parte Yu.*²²⁴ *Advantage Not Needed and Not Relevant*

Ex parte Yu concerned a claim that read:

A method for making an expandable honeycomb structure suitable for a window covering, the method comprising:

providing a preform made by folding a ribbon of material to a cutter,

wherein the cutter **perforates** the preform to define a row member,

continuously applying at least one line of **adhesive** to the row member at a point downstream of the cutter,

separating the row member from the preform after applying the adhesive to the row member.

The primary reference was Ruggles, and the secondary reference was Hull. According to the opinion, Ruggles disclosed a method and apparatus for, “making honeycomb insulating material for covering windows.” The Hull reference disclosed,

²²² *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983).

²²³ *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138 (Fed. Cir. 1985).

²²⁴ *Ex parte Yu*, Appeal No. 2010-000812, Ser. No. 11/063,764 (Sept. 17, 2010).

“first **perforating** and scoring the preform web, then after applying the continuous band of **adhesive, separating** each row member by accelerating the row member.” The **bold font** highlights the features that are shared by the claim and the Hull reference.

The claim requires perforation before separating. The Board observed that, “Ruggles does not disclose . . . perforation . . . followed by . . . separation.” Now, regarding combining the Hull method into the Ruggles method, the Board observed that, “The examiner relies on Hull for . . . teaching Appellant’s claimed perforation . . . step . . . followed by a final separation step.” The examiner’s asserted rationale to combine references was the advantage provided by Hull that, “minimizes the force required for final separation, which results in registration being never lost.”

The Board refused to accept this as a suitable rationale, writing that it is not the case that the Ruggles reference suggest that problems with registration, “were likewise a concern or problem in the apparatus and method of forming Ruggles’ honeycomb insulation material.” Here the Board was agreeing with the argument in the Appeal Brief. With exemplary clarity, the Appeal Brief argued, “It makes no logical sense to rely on the purported solution to a problem from one prior art reference (Hull) to solve a problem in another prior art reference (Ruggles) when the problem does not exist in the other prior art reference (Ruggles).”²²⁵ The Board characterized the rejection as based on “impermissible hindsight” and reversed the rejection.

IX. OPTION OF DRAFTING AN *ADVANTAGE NOT NEEDED AND NOT RELEVANT ARGUMENT*, AND REFRAINING FROM USING A *TEACHING AWAY ARGUMENT*

Using the same available facts, an attorney or agent can draft an *Advantage Not Needed and Not Relevant* rebuttal argument and can also draft a teaching away rebuttal argument. This author proposes that, when the available facts seem, at first glance, to support a teaching away argument, the attorney or agent should consider instead drafting only an *Advantage Not Needed and Not Relevant* argument. The author bases this recommendation on the high failure rate of teaching away arguments, the tendency of patent practitioners to disregard the stringent requirements of the rule for teaching away, and the unambiguous nature (lack of gray areas) of the rule for applying *Advantage Not Needed and Not Relevant*.

When the Board reviews rebuttal arguments making use of “teaching away,” the Board usually refuses the teaching away argument and affirms the rejection. In only about 11% of PTAB cases, rebuttal arguments making use of “teaching away” succeed in persuading the Board to reverse.²²⁶ The reasons for this high failure rate are

²²⁵ *Yu*, Second Amended Brief on Appeal, Ser. No. 11/063,764, 13 (Oct. 27, 2008).

²²⁶ On December 16, 2017, this author used the term “teaching away” to query the Final Decisions available on the USPTO’s website. The author selected the first 108 consecutive opinions that either affirmed or reversed an obvious rejection where the inventor’s rebuttal was based on a “teaching away” argument. A review of these 108 opinions revealed that in twelve opinions, the argument succeeded and persuaded the Board to reverse, and that in 96 of the opinions, the Board affirmed the rejection. The opinions where the Board reversed were *Ex parte* Patterson, Appeal No. 2016-001355; *Ex parte* Gossele, Appeal No. 2016-002512; *Ex parte* Millard, Appeal No. 2016-007511; *Ex parte* Paton-Ash, Appeal No. 2015-007782; *Ex parte* Brinkman Appeal No. 2017-004234; *Ex parte* Lavedan, Appeal No. 2016-006278; *Ex parte* Kreizinger, Appeal No. 2017-008645; *Ex parte* Mantzis, Appeal No. 2016-

over-zealous use of teaching away doctrine by patent practitioners, as illustrated below in the excerpts from recent PTAB cases.

In some situations, the available facts can support a teaching away and also support an argument for *Advantage Not Needed and Not Relevant*. If the available facts can support both type of arguments, then the attorney or agent should not hesitate to draft both types of arguments. The following documents the situation where the facts can support both arguments. For two of the Board's opinions detailed at an earlier point in this article (*Ex parte Nakamura*²²⁷ and *Ex parte Yu*²²⁸), the inventor submitted both types of arguments in the Appeal Brief. For these two opinions, both arguments were set forth in the Appeal Brief, but the Board's opinion ignored the teaching away argument. The Board agreed with and was persuaded by the *Advantage Not Needed and Not Relevant* argument.

For these two cases, the **characteristic** that was scrutinized in the teaching away argument **was the same as the characteristic** that was scrutinized in the *Advantage Not Needed and Not Relevant* argument. For *Ex parte Nakamura*²²⁹ this common characteristic was an **impurity in a synthetic diamond**. For *Ex parte Yu*²³⁰ the common characteristic was a **method involving first cutting and then applying adhesive**. The fact that the same characteristic (the common characteristic) can be at the center of teaching away analysis and at the center of *Advantage Not Needed and Not Relevant* analysis, supports the following proposal. This author proposes that, when the available facts seem to support a teaching away rebuttal argument, the attorney or agent should also contemplate whether the same facts can support an *Advantage Not Needed and Not Relevant* rebuttal argument. If the facts can support both types of arguments, the attorney or agent might want to consider submitting both types of arguments. But if the facts only support the less-stringent *Advantage Not Needed and Not Relevant* argument, and do not support the more stringent requirement for teaching away, then the attorney should refrain from drafting a teaching away argument.

For *Ex parte Nakamura*, the footnotes disclose the Board's reiteration of the *Advantage Not Needed and Not Relevant* argument,²³¹ the Appeal Brief's *Advantage Not Needed and Not Relevant* argument,²³² and the Appeal Brief's teaching away argument.²³³ For *Ex parte Yu*, the footnotes disclose the Board's reiteration of the

007460; *Ex parte Uhrhan*, Appeal No. 2016-002541; *Ex parte Carrato*, Appeal No. 2016-006607; *Ex parte Jordan*, Appeal No. 2017-002562; and *Ex parte Binder*, Appeal No. 2016-001549.

²²⁷ *Ex parte Nakamura*.

²²⁸ *Ex parte Yu*.

²²⁹ *Ex parte Nakamura*.

²³⁰ *Ex parte Yu*.

²³¹ The Board agreed with the Advantages Not Needed and Not Relevant argument, writing, "we agree with Appellants that the examiner has not substantiated why one . . . would have been led to turn to Anthony's teachings . . . by including boron as an additive for forming diamonds, especially in the face of Tsuji's teachings regarding the avoidance of metal inclusions in the formations of diamonds."

²³² Regarding the Appeal Brief's Advantage Not Needed and Not Relevant Argument, the inventor argued, "Therefore, nothing in this reference suggests that any advantage would be gained by the addition of boron."

²³³ Regarding the Appeal Brief's teaching away argument (requires comparing one of the references with the claims), the inventor argued, "in fact, this reference teaches away from

Advantage Not Needed and Not Relevant argument,²³⁴ the Appeal Brief's *Advantage Not Needed and Not Relevant* argument,²³⁵ and the Appeal Brief's teaching away argument.²³⁶

This author finds it self-evident that the set-point for achieving a successful teaching away argument is more stringent than the set-point for achieving a successful argument for *Advantage Not Needed and Not Relevant*. The more stringent rule, *In re Gurley* states that, "A known or obvious composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use."²³⁷ The fact that practitioners frequently submit teaching away arguments, where the prior art references do not, in fact, quite support this type of argument, is documented by the following excerpts from the Board. The following excerpts disclose the Board's reasons for refusing to accept the teaching away argument (see below). The Board's reasons take the form of a family of related fact-patterns that, when taken together, illustrate the application of Federal Circuit case law on teaching away:

A. *Ex parte Hyde*.²³⁸

The Board refused the inventor's teaching away rebuttal argument, writing,

Furthermore, the teaching away argument is unconvincing because Appellants direct us to no evidence that De France's assembly "should not" or "cannot be" modified according to the disclosure of *Couture. Para-Ordnance Mfg., Inc. v. SGS Imps. Int'l, Inc.*, 73 F.3d 1085, 1090 (Fed. Cir. 1995) (a reference that teaches away will state that it "should not" or "cannot" be used in combination with other reference).

the . . . claimed invention in that it states that impurities are undesirable in . . . single diamond crystals."

²³⁴ The Board's opinion stated, "As Appellant argues, the examiner has not pointed to where Ruggles . . . suggests . . . that the registration issues Hull addresses were . . . a concern or a problem apparatus . . . of forming Ruggles' honeycomb insulation material."

²³⁵ Regarding *Advantage Not Needed*, the Appeal Brief argued that, "It makes no logical sense to rely on the purported solution to a problem from one prior art reference (Hull) to solve a problem in another prior art reference (Ruggles when the problem does not exist in the other prior art reference (Ruggles)." The solution that was allegedly provided by the Hull reference was that Hull disclosed first cutting, and then applying adhesive. Regarding this disclosure of Hull, the Appeal Brief explained that, "The Examiner relied on Hull to reconfigure Ruggles, such as moving the cutting means . . . of Ruggles . . . upstream of the adhesive applying means."

²³⁶ Regarding the Appeal Brief's teaching away argument, the inventor argued that, "Ruggles actually teaches away from applying adhesive after cutting." In view of the fact that teaching away arguments compare one of the references with the claims, please note that the claims required, "applying . . . adhesive to the row member at a point downstream of the cutter." The Appeal Brief recognized the need to compare a reference with the claims, by its citation of *In re Gurley*, 27 F.3d 551 (Fed. Cir. 1994).

²³⁷ *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994).

²³⁸ *Ex parte Hyde*, Appeal No. 2016-002509, Ser. No. 12/460,445 (Nov. 30, 2017).

*B. Ex parte Lakso.*²³⁹

The Board refused the teaching away argument, writing,

Bomemann’s teaching that calcium carbonate is preferred, in part, for its low cost does not rise to a teaching away. See *In re Farrenkopf*, 713 F.2d 714, 718 (Fed. Cir. 1983) (“[Additional expense . . . would not discourage one of ordinary skill in the art. . . . That a given combination would not be made by businessmen for economic reasons does not mean that persons skilled in the art would not make the combination because of some technological incompatibility. Only the latter fact would be relevant.”).

*C. Ex parte Currence.*²⁴⁰

The Board refused the teaching away argument, writing,

Rather, teaching away requires “clear discouragement” from implementing a technical feature. *In re Ethicon, Inc.*, 844 F.3d 1344, 1351 (Fed. Cir. 2017) . . . Appellants have not directed us to any language in Aghili that criticizes, discredits, or otherwise discourages investigation into using pre-separation, reboiling, and/or recycle reflux techniques in a propane recovery system.

*D. Ex parte Gonzalez.*²⁴¹

The Board refused the inventor's teaching away argument, writing,

At most, the cited portions of Wilson teach an alternative to piercing but do not actually criticize or discredit it as an alternative anchoring technique. “[M]ere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed . . .” *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

*E. Ex parte Duffy.*²⁴²

The Board refused the inventor's teaching away argument, writing,

Appellant notes that “Duffy is designed to function with a single strap.” *Id.* However, Appellant’s do not identify any portion of Duffy that criticizes, discredits, or otherwise discourages the use of a second strap. We will not

²³⁹ *Ex parte Lakso*, Appeal No. 2017-001565, Ser. No. 13/514,864 (Nov. 30, 2017).

²⁴⁰ *Ex parte Currence*, Appeal No. 2017-010615, Ser. No. 13/174,002 (Nov. 29, 2017).

²⁴¹ *Ex parte Gonzalez*, Appeal No. 2016-004112, Ser. No. 13/073,443 (Nov. 29, 2017).

²⁴² *Ex parte Duffy*, Appeal No. 2016-005488, Ser. No. 13/727,954 (Nov. 15, 2017).

read into a reference a teaching away from a proposed combination when no such language exists. See *Dystar Textilfarben GmbH & Co. Deutschland KG. v. C.H. Patrick Co.*, 464 F.3d 1356, 1364 (Fed. Cir. 2006).

X. CONCLUSIONS

A. *The most common rebuttal strategies.*

Rebuttal arguments against § 103-rejections most often take the approach of amending the claim to include an additional claim element that is not disclosed by the cited prior art references, or arguing that one of the elements allegedly disclosed by one of the prior art references is actually not disclosed (here, the argument is that the examiner had inaccurately characterized the prior art reference). Another common rebuttal strategy is to argue that the examiner had not asserted the rationale to combine references, as required by *In re Kahn, supra*.

B. *Case law most directly relevant to arguments based on Redundant Advantages or based on Advantage Not Needed and Not Relevant.*

Another rebuttal approach, which can be used in addition or as an alternative, is one that makes use of anti-obviousness case law. About ten different categories of anti-obviousness case law are available. Of these, the category of *Redundant Advantages* and the category of *Advantage Not Needed and Not Relevant* are particularly easy to apply, because they make use of a simple and unambiguous algorithm. The algorithm takes the form of first contemplating the advantage set forth in the examiner's asserted rationale to combine, detecting the recitation of that same advantage in the secondary reference, and then drafting an argument that the alleged advantage is redundant with an advantage already possessed by the primary reference, or drafting an argument that the alleged advantage is not needed by and not relevant to the primary reference.

In this algorithm, the alleged “advantage” set forth by the examiner needs to be the same as an advantage provided by a chemical, composition, structure, or other substance, that is disclosed by one of the cited references. The reason why they need to be the same is that, if the attorney or agent is able to argue that the primary reference has no need for an advantage provided by the secondary reference, then the examiner's asserted rationale to combine reference collapses, and can be characterized as devoid of reason and sense. Where the attorney or agent can establish that the asserted rationale does not make any sense, the result is that, under *In re Kahn*, the basis of the § 103-rejection has been overcome.

The Board occasionally cites *KSR* and *In re Kahn*, as a legal basis when it employs *Redundant Advantages* or *Advantage Not Needed and Not Relevant* in its reversal holdings. But more frequently, the Board cites one or more Federal Circuit cases relating to “impermissible hindsight” or to “picking and choosing,” as a basis for reversal. Cases relating to hindsight and to picking and choosing, such as, *Kinetic Concepts, Inc., v. Smith and Nephew, Inc.*, *In re Omeprazole Patent Litigation*, *W.L.*

(1) Laundry Lists; (2) Redundant Advantages; and (3) Advantage Not Needed and Not Relevant

Gore, Inc. v. Garlock, or *Interconnect Planning Corp. v. Feil*, are more directly focused on *Redundant Advantages* or *Advantage Not Needed and Not Relevant*, than is *KSR* or *In re Kahn*. If an attorney or agent chooses to submit an argument based on *Redundant Advantages* or on *Advantages Not Needed and Not Relevant*, and if the argument cites a few cases from the Board to illustrate how the Patent Office uses these arguments, then it is essential that the argument cites case law from the Federal Circuit (if Federal Circuit case law is not cited, then the examiner will likely respond that cases from the Board do not establish precedent).

C. Federal Circuit's opinions on the size of the alleged laundry list that can reasonably support a rebuttal argument that uses a laundry list-style rebuttal.

Laundry list-style arguments fail, where the argument relies on a disclosure in the prior art that take the form of a short list, such as lists that include only a dozen or so chemicals.

The Federal Circuit has provided guidance on the size of a list in a prior art reference that can reasonably be used as a basis for a laundry list-style rebuttal. For example, *In re Baird*²⁴³ refers to a list of “millions” of compounds, in its statement that, “A disclosure of millions of compounds does not render obvious a claim to three compounds, particularly when that disclosure indicates a preference leading away from the claimed compounds.”

To provide another example, *Otsuka Pharmaceutical Co., Ltd. v. Sandoz, Inc.*²⁴⁴ refers to a list of trillions of compounds, in its holding that, “the far more nebulous disclosure that the trillions of carbostyryl compounds encompassed by the ‘416 patent . . . the ‘416 patent’s “laundry list” of potential central nervous system controlling effects to mean that every carbostyryl derivative disclosed in the ‘416 patent is a potential antipsychotic.”

Fortunately for inventors, the available PTAB cases seem never to require that laundry list-style rebuttal arguments be based only on disclosures in the prior art taking the form of a list that encompasses millions or trillions of chemicals.

D. Alternatives to using the term “laundry list,” in a rebuttal argument, where the claim element of interest resides in a short list or even in a long list in a prior art reference.

This concerns the successful use of “obvious to try” doctrine, where the prior art discloses a chemical corresponding to an element in a claim. Successful use of obvious to try doctrine is shown in the above accounts of *Ex parte Bonner*,²⁴⁵ *Ex parte Chopra*,²⁴⁶ and *Ex parte Kolter*.²⁴⁷ Another rebuttal approach is one making use of *Medichem S.A. v. Rolabo S.L.*²⁴⁸ The rule of *Medichem S.A. v. Rolabo S.L.* is:

²⁴³ *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994).

²⁴⁴ *Otsuka Pharmaceutical Co., Ltd. v. Sandoz, Inc.*, 678 F.3d 1280, 1293 – 1294 (Fed. Cir. 2012).

²⁴⁵ *Ex parte Bonner*, Appeal No. 2014-005298, Ser. No. 12/915,859 (June 27, 2016).

²⁴⁶ *Ex parte Chopra*, Appeal No. 2014-007825, Ser. No. 13/456,619 (July 1, 2016).

²⁴⁷ *Ex parte Kolter*, Appeal No. 2014-009359, Ser. No. 13/319,575 (Aug. 12, 2016).

²⁴⁸ *Medichem S.A. v. Rolabo S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006).

However, to have a reasonable expectation of success, one must be motivated to do more than merely to “vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful.” *Id.* at 903. Similarly, prior art fails to provide the requisite “reasonable expectation” of success where it teaches merely to pursue a “general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it.”

Success from an approach that applies *Medichem S.A. v. Rolabo S.L.* is illustrated in the above account of *Ex parte McMichael*.²⁴⁹

E. Special situation where the prior art’s disclosure takes the form of a word referring to a genus and where the claim is to a species.

*In re Baird*²⁵⁰ includes a rule that can assist in rebuttal arguments that refer to the prior art’s disclosure of the claim element in a laundry list. This rule is that, “A disclosure of millions of compounds does not render obvious a claim to three compounds, particularly when that disclosure indicates a preference leading away from the claimed compounds.”

In re Baird provides yet another rule that can assist in rebuttal arguments. This concerns the fact-pattern where the claim requires a species but the prior art discloses a genus. *In re Baird* teaches that the prior art’s disclosure of a genus cannot render obvious a claim element reciting a species that is encompassed by the genus. A genus can be identified by a word, such as, “carboxylic acid” or by a chemical formula, such as “R₁-CR₂H-CR₃H-COOH.” Typically, where the Specification or a claim recites a genus, such as, “R₁-CR₂H-CR₃H-COOH,” the same patent will define R₁, R₂, and R₃. The definition may take the form: R₁ is one of chlorine, bromine, fluorine, or methyl; R₂ is one of hydrogen, amino, phenyl group, benzyl group, and R₃ is one of hydrogen, propyl, or hydroxypropyl. Where the R groups are defined in this way, the genus takes the form of 48 different chemicals. The number “48” comes from this calculation: 4 x 4 x 3 = 48. R₁ consists of four different groups. R₂ also consists of four different groups. R₃ consists of three different groups.

The rule that a genus cannot render obvious a species is evident from the following excerpt from *In re Baird*²⁵¹ (see below).

The fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious. *In re Jones*, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed.Cir.1992) . . . [w]hile the Knapp formula unquestionably encompasses bisphenol A when specific variables are

²⁴⁹ *Ex parte McMichael*, Appeal No. 2009-002709, Ser. No. 10/624,328 (June 25, 2009).

²⁵⁰ *In re Baird*, 16 F.3d 380 (Fed. Cir. 1994).

²⁵¹ *Id.* at 382.

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chosen, there is nothing in the disclosure of Knapp suggesting that one should select such variables.

“Bisphenol A” is the species of chemical that was required by the claim. This species is encompassed by a genus, where the genus was disclosed by the prior art patent, U.S. Pat. No. 4,634,649 of Knapp. The Knapp patent defined the genus as:

