

134 S.Ct. 2120  
Supreme Court of the United States

NAUTILUS, INC., Petitioner  
v.  
BIOSIG INSTRUMENTS, INC.

No. 13-369. | Argued April 28,  
2014. | Decided June 2, 2014.

**Synopsis**

**Background:** Assignee of patent directed to a heart rate monitor used in exercise equipment brought infringement action against competitor. Following claim construction, the United States District Court for the Southern District of New York, Alvin K. Hellerstein, J., granted competitor's motion for summary judgment, holding that the patent was invalid as indefinite. Assignee appealed. The United States Court of Appeals for the Federal Circuit, Wallach, Circuit Judge, 715 F.3d 891, reversed, and certiorari was granted.

**Holdings:** The Supreme Court, Justice Ginsburg, held that:

[1] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention, abrogating *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, *Exxon Research & Engineering Co. v. United States*, 265 F.3d 1371, *Every Penny Counts, Inc. v. Wells Fargo Bank, N. A.*, 2014 WL 869092, and

[2] remand was required to permit the Court of Appeals to reconsider, under the proper standard for definiteness, whether the claim term “spaced relationship” in patent delineated the permissible spacing of electrodes with sufficient precision.

Vacated and remanded.

West Headnotes (15)

[1] **Patents**

🔑 Ambiguity, Uncertainty, or Indefiniteness

A patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention; abrogating *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, *Exxon Research & Engineering Co. v. United States*, 265 F.3d 1371, *Every Penny Counts, Inc. v. Wells Fargo Bank, N. A.*, 2014 WL 869092. 35 U.S.C.A. § 112.

160 Cases that cite this headnote

[2] **Patents**

🔑 Patents

The patent monopoly is a property right, and like any property right, its boundaries should be clear. U.S.C.A. Const. Art. 1, § 8, cl. 8.

Cases that cite this headnote

[3] **Patents**

🔑 Ambiguity, Uncertainty, or Indefiniteness

Definiteness of a patent is to be evaluated from the perspective of someone skilled in the relevant art. 35 U.S.C.A. § 112.

4 Cases that cite this headnote

[4] **Patents**

🔑 Ambiguity, Uncertainty, or Indefiniteness

In assessing a patent's definiteness, claims are to be read in light of the patent's specification and prosecution history. 35 U.S.C.A. § 112.

130 Cases that cite this headnote

[5] **Patents**

🔑 Ambiguity, Uncertainty, or Indefiniteness

Definiteness is measured from the viewpoint of a person skilled in the art at the time the patent was filed. 35 U.S.C.A. § 112.

3 Cases that cite this headnote

- [6] **Patents**  
🔑 Ambiguity, Uncertainty, or Indefiniteness  
The patent statute's definiteness requirement must take into account the inherent limitations of language; some modicum of uncertainty is the price of ensuring the appropriate incentives for innovation. 35 U.S.C.A. § 112.  
4 Cases that cite this headnote
- [7] **Patents**  
🔑 State of the art  
Patents are not addressed to lawyers, or even to the public generally, but rather to those skilled in the relevant art. 35 U.S.C.A. § 112.  
4 Cases that cite this headnote
- [8] **Patents**  
🔑 Ambiguity, Uncertainty, or Indefiniteness  
A patent must be precise enough to afford clear notice of what is claimed, thereby apprising the public of what is still open to them; otherwise there would be a zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims. 35 U.S.C.A. § 112.  
26 Cases that cite this headnote
- [9] **Patents**  
🔑 Ambiguity, Uncertainty, or Indefiniteness  
The patent drafter is in the best position to resolve the ambiguity in patent claims. 35 U.S.C.A. § 112.  
2 Cases that cite this headnote
- [10] **Patents**  
🔑 Ambiguity, Uncertainty, or Indefiniteness  
The patent statute's definiteness provision requires that a patent's claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty; the definiteness requirement, so understood, mandates clarity, while recognizing that absolute precision is unattainable. 35 U.S.C.A. § 112.  
175 Cases that cite this headnote
- [11] **Patents**  
🔑 Ambiguity, Uncertainty, or Indefiniteness  
The certainty which the law requires in patents is not greater than is reasonable, having regard to their subject-matter. 35 U.S.C.A. § 112.  
12 Cases that cite this headnote
- [12] **Patents**  
🔑 Scope of Review  
Although the Supreme Court does not micromanage the Federal Circuit's particular word choice in applying patent-law doctrines, it must ensure that the Federal Circuit's test is at least probative of the essential inquiry.  
1 Cases that cite this headnote
- [13] **Federal Courts**  
🔑 Particular cases  
Remand was required to permit the Court of Appeals to reconsider, under the proper standard for definiteness, whether the claim term "spaced relationship" in patent for a heart rate monitor used in exercise equipment delineated the permissible spacing of electrodes with sufficient precision to satisfy statutory requirements. 35 U.S.C.A. § 112.  
Cases that cite this headnote
- [14] **Federal Courts**  
🔑 Presentation of Questions Below or on Review; Record; Waiver  
The Supreme Court is a court of review, not of first view.  
2 Cases that cite this headnote
- [15] **Patents**  
🔑 In general; utility  
US Patent 5,337,753. Cited.

Cases that cite this headnote

**\*2122 Syllabus \***

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 [the] invention.” 35 U.S.C. § 112, ¶ 2. This case concerns the proper reading of the statute’s clarity and precision demand.

Assigned to respondent Biosig Instruments, Inc., the patent in dispute (the ‘753 patent) involves a heart-rate monitor used with exercise equipment. Prior heart-rate monitors, the patent asserts, were often inaccurate in measuring the electrical signals accompanying each heartbeat (electrocardiograph or ECG signals) because of the presence of other electrical signals (electromyogram or EMG signals), generated by the user’s skeletal muscles, that can impede ECG signal detection. The invention claims to improve on prior art by detecting and processing ECG signals in a way that filters out the EMG interference.

Claim 1 of the ‘753 patent, which contains the limitations critical to this dispute, refers to a “heart rate monitor for use by a user in association with exercise apparatus and/or exercise procedures.” The claim “comprise[s],” among other elements, a cylindrical bar fitted with a display device; “electronic circuitry including a difference amplifier”; and, on each half of the cylindrical bar, a “live” electrode and a “common” electrode “mounted ... in spaced relationship with each other.”

Biosig filed this patent infringement suit, alleging that Nautilus, Inc., without obtaining a license, sold exercise machines containing Biosig’s patented technology. The District Court, after conducting a hearing to determine the proper construction of the patent’s claims, granted Nautilus’ motion for summary judgment on the ground that the claim term “in spaced relationship with each other” failed § 112, ¶ 2’s definiteness requirement. The Federal Circuit reversed and remanded, concluding that a patent claim passes the § 112, ¶ 2 threshold so long as the claim is “amenable to construction,” and the claim, as construed, is not “insolubly ambiguous.” Under that standard, the court determined, the ‘753 patent survived indefiniteness review.

**\*2123 Held :**

1. A patent is invalid for indefiniteness if its claims, read in light of the patent’s specification and prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. The parties agree that definiteness is to be evaluated from the perspective of a person skilled in the relevant art, that claims are to be read in light of the patent’s specification and prosecution history, and that definiteness is to be measured as of the time of the patent application. The parties disagree as to how much imprecision § 112, ¶ 2 tolerates.

Section 112’s definiteness requirement must take into account the inherent limitations of language. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 731, 122 S.Ct. 1831, 152 L.Ed.2d 944. On the one hand, some modicum of uncertainty is the “price of ensuring the appropriate incentives for innovation,” *id.*, at 732, 122 S.Ct. 1831; and patents are “not addressed to lawyers, or even to the public generally,” but to those skilled in the relevant art, *Carnegie Steel Co. v. Cambria Iron Co.*, 185 U.S. 403, 437, 22 S.Ct. 698, 46 L.Ed. 968. At the same time, a patent must be precise enough to afford clear notice of what is claimed, thereby “ ‘appris [ing] the public of what is still open to them,’ ” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373, 116 S.Ct. 1384, 134 L.Ed.2d 577, in a manner that avoids “[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims,” *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236, 63 S.Ct. 165, 87 L.Ed. 232. The standard adopted here mandates clarity, while recognizing that absolute precision is unattainable. It also accords with opinions of this Court stating that “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, 37 S.Ct. 82, 61 L.Ed. 286. Pp. 2127 – 2129.

2. The Federal Circuit’s standard, which tolerates some ambiguous claims but not others, does not satisfy the statute’s definiteness requirement. The Court of Appeals inquired whether the ‘753 patent’s claims were “amenable to construction” or “insolubly ambiguous,” but such formulations lack the precision § 112, ¶ 2 demands. To tolerate imprecision just short of that rendering a claim “insolubly ambiguous” would diminish the definiteness requirement’s public-notice function and foster the innovation-discouraging “zone of uncertainty,” *United Carbon*, 317 U.S., at 236, 63 S.Ct. 165, against which this

Court has warned. While some of the Federal Circuit's fuller explications of the term "insolubly ambiguous" may come closer to tracking the statutory prescription, this Court must ensure that the Federal Circuit's test is at least "probative of the essential inquiry." *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40, 117 S.Ct. 1040, 137 L.Ed.2d 146. The expressions "insolubly ambiguous" and "amenable to construction," which permeate the Federal Circuit's recent decisions concerning § 112, ¶ 2, fall short in this regard and can leave courts and the patent bar at sea without a reliable compass. Pp. 2129 – 2130.

3. This Court, as "a court of review, not of first view," *Cutter v. Wilkinson*, 544 U.S. 709, 718, n. 7, 125 S.Ct. 2113, 161 L.Ed.2d 1020, follows its ordinary practice of remanding so that the Federal Circuit can reconsider, under the proper standard, whether the relevant claims in the '753 patent are sufficiently definite, see, e.g., *Johnson v. California*, 543 U.S. 499, 515, 125 S.Ct. 1141, 160 L.Ed.2d 949. P. 2131.

715 F.3d 891, vacated and remanded.

\*2124 GINSBURG, J., delivered the opinion for a unanimous Court.

#### Attorneys and Law Firms

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#### Opinion

Justice GINSBURG delivered the opinion of the Court.

[1] 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 [the] invention." 35 U.S.C. § 112, ¶ 2 (2006 ed.) (emphasis added). This case, involving a heart-rate monitor used with exercise equipment, concerns the proper reading of the statute's clarity and precision demand. According to the Federal Circuit, a patent claim passes the § 112, ¶ 2 threshold so long as the claim is "amenable to construction," and the claim, as construed, is not "insolubly ambiguous." 715 F.3d 891, 898–899 (2013). We conclude that the Federal Circuit's formulation, which tolerates some ambiguous claims but not others, does not satisfy the statute's definiteness requirement. In place of the "insolubly ambiguous" standard, we hold that a patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention. Expressing no opinion on the validity of the patent-in-suit, we remand, instructing the Federal Circuit to decide the case employing the standard we have prescribed.

#### I

[2] Authorized by the Constitution "[t]o promote the Progress of Science and useful Arts, by securing for limited Times to ... Inventors the exclusive Right to their ... Discoveries," Art. I, § 8, cl. 8, Congress has enacted patent laws rewarding inventors with a limited monopoly. "Th[at] monopoly is a property right," and "like any property right, its boundaries should be clear." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 730, 122 S.Ct. 1831, 152 L.Ed.2d 944 (2002). See also *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 373, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996) ("It has long been understood that a patent must describe the exact scope of an invention and its manufacture...."). Thus, when Congress enacted the first Patent Act in 1790, it directed that patent grantees file a written specification "containing a description ... of the thing or things ... invented or discovered," which "shall be so particular" as to "distinguish the invention or discovery from other things before known \*2125 and used." Act of Apr. 10, 1790, § 2, 1 Stat. 110.

The patent laws have retained this requirement of definiteness even as the focus of patent construction has shifted. Under early patent practice in the United States, we have recounted, it was the written specification that "represented the key to

the patent.” *Markman*, 517 U.S., at 379, 116 S.Ct. 1384. Eventually, however, patent applicants began to set out the invention’s scope in a separate section known as the “claim.” See generally 1 R. Moy, *Walker on Patents* § 4.2, pp. 4–17 to 4–20 (4th ed. 2012). The Patent Act of 1870 expressly conditioned the receipt of a patent on the inventor’s inclusion of one or more such claims, described with particularity and distinctness. See Act of July 8, 1870, § 26, 16 Stat. 201 (to obtain a patent, the inventor must “particularly point out and distinctly claim the part, improvement, or combination which [the inventor] claims as his invention or discovery”).

The 1870 Act’s definiteness requirement survives today, largely unaltered. Section 112 of the Patent Act of 1952, applicable to this case, requires the patent applicant to conclude the specification 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 (2006 ed.). A lack of definiteness renders invalid “the patent or any claim in suit.” § 282, ¶ 2(3).<sup>1</sup>

## II

### A

The patent in dispute, U.S. Patent No. 5,337,753 (’753 patent), issued to Dr. Gregory Lekhtman in 1994 and assigned to respondent Biosig Instruments, Inc., concerns a heart-rate monitor for use during exercise. Previous heart-rate monitors, the patent asserts, were often inaccurate in measuring the electrical signals accompanying each heartbeat (electrocardiograph or ECG signals). The inaccuracy was caused by electrical signals of a different sort, known as electromyogram or EMG signals, generated by an exerciser’s skeletal muscles when, for example, she moves her arm, or grips an exercise monitor with her hand. These EMG signals can “mask” ECG signals and thereby impede their detection. App. 52, 147.

Dr. Lekhtman’s invention claims to improve on prior art by eliminating that impediment. The invention focuses on a key difference between EMG and ECG waveforms: while ECG signals detected from a user’s left hand have a polarity opposite to that of the signals detected from her right hand,<sup>2</sup> EMG signals from each hand have the same polarity. The patented device works by measuring equalized EMG signals detected at each hand and then using circuitry to subtract the

identical EMG signals from each other, thus filtering out the EMG interference.

\*2126 As relevant here, the ’753 patent describes a heart-rate monitor contained in a hollow cylindrical bar that a user grips with both hands, such that each hand comes into contact with two electrodes, one “live” and one “common.” The device is illustrated in figure 1 of the patent, *id.*, at 41, reproduced in the Appendix to this opinion.

Claim 1 of the ’753 patent, which contains the limitations critical to this dispute, refers to a “heart rate monitor for use by a user in association with exercise apparatus and/or exercise procedures.” *Id.*, at 61. The claim “comprise[s],” among other elements, an “elongate member” (cylindrical bar) with a display device; “electronic circuitry including a difference amplifier”; and, on each half of the cylindrical bar, a live electrode and a common electrode “mounted ... in spaced relationship with each other.” *Ibid.*<sup>3</sup> The claim sets forth additional elements, including that the cylindrical bar is to be held in such a way that each of the user’s hands “contact[s]” both electrodes on each side of the bar. *Id.*, at 62. Further, the EMG signals detected by the two electrode pairs are to be “of substantially equal magnitude and phase” so that the difference amplifier will “produce a substantially zero [EMG] signal” upon subtracting the signals from one another. *Ibid.*

### B

The dispute between the parties arose in the 1990’s, when Biosig allegedly disclosed the patented technology to StairMaster Sports Medical Products, Inc. According to Biosig, StairMaster, without ever obtaining a license, sold exercise machines that included Biosig’s patented technology, and petitioner Nautilus, Inc., continued to do so after acquiring the StairMaster brand. In 2004, based on these allegations, Biosig brought a patent infringement suit against Nautilus in the U.S. District Court for the Southern District of New York.

With Biosig’s lawsuit launched, Nautilus asked the U.S. Patent and Trademark Office (PTO) to reexamine the ’753 patent. The reexamination proceedings centered on whether the patent was anticipated or rendered obvious by prior art—principally, a patent issued in 1984 to an inventor named Fujisaki, which similarly disclosed a heart-rate monitor using two pairs of electrodes and a difference amplifier.

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