IN THE

Supreme Court of the United States

FESTO CORPORATION,

Petitioner,

V

SHOKETSU KINZOKU KOGYO KABUSHIKI CO., LTD. a/k/a SMC CORP. and SMC PNEUMATICS, INC., Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF FOR RESPONDENTS

JAMES B. LAMPERT HALE AND DORR LLP 60 State Street Boston, Massachusetts 02109 (617) 526-6000 ARTHUR I. NEUSTADT

Counsel of Record

CHARLES L. GHOLZ

ROBERT T. POUS

OBLON, SPIVAK, MCCLELLAND,

MAIER & NEUSTADT, P.C.

1755 Jefferson Davis Highway

Arlington, Virginia 22202

(703) 413-3000

Counsel for Respondents

QUESTIONS PRESENTED

- 1. Whether prosecution history estoppel applies to an amendment that narrows the scope of a claim (a) for a reason related to avoidance of prior art, or (b) for a reason unexplained on the public record of the patent prosecution, or (c), indeed (as the Federal Circuit held), "for any reason related to the statutory requirements for a patent."
- 2. Whether, as the Federal Circuit held, "when a claim amendment creates prosecution history estoppel, no range of equivalents is available for the amended claim element."

CORPORATE DISCLOSURE STATEMENT

SMC Corporation, the parent of SMC Pneumatics, Inc. (now SMC Corporation of America), has no parent or other holder of 10% or more of its stock.

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BRIEF FOR RESPONDENTS

STATEMENT OF THE CASE

Petitioner Festo obtained the two patents involved in this case only after submitting amendments to narrow the broader claims it initially submitted to the Patent and Trademark Office (PTO). To obtain the Stoll patent, Festo added two limitations (or elements) to narrow the claimed invention: one (the requirement of two sealing rings, one at each end of the piston) was added to avoid prior art; the other (the requirement of magnetizable material in the sleeve) was added for a reason that Festo has insisted is "a mystery" on the public record. To obtain the Carroll patent, Festo amended its claims to add a similar requirement of two sealing rings that it added to obtain the Stoll patent – again, to avoid prior art Festo had discovered (and therefore was obliged to disclose).

The accused device of respondent SMC does not have either of the two elements added by Festo to narrow its claims. In suing SMC for infringement, Festo, though it had added these elements in order to obtain its patents, dismissed these elements as "unimportant" and asserted that their absence was "equivalent" to their presence. The aspect of this case now before this Court concerns whether that assertion of infringement under the doctrine of equivalents is barred by the longstanding limitation on that doctrine, prosecution history estoppel (formerly called file wrapper estoppel), as set forth in this Court's governing precedent prior to the enactment of the 1952 Patent Act, Exhibit Supply Co. v. Ace Patents Corp., 315 U.S. 126 (1942), and as confirmed in Warner-Jenkinson Co. v. Hilton Davis Chemical Co., 520 U.S. 17 (1997).

The Federal Circuit, after struggling with a large number of cases presenting important doctrinal issues about prosecution history estoppel, decided to hear this case *en banc*, invited participation by interested *amici*, set forth questions for the

parties and amici to answer, and then answered those questions pursuant to its congressional mandate to resolve issues unique to patent law. Based upon its unique experience of grappling with application of prosecution history estoppel for 20 years, the Federal Circuit concluded that (a) estoppel applies whenever an amendment substantively narrows a claim to satisfy a requirement for issuance of the requested patent and (b) the effect of the estoppel is not to be determined by an "unworkable" (because profoundly unpredictable) "flexible" approach, but is simply to bar any equivalent for the particular claim element added by the narrowing amendment. Those rulings, and the particular estoppel holdings here, are correct. In particular, the amendments here generate estoppel, as they were either made to avoid prior art or unexplained, in either case squarely covered by the holding of Warner-Jenkinson. And the scope of estoppel extends to the accused devices under the clear rule of Exhibit Supply, as they were embraced by the initially submitted claims but then excluded from the coverage of the narrowed claims.

A. Patent Applications and Their Prosecution

A patent application includes a "specification" and "claims." The specification must provide the public disclosure, including how to make and use the invention, that is the *quid pro quo* for the grant of patent rights. The claims, however, define the boundaries of the patent protection. Each claim is a carefully drafted paragraph that specifies with precision the subject matter over which the patentee, upon issuance, has exclusive rights (to make, sell, use, etc.) for the 20 year period of the patent. 35 U.S.C. § 154(a)(1).

In a claim, less is more and more is less. The greater the number of limitations (elements, requirements) set forth in a particular claim, the narrower the substantive scope of what is covered, since infringement requires meeting *all* of the claim

elements (literally or by an equivalent). Conversely, greater coverage, and hence a more valuable patent, is secured by omitting any limitation that is not needed to satisfy the various requirements of a valid, enforceable patent — novelty, nonobviousness, adequate public disclosure for the full scope of the claimed invention, etc. For example, a patent applicant might claim (1) a pencil, (2) a wooden pencil, (3) a wooden pencil with a graphite writing element, (4) a wooden pencil with a graphite writing element and a gum eraser. Each such claim provides the patentee narrower patent coverage, and a less valuable patent, than its predecessor in the list.

It has always been the fundamental professional responsibility of patent attorneys prosecuting an application to resist adding any scope-restricting element to their claims, unless necessary to satisfy a requirement for issuance. A new limitation is added only when the choice is between a patent with narrowed claims or no patent at all. And the choice of what limitation to add is made according to the same imperative: it is prosecuting attorneys' duty and practice to craft amendments to effect the least narrowing of scope required to meet a patentability requirement. The applicant "is master of his claims." Pet. App. 67a (Lourie, J., concurring).

The process of PTO examination focuses the applicant's attention, claim by claim, on what is needed to secure issuance, and the PTO determinations address the *meaning* of the claims. In the entire voluminous guide to patent examination, the PTO's *Manual of Patent Examining Procedure*, there is no directive for the PTO to consider any available range of "equivalents" – either *ab initio* or in reviewing amendments –

in applying the standards for issuance of the patent.¹ Based on a claim's meaning, the examiner may point to prior art (e.g., publications, patents, real-world products) that he believes makes that claimed invention obvious or not novel; or the applicant may on its own identify particular prior art that raises the same question.² If the applicant cannot disprove the concerns, it must make a change to narrow the claim, specifically focusing on adding whatever new limitation is needed to distinguish prior art (or, for example, adhere to a more limited public disclosure or conform to its own statement of its invention or provide the required clarity, see note 2, supra). Among the tools of narrowing the applicant may use is "means plus function" claim language (35 U.S.C. § 112, \P 6) and even negative claim language that explicitly excludes a particular prior art feature. See page 37, infra.

The applicant has every incentive to make only the minimally required change, to preserve as much of the original broader coverage as it possibly can. See, e.g., Brenner v. Manson, 383 U.S. 519, 534 (1966) (noting "the highly developed art of drafting patent claims" for purposes of

¹A form of equivalents analysis does, of course, play a role in evaluating claims in "means plus function" form, because the statutory authority, 35 U.S.C. § 112, ¶ 6, makes express reference to "equivalents." *See MPEP* §§ 2183-2186.

²The examiner may identify other ways in which a claim fails to meet a requirement for issuance, such as lack of utility (35 U.S.C. § 101), or a claim's lack of sufficient support in the specification to meet the enablement and other public disclosure requirements (35 U.S.C. § 112, ¶ 1), or a claim's going beyond what the applicant has made clear it regards as a more limited invention (35 U.S.C. § 112, ¶ 2, second requirement) or even a claim's insufficient definiteness (under 35 U.S.C. § 112, ¶2, first requirement) to put the public on notice of the boundaries of the asserted zone of exclusivity, within which others cannot compete or innovate without permission.

"broadening the scope of the claim as widely as possible"); R. Merges, Patent Law and Policy at 11 (2d ed. 1997) ("The overall goal when drafting claims is to make them as broad as the Patent Office will allow."); J. Sheldon, How to Write a Patent Application at 1-2 (Practising Law Institute 2000) (Applicant's objective: "[c]laiming the invention sufficiently broadly so that the most talented experts in the field cannot design around the claims for the next twenty years"). The applicant also has the right to appeal an examiner's rejectionbased request for unwarranted narrowing, inside the PTO and in the courts. 35 U.S.C. §§ 134, 141-145. Moreover, when submitting an amended claim, the applicant has every incentive to make only the barest possible statement of explanation: the applicant will typically seek to avoid any statement that might later be read as a disclaimer of coverage.³ Commonly. therefore, the explanation is an asserted conclusion only, stating no more, for example, than that the claims as amended overcome the rejection (which the examiner must check for himself) or that the prior art does not disclose or suggest the combination of features now required in the narrowed amended claim.

This entire process is recorded in the public record that becomes the prosecution history (or file history or file wrapper), which is available to the public upon request from the PTO and always is consulted in any subsequent effort to construe and apply the claim language. See 37 C.F.R. § 1.11. Critically, any skilled reader of the prosecution history understands, and can expect the applicant to act on, the

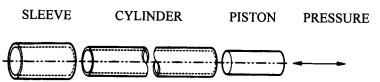
³Apart from amendments themselves, statements by the applicant have long been a basis for estoppel of asserted equivalents coverage and, also, for narrowing the available construction of the claim language. See 5A D. Chisum, Patents §§ 18.03[2][d] (claim construction), 18.05[2][c] (estoppel).

incentive to adopt only the minimally needed narrowing amendments, with attention squarely focused on the new elements that make the difference between rejection (or possible rejection in the case of a preemptive amendment) and issuance of the claim. Any skilled reader must presume that the patent applicant chose its narrowing-amendment language carefully, surrendering all he left out.

B. Factual Background

1. Rodless Cylinders

Both the Stoll patent (issued 1982) and the Carroll patent (issued in narrowed form on reexamination in 1988) are directed to minor design changes in magnetic rodless cylinders that appear in a crowded field of prior art. See Fed. Cir. Jt. App. A8631-35; JA II-157 to II-173 (magnetic rodless cylinders in prior art beginning in 1960s). A magnetic rodless cylinder has three basic parts, i.e., a piston, a cylinder, and a sleeve (sometimes called a "carriage"). The piston is on the inside of the cylinder and is moved by fluid under pressure. The sleeve is on the outside of the cylinder, and is magnetically coupled to the piston. The magnetic attraction between the sleeve and the piston, both of which have strong magnets mounted therein, causes the sleeve to follow the piston when the piston is moved by fluid pressure along the inside of the cylinder. Pet. App. 33a.



2. The Absence of Literal Infringement

As is settled in this litigation, SMC's accused rodless cylinders do not literally infringe either of Festo's two patents.

SMC's cylinders do not have "magnetizable" material in the sleeve (they use an aluminum alloy), which is required by claim 1 of the Stoll patent. JA II-6. SMC's cylinders also do not have any "sealing ring" at one end of their pistons – thus allowing fluid, with any impurities, to come between the piston's magnets and the inside of the cylinder – whereas both claim 1 of the Stoll patent and claim 9 of the Carroll patent require "sealing" rings at *both* ends (JA II-6, II-131): the Stoll patent specifies softness in the sealing ring to perform its wiping function, and the Carroll patent requires that the sealing rings be "resilient" to "effect a fluid-tight seal." JA II-4, II-131.

Contrary to Festo's repeated implication, SMC did not engage in any copying of Festo's sometimes unsatisfactory (JA I-81 to I-89) particular refinement of the well-known magnetic rodless cylinders already in existence. As stated by the district court, "you're right, there is no evidence of copying." JA I-151.

⁴The Stoll patent's specification notes that it is beneficial to use magnetizable material in the sleeve since doing so will minimize "magnetic leakage fields" that can cause "undesirable braking forces." JA II-4.

⁵Claim 1 of the Stoll patent recites that the two sealing rings, one at each end of the piston, are required "for wiping said internal wall as said piston moves along said tube to thereby cause any impurities that may be present in said tube to be pushed along said tube so that said first annular magnets will be free of interference from said impurities." JA II-6. The specification of the Stoll patent explains that having separate sealing and guide rings allows the former to be soft (and better at sealing) while the latter can remain hard (for better guiding). JA II-4; see also JA I-59 (Festo trial memorandum stating that the prior art ring was either too hard or too soft and that, when only a hard guide ring is used, "the sealing and wiping functions are not effectively obtained"); JA I-102 to I-106 (Stoll testimony stating that, with only the hard guide ring, "you won't get a leakage free surface"). JA I-104. See also JA I-118 to I-121.

3. Prosecution History: The Stoll Patent

After the German Patent Office brought to Festo's attention (during the prosecution of Festo's corresponding German patent application) two pertinent prior art German patents, which Festo was required to disclose to the PTO (37 C.F.R. §1.56), Festo narrowed its main claim by adding both the requirement of a magnetizable sleeve and the requirement of sealing rings at each end of the piston.⁶ Festo advised the PTO of these prior art patents and amended its main claim as part of its response to the PTO's first action on Festo's application. It did so even though the examiner had made no request that Festo either narrow or "clarify" its main claim with respect to either the material in the sleeve or the number and location of the sealing rings. JA II-30 to II-32.⁷

Festo's addition of the magnetizable sleeve element was

⁶Festo stated that "neither of these two references" – the two prior art German patents cited by Festo (27 37 924 and 19 82 379) – "discloses the use of a structure preventing the interference by impurities located inside the tube and on the outside of the tube while the arrangement is moved along the tube." JA II-40; I-120 to I-121. The sealing rings are what Festo included to prevent impurities. *See* note 5, *supra*. In fact, although it is irrelevant whether Festo was right in its reading of the prior art (*see Warner-Jenkinson*, 520 U.S. at 33 n.7), the German patents do not disclose a (soft) sealing ring mated with a (hard) guide ring at each end of the piston. JA II-109 to II-120, II-157 to II-173.

⁷The 35 U.S.C. §112 rejections noted by Festo did not require the addition of the sealing ring or the magnetizable material. The rejection that the claims were "improperly multiply dependent" (Pet. App. 40a) applied only to claims 4-12 and not to Festo's main claim (JA II-31) and, in any event, was remedied by having each dependent claim depend from only one claim rather than from multiple claims. JA II-25 to II-26, II-38 to II-39. The rejection that it was not clear whether the device was "a true motor or magnetic clutch" (Pet. App. 40a) was remedied by changing the term "linear motor" to "[t]he arrangement" and "magnetically coupled arrangement." JA II-37 to II-39, II-62 to II-63.

unexplained on the PTO record. It was not responsive to the examiner's rejection, and "there is no statement in the prosecution history that explains why this element was included in the independent claim." Pet. App. 50a. In the subsequent infringement litigation, the district court agreed with Festo's position "that the reason for the magnetizable sleeve amendment was 'a mystery,' because it did not appear to be related to any of the examiner's 35 U.S.C. §112 rejections, and it did not appear to distinguish the invention over the prior art." Pet. App. 44a; JA I-75.8

Festo's addition of the requirement of two sealing rings has an explanation evident from the PTO record. As held by the Federal Circuit, the addition "appears to have been made to distinguish the prior art." Pet. App. 52a. Specifically, "the amendment adding the sealing ring element was made to distinguish the German patents" that Festo had cited to the examiner. *Id.*

4. Prosecution History: The Carroll Patent

The Carroll patent originally issued in December 1973 (JA II-122), but 15 years later Festo requested reexamination in view of a prior art German patent. JA II-133 to II-142; see 35 U.S.C. §§ 301-307 (procedure for reexamination of issued patent in light of prior art not previously considered); 37 C.F.R. § 1.510. During the reexamination, Festo canceled its main claim and submitted an entirely new main claim 9, which requires a host of specific features including the pair of resilient sealing rings. JA II-180 to II-187. In its remarks

⁸Festo's insistence on the unexplained nature of the magnetizable-sleeve element was unavoidable for it. The only alternative is the conclusion, evident from the public record, that "magnetizable" was added to distinguish over the prior art submitted by Festo: German patent 27 37 924 expressly discloses a "carriage" (*i.e.*, sleeve) that is "made from non-magnetic material." JA II-117.

accompanying the amendment, Festo "stated that the amendment defined the 'features of the patentee's invention that distinguish over the art of record, including' the German patent cited in the request for reexamination" and further argued "that the combination of features recited in the claims, which includes the pair of sealing rings, distinguished the claims over the German patent." Pet. App. 55a; JA II-180 to II-187. The examiner accepted the narrowing amendment, citing the claimed "combination" in his reasons for allowance. JA II-189; see Pet. App. 55a. As held by the Federal Circuit, this amendment "was motivated by at least one reason related to patentability: a desire to avoid the prior art." Pet. App. 55a.

C. This Litigation

In Festo's infringement suit against SMC, the absence of literal infringement by SMC's non-magnetizable sleeve, single seal magnetic rodless cylinders is settled. Pet. App. 48a, 53a. Festo relies only on the doctrine of equivalents to bring the SMC cylinders, though without a magnetizable sleeve and without sealing rings at both ends of the piston, within Festo's exclusivity rights granted by patent claims requiring one or both of those features. The Federal Circuit ultimately held that Festo was estopped by its PTO amendments to assert such equivalents, thus not having to decide the serious issue whether Festo had proved "equivalence" itself or, rather, had "vitiated" claim elements in derogation of *Warner-Jenkinson*.

1. District Court Proceedings

With respect to the Stoll patent, a Special Master, after extensive testimony, initially concluded that SMC was entitled to summary judgment of non-infringement of the Stoll patent, applying prosecution history estoppel to bar any equivalents of the magnetizable-sleeve element. JA I-40 to I-44, I-49 to I-52. Festo challenged that conclusion before the district court, however, insisting that it was a "mystery" why its attorney had

added the magnetizable sleeve element: "Dr. Stoll should not be held to unintentional limitations added incorrectly by an attorney of which he was not aware and of which he certainly did not intend." JA I-54; see JA I-56 (same). The district court accepted Festo's position "that the reason for the magnetizable sleeve element was 'a mystery" and on that basis refused "to hold that prosecution history estoppel barred a finding that the Stoll patent was infringed under the doctrine of equivalents." Pet. App. 44a; see JA I-70 to I-76.

The court subsequently presided over a jury trial on (among other issues) whether SMC's nonmagnetizable sleeve and single-sealing-ring arrangement (at one end of the piston) were the equivalents of the required magnetizable sleeve and dual-sealing-ring arrangement. The accused SMC devices, with nonmagnetic sleeves, did not minimize magnetic leakage fields to prevent undesirable braking forces since they lacked the claimed magnetizable material to do so. See note 4, supra; JA I-142 to I-144. And they likewise did not prevent the fluid contact, and introduction of any impurities, the avoidance of which Festo expressly set forth as the function of its two-sealing-ring arrangement. See note 5, supra; JA I-142 to I-144.9 Nevertheless, the jury found equivalence. Pet. App. 44a.

As for the Carroll patent, the district court granted summary judgment of infringement under the doctrine of equivalents for the SMC rodless cylinder models at issue. (It granted summary judgment of non-infringement with respect to other SMC rodless cylinder models not at issue here.). The

⁹ Festo's assertion that a single two-way sealing ring at one end of the piston is the equivalent of two one-way sealing rings, one at each end of the piston, is a red herring. A single two-way sealing ring at one end of the piston leaves the other end of the piston unprotected from the entry of impurities since the hard guide ring by itself cannot effectively perform the wiping function. See note 5, *supra*; JA I-118 to I-121.

court simply deemed irrelevant to the Carroll patent the functions of impurity or dirt prevention made clear in the Stoll patent and required by the Carroll patent's claim language reciting "resilient sealing rings" in order "to effect a fluid-tight seal" (JA II-131). See JA I-79; Pet. App. 44a.

2. Panel Decisions

A panel of the Federal Circuit initially affirmed the district court's judgment. Pet. App. 190a. This Court, however, granted SMC's petition for a writ of certiorari, vacated the Federal Circuit decision, and remanded for reconsideration in light of Warner-Jenkinson, supra. See SMC Corp. v. Festo Corp., 520 U.S. 1111 (1997). That GVR was one of three the Court issued in light of Warner-Jenkinson, the other two being Honeywell, Inc. v. Litton Systems, Inc., 520 U.S. 1111 (1997), and United States v. Hughes Aircraft Company, 520 U.S. 1183 (1997). All three cases were set for rebriefing and reargument in the Federal Circuit.

Both Litton and Hughes were decided by panels of the Federal Circuit in April 1998, with both decisions ruling on the scope of estoppel in light of Warner-Jenkinson. See Litton Systems, Inc. v. Honeywell, Inc., 140 F.3d 1449 (Fed. Cir. 1998); Hughes Aircraft Co. v. United States, 140 F.3d 1470 (Fed. Cir. 1998). The Litton case - involving a holding that estoppel applied, with a remand to determine what the scope of the estoppel was (among other issues) - generated vigorous dissents from denial of rehearing en banc. Litton Systems, Inc. v. Honeywell, Inc., 145 F.3d 1472 (Fed. Cir. 1998). The Hughes case - a final resolution of infringement after 25 years of litigation – also generated a dissent from en banc rehearing (Hughes Aircraft Co. v. United States, 148 F.3d 1384 (Fed. Cir. 1998)), followed by an unsuccessful petition for certiorari by the United States. United States v. Hughes Aircraft Co., 525 U.S. 1177 (1999).

The second panel decision in the present case came in April 1999, with the panel now finding it necessary to remand to the district court for further litigation over the requirement of two sealing rings in the Stoll patent (but not the Carroll patent) – particularly, whether prosecution history estoppel barred Festo's assertion of equivalents for that claim limitation. Pet. App. 156a. By the time SMC's rehearing petition was pending in the summer of 1999, however, the Federal Circuit had addressed the applicability and scope of estoppel in a large number of prosecution history estoppel cases since Warner-Jenkinson. See 5A D. Chisum, Patents § 18.05 (1998 & 2000 Supp.); 13 D. Chisum, Patents, Federal Circuit Topical Outline, §§ 5410-5418 (summarizing numerous estoppel decisions) (1998 & 2000 Supp.). There was a demonstrated need for clarification and panel-by-panel consistency.

The Federal Circuit on August 20, 1999, vacated the panel decision and set this case for rehearing *en banc*, stating five doctrinal questions for the parties and *amici* to address. Four of them concerned prosecution history estoppel. The fifth was specifically addressed to the required element-by-element standard or "all elements" rule, asking whether Festo's equivalents argument -- that the absence of an element (the magnetizable sleeve, the sealing ring) was equivalent to its presence -- "violate[d] *Warner-Jenkinson's* requirement that the application of the doctrine of equivalents 'is not allowed such broad play as to eliminate an element in its entirety,' 520 U.S. at 29." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 187 F.3d 1381 (Fed. Cir. 1999); *see* Pet. App. 2a-3a (quoting the five questions).¹⁰

¹⁰The first question presented in Festo's certiorari petition is similar to the Federal Circuit's question one: "For the purposes of determining whether an amendment to a claim creates prosecution history estoppel, is 'a substantial reason related to patentability,' Warner-Jenkinson Co. v. Hilton

A number of amici accepted the Federal Circuit's invitation to participate – six companies and three lawyer groups. The companies were IBM, Kodak, Ford, Hewlett-Packard (HP), Proctor & Gamble (P&G), and Litton. There was broad agreement among the amici that estoppel was generated by unexplained amendments (Federal Circuit question 4) as well as by amendments made to satisfy a requirement for issuance even if voluntary (Federal Circuit question 2) and even if not made to overcome prior art (Federal Circuit question 1). Only on the Federal Circuit's question 3 – whether estoppel, where it applies, constitutes a bar to equivalents of the particular element added by narrowing amendment – did the amici differ. 11 The companies generally favored a bar, because of the need for clarity in patent boundaries, even though that position limited their own rights as substantial patent holders.

Davis Chem. Co., 520 U.S. 17, 33 (1997), limited to those amendments made to overcome prior art under §102 and §103, or does 'patentability' mean any reason affecting the issuance of a patent?" See Pet. App. 2a. Festo's second question presented is similar to the Federal Circuit's question three: "If a claim amendment creates prosecution history estoppel, under Warner-Jenkinson what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?" Pet. App. 2a-3a.

[t]hat case [Exhibit Supply], and the cases before and after it up to the present day, establish that when a patentee amends his claim to avoid the prior art, he gives up 'all that is embraced in th[e] difference' between what he first sought to claim, and what was finally accepted.

¹¹Even Litton (still engaged, as it is today, in fighting *Litton v. Honeywell*) could not avoid the straightforward recognition (at page 9 of its Federal Circuit brief) that this Court's decision in *Exhibit Supply* establishes that a patentee surrenders any matter that was within the initial claim but then excluded from the amended claim:

3. The En Banc Decision

On November 29, 2000, the court rendered its *en banc* decision, deciding the estoppel questions and resolving this case. Pet. App. 1a-155a.¹² The court's rulings are limited to an amendment, made by the patent applicant in the PTO, that narrows the claim. The decision does not address the role of statements or arguments by the patent applicant in the PTO as a basis for estoppel. *See* note 3, *supra*. Nor does it speak to unamended claim elements or even to a non-narrowing amendment.¹³

The SG/PTO brief also notes (at 16) that rewriting a dependent claim in independent form is not a narrowing. This statement is correct since the claim is substantively unchanged but incomplete since the cancellation of the broader independent claim which almost always accompanies such a rewriting does constitute a narrowing. *Mycogen Plant Science, Inc. v. Monsanto Co.*, 252 F.3d 1306, 1320 (Fed. Cir. 2001)

¹²The *en banc* court, though it had pointedly set a question concerning whether Festo had established equivalence apart from estoppel (had Festo, in violation of *Warner-Jenkinson*, "vitiated" certain claim elements?), did not have to reach that non-estoppel question. With the panel decisions in this case vacated, there is accordingly no extant court of appeals ruling on SMC's contention that equivalents liability here exceeded the bounds allowed by *Warner-Jenkinson*. That issue remains open in this case if the Federal Circuit's judgment is not affirmed.

¹³The Federal Circuit recently made clear that a change from one term to another where both had the same meaning was not a narrowing. *Turbocare Division v. General Electric Co.*, 264 F.3d 1111 (Fed. Cir. 2001). That situation must be distinguished from a substantive narrowing of a claim term by amendment to limit it to a particular embodiment in the specification; that common pattern does involve a narrowing, though patentees may seek to dress up their amendment as a mere clarification of what they always "intended." What is determinative is objective substantive narrowing of the *claim*'s meaning, a familiar and well-settled inquiry under, for example, the reissue provisions of the Patent Code, 35 U.S.C. §§ 251, 252. *See* SG/PTO Br. at 17 n.3 (invoking reissue standard).

The court concluded, by a vote of 11 to 1, that a narrowing amendment generates estoppel if made *either* for a reason "unexplained" on the public record *or* for any reason related to the statutory requirements for a patent. In particular, estoppel is not restricted to narrowing amendments made specifically to avoid prior art. The court explained that "the functions of prosecution history estoppel [the notice function of the claims and the prevention of recapture of surrendered subject matter] cannot be fully satisfied if substantial reasons related to patentability are limited to a narrow subset of patentability issues." Pet. App. 8a-11a. And the determination of the reason for an amendment, the court held, must be made on the basis of the public record (as understood through educated eyes, of course), not *post hoc* explanations. Pet. App. 47a-48a. Because the amendments

^{(&}quot;[T]he cancellation of a claim with a broad limitation in favor of one with a narrower limitation ... creates prosecution history estoppel."). This is not an issue in this case and Festo does not so assert since Festo cancelled broader independent claims in favor of narrower independent claims.

¹⁴The court also held, 11 to 1, that a voluntary amendment should be treated the same as a "required" amendment. Pet. App. 11a-13a. The court noted, in particular, that "the addition of the lower pH limit of 6" in *Warner-Jenkinson* "was not 'required' by the prior art rejection." Pet. App. 13a.

¹⁵ "In her dissenting opinion, Judge Newman expresses the concern that we are penalizing the patent holder by limiting the evidence upon which he can rely to establish that a narrowing amendment was made for a purpose unrelated to patentability to what is contained in the prosecution history record. In response, we wish to make it clear that, in determining the reason for an amendment, a court can properly consider any attorney argument regarding the reason for the amendment that is supported by the prosecution history record. Permitting patent holders to rely on evidence extrinsic to the prosecution history record would undermine the public notice function of the patent record." Pet. App. 47a n.6.

at issue in the present case were either unexplained on the public record (as conceded by Festo's "mystery" assertion) or plainly related to prior art, they generated estoppel (indeed, did so without regard to the broader rule adopted by the court).

The court then addressed the scope of the applicable estoppel, i.e., what if any equivalents are precluded, or remain available, when estoppel applies by virtue of a narrowing amendment that is determined to have been made for patentability reasons. The judgment on the facts of this case - that the estoppel barred Festo's assertion that the magnetizable-sleeve and dual-sealing-rings limitations had equivalents in SMC's accused devices (which did not have magnetizable sleeves or pairs of sealing rings) – produced only one expression of dissent (by Judge Newman). An eight-judge majority adopted a broader and more comprehensive "complete bar" rule for determining the scope of estoppel: when a narrowing amendment generates estoppel, the claim limitation added by the amendment is not subject to equivalents infringement; the patentee's eyes-open choice of the narrowing language defines the boundaries for that particular claim element. The patentee, of course, is free to establish equivalents for other claim elements. Pet. App. 13a-30a.

In reaching this conclusion, the court reasoned that this Court's decisions in *Exhibit Supply* and *Warner-Jenkinson*, and in other cases stressing the importance of public notice and PTO primacy, provided distinct support for this "complete bar" rule, though the *en banc* court did not rest (as it might have on the facts here) on those decisions as settling the issue. Pet. App. 13a-19a. The court explained, moreover, that its own precedents over the past 20 years had been inconsistent on this issue, some cases following a "flexible" approach (allowing some undefined range of equivalents for elements added by narrowing amendments), some cases following a strict "no equivalents" approach holding the patentee to the language of

the element added by amendment. Pet. App. 19a-24a. The court then resolved the question by relying on its "nearly twenty years of experience in performing [its] role as the sole court of appeals for patent matters." Pet. App. 24a. It explained, based on its "long experience" (Pet. App. 25a), that the flexible approach was "unworkable" (Pet. App. 25a) because it defeated the definitional and notice function of patent claims, making the boundaries of forbidden territory "virtually unascertainable" and deterring investment in innovation in the proximity of patented subject matter. Pet. App. 28a.

SUMMARY OF ARGUMENT

The Federal Circuit, sitting *en banc*, did just what Congress created the court to do. It applied its unique expertise and experience, gained from reviewing patent-infringement cases year in and year out, to resolve two aspects of a judgemade portion of patent law. The Federal Circuit's judgment in this case and its broader resolutions of those questions – under what circumstances prosecution history estoppel applies based on a claim-narrowing amendment in the PTO and what if any equivalents remain for the amendment-added claim limitation if estoppel does apply – should be affirmed. The decision is supported by this Court's governing precedents and by the well-recognized policies of the patent law.

¹⁶The "flexible" approach grew out of then-interlocutory decision in Hughes Aircraft Co. v. United States, 717 F.2d 1351 (Fed. Cir. 1983) (Hughes I), which stated that estoppel, once found applicable, "may have a limiting effect" on available equivalents "within a spectrum ranging from great to small to zero." Id. at 1363. (The Hughes Aircraft litigation continued for a quarter century. See page 12, supra.) The stricter approach was articulated almost contemporaneously in Kinzenbaw v. Deere & Co., 741 F.2d 383 (Fed. Cir. 1984), see Pet. App. 20a, as well as by pre-Federal Circuit regional appellate court precedent, see, e.g., Nationwide Chemical Corp. v. Wright, 584 F.2d 714, 718-20 (5th Cir. 1978); Ekco Prods. Co. v. Chicago Metallic Mfg. Co., 347 F.2d 453, 454-55 (7th Cir. 1965).

Estoppel applies here because the amendments at issue fall within the core circumstances giving rise to estoppel under this Court's decision in Warner-Jenkinson. They are either directly related to avoiding prior art or, as Festo must insist in this case, unexplained on any public record. Looking outside the public record would be inconsistent with the essential public notice policy of the patent law. More broadly, the Federal Circuit properly concluded that estoppel is generated by any scope-narrowing amendment to a claim made to satisfy a requirement for issuance of the patent. There is no sound basis - related to the public message of surrender of initially claimed territory – for picking out only some among the full range of requirements that Congress set for issuing a patent, requirements not limited to ensuring an advance over prior art but demanding both adequate and sufficiently precise public disclosure as well. And a limitation of the statutory grounds for amendments would produce practical problems.

The Federal Circuit also properly held that, once estoppel applies to the scope-narrowing amendment, it bars resort to the doctrine of equivalents for the amendment-added claim limitation: that "complete bar" rule defines what the patentee surrendered by that addition, namely, all matter originally claimed but then placed outside the narrowed claim. That rule is directly supported by this Court's authoritative decision in Exhibit Supply and was reinforced by Warner-Jenkinson. The rule is also overwhelmingly supported by a judgment that the Federal Circuit was, by its extensive experience, uniquely positioned to make: that the anti-innovation, anti-competition harms from the inherently unpredictable "flexible" approach to determining the scope of estoppel outweigh any interest of patentees in leeway on claim scope as to those elements they added in the PTO with necessarily focused attention on carefully choosing terms to minimize the amount of ceded coverage. Finally, no objection to the Federal Circuit's rule,

whether based on asserted reasonable reliance or other policies, stands up to analysis. The Federal Circuit has resolved a well-recognized confusion in its cases to bring the law into line with this Court's precedents and to add vital clarity to the patent system.

ARGUMENT

I. Festo's Amendments Generated Prosecution History Estoppel

The Federal Circuit held that prosecution history estoppel applied to Festo's amendments made to obtain its Stoll and Carroll patents. Those amendments come within the core circumstances generating estoppel under this Court's decision in *Warner-Jenkinson*, which made clear that estoppel applies, at a minimum, to amendments made to avoid prior art and to amendments that the patentee has not proved were made for some reason unrelated to patentability, *i.e.*, to unexplained amendments. The Federal Circuit's holding that estoppel applies in this case was therefore correct. So, too, was its broader ruling (not necessary to the resolution of this case) that estoppel is generated by a scope-narrowing amendment made to satisfy any requirement for issuance of the patent.

A. Festo's Dual-Sealing-Ring Amendments, Which Were Made to Avoid Prior Art, Fall Within A Core Circumstance Generating Estoppel

In Warner-Jenkinson, this Court confirmed the longstanding principle that prosecution history estoppel applies (to curtail assertion of infringement under the doctrine of equivalents) based on at least some amendments made by a patent applicant during prosecution of its application. 520 U.S. at 30-34. The Court rejected the notion that every amendment generates estoppel, no matter what the reason for the amendment. Id. at 30-31. The Court did not define a line

separating reasons that would generate estoppel from reasons that would not. It did, however, make unmistakably clear that on the estoppel-generating side of the line were "amendments made to avoid the prior art." *Id.* at 30.

Both of the dual-sealing-ring amendments in this case — in the Stoll patent and in the Carroll patent — were made to avoid prior art, as the Federal Circuit concluded. In each case, Festo included these new limitations in amendments submitted to the PTO with express reference to prior art — the newly disclosed German patent(s). And it is irrelevant whether, as Festo now tries to suggest, it erred in including these limitations as part of its effort to define claims that would avoid the German prior art. *Warner-Jenkinson*, 520 U.S. at 33 n.7, makes clear that Festo's reason is not to be re-evaluated in retrospect for its correctness. Estoppel, in short, plainly applies to the amendments requiring dual sealing rings.

B. Festo's Magnetizable-Sleeve Amendment Falls Within A Core Circumstance Generating Estoppel

This Court in *Warner-Jenkinson* reinforced the strength of the important principle of prosecution history estoppel by holding that, while the reason for an amendment is not irrelevant, the starting point for analysis is that an amendment was made for an estoppel-generating reason. 520 U.S. at 33-34. The Court adopted an express presumption, which it is the patentee's burden to overcome, that any amendment was made for an estoppel-generating reason. If the reason for an amendment adding a new claim element remains unexplained, "prosecution history estoppel would bar the application of the doctrine of equivalents as to that element." *Id.* at 33.

That principle applies to Festo's amendment of its Stoll claim to add the requirement of magnetizable material in the sleeve of its cylinders. By what it conspicuously does *not* say, Festo effectively concedes, as it positively insisted in the courts

below, that it is not possible to find within the PTO record some supposedly non-estoppel generating explanation for that amendment. Although Festo repeatedly alludes to Section 112, it is beyond dispute that the magnetizable-sleeve amendment had nothing whatever to do with the examiner's Section 112 rejections.¹⁷

To the extent that Festo suggests that the Federal Circuit was wrong in restricting the "explanation" to the PTO record, that suggestion is not only a reversal of course, 18 but Festo's position was rejected by 11 of the Federal Circuit judges. The reason is simple: the public notice policy of the patent law, as reaffirmed in *Warner-Jenkinson*, 520 U.S. at 29, 33-34, demands an objective standard, applied to publicly accessible materials, for the public to use in determining the reason for an amendment. "The public notice function of patents would be frustrated by forcing a patentee's competitors to guess whether a patent's claims were drafted and accepted in error." *Pioneer Magnetics Inc. v. Micro Linear Corp.*, 238 F.3d 1341, 1345 (Fed. Cir. 2001).

Contrary to Festo's suggestion, nothing in Warner-

¹⁷As noted above (note 8, *supra*), avoidance of the prior art non-magnetizable sleeve is the only explanation apparent on the public record. Hence Festo's original insistence on the unexplained character of its amendment.

¹⁸In its *en banc* brief before the Federal Circuit (Dec. 2, 1999), Festo conceded (at 62) that "if there is no reason which can be established from review of the file history and the patentee cannot establish a reason for the amendment, *Warner-Jenkinson* appears to hold that the element would be entitled no range of equivalents." Festo now tries to undo this concession by asserting that the holding in *Warner-Jenkinson* is restricted to an unexplained amendment that was "required." Festo Br. at 29-30. That is nonsensical: if the amendment was "required," it would be accompanied by the examiner's citation of the reason for the rejection, and so would not be unexplained.

Jenkinson states or implies that the remand in that case was for the purpose of permitting the patentee to submit new explanations for its amendments. The remand makes full sense, and is much better understood, as being for the purpose of having the judges best able to read the PTO record and other publicly accessible materials do so thoroughly in the first instance, with focused lawyer argument and expert assistance, if necessary, directed to understanding, but not adding to or altering, the explanation discernable from public materials. That view of the Warner-Jenkinson remand not only comports with the common practice of remanding cases for case-specific applications even on matters of law; it is the only reading consistent with this Court's pointed emphasis in Warner-Jenkinson on the need for public notice of patent boundaries. which would be undermined were patentees free to supplement the public record with new explanations not discernable by the public.

C. The Federal Circuit Properly Held Estoppel Applicable to Any Substantively Scope-Narrowing Amendment Made To Satisfy A Requirement for Issuance of the Patent

The Court in *Warner-Jenkinson*, having established that amendments made (as here) to avoid prior art or for otherwise unexplained reasons generate estoppel, carefully avoided any definitive statement of a standard for what other amendments did, and did not, generate estoppel. 520 U.S. at 30-34. The Court described the reasons involved in prior estoppel decisions, but it did not limit the applicability of estoppel to that set of reasons. The only general formulation used by the Court (in passing, describing the presumption) was "a substantial reason related to patentability." 520 U.S. at 33. And the Court noted its reluctance to declare estoppel applicable in circumstances "if" – as the Court cautiously stated – the PTO may have been acting on the assumption that estoppel did not apply to curtail assertion of equivalents in such

circumstances. Id. at 32.

The Federal Circuit in this case properly concluded that estoppel applies to a scope-narrowing amendment made to satisfy any requirement for issuance of the patent. That ruling is, first of all, fully consistent with Warner-Jenkinson. There is no reason to think that the Court's use of the term "patentability" meant to limit the reasons to avoidance of prior art. The Court's opinion obviously takes great pains not to state a general standard and not to declare avoidance of prior art the standard for estoppel. Indeed, the Court, in stating that addition of a claim element for other reasons does "not necessarily preclude infringement by equivalents," indicates that it very well may. 520 U.S. at 30-31 (emphasis added). And even the term "patentability" hardly carries a clear, limited meaning: for example, the comprehensive PTO Manual of Patent Examining Procedure ("MPEP") includes under its "patentability" heading (chapter 21, entitled "Patentability") all of the following statutory requirements for issuance of a patent: utility, novelty and nonobviousness in light of prior art, adequate written description, enablement, disclosure of best mode, conformity of claim to what applicant regards as its invention, and particularity and distinctness of claims.

The Solicitor General, representing the PTO, agrees with the Federal Circuit that attempting to meet any of the requirements for issuance of a patent supplies an estoppel-generating reason. SG/PTO Br. 13-17. That agreement implicitly answers the question that underlay this Court's guarded observation that it was reluctant to apply estoppel "if" the PTO had in some circumstances been relying on the inapplicability of estoppel, and consequent availability of equivalents, in demanding and accepting some amendments. As noted above, the definitive MPEP identifies no circumstance (outside the statutory means-plus-function context which is directed to literal and not equivalents

coverage) where the PTO makes its decisions in reliance on any continuing availability of equivalents. ¹⁹ And, as quoted below, both Judge Lourie and Judge Gajarsa of the Federal Circuit (two former patent practitioners) have clearly explained that there is no such reliance. *See* pages 44-45, *infra*.

The Federal Circuit's holding makes eminent sense. Avoidance of prior art forms just a part of the set of conditions laid down by Congress for issuing a patent, and the "patentability" of a particular claimed invention is not and cannot be judged independently of the application that contains the definition of the zone of exclusivity sought and the public disclosures that serve as the quid pro quo for the exclusivity (or monopoly) grant. All of the statutory requirements are part of the bargain: exclusivity in return for an advance in knowledge that is sufficiently disclosed to be effectively put in the public domain and well enough defined to prevent deterrence of further innovation from uncertainty about the patent-controlled territory.²⁰ When a patent applicant, in the PTO, bypasses further argument before the examiner and any appeal rights and decides with focused attention to amend its claims so as substantively to narrow the scope of claimed territory, it is defining the terms of the patent bargain, no matter which of the statutory requirements underlie the narrowing amendment. The particular requirement at issue does not alter the policy behind

¹⁹The Solicitor General (SG/PTO Br. 17 n.1) simply notes this Court's reference in *Warner-Jenkinson* to possible PTO reliance, but refrains from asserting (without any reflection in the *MPEP*) that there has in fact been such reliance.

²⁰See Bonito Boats, Inc. v. Thunder Craft Boats, Inc., 489 U.S. 141, 146-52 (1989); Universal Oil Prods. Co. v. Globe Oil & Refining Co., 322 U.S. 471, 484 (1944); United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 236 (1942); General Elec. Co. v. Wabash Appliance Corp., 304 U.S. 364, 369 (1938).

prosecution history estoppel: the entitlement of the public to rely on, and fairness of holding the applicant to, those claim limitations adopted (bypassing further argument before the examiner and any appeals) with pointed focus on what was minimally necessary to secure issuance of the patent.

Finally, a practical reason supports the Federal Circuit's refusal to limit estoppel-generating reasons to avoidance of prior art. As Federal Circuit decisions reflect, there would be an obvious potential for applicants to try to manipulate the PTO record if, even for amendments that in fact substantively narrowed the claims, some statutory grounds generated estoppel and others did not. For example, if "definiteness" under Section 112, ¶ 2, did not generate estoppel (even for a narrowing amendment), an applicant could try to recharacterize an amendment in response to some prior art as really just "clarifying" but not narrowing - as Festo tries here (Festo Br. 28), despite the plain fact that the amendments at issue did not relate to any issue of lack of clarity raised in the PTO.²¹ See Loral Fairchild Corp. v. Sony Corp., 181 F.3d 1313, 1326 (Fed. Cir. 1999) (noting applicant's attempts in the PTO to discuss a prior art rejection "under the rubric of a clarification" to escape estoppel); BAI v. L & L Wings, 160 F.3d 1350, 1355 (Fed. Cir. 1998).²² A simple standard of

²¹The examiner's Section 112 rejections related to other matters entirely. *See* note 7, *supra*.

²²Litton's *amicus* brief (at 5) illustrates this manipulation: Litton describes its amendment as having been "made to 'more particularly point out' its invention, 35 U.S.C. § 112," though it is settled in the *Litton* case that the amendment was made *not* to satisfy the Section 112, ¶ 2 particularity/definiteness requirement but to satisfy the separate requirement of the same paragraph that the claim conform to what the applicant "regards as his invention" (§ 112, ¶ 2), which was directly related to prior art in *Litton*, 140 F.3d at 1461. *See MPEP* § 2171 (§ 112, ¶ 2 has "two separate requirements"); *id.* §§ 2172-2173.

substantive narrowing avoids this problem.

II. The Applicable Estoppel Bars Equivalents Coverage of the Accused Nonliterally Infringing Devices

The Federal Circuit, defining the scope of the estoppel effected by the claim-narrowing amendments, held that it barred an assertion of equivalents for the limitations added by the estoppel-generating amendments. That "complete bar" rule thus estopped Festo from asserting that SMC's single-sealing ring arrangement and nonmagnetizable sleeve were the equivalent of the dual-sealing-ring and magetizable-sleeve elements of Festo's Stoll and Carroll patents. The Federal Circuit's holding is directly supported by this Court's The ruling reflects a proper governing precedents. determination, by the court with unique experience in the area, that the "flexible" approach representing one strand of its conflicting case law was inescapably uncertain, defeating the public's need for greater clarity of patent boundaries. And no claim of reasonable reliance or other policy assertion undermines the Federal Circuit's law-clarifying decision. On this issue, which is a matter of judge-made law that can only be resolved through the familiar process of doctrinal refinement based on experience, the resolution by the Federal Circuit, specially entrusted with the responsibility of deciding infringement cases year in and year out, should be affirmed.

A. This Court's Governing Precedents, Exhibit Supply and Warner-Jenkinson, Directly Support the Federal Circuit's Holding That Equivalents Coverage Is Barred

Festo, in the entire section of its brief concerning the scope of estoppel, *i.e.*, what coverage the applicant surrenders when making an amendment (Festo Br. 32-38), does not even cite, let alone discuss, this Court's most important precedent on the issue, the 1942 Exhibit Supply decision. That decision was the last full discussion of prosecution history estoppel before

Warner-Jenkinson, and it was the final and definitive pronouncement on the subject, culminating a long line of stringent decisions applying estoppel to limit equivalents infringement, before Congress's recodification of the patent laws in the 1952 Act.²³ As such, it is due the same adherence as this Court in Warner-Jenkinson gave the last pre-1952 doctrine of equivalents decision, Graver Tank & Mfg. Co. v. Linde Air Products Co., 336 U.S. 271 (1949), which did not involve any estoppel question.

Exhibit Supply not only re-stated the general principle limiting the doctrine of equivalents where "a restrictive amendment" (there, to avoid prior art) has been made: "it has long been settled that recourse may not be had to that doctrine to recapture claims which the patentee has surrendered by amendment." 315 U.S. at 136. What it added to prior estoppel decisions was a clear rule defining what a patent applicant surrenders when it makes a scope-narrowing amendment. The patent concerned pin-ball machines (or tables), with their many small vertical posts that make light or sound (by completing an electrical circuit) upon being hit by a ball. The original application covered conductors (the electrical connections for the posts) "carried by the table," but that claim was rejected, and the claim was narrowed to conductors "embedded in the table." This Court held that the applicant, by its choice of narrowing amending language, automatically was abandoning any subject matter that was within the claim before amendment but outside the claim after amendment.

²³E.g., Schriber-Schroth Co. v. Cleveland Trust Co., 311 U.S. 211, 220-22 (1940); Smith v. Magic City Kennel Club, 282 U.S. 784, 790 (1931); I.T.S. Rubber Co. v. Essex Rubber Co., 272 U.S. 429 (1926); Weber Elec. Co. v. E.H. Freeman Elec. Co., 256 U.S. 668, 677-78 (1921); Shepard v. Carrigan, 116 U.S. 593, 598 (1886); Goodyear Dental Vulcanite Co. v. Davis, 102 U.S. 222, 228 (1880).

By striking that phrase ["carried by the table"] from the claim and substituting for it "embedded in the table" the applicant restricted his claim to those combinations in which the conductor means, though carried on the table, is also embedded in it. By the amendment he recognized and emphasized the difference between the two phrases and proclaimed his abandonment of all that is embraced in that difference. [citations omitted] The difference which he thus disclaimed must be regarded as material, and since the amendment operates as a disclaimer of that difference it must be strictly construed against him. [citations omitted]

315 U.S. at 136-37.

The plain import of Exhibit Supply was recognized even by Litton in its amicus brief before the Federal Circuit. See note 11, supra (quoting Litton's straightforward reading of Exhibit Supply). The Solicitor General similarly recognizes: "the Court has stated that, when a patent applicant submits a narrowing amendment to avoid prior art, the applicant by necessary implication disclaims the range of equivalents that falls between the original and the amended claims." SG/PTO Br. 24 (citing Exhibit Supply); see also U.S. Petition for Certiorari in *United States v. Hughes Aircraft*, No. 98-571, at 19 ("[a]s the Court explained [in Exhibit Supply], when a patent applicant amends his claim to avoid prior art, the applicant necessarily 'proclaim[s] his abandonment of all that is embraced in that difference.") (emphasis added). This Court's decision in *Exhibit Supply* thus states a clear rule defining – for the patentee, for the public - what is surrendered by a narrowing amendment, a rule that for the present case and (at least) most cases is identical to the "complete bar" rule of the Federal Circuit.

This Court in Warner-Jenkinson clearly understood the Exhibit Supply rule. In adopting a presumption that an amendment was made for a reason generating estoppel, placing the burden on the patentee to show otherwise, the Court stated with clarity the result that follows where the patentee has not overcome the presumption, leaving in place the conclusion that applies to the amendment-added "prosecution history estoppel would bar the application of the doctrine of equivalents as to that element." 520 U.S. at 33 (emphasis added); see also id. ("prosecution history estoppel as a bar to application of the doctrine of equivalents to the element added by that amendment"). That conclusion, by logic and the structure of this Court's opinion, straightforwardly applies whether the amendment generates estoppel because the reason is known or merely presumed to be an estoppel-generating one. And given that it is nothing more than a simple restatement of what Exhibit Supply had already established, it must be understood as confirming Exhibit Supply rather than disregarded by attributing inadvertence to the Court. See Litton, 145 F.3d at 1476-78 (Gajarsa, J., dissenting from denial of rehearing); id. at 1473 (Clevenger, J., dissenting from denial of rehearing).²⁴

Festo not only blinds itself to the rulings of *Exhibit Supply* and *Warner-Jenkinson*. It makes no demonstration that other decisions of this Court are to the contrary. Indeed, with *Exhibit Supply* as the last pre-1952, pre-*Warner-Jenkinson* decision on estoppel, it would supersede earlier decisions even if there were an inconsistency, a common pattern in the evolution of judgemade law. But, in fact, the *Exhibit Supply* rule did not have to

²⁴The Court's statement that a court should consider "the manner in which the amendment addressed and avoided the objection" (520 U.S. at 33 n.7) simply refers to the need to determine whether the amendment was made for a reason related to patentability.

repudiate prior decisions; it had only to follow the familiar course – like the Court's adoption of a presumption of estoppel or its articulation of the element-by-element equivalence rule in *Warner-Jenkinson* – of formulating a law-clarifying rule consistent with the results of many prior decisions.

Quite simply, no prior decision of this Court is inconsistent with the Exhibit Supply rule or its "complete bar" counterpart adopted by the Federal Circuit in this case. The Federal Circuit clearly discussed the decisions of this Court cited by the dissenters below. Pet. App. 14a-18a. Most of the Court's prior decisions rejected infringement under the doctrine of equivalents on the basis of estoppel (or other grounds), so their results could not support a "flexible" estoppel rule; and other cases relied on by the dissenters below involved literal infringement, because the claims (as was common in the late 19th Century) themselves covered "equivalents" or matter "substantially as described." Neither the dissenters nor Festo has cited precedent of this Court, much less precedent from the modern era of particularized boundary-defining claiming, that upholds nonliteral infringement of an amendment-added claim limitation in contravention of Exhibit Supply.

B. The Federal Circuit, Based On Its Unique Experience, Properly Adopted The "Complete Bar" Rule In Preference To The Irretrievably Unpredictable "Flexible" Approach

The Federal Circuit expressly rested its decision in this case on an assessment of familiar policy considerations: the importance to the public, including competitors and other innovators, of notice of patent boundaries (along with PTO primacy in setting those boundaries) versus any patentee interest in coverage beyond the terms it chose to write. While the principles governing the doctrine of equivalents concern claim language in general, the balance in the present context – specifically, the patentee side – must be assessed with respect

to claim language that was adopted during the prosecution in the PTO with specific attention focused on the amended language. The Federal Circuit held that, in this context, the need for public notice overrides any patentee interest in escaping the claim-narrowing terms it chose and would be defeated by a "flexible" approach to judging the scope of estoppel.

In reaching that conclusion, the Federal Circuit relied on a body of experience, which it uniquely possesses, to conclude that a flexible approach introduces ineradicable uncertainty into the determination of what if any equivalents are available for an amendment-added claim limitation, and thus breeds costly and investment-deterring litigation over this important aspect of identifying patent boundaries, as parties cannot predict how particular district judges or particular panels of the Federal Circuit will assess the PTO record. The evaluation of the scope-of-estoppel issue, a matter of judge-made law, inevitably turns on precisely such practical considerations; and the Federal Circuit (even more than the PTO, which does not deal with doctrine of equivalents issues) is unique in its ability to make that evaluation, based on 20 years of experience deciding the scope of estoppel in dozens upon dozens of cases. The Federal Circuit's determination is due great deference and should be upheld. See Warner-Jenkinson, 520 U.S. at 40 ("special expertise" of Federal Circuit); Pet. App. 19a, 24a-25a.

1. The Federal Circuit's decision advances a policy interest deeply embedded in the patent laws, as *Warner-Jenkinson* and many prior decisions of this Court have explained. That interest is not, as Festo caricatures it, to "eliminate" uncertainty in the patent system. Festo Br. 41. It is, rather, to *reduce* uncertainty by providing the public – competitors, other innovators – better (not perfect) knowledge of where it may stand amidst what may be a forest of patents in an area of technology and commerce, as well as in protecting

the primacy of the PTO process for defining the zones that are off limits without permission from the patentee. See Warner-Jenkinson, 520 U.S. at 33-34; Markman v. Westview Instruments, Inc., 517 U.S. 370, 390 (1996). The Federal Circuit adopted the "complete bar" rule to define what an applicant surrenders by amendment to provide the increased notice.²⁵

Businesses making decisions about where to devote research-and-development dollars or what products they may labor to perfect or introduce into the market are significantly hampered by uncertainty about where various patentees' rights stop. Some uncertainty is inherent in the doctrine of equivalents, but prosecution history estoppel has long been a vital check on that uncertainty, reflecting the substantially weaker interest of patentees in leeway as to claim boundaries for those claim limitations that they crafted by amendment in the PTO and to which they therefore had to give specific focused attention. The certainty-enhancing role of prosecution history estoppel requires a clear rule for determining what is surrendered after determining that estoppel applies to a particular amendment. A patent lawyer advising a business provides little useful guidance if all he can advise is that an estoppel-generating amendment "may have a limiting effect" on available equivalents "within a spectrum ranging from great

²⁵In this respect, the rule serves as a default rule with similarities to various clear-statement rules this Court has adopted to require express provision to overcome the default result that otherwise applies: e.g., nonretroactivity (Landgraf v. USI Film Prods., 511 U.S. 244 (1994)); absence of implied repeal (United States v. Borden Co., 308 U.S. 188 (1939)); elimination of judicial review in certain contexts (INS v. St. Cyr, 121 S. Ct. 2271 (2001); waivers of sovereign immunity (United States v. Nordic Village, Inc., 503 U.S. 30 (1992)). A patentee, to avoid the effect of limiting coverage to the terms of particular claim language, must draft expressly broader claim language.

to small to zero." Hughes, 717 F.2d at 1363.

The Federal Circuit rejected just that "flexible" approach, and adopted the complete bar rule, after express acknowledgement and consideration of the patentee's competing interest in "some benefit of the doubt as to what was disclaimed." Pet. App. 27a. That asserted benefit, the court noted, "comes at the public's expense." *Id.* The expense, it explained, is to interests the patent law values highly.

Thus, the Federal Circuit explained that "the flexible bar approach 'poses a direct obstacle to the realization of important objectives." Pet. App. 26a.

These objectives include giving effect, when prosecution history estoppel arises, to a narrowing amendment's operation as a disclaimer of subject matter, see, e.g., Exhibit Supply, 315 U.S. at 136-37, preserving the notice function of patent claims, see, e.g., Warner-Jenkinson, 520 U.S. at 29, and promoting certainty in patent law, see, e.g., Markman, 517 U.S. at 390. The realization of these objectives cannot help but be frustrated by the uncertainty inherent in the flexible bar approach.

Pet. App. 26a (emphasis added). That uncertainty is reflected in the common pattern of litigation over the issue: The patentee draws the line at the prior art ("a wide range of equivalents"), the accused infringer draws the line close to the literal terms of the claims ("little or no range of equivalents"), and where the line ultimately will be drawn by a court is "virtually impossible to predict." Pet. App. 25a. That problem produces a result the Federal Circuit is uniquely qualified to diagnose: "it is virtually impossible to predict before the decision on appeal where the line of surrender is drawn." Pet. App. 24a-25a. And that result, the court concluded, renders the "flexible" approach not "workable" as that term must be understood in patent law:

"[R]ules qualify as 'workable' when they can be relied upon to produce consistent results and give rise to a body of law that provides guidance to the marketplace on how to conduct its affairs." Pet. App. 25a.

The complete bar rule solves this otherwise-unavoidable problem.

If prosecution history estoppel acts as a complete bar to application of the doctrine of equivalents, both the patentee and the public are on notice as to the scope of protection provided by a claim element narrowed for a reason related to patentability. The patentee and the public can look to the prosecution history, a public record, to determine if any prosecution history estoppel arises as to any claim element. If so, that element's scope of protection is clearly defined by its literal terms.

Pet. App. 27a (emphasis added). And that clarity helps to promote innovation.

Thus, under the complete bar approach, technological advances that would have lain in the unknown, undefined zone around the literal terms of a narrowed claim under the flexible bar approach will not go wasted and undeveloped due to fear of litigation. The public will be free to improve on the patented technology and design around it without being inhibited by the threat of a lawsuit because the changes could possibly fall within this scope of equivalents left after a claim element has been narrowed by amendment for a reason related to patentability. This certainty will stimulate investment in improvements and design-arounds because the risk of infringement will be easier to determine. In general, the difficulty in counseling

the public and the patentee on the scope of protection provided by an amended element is greatly reduced under the complete bar approach due to the certainty and predictability such a bar produces.

Pet. App. 30a (emphasis added). For these reasons, the Federal Circuit concluded that, "[a]lthough a flexible bar affords the patentee more protection under the doctrine of equivalents, we do not believe that the benefit outweighs the costs of uncertainty." Pet. App. 30a.

2. The clear rule adopted by the Federal Circuit in place of the amorphous "flexible" approach not only serves the public's interest in increased certainty as to patent boundaries. It also comports with the well-understood realities of patent practice. First, the controlling incentive of patent-prosecuting attorneys to cede as little as possible in securing a patent aligns the complete bar rule with what practitioners actually do. Second, from the perspective of the relevant public, the fact that this incentive is well understood by the patent bar makes it reasonable for skilled readers to infer that, when the applicant chose particular terms of limitation, it was carefully choosing the terms that narrowed coverage the least possible amount needed to secure the patent and thus that it was surrendering precisely what it excluded by that narrowing. Third, the unpredictability of different judges' application of a "flexible" approach reflects an inherent feature of PTO records: they are commonly so terse and unilluminating, furnishing no reliable basis for discerning the scope of surrender other than the difference between the original claim and narrowed claim.

Fourth, the patentee side of the policy balance at issue simply has not been shown to have substantial weight on its own. Beyond generalities, Festo does not identify any meaningful impediments to writing claim amendments to cede

as little territory as possible. Its example of using "glue" in a claim (Festo Br. 32) is defeated by its own recognition, just a few pages later (id. at 36), that the patentee could use "adhesive." Claims may even be stated in negative terms, subject to meeting written-description, definiteness, and the other normal requirements: the patentee may retain a term that the examiner has deemed too broad by itself, while requiring within that broad class something "other than" the particular prior-art feature encompassed within it that made it too broad in unmodified form. See, e.g., MPEP § 2173.05(i). Functional terms, moreover, are expressly allowed by the means-plusfunction provision of Section 112, ¶ 6. Neither Festo nor its amici have identified any concrete examples where a patentee cannot retain appropriate claim coverage by a proper amendment. In these circumstances, if there are claiming impediments, they cannot be significant enough to weigh heavily in the notice-fairness balance that the Federal Circuit considered, and properly struck, in its decision.

3. The Solicitor General largely agrees with the foregoing analysis, including the Federal Circuit's judgment that the flexible approach is unworkable and the fact of patentees' focused attention on particular limitations added by amendment in the PTO, as well as the Court's plain ruling in Exhibit Supply. SG/PTO Br. 23-24, 27. The Solicitor General, however, shies away from the Federal Circuit's clear rule, suggesting that surrender of all equivalents for the amendmentadded limitation be only a "presumption" and identifying conceptually two exceptions. Id. at 25-28. But the suggestion cannot be squared with Exhibit Supply. And, whatever the superficial appeal of such exceptions in the abstract, the Solicitor General's approach is neither well-defined nor supported by any concrete examples that actually justify the exceptions; is not grounded in the practical realities of business planning and infringement litigation on which the Federal Circuit relied; and would defeat the clarity that is the essence of Federal Circuit's rule – relegating the patent world to nothing more than a caution that "courts should exercise discipline" in finding some equivalents still available. SG/PTO Br. 27.

One exception is for situations where "it was not possible for one of ordinary skill in the art to draft a claim amendment that literally encompassed the allegedly equivalent matter." SG/PTO Br. 26. The Solicitor General, however, gives not a single example of any such impossibility, just as Festo has given none, and there is simply no basis for a belief that the tools available for claim drafting are insufficient, including the tool of claiming a "means" for performing a particular "function," which, under Section 112, ¶ 6, provides literal protection for equivalents of particular structures identified in the specification (not the claim) as an example of the required means. Moreover, if the Solicitor General means something restrictive by his reference to "ordinary skill in the art," that concept (including what the relevant "art" is and what the level of "ordinary skill" is) commonly is a subject of contentious litigation – by factfinders (not the court) – in the context of judging obviousness. See Graham v. John Deere Co., 383 U.S. 1 (1966); Richardson-Vicks Inc. v. Upjohn Co., 122 F.3d 1476, 1479 (Fed. Cir. 1997). Yet the Solicitor General here insists that the estoppel inquiry is a matter of law (SG/PTO Br. 27), as the Federal Circuit has long held (SMC Br. in Opp. 17 n.12), and also rejects the "flexible" approach precisely because it disables a workable efficient resolution of the estoppel inquiry. In addition, the Solicitor General insists that the burden of establishing any exception be on the patentee, yet identifies a procedure that flips the burden: the patentee is required to assert a negative ("no alternative claim language was available"), then the accused infringer must come forward with language to disprove the assertion. This exception,

unsupported by any concretely shown need, is riddled with difficulties.

The Solicitor General's other exception is similarly deficient: "if the court finds that the assertedly equivalent element is itself an innovation that was not known to persons of ordinary skill in the art at the time the applicant amended the claim." SG/PTO Br. 25. The rationale is that matter that "did not exist and was not reasonably within the contemplation of the PTO and the applicant at the time of the claim amendment" is not reasonably thought to be disclaimed. SG/PTO Br. 25-26. The problems with this exception, however, are not only conceptual but, perhaps more important, practical.

Conceptually, the suggested exception relies on an unwarranted asymmetry between what a patentee claims and what a patentee disclaims. A patentee has long been entitled to coverage of (i.e., exclusivity rights over) post-patent innovations by others if they fall within the language adopted in the claims – and, indeed, as Warner-Jenkinson held, even if they are mere equivalents (judged at the later time of alleged infringement) of what is claimed. 520 U.S. at 37. There is no reason why the disclaimer effected by a narrowing amendment should not equally reach post-patent innovations, whether or not (actually or constructively) within the contemplation of the art at the time of patenting.

The suggested exception, in any event, raises a host of definitional issues and is rife with opportunities for litigation.²⁶ Does the Solicitor General intend an inquiry into what the PTO and the applicant were actually aware of, or is the inquiry more objective, involving what they reasonably *could* know? If the

²⁶Some of these issues have been the subject of extensive litigation in Litton's case, in which a petition for certiorari is pending (No. 00-1617). See Litton, supra.

PTO record were the basis for decision, how could the record be a reliable indication of what was known, given the obvious incentive, under such an approach, to include as little as possible in the record? If "ordinary skill in the art" is part of the standard, how does he propose to avoid the contentious litigation (over what are elsewhere treated as factual issues) that the concept provokes? When the Solicitor General speaks of matter that "does not exist," how does that relate to his standard referring to what is "known" - given that it is fundamental that description in publications puts matter in the public domain even if no one ever builds a prototype, let alone before any commercial availability? If the patent relates to one "art," but it uses as a component a device from another "art," is an existing or publicly disclosed equivalent of that component inside or outside the exception? If, as will be common, the alleged infringer has taken prior art and made some modifications to produce its accused device (i.e., accused as an equivalent of what may be just one element of a multi-element claim), how (and by whom) is the decision to be made whether the particular accused device is an "innovation that was not known"? More generally, what are the standards for "innovation," "exist," "known," etc.?

The Solicitor General's proposed exception obviously presents patentees with a field day for costly litigation over the scope of its estoppel effected by claim-narrowing amendment. It is a recipe for trials within trials, benefiting only the lawyers. Even worse, however the issues might be narrowed once joined in litigation, businesses have little way of guessing in advance what the answers will turn out to be. The exception thus reintroduces the very uncertainties that, the Solicitor General agrees, justifiably led the Federal Circuit to repudiate the

"flexible" approach to judging the scope of estoppel.²⁷ And, as with the Solicitor General's other exception, there simply is no concrete showing of any real-world "need" for the suggested exception, let alone so substantial a need as to justify the destruction of the clarity benefits of the Federal Circuit's rule.²⁸ Indeed, stretching to allow the *patentee* to assert coverage of what is *someone else*'s later innovation carries real costs to the patent law's encouragement of ever-continuing innovation by competitors.²⁹

²⁷The uncertainties must be assessed from the full perspective of both prospective patent holders and prospective accused infringers, as businesses in the real world may be either or both. Those who, like some universities and research groups, are only patent holders, and not makers or sellers readily subject to infringement suits, have a distinctly limited perspective. Of course, even from the perspective of those deciding where to invest money for research, there is great value in heightened clarity in determining whether existing patents will cover the fruits of any such research.

²⁸Even Judge Rader's example (Pet. App. 111a), a mere hypothetical, presents no obviously compelling case for limiting the scope of the estoppel – assuming, what is hardly clear itself, that "anode" and "cathode" would not actually be *construed* literally to cover any electron attractor and electron emitter, respectively. A pre-transistor-era patentee whose invention depended only on the functions of emitting or attracting electrons should, and easily could, have written its claims accordingly. If the inventor had in mind only some additional particular aspect of "anodes" and "cathodes," an amendment to use those terms *is* fairly limited to their literal scope.

²⁹Neither of the exceptions suggested by the Solicitor General would be applicable here. The elements at issue (non-magnetizable sleeve, sealing ring) were in the prior art. None is "an innovation that was not known ... at the time the applicant amended the claim" and, certainly, a claim could have been drafted "that literally encompassed the allegedly equivalent element."

C. The Federal Circuit's Experience-Based Judgment Is Not Defeated By Any Reasonable Reliance Interest Or Other Overriding Policy Objection

1. No sound claim of reasonable reliance stands as an obstacle to the Federal Circuit's application of its unique experience to adopt a clear rule on the scope of amendment-based estoppel to serve patent law's vital public-notice policy. This kind of objection cannot be accepted to override otherwise-sound doctrinal rulings except on the strongest proof of reasonable reliance: the Federal Circuit cannot properly be faced with a one-way ratchet in resolving patent-law issues always in favor of more protection. In any event, there are two decisive flaws in any such objection here. Any reliance would be legally unreasonable – for reasons so clear as to make the assertion of actual reliance itself implausible. Moreover, there is no substantial basis in patent-prosecution practice for an assertion of actual reliance in the first place.

Thus, any reliance on some remaining equivalents for amendment-added claim limitations would have been unreasonable in light of the ever-looming authority of *Exhibit Supply* stating a clear rule, plainly inconsistent with a "flexible" approach, defining the scope of estoppel in terms that, at least as a practical matter, are the same as the "complete bar" rule now clearly articulated by the Federal Circuit. Similarly, even if a patent applicant looked to Federal Circuit cases on the issue, it would have found a plain division of approach. That division is laid out in the Federal Circuit opinion (Pet. App. 19a-24a) and has for a long time been well-recognized by commentators.³⁰ Any reliance on one branch of the divided

³⁰5A D. Chisum, *Patents* § 18.05[3][b], at 18-492 (1998); Strawbridge et al., Area Summary, *Patent Law Developments in the United States Court of Appeals for the Federal Circuit During 1986*, 36 Am. U.L.Rev. 861, 887-88 (1987); Smith, *The Federal Circuit's Modern Doctrine of*

authority would have been unreasonable.

Indeed, the only reliance that could matter is some reliance on available equivalents coverage that was the key to a successful infringement case (on a valid patent), and that reliance would not be reasonable even if a patentee were looking only at the cases purporting to apply a "flexible" approach. The simple fact is that, as SMC's brief in opposition demonstrates, out of all the 52 cases cited by Judge Michel for the "flexible" approach, only a handful – themselves of very recent vintage - involved a successful infringement claim that seems actually to depend on the absence of the complete bar rule. SMC Br. in Opp. 25-29. (The small number and recent vintage of such cases, along with the interlocutory character of cases like the 1983 Hughes decision, provides a ready explanation of why the Federal Circuit's nominally "flexible" approach could survive for so long without en banc review or review by this Court in light of Exhibit Supply.) There is no reason to set out that analysis in full here, as it stands wholly unanswered by Festo. The unavoidable lesson is that no patentee could reasonably have counted on equivalents coverage for amendment-added claim limitations even by disregarding Exhibit Supply and the well-recognized division of Federal Circuit authority and looking only at what could reasonably be expected under the "flexible" approach.

These facts about the state of estoppel law not only make any reliance unreasonable, but make any reliance by patent attorneys reading the cases unlikely in fact to have occurred. Basic facts about patent litigation and patent-prosecution

Equivalents in Patent Infringement, 29 Santa Clara L. Rev. 901, 921 (1989); Note, To Bar or Not to Bar: Prosecution History Estoppel After Warner-Jenkinson, 111 Harv. L. Rev. 2330, 2336 (1998); Otterstedt, Unwrapping File Wrapper Estoppel in the Federal Circuit: A New Economic Policy Approach, 67 St. John's L. Rev. 405 (1993)

practice also undermine any assertion that patent applicants actually were placing reliance on remaining available equivalents for amendment-adopted claim limitations. The essential fact about litigation is that the governing standard for "equivalents" coverage is so uncertain of application ("insubstantial" differences, based on a battle of experts and lawyers) that a patent applicant could not look ahead to the prospect of a successful equivalents infringement assertion with anything remotely approaching confidence. For many years, indeed, the Federal Circuit treated "the doctrine of equivalents [as] the exception, however, not the rule" (London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1536 (Fed. Cir. 1991)), and Judge Lourie explained in the present case that, even today, "the overwhelming majority of equivalence claims ultimately fail" after lengthy and costly litigation (Pet. App. 68a).

The essential facts about patent prosecution are that neither a patent attorney nor the PTO, in practice, acts in reliance on some remaining scope of equivalents for claim language added by amendment. As Judge Lourie (a former patent practitioner) explained: "Surely, when prosecuting a patent, patent practitioners have no settled expectations of being able to assert

³¹See Caterpillar, Inc. v. Deere & Co., 224 F.3d 1374, 1381 (Fed. Cir. 2000) (Plager, J., concurring in reversal of noninfringement summary judgment) ("I join the opinion and concur in the conclusion that this case must be returned for trial, but I do so without enthusiasm. If the trial judge sat as the trier of fact, I would find his assessment of the facts unimpeachable. But he does not. Instead, under the rules as we now have them, and because the patentee's lawyer did a good job of building a record of arguably disputable facts, the matter (unless settled) will now go to a jury before whom there will be a lengthy and costly contest of the experts. The jury will then pick a winner; it may be the judge's winner, or it may not. In either event, the case provides a textbook example of the insubstantial nature of the 'insubstantial differences' test, and its marginally legitimate child, 'substantially the same way to achieve substantially the same result,' on which the outcome will turn. May the best lawyer win.").

the doctrine of equivalents." Pet. App. 66a. A leading treatise similarly explains that "it would be most unwise and indeed foolish for an applicant for patent knowingly to accept a claim of lesser breadth than that to which he is entitled with mental reservation based on an intention to rely upon the doctrine of equivalents." 2 P. Rosenberg, Patent Law Fundamentals at 14-6 (2d ed. June 2000). Judge Lourie further explained: "Additionally, the PTO does not make 'basic assumptions' relating to a range of equivalents to be allowed. ... The PTO examines claims in light of the disclosure of the patent application and against the prior art. . . . It does not issue patents with any expectations regarding equivalents." Pet. App. 67a (emphasis added). In a similar vein, Judge Gajarsa (also a former patent practitioner, and in fact a former examiner) had earlier explained:

In deciding whether to allow a patent application to issue, an examiner does not consider the doctrine of equivalents. The United States Patent and Trademark Office (PTO) requires its examiners to determine only whether a patent application meets the statutory requirements of Title 35 of the United States Code as well as various internal regulations. As a judicially-created doctrine, the doctrine of equivalents is not found anywhere in either Title 35 of the United States Code or in the Code of Federal Regulations governing PTO practice. As such, an examiner is in no way required or directed to consider the application of the doctrine of equivalents in determining whether to allow a particular patent application.

Litton, 145 F.3d at 1476 n.1 (Gajarsa, J., dissenting from denial of rehearing) (emphasis added).

2. If no claim of reasonable reliance defeats the Federal

Circuit's resolution of the scope-of-estoppel issue, no other policy objection does so either. For one thing, the Federal Circuit's rule does not destroy the doctrine of equivalents – which continues to apply to all claim elements not added by a narrowing amendment. Equivalents cases with no amendment-based estoppel impediment (wholly apart from the complete bar rule) are commonplace.³² Festo has not even attempted to show otherwise.

Equally important, it is demonstrably wrong to suggest that the real-world value of patents depends on the availability of equivalents infringement. That suggestion is simply inconsistent with the experience of patent practitioners. It is inconsistent, too, with the fact, noted by Judge Lourie, that "the overwhelming majority of equivalence claims ultimately fail."

³²See, e.g., Laitram Corp. v. Cambridge Wire Cloth Co., 863 F.2d 855 (Fed. Cir. 1988); Corning Glass Works v. Sumitomo Electric U.S.A., 868 F.2d 1251 (Fed. Cir. 1989); Sun Studs, Inc. v. ATA Equip. Leasing, Inc., 872 F.2d 978 (Fed. Cir. 1989); Insta-Foam Prods., Inc. v. Universal Foam Systems, Inc., 906 F.2d 698 (Fed. Cir. 1990); Uniroyal, Inc. v. Rudkin-Wiley Corp., 939 F.2d 1540 (Fed. Cir. 1991); Read Corp. v. Portec, Inc., 970 F.2d 816 (Fed. Cir. 1992); Goodwall Constr. Co. v. Beers Constr. Co., 991 F.2d 751 (Fed. Cir. 1993); Miles Labs., Inc. v. Shandon Inc., 997 F.2d 870 (Fed. Cir. 1993); Lifescan, Inc. v. Home Diagnostics, Inc., 76 F.3d 358 (Fed. Cir. 1996); Zygo Corp. v. Wyko Corp., 79 F.3d 1563 (Fed. Cir. 1996); Fonar Corp. v. General Elec. Co., 107 F.3d 1543 (Fed. Cir. 1997); Cybor Corp. v. FAS Technologies, Inc., 138 F.3d 1448 (Fed. Cir. 1998); YBM Magnex, Inc. v. ITC, 145 F.3d 1317 (Fed. Cir. 1998); Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182 (Fed. Cir. 1998); Overhead Door Corp. v. Chamberlain Group, Inc., 194 F.3d 1261 (Fed. Cir. 1999); Kraft Foods, Inc. v. ITC, 203 F.3d 1362 (Fed. Cir. 2000); Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324 (Fed. Cir. 2000); Fiskars, Inc. v. Hunt Mfg. Co., 221 F.3d 1318 (Fed. Cir. 2000); Viskase Corp. v. American Nat'l Can Co., 261 F.3d 1316 (Fed. Cir. 2001); Turbocare, supra. Of course, there are many more cases rejecting equivalents claims on their merits, apart from any amendment-based estoppel.

Pet. App. 68a. And it is inconsistent with the following empirical review – which shows that, whatever may have been the case in 1950, today at least it is just not true that cases of literal infringement are "very rare." Festo Br. 20 (quoting *Graver Tank*, 339 U.S. at 607). An examination of one year's worth of Federal Circuit cases (with calendar year 2000 dates) that reached the merits of infringement assertion (including in several instances the likely merits, in preliminary-injunction cases) shows that literal infringement is very far from rare. Of the 31 that did not reject infringement altogether, fully 27 either upheld or left open for remand liability for literal infringement, with only 4 cases leaving nothing but equivalents liability.³³

³³A Westlaw search for "infringe! & da(2000)" in the CTAF database turned up 176 documents, including a number of trademark and other nonpatent cases. The decisions seemingly upholding or allowing literal infringement are the following: Vanguard Prods. Corp. v. Parker Hannifin Corp., 234 F.3d 1370; Stryker Corp. v. Davol Inc., 234 F.3d 1252; Ruiz v. A.B. Choice Co., 234 F.3d 654; Doyle v. Crain Indus., Inc., 243 F.3d 564; Zi Corp. v. Tegic Communications, Inc., 243 F.3d 564; Lampi Corp. v. American Power Prods., Inc., 228 F.3d 1365; Southwest Software, Inc. v. Harlequin Inc., 226 F.3d 1280; Heidelberg Harris, Inc. v. Mitsubishi Heavy Industries, Ltd., 243 F.3d 560; Caterpillar Inc. v. Deere & Co., 224 F.3d 1374; Dow Chemical Co. v. United States, 226 F.3d 1334; Iscar Ltd. v. Sandvik AB, 243 F.3d 558; Messagephone, Inc. v. SVI Systems, Inc., 243 F.3d 556; Hilgraeve Corp. v. McAfee Associates, Inc., 224 F.3d 1349; Tate Access Floors, Inc. v. Maxcess Technologies, Inc., 222 F.3d 958; Indian Creek Mesquite, Inc. v. W.W. Wood, Inc., 250 F.3d 763; General Surgical Innovations, Inc. v. Origin Medsystems, Inc., 250 F.3d 761; C.R. Bard, Inc. v. Medtronic, Inc., 250 F.3d 760; Embrex, Inc. v. Service Eng'g Corp., 216 F.3d 1343; Magnivision, Inc. v. Bonneau Co., 250 F.3d 758; Northern Telecom Ltd. v. Samsung Electronics Co., 215 F.3d 1281; Advanced Display Systems, Inc. v. Kent State University, 212 F.3d 1272; Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360; Optical Disc Corp. v. Del Mar Avionics, 208 F.3d 1324; IMS Technology, Inc. v. Haas Automation, Inc., 206 F.3d 1422; Clearstream Wastewater Systems, Inc. v. Hydro-Action, Inc., 206 F.3d 1440; Rivera-Davila v. Asset Conservation, Inc., 230 F.3d 1378; Ajinomoto Co. v. Archer-Daniels-Midland Co., 228 F.3d 1338.

That review would have to be extraordinarily inaccurate, or the sample extraordinarily unrepresentative, for any claim of rarity to be even close to true.

There is also no substantial cause for objection based on the supposition that applicants "could be rendered reluctant to amend claims" by virtue of the Federal Circuit's newly clarified rule. See SG/PTO Br. 21. This observation cannot sensibly mean that an applicant will abandon an application rather than amend it after a rejection; it must mean that an applicant is more likely to appeal inside the PTO than previously. But that result (with causation traced to the Federal Circuit rule) is hardly clear. Without proof that substantial numbers of patent applicants relied on equivalents availability, there is no reason to suppose that such a change will occur. And, even on an assumption of some such reliance, there is an obvious offsetting effect: such applicants would do more up-front refinement of their claims before filing - thereby reducing the occasions for PTO rejections in the first place. Anyway, if more scopedefining decisions are being made inside the expert PTO, rather than awaiting future litigation after guesswork as to boundaries by the public, that is not a negative consequence at all.³⁴

CONCLUSION

The judgment of the court of appeals should be affirmed.

The equivalents-only cases are: Vermeer Mfg. Co. v. Charles Machine Works, Inc., 251 F.3d 168; Fiskars, Inc. v. Hunt Mfg. Co., 221 F.3d 1318; Ta Instruments, Inc. v. Perkin-Elmer Corp., 250 F.3d 756; Kraft Foods, Inc. v. International Trading Co., 203 F.3d 1362.

³⁴See Sage Products Inc. v. Devon Industries Inc., 126 F.3d 1420, 1425 (Fed. Cir. 1997) (per Rader, J.) ("as between the patentee who had a clear opportunity to negotiate broader claims but did not do so, and the public at large, it is the patentee who must bear the cost of its failure to seek protection for this foreseeable alteration of its claimed structure").

Respectfully submitted,

ARTHUR I. NEUSTADT

Counsel of Record
CHARLES L. GHOLZ
ROBERT T. POUS
OBLON, SPIVAK, McCLELLAND
MAIER & NEUSTADT, P.C.
1755 Jefferson Davis Highway
Arlington, Virginia 22202
(703) 413-3000

JAMES B. LAMPERT HALE AND DORR 60 State Street Boston, Massachusetts 02109 (617) 526-6000

Counsel for Respondents