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The Law of Unintended Consequences as Applied to Restriction of Markush Groups



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The law of unintended consequences has almost universal application. Indeed, it guarantees that decisions made to have an intended effect will often result in effects which are just the opposite of that intended.

In an earlier article, “Untying the Gordian Knot (PTO Style), or A Funny Thing Happened to My Markush Claim” (82 PTCJ 170, 6/3/11), we discussed whether the

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Patent and Trademark Office has the authority to restrict a single claim containing a Markush group. This discussion anticipates the upcoming decision in *Ex parte DeGrado*, No. 2010-005832 (B.P.A.I. briefing ordered May 9, 2011).

Although we opined that controlling case law did not permit the PTO to restrict a single claim regardless of the breadth of the Markush group used in that claim, we believe that the board is likely to support the examiner's improper restriction requirement in that case. In this article, we identify some of the possible unintended consequences of such a decision. First, however, we will attempt to identify the PTO's likely intended consequences of such restriction requirements.

Why do examiners restrict Markush groups in a single claim? A proposed answer

Before computers, word processing, and other electronic and software capabilities, patent applications were abbreviated versions of what they are today. A random sampling of a limited number of patents in the

1950s and 1960s shows that they typically were about six columns in length and the total number of claims was likewise limited.¹ This most likely was an artifact of the technology of the time. Patent applications were typed on carbon paper and errors were difficult to correct without creating additional errors. A page of the application retyped to correct an error or errors often lead to the creation of other typographical errors.² As the specification was invariably limited by the then available technology, so were the number and breadth of the claims that were supported by the specification.

With the advent of word processing and other software to support drafting of documents such as patent applications (e.g., software for chemical structures), and the proliferation of computers, exceptionally long patent applications became more and more common place. With lengthy specifications, the practitioner could easily support broader and broader claims. However, the examiner's ability to review the critical components of patent applications essentially did not change.³ An examiner reviewing a five-page application with 15 claims during the 1950s could much more readily dispose of that application than a today's examiner, who has to review a 500-page application with 75 to 100 claims, especially when each independent claim covers more than a page. Indeed, anecdotal evidence would suggest that the claims presented in a biotech or chemical application today are orders of magnitude more complex than those from 30 to 50 years ago.

Thus the conundrum faced today by the PTO. While the complexity of the application has increased exponentially, the ability of the examiner to review the critical aspects of the claim has remained essentially the same. To address this conundrum, some examiners have increasingly applied restriction practice to a Markush group within a claim. The authors believe the examiners are trying to simplify the claim and to obtain a handle on the search parameters. The examiners likely are taking this step, in part, so that they can complete their "examination" of the application within the time they are allowed for a balanced disposal under the PTO's guidelines. This practice, however, is forbidden by *In re Weber*, 580 F.2d 455 (CCPA 1978), and *In re Harnish*, 631 F.2d 716 (CCPA 1980).

Unintended Consequences

In the authors' opinion there are at least four unintended consequences that likely will arise if the board

¹ Five random patents were reviewed from that era—Nos. 2,987,987, 3,290,919, 3,358,215, 4,010,011 and 4,328,172. Three of these patents were six columns in length, one had 14 columns and the last had four columns.

² Indeed, at the start of one of the authors' careers, a request to an administrative assistant to retype a page or pages of an application was often meant with displeasure (at best) as it meant that the new page had to be typed in such a manner to correct the error(s) and to end exactly where the old page ended. Not an easy feat!

³ While computer technology allows examiners to more rapidly conduct prior art searches, the critical aspects of reading the relevant references and applying them to the claims is still the function of the examiner. Moreover, computer searching likely identifies more references than a hand search in the appropriate classes and subclasses of the patent literature. Thus, the examiner has to read more art to identify the best references and to apply them to the application's claims.

affirms examiners' improper efforts to simplify their admittedly difficult job:

- a) the potential loss of claim coverage by the applicant;
- b) the introduction of written description issues in the newly recast claims;
- c) the validity of the restriction requirement as viewed from the judiciary; and
- d) the standard of duty of disclosure if the restriction requirement is held invalid.

We will evaluate each of these in order.

Potential Loss of Rights

In some areas, the whole can be greater than the sum of its parts. This can be true of patent claims. When a Markush group is divided into several separate claims, the claim scope of the allowable separate claims may not equal the scope of the single, originally-presented claim.

Practitioners typically write Markush groups with great care to ensure that all of the embodiments intended to be within the scope of the claimed invention are included. Examiners, however, typically fragment the claim via a restriction requirement with the sole goal of obtaining a readily searchable structure.

Accordingly, such fragmentation can result in the totality of the fragments being less than the scope of the original claim. Judge Baldwin foresaw this issue in *In re Weber*, 580 F.2d at 458, stating that "[t]he totality of the resulting fragmentary claims would not necessarily be the equivalent of the original claim." Even if the totality of the fragments resulted from a restriction of a Markush group has the same scope as that of the original claim, an applicant may not be able to pursue protection of all the fragments. One of the authors has seen claims divided by the PTO into as many as 100 groups. Few applicants would be able to obtain protection of all these groups in divisional applications.

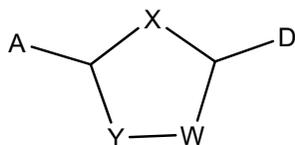
Accordingly, instead of allowing the applicant to define the invention in the manner he or she feels most appropriate, restriction of a Markush group in a claim alters the playing field and allows the examiner to define the invention in a manner that permits easier examination on the merits. The practitioner is left with the debris of the originally presented claim and, in some cases, like Humpty Dumpty, the entire contents of the claim can not be put back together again.

Written Description

In *In re Weber*, Judge Baldwin raised another issue with restriction of a Markush group, stating that "since the subgenera would be defined by the examiner rather than by the applicant, it is not inconceivable that a number of the fragments would not be described in the specification." *Id.* Indeed, a generic claim does not necessarily provide support for every subgenus. This can be illustrated by the following example.

A generic claim claims a method using a compound having a 5-membered ring structure with 3 defined heteroatoms and up to two substituents such as:

where each of W, X, and Y are independently nitrogen, oxygen or sulfur provided that only 1 of W, X, and Y is either oxygen or sulfur; A and D are independently hydrogen, C₁-C₆ alkyl or C₆-C₁₀ aryl either or both option-



ally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl wherein at least one of A or D is not hydrogen.

Let's suppose that the only compounds specifically described and made in the specification for use in that method are those where X is sulfur or nitrogen, Y and W are both nitrogen, A is alkyl and D is hydrogen. There exists a literal description of that genus in the application and the question of enablement should not be raised as such five-membered ring systems are well known in the art as is their synthesis.

Now let's suppose that the Examiner restricts that claim into the following groups:

Group I: methods employing compounds where each of W, X, and Y is nitrogen and A and/or D are C₁-C₆ alkyl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl;

Group II: methods employing compounds where each of W, X, and Y is nitrogen and A and/or D are C₆-C₁₀ aryl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl;

Group III: methods employing compounds where W is oxygen or sulfur and X and Y are nitrogen and A and/or D are C₁-C₆ alkyl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl;

Group IV: methods employing compounds where W is oxygen or sulfur and X and Y are nitrogen and A and/or D are C₆-C₁₀ aryl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl;

Group V: methods employing compounds where X is oxygen or sulfur and W and Y are nitrogen and A and/or D are C₁-C₆ alkyl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl;

Group VI: methods employing compounds where X is oxygen or sulfur and W and Y are nitrogen and A and/or D are C₆-C₁₀ aryl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl;

Group VII: methods employing compounds where Y is oxygen or sulfur and W and X are nitrogen and A and/or D are C₁-C₆ alkyl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl; and

Group VIII: methods employing compounds where Y is oxygen or sulfur and W and X are nitrogen and A and/or D are C₆-C₁₀ aryl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl.

The application contains description of subgenus where X is nitrogen or sulfur and Y and W are nitrogen, A is alkyl and D is hydrogen. Thus, the application provides support and written description for claims directed to Groups I and V. However, there is no description or claims which would support subgeneric claims directed to Groups II, III, IV, VI, VII and VIII.

To obtain coverage of compounds that have been prepared, the applicant elects Group I directed to compounds wherein each of W, X and Y is nitrogen and A and/or D are C₁-C₆ alkyl optionally substituted with halo, hydroxyl, amino, nitro, cyano, and carboxyl in the parent application.

Let's suppose that the applicant then files (and pays for) seven divisional applications directed to other non-elected groups.

Because the specification only describes compounds falling into Group V as defined by the PTO, there is no description of any subgenus or any actual examples corresponding to any of the remaining groups in the other divisional applications. As such, would the claims of these other divisional applications have written description support by the application? Would a challenger of a claim that Y is oxygen or sulfur, X and W are nitrogen and A and/or D is an optionally substituted aryl group be able to argue that there are no blaze marks in the application indicating that the inventor intended those specific structures to be claimed? Would such an argument invalidate the claims for lack of written description? Remember that the Federal Circuit has held that the originally filed generic claim encompassing a subgenus may not provide adequate written description support for the subgenus if the specification does not mark a trail to the subgenus through the woods by supplying blaze marks on the trees. See *Purdue Pharma L.P. v. Faulding Inc.*, 230 F.3d 1320, 1326 (Fed. Cir. 2000) (61 PTCJ 8, 11/3/00) (quoting *In re Ruschig*, 379 F.2d 990, 994-94 (CCPA 1967)). Further, "insufficiency under § 112 . . . [can] not be cured by citing the causes for such insufficiency." *Rohm & Haas Co. v. Mobil Oil Corp.*, 718 F. Supp. 274, 298 (D. Delaware 1989) (citing *In re Johnson*, 558 F.2d 1008, 1019 (CCPA 1977)). In *Rohm & Haas Co.*, the court rejected Mobil's contention that it "was forced to submit subgeneric Markush claims because the . . . [Patent Office] kept requiring a restriction or division of Mobil's generic Markush claims under 35 U.S.C. § 121" and that it "should not now be penalized for complying with the . . . [Patent Office's] requirements." *Id.* The court stated that "the subject matter of claims filed to overcome a § 121 rejection must have been disclosed in the manner provided by the first paragraph of § 112 in order to be entitled to the original filing date" and "[a]n applicant could not divide undescribed subject matter from an application and still retain the original filing date." *Id.* at 298.

Validity of the Restriction Requirement in Litigation

35 U.S.C. § 121 provides applicants with an important right if the PTO casts a restriction requirement:

A patent issuing on an application with respect to which a requirement for restriction under this section has been made, or on an application filed as a result of such a requirement, shall not be used as a reference either in the Patent and Trademark Office or in the courts against a divisional application or against the original application or any patent issued on either of them, if the divisional application is filed before the issuance of the patent on the other application.

That is to say, if the examiner properly divides a claim into several groups and the applicant files divisional applications directed to these groups, the applications cannot be used as references against each other in, for example, an obviousness-type double patenting rejection. Moreover, art that is applicable against one group of restricted claims is not automatically applicable to another group of restricted claims as these claims are, by law, patentably distinct.

Therefore, the applicant would not be required to file a terminal disclaimer in one application over the other divisional applications. However, will a restriction requirement of a Markush group be upheld during litigation?

While the practice of restricting a Markush group is common to examiners of the PTO, this practice is contrary to the case law precedent developed by the Federal Circuit and its predecessor court, the Court of Customs and Patent Appeals. These courts have repeatedly held that restriction practice is between claims and not within a single claim and that if a claim contains an improper Markush group, for example, lack of unity of invention, the claim should be rejected rather than subjected to a restriction requirement, *See, e.g., In re Weber*, 580 F.2d at 458; and *In re Harnish*, 631 F.2d at 721-722.

Let's suppose that the patentee relies on a restriction requirement of a Markush group to defend the validity of claims of the divisional patent, or that the alleged infringer challenges the validity of the patent asserting that the restriction requirement is improper. Would a federal district court, following case law precedent, decide that the restriction requirement is not proper, and therefore claims of divisional patents resulting from the improper restriction requirement can be invalidated based on an obviousness double patenting ground over another divisional patent? Or would the court uphold the restriction requirement and thus run afoul with the Federal Circuit case law? It would likely choose the former path.⁴

While obviousness double patenting can be obviated in some cases by filing a terminal disclaimer, this mechanism is not always available, as a requirement of filing a terminal disclaimer is that both patents must be commonly owned. *See, e.g., In re Fallaux*, 564 F.3d 1313, 1319 (Fed. Cir. 2009) (78 PTCJ 70, 5/15/09); 37 C.F.R. § 1.321. If a patent owner, relying on the restriction requirement, transferred ownership of one of the divisional patents to another party or transferred the ownership of the divisional patents to different parties, a terminal disclaimer would not be accepted to cure invalidity based on an obviousness double patenting ground. In such a case, what would be these patent owner's recourse other than to attempt to reestablish common ownership?

Duty of Disclosure

If a restriction requirement of a Markush group is held invalid in court, there arises yet another possible unintended consequence related to a party's duty to disclose.

⁴ *Rohm & Haas Co.*, 718 F. Supp. 274 indicates the courts' unwillingness to validate an otherwise invalid patent simply because the PTO's action may have led to the invalid patent.

"A patent may be rendered unenforceable for inequitable conduct if an applicant, with intent to mislead or deceive the examiner, fails to disclose material information or submits materially false information to the PTO during prosecution." *Digital Control Inc. v. Charles Machine Works*, 437 F.3d 1309, 1313, 77 USPQ2d 1823 (Fed. Cir. 2006) (71 PTCJ 400, 2/17/06); see also 37 C.F.R. § 1.56(a). In *Therasense Inc. v. Becton, Dickinson & Co.*, No. 2008-1511 (Fed. Cir. May 25, 2011) (en banc) (82 PTCJ 140, 6/3/11), the Federal Circuit set forth a "but-for" materiality standard, stating that "prior art is but-for material if the PTO would not have allowed a claim had it been aware of the undisclosed prior art."

A restriction requirement carries with it a determination by the PTO that the inventions being restricted are independent and distinct and that "[a] patent issuing on an application with respect to which a requirement for restriction . . . has been made, or on an application filed as a result of such a requirement, shall not be used as a reference . . . against a divisional application or against the original application or any patent issued on either of them . . ." 35 U.S.C. § 121. That is to say that it is fair to conclude that a reasonable examiner would not consider that the parent application, possibly including the art cited therein, to be important to the patentability of a divisional application, and vice versa, and would not disallow a claim based on such art.

A question thus arises as to whether an applicant can justifiably rely on the restriction of a Markush group and not submit to the PTO the art cited in the parent application in the later filed divisional application. Further, can an applicant rely on the restriction and not submit in one divisional application references related to another divisional application?

Again, let us illustrate this problem with the above example and suppose that, based on the restriction of Groups I to VIII, the applicant decides not to submit any of the art cited in the application directed to elected Group I in a later filed divisional application directed to Group V. What will happen if the restriction is held invalid in court? Will the withholding of those references in the parent application become a ground of a charge of inequitable conduct as it relates to any of the "divisional" applications filed by the applicant?

Closing Remarks

Thus, while some PTO examiners apply the restriction practice to a Markush group within a claim in order to simplify the claim and to obtain a manageable search scope, such a practice may result in consequences that are not intended by the examiners.

A ruling by the *DeGrado* panel that a restriction of a Markush group within a claim is improper would not only be consistent with the legal precedent but also avoid these unintended consequences by putting an end to such practices.