

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TRE MILANO, LLC,
Petitioner,

v.

TF3 LIMITED,
Patent Owner.

Case IPR2015-00649
Patent 8,651,118 B2

Before JAMES P. CALVE, SCOTT A. DANIELS, and
TIMOTHY J. GOODSON, *Administrative Patent Judges*.

GOODSON, *Administrative Patent Judge*.

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

I. INTRODUCTION

Tre Milano, LLC (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–5 and 11 of U.S. Patent No. 8,651,118 B2 (“the ’118 patent”). TF3 Limited (“Patent Owner”) timely filed a Preliminary Response (Paper 6, “Prelim. Resp.”) to the Petition. We have jurisdiction under 35 U.S.C. § 314.

To institute an *inter partes* review, we must determine that the information presented in the Petition shows “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). For the reasons set forth below, we conclude that the information presented in the Petition establishes a reasonable likelihood that Petitioner will prevail in challenging claims 1–5 and 11 of the ’118 patent. Pursuant to 35 U.S.C. § 314, we hereby authorize an *inter partes* review to be instituted as to claims 1–5 and 11.

Our factual findings and conclusions at this stage of the proceeding are based on the evidentiary record developed thus far. This is not a final decision as to patentability of claims for which *inter partes* review is instituted. Our final decision will be based on the full record developed during trial.

A. Related Matters

The parties inform us that the ’118 patent is the subject of a lawsuit in the U.S. District Court for the District of Connecticut, *Conair Corp. v. Tre Milano*, Case No. 3:14-cv-01554-AWT. *See* Pet. 1; Paper 5, 2.

B. The ’118 Patent (*Ex. 1001*)

The ’118 patent relates to a hair styling device. *Ex. 1001*, Title, Abstract. According to the Specification, one advantage of the device is that it permits the removal of a formed curl without being unwound, which better

preserves the curvature of a wound curl compared to devices in which the wound curl is forced to unwind as it is removed. *Id.* at col. 2, ll. 9–21. The device is shown in Figures 1 and 2, which are reproduced below:

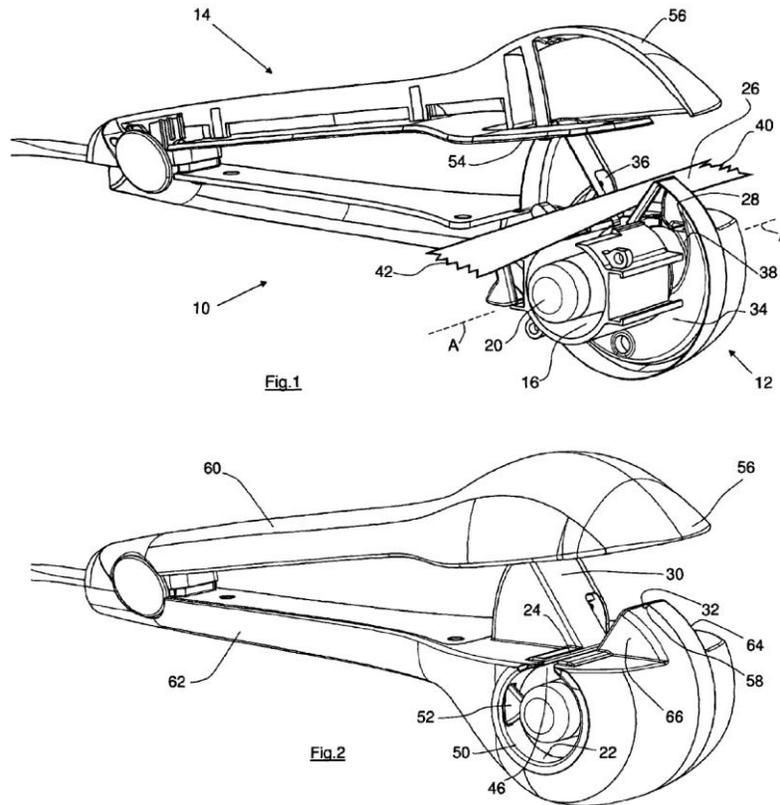


Figure 1 is a perspective of part of the hair styling device with some of the body removed. *Id.* at col. 4, ll. 29–32. Figure 2 shows the complete hair styling device. *Id.* at col. 4, ll. 33–35. As shown in Figures 1 and 2, device 10 has chamber 16 within body 12. *Id.* at col. 4, ll. 50–51. Length of hair 26 is introduced into chamber 16 through primary opening 24. *Id.* at col. 4, ll. 58–60. The rotation of rotatable element 34 causes leading edge 38 to capture length of hair 26 and pull it through primary opening 24 into chamber 16. *Id.* at col. 5, ll. 11–17. Continued rotation of rotatable element 34 causes the proximal portion of length of hair 26 to rotate around elongate member 20 until it engages abutment 52, and the distal portion of length of

hair 26 is gradually wound around elongate member 20 between rotatable element 34 and abutment 52. *Id.* at col. 5, ll. 47–50, 54–60.

Chamber 16 can be heated, such that the length of hair 26 is styled by remaining within chamber 16, curled around the cylindrical elongate member 20, for a predetermined length of time. *Id.* at col. 5, l. 65–col. 6, l. 4, col. 6, ll. 23–25. At the end of a styling operation, abutment 52 moves to its open position, which allows the styled hair 26, now curled, to pass out of secondary opening 50 by sliding along elongate member 20 and off its free end. *Id.* at col. 6, ll. 30–37.

C. Illustrative Claims

Claim 1, the sole independent claim challenged, is an apparatus claim from which each of claims 2–5 and 11 depends. Claim 1 is illustrative of the subject matter at issue, and is reproduced below:

1. A hair styling device having:

a body defining a chamber adapted to accommodate a length of hair, the chamber having a primary opening through which the length of hair may pass into the chamber;

a rotatable element adapted to engage the length of hair adjacent to the primary opening;

an elongate member around which, in use, the length of hair is wound by the rotatable element, the elongate member having a free end;

the chamber having a secondary opening through which the length of hair may pass out of the chamber, the secondary opening being located adjacent to the free end; and

a movable abutment which can engage the length of hair in use, the movable abutment having an open position in which the length of hair can pass through the secondary opening, and a closed position in which the length of hair is retained within the chamber, wherein the movable abutment is located within one of (i) the secondary opening, (ii) the primary opening, and

(iii) a passageway connecting the secondary opening to the primary opening.

D. References Relied Upon

The Petition relies on the following references:

Gnaga	US 4,148,330	Apr. 10, 1979	Ex. 1004
Hottenrott	US 2010/0083978 A1	Apr. 8, 2010	Ex. 1009
Dinger	GB 302,952	Dec. 21, 1928	Ex. 1012
Gillette	GB 1,036,583	July 20, 1966	Ex. 1010
Hoshino	JP 61-10102	Jan. 21, 1986	Ex. 1005 ¹
De Benedictis	WO 2009/077747 A2	June 25, 2009	Ex. 1011

E. Alleged Grounds of Unpatentability

Petitioner contends that claims 1–5 and 11 of the ’118 patent are unpatentable on the following grounds:

Reference(s)	Basis	Claim(s) Challenged
Gnaga	§ 102	1–5 and 11
Hoshino	§ 102	1–5 and 11
Hottenrott	§ 102	1 and 3–5
Gillette	§ 102	1–5 and 11
De Benedictis	§ 102	1, 3–5, and 11
De Benedictis and Dinger, Gnaga, Hoshino, or Gillette	§ 103	2

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the

¹ Petitioner has submitted an English translation of Hoshino as Exhibit 1006.

patent in which they appear. 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1278 (Fed. Cir. 2015). 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. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

1. “Chamber”

Claim 1 recites “a body defining a chamber adapted to accommodate a length of hair, the chamber having a primary opening through which the length of hair may pass into the chamber” and “the chamber having a secondary opening through which the length of hair may pass out of the chamber.” Ex. 1001, col. 9, ll. 29–41. Figure 1 of the ’118 patent designates the chamber with reference number 16. *See id.* at col. 4, l. 51.

Petitioner argues that “chamber” should be construed to mean “a space or cavity surrounded or closed off on all sides except for a primary opening that can be utilized for insertion of hair, and a secondary opening that can be utilized for removal of hair.” Pet. 5. Petitioner’s proposed construction is based on dictionary definitions of “chamber” and “enclosed,” as well as Petitioner’s contention that chamber 16 disclosed in the ’118 patent is closed off on all sides except for the primary and secondary openings. *See id.* (citing Exs. 1015, 1016.) Patent Owner does not propose a construction of “chamber,” but argues that Petitioner’s analysis of the cited references is inconsistent with Petitioner’s proposed construction of “chamber.” *See Prelim. Resp.* 12–14.

Based on the current record, Petitioner’s proposed construction appears to be unduly narrow. Claim 1 recites that the chamber has a primary

opening and a secondary opening, but the claim language does not preclude the possibility of other openings to the chamber. Petitioner does not point to, and we do not find, any indication in the Specification that the primary and secondary openings must be the only openings and that the chamber must be closed off on all sides other than through those two openings.

Petitioner contends that the '118 patent depicts chamber 16 as being closed off on all sides except for the two openings (*see* Pet. 5), but this is not a sufficient reason for limiting the claim term “chamber” to having that characteristic. *See, e.g., In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1369 (Fed. Cir. 2004) (“We have cautioned against reading limitations into a claim from the preferred embodiment described in the specification, even if it is the only embodiment described, absent a clear disclaimer in the specification.”).

For the purposes of this decision, we adopt a construction of “chamber” to mean “a partially enclosed space.” This construction accords with the ordinary meaning of chamber as an enclosed space (*see* Ex. 1015), while also allowing for the presence of primary and secondary openings to the chamber, which are required expressly by claim 1.

2. “Free End”

Claim 1 recites that the elongate member has a “free end.” Patent Owner argues that a “free end” is “an end of an elongate member that is devoid of any structure that would impede the translational release of the hair at the end of the elongate member.” Prelim. Resp. 14–15. Patent Owner’s proposed construction is based on the description in the '118 patent that abutment 52 in its open position allows the length of hair “to slide along the elongate member 20 towards and subsequently off its free end.” *Id.*

(quoting Ex. 1001, col. 6, ll. 34–37). Patent Owner also quotes a dictionary defining “free” to mean “not physically restrained, obstructed, or fixed; unimpeded.” *Id.*

Patent Owner’s proposed construction does not specify that the free end is devoid of structure that would impede release *when the movable abutment is in the open position*. As such, in order to qualify as a “free end” under Patent Owner’s proposed construction, the end of the elongate member must be devoid of structure that would impede release *regardless* of the position of the movable abutment. The ’118 patent describes that hair can slide off the free end of elongate member 20 when abutment 52 is in its open position. Ex. 1001, col. 6, ll. 33–37. But Figure 2 of the ’118 patent shows that when abutment 52 is in the closed position, abutment 52 prevents hair wound around elongate member 20 from sliding off the free end. *See id.* at col. 5, ll. 47–59; col. 7, l. 65–col. 8, l. 2. Thus, Patent Owner’s proposed construction conflicts with the preferred embodiment of the ’118 patent. “A claim construction that excludes the preferred embodiment ‘is rarely, if ever, correct and would require highly persuasive evidentiary support.’” *Adams Respiratory Therapeutics, Inc. v. Perrigo Co.*, 616 F.3d 1283, 1290 (Fed. Cir. 2010) (quoting *Vitronics Corp. v. Conceptronic Inc.*, 90 F.3d 1576, 1583–84 (Fed. Cir. 1996)). We, therefore, decline to adopt Patent Owner’s proposed construction.

The ’118 patent does not provide a definition for “free end.” The free end is shown as the end of elongate member 20 opposite the base, by which elongate member 20 is attached to the remainder of hair styling device 10. *See* Ex. 1001, Figs. 1–4. Thus, consistent with the dictionary definition Patent Owner quotes, the free end of elongate member 20 is the end that is

not physically restrained or fixed. *See* Prelim. Resp. 15. We note that, based on the Figures in the '118 patent, abutment 52 may provide some structural support to the free end 20 when abutment 52 is in the closed position. *See* Ex. 1001, Figs. 1–4. When abutment 52 is in the open position, however, the free end of elongate member 20 is not structurally supported. Accordingly, for the purposes of this decision, we construe “free end” to mean “an end of the elongate member that is unsupported when the movable abutment is in the open position.”

3. Other Claim Terms

Petitioner has proposed other terms for construction. *See* Pet. 5–6. However, “claim terms need only be construed ‘to the extent necessary to resolve the controversy.’” *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). We determine that, at this stage of the proceeding, no other terms require express construction in order to reach our decision.

B. Anticipation by Gnaga

Petitioner argues that claims 1–5 and 11 of the '118 patent are anticipated by Gnaga. *See* Pet. 7–16. Gnaga describes a motor-curler unit for automatic application of curlers to hair. Ex. 1004, Abstract. Figures 1 and 2 of Gnaga are reproduced below:

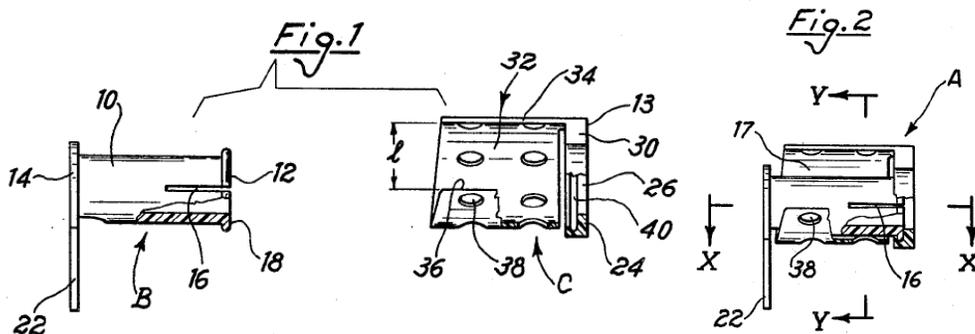
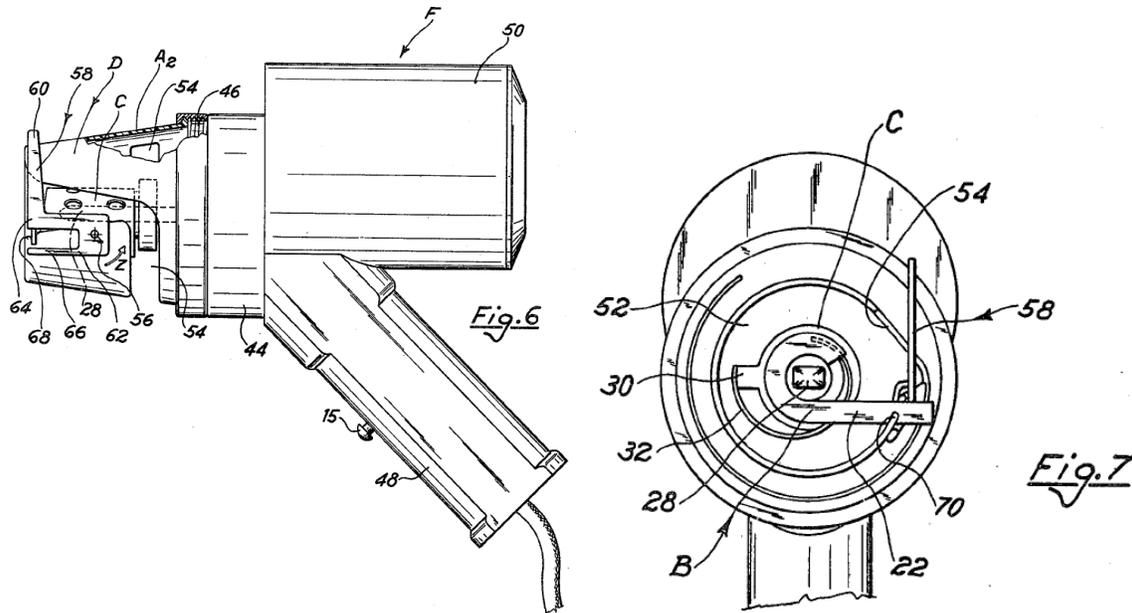


Figure 1 is a side view of internal element B and external element C, which together form Gnaga's curler A. *Id.* at col. 2, ll. 31–33, 44–48.

Figure 2 is a side view of curler A with elements B, C in engagement with one another. *Id.* at col. 2, ll. 34–36. Figures 6 and 7 of Gnaga are reproduced below:



Figures 6 and 7 show side and front views, respectively, of the unit with curler A inserted inside housing D. *Id.* at col. 2, ll. 42–43, col. 3, ll. 34–37. Internal element B is locked in position via rod 22 and hook 58, and external element C is engaged with shaft 28. *Id.* at col. 3, l. 56–col. 4, l. 8. With this arrangement, rotation of shaft 28 drives the rotation of external element C, while internal element B is held stationary due to the engagement of rod 22 and hook 58. *Id.* at col. 4, ll. 13–26. Thus, when a hair lock is brought into housing D via slot 54, rotation of element C causes the hair lock to be inserted into hollow space 17 between elements B and C, and wound around element B. *Id.* at col. 4, ll. 9–22. When the motor is stopped, the operator releases the connection of hook 58 and rod 22. *Id.* at col. 4, ll. 23–

28. The hair lock can then be removed from casing D with “curler A, around which the hair lock is still wound, rest[ing] in position when coming out from the dome-shaped casing D.” *Id.* at col. 4, ll. 28–32. After the hair is dried, curler A is disassembled to its two pieces B, C, and the curled hair lock is released. *Id.* at col. 4, ll. 32–35.

1. Claim 1

Petitioner contends that Gnaga’s rotating element C and housing D form a body defining a chamber, as recited in claim 1, and that slot 54 is a primary opening through which a length of hair passes into the chamber. *See* Pet. 10, 14. Petitioner further asserts that the opening at the front of Gnaga’s housing D constitutes the claimed secondary opening. *Id.* at 10. Patent Owner argues that the portion of Gnaga that Petitioner has identified as the chamber does not accord with Petitioner’s proposed construction of “chamber.” *See* Prelim. Resp. 12–13. As discussed above, however, we do not adopt Petitioner’s proposed construction of chamber. On the current record, we are persuaded that Gnaga’s housing D forms a body defining a partially enclosed space, that slot 54 is a primary opening through which hair may pass into that partially enclosed space, and that the front of housing D includes a secondary opening to the partially enclosed space.

Petitioner points to Gnaga’s external element C as the “rotatable element” and Gnaga’s internal element B as the “elongate member.” Pet. 11. Petitioner contends that the end of internal element B nearest the front of the device constitutes a “free end.” *See id.* at 10. Petitioner relies on Gnaga’s rod 22 as the “movable abutment.” *Id.* at 12. Petitioner asserts that rod 22 has an open position in which curler A can pass through the opening at the front of outside housing D, as well as a closed position in which the

rod 22 and hook 58 lock curler A inside the housing D. *Id.* at 7, 8.

Patent Owner argues that rod 22 obstructs the end of internal element B such that there is no free end. Prelim. Resp. 16–17. As discussed above, we construe “free end” to mean “an end of the elongate member that is unsupported when the movable abutment is in the open position.” When rod 22 is not engaged with hook 58, the end of rod 22 nearest the front of housing D is not attached to housing D, which allows curler A to be removed from housing D. Ex. 1004, col. 4, ll. 26–32. Thus, based on the current record, we agree with Petitioner that Gnaga’s internal element B has a free end.

Patent Owner further argues that Gnaga lacks a movable abutment having an open position, because the only way to remove the curled length of hair from curler A *in the fully assembled device* is to pull the length of hair back past the rod 22. Prelim. Resp. 17–18. This argument is unpersuasive because it is based on the proposition that Gnaga’s disclosure should be limited to the mode in which curler A is mounted on shaft 28 and locked into housing D. Yet, Gnaga describes removing curler A, with hair wound around it, from housing D as part of the normal hair styling operation. Ex. 1004, col. 4, ll. 28–32. Patent Owner does not persuade us that using Gnaga’s device in the intended manner by removing curler A from housing D causes these two separated parts to cease being a hair styling device. As such, based on the current record, we agree with Petitioner that Gnaga’s rod 22 constitutes a movable abutment having an open position in which curler A, with hair wound around it, can pass through the opening at the front of outside housing D.

For the foregoing reasons, Petitioner has demonstrated a reasonable

likelihood that it will prevail in showing that claim 1 is anticipated by Gnaga.

2. Claim 2–5 and 11

Petitioner explains how Gnaga discloses each limitation of dependent claims 2–5 and 11. Pet. 12–16. Patent Owner does not present any argument for the patentability of these claims over Gnaga separate from the arguments for claim 1, from which they depend. *See* Prelim. Resp. 15–20. Based on the current record, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it will prevail in showing that claims 2–5 and 11 are anticipated by Gnaga.

3. Petitioner’s Alternative Obviousness Argument

Petitioner argues that if Gnaga does not anticipate claims 1–5 and 11, any differences between Gnaga and claims 1–5 and 11 are trivial and it would have been obvious to make such modifications to Gnaga. Pet. 13–14. We agree with Patent Owner that Petitioner’s obviousness analysis is conclusory and unsupported, insofar as Petitioner does not identify any differences between the claims and Gnaga nor provide any facts or reasoning as to why those differences would have been obvious. *See* Prelim. Resp. 19–20. Moreover, to the extent that anticipation may be considered the epitome of obviousness, institution on such a basis would be redundant with the ground of anticipation by Gnaga on which we are instituting proceedings. Thus, Petitioner has not demonstrated a reasonable likelihood that it will prevail in showing that claims 1–5 and 11 are obvious in view of Gnaga.

C. Anticipation by Hoshino

Petitioner argues that claims 1–5 and 11 of the ’118 patent are

anticipated by Hoshino. *See* Pet. 16–26.² Figure 1 of Hoshino is reproduced below:

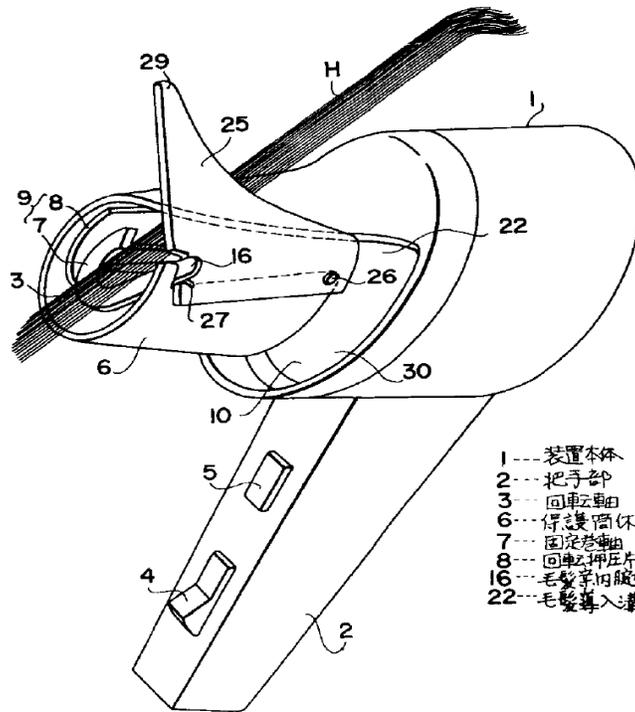


Figure 1 is an oblique view of the automatic hair curler. *See* Ex. 1006, 6. As shown in Figure 1, Hoshino describes an automatic hair curler in which curling member 9, made up of fixed roller 7 and rotating pressing piece 8, is mounted on shaft 3. *See* Ex. 1005, Figs. 1, 2; Ex. 1006, 3. Fixed roller 7 is held in place by the position of hair guide arm 16 between latching groove 23 on protective tube body 6 and lock groove 24 on lock lever 25,

² Petitioner also contends that if Hoshino does not anticipate claims 1–5 and 11, any differences between Hoshino and claims 1–5 and 11 are trivial, and it would have been obvious to make such modifications to Hoshino. Pet. 24. This contention is unpersuasive for the same reasons discussed above in section II.B.3. Specifically, it is conclusory and unsupported. *See* Prelim. Resp. 23–24. Petitioner has not demonstrated a reasonable likelihood of prevailing in showing that claims 1–5 and 11 would have been obvious in view of Hoshino.

while rotating pressing piece 8 is driven to rotate by shaft 3. Ex. 1006, 4. Hair H is introduced into hair introduction groove 22 and is wound onto fixed roller 7 by rotating pressing piece 8. *Id.* at 5. When curling is completed, lock lever 25 is rotated and curling member 9 is removed from shaft 3. *Id.* at 5. Curling member 9 can be left on the head and, when ready, curling member 9 is removed from the curled hair by detaching fixed roller 7 and rotating pressing piece 8. *Id.* at 5.

1. Claim 1

Petitioner contends that Hoshino's rotating pressing piece 8 and protective tube body 6 form a body defining a chamber. *See* Pet. 20. Petitioner asserts that hair introduction groove 22 constitutes a primary opening through which a length of hair passes into the chamber, and that the opening at the front of Hoshino's protective tube body 6 constitutes the claimed secondary opening. *See id.* at 20–21. Petitioner points to Hoshino's rotating pressing piece 8 as the “rotatable element” and Hoshino's fixed roller 7 as the “elongate member.” *See id.* at 21. Petitioner contends that the end of fixed roller 7 nearest the front of the device constitutes a “free end.” *Id.* Petitioner relies on Hoshino's hair guide arm 16 as the “movable abutment.” *Id.* at 22. Petitioner asserts that hair guide arm 16 has an open position in which curler A can pass through the opening at the front of protective tube body 6, and a closed position in which the hair is retained inside protective tube body 6. *Id.* at 20–22.

Patent Owner's arguments concerning Hoshino are similar to those that Patent Owner presented regarding Gnaga. Patent Owner argues that the portion of Hoshino Petitioner has identified as the chamber does not accord with Petitioner's proposed construction of “chamber.” *See* Prelim. Resp. 13.

This argument is not persuasive because we do not adopt Petitioner's proposed construction of chamber. On the current record, we are persuaded that Hoshino's protective tube body 6 forms a body defining a partially enclosed space, that hair introduction groove 22 is a primary opening through which hair may pass into that partially enclosed space, and that the front of protective tube body 6 includes a secondary opening to the partially enclosed space.

Patent Owner also argues that Hoshino's fixed roller 7 lacks a "free end" because hair guide arm 16 obstructs the end. *See* Prelim. Resp. 20–21. We construe "free end" to mean "an end of the elongate member that is unsupported when the movable abutment is in the open position." Hoshino teaches that "if the lock lever 25 is rotated and the lock of the hair guide arm 16 released, the curling member 9 can easily be removed from the rotating shaft 3" Ex. 1006, 5. As seen in Hoshino's Figure 2, when hair guide arm 16 is in its unlocked position, the front end of fixed roller 7 is not connected to or supported by protective tube body 6, which permits curling member 9 (of which fixed roller 7 is a part) to be removed from shaft 3. Ex. 1005, Fig. 2. Thus, based on the current record, we agree with Petitioner that Hoshino's fixed roller 7 has a free end.

Patent Owner further argues that Hoshino lacks a movable abutment having an open position, because the only way to remove the curled length of hair from curling member 9 in the fully assembled device is to pull the length of hair back past hair guide arm 16. Prelim. Resp. 22. This argument is unpersuasive as to Hoshino for the same reason discussed above with respect to Gnaga: the argument assumes that Hoshino should be limited to the fully assembled device with curling member 9 locked in position on

shaft 3. Yet, similar to Gnaga, Hoshino describes removing curling member 9 from shaft 3 as a normal part of the hair styling operation. Ex. 1006, 5. Patent Owner does not persuade us that using Hoshino's device in the intended manner by removing curling member 9 from protective tube body 6 causes these two separated parts to cease being a hair styling device. As such, based on the current record, we agree with Petitioner that Hoshino's hair guide arm 16 constitutes a movable abutment having an open position in which fixed roller 7 with hair wound around it can pass through the opening at the front of protective tube body 6.

For the foregoing reasons, Petitioner has demonstrated a reasonable likelihood that it will prevail in showing that claim 1 is anticipated by Hoshino.

2. Claim 2–5 and 11

Petitioner explains how Hoshino discloses each limitation of dependent claims 2–5 and 11. Pet. 22–24, 26. Patent Owner does not present any argument for the patentability of these claims over Hoshino separate from the arguments for claim 1, from which they depend. *See* Prelim. Resp. 20–24. Based on the current record, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it will prevail in showing that claims 2–5 and 11 are anticipated by Hoshino.

D. Anticipation by Hottenrott

Petitioner argues that claims 1 and 3–5 are anticipated by Hottenrott. *See* Pet. 27–36.³ Figures 1a and 1b of Hottenrott are reproduced below:

³ As in the other anticipation grounds, Petitioner includes a backup position that to the extent claims 1 and 3–5 are not anticipated by Hottenrott, the claims would have been obvious in view of Hottenrott. *See* Pet. 34. Like the other obviousness arguments Petitioner advances in the alternative, this

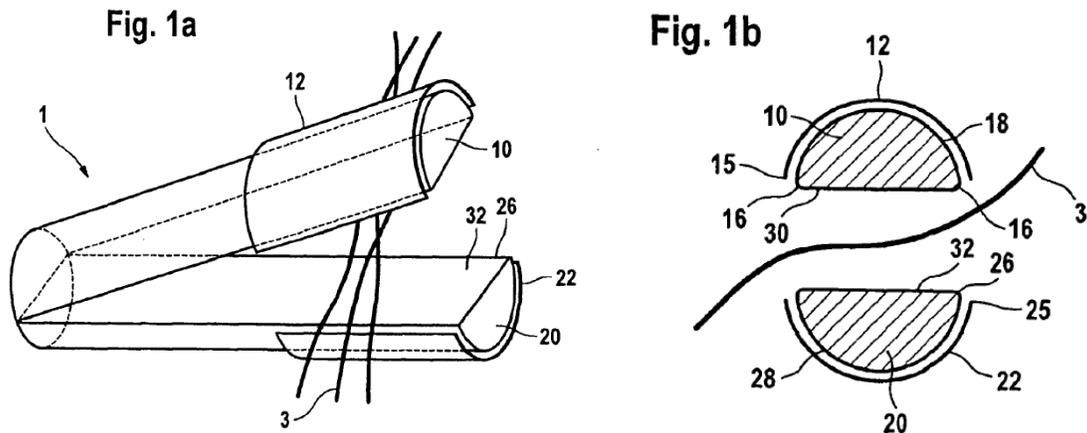


Figure 1 shows a schematic, three-dimensional diagram of a first embodiment. *See Ex. 1009 ¶ 50.* Figure 1b shows a cross sectional diagram of the device of Figure 1a with a strand of hair. *Id.* ¶ 51. As depicted in Figures 1a and 1b, Hottenrott describes hair styling device 1 having a cylindrical heating part 4 that allows guide shells 12, 22 to rotate around styling parts 10, 20. *See Ex. 1009 ¶ 71, Figs. 1a–2b.* In use, strand of hair 3 is inserted between styling parts 10, 20 near the base of strand of hair 3, and heating surfaces 30, 32 of styling parts 10, 20 are brought together. *Id.* ¶ 85. The rotation of guide shells 12, 22 causes strand of hair 3 that is pulled over guide edge 15 to be “pulled through between the flat heating plates 30, 32 of the styling parts 10, 20, curved over the styling edge 16 of the styling part 10 and cooled on the cooling zone 18 of the styling part 10 before ultimately leaving the hair styling device 1 via the guide edge 25 of the guide shell 22.” *Id.* ¶ 73; *see also id.* at Figs. 1a–3b. With the device in its closed, rotated state, the hair strand is pulled through the device from the base to the end of the hair strand. *Id.* ¶ 85. The device is then returned to the unrotated and

argument is conclusory and unsupported. *See supra* § II.B.3. Petitioner has not demonstrated a reasonable likelihood of prevailing in showing that claims 1 and 3–5 would have been obvious in view of Hottenrott.

opened position so that the next strand of hair can be inserted for styling. *Id.*

In arguing that Hottenrott anticipates claim 1, Petitioner contends that Hottenrott's guide shells 12, 22 correspond to the claimed "rotatable element." Pet. 30–31. Petitioner also relies on Hottenrott's guide shells 12, 22 as satisfying the limitation of a "movable abutment." *Id.* at 32–33. Patent Owner challenges Petitioner's reliance on guide shells 12, 22 as meeting two different elements of the claim, because "when a claim requires plural distinct structural elements, it is improper to map a single element of a reference to the plural recited elements." Prelim. Resp. 24–25 (citing *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999)).

We agree with Patent Owner that Petitioner's anticipation analysis of Hottenrott fails to give weight to each limitation in claim 1. Claim 1 recites "a rotatable element" and "an elongate member around which, in use, the length of hair is wound by the rotatable element." Because this claim language requires that the rotatable element winds the hair around the elongate member, we understand the claim to require that the rotatable element and the elongate member are separate structures. Consistent with the principle that all limitations in a claim must be considered to be meaningful, it is improper for Petitioner to rely on Hottenrott's guide shells 12, 22 as being both the claimed "rotatable element" and the "movable abutment." Thus, Petitioner has not demonstrated a reasonable likelihood that it will prevail in showing that claims 1 and 3–5 are anticipated by Hottenrott.

E. Anticipation by Gillette

Petitioner argues that claims 1–5 and 11 are anticipated by Gillette.⁴ Gillette describes a hair curling device. *See* Ex. 1010, 1, ll. 10–15. Figure 9 is reproduced below. *Id.* at 2, ll. 101–02.

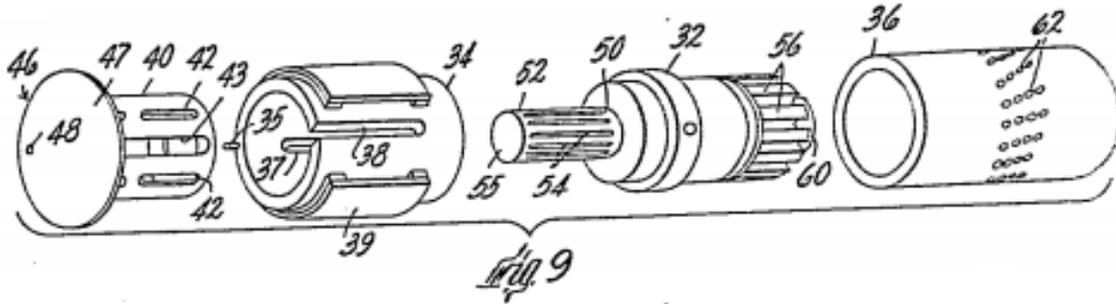


Figure 9 is an exploded, isometric view of the device. *Id.* at 2, ll. 101–02. As shown in Figure 9, the device includes winding member 40, air receiver 34, housing 32, and turbine stator 36. *See id.* at 4, ll. 86–94. In use, air suction is applied to the device, which causes hair to be sucked into winding member 40 and retained against wall 52 of shaft 50. *See id.* at 5, ll. 80–84. Shaft 50 is free to rotate within winding member 40, and its rotation, along with the circular flow path of air around the shaft, winds the hair inside winding member 40. *Id.* at 5, ll. 15–17, 55–59, 80–90. After the tress of hair has been fully wound, “the winding member 40 with the hair tress coiled therein is then pulled away from the rest of the assembly, the winding member remaining in position on the head” *Id.* at 5, ll. 106–10.

Petitioner’s anticipation argument based on Gillette is flawed for the

⁴ As in the other anticipation grounds, Petitioner includes a backup position that to the extent claims 1–5 and 11 are not anticipated by Gillette, the claims would have been obvious in view of Gillette. *See* Pet. 45. Like the other obviousness arguments Petitioner presents in the alternative, this argument is conclusory and unsupported. *See supra* § II.B.3. Petitioner has not demonstrated a reasonable likelihood of prevailing in showing that claims 1–5 and 11 would have been obvious in view of Gillette.

same reason as discussed above in Section II.D. Petitioner relies on the same structural component of Gillette as satisfying two separately recited elements of claim 1. Specifically, Petitioner contends that Gillette's shaft 50 is both the "rotatable element" and the "elongate member." *See* Pet. 41–42. Because the claim requires that the rotatable element winds the hair around the elongate member, the rotatable element must be a separate structure from the elongate member. By relying on shaft 50 as satisfying both of these two separate structures, Petitioner fails to give weight to each limitation in claim 1. Thus, Petitioner has not demonstrated a reasonable likelihood that it will prevail in showing that claims 1–5 and 11 are anticipated by Gillette.

F. Anticipation by De Benedictis

Petitioner argues that claims 1, 3–5, and 11 are anticipated by De Benedictis. *See* Pet. 48–57. De Benedictis describes several embodiments of hair styling devices. The embodiment on which Petitioner's anticipation argument is based is illustrated in Figure 13, which is reproduced below.

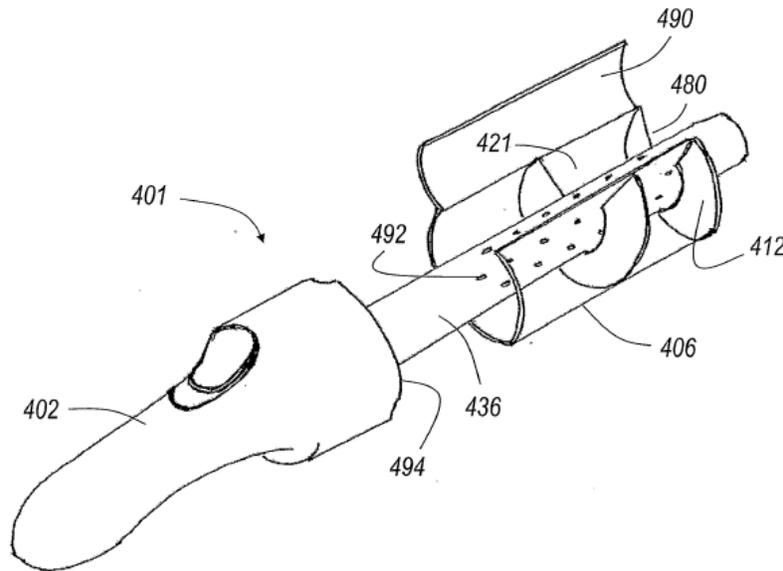


Fig. 13

Figure 13 is a perspective view of a hair styling device. Ex. 1011, 6,

ll. 13–14. Figure 13 depicts device 401 in which “an annular chamber 408 is formed between the walls of the housing 406 and the elongate member 436.” *Id.* at 17, ll. 14–16. Aperture 480 allows access into chamber 408 through end wall 412 at the end of housing 406 distal from handle 402. *Id.* at 17, ll. 17–19. Door 490 allows housing 406 to be opened along the length of housing 406 from aperture 480. *Id.* at 17, ll. 28–30. Rotating element 420 in the form of a helical member is arranged to rotate independently of both elongate member 436 and housing 406. *Id.* at 17, l. 31–18, l. 2. In use, door 490 is opened and hair is placed into the opening and into a gap 421 in helical member 420. *Id.* at 18, ll. 15–19. Door 490 is then closed, and helical member 420 is caused to rotate, which draws the free end of the hair into the chamber 406 and coils it around elongate member 436. *Id.* at 18, ll. 20–23. When the hair has been curled, device 401 is withdrawn, causing the hair to pass through aperture 480. *Id.* at 18, ll. 28–29.

Petitioner contends that door 490 of De Benedictis corresponds to the “movable abutment” of claim 1 and aperture 480 is the “secondary opening.” *See* Pet. 52–53. We are not persuaded that De Benedictis’s door 490 is a “movable abutment having an open position in which the length of hair can pass through the secondary opening, and a closed position in which the length of hair is retained within the chamber,” as recited in claim 1. As shown in Petitioner’s drawings illustrating De Benedictis in the open and closed positions, hair passes through aperture 480 regardless of whether door 490 is in its open or closed position. *See* Pet. 51, 52. De Benedictis expressly teaches removing the hair from chamber 408 with the door in the closed position: “When the curling is complete, the device 401 is simply withdrawn from the hair, allowing the hair to pass through the aperture 480.

The *door 490 need not be opened.*” *Id.* at 18, ll. 28–30 (emphasis added). Thus, door 490 lacks a closed position in which the hair is retained in the chamber.

Accordingly, Petitioner has not demonstrated a reasonable likelihood that it will prevail in showing that claims 1, 3–5, and 11 are anticipated by Gillette.

G. Obviousness over De Benedictis and Dinger, Gnaga, Hoshino, or Gillette

Petitioner’s argument that claim 2 would have been obvious continues to rely on De Benedictis as teaching all the limitations of claim 1, from which claim 2 depends. *See* Pet. 58–60. Thus, for the reason discussed above in Section II.F., Petitioner has not demonstrated a reasonable likelihood that it will prevail in showing that claim 2 would have been obvious in view of De Benedictis and Dinger, Gnaga, Hoshino, or Gillette.

III. CONCLUSION

For the foregoing reasons, upon review of Petitioner’s analysis and supporting evidence, as well as the arguments presented in the Preliminary Response, we conclude Petitioner has demonstrated a reasonable likelihood that it will prevail with respect to its challenges that claims 1–5 and 11 are anticipated by Gnaga and Hoshino. We further conclude that Petitioner has not demonstrated a reasonable likelihood of prevailing on any of the other challenges presented in the Petition. At this stage in the proceeding, we have not made a final determination as to the patentability of any challenged claim.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted as to claims 1–5 and 11 of the '118 patent for the following grounds:

1. Claims 1–5 and 11 under 35 U.S.C. § 102(b) as anticipated by Gnaga; and
2. Claims 1–5 and 11 under 35 U.S.C. § 102(b) as anticipated by Hoshino.

FURTHER ORDERED that 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, the trial commencing on the entry date of this decision; and

FURTHER ORDERED that the trial is limited to the grounds identified above.

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