

# United States Court of Appeals for the Federal Circuit

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**TF3 LIMITED,**  
*Appellant*

v.

**TRE MILANO, LLC,**  
*Appellee*

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2016-2285

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Appeal from the United States Patent and Trademark Office, Patent Trial and Appeal Board in No. IPR2015-00649.

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Decided: July 13, 2018

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BRADFORD J. BADKE, Sidley Austin LLP, New York, NY, argued for appellant. Also represented by CHING-LEE FUKUDA; THOMAS ANTHONY BROUGHAN, III, ANNA MAYERGOYZ WEINBERG, Washington, DC.

JEFFREY GLENN SHELDON, Cislo & Thomas LLP, Los Angeles, CA, argued for appellee. Also represented by LAURA LLOYD; DOUGLAS HUNT MORSEBURG, Leech Tishman Fuscaldo & Lampl, LLC, Pasadena, CA; THOMAS J. PEISTRUP, Tre Milano, LLC, Culver City, CA.

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Before NEWMAN, LOURIE, and HUGHES, *Circuit Judges*.

NEWMAN, *Circuit Judge*.

TF3 Limited (“TF3”) appeals the decision of the Patent Trial and Appeal Board (“PTAB” or “Board”)<sup>1</sup> in an *inter partes* review of U.S. Patent No. 8,651,118 (“the ’118 Patent”), requested by Tre Milano, LLC. Tre Milano challenged the validity of claims 1–5 and 11, and did not challenge the validity of claims 6–10 and 12–15 of the ’118 Patent. The PTAB instituted review of all of the claims that were challenged.

We conclude that the Board erred in its finding of anticipation, for the Board erroneously construed two claim terms: “the length of hair can pass through the secondary opening” and “free end,” broadening the claims beyond the description in the ’118 Patent specification. On the correct claim construction, the claims are not anticipated.

## I

### BACKGROUND

#### A. *The ’118 Patent*

The ’118 Patent is for a “hair styling device” that automates the curling of hair. In operation, a strand of hair is fed into a chamber of the device, the hair is wound around a rotating curling member in the chamber, the wound hair is heated to preserve the curl, and the curled hair slides off the curling member and exits the chamber. TF3 explains that “because the secondary opening 50 is annular and surrounds elongate member 20 the length of hair is not required to pass any obstruction or otherwise be forced to uncurl during its removal from the hair

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<sup>1</sup> *Tre Milano, LLC v. TF3 Ltd.*, IPR2015-00649, Paper No. 37 (P.T.A.B. May 2, 2016) (“Board Op.”); 2015 WL 3901718 (P.T.A.B. June 22, 2015) (“Institution Dec.”).

styling device 10, so that the curvature of the curls created by the device can be substantially maintained.” ’118 Patent, col. 6, ll. 39–44.

Figures 1 and 2 show the claim elements related to this appeal: the elongate member 20, primary opening 24, secondary opening 50, and movable abutment 52:

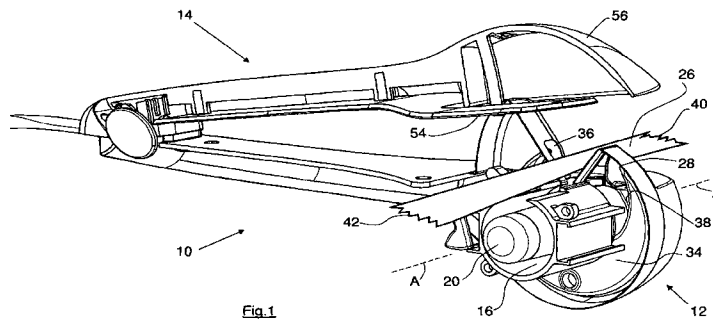


Fig. 1

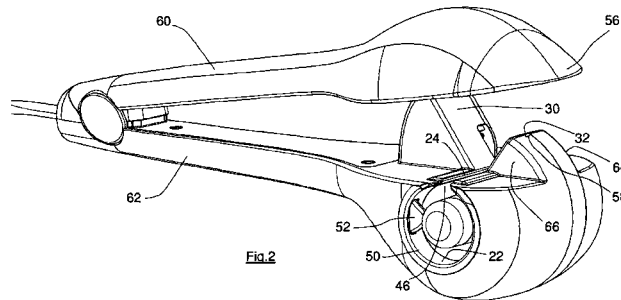


Fig. 2

In operation the device receives a section of hair 26 through primary opening 24 into chamber 16. A motor-driven rotatable element 34 rotates and its leading edge 38 engages and captures the hair 26. The rotating element winds the hair around elongate member 20 until it reaches abutment 52. The abutment prevents twisting of the hair by stopping the hair from rotating around the

free end of the elongate member 20. The wound hair is then heated. The user then releases the grip on handle parts 60 and 62, *see* Fig. 2, automatically moving abutment 52 from its closed position to its open position, and releasing the curled hair through the second opening 50.

Claim 1 is deemed representative:

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

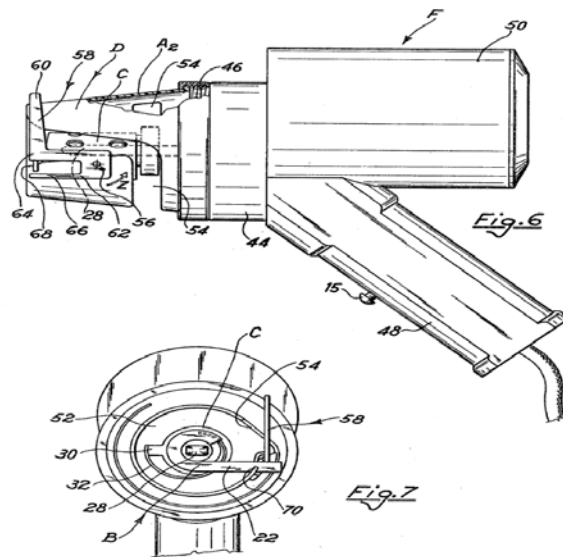
a movable abutment which can engage the length of hair in use, the movable abutment having an open position in which the length of hair can pass through the secondary opening, and a closed position in which the length of hair is retained within the chamber, wherein the moveable abutment is located within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

Dependent claims 2–5 and 11 add limitations specifying the position of the movable abutment and the shape of the secondary opening.

### B. The Prior Art

The Board instituted review on two grounds: anticipation by U.S. Patent No. 4,148,330 (“Gnaga”) and/or anticipation by Japanese Patent Application No. 61-10102 (“Hoshino”).

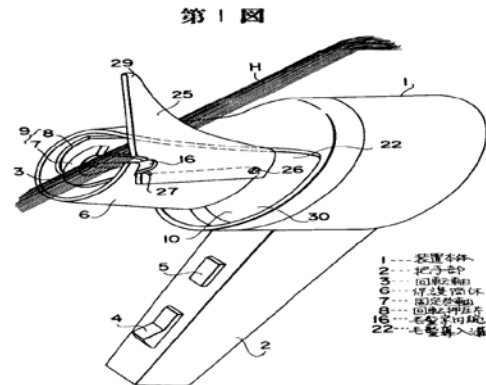
The Gnaga reference, titled “Motor-Curler Unit for Automatic Application of Curlers to the Hair to be Treated,” shows a hair-curling device in which curler A, composed of internal portion B and external portion C, is inserted into the device at housing D. The hair is wound around the rotating curler and heated, and the curler carrying the hair is ejected and disassembled, allowing removal of the hair by unwinding from the curler. Figures 6 and 7 depict the Gnaga device:



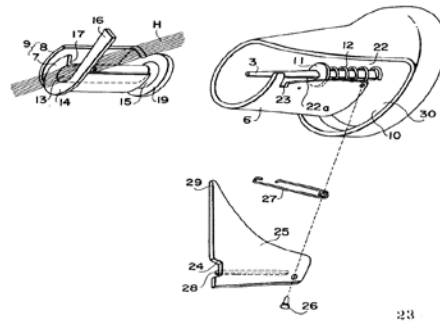
Gnaga, Figs. 6, 7.

The Hoshino reference describes a hair-curling device in which a curler is inserted into a winding structure, hair is wound around the rotating curler, supported by a lock lever and hair guide arm, and then the curler carrying the

hair is ejected from the device and disassembled, allowing removal of the curl by unwinding from the curler. J.A. 631 (Hoshino Translation). Hoshino Figures 1 and 2 illustrate the device, including curling member 9, lock lever 25, and hair guide arm 16.



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Hoshino, Figs. 1, 2.

### C. The Board Decision

The Board held that Gnaga and Hoshino each shows the same device as claimed in the '118 Patent, rendering the claims invalid for anticipation. However, as is apparent, the devices are not the same. Anticipation was decided on a flawed analysis, whereby the '118 Patent

claims were construed to have a breadth beyond the scope supported by the device described in the '118 Patent, the Board then holding that the unduly broad '118 Patent claims read on the different Gnaga and Hoshino devices and thus are anticipated.

The Board construed “free end” to mean “an end of the elongate member that is unsupported when the movable abutment is in the open position.” Board Op. at \*13. The Board rejected TF3’s proposed construction of “the length of hair can pass through the secondary opening” to mean “when the abutment is in its open position, the styled length of hair is allowed to slide along the elongate member towards and subsequently off its free end,” *id.*, instead determining that claim 1 “does not require that the length of hair is allowed to slide along the elongate member towards and subsequently off its free end.” *Id.* at \*16.

Based on these constructions, the Board rejected TF3’s argument that “Gnaga lacks (1) an elongate member having a free end, (2) a secondary opening adjacent to the free end, and (3) a movable abutment having an open position in which the length of hair can pass through the secondary opening, all present at the same time in a hair styling device,” finding the argument “not persuasive” because the argument relied upon TF3’s proposed claim construction. *Id.* at \*23–24.

The Board also found that Hoshino anticipates the '118 Patent device, stating, “[W]e agree with Petitioner that Hoshino teaches every element of claim 1. . . . Patent Owner’s argument that in Hoshino’s device, hair does not slide along and off the elongate member is not persuasive because we do not agree that allowing hair to slide along the elongate member and subsequently off its free end is a requirement of claim 1.” *Id.* at \*30.

TF3 appeals, stating that on the correct claim construction and the correct law of anticipation, the claims are not anticipated.

## DISCUSSION

“Anticipation” in patent usage means that the claimed device is not new; that it previously existed. *See In re Spada*, 911 F.2d 705, 708 (Fed. Cir. 1990) (“[T]he reference must describe the applicant’s claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it.”); *In re Donohue*, 766 F.2d 531, 533 (Fed. Cir. 1985) (“It is well settled that prior art under 35 U.S.C. § 102(b) must sufficiently describe the claimed invention to have placed the public in possession of it.”). Neither Gnaga nor Hoshino describes the same device as claimed in the ’118 Patent.

The Board’s error apparently arose from its “construction” of the claims more broadly than the description in the ’118 Patent specification, thereby enlarging the claims beyond their correct scope. However, when the claims are construed as the subject matter is described in the specification, they are not anticipated by the Gnaga and Hoshino devices.

***“The length of hair can pass through the secondary opening”***

The Board declined to construe “the length of hair can pass through the secondary opening,” as set forth in the specification, instead ruling that in accordance with the broadest reasonable interpretation, “claim 1 does not require that the length of hair is allowed to slide along the elongate member towards and subsequently off its free end.” Board Op. at \*13–16.

TF3 states that the correct construction requires the wound hair to slide along the elongate member and pass out of the chamber in its curled shape. TF3 states that this is the description in the specification, and that the claims are not reasonably construed more broadly, even under the broadest reasonable interpretation standard. “Above all, the broadest reasonable interpretation must



be *reasonable* in light of the claims and specification.” *PPC Broadband, Inc. v. Corning Optical Commc’ns RF, LLC*, 815 F.3d 747, 755 (Fed. Cir. 2016) (emphasis in original); see *Microsoft Corp. v. Proxyconn, Inc.*, 789 F.3d 1292, 1298 (Fed. Cir. 2015), *overruled on other grounds by Aqua Prods., Inc. v. Matal*, 872 F.3d 1290 (Fed. Cir. 2017) (en banc) (“A construction that is unreasonably broad and which does not reasonably reflect the plain language and disclosure will not pass muster.” (internal quotation marks and citation omitted)).

We conclude that the Board erred in its claim construction. The specification describes how the curled hair is removed from the device:

It is arranged that the abutment 52 in its open position allows the styled length of hair to pass out of the secondary opening 50, i.e., to slide along the elongate member 20 towards and subsequently off its free end. Little force is required to separate the hair styling device 10 from the length of hair which has been styled . . . the length of hair is not required to pass any obstruction or otherwise be forced to uncurl during its removal from the hair styling device 10 . . . .

’118 Patent, col. 6, ll. 33–42. However, the Board held that the description “can pass through a secondary opening” is not limited to requiring a secondary opening. The Board found it “irrelevant” as to whether claim 1 “requires that hair slides along and off the elongate member in passing through the secondary opening.” Board Op. at \*14. Instead, the Board found that, “We do not understand the use of ‘i.e.’ . . . to signify that passing out of the secondary opening always must be accomplished by sliding along and off the elongate member.” *Id.* at \*15. The Board erred in this analysis, for the specification uses the abbreviation “i.e.” for the mode whereby the curl slides out of the device without stretching or uncurling.

The usage “i.e.” (“*id est*” or “that is”), “signals an intent to define the word to which it refers.” *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009); see *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1202 (Fed. Cir. 2013) (“i.e.” is definitional when it “comports with the inventors’ other uses . . . in the specification and with each and every other reference”).

The ’118 Patent describes the device as improving curl retention by the structure that “permits a formed curl to be slid off the end of the elongate member without being uncurled.” ’118 Patent, col. 2, ll. 9–11. Neither the Gnaga nor the Hoshino device has such a structure. The claims of the ’118 Patent are not reasonably construed to include a device and method that are not described. As in *Enzo Biochem Inc. v. Applera Corp.*, 780 F.3d 1149, 1156–57 (Fed. Cir. 2015), the claim construction was erroneously broadened to include subject matter contrary to the description in the specification.

Claims are construed in light of the specification. See *Fenner Invs., Ltd. v. Cellco P’ship*, 778 F.3d 1320, 1322–23 (Fed. Cir. 2015) (“The terms used in patent claims are not construed in the abstract, but in the context in which the term was presented and used by the patentee, as it would have been understood by a person of ordinary skill in the field of the invention on reading the patent documents. . . . Thus, a claim receives the meaning it would have to persons in the field of the invention, when read and understood in light of the entire specification and prosecution history.”); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc) (“The claims, of course, do not stand alone. Rather, they are part of a fully integrated written instrument, consisting principally of a specification that concludes with the claims. For that reason, claims must be read in view of the specification, of which they are a part.” (internal quotation marks and citations omitted)).

Tre Milano defends the Board's finding of anticipation, arguing that there is not "a clear indication in the intrinsic record that the patentee intended the claims to be so limited," citing *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1327 (Fed. Cir. 2012). However, it is not reasonable to read the claims more broadly than the description in the specification, thereby broadening the claims to read on the prior art over which the patentee asserts improvement.

***The elongate member having a "free end"***

The Board construed "free end" to mean "an end of the elongate member that is unsupported when the movable abutment is in the open position." Institution Dec. at \*6. Based on this construction, the Board found a reasonable likelihood that Gnaga or Hoshino or both disclose a "free end" on the curler, because when the curler in the references is not locked in place, it has "a free end." *Id.* at \*7–10. This construction was based in part on finding that, when given their broadest interpretation, the '118 Patent claims do not require that the movable abutment operates as described in the specification. Thus the Board construed the claims as unlimited by the specification.

At the PTAB trial, the undisputed evidence was that this construction of "free end" was incorrect. The specification is clear that the free end is not a structural support, but an end over which the curl slides. This is the description in the specification. Tre Milano does not point to any contradictory description. Nonetheless, the Board stated in its final decision that "the Figures in the '118 patent, [show] abutment 52 may provide some structural support to the free end 20 when abutment 52 is in the closed position." Board Op. at \*8.

Claims are construed with reference to the specification and prosecution history, for these are the resources by which persons in the field of the invention understand what has been invented. Here, the specification states

that the “free end” of the elongate member is located adjacent to the secondary opening. ’118 Patent, col. 9, ll. 39–41. The elongate member and movable abutment are described in the specification as separated structures where the “free end” of the elongate member is located adjacent to the secondary opening. *Id.*, col. 9, ll. 38–50; *id.*, col. 7, l. 65–col. 8, l. 12. The movable abutment may be located in (i) the secondary opening, (ii) the primary opening, or (iii) a passageway connecting the secondary opening to the primary opening, *id.*, col. 9, ll. 46–50, and the alternative positions of the movable abutment cannot provide support to the free end of the elongate member, which must be located adjacent to the secondary opening. The Board’s requirement for the free end to have “structural support” from the movable abutment is contrary to the specification.

The ’118 Patent claims, construed in light of the specification, do not read on the prior art and are not anticipated by the prior art. *See Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1378 (Fed. Cir. 2001) (“that which would literally infringe if later anticipates if earlier”).

\* \* \*

Neither the Gnaga nor the Hoshino reference shows the same device having the same structure and operating in the same way as claimed in the ’118 Patent. Gnaga and Hoshino both show hair styling devices in which the elongate member—the curler—is ejected from the device along with the curled segment of hair, after which the curled hair is separated. TF3 stresses that in the ’118 Patent device there is no removal of a curling element carrying curled hair, no subsequent disassembly of the curling element, no unwinding of the curl. Instead, in the ’118 Patent device, the curled hair slides out of the device in curled form. The correct constructions of “elongate member having a free end” and “the length of hair can

pass through the secondary opening” implement these distinctions from the Gnaga and Hoshino devices.

The Board’s decision of anticipation was based on an improper enlargement of the claims. *See SunRace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1306 (Fed. Cir. 2003) (“Whether an invention is fairly claimed more broadly than the ‘preferred embodiment’ in the specification is a question specific to the content of the specification, the context in which the embodiment is described, the prosecution history, and if appropriate the prior art.” (internal quotation marks and citation omitted)). The Board’s analytic procedure was incorrect. Claims cannot be “anticipated” by devices that are not the same. Invalidity for anticipation requires that “[t]he identical invention must be shown in as complete detail as contained in the patent claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989); *see In re Skvorecz*, 580 F.3d 1262, 1266 (Fed. Cir. 2009) (“A rejection for ‘anticipation’ means that the invention is not new. Anticipation requires that all of the claim elements and their limitations are shown in a single prior art reference.”). Not only must each claim element be shown in a single reference, but the elements must be “arranged or combined in the same way as recited in the claims.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1370 (Fed. Cir. 2008); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983) (“Anticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim.”).

The conclusion of invalidity on the ground of anticipation cannot stand, and is reversed.

**REVERSED**