

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

POLYGROUP LIMITED (MCO),
Petitioner,

v.

WILLIS ELECTRIC CO., LTD.,
Patent Owner.

Case IPR2016-01783
Patent 9,066,617 B2

Before WILLIAM V. SAINDON, JEREMY M. PLENZLER, and
BARBARA A. PARVIS, *Administrative Patent Judges*.

PARVIS, *Administrative Patent Judge*.

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

I. INTRODUCTION

Polygroup Limited (MCO) (“Petitioner”) requests an *inter partes* review of claims 1, 2, 4–9, and 11–16 (“challenged claims”) of U.S. Patent No. 9,066,617 B2 (Ex. 1001, “the ’617 patent”). Paper 2 (“Pet.”). Willis

Electric Company, Limited (“Patent Owner”) filed a Preliminary Response to the Petition. Paper 11 (“Prelim. Resp.”).

This Decision is made under 35 U.S.C. § 314, 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.” We have reviewed the Petition, Preliminary Response, and the evidence cited therein. For the reasons discussed below, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any of the challenged claims of the ’617 Patent.

A. Related Matters

The ’617 patent has been asserted against Petitioner in *Willis Elec. Co. v. Polygroup Ltd.*, No. 0:15-cv-03443 (D. Minn. (filed Aug. 28, 2015)).¹ Pet. 72; Paper 4, 1. Petitioner also filed petitions requesting *inter partes* review of U.S. Patent No. 8,454,186 (IPR2016-00800, IPR2016-01609, IPR2016-01610); U.S. Patent No. 8,454,187 (IPR2016-00801, IPR2016-01611, IPR2016-01612); U.S. Patent No. 9,044,056 (IPR2016-00802, IPR2016-01613); and U.S. Patent No. 8,974,072 (IPR2016-01781, IPR2016-01782). Pet. 72; Paper 4, 1–2.

B. The ’617 Patent

The ’617 patent is directed to a multi-positional, locking artificial tree trunk (e.g., for a Christmas tree). Ex. 1001, (54). The artificial tree includes a first trunk portion, a second trunk portion, and a coupling mechanism. See

¹ This lawsuit is referred to herein as the “companion district court lawsuit.”

id. at 6:7–10, Fig. 1. The coupling mechanism is provided to assist in joining two sections of the artificial tree trunk (*id.* at 3:1–3) and is shaped to fit within first trunk portion and receive an insertable portion of second trunk portion (*id.* at 7:66–8:20, Fig. 2). The coupling mechanism is a hollow structure with radially-extending ribs that run along a portion of the length of the inner surface (*id.* at 7:38–44).

C. Challenged Claims

Petitioner challenges claims 1, 2, 4–9, and 11–16. Of the challenged claims, claims 1 and 14 are the only independent claims. Claims 2, 4–9, 11–13, 15, and 16 depend, directly or indirectly, from independent claim 1 or 14. Claim 1 is illustrative and is reproduced below.

1. A multi-positional interlocking artificial tree assembly, comprising:
 - a first trunk portion, the first trunk portion being hollow and defining a trunk cavity and a terminal first end;
 - a coupling mechanism, the coupling mechanism including a male body portion at a first end and a terminal lip or flange portion at a second end;
 - the male body portion inserts into the trunk cavity of the first trunk portion, and the terminal end of first the trunk portion abuts the lip such that the lip and the terminal end are both exposed, and
 - wherein the lip defines a portion of an inner cavity of the coupling mechanism, the inner cavity defined by an inner wall continuous with the lip, the inner wall further comprising a plurality of ribs.

Ex. 1001, 12:51–65.

D. Prior Art and Asserted Grounds

Petitioner asserts that the challenged claims of the '617 patent are unpatentable on the following grounds:

References	Basis	Claim(s) Challenged
Fevre ²	§ 102	1, 2, 4–9, and 11–15
Fevre and Hodges ³	§ 103	12 and 13
Mills ⁴ and Fevre	§ 103	14–16

Petitioner also relies on the Declaration of Mike Wood (Ex. 1003), who testifies that he is an expert in electrical engineering as it relates to lighting manufacturing and design (*id.* ¶ 12).

II. ANALYSIS

A. Claim Construction

1. Petitioner's Claim Construction Contentions

Petitioner's contentions regarding express construction of claim terms are limited to asserting that the elements recited in the preambles of the challenged claims, particularly the "artificial tree" element, should be considered non-limiting. Pet. 18–19. Those contentions in their entirety are reproduced below.

Petitioner respectfully submits that the elements recited in the preambles of the Challenged Claims (particularly, the "artificial tree" limitations set forth in the preambles of Challenged independent Claims 1 and 14) should be considered non-limiting because the body of each of the Challenged Claims recites a structurally complete purported invention and the respective preambles are used only to state a purpose or intended

² U.S. Patent No. 5,758,545 (issued June 2, 1998) (Ex. 1004).

³ U.S. Patent No. 5,492,429 (issued Feb. 20, 1996) (Ex. 1006).

⁴ U.S. Patent No. 377,953 (issued Feb. 14, 1888) (Ex. 1007).

use of the purported inventions. *See, e.g., Howmedica Osteonics Corp. v. Zimmer, Inc.*, 2016 U.S. App. LEXIS 3431, *10 (Fed. Cir. Feb. 26, 2016) (citations omitted). Indeed, the Patent Owner itself has taken the position that the elements recited in the preambles of the Challenged Claims should be considered non-limiting. Ex. 1017, 3, 17 (Patent Owner’s Infringement Contentions served in *Willis Elec. Co. v. Polygroup Ltd. (MCO)*, No. 0:15-cv-03443-WMW-KMM (D. Minn. Aug. 28, 2015)).

While Petitioner does not propose any claim constructions for purposes of this petition, Petitioner reserves the right to oppose any constructions offered by Patent Owner and to adopt other constructions in litigation and challenge claims/terms of the ’379 Patent under Pre-AIA 35 U.S.C. § 112 that which cannot be raised here. *See* 35 U.S.C. § 311(b).

Id. at 18–19.

Although, as can be seen above, Petitioner does not construe expressly the term “trunk portion,” Petitioner’s element-by-element contentions imply that the broadest reasonable interpretation of the term “trunk portion” may encompass portions of structures other than an artificial tree. For instance, Petitioner contends that claim 1 is anticipated by Fevre (*id.* at 19), which is directed to a steering column for a motor vehicle (Ex. 1004, [57]). Petitioner points to Fevre’s steering column tube body 1 as disclosure of “a first trunk portion, the first trunk portion being hollow and defining a trunk cavity and a terminal first end,” recited in claim 1. Pet. 20 (citing Ex. 1004, 3:53–59, Fig. 5).

2. Patent Owner’s Claim Construction Contentions

Patent Owner disputes Petitioner’s contentions regarding the preamble. Prelim. Resp. 10–17. In particular, Patent Owner contends that the “artificial tree assembly” element in the preamble is not a purpose or intended use. *Id.* Additionally, Patent Owner contends that it should not be

bound by its infringement contentions in the companion district court lawsuit, at least because all accused objects are artificial trees. *Id.* at 12 (citing Ex. 1017, 3, 17). Patent Owner also points to the '617 Patent Specification for support that the challenged claims are directed to artificial tree assemblies. *Id.* at 13–14. For instance, Patent Owner contends that the phrase “artificial tree” is used “over 40 times” in the '617 Patent Specification and “[a]ll embodiments disclosed in the patent are likewise directed to artificial trees.” *Id.* at 14. Patent Owner further points to the Title and the Field of the Invention of the '617 Patent as support that each of the independent challenged claims is directed to an artificial tree assembly. *Id.* at 13 (citing *e.g.*, Ex. 1001, 1:11–17).

Patent Owner additionally proposes constructions for the claim terms “trunk portion” and “coupling mechanism,” recited in the body of each of the challenged independent claims. *Id.* at 15–17. Turning to the first of Patent Owner’s proposed constructions, Patent Owner contends that “trunk portion” means “a section of the main stem of an artificial tree assembly.” *Id.* at 21; *see also id.* at 15 (“[T]he ‘trunk portion’ referred to throughout the remainder of the claim is in fact referring to a segment of a[n] (artificial tree).”) Patent Owner contends that “[t]he term ‘trunk portion’ is used over 200 times in the '617 specification” and “[i]n all cases, it refers to a section of the main stem of an artificial tree assembly.” *Id.* at 20 (citing *e.g.*, Ex. 1001, 1:13–17, 3:1–3, 6:8–17). Patent Owner also explains that “[t]here are a number of alternate dictionary definitions for the word ‘trunk,’” but “the only one that makes sense in the context of the entirety of the '617 patent is related to the central part of a tree.” *Id.* at 15.

Turning to the second of Patent Owner’s proposed constructions for a term recited in the body of the independent claims, Patent Owner contends that the broadest reasonable interpretation of “coupling mechanism” is “a sleeve for joining two trunk portions together to align them such that the trunk portions have limited rotational movement relative to one another.” *Id.* at 23. Patent Owner also contends that “coupling mechanism” derives antecedent basis from “interlocking” and “coupleable,” recited in the preambles of independent claims 1 and 14, respectively. *Id.* at 16.

3. Analysis of the Parties’ Claim Construction Contentions

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

We start with the parties’ contentions regarding “trunk portion.” Petitioner does not provide persuasive argument or evidence supporting that the term “trunk portion” should be construed in light of the ’617 Patent Specification broadly to encompass portions of structures other than an artificial tree. Pet. 18–20. Petitioner does not point us to intrinsic evidence, such as description in the ’617 Patent Specification, or extrinsic evidence, such as testimony or dictionary definitions that support Petitioner’s implied construction.

In contrast, Patent Owner points to disclosure in the '617 Patent Specification in support of its contentions. Prelim. Resp. 13–14, 19–21 (citing *e.g.*, Ex. 1001, 1:11–17, 3:1–3, 6:8–17). Upon review of the '617 Patent Specification, we determine that Patent Owner's contentions are consistent with the disclosure of the '617 Patent, which describes the invention as directed to artificial trees and trunk portions as portions of those artificial tree trunks. *See generally* Ex. 1001.

Additionally, Petitioner does not provide persuasive authority for its contention that it “reserves the right to oppose *any* constructions offered by Patent Owner.” Pet. 19 (emphasis added). Petitioner should have provided its contentions supporting its implied construction in the Petition. *See* 37 C.F.R. § 42.104(b) (“[T]he petition must set forth . . . [h]ow the challenged claim is to be construed.”); *see also* 37 C.F.R. § 42.108 (c) (“*Inter partes* review shall not be instituted . . . unless . . . *the petition* supporting the ground would demonstrate that there is a reasonable likelihood that at least one of the claims challenged in the petition is unpatentable” (emphasis added).) Particularly in the instant case where Petitioner's unpatentability contentions depend on broadly construing “trunk portion” to encompass, for example, a steering column tube body (Pet. 20 (citing Ex. 1004, 3:53–59, Fig. 5)), evidence and explanation supporting Petitioner's claim construction should have been set forth in the Petition.

Furthermore, on the record before us, we are not persuaded by Petitioner's contentions that the preambles of independent claims 1 and 14 are not limiting. Pet. 18–19. Instead, we are persuaded by Patent Owner that the “artificial tree assembly” element in the preamble provides necessary context at least for the term “trunk portion.” Prelim. Resp. 15. In

particular, recitation of “artificial tree assembly, comprising” in the preamble of each of independent claims 1 and 14 provides necessary context that the term “trunk” in the body of the claim is part of that artificial tree, and not, for example, a piece of luggage. We also are persuaded by Patent Owner that it should not be bound by its infringement contentions in the companion district court lawsuit, at least because consistent with Patent Owner’s contentions (Prelim. Resp. 12) the accused objects appear to be artificial trees (Ex. 1017, 3, 17).

With respect to the second of Patent Owner’s proposed constructions, our prior determination addresses the broadest reasonable interpretation of “coupling mechanism,” to the extent needed for the purposes of this Decision. In particular, Patent Owner’s proposed construction is, in part, that the “coupling mechanism” is “for joining two trunk portions.” Prelim. Resp. 23. Independent claims 1 and 14 recite expressly joining the “coupling mechanism” to the “trunk portion” in a manner set forth in more detail in the claims.

4. Conclusion

Accordingly, based on the record before us in the instant proceeding, we agree with Patent Owner (*id.* at 21) and determine that the broadest reasonable interpretation of “trunk portion” in light of the ’617 Patent Specification is “a section of the main stem of an artificial tree assembly.” In light of that determination, we need not make a further determination regarding the preamble except as set forth above. We also determine no other express construction of “coupling mechanism” is needed to resolve a dispute in this proceeding. *See Wellman, Inc. v. Eastman Chem. Co.*, 642

F.3d 1355, 1361 (Fed. Cir. 2011) (“[C]laim terms need only be construed ‘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)).

B. Person of ordinary skill in the art

Petitioner proposes that a person of ordinary skill in the art had:

- (1) a degree in mechanical engineering or an equivalent degree;
- (2) a minimum of one or two years of experience in mechanical engineering, general engineering, or general manufacturing and design arts; and
- (3) general knowledge of engineering or manufacturing and design that would include an understanding of techniques and structures for interconnecting tubular components.

Pet. 18 (citing Ex. 1003 ¶ 18). Patent Owner offers a similar description:

A person having ordinary skill in the art during the relevant timeframe would have been a person with at least one to two years of experience in designing artificial trees.

Prelim. Resp. 19.

Patent Owner contends that “Petitioner suggests a higher level of skill, including the requirement of an engineering degree.” *Id.* (citing Pet. 18). For the reasons set forth below, we reach the same decision regardless of whether the skilled artisan had an engineering degree. We, therefore, see no reason to choose one over the other. We also consider the level of skill implied by the disclosures of the prior art references. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (the prior art itself can reflect the appropriate level of skill in the art).

C. Anticipation by Fevre (Claims 1, 2, 4–9, and 11–15)

We first provide a summary of Fevre and then turn to Petitioner’s contentions.

1. *Fevre*

Fevre describes a depth-adjustable steering column for motor vehicles. Ex. 1004, 1:5–7. Figure 1 is reproduced below.

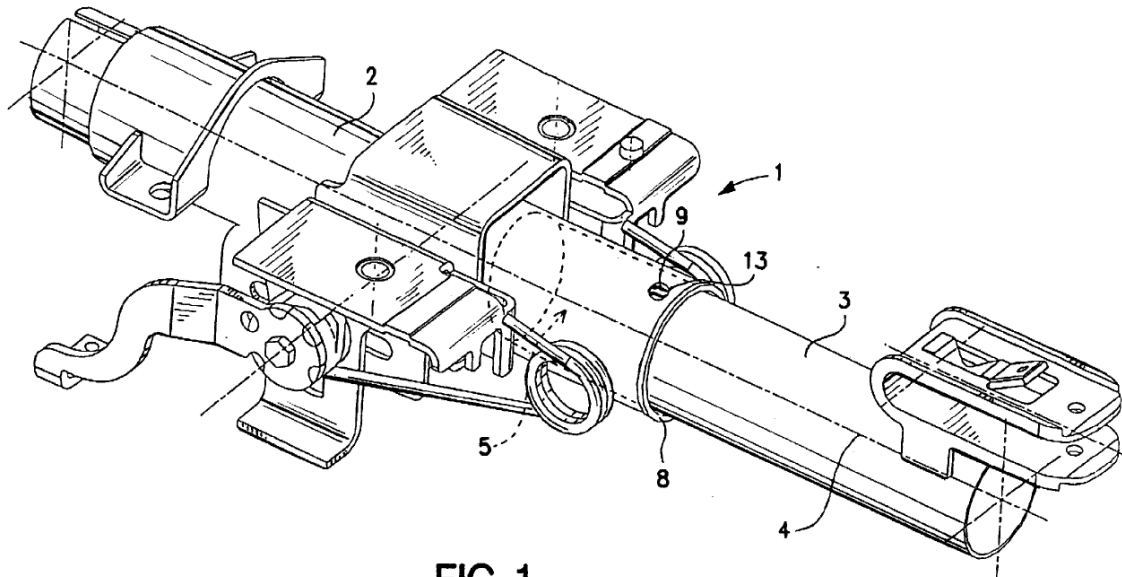


FIG. 1

Figure 1 shows a perspective view of a steering column tube body.

As shown in Figure 1 above, steering column tube body 1 includes outer tube 2 and inner tube 3. *Id.* at 3:53–57. Inner tube 3 slides into outer tube 2 along axis 4 of steering column tube body 1. *Id.* at 3:53–55. Sheath 5 is a cylindrical monobloc unit with a section substantially corresponding to that of tubes 2 and 3. *Id.* at 3:60–63. Block 9 formed on sheath 5 keeps sheath 5 in position. *Id.* at 3:57–59.

2. *Petitioner’s Contentions for Claims 1 and 14*

Petitioner reads the “trunk portion” of each independent claim of the ’617 Patent on Fevre’s steering column tube body 1. Pet. 20 (citing Ex. 1004, 3:53–59, Fig. 5; Ex. 1003 ¶¶ 82, 110). Petitioner provides a single

sentence explanation, annotations to Figure 5, and citations to the testimony of Mr. Wood. *Id.* Figure 5 of Fevre with Petitioner's annotations is reproduced below.

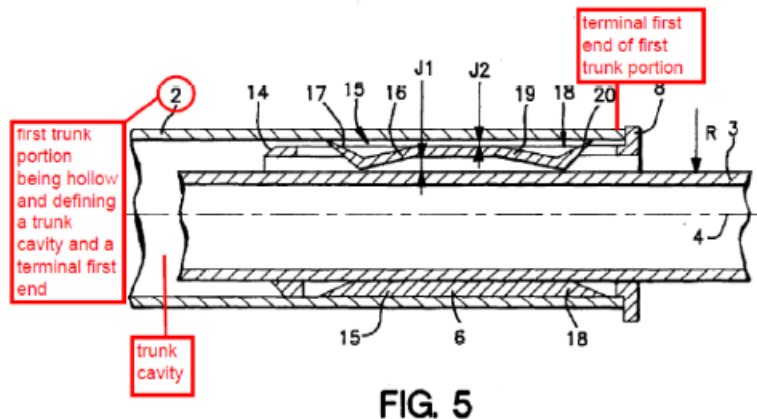


Figure 5 shows an axial section of a steering column tube body with Petitioner's annotations.

The declaration testimony of Mr. Wood relied upon by Petitioner includes Figure 5 of Fevre with the same annotations reproduced above (Ex. 1003 ¶ 110) (cited in Pet. 20). Mr. Wood also testifies as follows:

Fevre teaches a first trunk portion (i.e., outer tube 2) that is hollow and defines a trunk cavity and a terminal first end, as shown in Figs. 5 and 7. Ex. 1004, 3:53–59, Fig. 5 (annotated below), 7. A POSA would have recognized that *Fevre*'s outer tube 2 is hollow as the trunk cavity is positioned within the outer tube 2 and is shown in Fig. 5 as slidably receiving the sheath 5 and inner tube 3 “along the axis 4 of the column.” *Id.*, 3:53–59, Fig. 5 (annotated below), 7. Additionally, a POSA would have recognized that the end of the outer tube 2 that receives the sheath 5 and inner tube 3 (shown on the right side of Fig. 5 below) is a terminal end as it is positioned at an extremity of the outer tube 2. *Id.*, Fig. 5.

Id.

With respect to the “coupling mechanism,” Petitioner contends “*Fevre* teaches a coupling mechanism (i.e., sheath 5) including a male body portion at a first end and a terminal lip or flange portion (i.e., flange 8) at a second end.” Pet. 21 (citing Ex. 1004, 2:46–47, 3:55–57, 5:66–6:9, Fig. 6; Ex. 1003 ¶¶ 82, 111). With respect to joining the “coupling mechanism” to the “trunk portion,” Petitioner again points to outer tube 2, for example, contending “*Fevre* teaches that the male body portion of sheath 5 is inserted into outer tube 2 to be disposed between the outer tube 2 and inner tube 3.” *Id.* (citing Ex. 1004, 3:43–45, 3:55–57, 5:64–6:12, 6:36, Ex. 1003 ¶¶ 82, 112).

3. Patent Owner’s Contentions for Claims 1 and 14 and Discussion

Patent Owner’s contentions are premised on Patent Owner’s proposed constructions of the terms “trunk portion” and “coupling mechanism” discussed above, as well as Patent Owner’s assertion that “artificial tree assembly” recited in the preamble is limiting. Prelim. Resp. 24–26. More specifically, Patent Owner contends that *Fevre* does not disclose an “artificial tree assembly,” a “trunk portion,” or a “coupling mechanism,” recited in claims 1 and 14.

4. Discussion of Claims 1 and 14

On this record, we determine that Petitioner has not demonstrated a reasonable likelihood of showing that independent claims 1 and 14 are anticipated by *Fevre*. Petitioner has not provided sufficient explanation or identified sufficiently persuasive evidence supporting a finding that *Fevre* discloses a “trunk portion,” in accordance with the broadest reasonable interpretation of that term. As discussed above with respect to claim construction, we determine that the broadest reasonable interpretation of the

term “trunk portion” is “a section of the main stem of an artificial tree assembly.” Based on the record before us, we are not persuaded that outer tube 2 of Fevre’s steering column, or any other portion of Fevre’s steering column discloses “a section of the main stem of an artificial tree assembly.”

Petitioner’s reliance on the testimony of Mr. Wood does not resolve this deficiency. In particular, Mr. Wood testifies that “*Fevre* teaches a first trunk portion (i.e., outer tube 2).” Ex. 1003 ¶ 110. Mr. Wood’s testimony is conclusory. He does not disclose sufficiently underlying facts or data supporting that outer tube 2 of Fevre’s steering column describes a “trunk portion,” in accordance with the broadest reasonable interpretation of that term. *See* 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”)

Additionally, Mr. Wood does not testify regarding the broadest reasonable interpretation of “trunk portion” or other claim terms (Ex. 1003 ¶¶ 76–78), except that he testifies as set forth below.

I understand from Polygroup’s counsel that, consistent with the position taken by the Patent Owner, the elements recited in the preambles of the Challenged Claims (particularly the “artificial tree” limitations set forth in the preambles of Challenged independent Claims 1 and 14) should be considered non-limiting, and I have approached my analysis for purposes of establishing the unpatentability of the Challenged Claims of the ’617 Patent accordingly.

Id. ¶ 78 (citing Ex. 1017). Mr. Wood’s testimony is based on Petitioner’s claim construction contentions, which we decline to adopt for the reasons set forth above.

Furthermore, Mr. Wood’s testimony regarding Fevre is not consistent with his testimony regarding the art of tubular coupling assemblies. Ex. 1003 ¶¶ 27–42. In particular, in a timeline regarding tubular coupling assemblies, Mr. Wood chooses words such as “sleeve” (*id.* ¶¶ 27, 29), “tubular sections” (*id.* ¶¶ 28, 29, 32, 34), “cylindrical member” (*id.* ¶ 29), “shaft” (*id.* ¶ 30), and “tubular body portion” (*id.* ¶ 31) when testifying about patents directed to structures that are not artificial trees. Mr. Wood does not testify that those tubular portions of other structures are trunks or portions of trunks. *Id.* ¶¶ 27–34. In this same timeline, Mr. Wood testifies that patents directed to artificial trees have trunks or trunk portions. *Id.* ¶¶ 35, 36, 38, 39, 40. Mr. Wood’s testimony that outer tube 2 of Fevre’s steering column discloses a trunk portion is not consistent with his other testimony in which he limits his use of the term “trunk” to describe parts of artificial trees. *Id.* ¶¶ 27–42.

Petitioner’s contentions regarding the “coupling mechanism” (i.e., Fevre’s sheath 5) are based on joining sheath 5 to the outer tube 2 of Fevre’s steering column. *See, e.g.*, Pet. 21 (citing Ex. 1004, 3:43–45, 3:55–57, 5:64–6:12, 6:36, Ex. 1003 ¶¶ 82, 111). Based on the record before us, we are not persuaded that Fevre discloses joining a coupling mechanism to a “trunk portion,” in accordance with the broadest reasonable interpretation of that term.

Based on the record before us, for the foregoing reasons, we are not persuaded that Petitioner has established a reasonable likelihood that it would prevail in showing that claims 1 and 14 are anticipated by Fevre.

5. Discussion of Claims 2, 4–9, 11–13, and 15

Each of claims 2, 4–9, 11–13, and 15 depends, directly or indirectly, from either claim 1 or claim 14. Petitioner’s contentions regarding these dependent claims do not resolve the above-referenced deficiencies. Accordingly, on this record, we determine that Petitioner has not demonstrated a reasonable likelihood of showing that claims 2, 4–9, 11–13, and 15 are anticipated by Fevre.

D. Obviousness over Fevre and Hodges (Claims 12 and 13)

1. Hodges

Hodges is directed to a device for use in erecting a post that includes a tubular body intended for installation in the ground, for example in concrete within a hole, and a collar for tightly retaining the post. Ex. 1006, Abstract. Figure 5 is reproduced below.

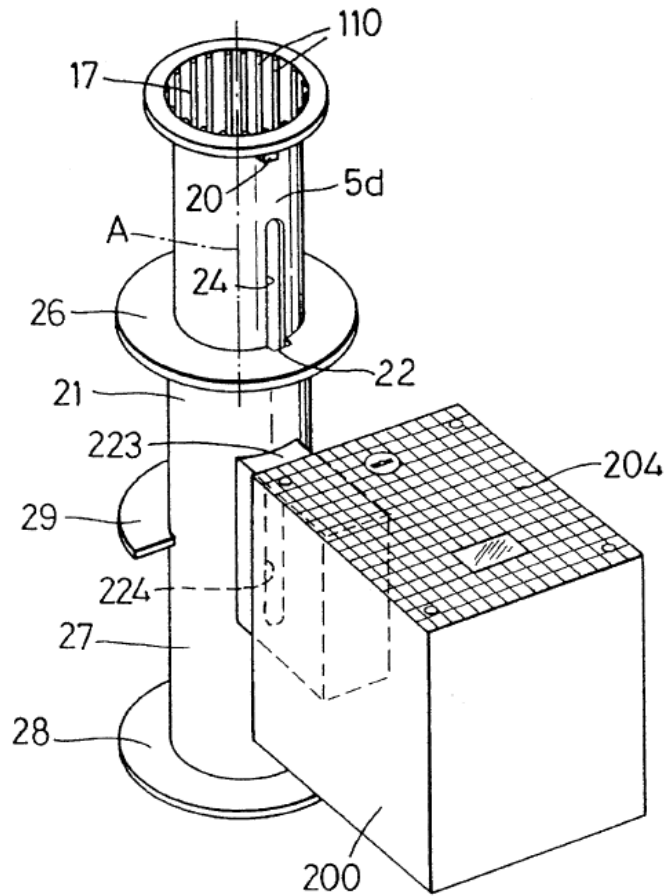


Fig. 5

View of Tubular Body Portion with a Collar and Inspection Pit.

As shown in Figure 5 of Hodges above, tubular body portion 21 includes upper and lower flanges 26 and 28 secured at opposite ends of tubular core 27, and intermediate flange 29 secured to tubular core 27 in a position between flanges 26 and 28. *Id.* at 4:31–39. Intermediate flange 29 is oriented to provide resistance to impact, for example, if used in the installation of posts on a motorway. *Id.* at 4:45–52.

Inspection pit 200 is connected to body portion 21 by integral conduit 223 which opens into opening 224 and is secured to body portion 21 by bolts. *Id.* at 5:16–28. Opening 224 allows electrical wiring to be introduced for illuminating a sign or operating traffic lights. *Id.* at 4:26–29.

2. *Petitioner’s Contentions for Fevre and Hodges (Claims 12 and 13)*

Petitioner asserts that dependent claims 12 and 13 also are unpatentable in view of Fevre and Hodges. Pet. 42–53. In this regard, Petitioner contends “[t]o the extent that Patent Owner asserts” that Fevre’s tongues 7 and projecting elements 22 do not satisfy the further recitations of claims 12 and 13 pertaining to ribs,⁵ “providing ribs that do not extend along an entire length of a coupling mechanism was well known in the art,” as taught, for example, in Hodges. Pet. 43. In its contentions for the Fevre and Hodges ground, Petitioner relies on teachings of Hodges for the further recitations of claims 12 and 13 pertaining to the plurality of ribs, but not for the recitations of claim 1 discussed above such as “trunk portion.” *Id.* at 42–44.

Petitioner provides contentions as to why Fevre and Hodges constitute analogous art suitable for combination, explaining that both are pertinent to the problem of how to secure tubular elements in a multi-tube assembly. *Id.* at 46. In this regard, Petitioner points to Hodges’ teaching of using its devices for “posts for seasonal lighting, e.g., Christmas.” Ex. 1006, 7:4–11 (cited in Pet. 46).

⁵ More specifically, claim 12 further recites “wherein the plurality of ribs do not extend along an entire length of the coupling mechanism.” Claim 13 further recites “wherein the plurality of ribs do not extend on an inside surface of the terminal lip or flange portion.”

3. Patent Owner's Contentions for Fevre and Hodges (Claims 12 and 13)

Patent Owner contends that Hodges' teaching regarding posts for seasonal lighting does not remedy Fevre's deficiencies. Prelim. Resp. 26. More specifically, Patent Owner characterizes Hodges as teaching "a device for mounting poles in the ground that allows the poles to be more easily removed/replaced." *Id.* at 27. Patent Owner further contends that such poles cannot "fairly be characterized as an artificial tree assembly having a 'trunk portion.'" *Id.* at 28.

4. Discussion of Fevre and Hodges (Claims 12 and 13)

Based on the particular record before us, Petitioner has not identified sufficiently a structure of Hodges that Petitioner asserts corresponds to a "trunk portion," or shown persuasively that Hodges remedies the aforementioned deficiencies discussed above with respect to Fevre. Pet. 42–53. Consistent with Patent Owner's contentions (Prelim. Resp. 27), Hodges teaches a device for use in erecting a post comprising "a tubular body intended for installation in the ground, e.g., in concrete within a hole." Ex. 1006, Abstract. Regarding the teachings in Hodges relating to seasonal lighting identified in the Petition (Pet. 46), that portion of Hodges is reproduced below.

The illustrative devices are especially suitable for use in erecting road traffic signs or traffic lights but can be used for other applications involving erection of posts, for example motorway crash barriers, pedestrian barriers (see FIG. 9), security fences, including for example British Rail trackside fences and other fences, supports for overhead cables, e.g. for railway or tram use, and lamp posts, including posts for seasonal lighting, e.g. Christmas, at seaside resorts or in city streets.

Ex. 1006, 7:4–12.

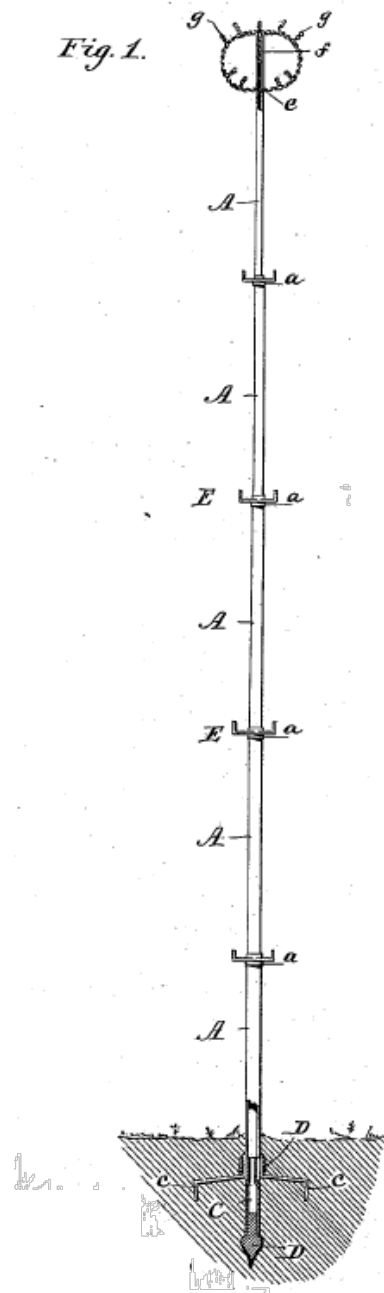
Consistent with Patent Owner's contentions (Prelim. Resp. 26–31), Hodges' teaching of seasonal lighting for Christmas is in the context of erecting outdoor posts, such as lamp posts (Ex. 1006, 7:4–12). Furthermore, Petitioner does not contend that Hodges remedies any deficiencies of Fevre other than the possible deficiency pertaining to ribs. For instance, the Petition does not identify Hodges' posts as teaching an artificial tree, a trunk, or trunk portion. Pet. 42–53. Accordingly, based on the record before us, we are not persuaded that Hodges' teachings remedy the aforementioned deficiencies.

On this record, we determine that Petitioner has not demonstrated a reasonable likelihood of showing claims 12 and 13 are unpatentable in view of Fevre and Hodges.

E. Obviousness over Mills and Fevre (Claims 14–16)

1. Mills

Mills is directed to a tubular metallic pole designed for use as a telegraph pole. Ex. 1007, 1:6–11. Figure 1 is reproduced below.



View of a Telegraph Pole

As shown above in Figure 1 of Mills, the pole includes several sections, A, of metal pipe or tubing. *Id.* at 1:49–50. Mills teaches that the lowermost section is of greater diameter and that each section successively is of lesser diameter than the one below it. *Id.* at 1:50–53. The sections are

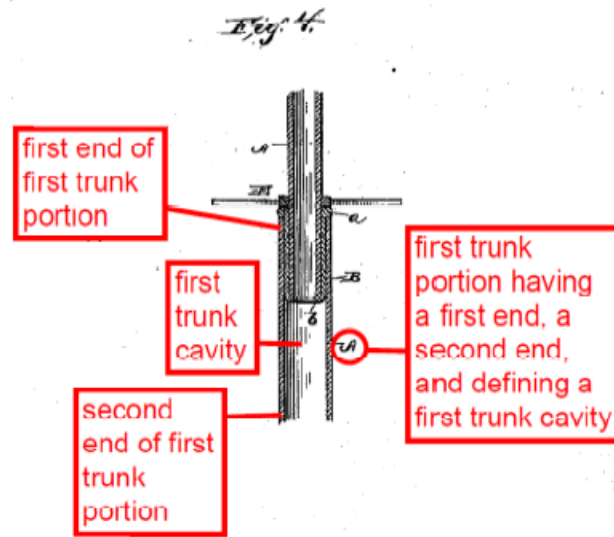
joined by inserting the lower end of the smaller section into the upper end of the larger section. *Id.* at 1:53–55.

Mills also teaches metallic sleeve B, which is inserted between the male and female parts of the joint. *Id.* at 1:66–70, 1:82–83. The upper end of sleeve B has external flange *a* and the lower end of sleeve B has internal flange *b*. *Id.* at 1:74–76. Flanges *a* and *b* support the joint. *Id.* at 1:76–80.

2. *Petitioner’s Contentions for Mills and Fevre (Claims 14–16)*

Petitioner asserts that claims 14–16 are unpatentable in view of Mills and Fevre. Pet. 55–62. The Mills and Fevre ground seeks to address a feature Petitioner alleges is missing from claim 16, which depends directly from claim 15 and indirectly from claim 14. In particular, Petitioner contends “[a]lthough *Fevre* anticipates Claim 14, *Fevre* does not teach multiple coupling mechanisms and inner tubes telescoped within another.” *Id.* at 6. Petitioner points to Mills for these further recitations of dependent claim 16. *Id.* at 68–70.

In its contentions regarding independent claim 14, Petitioner asserts “[n]either *Mills* nor *Fevre* teach a coupleable artificial tree assembly,” but “the preamble of Claim 14 is not limiting.” Pet. 57. Petitioner also points to Mills’ “lower section A” as teaching a first trunk portion. *Id.* (citing Ex. 1007, 1:13–32, 1:44–47, 1:49–50, 1:66–70, Figs. 1, 4; Ex. 1003 ¶¶ 90, 190). Petitioner provides annotations to Figure 4 of Mills reproduced below.



Longitudinal central section of a telegraph pole with annotations.

3. Patent Owner's Contentions for Mills and Fevre (Claims 14–16)

Patent Owner contends that Mills does not remedy the deficiencies of Fevre. Prelim. Resp. 31–33. In particular, Patent Owner contends that Mills “discloses a metallic telegraph pole that can be assembled in sections” and “has nothing at all to do with artificial tree assemblies.” *Id.* at 33–34.

4. Discussion of Mills and Fevre (Claims 14–16)

Petitioner's contentions that Mills' telegraph pole teaches a trunk are conclusory. *See, e.g.*, Pet. 57–58. For instance, Petitioner simply identifies lower section A of Mills as teaching the trunk portion without explaining how a section of a telegraph pole teaches a “trunk portion,” in accordance with the broadest reasonable interpretation of that term which is “a section of the main stem of an artificial tree assembly.” *Id.* Mr. Wood's testimony similarly is conclusory, again simply identifying lower section A of Mills as teaching the trunk portion. Ex. 1003 ¶¶ 90, 190. Mr. Wood's testimony

suffers from the same deficiencies discussed above with respect to Fevre in that he relies on Petitioner's claim construction contentions and his testimony regarding Mills is not consistent with his testimony regarding the timeline of tubular coupling assemblies, in which he limits his use of the term "trunk" to describe parts of artificial trees. *Id.* ¶¶ 27–42.

On this record, we determine that Petitioner has not demonstrated a reasonable likelihood of showing claims 14–16 are unpatentable in view of Mills and Fevre.

III. CONCLUSION

Petitioner has not demonstrated, on this record, that the prior art describes or teaches each element of independent claims 1 and 14, or of the claims 2, 4–9, 11–13, 15, and 16 which depend therefrom.

IV. ORDER

In view of the foregoing, it is hereby:

ORDERED that no *inter partes* review of the '617 Patent is instituted and that all grounds set forth in the Petition challenging the '617 Patent are *denied*.

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PETITIONER:

Paul E. McGowan
Alexis N. Simpson
Christopher J. Forstner
paul.mcgowan@troutmansanders.com
alexis.simpson@troutmansanders.com
Christopher.forstner@troutmansanders.com

Jason D. Eisenberg
jasone-ptab@skgf.com

PATENT OWNER:

Larina A. Alton
Luke D. Toft
lalton@foxrothschild.com
ltoft@foxrothschild.com