CHAPTER 3

THE DOCTRINE OF EQUIVALENTS
AND § 112 EQUIVALENTS

Glen P. Belvis

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§ 3.01 OVERVIEW OF THE DOCTRINE OF EQUIVALENTS AND § 112 EQUIVALENTS

The Federal Circuit has now had well over a year to interpret and apply the Supreme Court’s decision in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, which addressed the doctrine of equivalents and equivalents under 35 U.S.C. § 112, ¶ 6.¹ As noted by Federal Circuit Judge Plager:

There is perhaps no question more important to the health of patents than the scope and application of the judicially-created doctrine of equivalents. It permeates the entire fabric of patent law, and appears in virtually every case involving patent enforcement.²

In reviewing the recent decisions of the Federal Circuit, “[h]owever, it is now apparent that there is more than one view [on that court] of what was decided in *Warner-Jenkinson.*³ A split has developed in the Federal Circuit over how restrictive the court will be in applying the doctrine of equivalents and the doctrine of prosecution history estoppel. In spite of the uncertainty that this split causes, it is clear that in general “the Federal Circuit has not been generous in its view of equivalency.”⁴ Moreover, it is clear that the general trend of the Court to emphasize the requirement for clear and distinct claims drafting and to then enforce such properly written claims to the hilt will continue.⁵

Although the doctrine of equivalents is a substantially different doctrine from “equivalents” under § 112, ¶ 6, these doctrines have been, and will continue to be, intertwined in infringement analyses. The doctrine of equivalents is a judicially created doctrine that is expansive in nature. The policy behind the doctrine was recognized by the Supreme Court in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*:

To permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. Such a limitation would leave room for—indeed encourage—the unscrupulous copyist to make unimportant and insubstantial changes and


² *Litton Systems Inc. v Honeywell Inc.*, 145 Fad 1472, 47 US.P.Q.2d 1106, 1107 (Fed. Cir. 1998) (Plager J., dissenting from the order declining the suggestion for rehearing en banc).


⁴ 145 F.3d 1472, 1479, 47 US.P.Q.2d 1106, 1112 (Fed. Cir. 1998) (Newman J., view on the suggestion for rehearing en banc).

substitutions in the patent, which though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law.\(^6\)

The continued existence of the doctrine of equivalents was reaffirmed by the Supreme Court in *Warner-Jenkinson*.\(^7\) *Warner-Jenkinson*, however, substantially narrowed the scope of the doctrine and, as at least one Federal Circuit judge contends, recognized “the mischief that the doctrine of equivalents can do to patent law.”\(^8\) It is the extent to which this “mischief” will be contained that has given rise to the split in the Federal Circuit, and that will be analyzed in this chapter.

In particular, the Federal Circuit has split on the issue of whether a claim element that was added or changed to overcome the prior art should be entitled to any equivalents whatsoever. The majority of the Federal Circuit believe there should be some equivalency for such an element. A minority of that court believes that the doctrine of prosecution history estoppel would preclude any application of the doctrine of equivalents to such an element.

In contrast to the judicially created doctrine of equivalents, § 112 equivalents was a legislative response to the Supreme Court’s 1946 decision in *Halliburton Oil Well Cementing Co. v. Walker*, which prohibited functional claiming.\(^9\) In 1952, to partially overrule *Halliburton*, Congress enacted what has now become paragraph 6 of 35 U.S.C. § 112, which permits some functional claiming and provides:

> An element in claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.\(^{10}\)

Unlike the doctrine of equivalents, § 112 equivalents is a narrowing doctrine that restricts the scope of protection afforded the patent. In *Warner-Jenkinson* the Supreme Court found that applying § 112 equivalents was in fact “an application of the doctrine of equivalents in a restrictive role, narrowing the application of broad literal claim elements.”\(^{11}\) The Supreme Court went on to find that “§ 112, ¶ 6 was enacted as a targeted cure to a specific problem, and . . . the


\(^7\) Warner-Jenkinson Co. v Hilton Davis Chemical Co., 520 U.S. 17, 40, 41 USP.Q.2d 1865, 1876 (1997).

\(^8\) Hughes Aircraft Co. v United States, 148 F.3d 1384, 1385, 47 US.P.Q.2d 1542, 1544 (Fed. Cir. 1998) (Clevenger J., dissenting from denial of request for rehearing en banc).

\(^9\) 329 US. 1, 71 U S.P.Q. 175 (1946).

\(^10\) This paragraph was originally paragraph 3 in § 112, and care should be taken in reviewing older case law, which frequently refers to it as such. See 35. U.S.C. § 112 (1952); see, e.g., In re Zimmerley, 153 U.S.P.Q. 367, 369 (Pat. Off. Bd. App. 1966).

Thus, § 112 equivalents serves to limit the literal scope of the claims to the structures or acts that are specifically disclosed in the specification. The Federal Circuit has described § 112 equivalents as the “price that must be paid” for drafting claims in means- or step-plus-function format. The recent decisions of the Federal Court have continued this trend of viewing § 112 equivalents as a narrowing restrictive doctrine. In fact, their decisions have raised the price that must be paid for a means- or step-plus-function claim even higher, holding that the doctrine of equivalents may not be applicable to such a claim.

§ 3.02 THE DOCTRINE OF EQUIVALENTS

The present form of the doctrine of equivalents was set out nearly 50 years ago by the Supreme Court in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.* Under this doctrine an accused article or method that does not literally meet the limitations of a claim may nevertheless infringe. Thus, even if there is no literal infringement, infringement could be found under the doctrine of equivalents if the accused article or method was equivalent to the claimed invention.

The doctrine of equivalents, however, has created a tension between two important public policies. One policy focuses on the importance of providing public notice as to what infringes, by requiring clear and distinct claims drafting. The other policy focuses on the need to prevent an infringer from avoiding liability by merely playing semantic games or by making only minor changes in the accused article or method to avoid the literal language of the claims.

The Supreme Court again addressed this doctrine in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.* The Court reaffirmed the existence of the doctrine of equivalents, and in light of the public policy tensions associated with the doctrine “endeavor[ed] to clarify the proper scope of the doctrine.” Quoting its earlier decision in *Graver Tank*, the *Warner-Jenkinson* Court held:

What constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case. Equivalence, in

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15 339 U.S. 605, 85 U.S.P.Q.2d 528 (1950). The Supreme Court first ruled that infringement may occur even though the literal language of the claims was avoided in *Winans v. Denmead*, 56 U.S. 330 (1854).
16 *See, e.g.*, 35 U.S.C. § 112, ¶ 2 (1994) (“The specification shall include with one or more claims particularly pointing out and distinctly claiming the subject matter . . .”).
the patent law, is not the prisoner of a formula and is not an absolute to be considered in a vacuum. It does not require complete identity for every purpose and in every respect. In determining equivalents, things equal to the same thing may not be equal to each other and, by the same token, things for most purposes different may sometimes be equivalents. Consideration must be given to the purpose for which an ingredient is used in a patent, the qualities it has when combined with the other ingredients, and the function which it is intended to perform. An important factor is whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was.\textsuperscript{18}

The \textit{Warner-Jenkinson} Court then clarified and restricted the application of the doctrine of equivalents, holding that:

Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and \textit{thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole}. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.\textsuperscript{19}

This restriction of the doctrine of equivalents is referred to as the all-elements rule. This rule eliminates one of the greatest mischiefs that the doctrine of equivalents can work on the patent law. Prior to this rule, although several Federal Circuit panels had adopted and previously applied the all-elements rule,\textsuperscript{20} a patent lawyer could attempt to use the doctrine of equivalents to ignore the patent claims. Rather than focusing on the specific claim language and the elements of the claim, the case could be tried based on the claim as a whole and how the accused device was equivalent to that claim as a whole. As one litigare brazenly asserted to a district court:

\textit{The question isn’t what the claims say, and the question isn’t whether it [the accused product] looks different. The question is what are the qualitative attributes or characteristics of what they’ve done and are they the same. Do they capture the heart of the invention}. \ldots \textsuperscript{21}

The Supreme Court’s adoption of the all-elements rule should put an end to this type of chicanery.

The \textit{Warner-Jenkinson} Court further held that the equivalence determination is made at the time of the alleged infringement and not at the time the patent is issued:

\textsuperscript{18} 520 U.S. 17, 24-25, 41 U.S.P.Q.2d 1865, 1869 (1997).

\textsuperscript{19} 520 U.S. 17, 29, 41 U.S.P.Q.2d at 1871 (emphasis added).


Insofar as the question under the doctrine of equivalents is whether an accused element is equivalent to a claimed element, the proper time for evaluating equivalency—and thus knowledge of interchangeability between elements—is at the time of infringement, not at the time the patent was issued. 22

The Warner-Jenkinson Court, however, expressly declined to adopt a specific linguistic framework under which a doctrine of equivalents analysis should be performed:

All that remains is to address the debate regarding the linguistic framework under which “equivalence” is determined. Both the parties and the Federal Circuit spend considerable time arguing whether the so-called “triple identity” test—focusing on the function served by a particular claim element, the way that element serves that function, and the result thus obtained by that element is a suitable method for determining equivalence, or whether an “insubstantial differences” approach is better. There seems to be substantial agreement that, while the triple identity test may be suitable for analyzing mechanical devices, it often provides a poor framework for analyzing other products or processes. On the other hand, the insubstantial differences test offers little additional guidance as to what might render any given difference “insubstantial.”

In our view, the particular linguistic framework used is less important than whether the test is protective of the essential inquiry: Does the accused product or process contain elements identical or equivalent to each claimed element of the patented invention? Different linguistic frameworks may be more suitable to different cases depending on their particular facts. A focus on individual elements and a special vigilance against allowing the concept of equivalence to eliminate completely any such elements should reduce considerably the imprecision of whatever language is used. An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element. With these limiting principles as a backdrop, we see no purpose in going further and micro-managing the Federal Circuit’s particular word-choice for analyzing equivalence. We expect that the Federal Circuit will refine the formulation of the test for equivalence in the orderly course of case-by-case determinations, and we leave such refinement to that court’s sound judgment in this area of its special expertise. 23

Thus, it is in this context that the Federal Circuit has now addressed the doctrine of equivalents and sought to further develop the linguistic framework under which such an inquiry will be conducted.

22 520 U.S. 17, 37, 41 U.S.P.Q.2d 1865, 1874.

23 520 US. 17, 39-40, 41 US.PQ.2d 1865, 1875-76.
In *Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, the Federal Circuit addressed the doctrine of equivalents issue in the context of a lockout mechanism that was used on surgical staplers. In that case, the district court had granted a summary judgment of noninfringement under the doctrine of equivalents. The Federal Circuit reversed this finding as to one of the claims at issue, but affirmed it with respect to the other.

In addressing the doctrine of equivalents issue, the Federal Circuit first acknowledged the public policy concerns over this doctrine and the fact that an equivalents analysis must be done on an element-by-element basis to meet these policy concerns:

“The doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement.” Nonetheless, infringement under the doctrine of equivalents remains a viable basis for a finding of infringement, as long as the court properly applies (1) the so-called “All Elements” rule (“The determination of equivalence should be applied as an objective inquiry on an element-by-element basis.”) and (2) the doctrine of prosecution history estoppel (“Prosecution history estoppel continues to be available as a defense to infringement.”)

The Federal Circuit then went on to reaffirm the use of the function-way-result test as relevant, but not dispositive, of an equivalents inquiry:

Whether a component in the accused subject matter performs substantially the same function as the claimed limitation in substantially the same way to achieve substantially the same result may be relevant to [an equivalents] determination.

The Federal Circuit’s analysis, however, did not end there. The Court then went on to substantially expand the reach of the doctrine of equivalents. In doing so, the Federal Circuit first noted that:

Any analysis of infringement under the doctrine of equivalents necessarily deals with subject matter that is “beyond,” “ignored by,” and not included in the literal scope of a claim. Such subject matter is not necessarily “specifically excluded” from coverage under the doctrine of equivalents unless its inclusion is somehow inconsistent with the language of the claim. Literal failure to meet a claim limitation does not necessarily amount to “specific exclusion.”

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26 Id.
The Federal Circuit in *Ethicon* then limited the *Dolly*, *Weirner* and *Sage* cases. These cases had narrowed the reach of the doctrine of equivalents, relying on the public notice requirement of patent claims, and the fact that a patent applicant should not be permitted to rely on the courts to obtain protection that should have been first obtained from the Patent Office. Thus, these cases substantially increased the certainty around a doctrine of equivalents analysis. The *Ethicon* case, however, distinguished these cases, finding that they were limited to their facts and that they did not create a new rule of law with respect to equivalency.\(^{33}\)

The *Ethicon* court went on to reverse the granting of summary judgment of noninfringement on the basis that factual questions existed as to whether two structures in the accused device performed the function of one element in the claim:

> The district court erroneously reasoned that the “said restraining structure being movable by said pusher assembly” limitation requires as a matter of law that the cam bar retainer be distinct from the restraint. We have stated that “one-to-one correspondence of components is not required, and elements or steps may be combined without ipso facto loss of equivalency.” In other words, two physical components of an accused device may be viewed in combination to serve as an equivalent of one element of a claim invention, so long as no claim limitation is thereby wholly vitiated.\(^{34}\)

Thus, the doctrine first announced in *Corning Glass Works v. Sumitomo Electric USA.*,\(^{35}\) that equivalents to claim elements can be found in separate or different components of the accused product or process, is still alive and well after *Warner-Jenkinson*.

In *EMI Group North America, Inc. v. Intel Corp.*, the Federal Circuit applied its rationale in Ethicon to method or process claims.\(^{36}\) In *EMI*, although affirming the district court’s finding of noninfringement, the court held that “equivalency is not defeated by using an additional step to achieve what the patentee does in one step.”\(^{37}\)

In an unpublished opinion, the Federal Circuit has also reaffirmed the use of *Wilson Sporting Goods* hypothetical claims to aid in an equivalency analysis.\(^{38}\) The *Wilson Sporting Goods*


\(^{32}\) *Sage Products, Inc. v. Devon Industries, Inc.*, 126 F.3d 1420, 44 U.S.P.Q.2d 1103 (Fed. Cir. 1997).

\(^{33}\) *Ethicon*, 149 F.3d 1309, 1318, 47 U.S.P.Q.2d 1272, 1278 (1998). It is yet to be seen if other panels of the court will follow this restriction.

\(^{34}\) 149 F.3d 1309, 1279-80, 47 U.S.P.Q.2d 1272, 1320 (1998) (citations omitted).


$3.01\text{ Goods }$ hypothetical claim is an analytic framework, or theoretical construct, intended to enable an accused infringer to rely upon the prior art as a limitation to the scope of equivalents.\textsuperscript{39} This limitation is available because “a patentee may not rely on the doctrine of equivalents to obtain protection against infringement by subject matter that it could not have patented; the scope of protection under the doctrine of equivalents is thus limited by the prior art.”\textsuperscript{40} Thus, under Wilson Sporting Goods one would construct a hypothetical claim that literally covered the accused device and then determine if that hypothetical claim was patentable over the prior art. If the hypothetical claim was patentable then there could be a finding of infringement under the doctrine of equivalents.\textsuperscript{41}

$3.03\text{ PROSECUTION HISTORY ESTOPPEL}$

The doctrine of prosecution history estoppel, or file wrapper estoppel as it has also been called, is an important limit to the doctrine of equivalents. In theory, prosecution history estoppel uses the public record of what the patentee did before the Patent Office to restrict a patentee from relying on the doctrine of equivalents. Thus, prosecution history estoppel furthers the public notice policy by allowing the public to rely on these public records.

In fact, the Warner-Jenkinson Court relied upon the doctrine of prosecution history estoppel as a reason why the doctrine of equivalents did not violate the public notice policy of requiring clear and distinct claims.\textsuperscript{42} Thus, as a basis for reaffirming the existence of the doctrine of equivalents, the Warner-Jenkinson Court set forth a clear framework for the application of the doctrine of prosecution history estoppel.

(1) If from the record before the Patent Office an amendment was made to avoid the prior art, the doctrine of prosecution history estoppel applies and the amended claim added or changed claim element is not entitled to any equivalency.\textsuperscript{43}

(2) If the reason for the amendment or change is unclear from the record, “the court should presume that the PTO has a substantial reason related to patentability for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.”\textsuperscript{44}

(3) A court, however, is not “free to review the correctness” of the amendment or change to the claim element. It is only permitted to review


\textsuperscript{40} Bradshaw, supra n.38.

\textsuperscript{41} 41 U.S.P.Q.2d 1314 (1998).

\textsuperscript{42} 520 U.S. 17, 34, 41 U.W.P.Q.2d 1865, 1873 (1997).


\textsuperscript{44} 520 U.S. 17, 33, U.S.P.Q.2d 1865, 1873 (1997) (emphasis added).
whether that change (right or wrong) was in fact made to avoid a prior art rejection.\(^{45}\)

A majority of the Federal Circuit, however, does not see the Supreme Court’s framework as clear and specific, or has chosen to ignore it. The majority has not adopted the Supreme Court’s ruling that an amendment to overcome the prior art results in a total bar of the application of the doctrine of equivalents to the amended claim element. Instead, the majority has maintained the pre-

\textit{Warner-Jenkinson} position of the Federal Circuit that in such a situation the scope of the estoppel must be established, and that this scope can range from great to small to zero. In fact, the debate over this issue has created such a deep split in the Federal Circuit that it prompted the sarcastic comment from Judge Clevenger that:

\begin{center}
Whether to read the Supreme Court’s opinion at face value, or whether to discount its explicit language as unintended, unclear, uninformed, unfathomable, or whatever, seems to me a matter of considerable importance. . . .\(^{46}\)
\end{center}

In spite of the clear language of the \textit{Warner-Jenkinson} decision, the Federal Circuit refused to adopt the framework set out by the Supreme Court. Thus, in \textit{Litton Systems, Inc. v. Honeywell, Inc.}, the Federal Circuit held that:

This court determines in this opinion that the Supreme Court did not in fact effect such a sweeping change. Instead the Supreme Court adhered to the longstanding doctrine that an estoppel only bars recapture of that subject matter actually surrendered during prosecution. The common practice of amending a claim during prosecution, even amending to overcome prior art, does not necessarily surrender all subject matter beyond the literal scope of the amended claim limitation.\(^{47}\)

The \textit{Litton} court further held that:

an amendment to claim language in response to prior art \textit{may have a limiting effect within a spectrum ranging from great to small to zero}. The effect may or may not be fatal to application of a range of equivalents broad enough to


\(^{47}\) 140 F.3d 1449, 1445, 46 U.S.P.Q.2d 1321, 1325 (Fed. Cir. 1998). On the same day as \textit{Litton} the Federal Circuit also decided \textit{Hughes Aircraft Co. v. United States}, 140 F.3d 1470, 46 U.S.P.Q.2d 1285 (Fed. Cir. 1998). In that case Judge Archer, writing for the court, held that the reason behind an amendment must be determined and that amendments made to overcome the prior art “serve to narrow the range of equivalents; however, they do not preclude infringement under the doctrine of equivalents.” 140 F.3d 1470, 1477, 46 U.S.P.Q.2d 1285, 1290 (Fed. Cir. 1998). The \textit{Hughes} court affirmed a finding of infringement under the doctrine of equivalents “because the accused device does not fall within the range of subject matter surrendered.” \textit{Id.}, 46 U.S.P.Q.2d at 1290.
encompass a particular accused product. It is not fatal to application of the doctrine itself.\textsuperscript{48}

Thus, it now appears that a majority of the Federal Circuit judges, for various reasons, have chosen to disregard the explicit language of the Supreme Court and essentially leave the doctrine of prosecution history estoppel unchanged. To do this the \textit{Litton} court entered into what Judge Gajarsa fairly described as “a tortured interpretation of the \textit{Warner-Jenkinson} opinion.”\textsuperscript{49}

An example of the tortured effect of the \textit{Litton} court’s decision is that a patentee who amends a claim to overcome a prior art rejection, and clearly shows this in the file wrapper, will have a broader scope of equivalents than a patentee who amends a claim but cannot establish the basis for the amendment. In the latter situation, the \textit{Warner-Jenkinson} decision presumes that the amendment was for prior art reasons and then mandates that all equivalents are barred for that amended element.\textsuperscript{50} In the former situation, the “scope” of the estoppel would have to be determined and could range from great to small to zero.\textsuperscript{51} The absurdity of this result illustrates the strained interpretation that the \textit{Litton} court engaged in to preserve the status quo for estoppel and the doctrine of equivalents.

In view of this tension and the strong dissenters on the Federal Circuit, it is quite likely that this issue will again be before the Supreme Court in the near future. As Judge Clevenger aptly put it:

\begin{quote}
Someone, in this case or in another case soon, should explain to the Supreme Court that—if this panel [\textit{Litton}] is correct in granting a range of equivalents to limitations of claims amended for patentability reasons—it\textquotesingle s \textit{Warner-Jenkinson} decision had no meaningful effect at all on the doctrine of equivalents.\textsuperscript{52}
\end{quote}

The \textit{Litton} court, however, did set forth the analytical framework in which equivalency and estoppel issues are to be evaluated, at least until the Supreme Court enters into the debate

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{49} \textit{Litton Systems Inc. v. Honeywell Inc.}, 145 F.3d 1472, 1476, 47 U.S.P.Q.2d 1106, 1110 (Fed. Cir. 1998) (Gajarsa J., dissenting from the order declining the suggestion for rehearing en banc) (emphasis added).
\item \textsuperscript{50} \textit{Warner-Jenkinson Co. v. Hilton Davis Chemical Co.}, 520 U.S. 17, 33 41 U.S.P.Q.2d 1865, 1873 (1997) (“In those circumstances, prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.”).
\item \textsuperscript{51} \textit{See}, e.g., \textit{EMI Group North America Inc. v. Intel Corp.}, 151 F.3d 887, 897, 48 U.S.P.Q.2d 1181, 1189 (Fed. Cir. 1998) (“when the claims are amended for reasons of patentability, it is necessary to determine the scope of the estoppel that has been incurred by the amendment”).
\item \textsuperscript{52} \textit{Litton Systems Inc. v. Honeywell Inc.}, 145 F.3d 1472, 1473, 47 U.S.P.Q.2d 1106, 1107 (Fed. Cir. 1998) (Clevenger J., dissenting from the order declining the suggestion for rehearing en banc).
\end{itemize}
\end{footnotesize}
again. The *Litton* court acknowledges that the correctness of the patentee giving up subject matter is irrelevant. All that matters is that subject matter was, in fact, given up.\(^{53}\)

The *Litton* court further held that estoppel can arise even in matters that are unrelated to the prior art. Specifically, the *Litton* court held that:

[E]stoppel by clear and unmistakable surrender without claim amendments may arise even when the arguments to the examiner were not necessary to distinguish prior art... If an applicant makes an amendment unrelated to patentability which evidences an unmistakable surrender, that action will preclude recapture of the surrendered subject matter under the doctrine of equivalents.\(^{54}\)

Thus, the *Litton* court, over the dissent of Judge Newman, found that statements made in an information disclosure statement, even though they related to a reference that was not relied upon by the patent examiner, may give rise to an estoppel.\(^{55}\)

The *Litton* court also outlined four factual scenarios where some amount of an estoppel may occur.

*First*, if an applicant substitutes one limitation in a claim for another to overcome the prior art, the applicant is estopped from later asserting that the original limitation is an equivalent to the substituted one.\(^{56}\)

*Second*, when an applicant narrows a claim element to avoid features of the prior art relied upon to reject a claim, the applicant is estopped from later claiming that the amended element covers “trivial” variations of such prior art features.\(^{57}\)

*Third*, a patent applicant’s arguments, whether or not related to the prior art, may constitute a clear and unmistakable surrender of subject matter, which the applicant cannot later recover through equivalency.\(^{58}\)

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\(^{55}\) 140 F.3d 1449, 1462 & n.1, 46 U.S.P.Q.2d 1321, 1331, & n.1 (1998). Judge Newman did not believe that such statements should rise to the level of an estoppel. She however, did believe that they could be used to interpret the claims and thus limit the scope of the patent in that fashion. *Id.* At 1466, 46 U.S.P.Q.2d at 1333-34 (1998).


\(^{57}\) *Id.*

\(^{58}\) *Id.; see Laitram Corp. v. Intralox, Inc.*, 143 F.3d 1456, 1464, 1616 (Fed. Cir. 1998) (“[u]nmistakable assertions made by the applicant to the Patent and Trademark Office (PTO) in support of patentability, whether or not required to secure allowance of the claim ... may operate to preclude the patentee from asserting equivalency ...”).
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Fourth, any combination of the above three scenarios may occur. In which case, the scope of the estoppel is a product of the effects of these factors working in concert.\footnote{Litton, 140 F.3d 1449, 1462, 46 U.S.P.Q.2d 1321, 1330-31 (1998).}

In Litton the court remanded the case to the district court to evaluate the prior art that gave rise to the claim amendments. This evaluation was to determine if the differences between that prior art, or what was surrendered, and the accused device were trivial. If they were, then the patentee would be estopped from asserting that the accused device was equivalent to the claimed invention.\footnote{140 F.3d 1449, 1464, 46 U.S.P.Q.2d 1321, 1332 (1998).}

§ 3.04 “ADMISSION ESTOPPEL”—THE GRAY AREA BETWEEN ESTOPPEL AND CLAIM INTERPRETATION

With the focus over the last few years on the critical importance of intrinsic evidence in interpreting claims,\footnote{Markman v. Westview Instruments, Inc., 517 U.S. 370, 38 U.S.P.Q.2d 1461 (1996); Vitronics Corp. v. Conceptionic, Inc., 90 F.3d 1576, 39 U.S.P.Q.2d 1573 (Fed. Cir. 1996).} a whole body of law has developed that functions like prosecution history estoppel, but that may also be considered as claim interpretation. This body of laws developed as courts dealt with statements made by the patentee that would not ordinarily constitute a prosecution history estoppel, but which nevertheless put the public on notice about what the patentee believed the scope of the invention to be. Essentially, these are statements that the patentee made either in the specification or file history that categorize what the invention is, or is not, and how the invention functions, or does not function. Regardless of what label is placed on these types of statements, it is clear what will be held against the patentee and what will be used to limit the scope of the claims. As such, an apt name for this doctrine would be “admission estoppel.”

This situation was addressed by Judge Newman in her dissent in Litton. In that dissent she asserted that statements made in an information disclosure statement should not create an estoppel, because there was no evidence that the examiner relied on or even considered them. Judge Newman, nevertheless, appeared to agree that such statements could be used to interpret the claims, and thus have a narrowing effect on the scope of those claims.\footnote{140 F.3d 1449, 1469, 46 U.S.P.Q.2d 1321, 1336 (1998); compare 140 F.3d 1449, 1462 n.1, 46 U.S.P.Q.2d 1321, 1331 n.1 (1998).}

In Vehicular Technologies Corp. v. Titan Wheel International, Inc., the Federal Circuit squarely addressed the admission estoppel issue and acknowledged the existence of what, at that time, was yet an unnamed doctrine:

The available scope of protection of a patent under the doctrine of equivalents is not, however, limited solely by prosecution history estoppel. . . . In addition, a
separate body of case law confirms that a patentee may otherwise lose the right to assert coverage of allegedly equivalent structure or matter.63

In Vehicular Technologies, the patent specification had repeatedly identified and stressed the function of the claim element at issue. This function, however, was not performed or found anywhere in the accused device. Thus, there could be no infringement under the doctrine of equivalents.64

The Vehicular Technologies decision identified several situations that gave rise to admission estoppel. These situations included arguments made in a petition to make special,65 statements made during a demonstration to an examiner,66 statements made in an information disclosure statement,67 alternative embodiments that are disclosed in the specification but not claimed,68 and providing in the specification that a specific function must be performed.69

Similar reasoning led to a similar result in Dawn Equipment Co. v. Kentucky Farms Inc.70 In that case, the Federal Circuit found that:

there is damning evidence within the text of the ’282 patent itself that the two mechanisms do not operate in substantially the same way. Specifically, the patent strongly suggests, if not teaches, that they are not equivalent . . . . These statements in the patent alone strongly suggest, if not mandate, judgment in [the accused infringer’s] favor.71

These situations where the patentee said something was “black” before the Patent Office, but in litigation tries to assert that it is “white” are relatively straightforward. Admission estoppel should apply. A more difficult situation occurs when the accused equivalent has been disclosed in the patent specification but is not claimed. Depending on the facts, there may or may not be infringement under the doctrine of equivalents. For example, suppose a claim to a composition of matter has a claim element calling for compound “b.” In the specification, however, it is disclosed that compounds “x,” “y,” and “z” may also be used in place of compound “b.” In that situation it is very likely that elements “x,” “y,” and “a” would be found

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70 140 F.3d 1009, 46 U.S.P.Q.2d 1109 (Fed. Cir. 1998).
71 Id. at 1109, 1114 (Fed. Cir. 1998).
to be an equivalent of “b.” On the other hand, a different result may occur, when the specification discloses two embodiments of an invention, and focuses on these as being alternative and different. If only one embodiment is claimed, it is very unlikely that the other will be considered an equivalent.

In an unpublished opinion in *Brunswick Corp. v. The United States*, the Federal Circuit addressed the situation of disclosed but unclaimed subject matter. In *Brunswick* the court had a patent relating to camouflage screens and fabric to hide military equipment from sight as well as radar. The claim element at issue related to the resistivity of the camouflage screen, which was important to the ability of the screen to hide an object from radar. The claims had a limitation of between 100 and 1,000 ohms. The specification, however, disclosed two screens that had resistances below the claimed range. The accused screen also had a resistance below the claimed range.

The Federal Circuit held that there could be no infringement under the doctrine of equivalents, because the disclosed resistance below the claimed range was dedicated to the public. Specifically, the Federal Circuit held that:

In *Maxwell*, this court cited the age-old rule that subject matter that is disclosed in the specification, but not claimed is dedicated to the public.... While the Supreme Court dismissed the argument that equivalents are limited to what is disclosed in the patent, its decision does not grant the patentee the right to claim as an equivalent that which is disclosed but unclaimed in the patent and therefore dedicated to the public....

The *Brunswick* decision substantially expands the ruling in *Maxwell* that the disclosed but unclaimed subject matter is not entitled to equivalency because such subject matter was dedicated to the public. In *Maxwell*, the unclaimed subject matter was a fully disclosed distinct alternative embodiment of the claimed invention. Moreover, by not claiming that alternative embodiment, the applicant had avoided Patent Office scrutiny of it. It was in that limited situation that the Maxwell language of public dedication was made.

Judge Newman dissented from the *Brunswick* decision, but with a new panel was able to come to an opposite conclusion in a published opinion, *YBM Magnex, Inc. v. International Trade*

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72 In fact, this was the very situation that the Supreme Court was faced with in *Graver Tank*. The missing element that was the subject of the equivalence analysis was disclosed in the specification. In *Graver Tank*, 339 U.S. 605, 85 U.S.P.Q.2d 329 (1950), the court affirmed the finding of equivalency.


74 46 U.S.P.Q.2d 1446 (Fed. Cir. 1998). Unpublished opinions may not be used as precedent. They do, however, show the way a particular panel or the court views an issue.


76 46 U.S.P.Q.2d 1446, 1449 (Fed. Cir. 1998)

Commission.78 In YBM the court was faced with a fact situation that was virtually identical to that present in Brunswick.79 In YBM, the patent claimed an oxygen content for a magnet in the range of 6,000 to 35,000 ppm. The specification, however, disclosed, but did not claim, magnets having oxygen contents in the range of 5,450 to 6,000 ppm.80 The accused magnets had an oxygen content in the range of 5,459 to 6,000 ppm.

The Commission overruled the findings of the administrative law judge that there was infringement. In doing so, the Commission found that Maxwell had established a “new rule of law,” and applying that rule found that the disclosed but not claimed range had been dedicated to the public and thus could not be recaptured through the doctrine of equivalents.81

Judge Newman soundly reversed the Commission, rejecting their assertion that Maxwell had created some new rule of law. In doing so Judge Newman stated:

The Supreme Court’s guidance in Warner-Jenkinson, . . . does not permit the blanket rule that everything disclosed but not claimed is barred from access to the doctrine of equivalents, whatever the facts, circumstances, and evidence . . . . In Graver Tank, for example the asserted equivalent, manganese silicate, had itself been disclosed in the specification; the district court relied on this disclosure as supporting equivalency, not negating it.82

Judge Newman then set forth the general rule for disclosed but unclaimed subject matter as follows:

Because the [Supreme] Court rejected the proposition that subject matter that is disclosed but not claimed is always deemed dedicated to the public, that position is not available as a general rule of law. Some factual situations may indeed warrant rejection of an asserted equivalent on this ground, as the Federal Circuit held in Maxwell; but to enlarge Maxwell to a broad and new rule of law, as did the Commission, is not only an incorrect reading of Maxwell but would bring it into direct conflict with Supreme Court precedent.83

Thus, Judge Newman reinstated the findings of the administrative law judge that there was infringement under the doctrine of equivalents.84


79 Because the Brunswick decision is not published it cannot be cited as precedent and thus the published YBM case would be controlling.


§ 3.05 MEANS- AND STEP-PLUS-FUNCTION CLAIMS

Section 112, ¶ 6, of the patent statute provides that claims can be written in functional language without any corresponding structure or acts:

An element in claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.85

The price that must be paid for using a means- or step-plus-function claim, however, is that the claim will be narrowly construed, being limited to the corresponding acts and structures disclosed in the specification and equivalents thereof.

In 1997, the Federal Circuit addressed means- and step-plus-function claims in several important decisions.86 In those decisions the court narrowly construed claims falling within the purview of § 112, ¶ 6. The court affirmed that this section applied to method and process claims, and that the scope of these claims would be limited in the same manner that apparatus claims were limited. The court further found that there must be a clear link between the functional claim language and the structure or acts in the specification for the structure or acts to be considered as corresponding to the claim language.

In 1998, the Federal Circuit continued the trend to narrow and restrict means- and step-plus-function claims. In that year the court further identified the types of claims that would fall within the purview of § 112, ¶ 6. The court also started to resolve the questions over which § 112 issues were for the judge and which were for the jury.

In Dawn Equipment Co. v. Kentucky Farms, Inc.,87 the Federal Circuit addressed, but did not resolve, the issue of whether the doctrine of equivalents, that is, Graver Tank equivalents, applied to means- and step-plus-function claims. In other words, does the patent law provide for an equivalent of an equivalent? In Dawn, the court had a cryptic footnote that implies that the Federal Circuit has never before addressed this issue:

For the purpose of our discussion, and because neither party addresses the point, we shall assume that it is legally proper to apply the doctrine of equivalents to a claim drafted in means-plus-function form. (But see the additional views of Judges Plager, Newman and Michel, infra.)88


87 140 F.3d 1009, 46 U.S.P.Q.2d 1109 (Fed. Cir. 1998).

88 140 F.3d at 1009, 1015 n.2, 46 U.S.P.Q.2d 1109, 1113 n.2 (Fed. Cir. 1998) (emphasis added).
In those additional views, Judges Plager and Michel made compelling arguments that: the doctrine of equivalents should not apply to claim elements drafted in means- and step-plus-function format. Judge Newman, on the other hand, believed that means- and step-plus-function claims should be treated as other claims in the application of the doctrine of equivalents. \(^{89}\)

Judge Plager first argued that as a practical matter having two equivalents was simply too confusing to ever be fairly applied. Judge Plager then concluded that the doctrine of equivalents should not be applied to means- and step-plus-function claim elements:

I believe that the practice of claiming under § 112, ¶ 6 would be much improved if we adhered to the proposition that the “equivalents” of “structure, material or acts described in the specification” are those found to be within the scope of that term as it is used in § 112, ¶ 6, and not elsewhere. Accordingly, the separate judicially-created doctrine of equivalents would have no application to those aspects of limitations drawn in means-plus-function form. This result is fully consistent with the legislative purpose of § 112, ¶ 6 and with its plain language which expressly provides for equivalents with regard to those parts of a means-plus-function claim for which Congress chose to permit equivalents. \(^{90}\)

Judge Michel implies that he would come to the same conclusion as Judge Plager, although he does not expressly do so apparently because the question was not before the court:

I wonder if affording the patentee additional protection under the doctrine of equivalents conflicts with the very language and intent of 35 U.S.C. § 112(6), which covers only those “equivalents” disclosed in the specification. . . . Is it contrary to section 112(6) to expand the protection for inventions claimed partly in means-plus-function format by also applying the doctrine of equivalents to limitations claimed in that format, when protection for some but not all equivalents has already been incorporated into the statute itself and when doing so further diminishes the notice function of the patent? \(^{91}\)

At least some of Judge Michel’s questions were answered in the affirmative by the court in Chiuminatta Concrete Concepts Inc. v. Cardinal Industries Inc. \(^{92}\) In that case the court was presented with a claim drawn to a concrete cutting saw. The claim had an element drafted in means-plus-function form that required:

\[
\text{means connected to the saw for supporting the surface of the concrete adjacent the leading edge of the cutting blade to inhibit chipping, spalling, or cracking of the concrete surface during cutting.}\]

\(^{89}\) 140 F.3d at 1009, 1018-23, 46 U.S.P.Q.2d 1109, 1118-19 (Fed. Cir.).

\(^{90}\) 140 F.3d 1009, 1021-22, 46 U.S.P.Q.2d 1109, 1118 (Fed. Cir.).

\(^{91}\) 140 F.3d 1009, 1023, 46 U.S.P.Q.2d 1109, 1119 (Fed. Cir.).


\(^{93}\) 145 F.3d 1303, 1306, 46 U.S.P.Q.2d 1752, 1754 (Fed. Cir.).
The structure disclosed in the patent specification that corresponded to this means-plus-function claim element was a skid plate. The accused concrete cutting saw used a pair of support wheels instead of a skid plate. The accused infringer, however, conceded that the support wheels performed the same function as the skid plate, to prevent chipping, spalling, or cracking of the concrete.94

The Chiuminatta court first identified the test for literal infringement—the accused device must perform the identical function of the means-plus-function claim element and have identical or equivalent structure to the corresponding structure disclosed in the specification.95 Identity of function being conceded, the court then focused on the equivalent structure part of the literal infringement inquiry. The court ruled that "[t]he proper test [for this inquiry] is whether the differences between the structure in the accused device and any disclosed in the specification are insubstantial."96 The court then held that the wheels were not equivalent structure to the skid plates, reasoning:

The asserted equivalent structures are wheels, and the differences between the wheels and the skid plate are not insubstantial. The former supports the surface of the concrete by rolling over the concrete while the latter skids. The former are soft, compressible, and round; the latter is hard and predominantly flat (albeit with rounded edges to prevent gouging of the concrete).97

The Chiuminatta court then held that, at least in the context of this case, the doctrine of equivalents, that is, Graver Tank equivalents, was not applicable to § 112, ¶ 6, means- and step-plus-function claims. Specifically the court held:

...where the equivalence issue does not involve later-developed technologies, but rather involves technology that predates the invention itself. In such a case, a finding of non-equivalence for § 112, ¶ 6, purposes should preclude a contrary finding under the doctrine of equivalents. ... There is no policy-based reason why a patentee should get two bites at the apple. If he or she could have included in the patent what is now alleged to be equivalent, and did not, leading to a conclusion that an accused device lacks an equivalent to the disclosed structure, why should the issue of equivalence have to be litigated a second time?98

94 145 F.3d 1303, 1306, 46 U.S.P.Q.2d 1752, 1754 (Fed. Cir.).
95 145 F.3d 1303, 1307, 46 U.S.P.Q.2d 1752, 1755 (Fed. Cir.).
96 145 F.3d 1303, 1309, 46 U.S.P.Q.2d 1752, 1756 (Fed. Cir.)
97 145 F.3d 1303, 1311, 46 U.S.P.Q.2d 1752, 1757 (Fed. Cir.)
98 145 F.3d 1303, 1311, 46 U.S.P.Q.2d 1752, 1752 (Fed. Cir.). Although the holding of the Chiuminatta court is quite clear, it may not be the court’s final word on the subject. In at least one case after Chiuminatta, the Federal Circuit entered into a review of the doctrine of equivalents issues of a means-plus-function claim element, when such an inquiry should have been moot under the holding in Chiuminatta. Unidynamics Corp. v. Automatic Products International, Ltd., 157 F.3d 1311, 1322, 48 U.S.P.Q.2d 1099, 1106 (Fed. Cir. 1998) (opinion by Rich, J., joining with him were Michel, J. and Schall, J.). In Unidynamics, however, the court affirmed the district court’s finding of no infringement either literally or under the doctrine of equivalents. Id. At 1323, 48 U.S.P.Q.2d at 1106.
The *Chiuminatta* court then concluded by paraphrasing from Judge Plager’s views in *Dawn Equipment*:

An element of a device cannot be “not equivalent” and equivalent to the same structure.

Although the *Chimuniatta* decision leaves some questions about the applicability of the doctrine of equivalents to means- and step-plus-function claims unanswered, the Supreme Court’s characterization of § 112, ¶ 6 equivalents as being “restrictive” and “narrowing” the scope of the claims lends support to the position that all claim elements coming under § 112, ¶ 6, should not be entitled to the doctrine of equivalents. There are two rationales that support this position.

First, it would be contrary to the intent of Congress for a court to apply the broadening equitable doctrine of equivalents to a type of claim that was intended to be narrow and restrictive. In essence, the application of the doctrine of equivalents to a means- or step-plus-function claim would vitiate the “prophylactic” limitations that Congress placed in § 112, ¶ 6.

Second, § 112, ¶ 6, was enacted to carve out a narrow exception to the Court’s *Halliburton* decision, by allowing functional claims. As noted by the Federal Circuit, however, this exception had a price—such claims would be narrowly and restrictively construed. There is nothing in the language or legislative history of § 112, ¶ 6, to indicate that in permitting functional claims, Congress intended to have the doctrine of equivalents apply to such claims. In fact, the Supreme Court in *Warner-Jenkinson* noted that § 112, ¶ 6, “is silent on the doctrine of equivalents as applied where there is no literal infringement.”

Thus, the language and history of § 112, ¶ 6, lends support to the conclusion that the doctrine of equivalents should not apply to means- and step-plus-function claims. After *Halliburton* there could be no infringement of a functional claim either literally or under the doctrine of equivalents, because such claims were invalid. Congress then allowed such claims, but specifically limited their scope of protection, that is, Congress specifically limited what could infringe. Thus, absent the Supreme Court’s reversal of *Halliburton*, it will be improper for a court to give a patentee who chose to claim an invention as a means- or step-plus-function greater protection than what Congress specifically authorized. As stated by the Federal Circuit in *Sage*:

>[A]s between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it as the patentee who must bear the cost

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102 Id.
of its failure to seek protection for this foreseeable alteration of its claimed structure.\textsuperscript{103}

Although the doctrine of equivalents may not apply to means- and step-plus-function claim elements the doctrine of prosecution history estoppel does. In \textit{Cybor Corp. v. FAS Technologies Inc.}, the Federal Circuit found that:

Prosecution history is relevant to the construction of a claim written in means-plus-function form. Indeed, “just as prosecution history estoppel may act to estop an equivalence argument under the doctrine of equivalents, positions taken before the PTO may bar an inconsistent position on claim construction under § 112, ¶ 6.” Clear assertions made in support of patentability thus may affect the range of equivalents under § 112, ¶ 6. The relevant inquiry is whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter.\textsuperscript{104}

In 1998, several Federal Circuit cases reaffirmed the narrowing approaches to § 112, ¶ 6, claims that were taken by the court in the previous year. In \textit{Kahn v. General Motors Corp.}, the Federal Circuit reaffirmed the requirement that for acts or structures to be considered as corresponding to a means- or step-plus-function claim element they must be clearly linked to that function in the specifications:

Unlike the ordinary situation in which claims may not be limited by functions or elements disclosed in the specification, but not included in the claims themselves, in writing a claim in means-plus-function form, a party is limited to the corresponding structure disclosed in the specification and its equivalents. \textit{A structure disclosed in the specification is only deemed to be “corresponding structure” if the specification clearly links or associates that structure with the function recited in the claim.} The duty to link or associate structure in the specification with the function is the quid pro quo for the convenience of employing § 112, para. 6.\textsuperscript{105}

In \textit{Multiform Desiccants, Inc. v. Medzam, Ltd.}, the Federal Circuit reaffirmed the ruling that the restrictive nature of § 112, ¶ 6, “trumps”\textsuperscript{106} the doctrine of claim differentiation:

the doctrine of claim differentiation can not broaden claims beyond their correct scope, determined in light of the specification and the prosecution history and any relevant extrinsic evidence. As explained in \textit{Tandon}, 831 F.3d at 1023, 4 U.S.P.Q. (BNA) at 1288, claims that are written in different words may ultimately cover substantially the same subject matter. \textit{See also}

\textsuperscript{103} \textit{Sage Products, Inc. v. Devon Industries, Inc.}, 126 F.3d 1420, 1425, 44 U.S.P.Q.2d 1103, 1107 (Fed. Cir. 1997).

\textsuperscript{104} 138 F.3d 1448, 1457, 46 U.S.P.Q.2d 1169, 1175 (Fed. Cir. 1998) (en banc) (citations omitted).

\textsuperscript{105} 135 F.3d 1472, 1476, 45 U.S.P.Q.2d 1608, 1611 (Fed. Cir. 1998) (citations omitted) (emphasis added).

\textsuperscript{106} \textit{O.I. Corp. v. Tekmar Co.}, 115 F.3d 1576, 1578, 42 U.S.P.Q.2d 1777, 1781 (Fed. Cir. 1997) (“We concluded that the description provides a clear meaning for the language of the claim in this case and that it trumps the doctrine of equivalents.”).
Molecular Research Corp. v. CBS, Inc., 793 F.2d 1261, 1269, 229 U.S.P.Q. (BNA) 805, 810 (Fed. Cir. 1996) (affirming district court’s construction of a claim although it rendered a dependent claim redundant).\(^{107}\)

In Applied Medical Resources Corp. v. United States Surgical Corp., the Federal Circuit affirmed a jury’s finding that the patent at issue was valid and infringed.\(^ {108}\) In doing so the court soundly rejected the infringer’s argument that in construing § 112, ¶ 6, claims, they should be limited by the prior art:

> It is not necessary to consider the prior art in applying section 112, paragraph 6. Even if the prior art discloses the same or an equivalent structure, the claim will not be limited in scope thereby. It is only necessary to determine what is an equivalent to the structure disclosed in the specification which is performing the function at issue.\(^ {109}\)

Although at first glance this may appear to be contrary to the trend of narrowing means- and step-plus-function claims, it will most likely not have that effect. To the contrary, the likely result will be that more of these types of claims will be found invalid, because they will not be able to be construed to avoid the prior art. Essentially, the patentee is stuck with the corresponding acts or structure disclosed in the specification and has very little room either during an infringement or a validity analysis to maneuver.

The Federal Circuit has further defined what types of claim elements will come within the purview of § 112, ¶ 6. In Ethicon Inc. v. United States Surgical Corp., the court reaffirmed the rule that “the use of the word ‘means’ gives rise to ‘a presumption that the inventor used the term advisedly to invoke the statutory mandates for means-plus-function clauses.’”\(^ {110}\) The use of the terms “means” or “step,” however, is not a prerequisite to bringing a claim element within the narrowing scope of § 112, ¶ 6. For example, in Mas-Hamilton Group v. LaGuard, Inc., the Federal Circuit found that a claim limitation drafted in terms of “lever moving element” fell under § 112, ¶ 6.\(^ {111}\) In so doing, the court reasoned that:

> In the instant case, even though the catch phrase [i.e., means for . . .] is not used, the limitation’s language is drafted as a function to be performed rather than definite structure or materials.\(^ {112}\)

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\(^{108}\) 147 F.3d 1374, 1380, 1381, 47 U.S.P.Q.2d 1289, 1290, 1295 (Fed. Cir. 1998).


\(^{110}\) 135 F.3d 1456, 1463, 45 U.S.P.Q.2d 1545, 1550 (Fed. Cir. 1998) (quoting York Products, Inc. v. Central Tractor Farm & Family Center, 99 F.3d 1568, 1574, 40 U.S.P.Q.2d 1619, 1623 (Fed. Cir. 1996); see also Sage Products Inc. v. Devon Industries, Inc., 126 F.3d 1420, 1427, 44 U.S.P.Q.2d 1103, 1109 (Fed. Cir. 1998)).

\(^{111}\) 156 F.3d 1206, 1313-14, 48 U.S.P.Q.2d 1010, 1016-17 (Fed. Cir. 1998).

\(^{112}\) 156 F.3d 1206, 1213, 48 U.S.P.Q.2d 1010, 1017 (Fed. Cir. 1998).
To further support this ruling, the court noted that the Patent Office has rejected the argument that only the term “means” will invoke § 112, ¶ 6.\textsuperscript{113} Similarly, the Manual of Patent Examining Procedure (MPEP) provides several examples of claims falling under the purview of § 112, ¶ 6, but not using the term “means” or “step”:

\begin{enumerate}
\item a jet device so constructed and located on the rotor to drive the rotor . . .
\item reducing the coefficient friction of the resulting film . . .
\item raising the pH of the resultant pulp to 5.0 to precipitate . . .\textsuperscript{114}
\end{enumerate}

Since \textit{Markman}, it is now settled law that the judge, not the jury, is responsible for claim interpretation.\textsuperscript{115} \textit{Markman}, however, did not address means- and step-plus-function claims. In fact, the Federal Circuit’s en banc \textit{Markman} decision expressly stated that “the issue of construction of means-plus-function claim limitations under 35 U.S.C. § 112, para. 6” was not before the court and that they “express no opinion on the issue of whether a determination of equivalents under § 112, para. 6, is a question of law or fact.”\textsuperscript{116}

The Federal Circuit has still left unanswered the question raised in \textit{Markman}—whether a determination of equivalents under § 112, ¶ 6, is a question of law or fact.\textsuperscript{117} The court, however, has answered several of the other questions about whether the judge or jury decides particular § 112, ¶ 6, issues. The court has concluded that determining whether a particular claim element is drafted in means- or step-plus-function format, and thus, falls under the narrowing purview of § 112, ¶ 6, is a question of claim construction, and thus, for the court to determine.\textsuperscript{118} The court further found that determining the meaning of the functional language in the claim element was a question of claim construction, and thus for the court.\textsuperscript{119}

\textsuperscript{113} 156 F.3d 1206, 1214, 48 U.S.P.Q.2d 1010, 1016 (Fed. Cir. 1998).
\textsuperscript{114} MPEP § 2181.
\textsuperscript{115} \textit{Markman v. Westview Instruments, Inc.}, 517 U.S. 370, 38 U.S.P.Q.2d 1461 (1996); \textit{Cybor Corp. v. FAS Technologies Inc.}, 138 F.3d 1448, 1456, 46 U.S.P.Q.2d 1169, 1174 (Fed. Cir. 1998) (en banc) (“[W]e conclude that the standard of review in \textit{Markman I}, as discussed above, was not changed by the Supreme Court’s decision in \textit{Markman II}, and we therefore reaffirm that, as a purely legal question, we review claim construction \textit{de novo} on appeal including any allegedly fact-based questions relating to claim construction. Accordingly, we today disavow any language in previous opinions of this court that holds, purports to hold, states, or suggests anything to the contrary.”).
\textsuperscript{117} \textit{Cybor Corp. v. FAS Technology Inc.}, 138 F.3d 1448, 1456 n.5, 46 U.S.P.Q.2d 1169, 1175 n.5 (Fed. Cir. 1998) (en banc).
court found that identifying the structure or acts that correspond to the means- or step-plus-function claim element was a question of law for the judge to determine.\(^{120}\)

The practical effect of these rulings can be seen in the jury instructions that the Federal Circuit approved in *Dawn Equipment*. In that case, the district judge specifically identified and told the jury what the corresponding structure for the means-plus-function was.\(^{121}\) Thus, *Dawn Equipment* provides a good example of the procedures that will be used to present § 112, ¶ 6, infringement issues to the jury.

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