

No. 13-369

IN THE
Supreme Court of the United States

NAUTILUS, INC.,

Petitioner,

v.

BIOSIG INSTRUMENTS, INC.,

Respondent.

**On Writ Of Certiorari
To The United States Court Of Appeals
For The Federal Circuit**

BRIEF FOR PETITIONER

THOMAS G. HUNGAR
MATTHEW D. MCGILL
JONATHAN C. BOND
GIBSON, DUNN & CRUTCHER LLP
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 955-8500

JAMES E. GERINGER
JEFFREY S. LOVE
JOHN D. VANDENBERG
Counsel of Record
PHILIP WARRICK
KLARQUIST SPARKMAN, LLP
One World Trade Center
Suite 1600
121 S.W. Salmon Street
Portland, OR 97204
(503) 595-5300
john.vandenberg@klarquist.com

Counsel for Petitioner

QUESTIONS PRESENTED

Section 112, ¶ 2, of the Patent Act requires that a patent specification “conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112, ¶ 2. “The statutory requirement of particularity and distinctness in claims,” this Court has held, “is met only when they clearly distinguish what is claimed from what went before in the art and clearly circumscribe what is foreclosed from future enterprise.” *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942). The Federal Circuit, however, holds that a claim satisfies Section 112, ¶ 2, even if “reasonable persons will disagree” over the claim’s meaning and scope, so long as the claim is “amenable to construction” and the construction of the claim adopted by the court is not “insolubly ambiguous.” Pet. App. 13a, 22a (citations omitted). The questions presented are:

1. Does the Federal Circuit’s acceptance of ambiguous patent claims with multiple reasonable interpretations—so long as the ambiguity is not “insoluble” by a court—defeat the statutory requirement of particular and distinct patent claiming?
2. Does the presumption of validity dilute the requirement of particular and distinct patent claiming?

**PARTIES TO THE PROCEEDING
AND RULE 29.6 STATEMENT**

Petitioner, which was defendant-appellee below, is Nautilus, Inc.

Respondent, which was plaintiff-appellant below, is Biosig Instruments, Inc.

Nautilus, Inc., has no parent corporation, and no publicly held corporation owns 10% or more of its stock.

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BRIEF FOR PETITIONER

Petitioner Nautilus, Inc., respectfully submits that the judgment of the court of appeals should be reversed.

OPINIONS BELOW

The court of appeals' opinion (Pet. App. 3a-32a) is reported at 715 F.3d 891. The court of appeals' order denying rehearing and rehearing en banc (Pet. App. 1a-2a) is unreported. The district court's order granting summary judgment for petitioner (Pet. App. 38a-39a) is unreported. The transcript of the summary-judgment hearing before the district court is reprinted at Pet. App. 50a-106a. The district court's order denying reconsideration of its summary-judgment order (Pet. App. 33a-35a) is unreported.

JURISDICTION

The district court had jurisdiction under 28 U.S.C. §§ 1331 and 1338(a). The court of appeals had jurisdiction under 28 U.S.C. § 1295(a)(1). The court of appeals entered its judgment on April 26, 2013. Pet. App. 3a. A timely petition for rehearing en banc was denied on June 28, 2013. Pet. App. 2a-3a. This Court has jurisdiction under 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

All pertinent constitutional and statutory provisions are reprinted in the Appendix at 1a.

INTRODUCTION

Federal patent claims mark the boundaries between the exclusive rights of the inventor and the territory open to others for further innovation. For

well over a century, Congress has required that the metes and bounds of patent claims must be clear. Since 1870, the Patent Act has mandated that a patent claim “*particularly* poin[t] out and *distinctly* clai[m]” the patentee’s invention. 35 U.S.C. § 112, ¶ 2 (2011) (emphases added). That emphatic language leaves no doubt that Congress intended to confer a federal monopoly for a patented invention *only if* the invention’s scope is clearly defined.¹

This Court has consistently construed that statutory command to foreclose ambiguous patent claims whose scope is not reasonably certain. A claim whose scope, read in light of the specification by one skilled in the art, is susceptible of more than one reasonable interpretation falls short of that standard. Not only the statute’s language, this Court has explained, but the fundamental purposes that Congress enacted the provision to achieve, compel holding patent claims to a high standard of definiteness. Patent claims define the patentee’s rights against the public at large, and accordingly must provide clear notice to all of what they encompass. Clear boundaries thus are critical to apprise the public of what is still fair game and what is off-limits. “The inventor must ‘inform the public during the life of the patent of the limits of the monopoly asserted, so

¹ Section 112 was amended in minor respects (including re-designation of its paragraphs as subsections) by the Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 4(c), 125 Stat. 284, 296 (2011), but those amendments do not apply here. The amendments apply only to a “patent application that is filed on or after” September 16, 2012, *see id.* § 4(e), 125 Stat. at 297; the application for the patent in dispute here was filed in 1992, J.A. 40. This brief refers throughout to the version of Section 112 in effect prior to the America Invents Act.

that it may be known which features may be safely used or manufactured without a license and which may not.” *Gen. Elec. Co. v. Wabash Appliance Corp.*, 304 U.S. 364, 369 (1938) (citation omitted). If a claim’s limits are imprecise, the result is a “zone of uncertainty” that inhibits innovation by others almost as much as a flat prohibition. *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942). Patent drafters, well aware of this, have powerful incentives to draft claims that are ambiguous to discourage others from innovating better solutions within this zone of uncertainty.

Faithfully construing and enforcing the statutory mandate of Section 112, ¶ 2, that claims “particularly poin[t] out and distinctly clai[m]” the invention are crucial to the patent system’s proper functioning. Other inventors and entrepreneurs cannot invest with confidence in developing new inventions if they cannot know what existing patents cover. And courts faced with patent claims that plausibly might be given any of multiple reasonable interpretations must expend already-scarce time and resources ascertaining what the purported invention is before they can adjudicate whether that invention meets the other criteria for a patent. Applying Section 112, ¶ 2, as written, in contrast, to forbid ambiguous claims whose scope is susceptible of multiple reasonable interpretations, enables efficient investment by others in new innovation, and makes courts’ work much easier. Indeed, the Patent and Trademark Office (“PTO”) applies that test every day. The Patent Act, in short, sets a high standard of clarity that patent claims must meet, and there is every reason to give the statutory standard full effect.

Under the rule of law followed below, in contrast, a patent claim is good enough under Section 112, ¶ 2, so long as it is “amenable to construction,” and so long as the claim, as “construed” by a court, is not “insolubly ambiguous.” Pet. App. 13a (citations omitted). As the PTO has aptly summarized Federal Circuit law, “the validity of a claim will be preserved if *some meaning* can be gleaned from the language.” U.S. Patent & Trademark Office, *Manual of Patent Examining Procedure* § 2173.02(I) (8th ed. Rev. 9, Aug. 2012) (“*MPEP*”) (emphasis added). The Federal Circuit has explained, moreover, that in its view a claim can be clear enough to satisfy Section 112, ¶ 2, “even though . . . reasonable persons will disagree” over the claim’s scope. Pet. App. 22a. On that basis, both the Federal Circuit majority and concurring opinions concluded that the disputed claims in respondent Biosig Instruments, Inc.’s patent are sufficiently definite, even though the opinions interpreted the claims’ scope in two very different ways.

Both the “insolubly ambiguous” standard and the result it yielded here are fundamentally at odds with the Patent Act’s text, Congress’s purposes, and this Court’s teaching. The approach followed below, moreover, inflicts tremendous harm on the patent system. The “insolubly ambiguous” standard strengthens a patent drafter’s existing incentives to draft some ambiguous claims in the hope of creating a *de facto* penumbra enlarging the patentee’s monopoly beyond its invention. And that standard foments frequent disputes about claims’ proper construction, inviting litigants to advocate strained, litigation-motivated interpretations of a claim with no fear that doing so will cause a court to question whether the claim itself is indefinite. The “insolubly ambigu-

ous” test thus encourages the very abuses that Congress added the claim requirement to prevent.

The court of appeals’ interpretation of Section 112, ¶ 2, is untenable, and its misapplication of the statute here well illustrates its error. This Court should repudiate the “insolubly ambiguous” standard, which departs from the statute’s prohibition on ambiguous claims, and it should reaffirm the standard established by Section 112, ¶ 2, and consistently applied by this Court. And, to provide much-needed guidance to lower courts in applying the statutory standard, the Court should illustrate its application here by holding respondent’s claims indefinite.

STATEMENT

1. A federal patent confers on the patentee the exclusive right to make, use, or sell the patented invention in the United States for a fixed period. *See* 35 U.S.C. § 154(a)(1); *Microsoft Corp. v. AT&T Corp.*, 550 U.S. 437, 455 (2007). The “scope of a patent grant” is “define[d]” by the patent’s “claims”—statements at the end of the patent’s specification that must “particularly poin[t] out and distinctly clai[m] the subject matter which the applicant regards as his invention.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373 (1996) (quoting 35 U.S.C. § 112, ¶ 2; other internal quotation marks omitted).

Patent claims are the basic unit of analysis both in determining whether a patent should issue and in ascertaining whether an issued patent has been infringed. The PTO, charged with issuance of patents, *see* 35 U.S.C. § 153, determines whether the statutory requirements for a patent are satisfied with respect to each claim in a patent. *See MPEP* § 2103.

And, once a patent has issued, the claims mark the boundaries of the patentee's exclusive rights. A patentee who alleges that his rights have been infringed must demonstrate "that the patent claim covers the alleged infringer's product or process." *Markman*, 517 U.S. at 374 (internal quotation marks omitted).

2. Although patent claims were unknown at English law, *see Markman*, 517 U.S. at 378-79, they have been an integral feature of our federal patent law for more than 170 years. And the core requirement that claims now embody—requiring an inventor himself to identify his asserted invention clearly and particularly—dates to the beginning of the Republic.

a. The first American patent statutes required a patent's written description of the invention to mark the invention's boundaries and distinguish it from the prior art. The Patent Act of 1790, Act of Apr. 10, 1790, ch. 7, 1 Stat. 109, mandated that a patentee submit a "specification in writing, containing a description . . . of the thing or things, by him . . . invented or discovered," which "shall be so particular" as "to distinguish the invention or discovery from other things before known and used." *Id.* § 2, 1 Stat. at 110. Congress was even more emphatic when it revised the statute three years later, requiring an inventor to "deliver a written description of his invention . . . in such full, clear and exact terms, as to distinguish the same from all other things before known." Act of Feb. 21, 1793, ch. 11, § 3, 1 Stat. 318, 321.

b. Over time, many patentees began identifying the claimed invention's scope separately in the patent. *See 1 Moy's Walker on Patents* § 4:2 (4th ed.

update 2013); Craig Allen Nard, *Legal Forms and the Common Law of Patents*, 90 B.U. L. Rev. 51, 66-67 (2010). In its next major revision of the Patent Act, Congress made this practice mandatory. The Patent Act of 1836 required that a patentee—in addition to submitting a “written description of his invention” sufficient to “enable” others “to make, construct, compound, and use” it—must *also* “particularly specify and point out the part, improvement, or combination, which he *claims* as his own invention or discovery.” Act of July 4, 1836, ch. 357, § 6, 5 Stat. 117, 119 (emphasis added) (“1836 Act”).

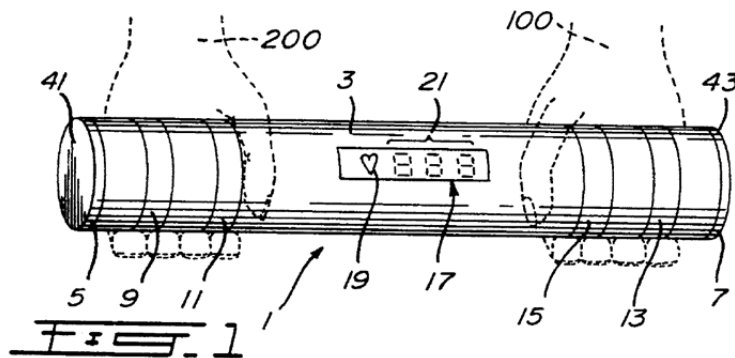
Congress codified patent claims as a “statutory requirement,” and required them to specify the invention particularly, “for the very purpose of making the patentee define precisely what his invention is,” and by doing so, to protect the “public” from “unjust” expansion of patent rights. *White v. Dunbar*, 119 U.S. 47, 52 (1886). Patents with unclear boundaries enable a patentee to “practis[e] upon the credulity or the fears of other persons, by pretending that his invention is more than what it really is.” *Evans v. Eaton*, 20 U.S. (7 Wheat.) 356, 434 (1822). Congress also sought to “reliev[e] the courts from the duty of ascertaining the exact invention of the patentee by inference and conjecture, derived from a laborious examination” of the specification and the prior art. *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 278 (1877). This task was “cast upon the Patent Office” (now the PTO), where the “claim is, or is supposed to be, examined, scrutinized, limited, and made to conform to what [the patentee] is entitled to.” *Ibid.* In the ensuing years, courts increasingly relied on patents’ claims in ascertaining the invention’s scope. *See Markman*, 517 U.S. at 379.

c. Congress cemented this change in 1870, explicitly requiring that a patent include “claims,” distinct from the patent’s written description of the invention, that both identify the purported invention and distinctly claim its scope. Act of July 8, 1870, ch. 230, § 26, 16 Stat. 198, 201 (“1870 Act”). The 1870 Act mandated that a patent application “particularly point out and distinctly claim the part, improvement, or combination which [the patentee] claims as his invention or discovery.” *Ibid.* And it expressly distinguished the patent’s claims from the remainder of the specification. *See ibid.* (“said specification *and claim* shall be signed by the inventor and attested by two witnesses” (emphasis added)). The “distinct and formal claim” thus became “of primary importance, in the effort to ascertain precisely what it is that is patented.” *Merrill v. Yeomans*, 94 U.S. 568, 570 (1877).

Congress carried over this requirement that a patentee “particularly point out and distinctly claim” his invention into the modern patent statute, enacted in 1952, which (with irrelevant changes) remains in force today. *See* Pub. L. No. 82-593, § 112, ¶ 2, 66 Stat. 792, 798 (1952) (“1952 Act”). Section 112 of the 1952 Act provided that the patent’s “specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” *Ibid.*, *codified as amended at* 35 U.S.C. § 112, ¶ 2 (2011).²

² As noted above, Section 112, ¶ 2, of Title 35 has since been amended and redesignated as Section 112(b), but those amendments are not applicable to this case and do not change the statutory standard. *See supra* at 2 n.1.

3. This case concerns a patent—issued to Gregory Lekhtman in 1994, and later assigned to respondent Biosig—for a heart-rate monitor for use in connection with exercise equipment, exercise activities, or both (the “Lekhtman Patent”). See Pet. App. 4a; J.A. 40. The nature and parameters of Lekhtman’s invention are disputed, but in essence it consists of a hollow cylinder or baton, which a user holds with both hands; electronic circuitry housed in the cylinder detects electrical signals produced by heartbeats and measures the user’s heart rate. See Pet. App. 4a-6a; J.A. 52-67. The issued patent illustrated the outside of the device as follows:



J.A. 42; see also *id.* at 68 (illustration of monitor in patent application). The monitor is called a “contact” monitor, because it provides contacts with the user’s hands.

Contact heart-rate monitors were not new when Lekhtman applied for the patent in 1992. Among others, Lekhtman himself had received a patent for another monitor years earlier. See C.A. J.A. 267. According to Lekhtman, however, his prior monitor failed to remove electrical signals emitted by a user’s skeletal muscles during exercise—known as electro-

myogram or “EMG” signals (hereinafter “muscle signals”)—generated, for example, when the user moved his arms or squeezed the monitor. Pet. App. 4a; J.A. 52. And “[b]ecause [muscle] signals are of the same frequency range as electrical signals generated by the heart”—known as electrocardiograph or “ECG” signals (hereinafter “heart signals”)—“[muscle] signals can mask [heart] signals,” making it difficult to measure heart rates accurately. Pet. App. 4a.

Lekhtman’s new monitor purportedly solved this problem. According to the patent, his monitor “process[ed] [heart] signals from which [muscle] signals are substantially removed,” thus enabling determination of the heart rate. Pet. App. 5a; see J.A. 53, 62-63. *How* Lekhtman’s monitor claimed to achieve this is at the center of the parties’ dispute here.

The Lekhtman Patent first recited a list of features of his monitor: Two surface electrodes are mounted on each side of the cylinder—on each side, one “live” electrode, and one “common” electrode, “in spaced relationship with each other.” J.A. 53 (emphasis added). The patent did not specifically define or further elaborate on this “spaced relationship,” or suggest that it was a term of art. The common electrodes on each side are connected to each other and to a point of common potential, such as ground. *Ibid.* The two live electrodes are connected to a “difference amplifier”—a standard device used in electric circuits that outputs the difference between two input signals. *Id.* at 54. The user would hold the monitor, with one hand on each side, and the electrodes would detect the heart and muscle signals emitted by each hand. *Id.* at 62; see also *id.* at 52-54.

This basic structure of four surface electrodes wired in this manner to a difference amplifier closely

resembled a similar heart-rate monitor covered by an earlier patent, issued to Iwao Fujisaki and others in 1984 (the “Fujisaki Patent”). *See* Pet. App. 9a; J.A. 180. After reciting these structural features of Lekhtman’s design, however, the Lekhtman Patent continued: “*whereby*, a first [muscle] signal will be detected between” the live and common electrodes on one side of the cylinder, “and a second [muscle] signal, *of substantially equal magnitude and phase to* [the] first [muscle] signal will be detected” between the live and common electrodes on the other side of the cylinder. J.A. 62 (emphases added). These muscle signals, the patent explained, would be fed into the “difference amplifier,” where—because they would be equal in magnitude and phase—they would cancel each other out. *See ibid.* The heart signals detected from each hand, however, would (according to the Lekhtman Patent) be “of substantially equal magnitude but of *opposite phase*,” and so would not be cancelled out, but amplified, when fed into the difference amplifier. *Id.* at 63 (emphasis added); *see also id.* at 52-54. The patent did not specify whether the muscle signals’ magnitude and phase would be equal *because of* the specific configuration of Lekhtman’s monitor—such as the placement and size of the various electrodes or how the electrodes are connected—or instead for reasons *unrelated* to the monitor’s design (*e.g.*, because muscle signals in a person’s hands are always equal due to laws of nature).

As relevant here, the Lekhtman Patent claimed (in claim 1) this monitor, purportedly capable of detecting heart signals (by removing muscle signals) to measure one’s heart rate. Pet. App. 6a-7a; *see* J.A. 61-63. The patent also included a claim (claim 11) for the same monitor “mounted on an exercise apparatus.” Pet. App. 7a; *see* J.A. 66; *see also id.* at 51 (il-

lustrations of monitor mounted on stationary bicycle and stair-climbing machine). The PTO issued the patent, including these claims, in 1994. *Id.* at 40.

4. This litigation stems from a dispute between Biosig—assignee of the Lekhtman Patent—and Nautilus’s alleged predecessor-in-interest, the Stairmaster Company. Pet. App. 8a, 53a. Biosig alleges that “in the 1990’s,” it “disclosed the patented technology” to Stairmaster. J.A. 26. According to Biosig, Stairmaster began making and selling exercise equipment that included heart-rate monitors that infringed the Lekhtman Patent, without securing a license from Biosig. *Ibid.* Biosig alleges that Nautilus, after acquiring Stairmaster’s assets, continued to make and sell infringing equipment. *Ibid.*; see Pet. App. 8a, 53a. Based on these allegations, Biosig sued Nautilus for patent infringement in 2004 in the Southern District of New York. Pet. App. 8a, 53a.

In 2008, while Biosig’s original suit was pending, Nautilus asked the PTO to reexamine the Lekhtman Patent, asserting, *inter alia*, that Lekhtman’s monitor was anticipated by and obvious in light of the Fujisaki Patent. C.A. J.A. 418-518.³ The PTO agreed to reexamine the Lekhtman Patent. *Id.* at 362-69. The parties voluntarily dismissed Biosig’s suit without prejudice while the reexamination proceedings were pending. Pet. App. 9a. Upon reexamining the Lekhtman Patent, the PTO issued a preliminary de-

³ Third parties may not seek reexamination on the ground that an original claim in a patent issued by the PTO is indefinite. See 35 U.S.C. § 311; *Ex Parte Lund, LLC*, No. 2010-5851, 2010 WL 1904319, at *2 (B.P.A.I. May 10, 2010). The reexamination proceedings in the PTO here thus did not address whether respondent’s previously issued claims are indefinite.

termination in April 2009 (known as an “office action”) rejecting (as relevant) claims 1 and 11 as anticipated by and obvious over the Fujisaki Patent, respectively. *Ibid.*; see C.A. J.A. 346-56.

Biosig submitted a lengthy response to the PTO defending the validity of the Lekhtman Patent. C.A. J.A. 184-343. The response included a 33-page declaration by Lekhtman, executed in 2009, in which he attempted to distinguish his monitor from Fujisaki’s. J.A. 141. Lekhtman asserted, for example, that the size and spacing of the electrodes in his design differed from Fujisaki’s. In Fujisaki’s device, the electrodes are “wide” and “closely spaced,” with the space between electrodes “narrower than the width of each electrode.” *Id.* at 158-59. Consequently, “the surface areas of contact between the hand and each detector will vary from person to person and for a given person will vary as the position of the hands changes during heavy exercise.” *Id.* at 158. As a result, the muscle signals “detected at the left and right hands cannot be substantially equal” using Fujisaki’s device. *Ibid.* Lekhtman asserted that in his device, in contrast, the two electrodes touched by each hand are “relatively narrow and spaced apart,” with the space between electrodes “wider than the width of each electrode.” *Id.* at 159.⁴

⁴ Despite this description, elsewhere in Lekhtman’s declaration he quoted approvingly the view of an expert retained by Biosig for litigation, Dr. Henrietta Galiana, who described Lekhtman’s device as having “*closely* spaced electrodes” and whose “mock-up” of Lekhtman’s “invention” had a spacing between electrodes *narrower* than the width of each electrode. J.A. 166-68 (emphasis added).

Lekhtman contended in his 2009 declaration, moreover, that the spacing of electrodes in his monitor was crucial to its functioning. “[C]are must be taken,” he explained, “to configure the system so that” the muscle signals effectively cancel one another out, producing “substantially zero [muscle signal] contribution at the output of the differential amplifier.” J.A. 165. Lekhtman’s declaration outlined a test—not mentioned in his patent—by which he asserted that one could determine, by “trial and error,” while grasping the monitor in three different ways, “the optimum configuration of the spacing, size, shape and materials” for the electrodes in his device, which he asserted would vary from one application to another. *Id.* at 155-56, 158, 175-76.

In light of this new information, Nautilus submitted a second request for reexamination, again contending that Lekhtman’s monitor was not patentable given the Fujisaki Patent. Pet. App. 9a. The PTO again agreed to reexamine the Lekhtman Patent and consolidated the two reexamination requests. *See* C.A. J.A. 166-81. In 2010, it issued a decision confirming the validity of the Lekhtman Patent. Pet. App. 9a; J.A. 78, 197-200.

5. In October 2010, after the PTO reexamination proceedings concluded, Biosig recommenced its infringement suit against Nautilus in the district court. The court conducted a hearing to construe disputed terms in the claims of the Lekhtman Patent. Pet. App. 10a. Among other terms, the parties disputed the meaning of the “spaced relationship” between the live and common electrodes on each side of the monitor. Based on Lekhtman’s submissions to the PTO during the reexamination proceedings, the district court tentatively concluded that the “spaced

relationship must be greater than the width of each electrode,” and the exact spacing would be determined through “trial and error.” J.A. 255-56.

Biosig objected to this interpretation, however, asserting that the appropriate spacing between electrodes (and the optimal size, shape, and material) varies depending on the exercise machine in which Lekhtman’s monitor is used. Though expressing misgivings about Biosig’s reading, and noting that it might render the patent fatally ambiguous and thus invalid, *see* J.A. 256-57, the district court modified its interpretation and construed “spaced relationship” to mean “a defined relationship” between the live and common electrodes, which could be “the same or . . . different” on each side. Pet. App. 43a-44a.

6. Nautilus then moved for summary judgment, arguing (as relevant) that the Lekhtman Patent was indefinite, and thus invalid, under 35 U.S.C. § 112, ¶ 2, because the term “spaced relationship” as used in the patent was ambiguous and failed to “particularly poin[t] out and distinctly clai[m]” Lekhtman’s invention. *Ibid.*; Pet. App. 10a. Biosig defended the patent, asserting—based on Lekhtman’s 2009 declaration, and a new declaration by another expert, Dr. George Yanulis—that one skilled in the art could determine the appropriate “spaced relationship” through trial-and-error testing. Pet. App. 18a-20a.

After a hearing, Pet. App. 50a-106a, the district court concluded that the Lekhtman Patent was indefinite. *Id.* at 101a-103a. The term “spaced relationship,” it held, “did not tell [the court] or anyone what precisely the space should be,” and did not provide “any parameters as to what the space should be,” or even indicate “whether the spaced relationship on the left side should be the same as the spaced

relationship on the right side.” *Id.* at 72a-73a. Although the claim, the court noted, referred to the desired *result*—*i.e.*, detecting substantially equal muscle signals from each hand, such that the muscle signals would cancel one another out, leaving only heart signals, *see id.* at 94a—there was “nothing in the specifications or the claim or the file history to teach” one skilled in the art that a particular “proper spacing . . . should be used” to cancel out the muscle signals. *Id.* at 103a. The district court accordingly granted summary judgment, holding (as relevant) that claims 1 and 11 are indefinite under Section 112, ¶ 2, and therefore invalid. *Ibid.*

7. A divided panel of the court of appeals reversed. Pet. App. 4a. The panel majority and concurrence reached conflicting conclusions as to what the disputed claims mean. Yet both the majority and concurrence nevertheless determined that the claims are not indefinite. *Id.* at 15a-25a; *id.* at 29a-32a (Schall, J., concurring).

a. A patent claim’s compliance with Section 112, ¶ 2, the majority noted, presents a “legal issue” that appellate courts “revie[w] without deference.” Pet. App. 12a-13a (quoting 35 U.S.C. § 112, ¶ 2). Applying circuit precedent, the majority held that a patent claim satisfies Section 112, ¶ 2, so long as the claim is “amenable to construction” and the claim as “construed” by a court is not “insolubly ambiguous.” *Id.* at 13a (citations omitted). A claim may be definite “even though . . . reasonable persons will disagree” over the correct interpretation of the claim. *Id.* at 22a. “[E]mbracing this standard” of indefiniteness, the majority reasoned, “accord[s] respect to the statutory presumption of patent validity,” codified in 35 U.S.C. § 282 (2011), and “protect[s] the inventive

contribution of patentees” whose “drafting of their patents has been less than ideal.” Pet. App. 22a (internal quotation marks omitted).⁵

Applying this standard, the majority held that claims 1 and 11 of the Lekhtman Patent are not indefinite. Pet. App. 15a-25a. The term “spaced relationship” is “amenable to construction,” it concluded, as shown by the fact that the district court itself construed that term before ruling that it was indefinite. *Id.* at 15a. Nor is “spaced relationship” “insolubly ambiguous.” *Id.* at 25a. Although the patent did not “specifically define” the term or provide “actual parameters, e.g., that the space between the live and common electrodes is one inch,” one could infer from the patent specification at least some “inherent” limitations on the proper spacing between the electrodes, which “may be sufficient to understand the metes and bounds of ‘spaced relationship.’” *Id.* at 16a. “For example,” the majority suggested, the space between the live and common electrodes on each side of the monitor “cannot be greater than the width of a user’s hands,” since the electrodes must be in contact with the same hand. *Ibid.* And it would not be “feasible” if the “distance between the live and common electrodes” were “infinitesimally small,” as that would “effectively merg[e] the live and common electrodes into a single electrode.” *Ibid.*

⁵ Section 282, like Section 112, was amended in minor respects by the America Invents Act in 2011, *see* Pub. L. No. 112-29, §§ 15(a), 20(g), 125 Stat. at 328, 334, but those amendments do not apply here. None of the amendments apply to proceedings commenced before September 16, 2011, *see id.* §§ 15(c), 20(l), 125 Stat. at 328, 335; this proceeding was commenced in October 2010, *see* J.A. 7, 23, 31.

Within these broad “inherent parameters,” Pet. App. 16a, the majority explained, the monitor’s *function* of removing muscle signals, so that heart signals can be measured, was “highly relevant in ascertaining the proper bounds of the ‘spaced relationship.’” *Id.* at 17a; *see id.* at 16a-21a. Removing muscle signals was (according to the majority) Lekhtman’s central purported innovation over the prior art—and the basis on which he attempted, during the PTO reexamination proceedings, to distinguish his invention from Fujisaki’s monitor. *See id.* at 16a-17a. And evidence that Biosig submitted during the reexamination proceedings and in this litigation indicated (in the majority’s view) that the configuration of the electrodes was essential to accomplishing that function. *See id.* at 18a-20a. In other words, the “whereby’ clause” in the patent—which stated that the muscle signals would be substantially equal, and thus would cancel one another out—“describes the *function* of substantially removing [muscle] signals that *necessarily follows* from the previously recited structure,” including the “spaced relationship.” *Id.* at 17a (emphases added). The term “spaced relationship,” the majority reasoned, thus refers to the spacing necessary for substantially removing muscle signals. *See id.* at 17a-18a.

One skilled in the art, the majority determined, would be able to determine that spacing—essentially by trial and error. *See* Pet. App. 18a-21a. Lekhtman’s 2009 declaration explained that an artisan, starting with some configuration of electrodes, could measure the muscle signals from each of the user’s hands, and then “adjus[t]” the “spacing, size, shape and materials of the electrodes” until the difference between the muscle signals was “close to zero.” *Id.* at 19a. Lekhtman asserted that when he applied for

the patent in 1992, one skilled in the art could have used a common device—an oscilloscope—“to measure the signals” and determine whether adjustments were necessary. *Ibid.* Lekhtman’s declaration described tests he had performed illustrating how this could be done, and results reported by another Biosig expert who tested a purported embodiment of Lekhtman’s invention. *Id.* at 19a-20a. A 2011 declaration of Biosig’s expert in this litigation, Dr. Yanulis, “confirmed” Lekhtman’s assertions. *Id.* at 20a.

Thus, the majority concluded, because “a skilled artisan could apply a test and determine the ‘spaced relationship’ as pertaining to the function of substantially removing [muscle] signals,” the patent adequately specified the “metes and bounds of ‘spaced relationship.’” Pet. App. 21a. “Nothing more rigorous,” it held, “is required under § 112, ¶ 2.” *Ibid.*

b. The concurrence, too, concluded that the disputed claims are not indefinite, but it interpreted the claims quite differently. Pet. App. 29a-32a (Schall, J., concurring). It agreed with the majority’s articulation of existing circuit “law on indefiniteness,” *id.* at 29a, and that the claims here are sufficiently definite under that standard. *Id.* at 30a-31a. The term “spaced relationship” “plainly was amenable to construction,” since neither party “dispute[d] that the district court” itself “did, in fact, construe the ‘spaced relationship’ limitation.” *Id.* at 30a. And the district court’s “construction,” the concurrence concluded, “provided sufficient clarity to one of skill in the art as to the ‘metes and bounds’ of the ‘spaced relationship’ limitation.” *Id.* at 31a; *see also id.* at 29a-30a. The term, as construed, thus was not insolubly ambiguous, given the “inherent parameters” on that spacing that the majority had inferred from the patent—

i.e., that the space between electrodes must be greater than zero and no wider than the user’s hand. *Id.* at 31a. The “spaced relationship,” the concurrence opined, means any “fixed spatial relationship between” the electrodes within these “inherent” limits. *Ibid.*

In the concurrence’s view, however, that is *all* that the term “spaced relationship” means. Pet. App. 31a-32a. According to the concurrence, the majority erroneously “presume[d] a functional linkage between the ‘spaced relationship’ limitation and the removal of [muscle] signals” that was not supported by the patent itself: Nothing in the claims imposed a “functional limitation” on the “spaced relationship” described in the claims. *Ibid.* Put differently, according to the concurrence, the patent did not claim that any particular spacing between electrodes—within the broad inherent parameters the majority noted—is essential to the monitor’s ability to function. Thus, the term “spaced relationship” did not limit the claims to those heart-rate monitors that incorporated the trial-and-error spacing required by the majority’s construction of the same claim term.

8. Nautilus sought rehearing en banc, asking the court of appeals to revisit its “insolubly ambiguous” test. C.A. Dkt. #46. Its request was denied. Pet. App. 2a.

SUMMARY OF ARGUMENT

I. The Patent Act requires that patent claims must “particularly poin[t] out and distinctly clai[m]” the invention. 35 U.S.C. § 112, ¶ 2. The ordinary meaning of the statute’s words—both when enacted and today—is that claims must identify the invention clearly, plainly, singly, and not confusedly. That

mandate forecloses an ambiguous patent claim, whose scope, even to one skilled in the art reading the claims in light of the specification, is susceptible of multiple reasonable interpretations. Decisions of this Court dating back more than a century, moreover, make clear that the statute must be construed, consistent with its plain meaning, to bar ambiguous claims, which directly undermine the claim requirement's fundamental purposes: providing the public with fair notice of the scope of the inventor's exclusive rights, and enabling courts to adjudicate whether an invention is patentable without first having to canvass the prior art and compare it with the patent specification to ascertain what the purported invention *is*.

The court of appeals rejects this standard. It applies a much more lenient test, under which it will uphold a claim as definite so long as it is merely “amenable to construction,” and the claim as construed by a court is not “insolubly ambiguous.” Pet. App. 13a, 22a (citations omitted). That test is directly at odds with the text of Section 112, ¶ 2, the statute's purposes, and this Court's case law construing it. None of the court of appeals' justifications for its lax approach to enforcing Section 112, ¶ 2, withstands scrutiny. The presumption of patent validity, 35 U.S.C. § 282, which establishes a higher standard of proof for *factual* issues in challenges to a patent's validity, has no bearing on the standard set by Section 112, ¶ 2, to answer the undisputedly *legal* question whether a patent claim is definite. The Federal Circuit's worries that enforcing the statute as written will hamstring inventors or will invalidate every patent claim whose construction is disputed are unfounded and do not justify the court's departure from Congress's emphatic command.

II. Under the correct understanding of Section 112, ¶ 2, respondent’s claims do not “particularly poin[t] out and distinctly clai[m]” the invention and are therefore indefinite. The majority and concurring opinions below—which adopted conflicting interpretations of the scope of the claims—readily demonstrate that the claims are subject to at least two reasonable interpretations and are therefore fatally ambiguous. Respondent’s claims closely resemble others that this Court has previously held invalid for indefiniteness—the scope of which likewise was ambiguous even to one skilled in the art. *See, e.g., United Carbon*, 317 U.S. at 236; *Gen. Elec.*, 304 U.S. at 369. The record compels the same conclusion here.

ARGUMENT

I. THE PATENT ACT REQUIRES THAT THE SCOPE OF PATENT RIGHTS BE CLEARLY DEFINED AND FORBIDS AMBIGUOUS PATENT CLAIMS.

The plain language of Section 112, ¶ 2—bolstered by more than a century of Supreme Court precedent recognizing Congress’s purposes in enacting the provision—requires that patent claims delineate the purported invention with clarity and precision. An ambiguous claim whose scope is susceptible of multiple reasonable interpretations to one skilled in the relevant art falls short of the statutory standard. The court of appeals, however, expressly permits such claims, flouting the statutory mandate and this Court’s teaching, and thwarting the purposes that Congress enacted the claim requirement to achieve.

A. The Patent Act’s Plain Text Forecloses Claims Whose Scope Is Ambiguous.

The Patent Act’s plain language requires claims to be clear and precise, and leaves no room for claims that are ambiguous. Section 111 of the Act requires an inventor seeking a patent to submit an application that contains, among other things, a “specification” of his asserted invention. 35 U.S.C. § 111(a)(2). Section 112 sets forth what the specification must contain. *Id.* § 112. With irrelevant exceptions, a patentee’s failure to comply with Section 112’s “requirement[s]” establishes a “defense” to the validity of the patent. *Id.* § 282, ¶ 2(3)(A), (4). Section 112, ¶ 1, requires that the specification “contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and . . . set forth the best mode contemplated by the inventor of carrying out his invention.” *Id.* § 112, ¶ 1. That mandate is immediately followed by Section 112, ¶ 2—at issue here—which provides that “[t]he specification *shall* conclude with one or more claims *particularly pointing out and distinctly claiming* the subject matter which the applicant regards as his invention.” *Id.* § 112, ¶ 2 (emphases added).

The “ordinary, contemporary, common meaning” of Section 112, ¶ 2’s key words at the time that Congress first added them to the statute, as reflected in “[d]ictionaries from the era,” *Sandifer v. U.S. Steel Corp.*, 134 S. Ct. 870, 876 (2014) (citation omitted), leaves no doubt that the scope of a patent claim must be clear and known and that ambiguous claims are forbidden. In 1870, when Congress first added the

requirement that patentees “shall particularly point out and distinctly claim” their invention, 1870 Act, § 26, 16 Stat. at 201, the word “particularly” meant, *inter alia*, “singly,” “distinctly,” or “[i]n a particular manner.” Noah Webster, *A Dictionary of the English Language* 522 (Goodrich & Porter eds. 1872) (“Webster’s 1872”). “Particular,” in turn, meant, among other things, “[r]elating to a part or portion of any thing, or to a single person or thing,” or “[c]learly distinguishable from others of its kind.” *Ibid.* And “distinctly” was defined as “clearly,” “plainly,” or “[w]ith distinctness.” *Id.* at 217; *see also ibid.* (defining “distinctness” as “[t]he quality or state of being distinct,” and “distinct,” *inter alia*, as “[h]aving the difference marked,” “distinguished,” and “[s]o separated as not to be confounded with any other thing; not confused”).⁶

The words “particularly” and “distinctly” carried the same meaning when Congress recodified the claim requirement in Section 112 in 1952. 1952 Act, § 112, ¶ 2, 66 Stat. at 798; *see Webster’s New International Dictionary* 1783 (2d ed. 1949) (defining “particularly” as, *inter alia*, “[i]n detail or in particulars,” “individually,” and “expressly”); *id.* at 756 (defining “distinctly” as, *inter alia*, “not confusedly; without

⁶ The precursor to this provision of the 1870 Act—the provision added in 1836 requiring that a patentee “*particularly* specify and point out the part, improvement, or combination, which he claims as his own invention or discovery,” 1836 Act, § 6, 5 Stat. at 119 (emphasis added)—carried the same emphatic meaning. *See, e.g.*, 2 Samuel Johnson, *A Dictionary of the English Language* s.v. “particularly” (6th ed. 1785) (“[d]istinctly,” “singly”); 1 Johnson, *supra*, s.v. “distinctly” (“[n]ot confusedly,” “without the confusion of one part with another,” “[p]lainly,” “clearly”).

blending of one thing with another; hence clearly; obviously”). And they mandate the same high degree of clarity and precision today. See *Webster’s Third New International Dictionary* 1647 (2002) (defining “particularly” as, *inter alia*, “in detail,” “in the specific case of one person or thing as distinguished from others,” “individually,” and “specifically” (capitalization omitted)); *id.* at 659 (defining “distinctly” as, *inter alia*, “not confusedly,” “without a blending or merging of one thing with another,” “clearly,” “obviously,” and “unequivocally” (capitalization omitted)).

The plain import of Section 112, ¶ 2’s “particularly point out and distinctly claim” requirement is thus that a patent claim’s meaning must be “clea[r]” and “plai[n],” not ambiguous or “confused.” Webster’s 1872, at 217, 522. And the claim must “singly” identify one invention. *Id.* at 522. One skilled in the relevant art thus must be able to know from reading the claim’s language in context what the one invention is that the patent encompasses. A claim cannot refer severally to any of multiple inventions and require a skilled artisan to guess which one is covered. Ambiguous claims—claims that read in context are susceptible to *more* than one reasonable interpretation—necessarily fall short of this standard established by the statutory text. If one skilled in the art cannot discern a claim’s scope—the patent’s metes and bounds—from reading the claim in context because he cannot tell which of two or more reasonable interpretations of the claim’s scope is correct, the claim is *ipso facto* not “clear” or “plain.” Such a claim, by definition, does not “singly” identify just one invention, and conveys only a “confused” understanding of the scope of the invention and thus of the patentee’s exclusive rights.

Section 112, ¶ 2’s objective standard of particularity and distinctness, moreover, does not vary depending on the ease or difficulty of drafting a claim to encompass a given invention. To satisfy Section 112, ¶ 2, a claim’s scope must be clear and plain, full stop, or else it is invalid—regardless of whether it would have been burdensome for the patentee to provide greater clarity. If the text of Section 112 left any doubt, it is erased by another provision of the Patent Act that expressly lowers the standard for a certain sub-category of patents not applicable here. Section 161 of the Act permits patents for “new variety[ies] of plant.” 35 U.S.C. § 161, ¶ 1. Section 162 permits the inventor to claim “the plant shown and described” in the specification, and provides that “[n]o plant patent shall be declared invalid for non-compliance with section 112 of this title if the description is as complete *as is reasonably possible*.” *Id.* § 162, ¶¶ 1-2 (emphasis added).⁷

Congress thus well knows how to require only that a patent drafter has tried his best to satisfy Section 112, and has codified that lesser standard in another context. *Cf. Gen. Elec.*, 304 U.S. at 372 n.13 (noting that “[d]ifferent considerations may apply” in assessing definiteness of plant patents under the predecessor of Section 162). Congress’s omission of any similar proviso in Section 112 confirms that it did not intend Section 112 to incorporate the same less stringent standard. *See Russello v. United States*, 464 U.S. 16, 23 (1983); *see, e.g., Allison En-*

⁷ Section 162, like Sections 112 and 282, was amended in 2011 by the America Invents Act, but the amendments do not apply to this case. Pub. L. No. 112-29, § 20(j), (l), 125 Stat. at 335; *supra* at 2 n.1, 17 n.5.

gine Co. v. United States ex rel. Sanders, 553 U.S. 662, 671 (2008) (“[W]hen Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.” (citation omitted; alteration in original)). Except for those patents Congress has specifically excused, in short, the high standard of definiteness established by Section 112, ¶ 2’s text must be obeyed.

B. This Court’s Precedent Confirms That Permitting Ambiguous Patent Claims Contravenes The Statute’s Purposes.

This Court’s case law confirms that to achieve Congress’s purposes in requiring “particular” and “distinct” patent claims, Section 112, ¶ 2, must be construed, consistent with its plain language, to forbid ambiguous claims. The claim requirement’s core objectives, this Court has recognized, are to provide the public with clear notice of a patent’s boundaries and to facilitate judicial determinations of patentability. Both purposes are undermined by allowing patent claims whose scope is uncertain.

1. The primary purpose of the Patent Act’s requirement that patent claims “particularly point out and distinctly claim” the invention, reflected in a long and unbroken line of this Court’s decisions, is to “protec[t] . . . the public” by providing clear notice of the patent’s scope and preventing the patentee from exploiting ambiguity to expand his exclusive rights. *Gen. Elec.*, 304 U.S. at 369. The “federal patent laws . . . embod[y] a careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of

a competitive economy.” *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 146 (1989). The statute grants patentees a temporary monopoly on their inventions, as an inducement to pursue innovation and to share their discoveries with the public. See *Mayo Collaborative Servs., Inc. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1305 (2012). But “[p]atent protection is . . . a two-edged sword,” and poses risks and costs that can impede others’ innovation. *Ibid.* As this Court has made clear, the patent system does not seek to discourage others from building on or designing around the patented invention. To the contrary, others “should be *encouraged* to pursue innovations, creations, and new ideas beyond the inventor’s exclusive rights.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731 (2002) (emphasis added).

For such “encouragement of the inventive genius of others” to occur, “[t]he limits of a patent must be *known*.” *Gen. Elec.*, 304 U.S. at 369 (emphasis added). Other inventors must be able to ascertain “which features may be safely used or manufactured without a license and which may not.” *Ibid.* (internal quotation marks omitted); see also *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60 (1931). The need for clarity is if anything even greater than in written instruments, like private contracts, that merely define the rights of private parties among themselves; patent claims define the rights of the patentee against the entire public. Providing “clarity” to the public concerning a patent’s scope thus “is essential to promote progress, because it enables efficient investment in innovation.” *Festo*, 535 U.S. at 730-31. As the PTO has explained, it is of the “utmost importance” to “foster[ing] innovation and competitiveness” that “the boundaries of the inventive subject

matter protected by a patent” be defined “clearly and precisely.” *MPEP* § 2173.

Unclear claims, this Court has held, thwart this objective by creating “[a] zone of uncertainty” regarding the patent’s boundaries, “which enterprise and experimentation may enter only at the risk of infringement claims.” *United Carbon*, 317 U.S. at 236. Uncertainty surrounding a patent’s scope “discourage[s] invention only a little less than unequivocal foreclosure of the field,” thus undermining the patent system’s constitutional objective of fostering innovation. *Ibid.* The risk of liability if a court finds a new product or process to be infringing, as well as the cost of defending infringement allegations in litigation, provides a powerful disincentive to would-be inventors to pursue new innovations that reasonably *might* be deemed to fall within the scope of an ambiguous patent claim.

Federal agencies have come to the same conclusion, and have emphasized the chilling effect that unclear patent claims have on innovation. As the PTO has put it, “patents of ambiguous and vague scope . . . exact a cost on society due to their ambiguity that is not commensurate with the benefit that the public gains from disclosure of the invention.” *Ex Parte Miyazaki*, No. 2007-3300, 2008 WL 5105055, at *6 (B.P.A.I. Nov. 19, 2008) (precedential). That cost is imposed because, as the Federal Trade Commission has explained, “[a]llowing multiple potential constructions” of a patent claim “to persist adds a penumbra to a patent’s scope, discouraging rivals from entering where, with clearer notice, they could safely operate.” Federal Trade Comm’n, *The Evolving IP Marketplace: Aligning Patent Notice and Remedies with Competition* 98 (2011). Commentators

likewise have repeatedly echoed this Court's teaching and these agencies' observations, underscoring the strong deterrent effect that ambiguous claims have on desirable innovation. *See, e.g.*, James Bessen & Michael J. Meurer, *Patent Failure* 47 (2008); Natasha N. Aljalian, *The Role of Patent Scope in Biopharmaceutical Patents*, 11 B.U. J. Sci. & Tech. L. 1, 12-13 (2005); Herbert Hovenkamp, *Patents, Property, and Competition Policy*, 34 J. Corp. L. 1243, 1256 (2009); Kelly Casey Mullally, *Legal (Un)certainty, Legal Process, and Patent Law*, 43 Loy. L.A. L. Rev. 1109, 1140 & n.130 (2010); Harry Surden, *Efficient Uncertainty in Patent Interpretation*, 68 Wash. & Lee L. Rev. 1737, 1743 (2011).

Patentees and patent drafters have long appreciated this chilling effect, and many have sought to exploit the uncertainty inherent in ambiguous patent claims to expand their *de facto* exclusive rights beyond the scope of their own inventions. Indeed, nearly two centuries ago, even before Congress codified the claim requirement, this Court recognized that a patent with unclear boundaries enables a patentee to "practis[e] upon the credulity or the fears of other persons, by pretending that his invention is more than what it really is." *Evans*, 20 U.S. (7 Wheat.) at 434. And since time immemorial, some patentees have striven to "twis[t]" and "tur[n]" claims "like a nose of wax . . . so as to make it include something more than" the inventor's actual contribution to the art. *White*, 119 U.S. at 51.

Not only do patent owners know how to exploit ambiguous patent claims once issued, but they have powerful economic incentives to draft at least some claims whose scope is ambiguous in the first instance. Drafters understand that unclear patent

claims discourage others from seeking better solutions to a problem, knowing that the penumbra that surrounds an ambiguous claim will make it harder for others to design around the claim with confidence. And drafters appreciate that such uncertainty, in turn, can raise the price of defending—and thus of settling—a patent-infringement lawsuit. Shape-shifting patents that can be stretched, due to their imprecision, plausibly to encompass entirely new, different inventions from those discovered by the patentee are thus now in great demand. And the skill of drafting “[b]road, to the point of inherently ambiguous,” claims has become “a prized talent.” *Enzo Biochem., Inc. v. Applera Corp.*, 605 F.3d 1347, 1348 & n.2 (Fed. Cir. 2010) (Plager, J., dissenting from denial of reh’g).

Indeed, patent treatises now admonish drafters deliberately to craft claims that are ambiguous, explaining that “[i]t is the claim drafter’s job to have written the claims in the application to . . . cover competitive products which neither the inventor nor the attorney thought of or *could even have imagined* at the time.” Robert C. Faber, *Faber on Mechanics of Patent Claim Drafting* 10–4 (6th ed. 2013) (emphasis added). One drafting guide, for instance, contains an entire subsection entitled “Include Ambiguous Claims,” which offers drafters more than a dozen “strategies” for “intentionally writ[ing] ambiguous claims.” Jeffrey G. Sheldon, *How to Write a Patent Application* § 6.5.19, at 6–114 (2005). And drafters are advised to “[a]void . . . like the plague” claim language that clearly identifies the “gist of the invention” or the “factor” that makes it “unique.” Robert D. Fish, *Strategic Patenting* 7–35 (2007); *see also* David Pressman, *Patent it Yourself* 204 (16th ed. 2012); George F. Wheeler, *Creative Claim Drafting: Claim*

Drafting Strategies, Specification Preparation, and Prosecution Tactics, 3 J. Marshall Rev. Intell. Prop. L. 34, 44-45 (2003).

Protecting the public from such strategies, this Court has long recognized, is the driving purpose of requiring that patent claims “particularly poin[t] out and distinctly clai[m]” the asserted invention. “The claim is required to be specific for the very purpose of protecting the public against extension of the scope of the patent.” *Universal Oil Prods. Co. v. Globe Oil & Ref. Co.*, 322 U.S. 471, 484-85 (1944); *accord Gen. Elec.*, 304 U.S. at 372 (Patent Act “requires . . . that the inventor set out a definite limitation of his patent” “for the protection of the public”); *White*, 119 U.S. at 52 (patent “claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is” in large part to prevent injustice to the public); *see also Evans*, 20 U.S. (7 Wheat.) at 434. “The public should not be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights.” *Merrill*, 94 U.S. at 573. And “[t]he genius of the inventor, constantly making improvements in existing patents”—which is what “gives to the patent system its greatest value”—“should not be restrained by vague and indefinite” claims. *Ibid.* “[N]othing can be more just and fair, both to the patentee and to the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent.” *Id.* at 573-74.

Safeguarding other inventors from abuse is also a powerful reason to enforce Section 112, ¶ 2’s command faithfully. To encourage innovation outside of a patent’s boundary and protect the public from exploitation, as Congress intended, a claim must clear-

ly inform skilled artisans of the scope of the single invention covered by the patent—not a range of *multiple* inventions, any or all of which might be off-limits depending on what a court decides many years later. “To sustain claims so indefinite as not to give the notice required by the statute” thus “would be in direct contravention of the public interest which Congress therein recognized and sought to protect.” *United Carbon*, 317 U.S. at 233.

2. This Court’s cases dating back more than a century make clear that the requirement that claims “particularly” and “distinctly” identify the purported invention also serves a second, independent purpose: enabling courts—as well as the PTO—to determine more readily whether that invention is patentable. *See United Carbon*, 317 U.S. at 236; *Keystone Bridge*, 95 U.S. at 278. Until Congress required that the patent itself “particularly specify and point out” what the inventor “claims as his own invention or discovery,” courts were burdened with a “duty of ascertaining the exact invention” based on their own “laborious examination of previous inventions, and a comparison thereof” with the invention asserted in the patent. *Keystone Bridge*, 95 U.S. at 278 (internal quotation marks omitted). The claim requirement “was inserted in the law for the purpose of relieving the courts” of this burden, saving them from “wad[ing] through the history of the art” to determine, “by inference and conjecture,” how the product or process described in the patent differed from the prior art before ascertaining whether that product or process merited a patent. *Ibid.* The patentee himself now must identify what he believes to be his contribution to the art, and the task of “examin[ing], scrutiniz[ing],” and “limit[ing]” the claim so that it

“conform[s] to what [the inventor] is entitled to” is assigned to the PTO. *Ibid.*

A patent claim, however, must be “reasonably clear-cut” to achieve this end of “enabl[ing] courts to determine whether novelty and invention are genuine” without undertaking their own cumbersome, antecedent inquiry into what the invention is. *United Carbon*, 317 U.S. at 236. An ambiguous claim, whose scope one skilled in the art could reasonably interpret in multiple different ways, does not “relieve the courts” of this burden (*Keystone Bridge*, 95 U.S. at 278) at all. If the court cannot tell from reading the claim in context which of several possible inventions is asserted, the court is back at square one, and must “wade through the history of the art” and attempt to discern which interpretation of the claim reflects the patentee’s actual invention. *Ibid.*

3. This Court’s cases make clear that, to ensure that Congress’s core objectives in requiring that claims “particularly poin[t] out and distinctly clai[m]” the invention are furthered and not thwarted, the statutory definiteness standard must be given full effect. “The statutory requirement of particularity and distinctness in claims,” the Court has held, “is met only when they *clearly* distinguish what is claimed from what went before in the art and *clearly* circumscribe what is foreclosed from future enterprise.” *United Carbon*, 317 U.S. at 236 (emphases added). Patent claims, therefore, must define “the exact scope of an invention.” *Markman*, 517 U.S. at 373. The claim’s boundaries thus must be “clearly” and “precisely” identified in the patent itself, so that it is “known” on the date it is issued what is covered and what is not. *United Carbon*, 317 U.S. at 232; *Gen. Elec.*, 304 U.S. at 369; *see also Festo*, 535 U.S. at

730-31; *Universal Oil*, 322 U.S. at 484-85; *Merrill*, 94 U.S. at 570. And the claim must clearly distinguish the invention from what has come before. See *Gen. Elec.*, 304 U.S. at 373. The patent law and “the principles which govern the exclusive rights conferred by it” thus “leave no excuse for ambiguous” or “vague” patent claims. *Merrill*, 94 U.S. at 573.

A claim whose scope, read in context, can bear two or more reasonable interpretations to one skilled in the relevant art—or that has no discernible meaning—is therefore impermissible. Such a claim does not provide the public with clear notice of “which features may be safely used or manufactured without a license and which may not.” *Gen. Elec.*, 304 U.S. at 369 (internal quotation marks omitted). And it fails to identify what about the asserted invention “distinguish[es]” it “from what is old.” *Id.* at 373; see also *United Carbon*, 317 U.S. at 232-36. “[I]t may be that” a patentee whose claim is ambiguous has “made the best disclosure possible” given the invention’s subject matter. *Gen. Elec.*, 304 U.S. at 372 (internal quotation marks omitted). “But Congress requires, for the protection of the public, that the inventor set out a definite limitation of his patent; that condition must be satisfied before the monopoly is granted.” *Ibid.*

That does not mean that claims are invalid merely because some interpretation is necessary to ascertain their single meaning to one skilled in the relevant art. Claims, of course, must be “construed in the light of the specifications.” *United States v. Adams*, 383 U.S. 39, 48-49 (1966). A claim that appears ambiguous on its face thus may be clear when read in light of the specification. See, e.g., *Merrill*, 94 U.S. at 569-73. But if despite applying appropriate inter-

pretive tools, a skilled artisan still would be faced with multiple reasonable readings of a claim's scope, the claim cannot be said to define "the exact scope of an invention," *Markman*, 517 U.S. at 373, with the clarity and precision that the statute requires. Likewise, terms of degree are not impermissible, *provided that* the patent specification provides sufficient information so that one skilled in the relevant art would necessarily understand what they mean without ambiguity. *See Eibel Process Co. v. Minn. & Ontario Paper Co.*, 261 U.S. 45, 65-66 (1923).

Moreover, the Court has made clear, the claim requirement's purposes forbid permitting patentees to cure otherwise fatal ambiguity or vagueness in their claims simply by adverting to the invention's intended *function*. Language in a claim that identifies what the inventor claims as his invention based only on the outcome it accomplishes, without delineating a particular structure by which his invention achieves that outcome, does *not* clearly distinguish the invention from what came before. And it does not put the public on notice of what alternative means of achieving that function are still available. *See United Carbon*, 317 U.S. at 234-36; *Gen. Elec.*, 304 U.S. at 373; *see also Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1, 12 (1946), *superseded by* 35 U.S.C. § 112, ¶ 6 (2011). Congress has embraced this important limitation: The Patent Act permits claims to refer to a "means" of achieving a given "function," *but* the claim is then confined under the statute to the *particular* apparatus the patentee has disclosed in the specification. 35 U.S.C. § 112, ¶ 6 ("such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof").

Congress's purposes and this Court's precedent erase any doubt that Section 112, ¶ 2, means just what it says. A claim "particularly point[s] out and distinctly claim[s]" the invention only if it clearly and precisely defines the invention's boundary lines in a way that a reader skilled in the relevant art would understand. If the claim is instead ambiguous, such that readers could reasonably interpret the claim's scope differently, it is invalid.

**C. There Is No Valid Justification For
The Federal Circuit's Departure From
The Statutory Definiteness Standard.**

The court below rejects the straightforward standard compelled by Section 112's text and reinforced by this Court's precedent distilling Congress's intentions. According to the decision below, "[a] claim is indefinite only when it is not 'amenable to construction,'" or when the claim once "*construed*" is not "insolubly ambiguous." Pet. App. 13a (emphasis added) (citation omitted); *see also ibid.* (claim is "insolubly ambiguous" only "if reasonable efforts at claim construction result in a definition that does not provide sufficient particularity and clarity to inform skilled artisans of the bounds of the claim," that is, if the "*construction* remains insolubly ambiguous" (emphasis added) (citation omitted)). The court of appeals expressly allows such claims "*even though*" "the meaning of the claim" is a question "over which reasonable persons will disagree." *Id.* at 22a (emphases added) (quoting *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001)). As the PTO has summarized it, under Federal Circuit precedent, "the validity of a claim will be preserved if some meaning can be gleaned from the

language.” *MPEP* § 2173.02(I); *see also* *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1366 (Fed. Cir. 2010) (claim is definite so long as it “can be given any reasonable meaning”).

That standard is at war with the Patent Act’s text, and it is antithetical to Congress’s purposes and decades of this Court’s case law. A rule that claims need only be *capable* of being construed does not come close to mandating the clarity and precision that Section 112, ¶ 2’s language commands. The “amenable to construction” requirement rules out only inkblots; ambiguous claims that can bear more than one reasonable reading necessarily pass muster. And a test that upholds claims so long as a construction adopted years later by a court is not “insolubly ambiguous” fails to require clear public notice of the claim’s scope when the patent is issued. Indeed, as this case illustrates, “it is not until three court of appeals judges randomly selected for that purpose pick the ‘right’ interpretation that the public, not to mention the patentee and its competitors, know what the patent actually claims.” *Enzo*, 605 F.3d at 1348 (Plager, J., dissenting from denial of reh’g); *see, e.g., Praxair, Inc. v. ATMI, Inc.*, 543 F.3d 1306, 1323-24 (Fed. Cir. 2008) (court “need not accept the constructions proposed by either party,” and concluding that the district court’s construction “is also not correct”).

The “insolubly ambiguous” test thus deprives the public of fair notice of claims’ boundaries and exposes consumers and would-be innovators alike to exploitation by patentees. Indeed, users of products and processes potentially subject to a patent who wish to secure a definitive determination of the patent’s valid scope (if it has any) often must devote considerable time and resources and potentially incur significant

risk. The “insolubly ambiguous” test, moreover, reinforces drafters’ already powerful incentives to draft at least some claims that are unclear in the first place, in the hope of capturing the “zone of uncertainty” that ambiguity creates, *United Carbon*, 317 U.S. at 236—in turn chilling the innovation that the patent laws exist to encourage.

The decision below, in fact, did not pretend that the “insolubly ambiguous” test has any footing in the text of Section 112, ¶ 2. Nor has the court of appeals suggested that its standard can be reconciled with the statutory mandate’s ends of providing clear public notice of claims’ scope and enabling efficient judicial determinations of patentability. Instead, the court of appeals has justified its approach based on several other considerations—none of which remotely supports such distortion of the statutory standard.

1. The primary asserted justification for the diluted definiteness standard applied below is that it “accord[s] respect to the statutory presumption of patent validity,” first applied at common law and now codified in 35 U.S.C. § 282. Pet. App. 22a. That presumption, however, does not at all support permitting ambiguous claims which lack the clarity and precision that Section 112, ¶ 2, requires.

Section 282, ¶ 1, establishes that “[a] patent,” and each claim within it, “shall be presumed valid.” 35 U.S.C. § 282, ¶ 1. The statute also makes clear, however, that “failure to comply with . . . any requirement of section 112” “shall be [a] defense,” which must “be pleaded.” *Id.* § 282, ¶ 2(3)(A). “The burden of establishing invalidity of a patent or any claim thereof” thus “rest[s] on the party asserting such invalidity.” *Id.* § 282, ¶ 1.

But nothing in Section 282 alters the legal “requirement[s]” of Section 112, ¶ 2. As this Court has held, Section 282’s presumption of validity requires that factual elements of invalidity defenses must “be proved by clear and convincing evidence.” *Microsoft Corp. v. i4i Ltd. P’ship*, 131 S. Ct. 2238, 2242 (2011). Although the statute “includes no express articulation of the standard of proof,” *id.* at 2245, “by the time Congress enacted § 282” in 1952, “the presumption of patent validity had long been a fixture of the common law” and had acquired a “settled meaning”: “[A] defendant raising an invalidity defense” must present “proof of the defense by clear and convincing evidence,” not merely by a “dubious preponderance” of proof. *Id.* at 2246-47 (quoting *Radio Corp. of Am. v. Radio Eng’g Labs., Inc.*, 293 U.S. 1, 8 (1934)). Applying the “general rule that a common-law term comes with its common-law meaning” absent a contrary indication in the statute, the Court construed Section 282 to retain that common-law meaning of the presumption of validity and as codifying the clear-and-convincing-evidence test. *Id.* at 2246.

This “heightened standard of *proof*” (*i4i*, 131 S. Ct. at 2246 (emphasis added)), however, has no bearing on the “requirement[s]” of clarity and precision that Section 112, ¶ 2, demands of patent claims. Section 282 does not purport to alter the legal standard that Section 112 establishes, or otherwise affect whether a patent claim satisfies that standard. To the contrary, Section 282 *incorporates* Section 112’s “requirement[s].”

Whether a patent claim satisfies Section 112’s requirements that it “particularly poin[t] out and distinctly clai[m]” the patentee’s invention is a *legal* inquiry as to which Section 282’s evidentiary stand-

ard is irrelevant. As lower courts have long held in other contexts, “there cannot appropriately be any evidentiary or factual burden with respect to” a “question of law.” *United States v. Watson*, 623 F.2d 1198, 1202 (7th Cir. 1980). “A question of law is by definition susceptible of only two answers: ‘yes,’ the requirements of legal principle are met or ‘no,’ they are not met.” *Ibid.* “A standard of proof, whether beyond a reasonable doubt or some other, simply has no application to” a “legal question,” such as “whether a given statement is material.” *United States v. Hausmann*, 711 F.2d 615, 617 (5th Cir. 1983) (per curiam); *see also United States v. Martinez*, 855 F.2d 621, 623 (9th Cir. 1988); *United States v. Farnham*, 791 F.2d 331, 334 (4th Cir. 1986); *United States v. Larranaga*, 787 F.2d 489, 496 (10th Cir. 1986); *United States v. Armilio*, 705 F.2d 939, 941 (8th Cir. 1983); *United States v. Berardi*, 629 F.2d 723, 727 (2d Cir. 1980); *United States v. Giacalone*, 587 F.2d 5, 7 (6th Cir. 1978).

Thus, as several Members of this Court have recognized, Section 282’s “strict standard of proof has no application” in cases “where the question of patent validity turns on the correct answer to *legal* questions.” *i4i*, 131 S. Ct. at 2253 (Breyer, J., joined by Scalia and Alito, JJ., concurring) (emphasis added). That is undoubtedly true of questions of validity, such as indefiniteness, that turn on whether the “patent applicant described his claims properly” as required by Section 112. *Ibid.*; *cf. Gen. Elec.*, 304 U.S. at 368 (holding claim “invalid on its face” for indefiniteness). Even the decision below acknowledged that “[i]ndefiniteness is a legal issue.” Pet. App. 12a.

Indeed, unlike some other invalidity defenses, indefiniteness presents not merely a question of “how

the law applies to *facts* as given,” *i4i*, 131 S. Ct. at 2253 (Breyer, J., concurring) (emphasis added), but a question of how the law applies in light of the antecedent *legal* determination of how a patent claim is properly interpreted. Whatever degree of clarity Section 112, ¶ 2, requires of patent claims, whether that standard is satisfied depends on what the claim *means*. As this Court has long held, the “interpretation of” patent claims is itself “a matter of law,” which lies “exclusively within the province of the court.” *Markman*, 517 U.S. at 372; *see id.* at 376-91; *see also, e.g., Winans v. Denmead*, 56 U.S. (15 How.) 330, 338 (1854) (“construing the letters-patent, and the description of the invention and specification of claim annexed to them,” “is a question of law, to be determined by the court”). Evidentiary thresholds appropriate for *factual* inquiries are thus utterly irrelevant in determining whether the text of a claim read in context—the interpretation of which is a legal issue to be decided by the court—points out an invention with the distinctness and particularity that Section 112 requires.

Nor should courts be reluctant to enforce Section 112’s clear mandate out of deference to the PTO’s determination that a patent is valid. Just as courts are perfectly capable of determining for themselves what clear patent claims mean, so too they are entirely able to discern independently whether a claim is sufficiently clear. This Court, indeed, has frequently resolved indefiniteness questions itself—sometimes in the first instance—and has applied the stringent statutory requirement of definiteness established in the statute, not a watered-down version diluted to accommodate the (then common-law) presumption of validity or out of deference to the agency’s determination of validity. *See, e.g., Gen. Elec.*, 304 U.S. at

369; see also *United Carbon*, 317 U.S. at 232; *Universal Oil*, 322 U.S. at 484.⁸

Properly understood, the now-codified presumption of validity thus has nothing to do with the degree of clarity that Section 112, ¶ 2, demands. As to issues of indefiniteness, Section 282 means simply that a court adjudicating a dispute involving a patent begins with the assumption that the patent is valid, and maintains that assumption unless and until the patent's validity is properly challenged. The party challenging the patent as indefinite must plead and prove that defense. See 35 U.S.C. § 282, ¶ 2(3)(A). But once the patent's compliance with Section 112 is put in issue, the court must decide that legal issue impartially—not with one thumb on the scales on the side of the private party who has secured a publicly granted monopoly.

2. The court of appeals also asserted that the lax “insolubly ambiguous” standard is appropriate to “protect the inventive contribution of patentees” whose “drafting of their patents has been less than ideal.” Pet. App. 22a (quoting *Exxon*, 265 F.3d at 1375). The ease or difficulty of satisfying the statutory requirement, however, is no basis for blue-penciling Section 112, ¶ 2, to permit ambiguous

⁸ Even if determinations regarding indefiniteness in some cases depended on any factual predicates on which deference to the PTO's findings might be appropriate, such deference is irrelevant in this case. Neither the Federal Circuit majority nor the concurrence purported to defer to any factual findings made by the agency. The Court thus has no occasion to decide here whether and in what circumstances deference to the PTO's subsidiary factual determinations is appropriate in adjudicating indefiniteness challenges.

claims in defiance of its text, Congress's purposes, and this Court's teaching. In any event, patent drafters are perfectly capable of satisfying the statutory standard of clarity.

It is the inventor himself, after all, who knows his invention best and is best positioned to avoid ambiguities. And drafters already have many well-recognized tools at their disposal to craft claims that particularly and distinctly delineate the invention. For example, inventors can include in the patent specification express definitions of the most important claim terms; positive and negative concrete examples of designs that fall inside and outside the claimed invention; and descriptions of and clear distinctions over the closest known prior art. See Surden, *supra*, at 1816-20; see, e.g., *Eibel*, 261 U.S. at 55-58. And they may include language describing an invention's function, provided that it is tethered to a specific, concrete structure. 35 U.S.C. § 112, ¶ 6. Indeed, by statute, patentees are *required* to describe the invention in "full, clear, concise, and exact terms." *Id.* § 112, ¶ 1. If inventors do not manage to make their claims clear, it is not for a lack of tools, but for a lack of trying.

Even if inventors have difficulty utilizing these tools in initially drafting particular and distinct claims, they still are not left out in the cold. An inventor "has an opportunity . . . to amend ambiguous claims to clearly and precisely define the metes and bounds of the claimed invention," while the application is pending before the agency. *MPEP* § 2173.02. Inventors, moreover, can submit more than one claim in the same patent, 35 U.S.C. § 112, ¶ 2, giving them multiple opportunities to mark the boundaries of their invention with sufficient clarity.

Any doubt that holding patent drafters to the statutory standard will not impose an onerous, unbearable burden is erased by the fact that the PTO, which decides whether to issue a patent in the first instance, *already* applies the statutory standard. Unlike the Federal Circuit, the PTO currently rejects claims as indefinite under Section 112, ¶ 2, if “a person of ordinary skill in the relevant art would read” the claim “with more than one reasonable interpretation.” *MPEP* § 2173.02(I); *see also Miyazaki*, 2008 WL 5105055, at *10 (rejecting claims as indefinite because, when read in light of the specification, they were “amenable to two or more plausible claim constructions”). Inventors—who already are required to draft unambiguous claims that are not subject to multiple reasonable readings to secure a patent from the PTO—would have no basis to complain if courts tested claims by the same standard.

Nor does complying with the statutory standard of definiteness require inventors to draft claims so narrowly as to invite evasion by clever infringers. As the PTO recognizes, claims can be broad yet not indefinite, so long as the boundaries of what they encompass are not ambiguous. *See MPEP* § 2173.02(I) (“A broad claim is not indefinite merely because it encompasses a wide scope of subject matter provided the scope is clearly defined.”). Moreover, where sub-optimal claim draftsmanship would otherwise enable others who make or use the patentee’s invention to avoid “literally infring[ing] upon the express terms of a patent claim” by making “insubstantial” alterations to the process or product, the “doctrine of equivalents” ensures that the infringer will not escape liability. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21, 24 (1997).

3. The court of appeals has previously justified the “insolubly ambiguous” standard based on the fear that “cases frequently present close questions of claim construction,” and “[u]nder a broad concept of indefiniteness, all but the clearest claim construction issues could be regarded as giving rise to invalidating indefiniteness in the claims at issue.” *Exxon*, 265 F.3d at 1375. That fear is unfounded. Many claim-construction disputes do not involve real disagreement over a claim’s *scope*, but only over the manner in which the words of the claim should be described in laypersons’ terms for the jury. Differences of opinion over how to translate a claim for lay jurors have no bearing on whether the boundaries of the claim itself are definite to a skilled artisan.

Many disputes that do bear on claims’ scope, moreover, arise precisely because parties tender *unreasonable* interpretations of the claims. But such disputes do not render a claim indefinite. Section 112, ¶ 2, does not render a claim invalid merely because more than one interpretation is theoretically *conceivable*. As a general matter, this Court has explained, “the certainty which the law requires in patents is not greater than is *reasonable*, having regard to their subject-matter.” *Minerals Separation, Ltd. v. Hyde*, 242 U.S. 261, 270 (1916) (emphasis added). Only genuinely ambiguous claims that are susceptible of more than one *reasonable* interpretation when read in light of the specification are forbidden by the statute. One skilled in the art can have “reasonable” “certainty” of a claim’s meaning even if outlandish, implausible readings of the claim’s text can be posited by counsel zealously advocating their clients’ interests. But to be reasonably certain of the claim’s correct interpretation, the skilled artisan must be

able to conclude that no other reasonable readings exist.

In any event, the court of appeals' concern that the frequency of claim-construction disputes justifies relaxing the statutory standard has matters backwards. That court's tolerance of ambiguous claims is a primary reason why such unclear claims and disputes over their meaning persist. The "insolubly ambiguous" standard gives patent drafters little incentive to craft their claims clearly in the first instance. And that flawed standard leaves patentees free to take changing, even inconsistent positions regarding a claim's meaning—in litigation, licensing negotiations, etc.—with little fear that doing so will render the claim invalid by revealing a latent ambiguity. The prevalence of disputes over claim interpretation is not a reason to water down the statute. It is part of the problem that Section 112, ¶ 2, exists to solve.

II. RESPONDENT'S CLAIMS ARE INDEFINITE UNDER THE CORRECT STATUTORY STANDARD.

The court of appeals' entrenched rejection of the particular-and-distinct-claiming standard required by Section 112, ¶ 2's text, purposes, and this Court's precedent is erroneous and at a minimum requires vacatur. But both the circumstances of this case—both the district court and court of appeals decided the indefiniteness issue as a matter of law—and the lower courts' need for guidance fully justify this Court's application of the correct standard here to reverse the judgment below.

A. There can be no serious dispute here that the relevant claims in the Lekhtman Patent, susceptible as they are to more than one reasonable interpreta-

tion, are ambiguous and therefore indefinite. Despite appearing to apply the same legal principles of claim interpretation, the Federal Circuit majority and concurrence adopted very different readings of key claim language and thus different understandings of the claims' scope. The majority concluded that the configuration of electrodes claimed by the patent—including the “spaced relationship” between them—is dictated by the invention’s intended *function* of removing interference from muscle signals. Pet. App. 16a-21a. On that view, the claim covers only devices with special electrode configurations—determined by trial and error—that cancel out the muscle signals in each hand, enabling measurement of heart signals alone. *Id.* at 17a-18a. The concurrence, in contrast, concluded that there is no “functional linkage” between the invention’s goal of eliminating muscle signals and the configuration of the electrodes. *Id.* at 31a-32a (Schall, J., concurring). Beyond certain broad, “inherent parameters” present in the patented design (and in the prior art)—*i.e.*, the electrodes on each side cannot touch each other, yet must be close enough for a person’s hand to touch both simultaneously—the “spaced relationship” described by the claim means *any* “fixed spatial relationship between” the electrodes. *Id.* at 31a; *cf. id.* at 16a (majority opinion).

Those two readings of the claim differ starkly, and the difference between them bears directly on the scope of the patent. Consider, for example, a skilled artisan in 1994 who wished to use the exact configuration and spacing of electrodes depicted in the closest prior art (the Fujisaki Patent), but desired to innovate some different means other than the electrodes’ spacing—such as additional circuitry—to equalize the muscle signals. Under the major-

ity's reading of the claims, that new device would be permissible. Under the concurrence's reading, however, it could infringe the Lekhtman Patent. Until a majority of a randomly selected panel of the Federal Circuit interpreted the claims, 19 years after the patent issued, a skilled artisan could not say with any confidence which view was correct. In the meantime, the ambiguity allowed the patent owner to adopt shifting, inconsistent positions regarding the claims' scope to suit the tactical needs of the moment—sometimes urging a broad, non-functional view of “spaced relationship,” while at other times urging a narrower, functional view.

Regardless whether the majority or concurrence's reading (if either) is ultimately more sound, there is no serious dispute that both interpretations are at least reasonable. Neither the majority nor the concurrence, in fact, even suggested, much less demonstrated, that the other opinion's reading was *not* reasonable. Moreover, while both the majority and concurrence disagreed to some extent with the district court's final interpretation, neither one opined that *that* interpretation was unreasonable either. Pet. App. 15a-25a; *id.* at 29a-32a (Schall, J., concurring); *cf.* Pet. App. 44a (district court's construction).

Respondent's claims thus fall far short of Section 112, ¶ 2's standard, and well illustrate the type of ambiguities that the statute prohibits but the “insolubly ambiguous” standard allows. Because the claims here, read in light of the specification, reasonably could refer at least either to a heart-rate monitor with a special electrode configuration defined by its function, or to a whole category of heart-rate monitors whose electrodes merely need to fit someone's hands, they necessarily do not point out and claim

the invention “clearly,” “plainly,” “singly,” and “not confused[ly].” *See* Webster’s 1872, at 217, 522. Neither the public, in determining which types of heart-rate monitors are covered by the patent and which are not, nor a court adjudicating whether respondent’s claimed invention is novel, non-obvious, and useful, can tell from reading the claim in context what it encompasses.

B. Respondent’s claims closely resemble those that this Court has previously invalidated. In *General Electric*, for example, the Court held invalid for indefiniteness a claim for a tungsten light-bulb filament “made up mainly of a number of *comparatively* large grains of such size and contour as to prevent substantial sagging and offsetting during a normal or commercially useful life,” because the claim’s meaning was not clear to one skilled in the art. 304 U.S. at 368 (emphasis added); *see id.* at 369-74. The claim failed to disclose even to a skilled artisan “the structural characteristics” of the tungsten grains. *Id.* at 370. “[T]he specification” did “not attempt in any way to describe the filament, except by mention of its coarse-grained quality,” or explain how it differed from the prior art. *Id.* at 373. The only clue the patent provided as to what was covered was its intended function of “prevent[ing] substantial sagging and offsetting.” *Id.* at 370. But, as the Court explained, the patentee could not cure the claim’s indeterminacy simply by pointing to a function his invention performs—especially when that function was asserted to distinguish the invention from the prior art. *See id.* at 371-72 (“a characteristic essential to novelty may not be distinguished from the old art solely by its tendency to remedy the problems in the art met by the patent”).

Similarly, in *United Carbon*, the Court rejected a claim for “sustantially [sic] pure carbon black in the form of commercially uniform, comparatively small, rounded, smooth aggregates having a spongy or porous interior.” 317 U.S. at 231; *see id.* at 233-37. The claim was “bad for indefiniteness,” the Court held, because its terms describing the product’s dimensions and other structural attributes could bear a range of meanings to one skilled in the art. *See id.* at 233-34, 237. “Whether the vagueness of the claim has its source in the language employed or in the somewhat indeterminate character of the advance claimed to have been made in the art,” the Court explained, “is not material. An invention must be capable of accurate definition, and it must be accurately defined, to be patentable.” *Id.* at 237. As in *General Electric*, the patent’s only hints as to what the ambiguous terms in the claim meant were “inaccurate suggestions of the functions of the product,” which were insufficient to define the invention particularly and distinctly. *Id.* at 234.

General Electric, 304 U.S. 364, and *United Carbon*, 317 U.S. 228, provide helpful guideposts that illustrate the correct analysis and highlight the indefiniteness of respondent’s claims. Here, as in both *General Electric* and *United Carbon*, the claims’ language, even in light of the specification, points in multiple directions, leaving the reader unable to discern with reasonable certainty the metes and bounds of what the inventor “regards as his invention.” 35 U.S.C. § 112, ¶ 2. The claims might sweep as broadly as the Federal Circuit concurrence or the district court ultimately concluded, or they might refer more narrowly, as the majority (and, tentatively, the district court) held, to a device in which a particular electrode configuration is critical to the functional

outcome. That is dispositive of the claims' invalidity. Indeed, here the ambiguity is particularly problematic because it concerns the very attribute of the invention—its function—that the inventor regarded as his invention and later asserted made it novel.

As in *General Electric* and *United Carbon*, it may be true here that Lekhtman intended to claim only a device that accomplished the function of removing muscle signals. But as those cases teach, that possibility is irrelevant to indefiniteness, because an otherwise-fatal ambiguity as to what an invention *is* cannot be cured by the reader's understanding of what it *does*. It likewise makes no difference to indefiniteness whether a reader skilled in the art, if *instructed* to ascertain the "spaced relationship" necessary to achieve the function of canceling out muscle signals, could readily do so, despite the absence in the specification of any concrete description or illustration of the necessary spacing. Here it is uncertain from the claims, as the majority and concurring opinions show, *whether or not* that function dictates the meaning of "spaced relationship" and thus prescribes the scope of the claims. A claim that does not answer that basic question does not particularly point out and distinctly claim the invention as Section 112, ¶ 2, requires.

CONCLUSION

Congress and this Court have made clear that patent claims must "particularly poin[t] out and distinctly clai[m]" the purported invention. And the statutory language and this Court's case law distilling Congress's core objectives leave no doubt that ambiguous claims fall short of this standard. The "insolubly ambiguous" standard that the court of appeals applies, and which led inexorably to its conclu-

sion in this case, cannot be reconciled with Section 112, ¶ 2's plain language, its purpose, or controlling precedent. This Court should reject the court of appeals' departure from the statute's requirements, re-affirm the standard of particularity and distinctness established long ago, and demonstrate the correct application of that standard by holding respondent's claims indefinite and invalid.

The judgment of the court of appeals should be reversed.

Respectfully submitted.

THOMAS G. HUNGAR
MATTHEW D. MCGILL
JONATHAN C. BOND
GIBSON, DUNN & CRUTCHER LLP
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 955-8500

JAMES E. GERINGER
JEFFREY S. LOVE
JOHN D. VANDENBERG
Counsel of Record
PHILIP WARRICK
KLARQUIST SPARKMAN, LLP
One World Trade Center
Suite 1600
121 S.W. Salmon Street
Portland, OR 97204
(503) 595-5300
john.vandenberg@klarquist.com

Counsel for Petitioner Nautilus, Inc.

February 24, 2014

APPENDIX

The Constitution of the United States, article I, section 8, clause 8, provides:

Section 8.

The Congress shall have Power . . .

. . .

To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;

. . .

Section 2 of the Act of Apr. 10, 1790, ch. 7, 1 Stat. 109, 110, provided:

SEC. 2. *And be it further enacted*, That the grantee or grantees of each patent shall, at the time of granting the same, deliver to the Secretary of State a specification in writing, containing a description, accompanied with drafts or models, and explanations and models (if the nature of the invention or discovery will admit of a model) of the thing or things, by him or them invented or discovered, and described as aforesaid, in the said patents; which specification shall be so particular, and said models so exact, as not only to distinguish the invention or discovery from other things before known and used, but also to enable a workman or other person skilled in the art or manufacture, whereof it is a branch, or wherewith it may be nearest connected, to make, construct, or use the same, to the end that the public may have the full benefit thereof, after the expiration of the patent term; which specification shall be filed in the office of the said Secretary, and certified copies thereof,

shall be competent evidence in all courts and before all jurisdictions, where any matter or thing, touching or concerning such patent, right, or privilege, shall come in question.

Section 3 of the Act of Feb. 21, 1793, ch. 11, 1 Stat. 318, 321, provided:

SEC. 3. *And be it further enacted*, That every inventor, before he can receive a patent, shall swear or affirm, that he does verily believe, that he is the true inventor or discoverer of the art, machine, or improvement, for which he solicits a patent, which oath or affirmation may be made before any person authorized to administer oaths, and shall deliver a written description of his invention, and of the manner of using, or process of compounding the same, in such full, clear and exact terms, as to distinguish the same from all other things before known, and to enable any person skilled in the art or science, of which it is a branch, or with which it is most nearly connected, to make, compound, and use the same. And in the case of any machine, he shall fully explain the principle, and the several modes in which he has contemplated the application of that principle or character, by which it may be distinguished from other inventions; and he shall accompany the whole with drawings and written references, where the nature of the case admits of drawings, or with specimens of the ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention is of a composition of matter; which description, signed by himself and attested by two witnesses, shall be filed in the office of the Secretary of State, and certified copies thereof

shall be competent evidence, in all courts, where any matter or thing, touching such patent-right, shall come in question. And such inventor shall, moreover, deliver a model of his machine, provided, the secretary shall deem such model to be necessary.

Section 6 of the Act of July 4, 1836, ch. 357, 5 Stat. 117, 119, provided:

SEC. 6. *And be it further enacted*, That any person or persons having discovered or invented any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvement on any art, machine, manufacture, or composition of matter, not known or used by others before his or their discovery or invention thereof, and not, at the time of his application for a patent, in public use or on sale, with his consent or allowance, as the inventor or discoverer; and shall desire to obtain an exclusive property therein may make application in writing to the Commissioner of Patents, expressing such desire, and the Commissioner, on due proceedings had, may grant a patent therefor. But before any inventor shall receive a patent for any such new invention or discovery, he shall deliver a written description of his invention or discovery, and of the manner and process of making, constructing, using, and compounding the same, in such full, clear, and exact terms, avoiding unnecessary prolixity, as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same; and in case of any machine, he shall fully explain the principle and the several modes in which he has contemplated the application of that principle

or character by which it may be distinguished from other inventions; and shall particularly specify and point out the part, improvement, or combination, which he claims as his own invention or discovery. He shall, furthermore, accompany the whole: with a drawing, or drawings, and written references, where the nature of the case admits of drawings, or with specimens of ingredients, and of the composition of matter, sufficient in quantity for the purpose of experiment, where the invention or discovery is of a composition of matter; which descriptions and drawings, signed by the inventor and attested by two witnesses, shall be filed in the Patent Office; and he shall moreover furnish a model of his invention, in all cases which admit of a representation by model, of a convenient size to exhibit advantageously its several parts. The applicant shall also make oath or affirmation that he does verily believe that he is the original and first inventor or discoverer of the art, machine, composition, or improvement, for which he solicits a patent, and that he does not know or believe that the same was ever before known or used; and also of what country he is a citizen; which oath or affirmation may be made before any person authorized by law to administer oaths.

Section 26 of the Act of July 8, 1870, ch. 230, 16 Stat. 198, 201, provided:

SEC. 26. *And be it further enacted*, That before any inventor or discoverer shall receive a patent for his invention or discovery, he shall make application therefor, in writing, to the commissioner, and shall file in the patent office a written description of the same, and of the manner and process of making, con-

structing, compounding and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound and use the-same; and in case of a machine, he shall explain the principle thereof, and the best mode in which he has contemplated applying that principle so as to distinguish it from other inventions; and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery; and said specification and claim shall be signed by the inventor and attested by two witnesses.

Section 112 of Pub. L. No. 82-593, § 112, 66 Stat. 792, 798 (1952), provided:

§ 112. Specification

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

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

[¶ 3] An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure,

material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Section 111(a) of Title 35, United States Code (2011), provided:

§ 111. Application

(a) IN GENERAL.—

(1) WRITTEN APPLICATION.—An application for patent shall be made, or authorized to be made, by the inventor, except as otherwise provided in this title, in writing to the Director.

(2) CONTENTS.—Such application shall include—

(A) a specification as prescribed by section 112 of this title;

(B) a drawing as prescribed by section 113 of this title; and

(C) an oath by the applicant as prescribed by section 115 of this title.

(3) FEE AND OATH.—The application must be accompanied by the fee required by law. The fee and oath may be submitted after the specification and any required drawing are submitted, within such period and under such conditions, including the payment of a surcharge, as may be prescribed by the Director.

(4) FAILURE TO SUBMIT.—Upon failure to submit the fee and oath within such prescribed period, the application shall be regarded as

abandoned, unless it is shown to the satisfaction of the Director that the delay in submitting the fee and oath was unavoidable or unintentional. The filing date of an application shall be the date on which the specification and any required drawing are received in the Patent and Trademark Office.

Section 112 of Title 35, United States Code (2011), provided:

§ 112. Specification

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

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

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

[¶ 4] Subject to the following paragraph, a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by

reference all the limitations of the claim to which it refers.

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

[¶ 6] An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

Section 161 of Title 35, United States Code (2011), provided:

§ 161. Patents for plants

[¶ 1] Whoever invents or discovers and asexually reproduces any distinct and new variety of plant, including cultivated sports, mutants, hybrids, and newly found seedlings, other than a tuber propagated plant or a plant found in an uncultivated state, may obtain a patent therefor, subject to the conditions and requirements of this title.

[¶ 2] The provisions of this title relating to patents for inventions shall apply to patents for plants, except as otherwise provided.

Section 162 of Title 35, United States Code (2011), provided:

§ 162. Description, claim

[¶ 1] No plant patent shall be declared invalid for noncompliance with section 112 of this title if the description is as complete as is reasonably possible.

[¶ 2] The claim in the specification shall be in formal terms to the plant shown and described.

Section 251 of Title 35, United States Code (2011), provided:

§ 251. Reissue of defective patents

[¶ 1] Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid, by reason of a defective specification or drawing, or by reason of the patentee claiming more or less than he had a right to claim in the patent, the Director shall, on the surrender of such patent and the payment of the fee required by law, reissue the patent for the invention disclosed in the original patent, and in accordance with a new and amended application, for the unexpired part of the term of the original patent. No new matter shall be introduced into the application for reissue.

[¶ 2] The Director may issue several reissued patents for distinct and separate parts of the thing patented, upon demand of the applicant, and upon payment of the required fee for a reissue for each of such reissued patents.

[¶ 3] The provisions of this title relating to applications for patent shall be applicable to

applications for reissue of a patent, except that application for reissue may be made and sworn to by the assignee of the entire interest if the application does not seek to enlarge the scope of the claims of the original patent.

[¶ 4] No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.

Section 282 of Title 35, United States Code (2011), provided:

§ 282. Presumption of validity; defenses

[¶ 1] A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. Notwithstanding the preceding sentence, if a claim to a composition of matter is held invalid and that claim was the basis of a determination of nonobviousness under section 103(b)(1), the process shall no longer be considered nonobvious solely on the basis of section 103(b)(1). The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

[¶ 2] The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

- (1) Noninfringement, absence of liability for infringement or unenforceability,

(2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability,

(3) Invalidity of the patent or any claim in suit for failure to comply with—

(A) any requirement of section 112, except that the failure to disclose the best mode shall not be a basis on which any claim of a patent may be canceled or held invalid or otherwise unenforceable; or

(B) any requirement of section 251.

(4) Any other fact or act made a defense by this title.

[¶ 3] In actions involving the validity or infringement of a patent the party asserting invalidity or noninfringement shall give notice in the pleadings or otherwise in writing to the adverse party at least thirty days before the trial, of the country, number, date, and name of the patentee of any patent, the title, date, and page numbers of any publication to be relied upon as anticipation of the patent in suit or, except in actions in the United States Court of Federal Claims, as showing the state of the art, and the name and address of any person who may be relied upon as the prior inventor or as having prior knowledge of or as having previously used or offered for sale the invention of the patent in suit. In the absence of such notice proof of the said matters may not be made at the trial except on such terms as the court requires. Invalidity of the extension of a patent term or any portion thereof under section 154(b) or 156 of this title because of the material failure—

(1) by the applicant for the extension, or

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(2) by the Director,

to comply with the requirements of such section shall be a defense in any action involving the infringement of a patent during the period of the extension of its term and shall be pleaded. A due diligence determination under section 156(d)(2) is not subject to review in such an action.