

UNITED STATES PATENT AND TRADEMARK OFFICE

THE PATENT TRIAL AND APPEAL BOARD BEFORE

ICON HEALTH & FITNESS, INC.,
Petitioner,

v.

NAUTILUS, INC.,
Patent Owner.

Case IPR2017-00494
Patent 7,632,219 B2

Before BARRY L. GROSSMAN, BART A. GERSTENBLITH, and
ROBERT L. KINDER, *Administrative Patent Judges*.

GERSTENBLITH, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

A. *Background*

ICON Health & Fitness, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of *inter partes* review of claims 1–4 and 6–20 of U.S. Patent No. 7,632,219 B2 (Ex. 1001, “the ’219 patent”). Nautilus, Inc. (“Patent Owner”) filed a Preliminary Response (Paper 8) to the Petition.

Pursuant to 35 U.S.C. § 314(a), an *inter partes* review may be instituted only if “the information presented in the petition . . . and any [preliminary] response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” See 37 C.F.R. § 42.108(c). For the reasons given below, on this record, Petitioner has not established a reasonable likelihood that it would prevail in showing the unpatentability of claims 1–4 and 6–20 of the ’219 patent. Accordingly, we deny the Petition and do not institute an *inter partes* review of the ’219 patent.

B. *Related Proceedings*

Petitioner challenges three patents related to the ’219 patent via continuation applications in three other proceedings: IPR2017-00490 (US Patent No. 6,689,019); IPR2017-00493 (US Patent No. 7,341,542 B2); and IPR2017-00495 (US Patent No. 8,323,155 B2). Pet. 1; Paper 4, 1.

The parties also identify as a related proceeding the following litigation between the parties involving the ’219 patent: *Nautilus, Inc. v. ICON Health & Fitness, Inc.*, No. 3:16-cv-05393 (W.D. Wash.). Pet. 1; Paper 4, 1.

C. Real Parties in Interest

The Petition identifies “ICON Health & Fitness, Inc.” as the sole petitioner real party in interest. Pet. 1. Patent Owner identifies “Nautilus, Inc.” as the patent owner and the sole patent owner real party in interest. Paper 4, 1.

D. The References

Petitioner relies on the following references:

U.S. Patent No. 6,206,804 B1, issued March 27, 2001 (Ex. 1003, “Maresh-I”);

U.S. Patent No. 5,857,941, issued January 12, 1999 (Ex. 1004, “Maresh-II”); and

U.S. Patent No. 6,171,215 B1, issued January 9, 2001 (Ex. 1005, “Stearns”).

E. The Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–4 and 6–20 of the ’219 patent on the following grounds (Pet. 3):

Reference(s)	Basis	Claims Challenged
Maresh-I	§ 103(a)	1–4, 6–10, 16, 17, 19, and 20
Maresh-I and Maresh-II	§ 103(a)	11–15 and 18
Stearns	§ 103(a)	1–4, 6–10, and 16–20
Stearns and Maresh-II	§ 103(a)	11–15

Petitioner supports its challenge with a Declaration by Scott Ganaja dated November 17, 2016 (Ex. 1006).

F. The '219 Patent

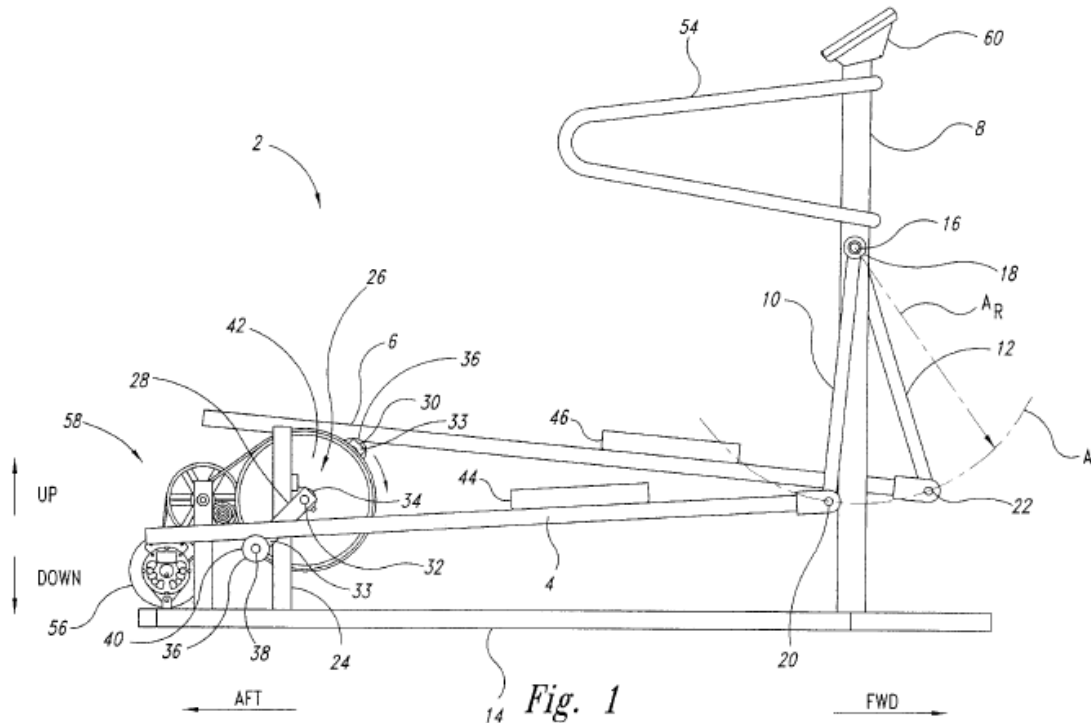
Anyone who frequents a gym or modern exercise studio will recognize the device shown and described in the '219 patent as an elliptical exercise machine or simply an “elliptical.” The '219 patent describes it in more formal patent style as “stationary elliptical motion striding equipment.”

Ex. 1001, 1:15–17. As explained in the Abstract:

An exercise device providing a fore and aft horizontal component of striding motion that is dynamically user-defined, while providing a vertical component of the motion that is maintained on a predetermined vertically reciprocating path in some embodiments. The exercise device guides the user's foot in a pseudo-elliptical stride path, while providing a dynamically variable stride length that allows the user to move with a natural stride length. The exercise device allows tall and short users to extend or curtail the stride length to match their natural stride lengths. The length of the reciprocating path is dynamically adjusted during the exercise operation without equipment adjustments by changes in the length of the stride input by the user at a pair of foot engagement pads disposed on laterally spaced apart foot support members.

Ex. 1001, [57]. As described in the '219 patent, the disclosed elliptical exercise machine allows the user to vary stride length independent of stride height, “thereby allowing the user to engage in a natural stride length which can be varied during the exercise without being constrained to a particular stride length and height selected by the manufacturer to be used by all users without variation.” *Id.* at 4:58–63.

Figure 1 of the '219 patent is reproduced below:



The Specification discloses several distinct embodiments of the invention. *See, e.g., id.* at 3:14–4:25. Figure 1 of the '219 patent illustrates one embodiment of the exercise device, which includes

two foot links [4, 6] pivotally suspended at a forward end from an upright pedestal [8] by respective swing arms [10, 12] and rollably supported at a rearward end by rollers on crank arms [28, 30], with a resistance device resisting the vertical component of the foot link motion via the rotating crank arms.

Id. at 3:14–20, 5:11–34. Additional embodiments are shown and described in conjunction with Figures 2–7, 12–16, and 18. *See, e.g., id.* at 4:21–25 (“FIG. 18 illustrates a twelfth alternative embodiment of the exercise device of the present invention”).

G. Illustrative Claim

Claim 1, the sole independent claim of the '219 patent, is representative of the claimed subject matter and reproduced below¹:

1. An exercise apparatus for use by a user performing a striding exercise, the exercise apparatus comprising:

(a) a right foot engagement member including a first end portion and a second end portion and supporting the right foot of a user;

(b) a left foot engagement member including a first end portion and a second end portion and supporting the left foot of a user;

(c) *first means for supporting and reciprocally lifting and lowering* the first end portion of the right foot engagement member with an upward-downward reciprocating motion in response to the movement of a user's feet with striding steps during a striding exercise;

(d) *second means for supporting and reciprocally lifting and lowering* the first end portion of the left foot engagement member with an upward-downward reciprocating motion in response to the movement of a user's feet with striding steps during a striding exercise;

(e) *means for allowing movement* of the first end portions of the right and left foot engagement members in forward and rearward directions relative to the respective one of the first and second lifting-lowering means to enable the first end portions of the right and left foot engagement members to move with a variable length of forward-rearward travel determined by a length of the striding steps used by a user during a striding exercise; and

¹ In reproducing claim 1, we include the clause designations (a–f) inserted by Petitioner. See Ex. 1007, 1–2. These paragraph designations are not part of the '219 patent. Petitioner uses these designations throughout the Petition as a shorthand reference to claim limitations. To avoid confusion, and maintain consistency, we also refer to these designations where appropriate.

(f) *means for supporting and guiding* the second end portions of the right and left foot engagement members to follow a forward-rearward reciprocating motion with a variable length of forward-rearward travel determined by the length of the striding steps used by a user during a striding exercise.

Ex. 1001, 22:11–42 (emphases added).

II. CLAIM CONSTRUCTION

In an *inter partes* review, claim terms in an unexpired patent are construed according to their broadest reasonable interpretation in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b); *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2144–46 (2016).

There is a presumption that claim terms are given their ordinary and customary meaning, as would be understood by a person of ordinary skill in the art in the context of the specification. *See In re Translogic Tech. Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007). Thus, we need to consider the level of ordinary skill in the relevant technological field.

The parties agree that a person of ordinary skill in the art at the time of the invention of the '219 patent would have at least a bachelor's degree in mechanical engineering and several years of experience designing mechanical systems or exercise equipment, or an equivalent level of education and experience. Pet. 7 (citing Ex. 1006 ¶¶ 20–21); Prelim. Resp. 7. Accordingly, for purposes of this Decision, we adopt the level of ordinary skill in the art agreed to by the parties.

Only terms that are in controversy need to be construed, and these need be construed only to the extent necessary to resolve the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

A. Means-Plus-Function Claims

In claim 1, reproduced above, clauses 1(c)–1(f) each use the word “means” followed by a recitation of the intended function performed by the recited means. This language form of claiming creates a presumption that invokes 35 U.S.C. § 112, ¶ 6, commonly referred to as “means-plus-function” claiming.² *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347, 1349 (Fed. Cir. 2015). Section 112, ¶ 6 states:

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.

Petitioner asserts that clauses 1(c)–1(f) are means-plus-function limitations. Pet. 3–4; *see, e.g., id.* at 3 (“With respect to elements 1c and 1d, the means-plus-function language invokes 35 U.S.C. § 112, ¶ 6.”). Patent Owner acknowledges that clauses 1(c) and 1(d) are means-plus-function clauses. Prelim. Resp. 7–8; *see, e.g., id.* at 7 (addressing clauses 1(c) and 1(d) under the heading “For Several Means-Plus-Function Terms, Petitioner Offers Deficient Claim Constructions”). Patent Owner does not, however, address whether clauses 1(e) and 1(f) are means-plus-function clauses.

For the reasons explained below, for purposes of this Decision we need only address clauses 1(c) and 1(d).

² Section 4(c) of the Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (“the AIA”) re-designated 35 U.S.C. § 112, ¶ 6 as 35 U.S.C. § 112(f). Because the ’219 patent has a filing date prior to September 12, 2012, the effective date of § 4(c) of the AIA, we refer to the pre-AIA version of 35 U.S.C. § 112.

1. Clauses 1(c) and 1(d)

Clauses 1(c) and 1(d) are reproduced below, with emphases added:

(c) *first means for supporting and reciprocally lifting* and lowering the first end portion of the right foot engagement member with an upward-downward reciprocating motion in response to the movement of a user's feet with striding steps during a striding exercise;

(d) *second means for supporting and reciprocally lifting* and lowering the first end portion of the left foot engagement member with an upward-downward reciprocating motion in response to the movement of a user's feet with striding steps during a striding exercise.

As is evident, the two clauses are identical, except that clause 1(c) refers to a “right foot engagement member,” whereas clause 1(d) refers to a “left foot engagement member.”

In clauses 1(c) and 1(d), the claim drafter signaled an intent to invoke § 112, ¶ 6 by using the term “means.” *Williamson*, 792 F.3d at 1349 (“use of the word ‘means’ creates a presumption that § 112, ¶ 6 applies” (citing *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 703 (Fed. Cir. 1998))).

We agree with both Petitioner and Patent Owner; clauses 1(c) and 1(d) are means-plus-function clauses. There is no persuasive evidence to rebut the presumption that use of the word “means” invokes § 112, ¶ 6. Thus, we look to the requirements a petition must satisfy if a claim includes a limitation written in means-plus-function format.

2. *The Requirement to Construe a Means-Plus-Function Limitation*

If a challenged claim includes a limitation drafted in means-plus-function format, we require that the petition identify the disclosed structure for performing the claimed function:

Where the claim to be construed contains a means-plus-function or step-plus-function limitation as permitted under 35 U.S.C. 112(f), the construction of the claim must identify the specific portions of the specification that describe the structure, material, or acts corresponding to each claimed function.

37 C.F.R. § 42.104(b)(3). The rule requires that a petitioner provide a specific claim construction of a means-plus-function clause. Setting forth a specific claim construction provides an efficient mechanism for identifying the legal and factual bases for satisfying the statutory threshold for instituting *inter partes* review. Additionally, patent owner has notice as to the basis for the challenge to the claims. See *Changes to Implement Inter Partes Review Proceedings*, 77 Fed. Reg. 48,688 (Aug. 14, 2012).

3. *Construing a Means-Plus-Function Limitation*

Construing a claim term drafted in means-plus-function format is a two-step process. The first step is to identify the claimed function(s). *Williamson*, 792 F.3d at 1351 (citing *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012)). The second step is to determine what structure, if any, disclosed in the specification corresponds to the claimed function(s). *Id.* Where there are multiple claimed functions, the specification must disclose adequate corresponding structure to perform all of the claimed functions. *Id.* at 1351–52. Furthermore, with respect to the second step, “structure disclosed in the specification is ‘corresponding’ structure only if the specification or prosecution history clearly links or

associates that structure to the function recited in the claim.” *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1334 (Fed. Cir. 2004) (citation omitted); *Cardiac Pacemakers, Inc. v. St. Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002) (“the structure must not only perform the claimed function, but the specification must clearly associate the structure with the performance of the function”). “This inquiry is undertaken from the perspective of a person of ordinary skill in the art.” *Cardiac Pacemakers*, 296 F.3d at 1113.

*B. Petitioner’s Proposed Construction
for Clauses 1(c) and 1(d)*

Petitioner’s entire claim construction argument for clauses 1(c) and 1(d) is one paragraph, which we reproduce below.

With respect to elements 1c and 1d, the means-plus-function language invokes 35 U.S.C. § 112, ¶ 6. There are two potential means disclosed within the ’219 Patent for “*supporting and reciprocally lifting and lowering the first end portion of the [] foot engagement member with an upward-downward reciprocating motion.*” In particular, the specification of the ’219 Patent identifies “vertically reciprocating motion of the foot links produced by the rotation of the crank arms 28 and 30.” *See, e.g.*, 10:28–30. The only other disclosure of such means is a “reciprocator 126” with a pulley mounted on the rear stanchion (*e.g.*, Figure 12 and 19:24–44). *See Ganaja* [Ex. 1006], 23.

Pet. 3 (emphasis added).

The first sentence of the quoted construction merely states that § 112 ¶ 6 applies to clauses 1(c) and 1(d). The second sentence refers to a portion of the recited function. Missing from Petitioner’s statement of the recited function, however, is the additional recited function that the supporting, lifting, and lowering is “in response to the movement of a user’s feet with striding steps during a striding exercise.” *E.g.*, Ex. 1001, 22:22–

23. As properly construed, the claimed function is supporting and reciprocally lifting and lowering the first end portion of the right (clause 1(c)) or left (clause 1(d)) foot engagement member with an upward-downward reciprocating motion in response to the movement of a user's feet with striding steps during a striding exercise.

With respect to the corresponding structure, Patent Owner asserts that Petitioner's proposed construction for clauses 1(c) and 1(d) fails "to inform the reader of the alleged means – is it the 'foot links,' the 'crank arms,' some combination of them both, or some combination of these elements with other elements?" Prelim. Resp. 8. Patent Owner concludes that Petitioner offers "a deficient claim construction with respect to these elements." *Id.* Patent Owner does not address Petitioner's discussion of "reciprocator 126." Patent Owner also does not propose an alternative claim construction.

As quoted above, Petitioner identifies "two potential means" for performing the claimed functions. The first potential means is "vertically reciprocating motion of the foot produced by the rotation of the crank arms 28 and 30." Pet. 3 (citation omitted). Petitioner's quotation of the '219 patent specification is unhelpful as it does not identify specifically which structure or structures Petitioner contends corresponds to the functions recited in clauses 1(c) and 1(d). There are at least three structures, or combinations of structures, included in Petitioner's quotation: (a) the foot links; (2) the crank arms; and (3) a combination of the foot links and the crank arms. Petitioner does not link these structures with sufficient clarity to any one or more of the claimed functions. Thus, we agree with Patent Owner that Petitioner's identification of the alleged first "potential means" lacks sufficient clarity. Petitioner's lack of clarity in identifying specific

structure, material, or acts fails to comport with the requirements of 37 C.F.R. § 42.104(b)(3), as set forth above.

The second “alternative means” identified by Petitioner is reciprocator 126 with a pulley mounted on the rear stanchion. As with the first alternative, Petitioner’s identification of these structures similarly lacks clarity. In particular, Petitioner’s discussion of this alternative consists of a single sentence that fails to explain how the specification ties one or more of these structures to the recited functions. Additionally, Petitioner’s identification of the reciprocator, pulley, and rear stanchion fails to indicate whether Petitioner intends to refer to each of these three structures, one of the structures, or two of the three structures as corresponding to the recited functions.³ Thus, as with Petitioner’s identification of the alleged first alternative means, this second alternative suffers from a lack of clarity resulting in a failure to comport with 37 C.F.R. § 42.104(b)(3).

For purposes of this Decision, however, we need not determine which structure(s) corresponds to the recited functions because Petitioner’s analysis of Maresh-I and Stearns is deficient for the reasons discussed below.

³ The ’219 patent teaches that “reciprocator 126 . . . has a pulley or gear 126 rotatably mounted to the stanchions 24 with a flexible member 128 such as a cable or chain passing over the pulley 126.” Ex. 1001, 19:28–32. In other words, the ’219 patent refers interchangeably to the reciprocator, pulley, and gear as corresponding to reference numeral 126. This discussion in the ’219 patent specification refers to the embodiment shown in Figure 12, which appears to point to the pulley or gear itself as reference numeral 126, further highlighting the lack of clarity in Petitioner’s identification of the alleged second potential means.

III. ANALYSIS

A. *Obviousness over the Cited References*

Petitioner raises two challenges to the patentability of claim 1 based on the teachings of Maresh-I (*see* Pet. 13–15), and separately based on the teachings of Stearns (*see id.* at 34–36). Each of Petitioner’s challenges suffers from the same deficiency and, hence, we address them together.

To show the unpatentability of a claim including a means-plus-function limitation based on prior art, Petitioner must: 1) identify the specific portions of the specification that describe the structure corresponding to the claimed function; and 2) specify where that structure or an equivalent is found in the cited prior art. *Fresenius USA, Inc. v. Baxter Int’l, Inc.*, 582 F.3d 1288, 1299–1300 (Fed. Cir. 2009) (“a functional analysis alone will not suffice”). In this proceeding, Petitioner has failed to perform the second step of the analysis required.

With respect to Petitioner’s challenge based on Maresh-I, Petitioner provides the following directed to clauses 1(c) and 1(d):

Maresh-I teaches first and second means (radially displaced pins of the cranks 760) for supporting and reciprocally lifting and lowering the first end portion of the right and left foot engagement members (rearward ends of the force receiving members 740) with an upward-downward reciprocating motion in response to the movement of a user’s feet with striding steps during a striding exercise.

Pet. 13–14 (citing Ex. 1003, 9:26–30, 9:46–55, Fig. 13; Ex. 1006 ¶¶ 16, 37–38).

With respect to Petitioner’s challenge based on Stearns, Petitioner provides the following directed to clauses 1(c) and 1(d):

Stearns teaches first and second means (left and right rotatable connections between the rollers 2023 and the cranks 2020) supporting and reciprocally lifting and lowering the first end portion of the respective foot engagement members (forward portions of the foot supporting links 2030) with an upward-downward reciprocating motion in response to the movement of a user's feet with striding steps during a striding exercise.

Furthermore, *Stearns* teaches that “[t]he embodiments shown and/or described herein are generally symmetrical about a vertical plane extending lengthwise through a floor-engaging base (perpendicular to the transverse ends thereof).”

Id. at 35–36 (citing Ex. 1005, 4:65–5:18, 18:37–49, Figs. 33, 34; Ex. 1006 ¶¶ 16, 90, 91).

Even assuming that Petitioner is correct—that “vertically reciprocating motion of the foot links produced by the rotation of the crank arms 28 and 30” and “‘a reciprocator 126’ with a pulley mounted on the rear stanchion” are the structure, material, or acts that correspond to the recited functions of clauses 1(c) and 1(d)—Petitioner’s analysis fails to show (1) that Maresh-I’s radially displaced pins of cranks 760 are the same or equivalent to the identified structures, material, or acts, and (2) that *Stearns*’ left and right rotatable connections between rollers 2023 and cranks 2020 are the same or equivalent to the identified structures, material, or acts. *See* Prelim. Resp. 9–10, 28 (arguing that Petitioner failed to show that the structures in Maresh-I and *Stearns* are the same as, or equivalent to, structure in the ’219 patent specification corresponding to the recited functions). Rather, Petitioner’s analysis focuses on the functional language of these claim elements without addressing the alleged corresponding structure(s). Even if an element in a reference may perform the claimed function, that does not, in and of itself, establish that the element is the same or equivalent

to the corresponding structure(s). Thus, Petitioner's analysis is deficient. *See* 37 C.F.R. § 42.104(b)(4) ("The petition must specify where each element of the claim is found in the prior art . . . relied upon."); *Fresenius USA, Inc.*, 582 F.3d at 1299–1300.

Claims 2–4 and 6–20 depend from claim 1. Petitioner's additional challenges to those claims based on Maresh-I, Maresh-II, and Stearns fail for the same reasons because Petitioner does not remedy the deficiencies discussed above in addressing these dependent claims.

Accordingly, for these reasons, Petitioner has not established a reasonable likelihood that it would prevail in showing the unpatentability of the challenged claims.

IV. CONCLUSION

Petitioner's identification of the specific portions of the '219 patent specification that describe the structure corresponding to the recited function of the means-plus-function elements of claim 1 suffers from several noted deficiencies that run afoul of 37 C.F.R. § 104(b)(3). The means-plus-function elements of claim 1 are incorporated into each of the other challenged claims by virtue of their dependency from claim 1. Additionally, even assuming Petitioner's identification of corresponding structure is correct, Petitioner fails to explain how the challenged claims are unpatentable under the statutory grounds identified in the Petition. *See* 37 C.F.R. § 42.104(b)(4). Thus, Petitioner has not established a reasonable likelihood that it would prevail in showing the unpatentability of claims 1–4 and 6–20 of the '219 patent.

V. ORDER

Accordingly, it is:

ORDERED that the Petition is *denied* as to the challenged claims of the '219 patent; and

FURTHER ORDERED that no *inter partes* review is instituted.

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