CHAPTER 8

THE DOCTRINE OF EQUIVALENTS AND § 112 EQUIVALENTS

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§ 8.01 Overview of the Doctrine of Equivalents and § 112, ¶ 6 Equivalents

§ 8.02 The Doctrine of Equivalents

§ 8.03 Prosecution History Estoppel

§ 8.04 Means- and Step-Plus Function Claims--Determining What Claims Invoke § 112, ¶ 6

§ 8.05 Infringement Determinations for Means- and Step-Plus-Function Claims
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. This doctrine expands the scope of patent protection beyond the literal words of the claims.

The policy behind this 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 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.\(^1\)

The continued existence of the doctrine of equivalents was re-affirmed by the Supreme Court in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*\(^2\) The doctrine of equivalents, however, is limited by prosecution history estoppel. Generally, prosecution history estoppel serves to limit the doctrine of equivalents by limiting or narrowing the scope of protection that a patent is afforded.

The doctrine of equivalents is at its lowest point since its creation in 1854.\(^3\) The Federal Circuit’s decision in *Festo*,\(^4\) which in effect elevates prosecution history estoppel to create a complete bar to the application of the doctrine of equivalents for the vast majority of patents, has had a year to play out in the court’s with devastating consequences to patent owners, innovators, and inventors. The *Festo* decision permits anyone to copy a patented invention, making only minor changes to that invention, and yet avoid infringement. Such “Festo copies” may soon become the norm and have the potential to substantially harm our patent system and the benefits to society that flow from it.

The Supreme Court, however, has taken the *Festo* decision for review. The case before the Supreme Court is fully briefed and oral arguments took place on January 8, 2002. It is anticipated that the Supreme Court may rule as early as May 2002 in this case. It is difficult, if not impossible, to predict a Supreme Court ruling based upon the question

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presented by the Justices. Nevertheless, having attended the oral argument, it is my impression from the tone and nature of the questions by the Justices, that the *Festo* decision will be overruled. For example:

**QUESTION** (by Chief Justice Rehnquist): Well, they’re [the Federal Circuit in *Festo*] saying more than that. They’re saying they’re held to it for the entire element, and that’s where I have---have great problems with---with what the circuit does. And--it seems to me a vast extension over what we thought about in *Warner-Jenkinson*. (Emphasis added).

**QUESTION** (by Chief Justice Rehnquist): Because Mr. Bork [attorney for Festo] says you’re going to transfer now the load to the appeals within the Patent Office and we’re going to have this long, long running time. . . . And it seems to me that that’s a--a very serious consequence if--if it in fact will follow.

**QUESTION** (by Justice Breyer): The argument you’re now making [in support of the *Festo* decision, that this decision gives certainty to the patent law and places the risk of amending claims on the patent lawyer] is a wonderful argument against the whole doctrine of equivalents, which I thought we had rejected. . . . But--but if the considerations that you’re raising now are as you think they are, we should abolish the doctrine of equivalents. That--that would give great certainty to the patent law, and all of the--all of the things that you assert would be achieved. The patentee is on notice and he should be as precise as possible, blah, blah, blah.

**QUESTION** (by Justice Ginsburg): Mr. Neustadt, would you--would you tell us why the approach of a complete bar is consistent with the approach taken in *Warner-Jenkinson* where the Court did not want to have a rigid--a rule with no flexibility, and so it created this rebuttable presumption? (Emphasis added).

**QUESTION** (by Justice Rehnquist): Well, there is an--I think I agree with Justice Ginsburg, as she suggested. *I think there is an inconsistency between Warner-Jenkinson and the position you’re taking* [to the support the absolute bar of *Festo*]. (Emphasis added).

**QUESTION** (by Justice O’Connor): Well, I thought everybody agreed that the question was open, that this Court did not decide [the absolute bar issue].
From the questions and tone of the argument, there should be little doubt that the Federal Circuit’s decision in Festo will be overruled. The only real question that remains is the extent to which that decision will be changed. In particular, the Federal Circuit in Festo answered four key questions\(^5\) regarding prosecution history estoppel and the doctrine of equivalents, which are now before the Supreme Court:

1. For the purposes of determining whether an amendment to a claim creates prosecution history estoppel, is “a substantial reason related to patentability,” *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 33 [41 U.S.P.Q.2d 1865] (1997), limited to those amendments made to overcome prior art under § 102 and § 103, or does “patentability” mean any reason affecting the issuance of a patent?—Any reason.

From the questions and tone of the oral argument in the Supreme Court, it is clear that the Court had problems with the Federal Circuit’s ruling on this matter.

2. Under *Warner-Jenkinson*, should a “voluntary” claim amendment—one not required by the examiner or made in response to a rejection by an examiner for a stated reason—create prosecution history estoppel?—Yes.

This issue did not get any attention during the oral arguments before the Supreme Court.

3. If a claim *amendment creates prosecution history estoppel, under Warner-Jenkinson*, what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?—Zero.

This issue was at the center of many of the Justice’s questions and comments. It appeared from the argument to be most troubling part of the Federal Circuit’s decision for the Supreme Court.

4. When “no explanation [for a claim amendment] is established,” *Warner-Jenkinson*, 520 U.S. at 33, thus invoking the presumption of prosecution history estoppel under *Warner-Jenkinson*, what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?—Zero.

At least for Justice Ginsburg, this was not how the Supreme Court had viewed its decision in *Warner-Jenkinson*.

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Regardless of what may come from the Supreme Court’s ruling in *Festo*, this year saw a continued trend to narrow the doctrine of equivalents. Moreover, the complete bar to equivalents that *Festo* put in place was applied essentially across the board. It is now safe to presume, for the time being, that any narrowing amendment, for whatever reason and done in whatever manner, will result in a complete bar to the doctrine of equivalents for the amended claim element.

In contrast to the judicially created doctrine of equivalents, § 112, ¶ 6 equivalents, was a legislative response to the Supreme Court’s 1946 decision in *Halliburton Oil Well Cementing Co. v. Walker*, which prohibited functional claiming. In 1952, to partially overrule *Halliburton*, Congress enacted what has now become ¶ 6 of 35 USC § 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.7

Unlike the doctrine of equivalents, § 112, ¶ 6 equivalents is a narrowing doctrine that restricts the scope of protection afforded the patentee. In *Warner-Jenkinson*, the Supreme Court found that applying § 112, ¶ 6 equivalents was in fact “an application of the doctrine of equivalents in a restrictive role, narrowing the application of broad literal claim element.”8 The Supreme Court went on to find that § 112, ¶ 6 was enacted as a targeted cure to a specific problem, and . . . the reference to ‘equivalents’ [in that paragraph] appears to be no more than a prophylactic against potential side effects of that cure.9 Thus, § 112, ¶ 6 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, ¶ 6 equivalents as the “price that must be paid” for drafting claims in means- or step-plus-function format.10 The recent decisions of the Federal Court have continued this trend of viewing § 112, ¶ 6 equivalents as a narrowing restrictive doctrine. The court also has further defined the distinction between prosecution history estoppel, which does not apply to § 112 equivalents, and using the file history to interpret the scope of § 112 equivalents.

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7 This paragraph was originally ¶ 3 in § 112 and care should be taken in reviewing older case law, which frequently refers to it as such. See 35 USC § 112 (1952). See, e.g., In re Zimmerley, 153 U.S.P.Q. 367, 369 (Pat. Off. Bd. App. 1966).
§ 8.02 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.*11 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.12 Determining what does and what does not count as an equivalent has been a critical and central issue to patent jurisprudence. 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.13

The Federal Circuit continued the well establish rule that obtaining the same result is not enough to establish infringement under the doctrine of equivalents. In *Schoell v. Regal Marine Industries, Inc.*, the court rejected the argument that the accused infringing boat with a 12 V-shaped aft keel was equivalent to the claimed “generally flat aft keel,” because those keels obtained the same result. In so ruling, the court specifically found that:

> From the similarity of results, Schoell [the patentee] infers that the boats, particularly the aft keels, must perform the same function in the same way. This is not enough; Schoell has not set forth specific facts showing that there is a genuine issue for trial whether the Regal twelve degree V-shaped aft keel is insubstantially different from the claimed “generally flat aft keel.”14

The Schoell court also went on to caution that the doctrine of equivalents is not a tool to get a loosing infringement case in front of a jury:

> The doctrine of equivalents is not a talisman that entitles a patentee to a jury trial on the basis of suspicion; it is a limited remedy available in special circumstances, the evidence for which is the responsibility of the proponent.15

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11 339 US. 605, 85 U.S.P.Q. 328 (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).
15 58 U.S.P.Q.2d at 1456.
The Federal Circuit has continued its line of cases that provided no equivalents to claim terms and specifications that are expressly limited on their face.\(^\text{16}\) Thus, a claim’s terms such as, “greater than,” “less than,” “extending beyond,” “consisting of,” etc., will have no protection under the doctrine of equivalents. In *SciMed Life Systems, Inc. v. Advanced Cardiovascular Systems, Inc.*, the Federal Circuit extended this rationale to find that that a dual lumen catheter was not equivalent to the claimed coaxial lumen, because the specification criticized and disclaimed the dual lumen embodiment.\(^\text{17}\) Specifically, the court held:

> Having specifically identified, criticized, and disclaimed the dual lumen configuration, the patentee cannot now invoke the doctrine of equivalents to “embrace a structure that was specifically excluded from the claims.” . . . by defining the claim in a way that clearly excluded certain subject matter, the patent implicitly disclaimed the subject matter that was excluded and thereby barred the patentee from asserting infringement under the doctrine of equivalents.\(^\text{18}\)

The court reached a similar result in *Fin Control Systems Pty. v. OAM, Inc.*\(^\text{19}\) In that case, the court held that a claim limitation to “lateral engagement” to a surfboard excluded as equivalents all engagements to the front or rear of the surfboard.\(^\text{20}\) This rationale was also applied in *Durel Corp. v. Osram Sylvania, Inc.*, to affirm a holding of no equivalents.\(^\text{21}\)

It is important to recognize that this limitation on the doctrine of equivalents is not based upon prosecution history estoppel. Instead, it is based upon the patent specification itself and how one determines equivalency (*i.e.*, similarity). As such, this rationale will not be affected by any reversal of the *Festo* decision, should that occur in the Supreme Court.

On two instances the Federal Circuit declined to apply the rationale of *Corning Glass Works*, which found that elements in the accused infringement product can be combined or rearranged in relation to the claimed elements and still be consider an equivalent.\(^\text{22}\) In *DeMarini Sports, Inc. v. Worth, Inc.*, the patent was directed to an aluminum softball bat with an insert pad.\(^\text{23}\) The bat accused of infringing had substituted the insert pad for an external shell. The court found no equivalents and distinguished the facts of this case from *Corning Glass Works*. The *DeMarini* court first noted that the *Corning Glass* rationale was still good law:

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\(^{17}\) 242 F.3d 1337, 58 U.S.P.Q.2d 1059 (Fed. Cir. 2001).

\(^{18}\) 242 F.3d at 1345; 58 U.S.P.Q.2d at 1066.

\(^{19}\) 265 F.3d 1311, 60 U.S.P.Q.2d 1203 (Fed. Cir. 2001).

\(^{20}\) 265 F.3d at 1320-21; 60 U.S.P.Q.2d at 1210.

\(^{21}\) 256 F.3d 1298, 59 U.S.P.Q.2d 1238 (Fed. Cir. 2001).


\(^{23}\) 239 F.3d 1314, 57 U.S.P.Q.2d 1889 (Fed. Cir. 2001).
Whether or not a limitation is deemed to be vitiated must take into account that when two elements of the accused device perform a single function of the patented invention, or when separate claim limitations are combined into a single element of the accused device, a claim limitation is not necessarily vitiated, and the doctrine of equivalents may still apply if the differences are insubstantial.24

The *DeMarini* court, however, went on to find that in this rationale was not applicable to the aluminum bats at issue before the court:

DeMarini characterizes *Corning Glass* as a mere reversal of parts case involving the reciprocal change of coacting elements. While we agree with *DeMarini* that in *Corning Glass* the alleged infringer effected a reciprocal change in the accused device to achieve the identical result of the claimed device, we disagree that he reciprocal change was a reversal of structure. . . . In other words, no structural claim limitations were rearranged, only the relative characteristics of the structures were reciprocally changed.

In the case at bar, the difference between the accused bat and the claimed invention is more profound than in *Corning Glass*. To compare the claimed insert to the Worth EST shell [the accused device] involves a structural rearrangement and redefinition of claim limitations in which the functional relationships of these structural limitations is not maintained, . . . 25

Similarly, in *Forest Laboratories, Inc. v. Abbott Laboratories*, the court declined to find equivalency when elements in the accused device had been re-arranged with respect to the patent claims:

In *Corning Glass Works*, we did not dispense with the need for one-to-one correspondence of limitations and elements; the limitation at issue was in fact met by an equivalent, albeit one of a different part of the device. . . . Here, Abbott does not point to any alternative to the water that would be equivalent to it. A statement that water is “irrelevant” does not establish that an unknown percentage of water is equivalent to the claimed water percentages. If we accepted this testimony and treated the water limitation as irrelevant, we would be vitiating that limitation.26

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24 239 F.3d at 1332; 57 U.S.P.Q.2d at 1900).
25 239 F.3d at 1332; 57 U.S.P.Q.2d at 1990-01.
The court was again presented with the situation where a part of the accused infringing act or product was disclosed in the specification but not claimed. 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 \( z \) also may be used in place of compound \( B \). In that situation it is very likely that elements \( x, y, \) and \( z \) would be equivalents of \( B \).\(^{27}\) 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 an equivalent, which is exactly what the Federal Circuit held in *Maxwell v. Baker*.\(^{28}\)

In *Smith & Nephew, Inc. v. Ethicon, Inc.*,\(^{29}\) the Federal Circuit declined to apply the rationale of *Maxwell* to the situation where the accused infringing process performed steps in addition to the steps that were claimed. In so holding, the *Smith* court reasoned:

A claim is not defective when it states fewer than all of the steps that may be performed in practice of the invention. . . . Infringement arises when all of the steps of a claimed method are performed, whether or not the infringer also performs additional steps. . . . This court did not hold in *Maxwell* . . . that unless all disclosed procedures are included in the claim, the patentee has “dedicated to the public” not only the unclaimed procedures but the entire claimed process.\(^{30}\)

In an analogous statement in *Asyst Technologies, Inc. v. Empak, Inc.*, the Federal Circuit reasoned:

It is well established that “it is not necessary to claim in a patent every device required to enable the invention to be used.” . . . An electrical outlet enables a toaster to work, but the outlet is not for that reason considered part of the toaster.\(^{31}\)

§ 8.03 PROSECUTION HISTORY ESTOPPEL

The doctrine of prosecution history estoppel, or file wrapper estoppel, 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. Prior to the Federal Circuit’s *Festo* decision, “prosecution history estoppel preclude[d] a patentee from obtaining under the doctrine of equivalents coverage of subject matter that has been relinquished during the prosecution of its patent

\(^{27}\) 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.


\(^{29}\) ___ F.3d ___, 61 U.S.P.Q.2d 1065 (Fed. Cir. 2001).

\(^{30}\) ___ F.3d at ___, 61 U.S.P.Q.2d at 1069-70.

Now after Festo, the doctrine of prosecution history estoppel is a complete bar to equivalents for any claim element that was narrowed during the prosecution of the patent. In fact, the Federal Circuit has extended this complete bar to claim elements that were not narrowed, and in fact were not even amended during prosecution.

In Intermatic Inc. v. Lamson & Sessions Co., the Federal Circuit held that amendments made during a reexamination created an estoppel for claims that were allowed without amendment in the original patent:

We conclude that the principles espoused in Builders equally apply to a claim limitation that was narrowed in order to obtain allowance of a claim during reexamination, despite the fact that the resulting estoppel may retroactively extend to original, unamended claims, and hold that any estoppel generated by such an amendment applies to all other claims in the patent containing that limitation.

The Federal Circuit similarly extended prosecution history estoppel to new grounds in several other cases. In Mycogen Plant Science, Inc. v. Monsanto Co., the court applied prosecution history estoppel to a claim that was given a first office action allowance. In Mycogen, the claim was originally present as a dependent claim, which the examiner indicated would be allowable if rewritten in independent form. Significantly, the applicant did not incorporate the limitations of that dependent claim into an independent claim. Instead, the dependent claim was sufficiently detailed that the only thing the applicant had to do was delete the reference to the independent claim. Thus, the applicant removed, rather than added, terms to the claim. Nevertheless, the Federal Circuit found this to be a narrowing amendment and barred any application of the doctrine of equivalents.

Similarly, in Glaxo Group Ltd. v. Ranbaxy Pharmaceuticals, Inc., the court applied an estoppel to a new claim that merely combined and restated elements that were present in earlier claims. In Bioval Corp. International v. Andrx Pharmaceuticals, Inc., the court held that an amendment to a claim term in a parent application applied to that claim term in all subsequent applications that claimed priority to the parent.

In Pall Corp. v. PTI Technologies, Inc., the Federal Circuit held that statements made in an IDS created an estoppel. In this case, the applicant had used the somewhat antiquated

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catchall language in an IDS that none of the cited material disclose the claimed invention. Unfortunately, the Federal Circuit accepted this at face value and applied an estoppel. The Federal Circuit, however, remanded the case to determine the extent of the estoppel. In this situation, because it is an argument-based estoppel, rather than amendment-based estoppel, the complete bar of Festo did not apply. Rather, the estoppel should be limited to that which the applicant expressly surrendered (i.e., what the applicant said was not the claimed invention).  

In Watts v. XL Systems, Inc., another case addressing argument-based estoppel, the Federal Circuit held that general arguments directed toward a particular claim term created an estoppel regarding that term for all the claims of the patent. Specifically, the court ruled:

> We find Watts’ argument that the prosecution history does not apply to the sealingly connected limitation of claim 18 to be baseless. It is irrelevant in this case whether Watts’ prosecution history remarks were directed to claim 18 specifically because there is no clear indication that they were not. . . . While Watts’ remarks occur in a discussion of claim 1, they are general in nature and apply to any claim that contains the sealingly connected limitation.  

In Dow Chemical Co. v. Sumitomo Chemical Co., however, the Federal Circuit relied upon the arguments of the applicant to support a finding that there was on prosecution history estoppel. In that case, the applicant had asserted that the examiner was wrong and ultimately prevailed. The applicant also on the record stated that its claims were not limited to certain features. Thus, the court reasoned:

> We note that statements made by an examiner will not necessarily limit a claim. . . . Where a patentee disputes an examiner’s statement on the record, and makes no amendment based on the examiner’s statement, such statement usually would not be construed as a basis for argument-based prosecution history estoppel. Moreover, Dow made it clear in its response that, “as the Examiner agreed, the claimed invention is not limited to a one stage or single step process.” . . . Dow’s statements make clear that its invention was not limited to a one step process. Thus, Dow’s statements do not evince the “clear and unmistakable surrender of subject matter” necessary to invoke argument-based prosecution history estoppel.  

In Pioneer Magnetics, Inc. v. Micro Linear Corp., the Federal Circuit followed its pronouncement in Festo, and held that evidence that was not part of the public record could

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not be used to rebut the presumption that an amendment was made for the purposes of patentability. Thus, the court held:

The argument [that the amendment was not made for the purposes of patentability] is unpersuasive. First, we do not consider the Beecher declaration [the lawyer who prosecuted the application] in determining the reasons for the amendment to the claim. Only the “public record of the patent’s prosecution, i.e., the patent’s prosecution history” can be a basis for such a reason.\(^{41}\)

In two cases, however, the Federal Circuit declined to find an estoppel even though the claims had been amended for patentability reasons. In both these cases, the court found that the amendments were non-narrowing and as such the \(\text{Festo}\) absolute bar did not apply. In \(\text{Interactive Pictures Corp. v. Infinite Pictures, Inc.}\), the court found that amending the claim term “output signals” to “output transforming calculation signals” did not narrow the claim, but merely made express what was implicit in that claim term.\(^{42}\) In \(\text{TurboCare v. General Electric Co.}\), the court found that:

[the] newly added claim term only redefined the small clearance position limitation without narrowing the claim. Therefore \(\text{Festo}\) is not applicable.\(^{43}\)

\(§\) 8.04 MEANS- AND STEP-PLUS-FUNCTION CLAIMS—DETERMINING WHAT CLAIMS INVOKE \(§\) 112, ¶ 6

In determining whether a claim element invokes \(§\) 112, ¶ 6—i.e., whether it is written in means- or step-plus-function language the Federal Circuit has continued to apply and refine the presumptions setout in \(\text{Personalized Media Communications v. International Trade Commission}\). In that case, the Federal Circuit summarized the analysis for making the determination of the applicability of \(§\) 112, ¶ 6 to a claim element as follows:

The fact that a particular mechanism . . . is defined in functional terms is not sufficient to convert a claim element containing that term into a “means for performing a specified function” within the meaning of [\(§\) 112, ¶ 6]. Many devices take their names from the functions they perform. The examples are innumerable, such as “filter,” “brake,” “clamp,” “screwdriver,” or “lock.” . . .

[T]he term “means” is central to the analysis: “the use of the term ‘means’ has come to be so closely associated with ‘means-plus-function’ claiming that it is fair to say that the use

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\(^{41}\) \(\text{Pioneer Magnetics, Inc. v. Micro Linear Corp.}\), 238 F.3d 1341, 1345, 57 U.S.P.Q.2d 1553, 1556 (Fed. Cir. 2001).

\(^{42}\) 61 U.S.P.Q.2d 1152, 1157 (Fed. Cir. 2001).

\(^{43}\) 60 U.S.P.Q.2d 1017, 1028 (Fed. Cir. 2001).
of the term ‘means’ (particularly as used in the phrase ‘means for’) generally invokes [§ 112, ¶ 6] and that the use of a different formulation generally does not.” Id. at 1584, 39 U.S.P.Q. at 1787.

Subsequent cases have clarified that use of the word “means” creates a presumption that § 112, ¶ 6 applies, see York Prods., Inc. v. Central Tractor, 99 F.3d 1568, 1574, 40 USPQ2d 1619, 1623 (Fed. Cir. 1996) (“In determining whether to apply the statutory procedures of [§ 112, ¶ 6], the use of the word ‘means’ triggers a presumption that the inventor used this term advisedly to invoke the statutory mandates for means-plus-function clauses.”), and that the failure to use the word “means” creates a presumption that § 112, ¶ 6 does not apply, see Mas-Hamilton, 156 F.3d at 1213,48 U.S.P.Q.2d at 1016. These presumptions can be rebutted if the evidence intrinsic to the patent and any relevant extrinsic evidence so warrant. See, e.g., Cole v. Kimberly-Clark Corp., 102 F.3d at 524, 531, 41 U.S.P.Q.2d 1001, 1006 (Fed. Cir. 1996) (noting that whether § 112, ¶ 6 is invoked involves an analysis of the “patent and the prosecution history,” and consulting a dictionary definition of “perforation” to understand if one of skill in the art would understand this term to connote structure). In deciding whether either presumption has been rebutted, the focus remains on whether the claim as properly construed recites sufficiently definite stricture to avoid the ambit of § 112, ¶ 6. See Sage Prods. v. Devon Indus., Inc., 126 F.3d 1420, 1427-28, 44 U.S.P.Q.2d 1103, 1109 (Fed. Cir. 1997) (“[W]here a claim recites a function, but then goes on to elaborate sufficient structure, material, or acts within the claim itself to perform entirely the recited function, the claim is not in means-plus-function format” even if the claim uses the term “means”).

Thus, in Lockheed Martin Corp. v. Space Systems/Loral, Inc., the Federal Circuit did not consider a whereby clause as part of a means-plus-function claims element:

The function is properly identified as the language after the “means for” clause and before the “whereby” clause, because a whereby clause that merely states the result of the limitations in the claim adds nothing to the substance of the claim. Texas

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In *Generation II Orthotics, Inc. v. Medical Technology, Inc.*, the Federal Circuit addressed the relationship between apparatus claims that were drafted in means-plus-function format and method claims related to the use of that apparatus. The court declined to construe the method claims as invoking § 112, ¶ 6 simply because the related apparatus claims invoked that paragraph. Specifically, the court reasoned:

The mere fact that a method claim is drafted with language parallel to an apparatus claim with means-plus-function language does not mean that the method claim should be subject to an analysis under § 112, paragraph 6. . . . Rather, each limitation must be independently reviewed to determine if it is subject to the requirements of § 112, paragraph 6. . . .

Because claim 16 of the ‘169 patent and claim 1 of the ‘806 patent do not use the words “means for” with regard to the structural “joint” limitation, and do not use the words “step for” with regard to the “locating” and “adjusting” steps, there is a presumption that these limitations are not subject to section 112, paragraph 6.  

The number of issues relating to the applicability of § 112, ¶ 6 to claims elements were surprising limited in 2001, with most cases stipulating that anything containing a “means” term invoked § 112, ¶ 6. In the past, patentees would resist having § 112, ¶ 6 apply to a claim element, because that paragraph limited the scope of the element. After *Festo*, however, there is now a distinct advantage to having § 112, ¶ 6 apply. As addressed below, § 112, ¶ 6 equivalents is a literal infringement analysis, and as such, *Festo* and its compete bar to equivalents does not apply. Thus, § 112, ¶ 6 may be one of the few, if not the only, ways to avoid the reach of *Festo*.

§ 8.05 INFRINGEMENT DETERMINATIONS FOR MEANS- AND STEP-PLUS-FUNCTION CLAIMS

A literal infringement analysis under § 112, ¶ 6 is a two-part inquiry. First, the claimed function must be performed “exactly” in the accused device. Second, identical or equivalent structures or acts to those disclosed in the patent specification must be found in

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47 *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 933-34, 41 U.S.P.Q.2d 1737, 1739 (Fed. Cir. 1987) (emphasis original); *General Elec. Co. v. Nintendo Co.*, 179 F.3d 1350, 1356, 50 U.S.P.Q.2d 1910, 1915 (Fed. Cir. 1999) holding that “[w]e therefore do not need to determine whether the accused devices use the same structure as described in the [specification] or its equivalent. Since the accused devices do not perform the identical function to that of [the claim], the accused devices cannot literally infringe [the claim.]”;

the accused device or process. Thus, the Federal Circuit has framed the test for literal infringement as:

for a means-[or step]-plus-function limitation to read on an accused device, the accused device must employ means [or steps] identical to or the equivalent of the structures, material, or acts described in the patent specification. The accused device must also perform the identical function as specified in the claims.48

Because this equivalence test is a literal infringement analysis, the doctrine of prosecution history estoppel and the holding of Festo are not applicable. Thus, in Wenger Manufacturing v. Coding Machinery Systems, the Federal Circuit ruled:

CMS further argues that prosecution history estoppel precludes a finding of infringement by a machine that does not recalculate air. We disagree. This court has previously stated that the doctrine of prosecution history estoppel is “irrelevant” of the determination of literal claim scope. Biodex Corp. v. Loredam Biomedical, Inc., 946 F.2d 850, 862, 20 U.S.P.Q.2d 1252, 1262 (Fed. Cir. 1991). In Biodex we recognized a “clear line of distinction” between using prosecution history to construe disputed claim language, and applying the doctrine of prosecution history estoppel to prevent a patentee from obtaining under the doctrine of equivalents coverage of subject matter that was relinquished during prosecution.49

This clear line of distinction, however, does not permit a means- or step-plus-function claim element to go unchecked by the prosecution history and patent specifications. Thus, in Wegner, the court further stated:

[J]ust 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 make in support of patentability thus may affect the range of equivalents under § 112, ¶ 6.50

In several cases, the Federal Circuit address the relationship between § 112, ¶ 6 equivalents (literal infringement) and the doctrine of equivalents as it pertains to a means-and step-plus-function claim element. In most of these cases, the court simply goes from the finding no literal infringement (i.e., no equivalents under § 112, ¶ 6) to a doctrine of equivalents analysis, similarly finding no infringement. These cases, however, appear to gloss over, or outright ignore, the after-arising-equivalence rule that applies to means- and step-plus-function claims. The Federal Circuit in Ballard Medical Products v. Allegiance, however, makes it clear that the after-arising-equivalence test is still the law:

Moreover, where the claim of infringement under section 112 paragraph 6 fails on the ground that the accused device is not equivalent to the structure disclosed in the specification, the doctrine of equivalents is available only if, unlike in this case, the accused device represent new technology developed after the issuance of the patent.

The Federal Circuit also has continued the rule that when determining the structure or acts that corresponds to the means- or step-plus-function claims, only that structure which is essential to obtaining the claimed function should be included.

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52 See Chiuminata Concrete Concepts v. Cardinal Indus., Inc., 145 F.3d 1303, 1311, 46 U.S.P.Q.2d 1752, 1758 (Fed. Cir. 1999) ("... 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 us 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?"); Smith Indus. Med. Sys., Inc. v. Vital Signs, Inc., 183 F.3d 1347, 51 U.S.P.Q.2d 1415 (Fed. Cir. 1999) ("because the tube is not an ‘after arising’ component in relation to the date of the patent, infringement under the doctrine of equivalents is again precluded ... I therefore see no need for a remand.") (Lourie, J. dissenting in part).


54 Globetrotter Software, Inc. v. Elan Computer Group, Inc., 236 F.3d 1362, 57 U.S.P.Q.2d 1542 (Fed. Cir. 2001) (only essential structure to perform the claimed function is demeaned to be corresponding structure to the means clause); Asyst Technologies, Inc. v. Empak, Inc., 268 F.3d 1364, 60 U.S.P.Q.2d 1567 (Fed. Cir. 2001) (noting that “structural features that do not actually perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations.”); Acromed Corp. v. Sofamor Danek
Advanced Cardiovascular Systems, Inc., the court held that only one of three structures that were capable of performing the claimed function to be the corresponding structure. The court reasoned that:

Despite the fact that the straight wire, wire hooks and suture ties can perform the recited function of connecting adjacent elements together, neither the specification nor the prosecution history of the ‘727 patent, either alone or in combination, provides a clear link or association with the recited function. Thus, we hold the only structure corresponding to the function of the means-plus-function limitation in issue the helical winding.55

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