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YBM Magnex, Inc. v. International Trade Commission

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Of the many hoary doctrines that populate the landscape of patent law, one of the most venerable is the principle that when a patentee discloses more subject matter than he claims, he dedicates the unclaimed matter to the public.\(^1\) The doctrine finds its origins in the nineteenth century case \textit{Miller v. Bridgeport Brass Co.},\(^2\) in which the Supreme Court stated, "[T]he claim of a specific device or combination, and an omission to claim other devices or combinations apparent on the face of the patent, are, in law, a dedication to the public of that which is not claimed."\(^3\) The vitality of the \textit{Miller} rule was demonstrated as recently as 1996, when, in \textit{Maxwell v. Baker},\(^4\) the Court of Appeals for the Federal Circuit interpreted \textit{Miller} to mean that, under the doctrine of equivalents, a patentee could not recover subject matter that had been disclosed but not claimed in the patent.\(^5\)

In \textit{YBM Magnex, Inc. v. International Trade Commission},\(^6\) the Federal Circuit held that unclaimed subject matter disclosed in a patent \textit{can} be doctrinally equivalent to the literally claimed matter.\(^7\) The \textit{YBM Magnex} holding creates tension with the venerable canon noted above. An exploration of the origins and development of the \textit{Miller} rule, however, reveals that it was first enunciated in circumstances unlike those of \textit{YBM Magnex} and that its indiscriminate application, and the variety of meanings that courts have assigned it, are based not on clear direction from the Supreme Court, but on the rule’s broad and ill-defined language. The Federal Circuit’s decision not to apply the rule in \textit{YBM Magnex} was legally sound and equitable, but the court failed to clarify when, if ever, the presence of disclosed but unclaimed matter should bar the availability of the doctrine of equivalents. I propose that the bar should arise only when, as in \textit{Miller}, the patentee explicitly distinguishes his invention from the disclosed but un-
claimed matter, and that the modern patent statutory scheme renders the 
Miller rule largely obsolete outside the doctrine of equivalents.

I. CASE SUMMARY

YBM Magnex, Inc., the plaintiff in this case, owned U.S. Patent No. 4,588,439 (“the ’439 patent”), claiming permanent magnetic alloys of specified compositions. In Claim 1, YBM Magnex claimed certain alloys with oxygen concentrations between 6000 and 35,000 ppm by weight. The specification disclosed alloys with lower oxygen concentrations; these were described as exhibiting poor stability (physical degradation) under conditions of high humidity and elevated temperature.

In earlier proceedings, the plaintiff charged eight parties who imported permanent magnets with infringement of its ’439 patent. Three of those parties entered into a Consent Order. The plaintiff later filed an enforcement complaint, charging the three parties with continuing infringement. While that proceeding was pending, the Federal Circuit decided Maxwell v. Baker. The three accused infringers then argued that their own alloys, which had oxygen concentrations too low for a finding of literal infringement, could not infringe under the doctrine of equivalents because the lower oxygen concentrations had been disclosed, but not claimed, in the patent. Although an administrative law judge (“ALJ”) initially ruled in favor of the plaintiff, the International Trade Commission (“ITC”) concluded that the Maxwell decision compelled it to find that disclosed matter outside the literal scope of the claims is “automatically” dedicated to the public, and therefore that importation of magnetic alloy compositions with oxygen concentrations below 6000 ppm could not infringe the plaintiff’s ’439 patent, the doctrine of equivalents notwithstanding. The plaintiff appealed the decision of the ITC with respect to its interpretation of Max-

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8. See id. at 1318, 46 U.S.P.Q.2d at 1844.
11. See YBM Magnex, 45 F.3d at 1318, 46 U.S.P.Q.2d at 1844.
14. See id.
15. See id.
16. See id. at 1319-20, 46 U.S.P.Q.2d at 1845.
well as binding precedent; because the interpretation was a question of law, the Federal Circuit reviewed the decision *de novo*.  

Judge Newman, writing for the majority, noted that the Supreme Court declined to apply the *Miller* rule when assessing the equivalence of (literally) disclosed but unclaimed matter in the well-known *Graver Tank* decision. In *Graver Tank*, the Court determined that a welding flux incorporating a silicate of manganese was equivalent to a claimed flux incorporating silicates of alkaline earth metals, despite the fact that manganese is not an alkaline earth metal and despite the disclosure of manganese silicate in the specification. The *YBM Magnex* court also observed that in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, the Supreme Court’s most recent pronouncement on the doctrine of equivalents, the Court discussed and rejected the hypothesis that only disclosed matter that is not literally claimed could be found equivalent to claimed matter, implying that equivalence could be found in some circumstances. The court listed several Federal Circuit decisions where, had the *Miller* rule been applied as an inflexible doctrine, the outcome would have differed.

The court pointed out that certain language from *Maxwell*, suggesting that the rule should apply in all determinations of doctrinal equivalency, need not be considered binding authority because it was not necessary to the outcome of that case. The court thus reversed the ITC’s decision and re-
stored the findings of the ALJ. The decision limited Maxwell to the facts of that case rather than explicitly overruling prior Federal Circuit law.

II. DEVELOPMENT OF THE MILLER RULE IN THE SUPREME COURT

An exploration of the Miller rule’s original meaning and subsequent development in the courts helps justify the Federal Circuit’s decision not to apply the rule in YBM Magnex. An historical study also illustrates some of the varying circumstances in which the rule has, and has not, been invoked, motivating a need for a clarification in the rule’s meaning and scope of applicability.

The somewhat abstract concept of “dedication to the public” embodied in the Miller rule was originally linked to the doctrine of abandonment. The phrase first appeared in a Federal case concerning a patented invention more than fifty years prior to Miller, when the Supreme Court observed, “It ... cannot be denied, that an inventor may abandon his invention, and surrender or dedicate it to the public.” A decision just over a decade prior to Miller used virtually identical language. Abandonment was then, as it is today, a statutory bar arising from the acts or inaction of an inventor that prohibits the inventor—but not necessarily others—from patenting his or her invention.

The facts and outcome of the Miller case lend themselves to an abandonment-based analysis. The Miller plaintiff first patented a lamp whose

25. See id. at 1322, 46 U.S.P.Q.2d at 1847. After the YBM Magnex decision, financial penalties imposed by the ITC for violation of the consent order were upheld on appeal. See Sam Huan New Materials High Tech, Inc. v. ITC, 161 F.3d 1347, 48 U.S.P.Q.2d 1965 (1999).


28. See Agawam Co. v. Jordan, 74 U.S. 583, 607 (1868) (“Undoubtedly an inventor may abandon his invention, and surrender or dedicate it to the public....”).

29. See, e.g., DONALD S. CHISUM, CHISUM ON PATENTS § 6.03 (1998). The link to the doctrine of abandonment raises the intriguing possibility that an inventor might have been barred from patenting an invention by virtue of having “dedicated it to the public” (as the phrase is used within the very early Supreme Court decisions), without that subject matter necessarily entering the public domain. As discussed in the text, however, decisions after Miller do not emphasize abandonment, justifying the rule more on the patent’s notice function than on the unmeritorious conduct of the patentee.
stated advantages included the absence of a chimney. 30 The patent was twice surrendered and reissued; the second reissue, which was granted sixteen years after the original, encompassed a design with a chimney. 31 The defendant manufactured lamps with chimneys prior to the second reissue, and, when accused of infringing the reissued patent, successfully challenged its validity in the circuit court. 32 On appeal, the Supreme Court expressed its skepticism that the patentee’s belated claim expansion in the reissued patent arose from a need to correct inadvertent errors in the original (at the time, reissuance to broaden the scope of a patent was not statutorily authorized except as an equitable remedy to correct such errors). 33 Because the reissued patent encompassed subject matter that was not only unclaimed but actively disparaged in the original, the Supreme Court affirmed the circuit court decision invalidating the reissued patent. 34

A few years after Miller, however, the Court invalidated a reissued patent in similar circumstances while skirting the doctrine of abandonment. In Mahn v. Harwood, 35 a patent, that was reissued four years after the original was issued, listed several claims that expanded the reach of the original, while the specification was effectively unchanged. 36 The Miller rule and simple logic would seem to prohibit a reissue in these circumstances. The Mahn Court invalidated the reissue and made clear that it viewed disclosed but unclaimed matter as having entered the public domain, emphasizing the notice function of the patent rather than the misbehavior of the patentee. 37 The Court explained that Miller stood for the principle that, “[A]ll those parts of the art, machine, or manufacture set out and described in the specification, and not embraced in such specific claim, are not claimed by the patentee—at least, not claimed in and by that patent.” 38 If the closing words are read as an endorsement of the hypothetical, they suggest that the statutory bar of abandonment is not always

31. See id.
32. See id. at 350.
33. See id. at 352 (“The pretence ... that there was an inadvertence and oversight which had escaped the notice of the patentee for fifteen years is too bald for human credence.”).
34. See id. at 354; Mahn v. Harwood, 112 U.S. 354, 363 (1884).
36. 112 U.S. 354 (1884).
37. See id. at 355-57.
38. See id. at 361 (“The public is notified and informed ... that [the patentee’s] claim to invention is for such and such an element or combination, and for nothing more.... The public has the undoubted right to use, and it is to be presumed does use, what is not specifically claimed in the patent.”).
39. Id. at 360-61.
raised, or that if raised, it can sometimes be circumvented. Interestingly, the Mahn Court's statement appears to endorse the doctrine ultimately rejected in *YBM Magnex*: that as a matter of law, disclosed material outside the literal ("specific") claims can never be found equivalent to claimed matter.

Given the broad language of the *Miller* rule, it was perhaps inevitable that it would be cited in circumstances completely different from the narrow reissue question that elicited its enunciation. In *Graham v. John Deere Co.*,40 for example, the Court relied on *Miller* to support the principle that subject matter disclosed in a specification, even though not claimed, should be treated as prior art when assessing the obviousness of a patent issued to an independent inventor.41 More recent Supreme Court decisions, indicating the Court's unwillingness to apply the *Miller* rule when assessing equivalency, are discussed in Judge Newman's *YBM Magnex* decision above.


Apparently continuing the abandonment-based doctrine implicit in *Miller*, the U.S. Patent and Trademark Office ("PTO") prior to 1971 refused, except in limited circumstances, to reissue patents where the revised claims encompassed matter disclosed but not literally claimed in the original.42

The Eighth Circuit Court of Appeals first established the relevance of the *Miller* rule in a case turning on infringement by equivalence. In *Adams Electric Railway Co. v. Lindell Railway Co.*,43 the court found noninfringement in part because the plaintiff had dedicated unclaimed subject matter to the public.44 Neither that court nor any subsequent court seems to have considered the possibility that the rule might be irrelevant to the doctrine of equivalents on the straightforward grounds that any "equivalent" subject matter could be considered "claimed" within the meaning of the rule.45

41. See id. at 31-32, nn.17, 35 & 37.
42. See CHISUM, supra note 29, § 6.03[3].
43. 77 F. 432 (8th Cir. 1896).
44. See id. at 449-50 (noting that the only words in the plaintiff's patent that could indicate that he ever thought of the accused device were in the specification, but that this subject matter was omitted from the claims of the patent and, therefore, abandoned to the public).
45. The author thanks Bart Wise for this observation.
The Federal Circuit has made use of the *Miller* rule almost exclusively in doctrine of equivalents cases. That court first cited the relevant portions of *Miller* in 1991 in *Unique Concepts v. Brown*. In *Unique Concepts*, the defendant marketed framing materials where the corners were formed from two linear pieces, mitered then joined. The plaintiff's patent claimed preformed monolithic right-angle corner pieces, but the specification disclosed, as a less-desirable method of forming the corners, "improvise[d] corner pieces" similar to those of the defendant. The court ultimately concluded that the defendant's product did not infringe either literally or under the doctrine of equivalents. Curiously, the *Unique Concepts* court mentioned the *Miller* rule not in its discussion of infringement by equivalence, but in its rejection of literal infringement. This somewhat casual application of the rule is perhaps not of great significance, because the finding of noninfringement was informed primarily by the distinct ways in which the defendant's product and the claimed matter functioned.

The key Federal Circuit decision ultimately reined in by *YBM Magnex* was that of *Maxwell v. Baker*. In *Maxwell*, the plaintiff claimed a system for joining together mated pairs of shoes to prevent their separation, for example, on tables in retail stores. The claimed system utilized a fastening tab sandwiched between the inner and outer sole of each shoe. The tab provided a hole through which a loop of cord could be passed. The defendant's system utilized a tab that was stitched to the "top line" or "counter pocket" of each shoe. The plaintiff's patent specification disclosed methods of attaching the tab virtually identical to those employed...

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47. See id. at 1561, 19 U.S.P.Q.2d at 1503.
48. See id. at 1562, 19 U.S.P.Q.2d at 1503.
49. See id. at 1564-65, 19 U.S.P.Q.2d at 1505-06.
50. See id. at 1562-63, 19 U.S.P.Q.2d at 1504.
51. See id. at 1564, 19 U.S.P.Q.2d at 1505 (quoting the district court's determination that plaintiff and defendant are "doing something in a completely different way" to support its finding that the district court had not committed clear error).
52. 86 F.3d 1098, 39 U.S.P.Q.2d (BNA) 1001 (Fed. Cir. 1996).
53. See id. at 1101, 19 U.S.P.Q.2d at 1002.
54. See id. at 1102, 19 U.S.P.Q.2d at 1002-03.
55. Tabs are, of course, unnecessary for shoes with eyes for laces, buckles, or similar features. The tab-based systems at issue in *Maxwell* were designed for shoes having nothing topologically equivalent to a permanent "through-hole."
by the defendant,\textsuperscript{57} but the relevant claim mentioned only the "sandwiched-between-the-soles" approach.\textsuperscript{58} Because the district court subsequently conceded that no reasonable jury could have found literal infringement, the jury’s finding of infringement must necessarily have been based on the doctrine of equivalents.\textsuperscript{59} The defendant moved for judgment as a matter of law, relying at least in part on the principle that the patentee had dedicated to the public the subject matter that had been disclosed but not claimed.\textsuperscript{60} The district court denied the motion and the defendant appealed.\textsuperscript{61}

The Federal Circuit, relying on \textit{Miller}, Unique Concepts, and \textit{Environmental Instruments, Inc. v. Sutron Corp.}\textsuperscript{62} reversed the district court’s denial of judgment as a matter of law and stated, as a matter of law, that the defendant “could not infringe by using … [a] system that Maxwell dedicated to the public.”\textsuperscript{63} The \textit{Maxwell} court distinguished \textit{Graver Tank} on the basis that the accused welding flux literally infringed claims that were extant in the patent when issued but were subsequently invalidated.\textsuperscript{64} The \textit{Graver Tank} patentee, in other words, had not intentionally dedicated the subject matter to the public.

Soon after \textit{Maxwell}, the Federal Circuit relied on what it called the “rule of \textit{Maxwell}” to affirm a finding of partial noninfringement in \textit{Brunswick Corp. v. United States}.\textsuperscript{65} In \textit{Brunswick}, the defendant manufactured screens designed to be draped over military hardware to provide radar camouflage.\textsuperscript{66} The plaintiff’s patent claimed screens with a surface electrical resistivity within a specified numerical range; the court ruled out literal infringement because the defendant’s unmodified polyester/steel cloth screens fell sufficiently outside the claimed range.\textsuperscript{67} Although the patent

\textsuperscript{57} See id. at 1106, 39 U.S.P.Q.2d at 1006 (citing the specification of U.S. Patent No. 4,624,060: “[Alternatively, the tabs may be] stitched into a lining seam of the shoes at the sides or back of the shoes.”).

\textsuperscript{58} See id. at 1102, 39 U.S.P.Q.2d at 1003.


\textsuperscript{60} See id. at 1101, 1106, 39 U.S.P.Q.2d at 1004, 1006.

\textsuperscript{61} See id. at 1101, 39 U.S.P.Q.2d at 1004.

\textsuperscript{62} 877 F.2d 1561, 1564, 11 U.S.P.Q.2d (BNA) 1132, 1134 (Fed. Cir. 1989) (stating, without citation support, a variant of the \textit{Miller} rule: “The disclosure of a patent is in the public domain save as the claims forbid.”).

\textsuperscript{63} \textit{Maxwell}, 86 F.3d at 1108, 39 U.S.P.Q.2d at 1007.

\textsuperscript{64} See id. at 1107, 39 U.S.P.Q.2d at 1006-07.


\textsuperscript{66} See id.

\textsuperscript{67} See id.
specification did not explicitly disclose a surface resistivity corresponding to the defendant’s screens, tabular information in the specification, plus certain assumptions and mathematical calculations, could yield the defendant’s numerical values. The plaintiff argued that the “rule of Maxwell” did not bar a finding of equivalent infringement because the defendant’s surface resistivities were not “apparent on the face of the patent” (echoing but not citing the language of Miller). The Brunswick court rejected this limitation of the rule. Noting that a patent addresses a reader skilled in the relevant art, and that such a reader would have little difficulty performing the necessary calculations, the court rejected the plaintiff’s contention that the defendant’s products could infringe by equivalence because they were “hidden” rather than apparent in the specification. The Brunswick court skirted the question of whether the Miller/Maxwell rule should apply in all circumstances, but found that the facts of Brunswick were sufficiently close to those of Maxwell that the rule should apply.

IV. SUMMARY: A RULE OF UNCERTAIN MEANING AND UNCERTAIN STATUS

Courts have attached at least three distinct meanings to the “rule” about disclosed but unclaimed subject matter. In Miller and Mahn v. Harwood, the Court invalidated a reissued patent because it encompassed disclosed but unclaimed subject matter from the original. Graham v. John Deere Co. suggested that the rule supports the principle that subject matter in the specification of an issued patent, although not claimed, constitutes published prior art for purposes of assessing the obviousness of another patent. Although Maxwell, Brunswick, and YBM Magnex reached divergent conclusions as to whether the rule is universally applicable, the meaning of the rule was consistent among the three opinions—it operated in a fashion analogous to prosecution history estoppel, barring a patentee from recapturing any disclosed but unclaimed subject matter under the doctrine of equivalents. “Dedication to the public,” if divorced from its historical context, would seem to require all of these treatments and
probably others as well, yet the Supreme Court has consistently chosen not to assign a special treatment to disclosed but unclaimed matter within the doctrine of equivalents. The awkward history and uncertain status of the rule establishes that the Federal Circuit did not act outside its authority in declining to apply the rule in the *YBM Magnex* decision.

Neither the recent Federal Circuit decisions nor the history of the rule, however, do much to clarify the circumstances, if any, under which disclosed but unclaimed subject matter *should* be accorded a special status. Even within the doctrine of equivalents, the mixed messages sent in *YBM Magnex* and *Maxwell* have provided little guidance. Leaving the district courts to speculate about the law is likely to create inconsistencies among outcomes, uncertainty among litigants, and frequent appeals to the Federal Circuit.

The problem of disclosed but unclaimed subject matter has generally arisen in a fairly specific set of circumstances: where a patent discloses and enables an aspect of the invention that is the subject of the patent, but where that disclosed and enabled aspect falls outside the literal scope of the claims. I adopt this definition for the remainder of this Note.

Two broad arguments can be raised against a sweeping, *Miller*-like rule for disclosed but unclaimed subject matter. The first is that the existence of such a rule would encourage inventors to minimize the subject

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73. At least one district court invoked the rule in a “combination” case involving both the doctrine of equivalents and multiple independent patents granted to a single inventor. In *Washburne v. Consolidated Safety Pin Co.*, 197 F. 552 (D.N.J. 1912), disclosed but unclaimed subject matter in an early patent limited the reach of the doctrine of equivalents in the patentee’s subsequent patent, where the subsequent patent, although described as an “improvement,” was not a reissue. See id. at 554.

74. Although the proposed definition may strike some readers as unnecessarily wordy, a meaning narrower than simply “disclosed but unclaimed subject matter” is required to avoid absurd results. For example, in a patent for a closed-cell foam, the specification might illustrate the foam’s utility as padding beneath a variety of vibrating industrial machines. Those machines might be disclosed and unclaimed, but it makes little sense to view them as having entered the public domain or meriting any other special treatment. Furthermore, imprecise use of language in this area can lead to muddling of the “rule” about disclosed but unclaimed subject matter with a comparably ancient and even less defensible principle: that if a patentee chooses to *disclose and claim* only a portion of her invention, the “residue” is presumptively dedicated to the public. See, e.g., Peter G. Dilworth, *Some Suggestions for Maximizing the Benefits of the Provisional Application*, 78 J. PAT. & TRADEMARK OFF. SOC’Y 233, 239-40 n.17 (1996) (citing *Miller, Mahn v. Harwood*, and a quotation from *McClain v. Ortmayer*, 141 U.S. 419, 423-24 (1891) (“Nothing is better settled ... than that the patentee may claim the whole or only a part of his invention, and that if he only describe and claim a part, he is presumed to have abandoned the residue to the public.”)).
matter disclosed in their patents. A rational applicant who realizes that her specification may be used against her will disclose only the bare minimum of information necessary to secure the patent. All else being equal, the more a patentee discloses, the greater the benefit that the public receives. The second argument rests on the empirical observation that the various courts have heretofore been unable to agree upon a rule of general applicability. This lack of consensus demonstrates that fashioning such a rule will be at least difficult, and perhaps impossible to reconcile with the equities presented in the wide range of fact patterns to which it would be applied.

V. LIMITING THE RULE’S SCOPE TO THE DOCTRINE OF EQUIVALENTS

The modern statutory scheme largely preempts the Miller rule when multiple patents or reissues are involved. Today, the claims of a patent may be expanded in a reissue only if the reissue is applied for within two years of the grant of the original. In addition, reissuance is unavailable if the patentee practiced “deceptive intention.” The first statutory safeguard, and perhaps the second, prevent the inequitable reissue problem that arose in Miller. No patent can claim subject matter disclosed in a prior patent issued more than one year prior to the application in question. When an original application is divided into multiple divisional applications (as the PTO Commissioner may require if the original claims two or more independent and distinct inventions), the resulting patents may not be used against each other either in the PTO or in the courts, further limiting the sphere in which a Miller-like rule could operate.

The Miller rule is especially difficult to harmonize with continuation applications, now statutorily authorized under 53 U.S.C. § 120. While a patent is pending before the PTO, its inventor may file a continuation application referencing this “parent” application; if the continuation discloses no new matter, then the continuation—when it ultimately issues—gains benefit of the parent’s filing date. This process clearly contemplates a period after the issuance of the parent when the public, unaware of the pending continuation (but perhaps aware of the Miller rule) might be-

76. See id.
77. See id. § 102(b).
78. See id. § 121.
79. See id.
80. See CHISUM, supra note 29, § 13.01 for a more complete discussion of continuation applications.
gin to practice matter that is disclosed but unclaimed in the parent. Because the claims of the continuation can be broader than those of the parent, there is obviously a potential for infringement when the continuation subsequently issues. There seems to be no case law to reconcile the *Miller* rule with the continuation process.

If the *Miller* rule remains viable in the multiple patent or reissue context, its relevance is limited to narrow interstices in the statutory scheme. The *YBM Magnex* decision says little about the rule’s viability outside the doctrine of equivalents. From the observations above, and the fact that the Federal Circuit has discussed the rule almost exclusively within the doctrine of equivalents, it could be inferred that the modern statutory scheme provides the preferred framework within which to evaluate the appropriate scope of disclosure and claims when multiple patents or reissues are involved.

Statutory law intrudes little into the doctrine of equivalents, leaving a potentially significant sphere within which judge-made laws like the *Miller* rule could operate. One notable limitation is imposed by the doctrine of prosecution history estoppel, which limits the availability of the doctrine of equivalents when the applicant has explicitly surrendered subject matter during patent prosecution and is unable to rebut the presumption that the surrender was made to comply with the requirements of patentability. Thus, the relevance of any special rule barring recovery under the doctrine of equivalents of disclosed but unclaimed matter is limited to circumstances where prosecution history estoppel does not independently bar such a recovery.

The *YBM Magnex* decision establishes that disclosed but unclaimed matter can be equivalent to literally claimed matter in some circumstances. Determining the circumstances in which the *Miller* rule does and does not apply is logically equivalent to developing an entirely new rule (or perhaps “meta-rule”). In the remainder of this Note, I explore the difficulties associated with two broad categories of rule: those where the decision to bar recovery under the doctrine of equivalents is shaped by the functional relationship that the disclosed but unclaimed matter bears to the claimed matter, and those where the outcome depends on the reason for the appearance of the disclosed but unclaimed matter in the patent.

A. Difficulties With Functional Relationship Rules

It is difficult to envision a functional relationship rule that would not be redundant with or hopelessly complicate the tests already incorporated in the doctrine of equivalents itself, such as the function-way-result test, the interchangeability test, or other variations on the “all elements” test employed according to the nature of the invention. Rules of this type, and their difficulties, are best illustrated by an example—such as the rule enunciated by the first district court to attempt to harmonize the recent Federal Circuit decisions. That court determined that a bar to the doctrine of equivalents arises when, as in *Maxwell*, the disclosed but unclaimed matter represents a “distinct system or method” when compared to the claimed matter, but that *YBM Magnex* permits a finding of doctrinal equivalence when the disclosed but unclaimed matter is simply an “alternative material.” The rule is of limited usefulness, because its prongs fall far short of encompassing the range of possible relationships that an accused device might bear to the claimed matter in a patent. The first prong seems redundant (an accused product that is a “distinct system or method” would ordinarily fall outside the range of the doctrine of equivalents in any case); the second provides little insight beyond the fact pattern of *YBM Magnex*. Another functional relationship rule suggested by the fact patterns discussed in this Note might be shaped by whether the disclosed matter and claimed matter differed by only a numerical specification. This rule too would lead to territory already well-explored as part of the general principles of doctrinal equivalence.

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84. See *Johnson & Johnston Assoc., Inc. v. R.E. Serv. Co., Inc.*, 1998 WL 545010 at 3-4 (N.D. Cal. Aug. 24, 1998) (denying a defendant’s motion for summary judgment on the grounds that the specification disclosed an invention with substrates made of “aluminum … [or] other metals, such as stainless steel or nickel alloy,” while the claims recited only aluminum substrates, thereby dedicating to the public those embodiments with non-aluminum metal substrates).

85. In this regard, the district court judge’s denial of the *Maxwell* defendant’s motion for judgment as a matter of law would appear to be clearly erroneous. The method by which the defendant affixed tabs to shoes was entirely distinct from the claimed method.

Any functional relationship rule of general applicability that is, as Miller suggests, a matter of law, would place the district court judge in the position of carrying out what has heretofore been characterized as a fact-finding function. The Supreme Court has indicated that summary judgment or judgment as a matter of law on issues of doctrinal equivalence is appropriate if the court determines that prosecution history estoppel or a similar doctrine renders the doctrine of equivalents unavailable. A functional relationship rule vitiating doctrinal equivalence for disclosed but unclaimed matter would require the court to perform analyses akin to the functional relationship tests of the doctrine of equivalents itself, which have been deemed to be the purview of the jury. Furthermore, a system in which the court first analyzed the functional relationship between disclosed but unclaimed matter and the literal claims, followed, if need be, by a jury determination of doctrinal equivalence between an accused device and the literal claims, seems extraordinarily complex and subject to uncertain standards of review. If the accused device were not identical to the disclosed but unclaimed matter, their differences would raise the specter of the need for yet a third functional relationship test. Assigning all of the tests to the jury might simplify the standards of review, but would not resolve the complexity problem.

B. Difficulties With Reason-Based Rules

Problems also abound with most reason-based rules. The number of potential reasons for the appearance of disclosed but unclaimed matter in a patent is large. In many cases there will be little evidence to help discriminate among them. Even where the reason is clearly identified, determining the "best" result (the normative decision whether to bar the patentee from recovering the subject matter) can be difficult.

Turning first to the range of potential reasons for the appearance of disclosed but unclaimed matter, the cases discussed in this Note suggest at least five fairly distinct ones. Those reasons, and the cases speculatively associated with them, include:

1. Inadvertent error. An omission from the claims might go unnoticed during patent prosecution. Inadvertent error is the simplest explanation for

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88. See id. at 1053, 41 U.S.P.Q.2d at 1875.
89. The reader should be cautioned that the reasons proposed for the appearance of disclosed but unclaimed subject matter are supported not by legal authority but by the considered opinion of the author, based on hints in each case.
the presence of the unclaimed shoe fastening system in the Maxwell patent.90

2. Error of judgment. A patentee might mistakenly believe that patentable subject matter is in the prior art, disclose that subject matter in the specification, and tailor the claims so as not to encompass that subject matter. Alternatively, a patentee might limit the scope of a claim because of a mistaken interpretation of patent law. The YBM Magnex patent specification touts the advantages of the invention under conditions of heat and humidity; perhaps the patentees erroneously believed that the patent could be challenged on enablement or usefulness grounds if it claimed alloys that did not survive particularly well in that environment.91 (Alternatively, it is possible that alloys with lower oxygen concentrations were genuinely in the prior art, but if so, it is surprising that the accused infringers did not so allege.)

3. Good faith use of the specification as a public forum. A patentee might use the specification to distinguish her invention from what she believes is an undesirable or less desirable embodiment to facilitate prosecution. This seems to have been the original motive of the Miller patentee.92 Alternatively, the patentee might use the specification to discourage others from what he believes is wasteful research into nonproductive areas.

4. Bad faith use of the specification as a public forum. A patentee might disclose unclaimed subject matter in the specification, intending to entrap infringers under the doctrine of equivalents. A particularly evil-minded applicant might intimate that the unclaimed matter is in the prior art, inducing a competitor to practice the subject matter with impunity. Alternatively, the patentee might disclose and disparage some aspect of the invention that he in fact knows to show great promise, in order to discourage competitors from pursuing further research in that area.

5. Judicial intervention. The patentee may have intended to claim literally to the full extent provided by the disclosure, but a court, as in a Markman hearing,93 might interpret a claim more narrowly than the pat-

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The paucity of evidence generally makes it difficult to determine which of the reasons, or combinations thereof, is relevant in a given fact pattern. The parallel doctrine of prosecution history estoppel emphasizes the detailed language of the claims themselves, which both the applicant and examiner scrutinize carefully. Finalization of claim language often generates a record of sophisticated exchanges between applicant and examiner. By contrast, the presence of disclosed but unclaimed matter results from an interplay of the claims and the specification, and both the applicant and examiner generally have less incentive to scrutinize the latter. Because the specification does not formally limit the scope of the patent claims, the applicant (especially one who is unaware of the Miller rule) has less concern about its detailed content. The examiner will ensure that the specification provides sufficient support for the claims but has no particular reason to be concerned with whether it discloses too much.

Even when the reason for the appearance of disclosed but unclaimed matter is apparent, the decision to bar recovery under the doctrine of equivalents is not always straightforward. For example, if inadvertent error is the root cause, equity to the patentee would favor a rule that did not bar recovery. Alternatively, it could be argued that in such circumstances recovery should most assuredly be barred, in order to foster careful, conscientious patent prosecution. Similar equitable and "tough love" justifications can be raised on both sides for many of the reasons listed above. Complicating the decision to bar recovery in each circumstance is the fact that the consequence of the unclaimed disclosure is not always easy to predict. For inadvertent disclosure, the result is generally that the public receives the benefit of "free" information. If a specification discloses—whatever the motive of the patentee—that a particular area of investigation is not promising, however, the result might be a reduction in the research


95. See Constant v. Advanced Micro-Devices Inc., 848 F.2d 1560, 1571, 7 U.S.P.Q.2d (BNA) 1057, 1064-65 (Fed. Cir. 1988) (noting the principle that limitations should not be imported from the specification into the claims); but see Vehicular Techs. Corp. v. Titan Wheel Int'l, 141 F.3d 1084, 1090, 46 U.S.P.Q.2d (BNA) 1257, 1261 (Fed. Cir. 1998) (holding that language in the specification can help determine the functionality of a claimed element for purposes of doctrinal equivalency). Judge Newman dissented from Vehicular Technologies, decrying what she referred to as the "All-Advantages Rule," that equivalency can be found only if the advantages mentioned in the specification, although not included in the claims, are possessed by the accused device. See id. at 1093, 46 U.S.P.Q.2d at 1263 (Newman, J., dissenting).
in that area, or a stimulation of research as others rise to the challenge posed. Whether the former or the latter is the "better" outcome can not easily be predicted, arguing against an inflexible rule.

Only in the fact pattern of *Miller* itself, where the patentee explicitly distinguishes his invention from some unclaimed subject matter, can a glimmer of justification for a reason-based rule within the doctrine of equivalents be found. Although the motive of the patentee will not always be evident, the effect of the patent on an independent reader of ordinary skill in the art can be predicted. The presence of disclosed *disclaimed* matter would lead such a reader to conclude that the patentee, for whatever purpose, actively chose to limit the scope of his or her patent to avoid this matter. Insofar as the patent specification retains a notice function,\(^{96}\) it would seem, as a matter of equity, that in these limited circumstances the public should be permitted to practice the disclaimed matter free from concern that the patentee will recapture it under the doctrine of equivalents.

VI. CONCLUSION

The *YBM Magnex*\(^{97}\) decision establishes that a patentee is not always barred from recovering, under the doctrine of equivalents, subject matter that is disclosed but not claimed in the patent. Although the decision leaves open the possibility that the contrary rule, established over a century ago in *Miller v. Bridgeport Brass Co.*,\(^{98}\) might remain dogma across multiple or reissue patents, examination of the modern statutory scheme suggests that the *Miller* rule has been rendered largely obsolete outside of the doctrine of equivalents. The *YBM Magnex* decision offers little guidance as to when, if ever, a bar to the availability of the doctrine of equivalents should arise. Because of the intrinsic and substantial difficulties associated with any broadly applicable framework that could provide such guidance, I propose that the doctrine of equivalents remain available unless the patentee has explicitly distinguished or distanced his invention from the unclaimed subject matter.


\(^{97}\) 145 F.3d 1317, 46 U.S.P.Q.2d (BNA) 843 (Fed. Cir. 1998).

\(^{98}\) 104 U.S. 350 (1881).