

PROSECUTION HISTORY ESTOPPEL AFTER *FESTO*: CAN AN EQUIVALENT EVER BREAK THROUGH THE FILE WRAPPER?

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I. INTRODUCTION

Patents are issued to inventions that are found to be useful, new, and non-obvious.¹ The claims of a patent define the scope of its protection.² Traditionally, the doctrine of equivalents allowed the claims of a patent to expand to encompass things that were not literally included in the claim, but made only insubstantial changes to the claims which, while adding nothing to the invention, would be enough to avoid the patent's reach by evading the literal language of the claims.³

The prosecution history, or file wrapper, of a patent is the written record of the proceedings between the inventor and the United States Patent and Trademark Office from the time the patent application was filed until the patent is issued.⁴ When a claim of a patent is amended in the course of its prosecution, those amendments can at times give rise to prosecution history estoppel, a doctrine that prevents a patent holder from “reclaiming” patent coverage that was surrendered during the prosecution process via the doctrine of equivalents.⁵

The interaction between the doctrine of equivalents and prosecution history estoppel has been in a state of flux since the Federal Circuit decided *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*⁶ (*Festo VI*) in 2000. The relationship between the two doctrines was fundamentally altered by the Federal Circuit's holding that prosecution history estoppel operates as

1. Tracey McCormick, Note, *Will TrafFix “Fix” the Splintered Functionality Doctrine?*: *TrafFix Devices, Inc. v. Marketing Displays, Inc.*, 40 Hous. L. Rev. 541, 559 (2003).
2. Johnson & Johnston Assocs. Inc. v. R.E. Serv. Co., 285 F.3d 1046, 1052 (Fed. Cir. 2002).
3. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607-08 (1950).
4. BLACK'S LAW DICTIONARY 660 (8th ed. 2004).
5. *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1362 (Fed. Cir. 1983).
6. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000), *vacated by* 535 U.S. 722 (2002).

a complete bar to the doctrine of equivalents.⁷ This holding did not last long. In 2002, the Supreme Court vacated this decision and reinstated the flexible bar approach in *Festo VIII*.⁸ Finally, on remand, the Federal Circuit in *Festo IX*⁹ elaborated on the Supreme Court's holding, providing guidance for when prosecution history estoppel does not bar application of the doctrine of equivalents.¹⁰

This Note argues that in *Festo IX*, the Federal Circuit virtually reestablished the complete bar to the application of the doctrine of equivalents to narrowed claims. Part II gives a brief history of the doctrine of equivalents. Part III discusses the advent and application of prosecution history estoppel and its historical interaction with the doctrine of equivalents. Part IV describes the Federal Circuit's decision to apply prosecution history estoppel as a complete bar to the doctrine of equivalents. Part V analyzes the Supreme Court's vacatur of the Federal Circuit's complete bar, and Part VI details the Federal Circuit's response on remand from the Supreme Court. The practical result of the Federal Circuit's decision on remand is discussed in Part VII along with the associated practical and policy concerns. Part VIII, the conclusion, stresses that the current state of prosecution history estoppel is contrary to both the historic purpose of the doctrine of equivalents as well as the constitutional purpose of the patent system, and that the Federal Circuit should apply prosecution history estoppel in a more flexible manner.

II. THE HISTORY AND APPLICATION OF THE DOCTRINE OF EQUIVALENTS

The Constitution provides that "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 Right to their respective Writings and Discoveries."¹¹ Just three years after ratification of the

7. See *id.* at 574-75 (rejecting the flexible bar approach that the Federal Circuit adopted nearly twenty years earlier in *Hughes Aircraft*); see also discussion *infra* Part IV (providing a detailed analysis of the *Festo* cases).

8. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. at 742; see also discussion *infra* Part V (detailing the Supreme Court's holding in *Festo VIII*).

9. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359 (Fed. Cir. 2003), *cert. denied*, 541 U.S. 988 (2004).

10. *Id.* at 1366-67 (synthesizing the Court's holdings in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997), and *Festo VIII* to provide a detailed framework for analyzing the application of prosecution history estoppel); see also discussion *infra* Part VI (detailing the Federal Circuit's holding in *Festo IX*).

11. U.S. CONST. art. I, § 8, cl. 8.

Constitution, Congress enacted the first patent statute.¹² Neither that Act nor its revision in 1793¹³ addressed the doctrine of equivalents. The first mention of equivalents in the statute occurred almost 200 years later along with major revisions to the Patent Act in 1952.¹⁴ Indeed, even the current version of the Patent Act¹⁵ only mentions equivalents once,¹⁶ and courts have held that the coverage of the statutory language and that of the doctrine of equivalents are not coextensive.¹⁷

The doctrine of equivalents is a judicially created expansion of the scope of patents to include products that contain only insubstantial changes that take the new product outside the literal limits of the patent's claims.¹⁸ The central idea of the doctrine is "if two devices do the same work in substantially the same way, and accomplish substantially the same result, they are the same, even though they differ in name, form, or shape."¹⁹ Even changes in the device that were "made possible by subsequent advances in the art[] do not allow the accused infringing device to escape the 'web of infringement.'"²⁰

The doctrine of equivalents had its beginnings in *Odiorne v. Winkley*,²¹ where the jury was instructed that if the two machines in question were "substantially, in their principles and mode of operation, like the plaintiff's machines" and any differences were "[m]ere colorable

12. Act of Apr. 10, 1790, ch. 7, §§ 1-7, 1 Stat. 109 (repealed 1793).

13. Act of Feb. 21, 1793, ch. 11, §§ 1-12, 1 Stat. 318 (current patent statute codified at 35 U.S.C.).

14. Act of July 19, 1952, Pub. L. No. 82-593, § 112, 66 Stat. 792, 799 (codified as amended at 35 U.S.C.).

15. 35 U.S.C. §§ 1-376 (2000).

16. *See id.* § 112 (stating that claims expressed in means-plus-function form "shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof").

17. *See Caterpillar Inc. v. Deere & Co.*, 224 F.3d 1374, 1379 (Fed. Cir. 2000) (stating that "[t]he tests for equivalence under [35 U.S.C.] § 112, ¶ 6 and the doctrine of equivalents are closely related").

18. Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035, 1113 (2003).

19. *Mach. Co. v. Murphy*, 97 U.S. 120, 125 (1877).

20. *Am. Hosp. Supply Corp. v. Travenol Labs., Inc.*, 745 F.2d 1, 9 (Fed. Cir. 1984) (quoting *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1365 (Fed. Cir. 1983)).

21. *Odiorne v. Winkley*, 18 F. Cas. 581 (C.C.D. Mass. 1814) (No. 10,432); *see Charles Greiner & Co. v. Mari-Med. Mfg., Inc.*, 962 F.2d 1031, 1036 (Fed. Cir. 1992) (tracing the origin of the doctrine of equivalents to *Odiorne*).

alterations,” then an infringement had occurred.²² Eventually, the Supreme Court adopted the principle. In *O'Reilly v. Morse*,²³ a case involving the telegraph invented by Samuel Morse, the Court stated:

It is a well-settled principle of law, that the mere change in the form of the machinery . . . or an alteration in some of its unessential parts; or in the use of known equivalent powers, not varying essentially the machine, or its mode of operation or organization, will not make the new machine a new invention.²⁴

After finding Morse's reissued patent valid (with the exception of one claim), the Court found that O'Reilly's telegraph did substantially “use the same means” as Morse's, and therefore infringed the remaining claims of Morse's patent.²⁵

The most significant early case that addressed the doctrine of equivalents was *Winans v. Denmead*.²⁶ Some cases even attribute the origin of the doctrine of equivalents to *Winans*, even though it was alluded to in the prior cases discussed.²⁷ In *Winans*, the Supreme Court explicitly stated that a patent by law “cover[s] not only the precise forms [the inventor] has described, but all other forms which embody his invention.”²⁸ This was the most powerful statement of the doctrine of equivalents that had been made to date by the Court because it applied the doctrine to all patents unless the inventor limited the patent to “one particular form of machine, excluding all other forms,” and applied a presumption that the inventor's intent was *not* to exclude equivalents.²⁹

The first case to use the phrase “doctrine of equivalents” as a term of art in patent law was *McCormick v. Talcott*.³⁰ In that case, the Court stated that the “doctrine of equivalents” only applies to improvements that are

22. *Odiorne v. Winkley*, 18 F. Cas. at 582.

23. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62 (1853).

24. *Id.* at 123.

25. *Id.* at 123-24.

26. *Winans v. Denmead*, 56 U.S. (15 How.) 330 (1853).

27. *See, e.g., Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950) (attributing the doctrine of equivalents to the *Winans* decision).

28. *Winans v. Denmead*, 56 U.S. (15 How.) at 342.

29. *Id.* at 341.

30. *McCormick v. Talcott*, 61 U.S. (20 How.) 402 (1857); *see also* Kirk M. Hartung, *The Doctrine of Equivalents: A Matter of Chance and Confusion*, 86 J. PAT. & TRADEMARK OFF. SOC'Y 645, 646 (2004) (stating the first use of the term was in *McCormick*).

“mere colorable invasions” of the patented invention.³¹ The doctrine was refined in *Machine Co. v. Murphy*,³² where the Court clearly articulated the test for infringement under the doctrine of equivalents.³³ The Court stated that “in determining the question of infringement, the court or jury” should determine if the alleged equivalent “performs substantially the same function in substantially the same way to obtain the same result.”³⁴ This test is still applied in essentially the same form today.³⁵

The doctrine of equivalents was reaffirmed in *Graver Tank & Manufacturing Co. v. Linde Air Products Co.*³⁶ There, Justice Robert Jackson stated that the emergence of the doctrine of equivalence was in response to parties making “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.”³⁷ If this were allowed, it would “convert the protection of the patent grant into a hollow and useless thing.”³⁸ The end result would be to encourage behavior that would have the opposite effect that the Constitution requires, because that patent system would no longer “promote the Progress of Science and useful Arts.”³⁹

In 1996, the Court once again upheld the continued application of the doctrine of equivalents.⁴⁰ *Markman v. Westview Instruments, Inc.*⁴¹ is best known for its holding that the meaning of ambiguous claim terms are to be determined by courts as a matter of law,⁴² bringing about so-called “*Markman* hearings.”⁴³ However, the Court also noted the statutory

31. McCormick v. Talcott, 61 U.S. (20 How.) at 405.

32. *Mach. Co. v. Murphy*, 97 U.S. 120 (1877).

33. *Id.* at 125.

34. *Id.*

35. See, e.g., *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1364 (Fed. Cir. 2000) (stating that to be an equivalent under “the traditional function-way-result test, the accused structure must perform substantially the same function, in substantially the same way, to achieve substantially the same result, as the disclosed structure”).

36. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608-09 (1950).

37. *Id.* at 607.

38. *Id.*

39. U.S. CONST. art. I, § 8, cl. 8.

40. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373-74 & n.1 (1996).

41. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370.

42. *Id.* at 372.

43. See Jay Dratler, Jr., *Alice in Wonderland Meets the U.S. Patent System*, 38

requirement that the patent applicant “distinctly claim[] the subject matter which the applicant regards as his invention” was not inconsistent with the application of the doctrine of equivalents.⁴⁴ Using an equivalent to make a “noncritical change” to the invention is still an act of infringement, even though the patent holder did not necessarily “distinctly claim” the equivalent.⁴⁵ At this point, an introduction to prosecution history estoppel is appropriate so that the recent interaction between the two principles may be discussed later.

III. PROSECUTION HISTORY ESTOPPEL AND ITS EFFECT ON THE DOCTRINE OF EQUIVALENTS

The phrase “prosecution history estoppel” was first used by the Federal Circuit in *Hughes Aircraft Co. v. United States*.⁴⁶ This was a change from the former terminology, “file wrapper estoppel,” which referred to the “file wrapper” that held the contents of a patent application together in the United States Patent and Trademark Office.⁴⁷

A. *The Evolution of Prosecution History Estoppel*

While the current terminology is relatively new, the ideas behind prosecution history estoppel were alluded to in the mid-1800s in *O'Reilly*. In *O'Reilly*, the Supreme Court noted that “the mere change in the form of the machinery (unless a particular form is specified as the means by which the effect described is produced) . . . will not justify its use without the consent of the first patentee.”⁴⁸ While this language does not explicitly mention the prosecution history of the patent, it indicates that once the

AKRON L. REV. 299, 325 & n.110 (2005) (noting that *Markman* hearings are named for the *Markman* case). At a *Markman* hearing, “the court receives argument and/or evidence regarding the proper construction of patent claims.” George Summerfield & Todd Parkhurst, *Procedures for Claim Construction after Markman*, 20 MISS. C. L. REV. 107, 110-11 (1999).

44. *Markman v. Westview Instruments, Inc.*, 517 U.S. at 373-74 & n.1 (quoting 35 U.S.C. § 112 (2000) (alteration in original) (noting that the claims required by 35 U.S.C. § 112 cover functionally equivalent products with noncritical differences in addition to exact copies)).

45. *Id.* at 373-74.

46. *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1362 (Fed. Cir. 1983); Alan P. Klein, *The Judicial Errors that Brought Us to Festo*, 85 J. PAT. & TRADEMARK OFF. SOC'Y 350, 352 n.11 (2003) (stating the first use of the term was in *Hughes Aircraft*).

47. *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 398-99 (Ct. Cl. 1967).

48. *O'Reilly v. Morse*, 56 U.S. (15 How.) 62, 123 (1853) (emphasis added).

patentee has made a reference to a certain material in a claim, the doctrine of equivalents cannot be used to broaden that claim to cover other materials. Later, in *Leggett v. Avery*,⁴⁹ the Court held that if subject matter in a patent was disclaimed, recapture of the disclaimed subject matter was not allowed via a reissue proceeding.⁵⁰

Further refinement came in 1942, in *Exhibit Supply Co. v. Ace Patents Co.*⁵¹ The patent in that case was for targets used in pinball machines.⁵² As originally claimed by the patentee, the target was “carried by the table,” however, to overcome objections made by the Patent Office, the claim was amended, and eventually issued as “embedded in the table.”⁵³ As a result of this amendment during prosecution, the Court noted that the inventor “recognized and emphasized the difference between the two phrases and proclaimed his abandonment of all that is embraced in that difference.”⁵⁴ As a result, the inventor could not then resort to the doctrine of equivalents to reclaim the abandoned material.⁵⁵ This holding resulted in a *per se* application of prosecution history estoppel when an amendment was made to avoid prior art.⁵⁶

B. The Federal Circuit’s Holdings Prior to Festo

After *Exhibit Supply*, the Supreme Court did not substantially revisit the issue of prosecution history estoppel again until nearly the end of the century.⁵⁷ During that time, the circuit courts split on the issue of how strict prosecution history was to be applied.⁵⁸ In 1982, the Federal Circuit Court of Appeals was created by Congress, in part, to handle all appeals of patent cases in order to bring about uniformity in the patent law.⁵⁹ Shortly

49. *Leggett v. Avery*, 101 U.S. 256 (1879).

50. *Id.* at 259.

51. *Exhibit Supply Co. v. Ace Patents Co.*, 315 U.S. 126 (1942).

52. *Id.* at 128.

53. *Id.* at 136.

54. *Id.*

55. *Id.* at 137.

56. *E.g.*, *Christopher J. Foster, Inc. v. Newport News Shipbuilding & Dry Dock Co.*, 531 F.2d 1243, 1246 (4th Cir. 1975).

57. Jay I. Alexander, *Cabining the Doctrine of Equivalents in Festo: A Historical Perspective on the Relationship Between the Doctrines of Equivalents and Prosecution History Estoppel*, 51 AM. U. L. REV. 553, 584 (2002).

58. *See id.* at 584-92 (discussing the lack of uniformity in the holdings of the circuit courts regarding prosecution history estoppel after *Exhibit Supply*).

59. Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 3-4, 7 (1989). The Federal Circuit Court of

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after the Federal Circuit's creation, it made its first major decision in an effort to achieve the desired uniformity.

In *Hughes Aircraft*, the Federal Circuit applied prosecution history estoppel narrowly, holding that “[n]o reason or warrant exists for limiting application of the doctrine of equivalents to those comparatively few claims allowed exactly as originally filed and never amended,” and that it was possible for prosecution history estoppel to have no effect on the doctrine's application to an amended claim.⁶⁰ Under *Hughes Aircraft*, prosecution history estoppel's restriction of the doctrine of equivalents is determined, at least partially, by the amount of the limitation.⁶¹ The more limiting the amendment made during prosecution, the greater prosecution history estoppel's power to restrict the doctrine of equivalents.⁶² This holding illustrates a fairly narrow application of prosecution history estoppel.

Interestingly, early in its existence the Federal Circuit also applied prosecution history estoppel broadly. In *Kinzenbaw v. Deere & Co.*,⁶³ the court refused to even consider allowing application of the doctrine of equivalents to a narrowed claim.⁶⁴ Although Deere attempted to offer proof that the reason for the limiting amendment of the allegedly infringed claim during prosecution was not to distinguish the prior art (and therefore prosecution history estoppel did not bar application of the doctrine of equivalents), the court flatly refused to consider their argument.⁶⁵ Instead, the court held that Deere had not given any “convincing reason why a competing manufacturer was not justified in assuming” that if they utilized the surrendered area of the claim they would not infringe, and further, that Deere did “not give[] any convincing reason why [the court] should enlarge the literal scope of” the claims of the patent at issue.⁶⁶

These two cases illustrate the contradictory views taken by the

Appeals was created by the Federal Courts Improvement Act of 1982, which also established the United States Claims Court to hear patent infringement cases against the United States. Federal Courts Improvement Act of 1982, Pub. L. No. 97-164, 96 Stat. 25 (1982) (codified as amended in scattered sections of 28 U.S.C.).

60. *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1363 (Fed. Cir. 1983).

61. *Id.* (citing *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 400-01 (Ct. Cl. 1967)).

62. *Id.*

63. *Kinzenbaw v. Deere & Co.*, 741 F.2d 383 (Fed. Cir. 1984).

64. *Id.* at 389.

65. See *id.* (refusing to “undertake the speculative inquiry” requested by Deere).

66. *Id.*

Federal Circuit in its approach to prosecution history estoppel prior to *Festo*. It is particularly interesting that the three judges from the panel that heard *Hughes Aircraft* were also among the five judges on the panel that applied an arguably inconsistent approach in *Kinzenbaw*.⁶⁷ Possibly because of its arguably inconsistent holdings on the subject of prosecution history estoppel, the Federal Circuit made an effort to promote clarity in the patent application process by deciding the extent of prosecution history estoppel in a 2000 en banc decision.⁶⁸

IV. THE FEDERAL CIRCUIT ATTEMPTS TO MAKE A BRIGHT LINE RULE

The original *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*⁶⁹ case (*Festo I*) was an infringement suit alleging infringement of Festo's patents for magnetic rodless cylinders.⁷⁰ The patented cylinder was "a piston-driven device that relies on magnets to move objects in a conveying system."⁷¹ These devices had a wide variety of uses, and had been used "in machinery as diverse as sewing equipment and the Thunder Mountain ride at Disney World."⁷²

The patents at issue, named by the inventors who were originally granted the patents, were the Carroll⁷³ and Stoll⁷⁴ patents.⁷⁵ The Carroll patent was amended during reexamination proceedings to include the

67. Compare *Hughes Aircraft Co. v. United States*, 717 F.2d at 1352 (holding by Chief Judge Markey, and Judges Davis and Baldwin), with *Kinzenbaw v. Deere & Co.*, 741 F.2d at 384 (holding by Chief Judge Markey, and Judges Friedman, Rich, Davis, and Baldwin).

68. Stephen Dirksen et al., *Patent Amendments and Prosecution History Estoppel Under Festo*, 2001 DUKE L. & TECH. REV. 0011, ¶¶ 11-12, available at <http://www.law.duke.edu/journals/dltr/articles/2001dltr0011.html> (noting that in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558 (2000) (en banc), vacated by 535 U.S. 722 (2002), the Federal Circuit sat en banc to "clarify and expand the doctrine of prosecution history estoppel").

69. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, No. 88CV1814, 1994 WL 1743984 (D. Mass. Feb. 3, 1994), aff'd, 72 F.3d 857 (Fed. Cir. 1995), vacated by 520 U.S. 1111 (1997).

70. *Id.* at *1-2.

71. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 728 (2002).

72. *Id.*

73. U.S. Patent No. 3,779,401 (issued Dec. 18, 1973) (reexamination certificate issued Oct. 25, 1988).

74. U.S. Patent No. 4,354,125 (issued Oct. 12, 1982).

75. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 1994 WL 1743984, at *1.

limitation that the device contained two sealing rings,⁷⁶ and the Stoll patent was amended during the prosecution of the patent to include the same sealing ring limitation and a magnetizable sleeve limitation.⁷⁷ Shoketsu Kinzoku Kogyo Kabushiki Co. (SMC) began selling a similar cylinder, but with two main differences.⁷⁸ SMC's cylinder used one two-way sealing ring, whereas Festo's cylinder used two one-way sealing rings.⁷⁹ Also, the outer sleeve of the SMC cylinder was made out of a nonmagnetizable alloy, whereas Festo's sleeve was magnetizable.⁸⁰

Due to the complexity of the claims in the two patents at issue, the district court appointed a special master pursuant to Federal Rule of Civil Procedure 53.⁸¹ The special master concluded that the claims at issue in both patents were valid⁸² and that SMC's product infringed the Carroll patent under the doctrine of equivalents.⁸³ He also concluded that Festo was estopped from asserting infringement of the Stoll patent under the doctrine of equivalents, based on the prosecution history.⁸⁴

The district court disagreed with the special master's conclusion that Festo was estopped from proving infringement based on the doctrine of equivalents on the Stoll patent, stating that there was a disputed issue of fact that required determination by a jury.⁸⁵ The jury trial that followed resulted in a finding that the Stoll patent was infringed by SMC under the doctrine of equivalents.⁸⁶ In *Festo II*,⁸⁷ SMC appealed this decision

76. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. at 728.

77. *Id.*

78. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 234 F.3d 558, 582 (2000), *vacated by* 535 U.S. 722 (2002).

79. *Id.*

80. *Id.*

81. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., No. 88CV1814, 1994 WL 1743984, at *1 (D. Mass. Feb. 3, 1994), *aff'd*, 72 F.3d 857 (Fed. Cir. 1995), *vacated by* 520 U.S. 1111 (1997); *See* FED. R. CIV. P. 53 (repealed 2003) (allowing a court to appoint a special master "when the issues are complicated," and providing for the special master to prepare a report "containing findings of fact and conclusions of law").

82. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., No. Civ.A. 88-1814-MA, 1993 WL 1510657, at *7, *16 (D. Mass. Apr. 27, 1993).

83. *Id.* at *10.

84. *Id.* at *20.

85. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 1994 WL 1743984, at *4-5.

86. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 72 F.3d 857, 862-63 (Fed. Cir. 1995), *vacated by* 520 U.S. 1111 (1997).

87. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 72 F.3d 857.

claiming as error, among other things, that prosecution history estoppel should have barred application of the doctrine of equivalents to the Stoll patent.⁸⁸ The Federal Circuit held that while the reason for the narrowing of the sealing rings claim in the Stoll patent was unknown, it was not error for the trial court to hold that prosecution history estoppel did not prevent Festo from arguing the doctrine of equivalents.⁸⁹

While SMC's petition for certiorari was pending in *Festo III*,⁹⁰ the Supreme Court decided *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*⁹¹ Following the *Warner-Jenkinson* decision, the Court executed a grant, vacate, and remand (GVR): the Court granted the petition for certiorari, vacated the *Festo II* decision, and remanded to the Federal Circuit for reconsideration in light of *Warner-Jenkinson*.⁹² On remand in *Festo IV*,⁹³ the Federal Circuit vacated the judgment of infringement of the Stoll patent and remanded the case to the district court for a determination of the applicability of prosecution history estoppel.⁹⁴ Remand was required because the reason for the narrowing amendment in the Stoll patent was unknown, and *Warner-Jenkinson* required that if the reason for the narrowing amendment was unknown, it was presumed to have been made for reasons of patentability, so prosecution history estoppel applies.⁹⁵

Following *Festo IV*, SMC petitioned for a rehearing en banc, which was granted in *Festo V*.⁹⁶ In *Festo VI*,⁹⁷ the en banc Federal Circuit reversed the finding of infringement based on the doctrine of equivalents on both the Carroll and Stoll patents.⁹⁸ In doing so, the court made two

88. *Id.* at 863-64.

89. *Id.*

90. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 520 U.S. 1111.

91. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17 (1997).

92. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 172 F.3d 1361, 1365 (Fed. Cir. 1999) (describing the GVR that occurred in *Festo III*), vacated by 187 F.3d 1381 (1999), *rev'd*, 234 F.3d 558 (Fed. Cir. 2000) (en banc), vacated by 535 U.S. 915 (2001).

93. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 172 F.3d 1361.

94. *Id.* at 1380.

95. *Id.*; see also *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. at 33 (stating that the burden is on the patent holder to show that the amendment made during prosecution was not for reasons of patentability in order to avoid prosecution history estoppel).

96. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 187 F.3d 1381 (Fed. Cir. 1999).

97. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000) (en banc), vacated by 535 U.S. 722.

98. *Id.* at 591.

major holdings. First, the court held that although the Supreme Court in *Warner-Jenkinson* held only that narrowing amendments made to avoid prior art triggered prosecution history estoppel, prosecution history estoppel applied in all cases where a narrowing amendment was made for reasons of patentability.⁹⁹ This holding broadened the scope of prosecution history estoppel: because nearly all amendments made during the prosecution of a patent are arguably for reasons of patentability, only very few amendments made during patent prosecution would not trigger prosecution history estoppel as a result of this holding.

The court's second major holding was that when prosecution history estoppel is created as a result of a narrowing amendment, "there is no range of equivalents available for the amended claim element. Application of the doctrine of equivalents to the claim element is completely barred (a 'complete bar')."¹⁰⁰ The court decided a complete bar was warranted for several policy reasons. First, the court found the flexible bar approach to the scope of equivalents available when prosecution history estoppel applies to be "unworkable."¹⁰¹ Stating that the paramount function of patent claims was to put the public on notice as to the scope of what has been patented, the court emphasized "the need for certainty as to the scope of patent protection," and pointed out that this was one of the problems with the flexible bar approach.¹⁰²

The court also adopted the complete bar in order to "enforce the disclaimer effect" of an amendment narrowing the claims of a patent.¹⁰³ Further, the court posited that a complete bar would encourage the development of technological advances that were "in the unknown, undefined zone around the literal terms of a narrowed claim under the flexible bar approach" by removing the fear of litigation.¹⁰⁴

Both the Carroll and Stoll patents had claims that were narrowed, and these narrowing amendments had not been shown by Festo to be for reasons unrelated to patentability.¹⁰⁵ "The amendments therefore gave rise to prosecution history estoppel."¹⁰⁶ Thus, because the Federal Circuit held

99. *Id.* at 565-66.

100. *Id.* at 569.

101. *Id.* at 575.

102. See *id.* ("A problem with the flexible bar approach is that it is virtually impossible to predict . . . where the line of surrender is drawn.").

103. *Id.*

104. *Id.* at 577.

105. *Id.* at 591.

106. *Id.*

that these narrowed claims were entitled to “*no* range of equivalents,” they could not, therefore, be infringed based on the doctrine of equivalents.¹⁰⁷ Four of the twelve judges dissented from the holding that prosecution history estoppel results in a complete bar to the doctrine of equivalents.¹⁰⁸ Judge Paul R. Michel’s dissent on this point was particularly vigorous; he, joined by Judge Randall R. Rader, argued that the majority’s decision disregarded nine Supreme Court decisions in addition to over fifty Federal Circuit holdings.¹⁰⁹

V. THE SUPREME COURT REJECTS THE FEDERAL CIRCUIT’S COMPLETE BAR

After the Federal Circuit’s en banc holding, Festo petitioned for writ of certiorari to the Supreme Court, which was granted in *Festo VII*.¹¹⁰ In *Festo VIII*,¹¹¹ a unanimous Court addressed the main holdings of *Festo VI*: that prosecution history estoppel applies to all narrowing amendments and that when prosecution history estoppel arises, a finding of infringement under the doctrine of equivalents is completely barred.¹¹²

A. Application of Prosecution History Estoppel to All Narrowing Amendments

In *Festo VIII*, the Court agreed with the Federal Circuit that prosecution history estoppel applies to all narrowing amendments made for reasons of patentability, not just those made to avoid prior art.¹¹³ A narrowing amendment made to meet any of the statutory requirements, including the descriptive requirements of 35 U.S.C. section 112, can give rise to estoppel.¹¹⁴

107. *Id.* (emphasis added).

108. See *id.* at 598 (Michel, J., concurring in part and dissenting in part) (arguing that the majority’s complete bar approach contravenes the Supreme Court’s decision in *Warner-Jenkinson*); *id.* at 619 (Rader, J., concurring in part and dissenting in part) (same); *id.* at 625-26 (Linn, J., concurring in part and dissenting in part) (same); *id.* at 630 (Newman, J., concurring in part and dissenting in part) (same).

109. *Id.* at 601-16 (Michel, J., concurring in part and dissenting in part).

110. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 533 U.S. 915 (2001).

111. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002).

112. *Id.* at 727-28.

113. *Id.* at 736-37.

114. *Id.* In order to pass muster under the requirements of 35 U.S.C. § 112, a patent must describe the invention, enable one skilled in the art to make and use the

Festo argued that in some circumstances, amendments required by the patent examiner under section 112 only concern the form of the application, not the invention's subject matter.¹¹⁵ For example, the Patent and Trademark Office might simply reject an application under section 112 because "an applicant for a patent mistakenly omits a claim element that links two other elements of a claim."¹¹⁶ If all amendments may give rise to prosecution history estoppel, Festo argued, even if the claim amendment "surrendered nothing," it would still "create prosecution history estoppel preventing reliance upon the doctrine of equivalents."¹¹⁷

The Court allayed Festo's concerns in this regard by holding that while any type of amendment may give rise to prosecution history estoppel, only those amendments that actually narrow the patent's scope give rise to estoppel.¹¹⁸ Therefore, the situation described by Festo would not actually result in an estoppel if the amendment truly "surrendered nothing."

B. Prosecution History Estoppel Is Not a Complete Bar to Application of the Doctrine of Equivalents

The Court disagreed with the Federal Circuit's usage of prosecution history estoppel as a complete bar to all applications of the doctrine of equivalents to narrowed claims.¹¹⁹ A complete bar eliminates the need to ascertain the reach of prosecution history estoppel by "an examination of the subject matter surrendered by the narrowing amendment."¹²⁰ However, prosecution history estoppel is applied "to hold the inventor to the representations made during the application process and to the inferences that may reasonably be drawn from the amendment."¹²¹

By narrowing the claim of a patent during the patent's prosecution, the inventor is conceding that the reach of the patent's narrowed claim is not as great as it was prior to the amendment.¹²² However, the reasoning

invention, and identify the best mode of carrying out the invention. 35 U.S.C. § 112 (2000).

115. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. at 736.

116. Brief for Petitioner at 23, Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722 (2002) (No. 00-1543).

117. *Id.*

118. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. at 736-37.

119. *Id.* at 737.

120. *Id.*

121. *Id.* at 737-38.

122. *Id.* at 738.

behind the doctrine of equivalents still holds: language cannot completely describe an invention.¹²³ As stated by the Court, “[t]he narrowing amendment may demonstrate what the claim is not; but it may still fail to capture precisely what the claim is.”¹²⁴

The Court offered some examples where prosecution history estoppel applies, yet particular types of equivalents would still infringe under the doctrine of equivalents.¹²⁵ One such situation is if the equivalent was unforeseeable at the time the narrowing amendment was made.¹²⁶ In that case, the inventor cannot reasonably be subjected to the inference that he or she intended to surrender the unforeseeable equivalent. Also, if the amendment’s rationale has only “a tangential relation to the equivalent in question,” the equivalent might not have been actually surrendered, and the doctrine of equivalents could still apply.¹²⁷ The Court also offered a “catch-all” exception, stating that “there may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.”¹²⁸

While the Court pointed out that its holding was not “just the complete bar by another name,” it clearly increased the scope of prosecution history estoppel beyond its previous decisions and therefore swung the balance of power in doctrine of equivalence cases toward the alleged infringer.¹²⁹ The Court’s affirmation of the Federal Circuit with regard to the types of amendments that may give rise to prosecution history estoppel increased the number of cases where prosecution history estoppel can be used to defeat a claim of infringement.¹³⁰

The Court further shifted the balance of power to the producer of the alleged equivalent by placing the burden on the patentee to show the

123. *Id.*

124. *Id.*

125. *See id.* at 740-41.

126. *Id.* at 740.

127. *Id.*

128. *Id.* at 740-41.

129. *Id.* at 741; *see id.* at 735 (stating that the Court’s prior cases have applied prosecution history estoppel only in limited cases, including where the amendment was ““to avoid the prior art””) (quoting *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 30 (1997)); *see also* *Alexander, supra* note 57, at 603 n.402 (noting the Supreme Court’s concession in *Festo VIII* that none of its previous decisions applied prosecution history estoppel to narrowing amendments made to improve form only).

130. *See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. at 740-41 (providing limited examples of when the presumption of prosecution history estoppel can be overcome).

narrowing amendment did not disclaim protection for the alleged equivalent.¹³¹ The reasoning behind the *Festo VIII* holding is sound,¹³² but the end result makes it more difficult for a patent holder to prove infringement under the doctrine of equivalents where a narrowing amendment has been made. Indeed, this followed the logic of the Court's decision in *Warner-Jenkinson*, where the burden of showing a reason for a narrowing amendment other than patentability was placed on the patentee as well.¹³³ Thus, in *Festo VIII*, the Court altered "the delicate balance the law attempts to maintain between inventors, who rely on the promise of the law to bring the invention forth, and the public, which should be encouraged to pursue innovations, creations, and new ideas beyond the inventor's exclusive rights," in favor of the public.¹³⁴

VI. THE FEDERAL CIRCUIT PROVIDES SOME GUIDANCE UNDER THE NEW STANDARD

After its decision was vacated and remanded by the Supreme Court in *Festo VIII*, the Federal Circuit once again considered the case in *Festo IX*.¹³⁵ The court considered several issues that were raised but not resolved by the Supreme Court. The Federal Circuit asked the parties to brief four issues: whether the determination of a rebuttal of the presumption of surrender of equivalents under any of the three methods delineated by the Supreme Court is a question of law or fact, and the extent of the jury's role in determining whether the owner of a patent can rebut that presumption; what factors should be considered when analyzing the possible rebuttal of the presumption of surrender; if additional factual findings (and therefore remand to the district court) were required in order to make the determination in this case; and if remand was not necessary, whether Festo could rebut the presumption that it "surrendered the equivalent now asserted."¹³⁶

131. *Id.* at 740.

132. *See id.* (stating that the reason for placing the burden on the patentee is because "[t]he patentee, as the author of the claim language, may be expected to draft claims encompassing readily known equivalents").

133. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. at 33.

134. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. at 731 (citing *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150 (1989)).

135. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359 (Fed. Cir. 2003), *cert. denied*, 541 U.S. 988 (2004).

136. *Id.* at 1365-66.

A. *Reinstated Festo VI Holdings*

In its decision, the Federal Circuit was quick to point out that some of its prior holdings in *Festo VI*, while vacated, were not affected by the Supreme Court's decision.¹³⁷ The court noted that its "holding that a narrowing amendment made to comply with any provision of the Patent Act, including section 112, may invoke an estoppel" was endorsed by the Supreme Court, and as such, reinstated that portion of its holding.¹³⁸ The court next reinstated its holding that even "a 'voluntary' amendment may give rise to prosecution history estoppel."¹³⁹ Further, the court noted that while its adoption of a complete bar to the doctrine of equivalents whenever a narrowing amendment was made for purposes of patentability was reversed, there is now a "*Festo* presumption" that equivalents have been surrendered.¹⁴⁰

The court then explained how the *Warner-Jenkinson* presumption—that a narrowing amendment was made for reasons of patentability—interacts with the new *Festo* presumption—that the patentee has surrendered all equivalents between the original claim and the claim as amended.¹⁴¹ First, it must be determined if a narrowing amendment was made.¹⁴² If the amendment did not narrow the claim at issue, prosecution history estoppel is inapplicable.¹⁴³ Given a narrowing amendment, the reason for the amendment must then be determined.¹⁴⁴ It is here that the *Warner-Jenkinson* presumption applies: when there is no evidence in the prosecution history for the reason for the amendment, it is presumed to have been made for "a substantial one relating to patentability."¹⁴⁵ This may be rebutted by the introduction of evidence that the reason was otherwise, and this evidence is limited to the prosecution history record of the patent.¹⁴⁶

137. *Id.* at 1366.

138. *Id.*

139. *Id.*

140. *Id.*

141. *Id.* at 1366-67.

142. *Id.* at 1366 (citing *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 330 F.3d 1352, 1356 (Fed. Cir. 2003)).

143. *Id.*

144. *Id.*

145. *Id.* at 1366-67 (citing *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 330 F.3d at 1356).

146. *Id.* at 1367 (citing *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 586 & n.6 (Fed. Cir. 2000) (en banc), *vacated by* 535 U.S. 722 (2002)).

If the *Warner-Jenkinson* presumption is rebutted, no prosecution history estoppel arises. If it is not, however, the *Festo* presumption then comes into play.¹⁴⁷ If the patentee cannot rebut the *Festo* presumption, all equivalents between the original claim and the narrowed claim are surrendered.¹⁴⁸

B. *The Roles of Judge and Jury in Rebuttal of the New Festo Presumption*

The court then turned its attention to the issues it presented to the parties for briefing on remand. First, the Federal Circuit decided that the question of rebuttal of the *Festo* presumption is a question of law for the court, not a jury question.¹⁴⁹ This is the case even though underlying facts may affect the rebuttal.¹⁵⁰ This holding follows the Supreme Court's holding in *Warner-Jenkinson*, where the Court held that the determination of whether prosecution history estoppel applies is a question of law.¹⁵¹

As previously noted, the Supreme Court enumerated three specific ways to rebut the *Festo* presumption of surrender: an equivalent that was unforeseeable at the time application was made, amendments with a tangential relation to the equivalent, and "some other reason" that the patentee would not have been able to describe the equivalent.¹⁵² The Federal Circuit addressed each of these in turn.

1. *Equivalents Unforeseeable at the Time the Amendment Was Made*

With regard to unforeseeable equivalents, the Federal Circuit noted that an objective inquiry is appropriate.¹⁵³ The question a court must ask is "whether the alleged equivalent would have been unforeseeable to one of ordinary skill in the art at the time of the amendment."¹⁵⁴ The court noted that in general, technology developed after the amendment was made will likely qualify as unforeseeable, while existing technology generally will not.¹⁵⁵

147. *Id.*

148. *Id.*

149. *Id.*

150. *Id.* at 1368 n.3.

151. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997).

152. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. at 740-41.

153. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1369.

154. *Id.*

155. *Id.*

Further, the court noted that the foreseeability of a particular equivalent inherently depends upon underlying factual issues, such as “the state of the art and the understanding of a hypothetical person of ordinary skill in the art at the time of the amendment.”¹⁵⁶ As such, it is appropriate for a district court to hear extrinsic evidence, such as expert testimony, that relates to these factual issues.¹⁵⁷

2. *Amendments Bearing Only a Tangential Relation to the Alleged Equivalent*

The court was less helpful with regard to the second method of rebutting the *Festo* presumption. The court stated the appropriate question for district courts in analyzing this question is “whether the reason for the narrowing amendment was peripheral, or not directly relevant, to the alleged equivalent.”¹⁵⁸ This statement is merely the court substituting synonyms for “tangential” for the language provided by the Supreme Court, as indicated by their reference to two dictionaries.¹⁵⁹ The court limited its guidance for district courts on this inquiry. It stated that if the amendment was made to avoid a specific piece of prior art, and that piece of prior art contained the equivalent at issue, then the amendment is not tangential.¹⁶⁰ This, along with the rephrased question above, was the extent of the specific guidance offered by the Federal Circuit on this inquiry.

District courts did, however, receive instruction regarding what evidence should be considered when analyzing an amendment to determine if it is only tangentially related to the equivalent at issue. In order to preserve “the public notice function of a patent and its prosecution history,” the reason for the amendment, and hence its relationship to the alleged equivalent, must be determined from the prosecution history record alone.¹⁶¹ Other than the prosecution history, the only evidence allowed in the inquiry is expert testimony from someone skilled in the art, and even this is limited to that which is necessary to assist

156. *Id.*

157. *Id.*

158. *Id.*

159. *See id.* (referencing definitions of “tangential” as defined in *The American Heritage College Dictionary* and *The New Shorter Oxford English Dictionary*).

160. *Id.*

161. *Id.* at 1369-70 (citing *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 330 F.3d 1352, 1356 (Fed. Cir. 2003); *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 586 (Fed. Cir. 2000), *vacated by* 535 U.S. 722 (2002)).

the court in interpreting the prosecution history.¹⁶²

3. "Some Other Reason"

The final way for a patentee to escape the *Festo* presumption is the "catch-all" provision, included "in order not to totally foreclose a patentee from relying on reasons, other than unforeseeability and tangentialness, to show that it did not surrender the alleged equivalent."¹⁶³ The example offered by the court for the applicability of this avenue of rebuttal is "the shortcomings of language," meaning that the equivalent could not be described with sufficient specificity in the claim.¹⁶⁴

The court also gave an example of when this type of rebuttal is inapplicable. If the equivalent in question is present in the prior art, "'there can be no other reason the patentee could not have described the substitute in question.'"¹⁶⁵ Unfortunately, this example is not particularly helpful, as it is essentially a restatement of its example of a foreseeable equivalent under the first analysis. The court also noted that, similar to the tangentialness inquiry, "[w]hen at all possible, determination of the third rebuttal criterion should also be limited to the prosecution history record."¹⁶⁶ The court declined to decide the types of extrinsic evidence, if any, that may be considered in this analysis.¹⁶⁷

VII. ARE THERE ANY EQUIVALENTS LEFT FOR NARROWED CLAIMS?

While the Supreme Court appeared to strike down the Federal Circuit's complete bar to equivalents based on unexplained narrowing amendments or those made for reasons of patentability,¹⁶⁸ the Federal Circuit has essentially reestablished its complete bar, disguised by talk of presumptions and a tripartite test. Although the Supreme Court gave patentees three ways to escape full application of prosecution history estoppel to any narrowed claims,¹⁶⁹ it seems amendments will virtually never fall into these "escape hatches."

162. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1370.

163. *Id.*

164. *Id.*

165. *Id.* (quoting *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 330 F.3d at 1357).

166. *Id.*

167. *Id.*

168. *See supra* Part V.B.

169. *See supra* Part VI.B.1-3.

A. *Unforeseeable Equivalents Must Be Shown to Be Independently Patentable*

As an example of an unforeseeable equivalent that might be sufficient to rebut the new *Festo* presumption, the Federal Circuit stated that “later-developed technology (e.g., transistors in relation to vacuum tubes, or Velcro® in relation to fasteners) or technology that was not known in the relevant art” is usually not foreseeable.¹⁷⁰ In theory this sounds fair to the patentee; while he or she would give up any rights to equivalents known in the art at the time of the amendment, later developed equivalents could still fall under the patent’s scope.

In practice, however, a much different result is likely to arise. If the new technology is unforeseeable, it likely is also nonobvious under 35 U.S.C. section 103, one of the statutory requirements for patentability.¹⁷¹ Further, if the equivalent is not “known in the prior art in the field of the invention,”¹⁷² then it is likely that the equivalent was not “known or used by others in this country, or patented or described in a printed publication in this or a foreign country,” and hence novel under 35 U.S.C. section 102.¹⁷³ Finally, if the alleged equivalent is used in the existing invention, it would certainly be considered useful under 35 U.S.C. section 101.¹⁷⁴ Therefore, in order to show an equivalent was unforeseeable, and thus rebut the *Festo* presumption in this way, a patentee must essentially show that the equivalent at issue would have been independently patentable at the time of the amendment.

170. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1369.

171. 35 U.S.C. § 103 (2000); *see In re Zeidler*, 682 F.2d 961, 964 (C.C.P.A. 1982) (holding that “an unforeseeable combination of advantageous properties” was sufficient to show nonobviousness even given structural similarity); *see also In re Papesch*, 315 F.2d 381, 386-87 (C.C.P.A. 1963) (holding that unforeseeable beneficial properties in an otherwise obvious compound can make the compound nonobvious for purposes of patentability).

172. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1369.

173. *See* 35 U.S.C. § 102 (noting the circumstances in which a person is not entitled to a patent because of lack of novelty). If the doctrine of equivalents applies, the alleged infringing equivalent does not anticipate, because it does not literally infringe. *See Lisle Corp. v. A.J. Mfg. Co.*, 398 F.3d 1306, 1315 (Fed. Cir. 2005) (“It is established law that that which infringes, if later, anticipates, if earlier.”)

174. *See Estee Lauder Inc. v. L’Oreal, S.A.*, 129 F.3d 588, 593 (Fed. Cir. 1997) (holding that the “utility requirement is satisfied when an inventor has learned enough about the product to justify the conclusion that it is useful for a specific purpose”) (quoting *Standard Oil Co. (Ind.) v. Montedison, S.p.A.*, 494 F. Supp. 370, 381 (D. Del. 1980)).

This conclusion is further buttressed by the Federal Circuit's own example. In *Festo IX*, the court identified Velcro as an example of a "later-developed technology" that would likely comprise an unforeseeable equivalent.¹⁷⁵ The trademarked brand Velcro, however, is the commercial embodiment of a patented item.¹⁷⁶ Given this outcome, the patentee seeking to reclaim an equivalent under the "unforeseeable equivalent" method of rebuttal appears in reality to be limited to those equivalents that are not only unforeseeable, but also independently patentable at the time of the amendment.¹⁷⁷ Although this clearly does not foreclose all unforeseeability arguments, it is illustrative of how strict application of this requirement could result in a virtually insurmountable standard for rebuttal of the *Festo* presumption.¹⁷⁸

B. A Narrowing Amendment Can Rarely Be Found to Be Tangentially Related to an Alleged Equivalent

Turning now to the second way to rebut the *Festo* presumption, a patentee may show that the reason for the narrowing amendment was only tangentially related to the alleged equivalent.¹⁷⁹ Once again, this sounds like a fair reservation of rights for the patent holder. It seems unlikely, however, that an equivalent that is related closely enough to potentially give rise to infringement under the doctrine of equivalents could ever be only "tangentially related" to the amendment in question, calling into question the viability of this exception as well.

The Federal Circuit also indicated the restricted nature of this exception by limiting evidence of the tangential relation of the amendment to the equivalent in question to the prosecution history of the patent.¹⁸⁰

175. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1369.

176. See U.S. Patent No. 2,717,437 (issued Sept. 13, 1955); see also NAT'L INVENTORS HALL OF FAME, INVENTOR PROFILE: GEORGE DE MESTRAL, at http://www.invent.org/hall_of_fame/37.html (2002).

177. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1369.

178. Since the Federal Circuit's decision in *Festo IX*, it has yet to find an alleged equivalent unforeseeable. *Mycogen Plant Sci., Inc. v. Monsanto Co.*, 91 Fed. Appx. 666, 668 (Fed. Cir. 2004); *Glaxo Wellcome, Inc. v. Impax Labs., Inc.*, 356 F.3d 1348, 1355-56 (Fed. Cir. 2004); *Ranbaxy Pharmas. Inc. v. Apotex, Inc.*, 350 F.3d 1235, 1241 (Fed. Cir. 2003); *Talbert Fuel Sys. Patents Co. v. Unocal Corp.*, 347 F.3d 1355, 1359-60 (Fed. Cir. 2003).

179. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740 (2002).

180. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1369-70.

The reason for this limitation was so “the public notice function of [the] patent and its prosecution history” could have significance.¹⁸¹ As stated by the Federal Circuit, the doctrine of equivalents is the attempt to establish a balance between the rights of the patent holder (by preventing “fraud on the patent”)¹⁸² and the right of the public to know the limits of the patented invention.¹⁸³ Given the Federal Circuit’s emphasis on the public notice function of the patent, the rights of the patent holder necessarily must be reduced.¹⁸⁴ This possible avenue of presumption shows at least some promise for patentees, possibly because it has not yet been well defined by the Federal Circuit. While in most cases the Federal Circuit has not found the alleged amendment only tangentially related to the equivalent at issue,¹⁸⁵ it has on one occasion found this inquiry satisfied.¹⁸⁶

C. Possible Other Reasons for Lack of Description of the Alleged Equivalent

The final way a patentee can salvage the presumptively surrendered equivalent is via “some other reason.”¹⁸⁷ Again, this seems good for the patent holder as it allows a reason that would not qualify under the previous rebuttal criteria to permit an equivalent to be regained. However, the Federal Circuit noted that this exception “must be a narrow one,” and offered as its only example when “the shortcomings of language” are

181. *Id.* at 1369.

182. *YBM Magnex, Inc. v. Int'l Trade Comm'n*, 145 F.3d 1317, 1322 (Fed. Cir. 1998).

183. *Id.*; see also M. Scott Boone, *Defining and Refining the Doctrine of Equivalents: Notice and Prior Art, Language and Fraud*, 43 IDEA 645, 666-67 (2003) (describing the nature of the balance between the public notice and patent holder’s interests).

184. See Boone, *supra* note 183, at 666-67 (noting that the purpose of the doctrine of equivalents is in conflict with the public notice function of patents and the two work as a balance).

185. *Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1383 (Fed. Cir. 2005); *Mycogen Plant Sci., Inc. v. Monsanto Co.*, 91 Fed. Appx. 666, 669 (Fed. Cir. 2004); *Talbert Fuel Sys. Patents Co. v. Unocal Corp.*, 347 F.3d 1355, 1360 (Fed. Cir. 2003).

186. *Insituform Techs., Inc. v. Cat Contracting, Inc.*, 385 F.3d 1360, 1368 (Fed. Cir. 2004). Interestingly, Judge Schall, who authored the opinion in *Insituform*, also authored the majority opinion in *Festo VII*, where the Federal Circuit attempted to establish the complete bar. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 562 (Fed. Cir. 2000) (en banc), *vacated by* 535 U.S. 722 (2002). This further indicates that the “tangential relation” prong holds the most promise for rebutting the presumption of surrender.

187. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. at 740-41.

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unable to adequately describe a potential equivalent as a situation in which it might arise.¹⁸⁸

Further, the court indicated that this rebuttal method is not available when “the alleged equivalent is in the prior art.”¹⁸⁹ Thus, it appears that this basis for rebuttal of the presumption of surrender of equivalents would be applicable when the aforementioned linguistic shortcomings prevent the inventor from drafting the claims to include the alleged equivalent.

D. Other Concerns Raised by the Federal Circuit’s Decision

In addition to the concern that the Federal Circuit has, for practical purposes, reinstated the complete bar to application of the doctrine of equivalents to narrowed claims, there are other concerns raised by its decision as well. For example, the determination of whether prosecution history estoppel applies is a question of law for the court.¹⁹⁰ When claim construction was found to be a question of law for the court in *Markman*, it caused the district courts to conduct pretrial “*Markman* hearings” in the majority of patent cases where the meaning of claim terms was in dispute.¹⁹¹ With courts now under the obligation to determine as a matter of law the existence and potential rebuttal of the new *Festo* presumption, it seems likely that district courts, faced with repeated instances of motions for partial summary judgment on the issue, will now also feel compelled to hold “*Festo* hearings.” This will almost certainly further increase the cost of conducting patent litigation.¹⁹²

188. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 1370 (Fed. Cir. 2003), *cert. denied*, 541 U.S. 988 (2004). The Federal Circuit’s prediction that the exception “must be a narrow one” is thus far accurate; all but one court to consider the issue has found “some other reason” to be lacking and hence equivalents to be surrendered. *Mycogen Plant Sci., Inc. v. Monsanto Co.*, 91 Fed. Appx. at 669; *Talbert Fuel Sys. Patents Co. v. Unocal Corp.*, 347 F.3d at 1360. *But see Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 287 F. Supp. 2d at 158-59 (holding “that those skilled in the art (and the Patent Office) interpreted the amendment to encompass the equivalent,” and therefore the patentee had not surrendered the equivalent for “some other reason” due to the “shortcomings of language,” although resting its decision on the tangentiality of the amendment).

189. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d at 1370.

190. *Id.* at 1367-68.

191. *See Robert C. Weiss & Todd R. Miller, Practical Tips on Enforcing and Defending Patents*, 85 J. PAT. & TRADEMARK OFF. SOC’Y 791, 795-96 (2003) (noting that *Markman* hearings are now the norm in many patent cases before district courts and special masters).

192. *See Craig Allen Nard, A Theory of Claim Interpretation*, 14 HARV. J.L. & TECH. 1, 78-79 (2000) (noting that *Markman* hearings involve a waste of trial court

Also, recall that the Supreme Court in *Graver Tank* stated that the emergence of the doctrine of equivalents was in response to parties making “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.”¹⁹³ If this were allowed, it would “convert the protection of the patent grant into a hollow and useless thing.”¹⁹⁴ By placing essentially insurmountable restrictions on the application of the doctrine of equivalents when a patentee narrows a claim, the courts are making patent rights the “hollow and useless thing[s]” the Supreme Court was concerned about.¹⁹⁵ While there are arguably some administrative advantages to prosecution history estoppel serving effectively as a complete bar to the doctrine of equivalents,¹⁹⁶ it must always be remembered that the purpose of patents is “[t]o promote the Progress of Science and useful Arts.”¹⁹⁷ Without an effective patent right, the motivation for progress in science will be severely hampered.

VIII. CONCLUSION

The Federal Circuit’s holding in *Festo IX* has the potential to be the functional equivalent to its holding in *Festo VI*: prosecution history estoppel is still an effective complete bar to application of the doctrine of equivalents.¹⁹⁸ This holding, while technically applying the standards set forth by the Supreme Court,¹⁹⁹ in practice will likely approach the complete bar the Supreme Court thought it rejected.²⁰⁰ The historical reasons behind the doctrine of equivalents²⁰¹ cannot be harmonized with the current interplay between the doctrine and prosecution history estoppel: an

resources and expensive appeals).

193. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

194. *Id.*

195. *Id.*

196. See Note, *Estopping the Madness at the PTO: Improving Patent Administration Through Prosecution History Estoppel*, 116 HARV. L. REV. 2164, 2174-79 (2003) (noting that the complete bar approach provides the patentee with incentive to submit a “perfect” patent, which requires the patentee to expend resources that would otherwise be expended by the Patent and Trademark Office in conducting prior art searches and examining the patent).

197. U.S. CONST. art. I, § 8, cl. 8.

198. See *supra* Part VII.

199. See *supra* Part V.

200. See *supra* Part IV.

201. See *supra* Part II.

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inventor's only alternative is to refrain from amending his or her claims.²⁰² Based on this conclusion, the Federal Circuit should either explicitly reinstate the flexible bar approach to prosecution history estoppel or apply its current test in such a way that the actual result of a narrowing amendment is not necessarily a surrender of all equivalents to which the patentee might otherwise be entitled.

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202. *See supra* Part VII.D.

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