

CASE BRIEF

Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 122 S. Ct. 1831 (2002)

I. INTRODUCTION

The Supreme Court recently handed down the decision on *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*¹ The Court vacated the Federal Circuit's proposal of a "complete bar" of the doctrine of equivalents on claims narrowed by amendments.² The Court held that the doctrine of equivalents is still available on certain narrowed claims, though at a limited scope.³ This is a decision eagerly awaited by the entire patent community, since the Federal Circuit's *en banc* decision to adopt a "complete bar" approach significantly limited the scope of protection afforded to patent claims narrowed through amendments. Because claim amendments are a common practice, the Federal Circuit's decision affected the value of a vast majority of the 1.2 million patents currently in force⁴ and would have significantly changed the way new patent applications are prosecuted.⁵

The Supreme Court' decision represented a new effort by the Court to balance the two conflicting purposes of our patent system: protecting rights of the patent owners and providing notice to the public of the boundaries of a patent to facilitate further innovation. This decision is consistent with the development of the doctrine over the last

¹ 122 S. Ct. 1831 (2002), hereinafter *Festo V.*

² *Id.* at 1842.

³ *Id.*

⁴ *Festo v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 618 (Fed. Cir. 2000) (Michel, J., dissenting), hereinafter *Festo IV.*

⁵ *See, e.g.*, Steven H. VerSteeg, *Parallel Applications to Preserve the Doctrine of Equivalents in a Post Festo World*, 84 J. Pat. & Trademark Off. Soc'y, 341 (2002); Glen P. Belvis, *An Analysis of the En Banc Decision in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co. and the Doctrine of Equivalents*, 11 Fed. Circuit B.J. 59, 99-110 (2002).

one and half centuries. It brought our patent system back to the right track from the unbalanced extreme that the Federal Circuit was leading us. The foreseeability and reasonableness inquiry proposed in the *Festo V* opinion is both equitable and workable in resolving the uncertainty between the doctrine of equivalence and prosecution history estoppel.

However, the foreseeability and reasonableness test is at odds with the Court's view on the doctrine of equivalents stated in *Graver Tank*.⁶ The Court should go one step further in extending the foreseeability and reasonableness test to the general application of the doctrine of equivalents and overrule *Graver Tank*, thus providing a consistent guidance to the lower courts and the entire invention community in the application of the doctrine. Both the protection of patent rights and the certainty of public notice will be better served with a consistent and equitable test.

II. HISTORIC DEVELOPMENT

The purpose of the patent law is to "promote the Progress of Science and useful Arts."⁷ Two functions are served by the patent system: incentives for the innovators and notice to the public.⁸ The former is to encourage innovation by giving the patentee a market monopoly to make profit out of the invention, and the latter is to benefit the public of the invention by allowing the public to make further improvements over the invention without the risk of patent infringement.

⁶ *Graver Tank & Mfg. Co., Inc. v. Linde Air Products Co.*, 339 U.S. 605 (1950).

⁷ U.S. Const. art. I §8, cl. 8.

⁸ See Matthew J. Conigliaro, Andrew C. Greenberg and Mark A. Lemley, *Foreseeability in Patent Law*, 16 *Berkeley Tech. L.J.* 1045, 1046 (2001)

These two functions, however, are frequently at tension with each other. While a patentee seeks to maximize patent protection, the public benefits from limiting the scope of the patent so that more royalty free use of the invention can be achieved. The correct application of two legal doctrines, the doctrine of equivalents and the prosecution history estoppel, plays a critical role in balancing the two conflicting functions of the patent law.⁹

A. The Doctrine of Equivalents

While a reasoning similar to the doctrine of equivalents can be found more than two centuries ago.¹⁰ It is in *Winans v. Denmead*, decided in 1853, that the Supreme Court cemented the doctrine into law.¹¹ In *Winans*, the Court held that an octagon-shaped coal car with a pyramidal-shaped base is equivalent to a cylinder-shaped one with a tapered cone-like base.¹² This debut of the doctrine of equivalents was achieved over the dissenting of four justices, who raised a strong concern of the uncertainty that the doctrine would bring to the patent scopes.¹³

The next seminal decision on the doctrine of equivalents was the Court's ruling in *Graver Tank & Manufacturing Co. v. Linde Air Products* more than half a century ago, where the Court laid a firm foundation for the modern doctrine of equivalents.¹⁴ In *Graver Tank*, the patentee claimed an electric welding composition that contained

⁹ *Id.* at 1047.

¹⁰ See Jay I. Alexander, Cabining the Doctrine of Equivalents in Festo: A Historic Perspective on the Relationship Between the Doctrine of Equivalents and Prosecution History Estoppel, 51 Am. U.L. Rev. 553, 556-57 (2002) (finding the application of a reasoning similar to the doctrine of equivalents in a 1798 case).

¹¹ 56 U.S. 330 (1853).

¹² The patentee only patented the cylinder-shaped car, not the octagon-shaped one used by the defendant. The Court found that the advantage of a cylinder-shaped coal cart with a cone-shaped base is to disperse the pressure of the load outwards in every direction, which can be achieved similarly by the octagon-shaped car with a pyramidal-like base.

¹³ See *id.* at 347 (Campbell, J., dissenting).

¹⁴ 339 U.S. 605 (1950).

alkaline earth metal silicates, including calcium or magnesium silicates.¹⁵ The only difference in the alleged infringer's product is the replacement of magnesium silicate by manganese silicate, which is not an earth metal silicate.¹⁶ The issue in *Graver Tank* is whether manganese silicon is an equivalent of magnesium silicate in the welding composition.¹⁷

Protecting patent rights clearly gained an upperhand in *Graver Tank*, where the majority stated that "to permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing."¹⁸ In an effort to provide a framework for the doctrine of equivalents, the Court proposed that "a patentee may invoke [the doctrine of equivalents] to proceed against the producer of a device if it performs substantially the same function in substantially the same way to obtain the same result,"¹⁹ which became a widely used test to determine equivalence after *Graver Tank*. According to the Court, an important factor in determining equivalence is whether persons reasonably skilled in the art would have known of the interchangeability of the unclaimed elements with the claimed ones.²⁰ Finding that manganese silicate is substantially identical in operation and result to magnesium silicate in the welding composition, the Court held that it is an equivalent of magnesium silicate.²¹

Despite the firm establishment of the doctrine of equivalents, the concerns raised by the dissenting justices in *Winans* never subsided, and the wide application of the

¹⁵ *Id.* at 610.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.* at 607.

¹⁹ *Id.* at 608.

²⁰ *Id.* at 609.

²¹ *Id.* at 612.

doctrine following *Graver Tank* further exacerbated the problem. The Supreme Court recognized in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.* that after *Grave Tank* the doctrine "has taken a life of its own, unbounded by the patent claims."²²

To rein in the application of the doctrine of equivalents, the Court endorsed two rules in *Warner-Jenkinson*, both of which have deep roots in the Court's patent adjudication. The first rule is the so called "all elements rule,"²³ which, according to the Warner-Jenkinson Court, means that "[e]ach element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole."²⁴ This rule requires an element-by-element analysis of the applicable equivalents, thus limiting a patentees' overreaching argument of overall similarity in functionality.

The second rule is prosecution history estoppel, the subject of central contention in the Federal Circuit in *Festo*.²⁵ Although the Supreme Court stated in *Warner-Jenkinson* that "*Graver Tank* did not dispose of prosecution history estoppel as a legal limitation on the doctrine of equivalents,"²⁶ the scope of the application of the rule was not made very clear. In fact, the scope of the rule has never been very clear from the origination of the rule more than a century ago.

²² 520 U.S. 17, 28-29 (1997).

²³ The framework of the "all elements rule" appeared much earlier than Warner-Jenkinson. In *Water Meter Co. v. Desper*, 101 U.S. 332 (1879), the Court held that defendant's meter did not infringe upon the patented meter because the defendant's meter lacked one material element and substituted no equivalent for the element. In *Greg v. Herring*, 107 U.S. 640 (1883), the Court dismissed the infringement complaint because all the elements of the claimed invention were not present in the defendant's product. The Court stated that every claimed element is material and the Court can only decide whether any part omitted by an alleged infringer is supplied by some other device or instrumentality which is its equivalent. *Id.* at 648. See also Alexander, supra note _ at 565.

²⁴ 520 U.S. at 29.

²⁵ See *Festo V*, 234 F.3d 558 (Fed. Cir. 2000).

²⁶ *Id.* at 30.

B. PROSECUTION HISTORY ESTOPPEL

The Supreme Court firmly decided in 1879 that a patentee could not recapture intentionally disclaimed subject matter through subsequent expansion of the claims.²⁷ A few years later, the Court applied the principle to estop a patent owner from claiming infringement by the doctrine of equivalents when the equivalent structure was specifically disclaimed.²⁸ As to the subject matter unaffected by the disclaimer, the Court held the position that the doctrine of equivalents should still be available.²⁹

The more difficult question concerning prosecution history estoppel and the doctrine of equivalents is when the disclaimer (or amendment) narrowed originally covered subject matter but the alleged infringing device is not clearly surrendered. In *Hurlbut v. Schillinger* the Court faced such a situation.³⁰ The patentee in *Hurlbut* disclaimed a portion of his invention due to prior art and was found in a prior litigation to be precluded from asserting claims against an accused device in light of the disclaimer.³¹ Nevertheless, the Court allowed the application of the doctrine of equivalents to the invention and found for the patentee against a device more closely equivalent to his

²⁷ See *Leggett v. Avery*, 101 U.S. 256 (1879). The patentee applied for extension of seven claims, six of which were rejected for anticipation by prior art and disclaimed by the patentee. Only the fifth claim was granted. The patentee later filed reissue application containing claims essentially the same as the previously disclaimed ones and was granted the patent. The Court held the reissued patent invalid, for the patentee could not recapture claims he already abandoned. *Id.* at 259.

²⁸ See *Union Metallic Cartridge Co. v. United States Cartridge Co.*, 112 U.S. 624 (1884). The patent is for the construction of an organized automatic machine for heading cartridge shells, where the patentee described and claimed a process in which a movable "die" struck a fixed "bunter" to form the cartridge flange. The patentee's widow later tried to claim a fixed "die" and a movable "bunter" through re-issuance of the patent and her application was rejected for introduction of new matter. She disclaimed the added structure to obtain the re-issuance. The Court held that she could not claim the "fixed die" and movable "bunter" as equivalents to movable "die" and fixed "bunter" claimed in the patent, because she already disclaimed that structure during application for the re-issuance.

²⁹ See *Goodyear Dental Vulcanite Co. v. Davis*, 102 U.S. 222 (1880). The patentee claimed the use of vulcanized rubber for the making of artificial teeth and disclaimed a specific material called "gutta-percha" for the purpose. The Court held that he still has the doctrine of equivalents available to him regarding the "vulcanized rubber."

³⁰ *Hurlbut v. Schillinger*, 130 U.S. 456 (1889)

³¹ *Id.* at 465-66.

claimed invention.³² This ruling is the earliest Supreme Court precedent consistent with the "flexible bar" approach most often applied in later cases. The Court applied the same reasoning in *Sutter v. Robinson*.³³

However, the Supreme Court has not been consistent itself in applying the "flexible bar." In *Hubbell v. United States*, the Court stated that "limitations imposed by the inventor . . . must be strictly construed against the inventor and in favor of the public. . . ,"³⁴ signaling a deviation from the "flexible bar." Again, in *Weber Electric Co. v. E.H. Freeman Electric Co.*, the Court added the confusion by stating that when a patentee narrowed his claim in order to obtain a patent, he may not resort to the doctrine of equivalents to claim the larger scope which it might have had without the amendments.³⁵

Although the "flexible bar" was never repudiated by the Court, the language used by the Court consistently favored a more limiting interpretation of the narrowing amendment during this period. *Exhibit Supply Co. v. Ace Patents Corp.* represented the Court's furthest deviation from the flexible bar approach, where the Court stated: "By the amendment [the patentee] recognized and emphasized the difference between the two phrases and proclaimed his abandonment of all that is embraced in that difference."³⁶ However, the Court did not clarify how to determine the scope of the difference.

The ambiguity from the Court's own line of cases produced a predicted inconsistency in the lower courts, where both a "flexible bar" approach and a more

³² *Id.* at 472.

³³ 119 U.S. 530 (1886). In a patent claiming a process of re-sweating tobacco leaves, the patentee narrowed his claim to porous wooden box in order to distinguish prior art, which used metal box. The Court analyzed whether the uses of cases, boxes or packages in which the tobacco leaves are originally packed by the producer is equivalent to the porous wooden box.

³⁴ 179 U.S. 77, 83-84 (1900).

³⁵ 256 U.S. 668, 677-78 (1921).

³⁶ 315 U.S. 126, 136 (1942).

limiting approach were applied.³⁷ After the establishment of the Federal Circuit in 1982, the Circuit embraced the "flexible bar" approach in its first case concerning the prosecution history estoppel, *Hughes Aircraft Co. v. United States* (hereinafter "*Hughes I*").³⁸ As a hallmark of the "flexible bar" approach, the Federal Circuit stated that no reason or warrant exists for limiting application of the doctrine of equivalents to the few unamended claims, and that the effect of the amendment to the scope of available equivalents can range "from great to small to zero", depending on the nature and purpose of the amendment.³⁹ A majority of cases decided by the Federal Circuit between 1984 and 1997 followed the *Hughes I* reasoning and the "flexible bar" approach.⁴⁰ However, in *Kinzenbaw v. Deere & Co.*, a case decided less than one year after *Hughes I*, a five-judge panel refused to analyze the availability of the doctrine of equivalents to a claim element narrowed by amendment, despite the argument by the patentee that the amendment was not necessary for patentability.⁴¹ In contrast to the "flexible bar" approach, *Kinzenbaw* resembles more of the "complete bar" approach that is consistent with the Supreme Court's language in *Exhibit Supply Co.*⁴²

³⁷ For a general discussion of circuit court approaches to prosecution history estoppel and the doctrine of equivalents, see Alexander, *supra* note _ at 584-92. See also *Hughes Aircraft Co. v. United States*, 717 F.2d 1362-63 (Fed. Cir. 1983).

³⁸ 717 F.2d 1351 (Fed. Cir. 1983) (holding that the later developed technology to use onboard computer to control satellite orientation is equivalent to receive signal from the satellite and use the computers on earth to control the orientation of the satellite).

³⁹ *Id.* at 1363.

⁴⁰ Donald S. Chisum, *Chisum on Patents* § 18.05[3][b][i], at 18-497 (1998).

⁴¹ 741 F.2d 383 (Fed. Cir. 1994). In a patent for row planter, the patentee amended during prosecution his original claim to include a limitation that the radius of the gauge wheel exceeded the radius of the disc, though the rejection by the patent examiner was on another limitation. The Court nevertheless applied the prosecution history estoppel and limited this claim element to its literal meaning.

⁴² 315 U.S. 126, 136 (1942).

C. The Implication of *Warner-Jenkinson* on Prosecution History Estoppel

The last word that the Supreme Court had regarding prosecution history estoppel and the doctrine of equivalents before its decision on the *Festo* case is *Warner-Jenkinson*.⁴³

In *Warner-Jenkinson*, the patentee amended his claim to limit the application of his invention, an ultrafiltration process, to approximately pH 6.0 to 9.0.⁴⁴ The upper limit of pH 9.0 is added to distinguish a prior art, which revealed an ultrafiltration process at pH above 9.0, but the reason for adding a lower limit of pH.6.0 was not clear from the record.⁴⁵ The accused infringing process was conducted at pH 5.0, out of the claimed literal range.⁴⁶

Once again embracing itself with the "flexible bar" line of reasoning, the Court declined to invoke the prosecution history estoppel to amendments made regardless of reasons.⁴⁷ The Court stated that "[w]here the reason for the change was not related to avoiding the prior art, the change may introduce a new element, but it does not necessarily preclude infringement by equivalents of that element."⁴⁸

However, to further the definitional and notice function of the claims, the Court placed the burden on the patentee to establish the reason for an amendment required during prosecution.⁴⁹ The Court implied that if the reason is not sufficient, courts could bar the application of the doctrine of equivalents to the amended element.⁵⁰ When no reason for amendment could be established, the Warner-Jenkinson Court instructed

⁴³ 520 U.S. 17 (1997).

⁴⁴ *Id.* at 32.

⁴⁵ *Id.*

⁴⁶ *Id.* at 23.

⁴⁷ *Id.* at 32.

⁴⁸ *Id.* at 33.

⁴⁹ *Id.*

⁵⁰ *Id.*

courts to presume that the patent applicant had a substantial reason related to patentability for including the limiting amendment added by the amendment, and thus bar the application of the doctrine of equivalent as to that element.⁵¹ That presumption, however, could be rebutted by providing appropriate reasons for amendment.⁵²

Although the Warner-Jenkinson court strived to balance the protection of patent holders and the notice function to the public, the proposed approach, however, failed to provide a clear guideline. The Court failed to elaborate what it considered as a "substantial reason" related to patentability. It also failed to address in clear terms the scope of the doctrine of equivalents available to claims amended for a substantial reason related to patentability. The Court did conclude that intent plays no role in the application of the doctrine of equivalents and placed the proper time for evaluating equivalency at the time of the infringement, not at the time of the issuance of the patent.⁵³

III. THE *FESTO* DECISION

In *Festo*, the Supreme Court tried to reconcile the two extremes of the "flexible bar" approach and the *en banc* Federal Circuit's "complete bar" approach. To clarify the holdings in *Warner-Jenkinson*, the Court first limited the complete bar of amended claim elements to situations where the patentee is unable to explain a reason for the amendment, and gave the patentee an opportunity to rebut the presumption.⁵⁴ As to the scope of the surrendered subject matter when prosecution history estoppel is triggered, the Court also placed the burden on the patentee to show that the amendment has not

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Id.* at 36-37.

⁵⁴ 122 S.Ct. at 1842.

surrendered a particular equivalent in question.⁵⁵ Although the Court cited *Exhibit Supply* to reaffirm its holding that the difference between the original claim and the amended claim is abandoned, the Court allowed several situations that the difference can be recaptured through the doctrine of equivalents.⁵⁶ In particular, the Court pointed out that when the equivalents are *unforeseeable* at the time of the application and when the rationale underlying the amendment may bear no more than *tangential* relation to the equivalent in question, the amendment should not bar completely the application of the doctrine of equivalents.⁵⁷ In addition, the Court stated that there maybe some other reasons suggesting that the patentee could not *reasonably* have expected to describe the insubstantial substitution in question.⁵⁸

This is the most balanced approach the Court has proposed so far to accommodate both the protection function and the notice function of the patent system. It gives a patentee necessary protection against unscrupulous copyists by retaining some teeth of the doctrine of equivalents even after narrowing amendments, and at the same time it gives the public a workable guidance in discerning the scope of the amended claims. If the general territory between the original claim and the amended claim encompasses subject matter foreseeable to an ordinary person skilled in the art and describable by a reasonable claim language, it is reasonable to hold that the patentee, by narrowing the claim, abandoned that difference. On the contrary, if an equivalent lies between the two claims but was unforeseeable to the patentee at the time of making the amendment, such as later developed technology, or it was impractical for the patentee to cover all the

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ *Id.*

equivalents in a reasonable claim language, such as claiming all the analogous DNA sequences encoding a functionally similar protein, it is unreasonable to deprive the patentee all the protection afforded by the doctrine of equivalents.

This rule, however, is inconsistent with the application of the doctrine of equivalents to unamended claims as the Court stated in *Graver Tank*. According to *Graver Tank*, an unclaimed structure foreseeable to an ordinary person skilled in the art that performs substantially the same function in substantially the same way to achieve substantially the same result is a proof of equivalence, rather than a bar to the application of the doctrine of equivalents.⁵⁹

If it is foreseeable to a person of ordinary skills in the art, then there is really no excuse to not hold the patentee responsible for failure to claim the equivalent, for claims define the boundary of the invention, and the public has a right to know that boundary as certain as reasonably possible.

Applying this reasoning to *Graver Tank*, the patentee should be held responsible for failure to claim manganese silicate. The doctrine of equivalents is used to protect a patentee against later developed technologies impossible to be claimed at the time of the application, and against certain equivalents impractical for the patentee to capture due to limitations of language, but the doctrine should not be used to protect a patentee against his own inadvertence and mistake. The public interests at stake due to an uncertain claim boundary are simply too great compared to the benefit afforded to the few careless applicants.

The approach advocated in the Court's *Festo* opinion should be extended to the application of the doctrine of equivalents to every claim elements, regardless of whether

⁵⁹ 339 U.S. at 609.

the element has been narrowed or not. Only this way will both interests that the patent law aims to advance be correctly balanced. Therefore, the Supreme Court should overrule *Grave Tank* and clear the way for a uniform standard in the application of the doctrine of equivalents.