2002

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The Doctrine of Equivalents and Prosecution History Estoppel:
The Supreme Court Supports Flexibility Over Certainty in Patent Cases in Festo v. SMC

by: Sue Ann Mota


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“The Congress shall have the power to promote the progress of science and useful arts, by securing for
limited times to authors and inventors the exclusive rights to their respective writings and discoveries.”

I. INTRODUCTION

Pursuant to this Constitutional grant of power, Congress has enacted numerous Patent Acts, most recently the Patent Act of 1952. The limited monopoly granted by Congress, that no one may make, use, or sell the patented invention now for twenty years from application, is a property right, and like any property right, its boundaries should be clear. The scope of a patent, however, covers not only its literal terms, but also all equivalents under the doctrine of equivalents, which renders the scope of patents less certain.

Prosecution history estoppel, a rule of patent construction, requires that the claims of a patent be interpreted in light of the application process at the Patent and Trademark Office (hereinafter “PTO”); a patentee may not regain as equivalent subject matter surrendered when claims are narrowed during the application process. The Court of Appeals for the Federal Circuit, sitting en banc, held in 2000 that when prosecution history applies from any amendment made during an application process that narrows a patent claim, it bars any and all equivalent for the element that was amended. The U.S. Supreme Court, however, on May 28, 2002, vacated this decision, unanimously holding that prosecution history estoppel need not bar suit against every equivalent to the amended claim element. Thus, the U.S. Supreme Court continued the role of flexibility over certainty, overturning the Federal Circuit’s complete bar by estoppel.

This article will examine the doctrine of equivalents, prosecution history estoppel, and the Festo litigation. This author concludes that, while still allowing for some uncertainty, the U.S. Supreme Court struck the correct balance in allowing patent holders to use the doctrine of equivalents against copycat inventions when claims have been narrowed during prosecution history.

II. PATENT LAW, THE DOCTRINE OF EQUIVALENTS, AND PROSECUTION HISTORY ESTOPPEL

Pursuant to its Constitutional grant, Congress passed the Patent Act of 1790. The later Patent Act of 1836 required an applicant to file a specification and to point out the particular part, improvement, or combination which is claimed as the applicant’s own invention. The Patent Act of 1870 required a claim, stating that an applicant “shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery.” The current Patent Act of 1952 allows an inventor to obtain a patent for “any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof.” To be patentable, an invention must thus be novel, useful and nonobvious. A patent application must contain a specification that describes the invention in such full, clear, concise and exact terms as to enable any person skilled in the art to make and use the invention. The specification must set forth the precise invention for which a patent is solicited, in such manner as to distinguish it from other inventions, and from what is old. The patent application must also include one or more claims that particularly point out and distinctly claim the subject matter that the applicant regards as the invention. The application must also include a drawing when necessary, an oath and the current fee. Once a complete application is submitted, the PTO patent examiner makes an examination of the application including performing a prior art search. The examiner issues a first office action, and provides the examiner’s reasons for any rejection of claims, such as the invention was anticipated by the prior art or the claims are not for patentable subject matter. The applicant may request reconsideration in writing, and must distinctly and specifically point out the supposed errors in the examiner’s action. The applicant must respond to every ground of objection and rejection by the PTO. The applicant may amend the claims.

After reconsideration, the applicant will be notified if claims are rejected in the same manner as after the first examination. The PTO can, on its own initiative, also request reexamination.
If the PTO persists in the rejection of any of the claims in an application, or if the rejection has been made final, the applicant may appeal to the Board of Patent Appeals and Interferences in the Patent and Trademark office. An appeal may be taken to the Court of Appeals for the Federal Circuit, or a civil action may be filed against the Patent Commission in the U.S. District Court for the District of Columbia.

If a patent is granted, the patent holder has the exclusive rights to make, use, sell, or offer to sell the patented inventory for a period of twenty years from patent application. If a patent claim is infringed, whether by actual or contributory infringement or the doctrine of equivalents, the patent holder shall have a remedy by civil action for infringement. A court may grant an injunction “in accordance with the principles of equity . . . on such terms as the court deems reasonable.” A court may grant damages to compensate for infringement together with interests and costs. The damages may not be less than a reasonable royalty. The damages may be increased by the court up to three times the amount assessed. The court in exceptional cases may award reasonable attorney’s fees to the prevailing party.

One method of patent infringement mentioned above is by equivalents, under which a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is equivalence between the elements of the accused product or process and the elements of the patented invention. The U.S. Supreme Court in 1854 approved of the doctrine of equivalents in Winans v. Denmead. The U.S. Supreme Court in 1950 set the modern contours of this doctrine in Graver Tank, holding that a substituted element by a competitor did not fall within the literal elements of a patent claims, but then looked further to see whether the change was so insubstantial to invoke the doctrine of equivalents. The Court in Graver Tank stated that the following factors are considerations for applying the doctrine of equivalents:

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

The Supreme Court in 1997 unanimously held that this doctrine of equivalents existed after the 1952 Patent Act. In Warner-Jenkinson Co. v. Hilton Davis Chemical Co., the Court, adhering to the doctrine of equivalents, stated that “the 1952 Patent Act is not materially different from the 1870 Act” concerning the role of the PTO, patent claiming, and reissue of patents. The minor differences have no bearing on the decision reached in Graver Tank and thus provide no reason for overruling it. The Court, endeavoring to clarify the scope of the doctrine, stated in Warner-Jenkinson that equivalence “should be applied as an objective inquiry on an element-by-element basis.”

The Court in Warner-Jenkinson further stated that the Court of Appeals did not consider prosecution history estoppel, and remanded. In the patent prosecution history, the PTO may reject a patent application for not meeting statutory requirements for patentabilities. The applicant may then narrow patent claims. Prosecution history then estops the applicant from arguing that the subject matter covered by the earlier broader claim was an equivalent to what was covered in the amended claim. Prosecution history estoppel precludes a patent holder regaining subject matter relinquished in an amended claim.

Both the doctrine of equivalents and prosecution history estoppel were at issue in Festo.
III. FESTO CORP. v. SHOKETSU KINZOKU KOGYO KABUSHIKI CO.

[12] Festo Corp. owns two patents, the Stoll patent and the Carroll patent, both relating to magnetically coupled rodless cylinders. The cylinder “moves by magnetic attraction to the piston, which is moved hydraulically or pneumatically.”[49] The Carroll patent issued in 1973.[50] and expired in 1990.[51] A reexamination certificate was issued in 1988 with amended claims, and during the reexamination, Carroll canceled claim 1 and added claim 9.[52] The Stoll patent was filed in 1980 as the U.S. counterpart of a German patent application.[53] In the first office action, all twelve original claims were rejected by the patent examiner. Some claims were amended, others were canceled. The patent issued in 1982.[54]

[13] After Festo began selling its device, Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., and SMC Pneumatics, Inc. (hereinafter collectively “SMC”), entered the market with a similar device. Festo sued SMC in a district court for infringement of both the Carroll and Stoll patents. Before trial, the district court granted Festo’s motion for partial summary judgment concerning the Carroll patent.[55] All the claim elements were conceded to be literally present in the allegedly infringing devices except two.[56] The district court granted summary judgment on infringement of the Carroll patent under the doctrine of equivalents.[57] The remaining issues were tried to a jury, which found both patents valid, found the Stoll patent infringed by the doctrine of equivalents, and assessed damages.[58]

[14] SMC appealed to the Federal Circuit, raising for the first time the issue of prosecution history estoppel.[59] On appeal, Festo argued that the prosecution history estoppel does not bar a finding of equivalence when a term in the claim was not required.[60] In Festo, during prosecution, the sleeve being magnetized was added. The reason for the addition was disputed at trial, and the judge called the addition a “mystery.”[61] The Court of Appeals held that, in determining whether prosecution history estoppel applies, the court must consider both what has changed and the reason for the change in light of the prior art in the field.[62] The Court of Appeals affirmed both the summary judgment of infringement of the Carroll patent as well as the damages awarded by the jury.[63]


[16] On remand, the Court of Appeals for the Federal Circuit acknowledged the importance of the doctrine of equivalents to prevent an accused infringer to avoid liability for only minor or insubstantial changes.[66] According to the Federal Circuit, the exact range of equivalents when prosecution history estoppel applies is virtually unascertainable under the preceding, more flexible approach to the doctrine.[67] Thus the Federal Circuit reversed, holding that a complete bar eliminates the public’s need to speculate as to the subject matter surrendered by an amendment that narrows a claim.[68] Even though no explanation for the amendments narrowing the scope of the claims was established, the Court held that the amendments gave rise to prosecution history estoppel and thus may not be infringed by equivalence.[69]

[17] In a concurrence, Judge Lourie stated that he believed that the Federal Circuit’s new rule would provide a clear net gain for innovation and the public, who would gain by greater certainty.[70] New innovations could be developed without fear of protracted innovation.[71] This case once again went to the U.S. Supreme Court.[72]

[18] Justice Kennedy, writing for a unanimous Court, stated in an opinion issued May 28, 2002, that the Court once again was required to address the relation between two patent law concepts, the doctrine of equivalents and the rule of prosecution history estoppel.[73] Although the Court had considered the same concepts five years earlier in Warner-Jenkinson,[74] the Federal Circuit subsequently held that a patent applicant surrenders all equivalents when claims are narrowed during patent prosecution.[75] In a sharply worded opinion, Justice Kennedy stated, “[t]he Court of Appeals ignored the guidance of Warner-Jenkinson, which instructed that courts must be cautious before adopting changes that disrupt the settled expectations of the inventing community.”[76]
IV. CONCLUSION

{19} The U.S. Supreme Court in *Festo* thus retained the flexible rule, that prosecution history estoppel does not bar suit against every equivalent of every amended claim. The Court acknowledged that this can create substantial uncertainty about where the patent monopoly ends. [77] “Each time the Court has considered the doctrine, it has acknowledged this uncertainty as the price of ensuring the appropriate incentives for innovation.” [78]

{20} This author agrees with the Court’s decision. The Court struck a balance between innovation and certainty. Under the doctrine of equivalents, a patent holder should be able to protect against not only a literal infringer, but also those who design around the patent application, and create nearly equivalent, although not identical, versions. On the other hand, an inventor should not be able to recoup what has been narrowed during prosecution history estoppel by the doctrine of equivalents. This prosecution history estoppel, however, should not be a complete bar to all elements narrowed, regardless of the purpose, as held by the Federal Circuit. Had the Federal Circuit’s decision been upheld, many patent holders would have lost equivalence for many claims narrowed for any reason, which was not anticipated if these patent holders relied on prior court precedent. In the author’s opinion, the Court was correct in holding that certainty is not a sufficient reason to overthrow this precedent and reliance.

ENDNOTES

[*] Professor of Legal Studies, Bowling Green State University; J. D., University of Toledo College of Law, Order of the Coif; M.A. and B.A., Bowling Green State University.
[6] *Id.* at 1838. “The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes.” *Id.; see infra*, nn.34-41 and accompanying text.
[11] Act of July 4, 1836, ch. 357, § 6, 5 Stat. 117 (1836). The term “claim” was used, but a claim was not mandated.

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States or

(c) he has abandoned the invention, or

(d) the invention was first patented or caused to be patented, or was the subject of an inventor’s certificate, by the applicant or his legal representatives or assigns in a foreign country on an application for patent or inventor’s certificate filed more than twelve months before the filing of the application in the United States, or

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent, or

(f) he did not himself invent the subject matter sought to be patented, or

(g) before the applicant’s invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.”

35 U.S.C. § 103 states:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made. . . .

(c) Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Id. § 103(a), (c). In 1952, nonobviousness as a requirement was codified to put the common law judicial
precedents into statutory form. The first two requirements of novelty and utility had been the sole statutory test since the Patent Act of 1793. 


The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

A claim may be written in independent or, if the nature of the case admits, in dependent or multiple dependent form.

Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

A claim in multiple dependent form shall contain a reference, in the alternative only, to more than one claim previously set forth and then specify a further limitation of the subject matter claimed. A multiple dependent claim shall not serve as a basis for any other multiple dependent claim. A multiple dependent claim shall be construed to incorporate by reference all the limitations of the particular claim in relation to which it is being considered.

An element in a 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.


[19] 35 U.S.C. § 112, ¶ 2. The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery. PATENT MANUAL, SUPRA NOTE 18, at 608.01(i). The U.S. Supreme Court unanimously held in Markman v. Westview Instruments, Inc. that the construction of a patent, including terms of art within its claim, is within the exclusive province of the court. 517 U.S. 25, 37 (1996). See generally Sue Mota, Markman v. Westview Instruments, Inc.: Patent Construction is Seventh Amendment, 3 RICH. J. L. & TECH. 3 (1997), at http://jolt.richmond.edu/v3i1/mota.html (Oct. 1, 1997).


[21] Id. § 111(a)(3). If the patent is granted, periodic maintenance fees are also required. Id. § 41(b).

[22] Id. § 131.

[23] Id. § 132.

Whenever, on examination, any claim for a patent is rejected, or any objection or requirement made, the Commissioner shall notify the applicant thereof, stating the reasons for such rejection, or objection or requirement, together with such information and references as may be useful in judging of the propriety of continuing the prosecution of his application; and if after receiving such notice, the applicant persists in his claim for a patent, with or without amendment, the application shall be reexamined. No amendment shall introduce new matter into the disclosure of the invention.


An extension for up to five years may be available due to governmental delay. *Id.* § 154(a)(2).

*See also* Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 122 S. Ct. 1831, 1838 (2002). (describing the doctrine of equivalents as allowing “the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes”).


56 U.S. 330 (1854).

*Graver Tank*, 339 U.S. at 610.

Applying these factors, the Court in *Graver Tank* concluded that the trial court’s finding of infringement under the doctrine of equivalents was proper. *Id.* at 612.


*Id.* at 26.

*See generally* Warner Stemen, Note, *The Doctrine of Equivalents After Hilton Davis and Markman, and a Proposal for Further Clarification*, 22 NOVA L. REV. 783 (1998) (providing an overview of the doctrine of equivalents and presenting a proposal for how the doctrine might further be clarified); William R. Zimmerman, Note and Comment, *Unifying Markman and Warner-Jenkinson: A Revised Approach to the Doctrine of Equivalents*, 11 HARV. J.L. & TECH. 185 (1997) (arguing that courts must “revise the Markman framework to allow a more uniform application at the district and appellate court levels” and also “revise the doctrine of equivalents to create defined roles for the judge and jury similar to those in the literal infringement inquiry.”).


Id. at 1839.

Id. at 1835.

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 72 F.3d 857, 860 (Fed. Cir. 1993). The claimed devices have three basic parts: “a piston, a cylinder, and a sleeve” outside the cylinder magnetically coupled to the piston. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558 at 579. (Fed. Cir. 2000) The sleeve moves objects on a conveying system. Id.

U.S. Patent No. 3,779,401 (issued Dec. 18, 1973); Festo, 234 F.3d at 580; Festo, 72 F.3d at 860.

Prior to January 1, 1995, when the TRIPS Agreement went into effect, the patent term was seventeen years from patent grant. The current term is twenty years from application. 35 U.S.C. § 154(a)(2).

Festo, 234 F.3d at 584. Carroll requested reexamination, citing a German patent that was not of record during the Carroll patent’s prosecution history. The PTO examiner allowed the amended claims. Id. at 584.

Id. at 582.

Festo, 234 F.3d at 579, 583. The Stoll patent is U.S. Patent No. 4,354,125 (issued Oct. 12, 1982). Festo, 72 F.3d at 862; Festo, 274 F.3d at 582.

Festo, 72 F.3d at 860.

Id. at 860. Concerning the Carroll patent, SMC stated to the special master, “We’ve decided that we will not be presenting any testimony concerning infringement.” Id. at 861. The trial judge referred the case to a special master; the successor trial judge continued the reference. Id. at 865. The special master did find that prosecution history estoppel barred Festo’s assertion of equivalency. Id. at 864. The jury was allowed to have a copy of the special master’s report instead of merely having it read to them as per Federal Rules of Civil Procedure 53(e)(3). Id. at 865. This possession of the master’s report was deemed to be harmless error and not grounds for a new trial. Id. at 866.

Id. at 862. The district court found that SMC could not literally infringe the Stoll patents because SMC’s devices did not have magnetized sleeves.

Id. at 863. At trial, SMC’s counsel stated, “This is not really a prosecution history estoppel case.” Id.

Id. at 864. According to the Federal Circuit, “whenever prosecution history estoppel is invoked as a limitation to infringement under the doctrine of equivalents, a close examination must be made as to, not only what is surrendered, but also the reason for such a surrender.” Id.

Id.

Id.

The general measure of actual damages of a manufacturing patentee is the lost profits that the patentee would have earned but for the infringement.” Id. at 867. Festo presented evidence on the factors of demand for the product, the possible substitution of other products, Festo’s manufacturing and marketing capability to fulfill the demand, and the amount of profit Festo would have made on lost sales. Id. In addition, costs were taxed in favor of Festo. Id. at 868.


The appeals court stated that the Supreme Court has noted the court need not inquire into the examiner’s rejection that led to the amendment; even if the rejection is improper, the amendment may give rise to estoppel.  


Judge Lourie stated that, “It is said that stare decisis compels us to stay the course with the old rule. I thought the same regarding Zurko.”  


Judge Lourie further stated, referring to Zurko, “the Supreme Court, in its wisdom, believed that decades of practice should be overruled in order to bring our standard of judicial review of findings of fact made by the PTO into line with the standard of review applied to other agency decisions.”  

Festo, 234 F.3d at 597.  

Lourie believed that if a majority of the Federal Circuit believed that for certainty, a new rule should be adopted, it should be upheld.  

Festo, 234 F.3d at 598.  


Festo Corp. v. Shoketsu Kinzoku Kabushiki Co., 122 S.Ct. at 1832.

Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 (1997). The Court stated that in Warner-Jenkinson, the Court recognized that prosecution history estoppel does not arise in every instance where a patent application is amended.  

Festo, 122 S. Ct. at 1832.

Festo, 234 F.3d at 575. “The Court of Appeals acknowledged that this holding departed from its own cases, which applied a flexible bar when considering what claims of equivalence were estopped by the prosecution history.”  

Festo, 122 S. Ct. at 1835.

Festo, 122 S. Ct. at 1841 (citing Warner-Jenkinson, 520 U.S. at 28).

Id. at 1835.

Id. at 1837-38. Based on the record before the Court, it couldn’t say whether estoppel applied or the equivalents were surrendered.  

Id. at 1842. Thus, the judgment of the Federal Circuit was vacated and the case was remanded.  

Id. at 1843.

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1. [http://www.ipcreators.org/SC/Festo/Festo_page.htm](http://www.ipcreators.org/SC/Festo/Festo_page.htm)
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   Discusses the implications of *Festo v. SMC* for high-technology areas, such as bioinformation.

   Discussion of competing established patent law concepts, the law established by *Festo* and the future of patent law.

   Discusses the doctrine of equivalents, prosecution history estoppel, and *Festo*'s impact on patent law.

   Analyzes *Festo* and presents questions that arise from the Court's decision.