

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHARKNINJA OPERATING LLC,
SHARKNINJA MANAGEMENT LLC, AND
SHARKNINJA SALES COMPANY,
Petitioner,

v.

BISSELL INC.,
Patent Owner.

IPR2022-01194
Patent 10,973,383 B1

Before WILLIAM V. SAINDON, BENJAMIN D. M. WOOD, and
CARL M. DEFRANCO, *Administrative Patent Judges*.

SAINDON, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. Background and Summary

SharkNinja Operating LLC, SharkNinja Management LLC, and SharkNinja Sales Company (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–29 (“the challenged claims”) of U.S. Patent 10,973,383 B1 (Ex. 1001, “the ’383 patent”). BISSELL, Inc. (“Patent Owner”) filed a preliminary response (Paper 6, “Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review under 35 U.S.C. § 314(b) and 37 C.F.R. § 42.4(a) (2020). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

For the reasons provided below, we determine Petitioner has satisfied the threshold requirement set forth in 35 U.S.C. § 314(a). Because Petitioner has demonstrated a reasonable likelihood that at least one claim of the ’383 patent is unpatentable, we institute an *inter partes* review of all challenged claims based on all grounds raised in the Petition. 37 C.F.R. § 42.08(a).

Our findings of fact, conclusions of law, and reasoning discussed below are based on the evidentiary record developed thus far, and made for the sole purpose of determining whether the Petition meets the threshold for initiating review. This decision to institute trial is not a final decision as to the patentability of any challenged claim or the construction of any claim limitation. Any final decision will be based on the full record developed during trial.

B. Real Parties in Interest

Petitioner asserts that “real parties-in-interest are Petitioners SharkNinja Operating LLC, SharkNinja Management LLC, and SharkNinja Sales Company . . . , as well as EP Midco LLC and SharkNinja (Hong Kong) Company Limited.” Pet. vii. Petitioner also identifies “JS Global Lifestyle Company Limited as a real party-in-interest in an abundance of caution.” *Id.*

Patent Owner asserts that BISSELL Inc. is the real party in interest, but also identifies BISSELL Homecare, Inc. in “an abundance of caution.” Paper 4 (Patent Owner’s Mandatory Notices).

C. Related Matters

The parties both assert that there are no other judicial or administrative matters that would affect, or be affected by, a decision in this proceeding. Pet. vii; Paper 4. Petitioner challenges US Patent No. 11,147,426, a patent that has substantial overlap in claimed subject matter with the ’383 patent, in IPR2022-01195.

D. The ’383 Patent

The ’383 patent is directed to a battery-powered, wet vacuum cleaner. Ex. 1001, 3:54–56.

E. Illustrative Claims

Claim 1, reproduced below, is the sole independent claim challenged.

1. A surface cleaning apparatus, comprising:

an upright body comprising a handle and a frame, the frame comprising a main support section supporting a supply tank that is selectively removable from the main support section and a recovery tank that is selectively removable from the main support section;

a base operably coupled with the upright body, the base comprising a base housing and a removable nozzle assembly

selectively coupled to the base housing, the removable nozzle assembly comprising a nozzle housing at least partially defining a brush chamber;

a recovery system comprising a suction nozzle, a suction source in fluid communication with the suction nozzle for generating a working air stream, and the selectively removable recovery tank;

a brushroll selectively receivable within the base and at least partially located within the brush chamber, the brushroll rotatable therein about a brushroll axis;

a brushroll motor provided in the base and operably coupled to the brushroll, the brushroll motor adapted to provide a driving force to rotate the brushroll about the brushroll axis;

a fluid delivery system comprising the supply tank, a pump, and a fluid distributor, the fluid distributor provided on the base and configured to spray the brushroll;

a battery housing provided on the frame of the upright body, the battery housing disposed vertically lower than the supply tank and rearwardly of the recovery tank;

a rechargeable battery provided within the battery housing, the rechargeable battery configured to selectively supply power to the suction source, the pump, and the brushroll motor; and

at least one charging contact provided on an exterior of the battery housing.

F. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–29 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1–29	103	Xia ² , Conrad ³ , Kitsukawa ⁴

Petitioner also relies on the testimony of Gareth Jones, who has a mechanical engineering degree, a master’s in industrial design engineering, and experience working in the vacuum cleaner industry. Ex. 1003 ¶¶ 6–14.

II. ANALYSIS

A. Legal Standards Used in the Merits Analysis

“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

¹ The ’383 patent was filed on Dec. 15, 2020. Ex. 1001, code (22). The earliest possible priority date is June 22, 2019. *Id.* at code (60). Petitioner does not challenge priority. Pet. 3. Accordingly, we apply the versions of 35 U.S.C. §§ 102 and 103 that were in force after they were amended by the Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (2011).

² US PG Pub. No. 2017/0119225 A1, pub. May 4, 2017 (Ex. 1004).

³ US 11,229,342 B2, iss. Jan. 25, 2022, filed Dec. 22, 2017 (Ex. 1005).

⁴ JP Pub. No. 2016-137095 A, pub. Aug. 4, 2016 (Ex. 1006) (citations are made to the certified English translation appended thereto).

A claim is unpatentable under 35 U.S.C. § 103 if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious . . . to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner asserts the following level of ordinary skill in the art:

a bachelor’s degree in mechanical engineering (or an equivalent discipline) or equivalent work experience, and at least one year’s worth of experience in research, design and/or development related to vacuum cleaners for household and/development [sic] related to vacuum cleaners (or other comparable industrial design). Additional education could substitute for experience, and vice versa.

Pet. 9 (citing Ex. 1003 ¶ 21).

Patent Owner asserts the following level of ordinary skill in the art:

“a bachelor’s degree in mechanical engineering or similar discipline and at least one year of experience designing vacuum cleaners.” Patent Owner does not cite supporting evidence.

The definitions offered by the parties appear, for practical purposes, to be compatible. We adopt Petitioner’s proposed definition at this stage of the

proceeding because it cites, and is supported by, evidence and appears reasonable upon reviewing the '383 patent and the cited prior art.

C. Claim Construction

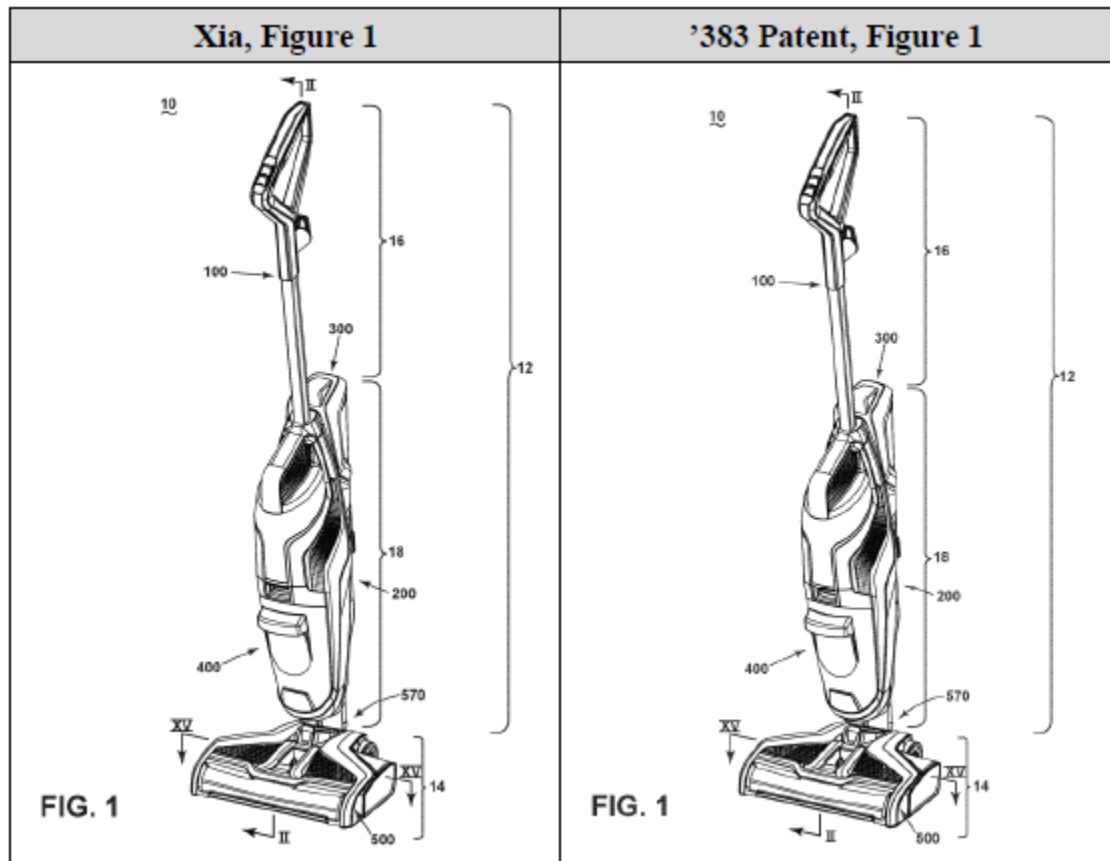
Petitioner and Patent Owner agree that no claim term requires express construction. Pet. 4–5; Prelim. Resp. 8. At least two of Patent Owner’s arguments, however, appear to be predicated on the claim terms having a particular meaning. *See, e.g.*, Prelim. Resp. 15 (“claim 1 . . . recites the battery housing as being disposed rearwardly of the recovery tank, not rearwardly of *a portion* of the recovery tank”), 17 (“the plain and ordinary meaning of ‘selectively supply power’ means that the rechargeable battery must be capable of powering a subset less than all of the required components”). Given that Patent Owner offers no explicit constructions for why we should construe the claims to get the result they advocate, we will address the implicit claim construction arguments in the context of the prior art analysis below, to the extent necessary. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’”)(quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). However, we expect the parties to explicitly brief these issues if arguments are predicated on how claim terms are read on the art.⁵

⁵ Regardless of whether a party considers itself to be construing a term or not, when the parties disagree that a claim term reads on the prior art, we would hope to see evidence and arguments supporting the party’s reading of the term on the art (and likewise, against their opponent’s reading).

*D. Asserted Obviousness over Xia, Conrad, and Kitsukawa
(Claims 1–29)*

Claim 1 recites various features of a wet vacuum cleaner, but most relevant to the dispute at this stage of the proceeding are: a battery housing that is “disposed vertically lower than the [water] supply tank” and “rearwardly of the recovery tank,” and a rechargeable battery “configured to selectively supply power to [various components].”

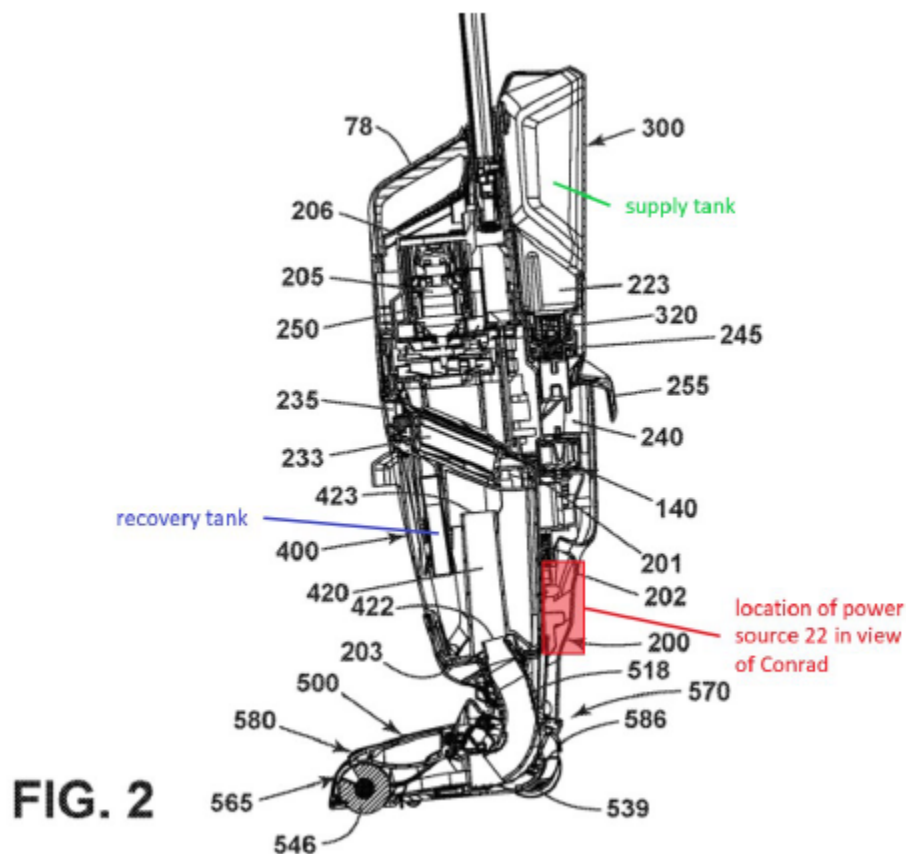
According to Petitioner, claim 1 of the ’383 patent takes an existing wet vacuum cleaner and “inclu[des] . . . a rechargeable battery with charging contacts at the lower rear of the device.” Pet. 1. Petitioner begins its ground of unpatentability with Xia, which it asserts is “essentially identical to the ’383 patent” (*id.* at 9) except for details pertaining to the battery (*see id.* at 18–21). Petitioner provides several side-by-side figures comparing the vacuums of the ’383 patent and of Xia (*id.* at 10–12), one of which is reproduced below:



Pet. 10 (reproducing on the left, Ex. 1004, Fig. 1; and on the right, Ex. 1001, Fig. 1). Both figures are identical and are a perspective view of an upright vacuum cleaner. Given the substantial overlap of the disclosures of Xia and the '383 patent regarding wet vacuums, Petitioner persuasively shows for purposes of this Decision how Xia teaches each non-disputed limitation of claim 1. *Id.* at 22–32.

As to the disputed battery and battery housing limitations, Petitioner notes that Xia teaches that its vacuum may be battery-powered, but does not go into further detail as to the battery type or its location. *Id.* at 33 (quoting Ex. 1004 ¶ 80). Petitioner directs our attention to the wet vacuum of Conrad for the battery location. *Id.* at 33–43. Petitioner states that Conrad teaches that, because batteries are “relatively heavy,” they should be “positioned toward the rear” in order to “help lower the overall centre of gravity.” *Id.* at

34–35 (quoting Ex. 1005, 101:43–48). In particular, Petitioner states that Conrad teaches to place the battery pack “below a liquid reservoir” and “rearward of the second cleaning sta[g]e.” *Id.* at 34 (quoting Ex. 1005, 101:48–51). Petitioner asserts that it would have been obvious to modify the vacuum of Xia to place the battery below the supply tank and to the rear of the recovery tank, as required by claim 1, following the teachings of Conrad, in order to lower the center of gravity of the cleaning unit when reclined in the surface cleaning position. *Id.* at 36–37 (quoting Ex. 1005, 101:46–48). Petitioner provides an annotated version of Xia Figure 2 to depict the location of the battery in the proposed combination:



Pet. 36. The above annotated copy of Figure 2 of Xia depicts the relative location of the proposed battery, below clean (supply) tank 300 and rearward of dirty (recovery) tank 400.

Petitioner further notes that although Xia and Conrad disclose battery-powered vacuums, neither specifically describes a rechargeable battery within a battery housing. *Id.* at 44. However, Petitioner notes that Kitsukawa discloses a vacuum having a rechargeable battery in a battery housing, with the battery provided with charging contacts. *Id.* at 45–46 (citing Ex. 1006, Fig. 7). Petitioner notes that using such batteries is a predictable, known technique for powering and charging cordless vacuums. *Id.* at 46–52.

We turn now to Patent Owner’s arguments.

Patent Owner argues that Petitioner does not adequately address the requirement that the battery housing be “rearward of the recovery tank.” Prelim. Resp. 13–17. On this preliminary record, however, it is our view that Petitioner’s proposed combination sufficiently addresses this limitation. Petitioner’s annotated Figure 2 of Xia, reproduced above, depicts where the battery is to go in the proposed combination, and that location is rearward of the recovery tank. Much of Patent Owner’s argument revolves around how *Conrad’s* battery and tank are positioned, but Petitioner is not proposing a bodily incorporation of Conrad’s tank and battery. Conrad teaches to place the battery in a position that will lower the center of gravity, rearward of the cleaning unit and below the supply tank. Ex. 1005, 101:45–50. As such,

Petitioner's annotated Figure 2 of Xia appears to be a straightforward application of the teachings of Conrad to Xia's vacuum.⁶

Patent Owner also argues that Petitioner's proposed combination does not address the "housing" part of the "battery housing" limitation of claim 1. Prelim. Resp. 10–13. In particular, Patent Owner argues that Petitioner has not stated why a person of ordinary skill in the art would have used a housing to hold the battery "as opposed to an open battery slot or a battery attachment point." *Id.* at 12. First, we note that Patent Owner has not provided any evidence at this time supporting its position that "an open battery slot or battery attachment point" were known options or that those options would not be considered a "housing." Second, we note that Kitsukawa explicitly teaches its battery to be in a housing, and Petitioner explicitly notes that "Kitsukawa also discloses that its rechargeable 'storage battery 18' is provided within 'storage battery case 8,' which is a battery housing." Pet. 45 (quoting Ex. 1006 ¶¶ 15, 18–19). Petitioner also explicitly makes this housing part of its proposed combination, rendering any potential lack of clarity from Xia and Conrad immaterial. *Id.* at 46. In sum, Petitioner has made sufficient showings, at this stage of the proceeding, that the proposed combination has a battery housing.

⁶ Because the spatial relationship of the battery and the recovery tank in the proposed combination appears to satisfy the "rearward" limitation clearly, we do not address at this time Patent Owner's implicit construction of "rearward" as it applies to Conrad's disclosure. Prelim. Resp. 15 (arguing the '383 patent requires "the battery housing . . . rearwardly of the recovery tank, not rearwardly of *a portion* of the recovery tank"); *Realtime Data*, 912 F.3d at 1375.

Patent Owner’s last argument as to claim 1 is that the proposed combination does not disclose “selectively supply[ing] power” to various components of the vacuum. Prelim. Resp. 17–19. In particular, Petitioner had asserted that the proposed combination taught that each of the claimed components were powered by the battery, using a switch. Pet. 44 (citing Ex. 1004 ¶¶ 78, 80). Patent Owner bases its argument under a particular claim construction of “selectively supply power,” but Patent Owner does not explicitly articulate the construction nor offer persuasive arguments or evidence in support. *See, e.g.*, Prelim. Resp. 17 (arguing that the term means “capable of powering a subset less than all of the required components”). Patent Owner perhaps would require the claim language to require individual independent on/off states for each of the claimed components; it is not clear. Patent Owner cites to Figure 44 and its explanatory text, but these do not support its conclusion. Prelim. Resp. 18 (citing Ex. 1001, 26:46–53, 27:14–35). Figure 44 of the ’383 patent is reproduced below:

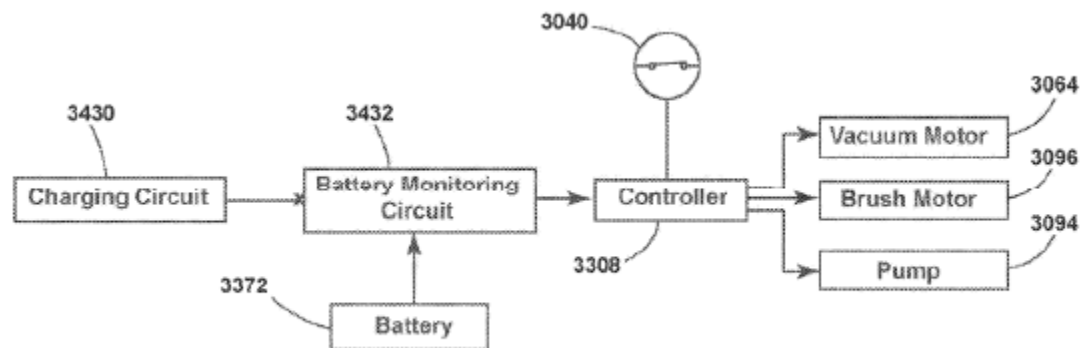


FIG. 44

Figure 44 of the ’383 patent is a block diagram “when the surface cleaning apparatus is docked with the storage tray in a self-cleaning mode.” It is not apparent to us how Figure 44 supports Patent Owner’s position—it appears to depict controller 3308 that presumably is connected in some manner to vacuum motor 3064, brush motor 3096, and pump 3094. The cited passages

in columns 26 and 27 of the '383 patent provide no further help. Instead, column 26 discusses a self-cleaning mode whereby the charging circuit is turned off and the battery powers the self-cleaning mode. Ex. 1001, 26:44–57. Column 27 merely states the battery can power “one or more components of the apparatus” in a self-cleaning mode. Even if the vacuum in the '383 patent had the ability to individually turn on and off the various components in Figure 44, this would appear to be a function of the controller or some sort of switch array, not the battery. Lastly, we note the that '383 patent uses the term “selectively” throughout, but that usage does not suggest any particular meaning on this record. *See, e.g., id.* at 7:36–45 (float valve to “selectively seal an air outlet”), 12:21–33 (trigger to “selectively” open a valve to supply fluid), 13:11–25 (a power switch and brush power switch can be “selectively closed by the user”), 30:28–31 (supply and recovery tanks are “selectively removable”). Accordingly, we are not persuaded that a battery that can “selectively supply power” to various components requires any more than a battery that can power those components, which the proposed combination teaches.⁷ Pet. 44 (citing Ex. 1004 ¶¶ 78, 80).

In sum, we are persuaded that Petitioner has established a reasonable likelihood that claim 1 is unpatentable in view of Xia, Conrad, and Kitsukawa. Patent Owner offers an argument for dependent claim 17, which is directed to status indicators for battery status and self-cleaning status. Prelim. Resp. 19–23. Petitioner’s position appears to be based on what would have been obvious to a person of ordinary skill in the art in view of

⁷ As opposed to, e.g., a battery insufficiently strong to power those components or not electrically connected to those components.

the prior art teachings of the usefulness of status lights (as opposed to an explicit teaching of these particular status lights). *See* Pet. 73–74. This is an issue best left for trial, where we expect cross examination testimony and/or further evidence to be useful. Patent Owner offers no arguments for dependent claims 2–16 or 18–29 at this time.

III. CONCLUSION

As explained above, we find that Petitioner has established a reasonable likelihood of success in showing that claim 1 is unpatentable over Xia, Conrad, and Kitsukawa. Accordingly, we institute *inter partes* review on all challenged claims on all asserted grounds. *See SAS Inst. v. Iancu*, 138 S.Ct. 1348, 1359–60 (2018).

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review of claims 1–29 of the ’383 patent is instituted with respect to all grounds set forth in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the ’383 patent is hereby instituted commencing on the entry date of this Decision, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

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