

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AFFORDABLE WIRE MANAGEMENT, LLC,
Petitioner,

v.

CAMBRIA COUNTY ASSOCIATION FOR THE BLIND AND
HANDICAPPED, INC.,
Patent Owner.

IPR2024-00182
Patent 11,349,291 B2

Before JAMES P. CALVE, FRANCES L. IPPOLITO, and
NATHAN A. ENGELS, *Administrative Patent Judges*.

CALVE, *Administrative Patent Judge*.

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

I. BACKGROUND

Affordable Wire Management, LLC (“Petitioner”) filed a petition requesting an *inter partes* review of claims 1–23 (the “challenged claims”) of U.S. Patent No. 11,349,291 (“the ’291 patent”) (Ex. 1001). Paper 1, 1 (“Pet.”). Cambria County Association for the Blind and Handicapped, Inc. (“Patent Owner”) filed a preliminary response. Paper 15 (“Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2022). An *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . 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.” 35 U.S.C. § 314(a). Upon consideration of the evidence and arguments in the record, we determine that the information presented does not show a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. Nor has Petitioner demonstrated a need to file a second petition challenging the claims of the ’291 patent. We therefore do not grant institution of an *inter partes* review.

A. *Related Proceedings*

The parties identify the following proceeding involving the ’291 patent: *Cambria County Association for the Blind and Handicapped, Inc. v. Affordable Wire Management, LLC*, No. 1:23-cv-00080 (D. Del.). Pet. 56; Paper 7 (Patent Owner’s Mandatory Notices), 1. The parties indicate that Patent Owner also asserted U.S. Patent No. 10,177,551 (“the ’551 patent”) in the district court litigation. Pet. 79; Paper 7, 1. Petitioner asserts that it has filed an *inter partes* review proceeding challenging the ’551 patent in IPR2024-00139. Pet. 56; *see* Paper 7, 1.

Petitioner also filed a petition challenging claims 1–10, 14–22, 24, and 25 of the '291 patent in IPR2024-00178. Paper 1, 1. Concurrently with this Decision, the Board institutes *inter partes* review in IPR2024-00178.

B. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 56. Patent Owner identifies itself as the real party in interest. Paper 7, 1.

C. The '291 Patent

The '291 patent describes a cable hangar used in solar, mining, and electrical industries to support alternating current (AC), direct current (DC), and category five electrical cables from a messenger wire 12 as shown in Figure 1, reproduced below. Ex. 1001, 1:18–24, 3:19–42.

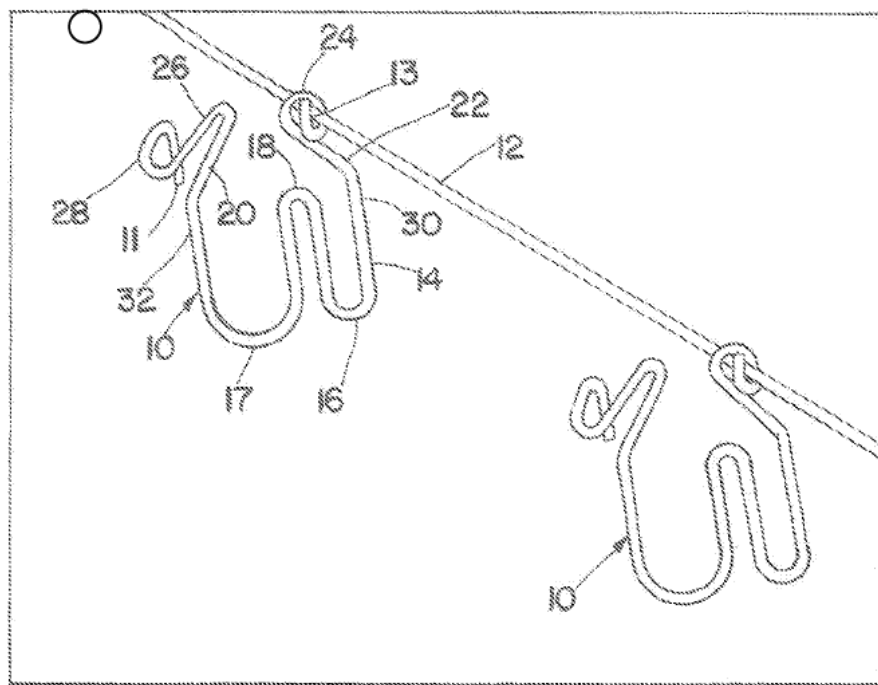


Fig. 1

Figure 1 shows hangar 10 with cable carrier formations 16, 17, sides 30, 32, divider 18, and data carrier loop 28. *Id.* at 6:18–43, 7:10–14. Hangar 10 is a round or flat-rolled galvanized/stainless steel spring wire 14. *Id.* at 6:37–40.

To lock hanger 10 onto messenger wire 12, spiral gripper 24 engages messenger wire 12 and sides 30, 32 are squeezed together until locking hook 26 engages messenger wire 12. Ex. 1001, 6:40–47. When released, locking hook 26 and gripper 24 exert a cooperative locking force on messenger wire 12 as shown in Figure 2, reproduced below. *Id.* at 6:40–62.

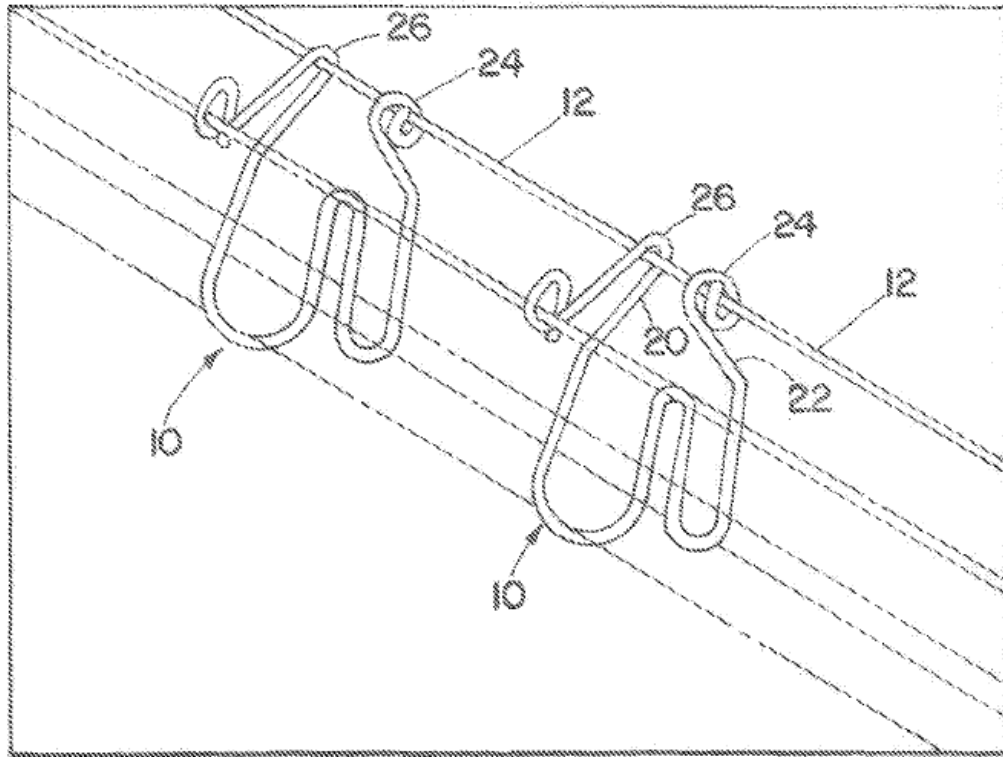


Fig. 2

Figure 2 shows spiral gripper 24 and locking loop 26 engaging messenger wire 12. *Id.* at 6:50–62. Spiral gripper 24 includes abutment surfaces 34, 36 that engage messenger wire 12. *Id.* at 6:54–56, 7:2–10. Locking hook 26 has abutment surface 38 that engages messenger wire 12 to create a locking force on messenger wire 12 with abutment surfaces 34, 36 on spiral gripper 24 and prevent cable hanger 10 from sliding along messenger wire 12 as shown in Figure 3, reproduced below. *Id.* at 3:30–42, 6:50–62, 7:14–26.

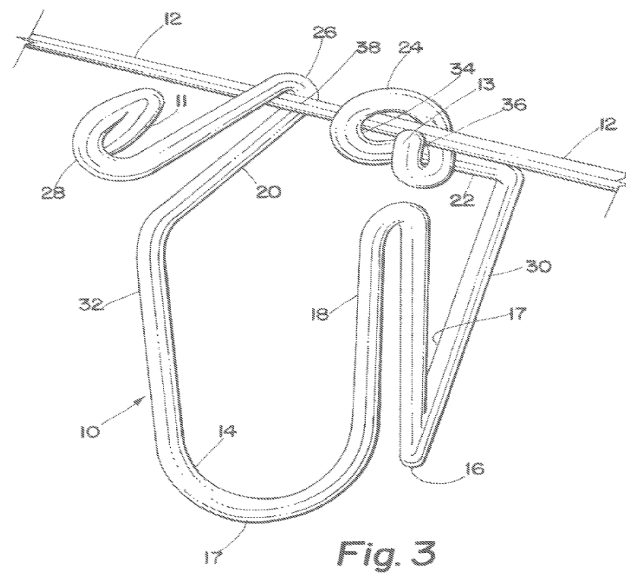


Figure 3 shows hanger 10 locked to messenger wire 12 by abutment surfaces 34, 36 of spiral gripper 24 and abutment surface 38 of locking hook 26 to retain hanger 10 securely in place on wire 12. *Id.* at 2:20–46, 6:63–7:26.

D. The '291 Patent Prosecution History

In a December 16, 2021, Office Action, the Examiner rejected the claims over admitted prior art relating to systems for organizing solar panel electrical cables in combination with cable hangers disclosed in US. Patent No. 2,384,440 to Carr, which is asserted in the Petition. Ex. 1015, 151–152. The Examiner found that the admitted prior art and Carr disclosed hangers that support cables on a messenger wire and determined that “it would have been obvious to substitute one cable hanger for the other” to support cables from a messenger wire. *Id.* at 152. In its Response, Patent Owner submitted a declaration of one of the inventors, Allen Garrett Smith, who testified that “messenger wire/hangers arrangements had never been employed in the solar industry” and the prior art cable hangers were used in the mining and electrical industries. *Id.* at 202. Mr. Smith testified that any references to the solar industry referred to Patent Owner’s own non-public testing. *Id.*

In the next office action following Patent Owner's response and its submission of Mr. Smith's declaration, the Examiner issued a Notice of Allowability. Ex. 1015, 210. In the Notice of Allowability, the Examiner provided the following statement of reasons for allowance:

The prior art does not disclose or suggest a system for organizing a plurality of electrical cables extending from a plurality of solar panels, with a plurality of cable hangers disposed along a messenger wire, with cable carrying surfaces structured to support at least one cable and separated by a cable carrier divider.

Id. at 210–211.

E. Challenged Claims

Claims 1, 6, 14, and 19 are the independent claims challenged in this proceeding. Claims 2–5 and 8–13 depend from claim 1. Claim 7 depends from claim 6. Claims 15–18 and 20–23 depend from claim 14. Ex. 1001, 10:24–12:35. Claim 1 is illustrative of the claimed subject matter and is reproduced below.

1. A system for organizing a plurality of electrical cables extending from a plurality of solar panels, the system comprising:

a messenger wire structured to be supported a distance above the ground; and

a plurality of cable hangers structured to be disposed along, and suspended from, the messenger wire, each cable hanger having a plurality of cable carrying surfaces, each cable carrying surface being structured to support at least one electrical cable of the plurality of electrical cables,

wherein adjacent cable carrying surfaces of the plurality of cable carrying surfaces are separated by a cable carrier divider.

Ex. 1001, 10:24–37.

F. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 19):

Ground	Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1	1–13	103 ¹	CAB Catalog ²
2	14–23	103	CAB Catalog, Almy ³

Petitioner relies on a Declaration of Dr. Omid Beik to support its Petition. Ex. 1002. Patent Owner relies on a Declaration of Dr. Edward C. Kern, Jr. to support its Preliminary Response. Ex. 2001.

II. DISCUSSION

A. Level of Ordinary Skill in the Art

Petitioner asserts that a skilled artisan would have had “a bachelor’s degree in a pertinent discipline, such as electrical engineering, civil engineering, mechanical engineering or equivalent with 2–3 years of experience in electrical utility systems, planning, and design.” Pet. 18 (citing Ex. 1002 ¶ 48). Petitioner also asserts that the number of years of experience could be higher or lower given the level of education and vice versa. *Id.* (citing Ex. 1002 ¶ 48).

¹ The Leahy-Smith America Invents Act (“AIA”) revised 35 U.S.C. § 103 effective on March 16, 2013. Because the ’291 patent has an effective filing date after March 16, 2013, we apply the AIA version of 35 U.S.C. § 103.

² CAB Hooks, Hangers & Mine Safety Products Catalog, ver2010, copyright 2010 (Ex. 1006, “CAB Catalog”).

³ US 2010/0139731 A1, published June 10, 2010 (Ex. 1004, “Almy”).

Patent Owner does not contest Petitioner’s definition of a person of ordinary skill in the art or propose its own definition of a skilled artisan. *See generally* Prelim. Resp. Dr. Kern testifies that for purposes of his analysis he is assuming the definition of a person of ordinary skill in the art provided by Petitioner. Ex. 2001 ¶ 20.

On the present record, we find that Petitioner’s uncontested level of ordinary skill in the art is consistent with the ’291 patent and the prior art of record. Therefore, we adopt Petitioner’s level of ordinary skill in the art, as articulated above, in our consideration of the issues presently before us.

B. Claim Interpretation

We interpret claims “using the same claim construction standard that would be used to construe the claims in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b). Under that standard, we construe a claim in accordance with its ordinary and customary meaning as understood by one of ordinary skill in the art and the prosecution history of the patent. *Id.*; *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc).

At this stage, Petitioner does not propose any claim construction of any claim term expressly. Pet. 18. At this stage, Patent Owner does not propose the construction of any claim term expressly. *See generally* Prelim. Resp.

On the present record, we determine that we do not need to construe any claim terms expressly because none are in dispute, and no terms require construction for us to reach our Decision. *See Realtime Data, LLC. v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019).

C. Principles of Law

A patent claim is unpatentable “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103. “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). Similarly, “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Id.* at 417.

The question of obviousness is resolved based on 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 ordinary skill in the art; and (4) when in evidence, objective evidence of non-obviousness. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

Patent Owner presents objective evidence of non-obviousness, which we determine that we do not need to analyze or weigh at this stage for the reasons discussed in more detail in Section II.F. *infra*. Prelim. Resp. 38–40.

D. Ground 1: Alleged Obviousness Over the CAB Catalog

Petitioner asserts that claims 1–13 are unpatentable under 35 U.S.C. § 103 over the Cambria County Association for the Blind and Handicapped (CAB) Catalog in view of the knowledge of a skilled artisan. Pet. 19–46.

1. *CAB Catalog*

a. *Patent Owner's Stipulation*

Patent Owner stipulates that, “for purposes of the Board’s decision on institution in this proceeding, it does not challenge Petitioner’s assertion that the CAB Catalog was publicly available as of the priority data and qualifies as a prior art printed publication under 35 U.S.C. § 102.” Paper 17.

b. *CAB Hangers for Electrical Cables*

The CAB Catalog describes Bosserman clips that suspend electrical cables in a variety of underground applications and cable rings that lock onto messenger wires and have surfaces (saddles) that support all types of aerial cables from messenger wires in plants, mills, tunnels, open pit mines, and pipeline projects. Ex. 1006, 2, 5, 14.

2. *Independent Claim 1*

a. *1[c]: “a plurality of cable hangers structured to be disposed along, and suspended from, the messenger wire, each cable hanger having a plurality of cable carrying surfaces, each cable carrying surface being structured to support at least one electrical cable of the plurality of electrical cables;”*

(1) *Petitioner's Contentions*

Petitioner asserts that the CAB Catalog discloses plural cable hangers disposed along, and suspended from, a messenger cable and also discloses cable hangers that have a plurality of cable carrying surfaces. Pet. 24–26 (citing Ex. 1006, 8–11). Petitioner contends that it would have been obvious to modify the CAB cable clips, rings, and saddles to include additional cable carrying surfaces that each support at least one electrical cable. *Id.* at 26–27 (citing Ex. 1006, 5, 9, 14; Ex. 1002 ¶ 61).

(2) *Patent Owner's Arguments*

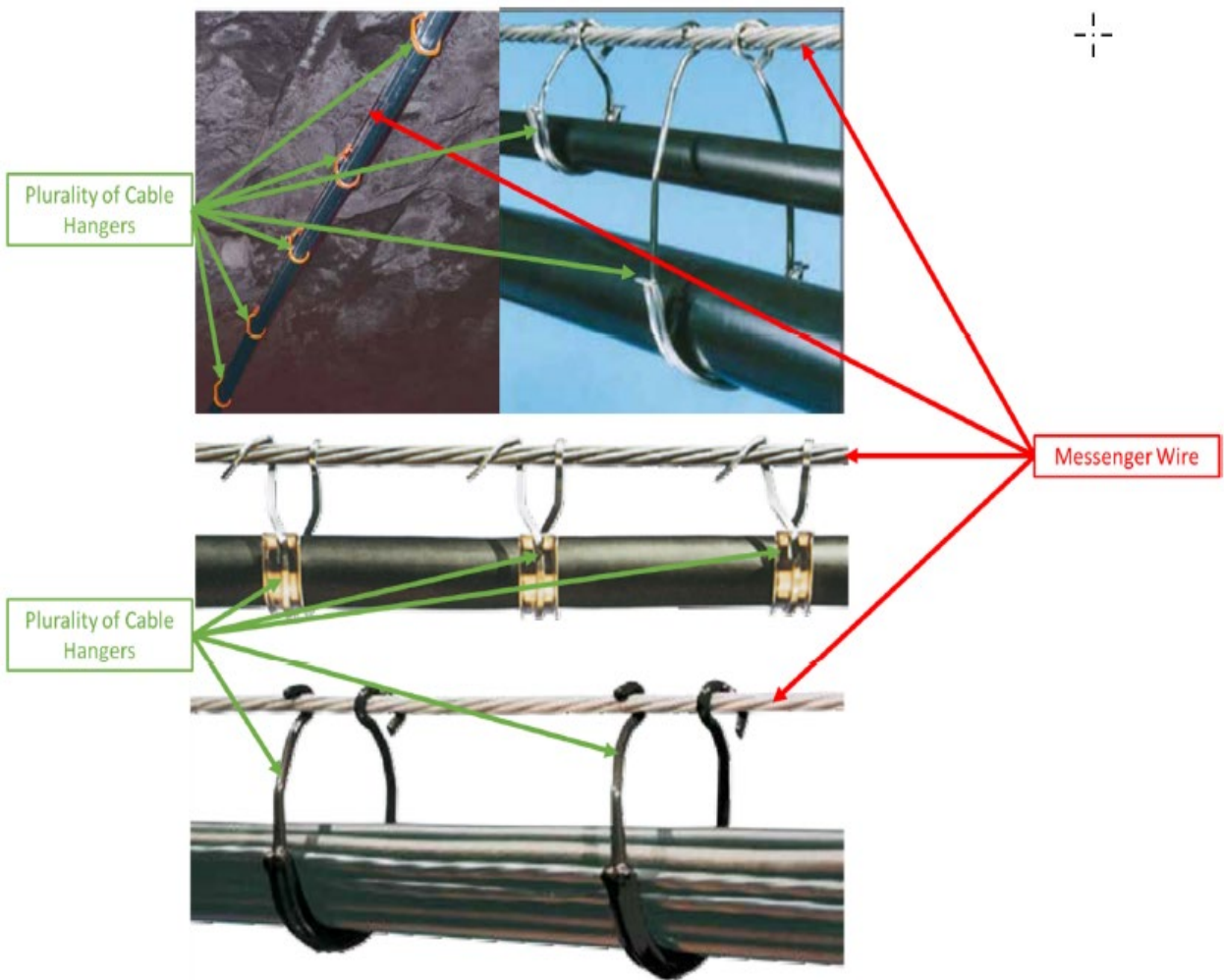
Patent Owner argues, “the only hanger disclosed in the CAB Catalog that has a plurality of cable carrying surfaces, and that is suspended from a messenger wire, is the CAB 905 Plastic Telewire Hook (EX1006, 8), which is for suspending telewires.” Prelim. Resp. 34. Patent Owner argues that the CAB 905 Plastic Telewire “is appropriate only for supporting lightweight telewires,” and “Dr. Beik fails to explain how this disclosure is sufficient to meet the claim requirement that the claimed cable hangers have a plurality of cable carrying surfaces structured to support heavier electrical power cables extending from solar panels in a solar installation.” *Id.* at 34–35.

(3) *Analysis*

To support its contentions that the CAB Catalog renders element 1[c] obvious, Petitioner cites two types of CAB Catalog cable hangers, namely cable hangers that lock onto a messenger wire to support cables on a single cable carrying surface and cable hangers that hook onto a messenger wire and support plural cables with plural cable carrying surfaces that are hooks.

To show that the CAB Catalog discloses cable hangers that are “structured to be disposed along, and suspend from, the messenger wire,” in element 1[c], Petitioner cites Bosserman clips and CAB cable rings that lock onto a wire and that each include a single cable carrying surface/saddle that is structured to support at least one electrical cable. Pet. 24–25.

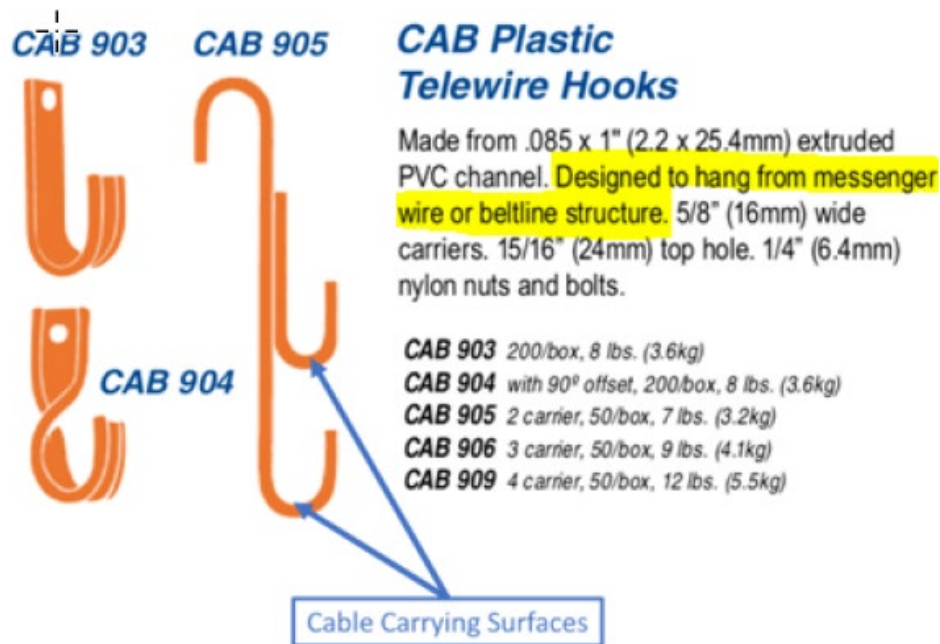
Petitioner asserts that the “*CAB Catalog* discloses a plurality of cable hangers disposed along, and suspended from, a messenger cable” as shown by CAB Catalog products (i.e., CAB Bosserman clips and CAB cable rings and saddles) depicted in Petitioner’s annotated version of pages from the CAB Catalog, which are reproduced below. Pet. 24–25.



The CAB Catalog products shown above are (1) Bosserman clips (orange clips in upper left corner) suspended from an underground messenger wire to suspend a bundle of cables from the messenger wire, (2) CAB standard and long style rings that are disposed along, and suspended from, the same aerial messenger wire (in the upper right corner) to suspend a larger and a smaller cable bundle from the same messenger wire, and (3) CAB coated (lower) and uncoated (upper) rings (the bottom two photographs) disposed along aerial messenger wires to suspend a plurality of cables and a cable bundle from their respective messenger wires. Ex. 1006, 5, 14. Each cable hanger locks tightly onto a messenger wire to retain the cable hanger in place. *Id.*

Each CAB cable hanger has a single cable carrying surface (saddle). The ends of each cable hanger are locking ends that engage and lock onto a messenger wire to “provide[] a tight, secure attachment of the cable ring to the messenger wire” for “support of all types of aerial cables.” Ex. 1006, 14; Ex. 2001 ¶ 97. Each of these CAB clips and rings suspends cables from aerial messenger wires in a spaced relationship using closed loops to secure the cables to the messenger wire. *See* Ex. 2001 ¶¶ 61, 62; Ex. 1011, 3.

To establish that the CAB Catalog discloses cable hangers with “a plurality of cable carrying surfaces,” Petitioner asserts, “*CAB Catalog* also discloses cable hangers having a plurality of (*i.e.*, more than one) cable carrying surfaces” which Petitioner annotates on the CAB 905, which is taken from pages of the CAB Catalog and reproduced below. Pet. 25.



CAB 903–905 hooks above include Petitioner’s identification of “Cable Carrying Surface” (*i.e.*, hooks) and highlighting of a description that they are “Designed to hang from messenger wire” by a hook. Ex. 1006, 8; Pet. 25.

We are not persuaded that a skilled artisan would have modified the closed-loop CAB clips and rings that *lock* onto messenger wires to maintain a spaced relationship to instead *hang* from a messenger wire by CAB 905 plastic hooks that do not lock onto the wire. Pet. 24–25; Ex. 1006, 5, 14.

Nor are we persuaded that a skilled artisan would have modified the single cable carrying surface on each CAB clip and ring to include multiple plastic hooks from the CAB 905 telewire hooks, as Petitioner proposes. Pet. 26. The CAB Catalog uses *two separate* CAB rings—the standard and the long style rings—each with a single cable carrying saddle “for running several cables independently from the same messenger wire.” The long and short rings *separately* support one cable as shown in a photograph of these rings taken from the CAB Catalog and reproduced below. Ex. 1006, 14.



Cables can be run separately by using CAB's standard and long style rings.

The photograph above shows CAB’s standard *and* long style rings that lock onto an aerial messenger wire and *separately* suspend two electrical cables. Ex. 1006, 14. Each ring includes a single cable carrying surface (saddle) that is structured to support a single electrical cable. *Id.*

The CAB Catalog also teaches multi-tiered CAB 905 telewire hooks that hang from messenger wires by a top *hook*, as shown above. These cable hangers include multiple open hooks that can organize and suspend cables from a messenger wire. On this record, we are not persuaded that a skilled artisan would have used a top hook to suspend a cable hanger and electrical cables from a messenger wire because cable hangers with such hooks are not structured to be disposed along the messenger wire. Instead, the top hooks would allow the cable hangers to move along the messenger wire.

Dr. Beik testifies that the CAB Catalog offers different shapes and sizes of hooks, shoulders, and ring diameter so a skilled artisan would know the same hanger “can be modified to fit two cables having a 2” diameter” or “to include extra bends in the hanger to provide separate and divided areas for each of the cables to occupy.” Ex. 1002 ¶ 62. Dr. Beik’s testimony that hangers *can* be modified does not explain why a skilled artisan would have modified the CAB cable rings that lock onto a messenger wire and support electrical cables with a single closed saddle to hang from a messenger wire by a single hook or include extra bends that provide separate areas for each cable or multiple cable carrying hooks. *See* Prelim. Resp. 35–36; Ex. 1006, 8–11, 14; Ex. 1011, 3. Instead, the CAB Catalog uses long and short rings with single saddles, and no bends, to suspend multiple cables from aerial messenger wires as shown above. Ex. 1006, 14. Nor are we persuaded that CAB rings would maintain their spacing to be disposed along the messenger wire if they were modified to hang from the messenger wire by a CAB 905 telewire hook. Nor does the CAB Catalog teach the interchangeability of the locking ends and single saddles of CAB rings with the hooks of the CAB 905 telewire hook or the desirability of doing so.

(4) *Conclusion*

We determine Petitioner has not demonstrated a reasonable likelihood that the CAB Catalog teaches or suggests element 1[c].

- b. *1[d]: “wherein adjacent cable carrying surfaces of the plurality of cable carrying surfaces are separated by a cable carrier divider.”*

(1) *Petitioner’s Contentions*

Petitioner asserts that the CAB Catalog renders this limitation obvious by teaching J-hooks with cable carrying surfaces separated by a cable carrier divider. Pet. 27–28 (citing Ex. 1006, 9–11; Ex. 1001, Fig. 23).

(2) *Patent Owner’s Arguments*

Patent Owner argues that Dr. Beik’s testimony that a skilled artisan “would know that this same hanger *can be* modified . . . to include extra bends in the hanger to provide separate and divided areas for each of the cables to occupy” does not mean that a skilled artisan also *would* make the modification, and Petitioner does not show that a skilled artisan would have been motivated to modify any of the CAB Catalog’s cable clips, rings, and saddles to have a plurality of cable carrying surfaces. Prelim. Resp. 35–36.

(3) *Analysis*

As discussed *supra* for element 1[c], Petitioner has not shown that a skilled artisan would have modified the CAB Catalog’s rings that lock to a messenger wire and support each cable with a single closed saddle to include plural hooks that are separated by a cable carrier divider as described for the CAB Bullhorn, J-Hook, and Longwall hangers. *See* Pet. 28; Ex. 1006, 9–11.

(4) *Conclusion*

On this record, we determine Petitioner has not shown a reasonable likelihood that the CAB Catalog teaches or suggests element 1[d].

c. Conclusion

On this record, we find that Petitioner has not established a reasonable likelihood that claim 1 is unpatentable over the CAB Catalog.

3. Claim 6

a. Petitioner's Contentions

Petitioner relies on its contentions for elements 1[a]–1[c] to support its contentions that the CAB Catalog renders obvious elements 6[a]–6[c]. Pet. 29. Petitioner relies on the CAB Catalog's disclosure of cable clips, rings, and saddles made from high tensile spring steel in rolled flat wire form to render obvious element 6[d]'s requirement that each cable hanger has a high tensile strength wire, and Petitioner asserts that it would have been obvious to modify these CAB cable clips, rings, and saddles to have a plurality of U-shaped configurations that each have a cable carrying surface. *Id.* at 29–31.

b. Patent Owner's Arguments

Patent Owner argues that the CAB Catalog does not teach or suggest a plurality of cable hangers including plural cable carrying surfaces that each support at least one electrical cable for the same reasons as claim 1. Prelim. Resp. 33–36. Patent Owner also asserts that the CAB Catalog does not teach or suggest a system for organizing a plurality of electrical cables extending from a plurality of solar panels or a messenger wire. *Id.* at 25–33.

c. Analysis

As discussed for elements 1[c] and 1[d], the CAB Catalog does not teach or suggest cable hangers structured to be disposed along a messenger wire and having plural cable carrying surfaces as recited in element 6[c], or a plurality of substantially U-shaped configurations with a cable carrying surface as recited in element 6[d]. *See* Ex. 1006, 14.

d. Conclusion

On this record, we find that Petitioner has not established a reasonable likelihood that claim 6 is unpatentable over the CAB Catalog.

4. Dependent Claims 2–5 and 7–13

Petitioner's contentions regarding claims 2–5 and 7–13 do not remedy the deficiencies of the CAB Catalog as to claims 1 and 6 from which these claims depend. We determine Petitioner has not established a reasonable likelihood that claims 2–5 and 7–13 are unpatentable over the CAB Catalog.

E. Ground 2: Alleged Obviousness Over the CAB Catalog and Almy

Petitioner asserts that claims 14–23 are unpatentable under 35 U.S.C. § 103 over the CAB Catalog and Almy. Pet. 46–53.

1. Almy

Almy discloses wire-based hanging wire-ways that support bundles of electrical cables between photovoltaic modules or modules of a photovoltaic system as shown in Figure 1, which is reproduced below. Ex. 1004 ¶¶ 2, 12.

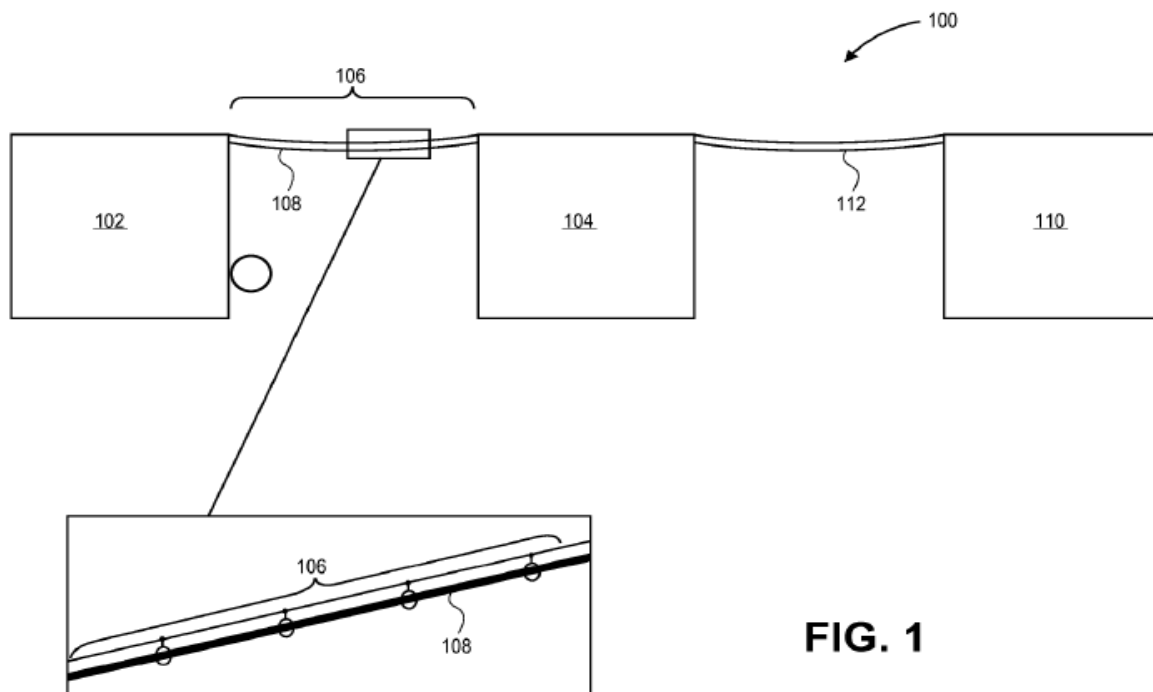


Figure 1 shows photovoltaic system 100 with first photovoltaic module group 102 and second photovoltaic module group 104. *Id.* ¶ 17. Wire-based hanging wire-way 106 is coupled to first photovoltaic module group 102 and second photovoltaic module group 104, and a first bundle of electrical cables 108 is supported by wire-based hanging wire-way 106. *Id.*

Figure 2B is reproduced below to show wire-based hanging wire-way 200B comprising a plurality of independent wire loops 204B coupled to and suspended from wire-line 202B to receive a bundle of electrical cables 206.

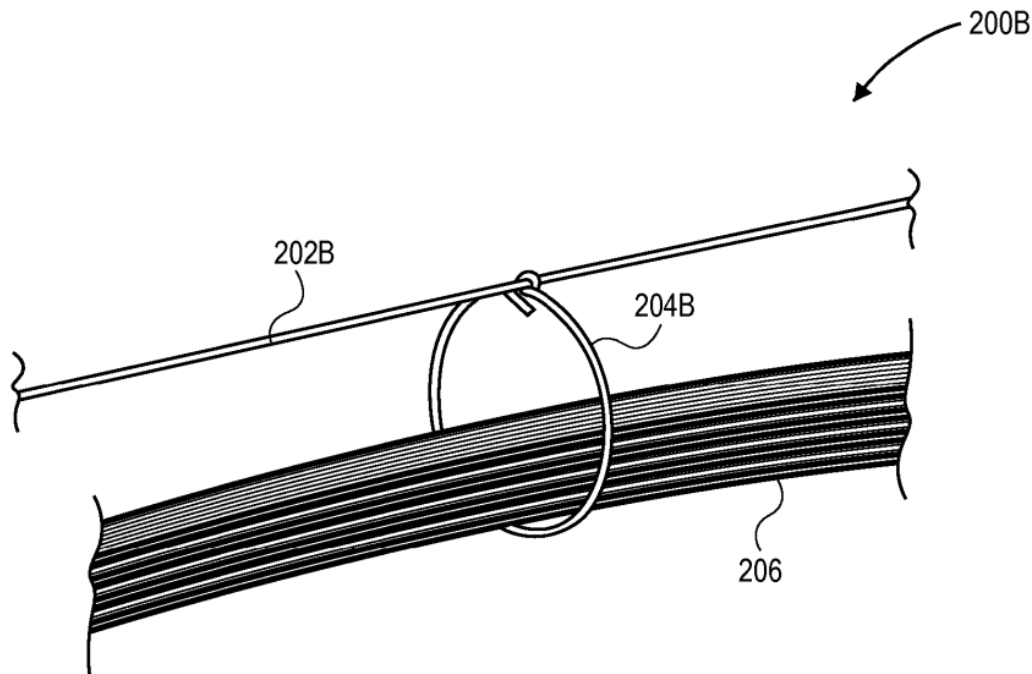


FIG. 2B

Figure 2B shows wire-based hanging wire-way 200B that includes wire-line 202B and a plurality of independent wire loops 204B coupled to wire-line 202B and adapted to receive and support a bundle of electrical cables 206. Ex. 1004 ¶ 22. Each wire loop 204B (only one shown) may be spaced from the next independent wire loop 204B by a distance of 0.25–2 meters. *Id.*

2. *Independent Claim 14*

a. *Petitioner's Contentions*

Petitioner asserts that Almy discloses a solar plant, plural solar panels, and plural electrical cables in elements 14[a]–14[c], and the CAB Catalog discloses organizing a plurality of electrical cables, a messenger wire, and cable hangers with plural cable carrying surfaces in elements 14[d]–14[g] for the reasons asserted for elements 1[a]–1[d]. Pet. 48–50 (citing Ex. 1004; Ex. 1002 ¶¶ 104–109; Ex. 1001, 1:18–22; Pet. Section VIII.A.1.a–d).

b. *Patent Owner's Arguments*

Patent Owner argues that the CAB Catalog does not teach or suggest a plurality of cable hangers, each having a plurality of cable carrying surfaces with each surface structured to support at least one electrical cable as recited in claims 14 and 19. Prelim. Resp. 38.

c. *Analysis*

As discussed in Section II.D.2. *supra*, for elements 1[c] and 1[d], we are not persuaded that the CAB Catalog discloses or suggests a plurality of cable hangers, each with a plurality of cable carrying surfaces separated by a divider as recited in elements 14[f]–14[g]. Nor are we persuaded that a skilled artisan would have replaced Almy's closed-loop cable carriers with the CAB 905 telewire open hooks or modified the CAB rings to hang from a messenger wire by a single hook, or suspended multiple cables from open *hooks* of the CAB 905 with a reasonable expectation of success. The CAB Catalog uses long and short rings to suspend multiple cables. Ex. 1006, 14.

d. *Conclusion*

On this record, we determine Petitioner has not shown a reasonable likelihood that claim 14 is unpatentable over the CAB Catalog and Almy.

3. *Independent Claim 19*

a. *Petitioner's Contentions*

Petitioner contends that Almy discloses elements 19[a]–19[c] for the same reasons as elements 14[a]–14[c], and the CAB Catalog renders obvious elements 19[d]–19[e] for the same reasons as elements 1[a]–1[b] and renders obvious a plurality of cable hangers disposed along and suspended from a messenger wire with plural cable carrying surfaces in element 19[f] for the same reasons as element 14[f] and element 1[c]. Pet. 50–51. Petitioner asserts that the CAB Catalog renders obvious elements 19[g]–19[i] for the same reasons as analogous elements 6[d]–6[f]. *Id.* at 51.

b. *Patent Owner's Arguments*

Patent Owner argues that the CAB Catalog does not teach or suggest a plurality of cable hangers with each cable hanger having a plurality of cable carrying surfaces, and each cable carrying surface is structured to support at least one electrical cable as recited in claims 14 and 19. Prelim. Resp. 38.

c. *Analysis*

As discussed in Section II.D.2. *supra* for element 1[c], we disagree that the CAB Catalog renders obvious plural cable hangers disposed along a messenger wire, *each* having a plurality of cable carrying surfaces. Nor are we persuaded that a skilled artisan would have replaced Almy's wire loops 204B with the CAB 905's *hooks* to support cables with an expectation of success. Nor are we persuaded that a skilled artisan would have modified the CAB rings to hang from a messenger wire by a hook when Almy couples wire loops 204B to wire-line 202B (Ex. 1004 ¶ 22) or to have a plurality of substantially U-shaped configurations as recited in element 19[g] rather than separate rings. Ex. 1006, 14 (use long and short ring to support two cables).

d. Conclusion

On this record, we determine Petitioner has not shown a reasonable likelihood that claim 19 is unpatentable over the CAB Catalog and Almy.

4. Dependent Claims 15–18 and 20–23

a. Petitioner’s Contentions

Petitioner contends that the CAB Catalog and Almy teach or suggest the limitations of claims 15–18 and 20–23 for the same reasons provided for claims 2–5, 9–11, and 13 in Ground 1. Pet. 52–53.

b. Patent Owner’s Arguments

Patent Owner argues that Petitioner has not shown that the CAB Catalog and Almy disclose the limitations of claims 14 and 19 from which claims 15–18 and 20–23 depend. Prelim. Resp. 37–38.

c. Analysis

Petitioner contentions that the CAB Catalog and Almy teach or suggest the additional limitations of claims 15–18 and 20–23 do not remedy the above-noted deficiencies of these references as to the patentability of claims 14 and 19 from which claims 15–18 and 20–23 depend.

d. Conclusion

On this record, we determine Petitioner has not shown a reasonable likelihood that claims 15–18 and 20–23 are unpatentable over the CAB Catalog and Almy.

F. Secondary Considerations

Because we determine that Petitioner has not shown a reasonable likelihood that any of the challenged claims are unpatentable on any of the asserted grounds of unpatentability, we do not consider the evidence of secondary considerations submitted by Patent Owner.

G. Multiple Petitions

1. Petitioner's Contentions

Petitioner contends that the '291 patent contains twenty-five claims that comprise 1,363 words, which is almost 10% of the 14,000 word count limit for petitions. Paper 3 (Petitioner's Explanation of Multiple Petitions Challenging U.S. Patent No. 1,349,291), 2. Petitioner asserts that it cannot narrow the challenged claims because Patent Owner has not provided its infringement contentions in the related district court litigation. *Id.*

Petitioner contends that the parallel petitions have material differences because IPR2024-00178 uniquely challenges claims 24–25, which recite methods of attaching and using the claimed hangers, and IPR2024-00182 uniquely challenges claims 13 and 23, which relate to ultraviolet coatings applied to the claimed cable hangers. Paper 3, 3.

2. Patent Owner's Arguments

Patent Owner argues that “there is substantial overlap in the claims challenged in [Petitioner's] two petitions.” Paper 16 (Patent Owner's Response to Petitioner's Explanation of Multiple Petition's Challenging U.S. Patent No. 11,349,291), 1. Patent Owner asserts that the '178 petition only challenges two claims not challenged in the '182 petition, and the '182 petition only challenges four claims not challenged in the '178 petition” and the same nineteen claims are challenged in each petition *Id.* at 1, 3. Patent Owner argues that it has asserted only fourteen claims of the '291 patent in the district court litigation, and none of the non-overlapping claims between the '178 and '182 petitions were asserted by Patent Owner. Patent Owner also argues that there is substantial overlap in claim language among the independent and dependent claims of the '291 patent. *Id.* at 2–3, 5.

Patent Owner argues that the '182 petition only asserts two grounds of unpatentability—the CAB Catalog and the CAB Catalog and Almy—and Almy was asserted in the '178 petition. Paper 16, 3–4. Patent Owner asserts that the '178 petition readily could have included grounds based on the CAB Catalog. *Id.* at 5.

3. *Analysis*

The Patent Trial and Appeal Board Consolidated Trial Practice Guide November 2019 (“CTPG”)⁴ states that “one petition should be sufficient to challenge the claims of a patent in most situations.” CTPG 59. The CTPG indicates that multiple petitions may be needed “when the patent owner has asserted a large number of claims in litigation or when there is a dispute about priority date requiring arguments under multiple prior art references . . . although this should be rare.” *Id.*

We determine that Patent Owner has not asserted a large number of claims in the related district court litigation sufficient to justify the filing of two petitions against the '291 patent. *See* Section I.A. *supra*. Patent Owner asserted claims 1–5, 9, 10, 14–18, 21, and 22 in its infringement contentions against Petitioner in the district court litigation. *See* Ex. 2002, 1 (Petitioner’s invalidity contentions in the district court litigation). The '178 petition’s challenge to claims 1–10, 14–22, 24, and 25 of the '291 patent covers all of the claims asserted in the district court litigation as does the '182 patent’s challenge to claims 1–23 of the '291 patent. This dual coverage addresses Petitioner’s concerns that it has challenged all of the claims asserted in the district court litigation. *See* Paper 3, 1, 2.

⁴ Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

This overlap in coverage of the claims asserted in the district court litigation in the '178 and '182 petitions means that Petitioner has filed two petitions that cover the same claims asserted in the district court litigation. The few, non-overlapping claims challenged in each petition are not asserted in the district court litigation. Under the first factor in *General Plastic Co., Ltd. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19, 9–10 (PTAB Sept. 6, 2017), we find that the petitions are directed to the same claims at issue in the district court litigation. *See* Paper 3, 3–4; Paper 16, 1–2. This factor weighs against exercising our discretion to allow two petitions.

We find that the limitations of independent claims 1 and 6 overlap in their recital of a messenger wire and a plurality of cable hangers with cable carrying surfaces, and independent claims 14 and 19 overlap in their recital of a plurality of solar panels, a plurality of electrical cables, and a system for organizing the electrical cables comprising a messenger wire, and a plurality of cable hangers with cable carrying surfaces. Ex. 1001, 10:24–37, 10:49–11:5, 11:29–45, 11:57–12:18. Claims 2–5 recite the same subject matter as claims 15–18. *Id.* at 10:38–48, 11:46–56; Paper 16, 3. Petitioner repeats its contentions for such claims. *See* Pet. 29, 50–53. We are not persuaded that the claim length requires two petitions, especially when each petition covers all claims asserted in the district court litigation. Paper 3, 2; Paper 16, 3.

Petitioner asserts that differences in the primary references asserted in each petition are significant, but Petitioner does not describe the differences sufficient to establish that two petitions are necessary or that they present different material issues. Paper 3, 3; *see* CTPG, 60. Petitioner asserts only that Caveney and Carr asserted in the '178 patent are patents and the CAB Catalog asserted in the '182 petition is Patent Owner's catalog. Paper 3, 5.

Patent Owner has not challenged Petitioner's reliance on Carr in the '178 petition even though Carr was considered by the Examiner during the prosecution of the '291 patent. *See generally* Prelim. Resp. Petitioner relies on Carr and Almy in the '178 petition to address the Examiner's finding that the prior art such as Carr and the admitted prior art in the '291 patent did not apply to electrical cables extending from solar panels. Ex. 1015, 210–211.

Petitioner ranks the '178 petition above the '182 petition in the order in which Petitioner asks the Board to consider the petitions. Paper 3, 5. We have considered the '178 petition before the '182 petition in instituting *inter partes* review for the '178 petition. *See* Section I.A. *supra*. We determine that Petitioner has not established a need to file the '182 petition.

4. Conclusion

For reasons discussed, Petitioner has not shown that a second petition is warranted. Accordingly, we exercise our discretion by not instituting an *inter partes* review based on the '182 petition as an alternative basis to deny institution of *inter partes* review in this proceeding.

H. Conclusion

Based on the parties' contentions and evidence in the current record, we determine that Petitioner has not established a reasonable likelihood of showing at least one claim of the challenged claims is unpatentable on at least one of the asserted grounds of unpatentability raised in the Petition. As a result, we do not institute an *inter partes* review of the challenged claims on any of the asserted grounds of unpatentability raised in the Petition. *See* 37 C.F.R. § 42.108(a). Alternatively, we also determine that Petitioner has not shown that a second petition is necessary, and we deny *inter partes* review of the challenged claims in the '182 petition on that basis as well.

III. ORDER

Accordingly, it is

ORDERED that the Petition is denied and no trial is instituted.

IPR2024-00182
Patent 11,349,291 B2

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