

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COLGATE-PALMOLIVE COMPANY,

Petitioner,

v.

NOBLE INNOVATIONS NC L.L.C.,

Patent Owner.

IPR2023-01254
U.S. Patent No. 8,881,332

PATENT OWNER NOBLE INNOVATIONS' SUR REPLY

UNDER 37 C.F.R. § 42.220

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EXHIBIT LIST

Exhibit No.	Exhibit Description
1001	U.S. Patent No. 8,881,332
1002	Prosecution File History of U.S. Patent No. 8,881,332 (Application No. 12/101,446)
1003	Prosecution File History of 11/840,627 (Parent Application to U.S. Patent No. 8,881,332)
1004	Prosecution File History of 14/535,442 (Continuation Application of U.S. Patent No. 8,881,332)
1007	Claim Listing
1009	U.S. Patent No. 2,262,982 (Wolcott)
1010	U.S. Patent No. 2,307,493 (Davidson)
1011	U.S. Patent No. 1,346,536 (Fitz-Gibbon)
1012	U.S. Patent No. 1,995,374 (Young)
1013	U.S. Patent No. 8,240,937 (Sorrentino)
2001	Kelly Kodama Expert Declaration
2002	Kodama CV
2003	Kodama Testimony List
2004	Wisp product of the year award
2005	WISP Launch Announcement

2006	9,808,077 Noble Dispenser Patent
2007	D528,803 Hohlbein
2008	WO 2004/021,914 Hohlbein
2009	7,331,731 Hohlbein
2010	D532,202 Hohlbein
2011	7,478,959 Hohlbein
2012	WISP Photo
2013	D532,607
2014	Colgate 2009 Annual Report
2015	Article Wisp Success

I. INTRODUCTION

Toothbrushes have bristles, bristles are mounted in toothbrush heads in tufts. In a typical toothbrush, tufts of bristles extend perpendicular to the surface of the toothbrush. The '332 patent, at 5:8-9 identifies these prior art bristle tufts as 26 in Figure 1: **"conventional straight bristles 26 may be further provided."** The '332 patent, at 4:65, defines a second kind of tuft of bristles: "The angled bristles 26A are preferably canted away from vertical in a direction toward the center of the capsule receiving zone 25, so as to retain an oral care capsule (not shown) insertable into the capsule receiving zone 25. The size and shape of the capsule receiving zone 25, and the size, spacing, and angle of the angled bristles 26A, are selected to retain an oral care capsule of a predetermined size and shape."

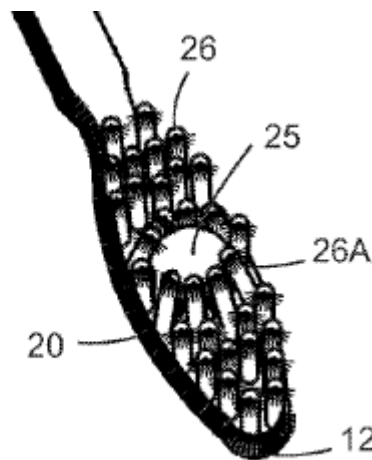


FIG. 1

As is clear from continuing on in the specification, at 5:5-8, the reference to bristles is not to a few random individual bristles, it is to groups of bristles (tufts). The specification specially identifies the ten tufts of bristles illustrated in Figure 1

as the angled bristles 26A see:

"As shown in FIGS. 1, 4, and 5, **ten angled bristles 26A** are equally spaced around the perimeter of a circular recess (spanning 360 degrees) defining the capsule receiving zone 25."

These are the angled bristles / angled retaining means. Reference number 26 identifies conventional vertical bristles.

Petitioner's Reply attempts to find both distinct claim elements in one feature of a prior art reference, however, the two elements cannot be combined into a single tuft of bristles, because the '332 patent specification explicitly teaches that they are physically separate elements. In addition, although the outer bristles of a conventional tuft 26 may splay out, these stray bristles are not "directed toward" anything, do not "retain an oral capsule" and do not have aspects such as "size, spacing and angle" which "are selected to retain an oral care capsule." Stray bristles on the periphery of a vertical tuft do not function as an "angled capsule retaining element" and thus cannot satisfy that claim element.

II. PETITIONER'S ASSERTIONS FAIL TO CONSIDER ALL ELEMENTS

Claim 1 specifically calls out 26 and 26A as separate and distinct elements of the claim:

1. A toothbrush comprising a brush head that includes:

....

[Tufts 26] a plurality of vertical bristles extending upward from the front surface;

....

[Tufts 26A] at least one pair of angled capsule retaining elements that are elevated above the recess and configured to retain an oral care capsule in the capsule receiving zone,

This is not accidental claim drafting, it is an intentional recitation of a distinction over the prior art, further limited by the last element of Claim 1:

. . . wherein at least a portion of each angled capsule retaining element [26A] of the at least one pair of capsule retaining elements is arranged to contact the oral care capsule.

Petitioner's arguments in the Reply improperly conflate these two elements.

The PTAB has discussed the issue of conflating two distinct claim elements into one feature of a prior art reference, explaining that it would be improper to rely on one component of a prior art reference as teaching two separate components of a claim. *See* Decision Denying Institution of *Inter Partes* Review, *Hopkins Manufacturing Corp. v. Cequent Performance Products, Inc.* (IPR 2015-00613, Paper 9, August 7, 2015). *Hopkins* held that the prior art disclosure of an accelerometer with an output signal could not be applied as teaching both a “deceleration signal” and an “inclination signal” as claimed. *Id.* at 11-12.

Becton, Dickinson and Co. v. Tyco Healthcare Gr., LP, 616 F.3d 1249 (Fed. Cir. 2010) sheds further light on an anticipation rejection based on one prior art component applied as teaching two claimed elements: “[w]here a claim lists elements separately, ‘the clear implication of the claim language is that those elements are ‘distinct component[s]’ of the [claimed] invention.’” This is

particularly true where the specification “confirms” that the separated claim elements are in fact separate elements. The '332 patent clearly illustrates these two claim elements (vertical bristles, angled retaining elements) as two separate elements 26 and 26A.

Engel Indus., Inc. v. Lockformer Co., 96 F.3d 1298 (Fed. Cir. 1996) is also on point, concluding that where a claim provides for two separate elements (a “second portion” and a “return portion” in *Engel*), these two elements “logically cannot be one and the same.”

Where a claim and the specification set forth separate elements or components it is improper to rely on the same structure of a prior art reference as teaching two (or more) separate claim elements. *Hopkins Manufacturing Corp.*, Paper No. 9 at 12.

Contrary to Petitioner’ fundamental argument, the claims of the patent-in-suit do not cover a standard toothbrush with naturally splayed-out bristles that could fortuitously be considered "at an angle." The inventors of the '332 patent did not patent a normal toothbrush that happens to have random, non-functionally angled bristles. Kodama Expert report Ex. 2001, at pp. 49, 57-59. The claims require conventional bristles 26 and separate angled retaining elements 26A, not some of the bristles of a tuft brushing up against a capsule.

The exemplary embodiment of Figure 1 illustrates normal bristles 26 that are

in perpendicular tufts and separate angled bristle tufts 26A that retain the dentifrice 25 in place. Kodama Ex. 2001, at pp. 49, 57-59.

The happenstance that a piece of prior art could be said to have a few splayed out bristles in a tuft, neither anticipates nor renders the claim – which must be judged by the totality of its recited elements and limitations – obvious. The "plurality of vertical bristles" in the claim refers to the totality of the "conventional straight bristles 26" in a tuft and "angled retaining element" of the claims refers to the intentionally angled tuft of bristles 26A or any equivalent structure that satisfies the claim language "elevated above the recess and configured to retain an oral care capsule."

The prior art references (with the sole exception of Fitz-Gibbon, Ex. 1011) teach only the existence of normal tufts of bristles extending in a normal manner perpendicular to the head of the tooth brush. Kodama Expert report Ex. 2001, at pp. 22, 61, 65, 68, 73. Fitz-Gibbons' bristles however do not satisfy the limitations of angled retaining elements for the reasons explained in Patent Owner's Response and below. In addition, Fitz-Gibbon does not teach any conventional vertical bristles and thus also lacks this element of the claims.

III. THE '332 PATENT PROSECUTION

The significance of "angled capsule retaining elements" that were separate and apart from the "plurality of vertical bristles" is also evident in the prosecution

history of the '332 patent. See Ex. 1002 at p. 57:

Applicants respectfully disagree with the Examiner's repeated allegation that any bristles according to Hohlbein **"capable of"** retaining an oral care capsule in a capsule receiving zone necessarily embody bristles **"configured to"** retain the oral care capsule in such zone according to Applicants' claims. . . . numerous cases have held that the phrase "adapted to" should not be interpreted as meaning merely "capable of" or "suitable for", but rather should be interpreted more narrowly as "configured to" which connotes intentionally and specifically made to act in a certain way. The implication with respect to the present case is that a proper reading of Hohlbein does not disclose or suggest any disclosure of bristles that are intentionally and specifically made to act according to the angled capsule retaining elements recited in Applicants' claims.

This argument was persuasive and resulted in the withdrawal of the final rejection and allowance of the '332 patent. Ex. 1002, p. 51.

The significance of intentionally "angled" and intentionally "configured to retain" in determination of obviousness is supported by significant case law. In *Agilent Techs., Inc. v. Affymetrix, Inc.*, 567 F.3d 1366 (Fed. Cir. 2009), the Federal Circuit rejected the construction of a closed chamber "adapted to..." as meaning "capable of..." because "the closed chamber is not merely capable of being set apart from its surroundings – it is in fact set apart." *Agilent*, 567 F.3d at 1378. In *Boston Scientific Corp. v. Cordis Corp.*, No. C 02-01474 JW, 2006 WL 3782840 (N.D. Cal. Dec. 20, 2006), the court construed "adapted to" to mean "configured to," as opposed to "suitable for." *Id.* at *3. After citing several common dictionaries, that court stated, "Plaintiffs' proposed definition of 'configured to' embraces the concept of a device intentionally and specifically made to act in a

certain way." *Id.* at *2. In contrast, "suitable for" was not the correct construction because it did not account for the device in question to be "intentionally and specifically made," which follows from the words "adapted to." *Id.* at *2. In *Sta-Rite Indus., LLC v. ITT Corp.*, 682 F. Supp. 2d 738 (E.D. Tex. 2010), the court rejected "having the capacity to" as too broad a construction for "adapted to." *Sta-Rite*, 682 F.Supp.2d at 753. That court construed the term "adapted to" to mean "designed or configured to" because "in view of the specification, simple capacity does not reflect the intended meaning of 'adapted to.'" *Id.*

A. "angled capsule retaining elements that are elevated above the recess"

"the oral care capsule is retained [...] preferably also from **above by a plurality of angled bristles**." '332 column 6, lines 20-24. It is important to note that the "angled bristles" does not refer to a tuft of bristles where some of the individual bristles in the tuft fan inward and others fan outward. The **plurality of angled bristles** refers not to a plurality of bristles in a tuft, but to a **plurality of tufts** that surround the capsule. The '332 teaches that the tufts themselves are angled inward. The angled retaining means is the tufts of bristles or other equivalent structure, that are intentionally angled inward, not some stray bristles in a vertical clump. (EX 2001, Kodama Dec, ¶57)

B. “wherein at least a portion of each angled capsule retaining element ... is arranged to contact the oral care capsule

The '332 patent describes the oral care capsule being placed within the capsule receiving zone, which comprises angled bristles 26A. (EX 2001, Kodama Dec, ¶59) The oral care capsule is pushed past the bristles and that the bristles afterwards contract around the oral care capsule. '332 at 7:33-42

IV. ANGLED CAPSULE RETAINING ELEMENTS

Petitioner's Reply takes the "includes" language of the Institution Decision out of context. The reference to "includes angled bristles" statement in the Institution Decision was in reference to Petitioner's assertion that the element should be construed as a means-plus-function limitation and thus be limited to tufts of bristles as illustrated in the patent. The Court did not adopt this narrow construction, but agreed that angled bristles (such as the ten angled bristles 26A illustrated in Figure 1) are one embodiment within the scope. By angled bristles, the PTAB Decision was referencing **"as disclosed in the Specification"** and **"the disclosed angled bristles structure."** As discussed above, what is disclosed in the Specification and claimed is two separate and distinct kinds of tufts of bristles, i.e. "conventional straight bristles 26" and "angled bristles 26A" where the "angled bristles structure" is formed in a tuft that is angled.

Petitioner's Reply misreads "includes" to mean any stray bristle in a tuft. But the Board stated that "the claims are limited to **the disclosed angled bristles structure** and equivalents." The disclosed angled bristle structure is tufts of bristles intentionally set at an angle inward toward the capsule, not some stray bristles in a vertical tuft.

Petitioner's Petition proposed an even narrower construction, which was not

adopted. Petitioner's new proposal, whereby *any* stray bristle will do, turns Petitioner's own argument on its head and ignores the Board's construction.

The Institution Decision states:

". . . even if not addressing whether the claim language is a **means-plus-function limitation**, Patent Owner appears to agree with Petitioner that the claims' scope includes angled bristles as the recited retaining elements, **as disclosed in the Specification**, although not expressly conceding at this point that the claims are limited to **the disclosed angled bristles structure** and equivalents under 35 U.S.C. § 112(6). *See id.* at 3–4 (citing paragraph 36 and Figure 1 of the application that issued as the '332 patent).

For the purposes of this institution decision, we find it unnecessary to construe any claim language because there is no dispute that the “angled capsule retaining elements” limitation recited by the claims *includes angled bristles*, even if it may not be limited to only **such a structure** (and its equivalents), and we find that *angled bristles* appear to be taught in the prior art, as discussed below. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))). Thus, whether or not the disputed claim language constitutes **a means-plus-function limitation** is not determinative at this stage of the proceeding.

Id. at 12.

The disclosed structure is not merely stray bristles, but an intentionally angled tuft of bristles or other equivalent structure that extends over the capsule and is "configured to retain" the capsule.

Petitioner originally agreed, see Paper No. 1, Pet. at page 10:

The claims otherwise include only minor placement/orientation descriptors, including that the retaining elements are angled, canted away from vertical towards a capsule receiving zone (claim 10), elevated above a recess, diametrically opposed (claim 1), 108 degrees apart (claim 10), and/or contact the capsule.

These important aspects of the claimed retaining element are missing from the prior art. Nowhere does the '332 patent teach a vertical tuft with stray bristles at an angle as satisfying the retaining elements limitation, thus, excluding such teachings from being invalidating. Figure 1, and the entire rest of the disclosure identify **26** as "**conventional straight bristles**" and separate element **26A** as "angled bristles." The specification at 4:65 – 5:4, continues on to state that:

"The angled bristles 26A are preferably canted away from vertical in a direction toward the center of the capsule receiving zone 25, so as to retain an oral care capsule (not shown) insertable into the capsule receiving zone 25. The size and shape of the capsule receiving Zone 25, and the size, spacing, and angle of the angled bristles 26A, are selected to retain an oral care capsule of a predetermined size and shape.

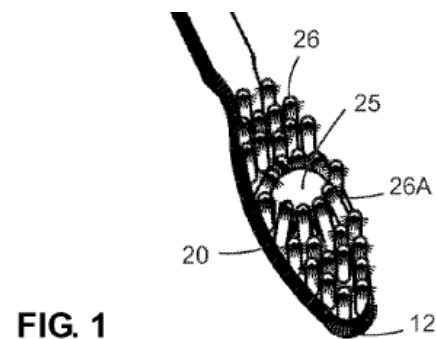


FIG. 1

Even Petitioner admits that "Further, given that the angled bristles are the structure that retains oral care capsules in the brush head, **angled bristles are an essential feature of the purported invention.**" Pet., Paper No.1@ p17.

After asserting that the '332 patent has a strict definition of retaining means, i.e. "angled, canted away from vertical towards a capsule receiving zone (claim 10), elevated above a recess, diametrically opposed (claim 1), 108 degrees apart (claim 10), and/or contact the capsule." (Pet. at (Paper No.1 @ page 10), Petitioner now asserts in its Reply, Paper No. 27, that *any* tuft, regardless of it lack of angle, direction, elevations, etc., that has at least one stray bristle that may brush against the capsule, nevertheless anticipates or renders obvious the claimed invention.

Contrary to Petitioner's assertion in the Response, Paper No. 27 page 2, Noble is not trying to "rewrite the claims." It is Petitioner who is trying to rewrite the claims to make them invalid by asserting that the '332 Patent somehow attempts to claim conventional bristles what are described in the '332 patent, at 5:8-

9 as:

"Conventional straight bristles 26 may be further provided apart from the capsule receiving Zone 25."

The '332 patent makes a clear distinction between the prior art bristles **26** and the claimed retaining means shown in an embodiment as **26A**. It is Petitioner that is attempting to remove that clear distinction.

As presented in detail in the Kodama Expert report (Ex. 2001), none of the prior art teaches the claimed retaining element, the references only teach "conventional straight bristles." Only Fitz-Gibbons has angled bristles, but those are not angled retaining elements, and do not meet the claim limitations and Fitz-Gibbons fails to teach any conventional straight bristles.

V. THE PRIOR ART FAILS TO DISCLOSE ALL INVENTIVE FEATURES OF THE '332 PATENT

A. Petitioner describes the bristles of Wolcott as "angled" when no such structure is found in Wolcott.

The Wolcott bristles are "conventional straight bristles." They are not structurally nor functionally equivalent to the claimed angled capsule retaining element. Petitioner at p. 4 of the reply admits that "**some** of Wolcott's bristles are in fact angled." However, some angled bristles in a tuft does not satisfy the claimed invention. A tuft with some angled bristles is a "conventional vertical bristles 25" as defined in the '332 patent and as claimed in the third claim element "a plurality of vertical bristles." The bristles need to satisfy the Board's finding of "**the disclosed angled bristles structure** and equivalents" that structure is taught as a tuft of bristles 26A: ". . . angle of the angled bristles 26A, are selected

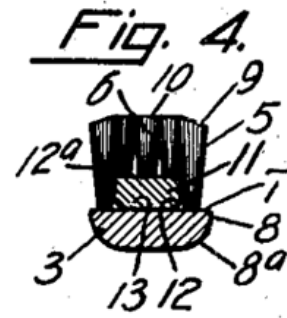
to retain an oral care capsule of a predetermined size and shape. As shown in FIGS. 1, 4, and 5, ten angled bristles 26A are equally spaced around the perimeter of a circular recess (spanning 360 degrees) defining the capsule receiving Zone 25."

Wolcott has only "conventional vertical bristles" and therefor does not teach the claims angled capsule retaining element.

Wolcott's bristle tufts extend straight up where they attach to the toothbrush, satisfying element 26 but not element 26A. The dentifrice pellet of Wolcott is placed loosely in between the remaining bristle tufts. As described by Mr.

Kodama, Wolcott does not teach retaining elements but only "teaches a toothbrush with missing bristles that provide room to add a

dentifrice pellet. Wolcott fails to disclose angled bristles or retaining elements to hold a capsule in place, as claimed in the '332 patent." (Ex. 2001, Kodama ¶62)



B. Davidson

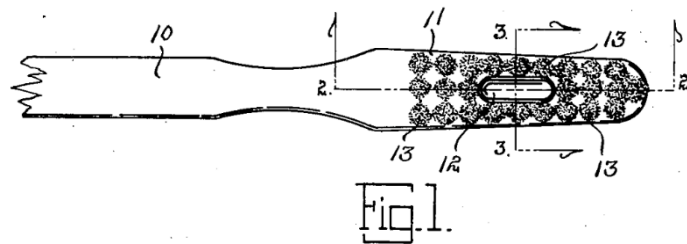
1. Davidson does not teach restraining oral care capsules

Petitioner admits that Davidson does not add the missing angled capsule retaining elements. Petitioner only relies upon "Davidson for its disclosure [of] a well or recess in a toothbrush head." Paper No.27, Reply at p.7 and " Noble claims

that Davidson “does not consider usage of the bristles to hold the dentifrice in place” and that Davidson “fails to disclose angled bristles.” While false, these points also are not relevant here. *Davidson* is not cited for bristles that retain a capsule.” [Reply at p.8]

Davidson teaches only a well for dentifrice powder, Davidson's well is not appropriate for a capsule. (EX 2001, Kodama ¶65) Davidson’s toothbrush is designed only to hold dentifrice when it is in the upright position (EX 2001, Kodama ¶65):

“Obviously during the pouring of the dentifrice into this provided space, **the tooth brush is held so that the bristles extend upwardly** as shown in Fig. 2.” Davidson 2:20-24

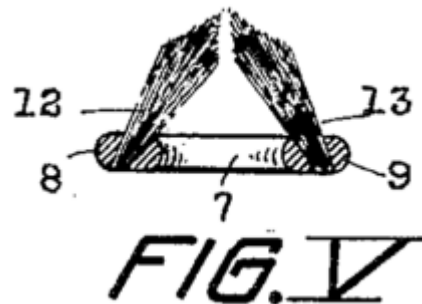


C. **Fitz-
Gibbon has no
Conventional**

Vertical Bristles

Similarly to Davidson, Fitz-Gibbon is directed towards a brush for holding dentifrice powder, not capsules and thus, despite the angled bristles, has no "angled capsule retaining elements." Fitz-Gibbons is nothing more than a conventional toothbrush where the user applies the toothpaste right before use, from the back

instead of from the front. There is no teaching of retaining anything and no structure for holding a capsule in place, the dentifrice in powder form is loaded right before brushing. The dentifrice sticks to the bristles as any toothpaste would, only applied from the back. (EX 2001, Kodama Dec, ¶69)



Fitz-Gibbon only considers using the pocket to contain dentifrice powder, as Fitz-Gibbon describes the brusher providing varying amounts of dentifrice within the pocket, “by depositing a small amount of the dentifrice in the filler opening” Fitz-Gibbon 2:95-99. (EX 2001, Kodama Dec, ¶70) As Mr. Kodama observes, “Even when contacted, powder will flow through and between the bristles and not be retained.”

In addition, Fitz-Gibbon has no "vertical bristles" and is thus lacking the second element of the claim altogether. There is no teaching in any of the prior art for any reason to add any vertical bristles to Fitz-Gibbons, see Kodama. Fitz-Gibbons specifically states that its bristles are specifically designed such that "Series 12 and 13 and are sharply inclined relative thereto so that the tips of said tufts 14 will engage the lingual surfaces of the teeth" adding vertical tufts would

destroy that carefully designed brushing purpose of Fitz-Gibbons.

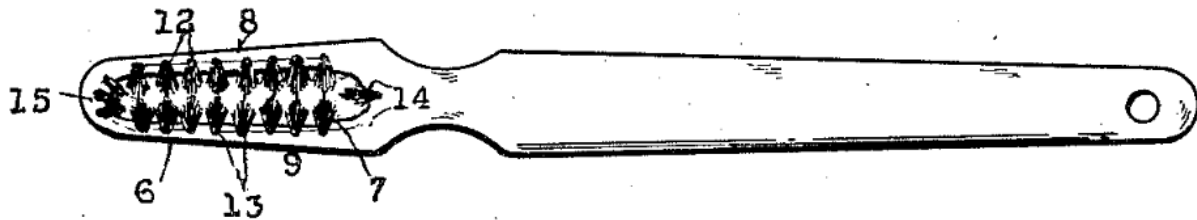
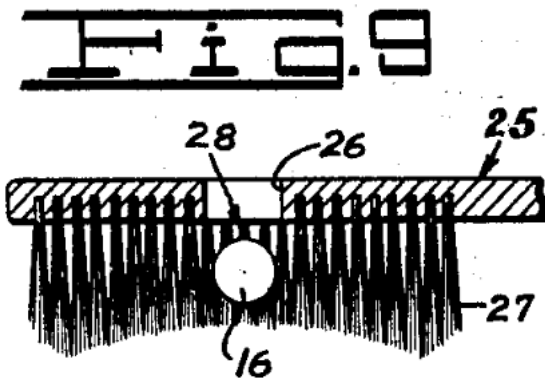


FIG. III

The Fitz-Gibbon bristles are not designed to allow a dentifrice pellet “inserted past the vertical bristles” as recited in claim 1 of the ‘332 patent. (EX 2001, Kodama Dec, ¶71) A capsule would simply fall out the back of Fitz-Gibbon.

D. Young

Young teaches a toothbrush with a space where some bristles are missing and a hole is cut in the back of the brush head. All of the bristles and tufts are “conventional straight bristles.” Young explicitly discloses “Said tufts being disposed in **parallel**, longitudinal and transverse rows” Young 2:43-45. Young, like Davidson and Wolcott does not disclose angled bristles 26A as taught, described, claimed and differentiated from conventional vertical bristles in the '332 patent. The present invention teaches the opposite of Fitz-Gibbon and Young, by inserting the capsule from the front of a brush past the angled capsule retaining elements, which eliminates the need to cut a hole in the back of the brush. Mr. Kodama concludes that to a POSITA, “Young and Fitz-Gibbon teach away from the inventive solution of the challenged claims.” (EX 2001, Kodama Dec, ¶72)



VI. (GROUND 1) - WOLCOTT AND DAVIDSON DO NOT TEACH ALL CLAIM ELEMENTS

Wolcott and Davison fail to teach all the claim elements of the '332 patent.

Neither reference teaches surrounding a pocket with angled bristles to provide pellet-retaining characteristics to the device. Neither Davidson nor Wolcott teach angled capsule retaining elements that are angled above the recess and configured to retain an oral care capsule. (EX 2001, Kodama Dec, ¶74)

A POSITA would not combine Davidson's well 12, which allows for powder to be contained in a level toothbrush only while upright, with the Wolcott missing bristles 11 because doing so would fail to achieve or even improve the oral capsule retaining ability.

Even if Davidson's well 12 was added to Wolcott's toothbrush, neither Wolcott nor Davidson disclose "angled capsule retaining elements" as recited in

claim 1 or “angled bristles” as recited in Claim 2 of the ‘332 patent. No reference teaches insertion past the vertical bristles into the capsule receiving zone. A combination of both cannot make up for their shared lack of disclosure. (EX 2001, Kodama Dec, ¶76)

VII. (GROUND 2) - THE COMBINATION OF WOLCOTT, DAVIDSON AND FITZ-GIBBON

Petitioner’s attempt to reinterpret Fitz-Gibbon so as to ignore the purpose of Fitz-Gibbon’s teaching is unpersuasive. As, petitioner points out “teaching away requires that the prior art expressly discourage the proposed modification or teach that it would cause the primary reference to be rendered unsatisfactory for its intended purpose.” No. 27 at 10 quoting *In re Urbanski*. Here, Fitz-Gibbon does exactly this, renders unsatisfactory the intended purpose of the combination of Wolcott, Davidson and Fitz-Gibbon.

The proposed combination of Wolcott and Davidons relies on selective picking and choosing from Fitz-Gibbon and Davidson while ignoring inconvenient parts of each, to teach “tilting the tufts of bristles.” However, Fitz-Gibbon is clear that the “bristles are so disposed on the brush head to . . . permits of the deposition of the dentifrice in said chamber or pocket ***through the back of the brush head.***” Ex. 1011, 2:79-84. Thus, the Fitz-Gibbon teaching of the orientation of bristles is specifically tied to the purpose of creating a pocket that allows for deposition of

the dentifrice through the back of the brush. Given that Noble’s claims require “a capsule receiving zone . . . including a recess defined in the front surface and arranged to receive at least a portion of an oral care capsule *inserted past the vertical bristles*,” the modification of Wolcott and Davidson with a teaching specifically tied to deposition from the back of the brush head would destroy the intended purpose for combining Wolcott, Davidson and Fitz-Gibbon. Petitioner cannot pick and choose which teachings it wishes to glean from the prior art without considering the clear context of such teachings. Here, it is clear the Fitz-Gibbons tuft orientation is specifically designed for inserting dentifrice through the back of the toothbrush head and any proposed combination that includes Fitz-Gibbons would necessarily include rear-loading and a hole in the back of the toothbrush head.

Finally, it is improper for Petitioner to merely rely on the conclusory “common sense” of a POSITA. *See, e.g., In re Lee*, 277 F.3d 1338, 1342 (Fed. Cir. 2002); *In re Zurko*, 258 F.3d 1379 (Fed. Cir. 2001) (deficiencies of references cannot be saved by appeals to “common sense” and “basic knowledge” without any evidentiary support.); *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1377 (Fed. Cir. 2012) (“With little more than an invocation of the words “common sense” (without any record support showing that this knowledge would reside in the ordinarily skilled artisan), the district court overreached in its

determination of obviousness.”); *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355 (Fed. Cir. 2016). Although a POSITA is creative, there still “must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *KSR*, 550 U.S. at 418. Petitioner has failed to explain why a POSITA would ignore the specific design purpose of Fitz-Gibbon’s bristles and fails to show how the teaching of Fitz-Gibbon’s rear-loading could be modified to allow angled capsule retaining elements which receive at least a portion of an oral care capsule inserted past the vertical bristles.

VIII. (GROUND 3) - THE COMBINATION OF DAVIDSON AND YOUNG FAILS TO TEACH ANGLED CAPSULE RETAINING ELEMENTS

Petitioner argues that a combination of Davidson and Young teach all elements of the patent. This fails for a number of reasons.

As detailed in the response, neither Young nor Davidson teach the claimed angled capsule retaining elements, neither teach inserting a capsule past angled bristles, and combining the two would require completely reconfigure both, teaching away from obviousness. (EX 2001, Kodama Dec, ¶82- ¶90)

Additionally, the combination of Young and Davidson is unworkable because the combination would have insertion from the back and a recess in the front. Effectively, there would be a hole in the toothbrush head and no matter which direction the dentifrice is inserted, it would fall out. Patent Owner

respectfully submits that the reason the proposed combination of Young and Davidson is unworkable is because it is purely based on improper hindsight. Petitioner, using the disclosure and teachings of the '332 patent, has sought out prior art that no POSITA would consider combining. The result is a proposed combination toothbrush that fails to retain any dentifrice no matter the orientation or direction in which the dentifrice is inserted. (EX 2001, Kodama Dec, ¶91)

“Angled capsule retaining elements” are recited in both dependent claims, the combination of Davidson and Young fails to teach all elements of any claim of the '332 patent. (Kodama Dec, ¶92)

IX. (GROUND 4) - THE COMBINATION OF YOUNG, DAVIDSON, AND FITZ-GIBBON FAILS TO DISCLOSE ALL ELEMENTS OF THE '332 PATENT.

Petitioner's Reply relies on the arguments in support of ground 2, thus Patent Owner adopts its ground 2 arguments here in opposition to Ground 4.

A. Dependent Claims 2 through 9

Petitioner's reply does not address any of the arguments made by Patent Owner in Patent Owner's Response. Patent Owner relies upon the arguments previously presented demonstrating that the limitations of the dependent claims are not found in the cited art.

B. Independent Claims 1 and 10

No combination of Wolcott, Davidson, Fitz-Gibbon, or Young disclose each and every feature of claims 1 or 10. Specifically, none of Petitioner's asserted art from Grounds 1-6, alone or in combination, disclose the feature of "a capsule receiving zone including a recess defined in the front surface and arranged to receive at least a portion of an oral care capsule insertable past the bristles into the recess; or angled capsule retaining elements; or at least three angled capsule retaining elements that are elevated above the recess, are configured to retain an oral care capsule in the capsule receiving zone, and are canted away from vertical in a direction toward a center of the capsule receiving zone, wherein each angled capsule retaining element of the at least three angled capsule retaining elements is arranged proximate to a perimeter of the capsule receiving zone at a position at least 108 degrees apart from at least one other angled capsule retaining element of the at least three angled capsule retaining elements relative to a center of the capsule receiving zone" as recited in independent claim 10. (EX 2001, Kodama Dec, ¶110 - ¶111)

Fitz-Gibbon cannot remedy the deficiencies in Wolcott and Davidson as alleged in Ground 2 because Fitz-Gibbon teaches away from inserting an oral capsule past vertical bristles. Instead, Fitz-Gibbon teaches depositing a dentifrice from the side or back of the brush head. This is completely opposed to the '332

patent and ensures that nothing is inserted past the vertical bristles. Thus, the proposed combination of Wolcott, Davidson, and Fitz-Gibbon of Ground 2 fails to render claims 1 or 10 of the '332 patent unpatentable. (EX 2001, Kodama Dec, ¶112)

Young also teaches away from the '332 patent. Young discloses a toothbrush with a hole on the back side of the toothbrush for inserting dentifrice. Inserting a dentifrice from the back side of the toothbrush head is the opposite of the '332 patent and ensures that no oral care capsule can be inserted past the vertical bristles. Young fails to remedy the deficiencies in Davidson and Fitz-Gibbon and in fact makes the deficiencies even worse. Accordingly, Petitioner's Grounds 3 and 4 fail to render claim 10 of the '332 patent obvious. (EX 2001, Kodama Dec, ¶113)

C. Dependent Claims 11 through 18

Petitioner's reply does not address any of the arguments made by Patent Owner in Patent Owner's Response. Patent Owner relies upon the arguments previously presented demonstrating that the limitations of the dependent claims are not found in the cited art.

D. SECONDARY CONSIDERATIONS

Petitioner argues, in opposition to secondary considerations, that Colgate's infringing product, WISP, was not successful. However, Petitioner's own publications, including Ex. 2014 Colgate's Annual report from 2009, states otherwise:

"In just 10 months, Wisp has gained a 5% market share of the U.S. manual toothbrush market."

United States

Colgate Wisp Mini-Brush Winning With Consumers

One of a kind, new Colgate Wisp disposable mini-brush contains a breath-freshening bead that is used without water, designed for on-the-go teeth cleaning and breath freshening. Targeted toward young adults with a busy lifestyle, Colgate's marketing campaign for Wisp uses a mix of traditional media as well as non-traditional promotional activities such as on-line contests, social media and sampling on college campuses. In just 10 months, Wisp has gained 5.0% of the U.S. manual toothbrush market, with Colgate's overall share of the U.S. manual toothbrush market reaching a record 32.2% for the year, up 5.2 share points versus year ago.

Petitioner also asserts that no long felt need existed, and no praise was received for the invention, yet Ex. 2004, Ex. 2005 and Ex. 2015 tell a different story, "the Wisp generated an "impressive" 44 Million in sales after only seven months in the marketplace." Ex. 2015.

X. WRITTEN DESCRIPTION

Patent Owner detailed the support in Patent Owner's Response. Petitioner's Reply raises no new issues, but simply cites to out-of-context statements during the Kodama Deposition.

The fact that it is "possible" (see reply Paper No. 27 at page 28) to have a smaller capsule, does not render the disclosure of a capsule that is retained through

contact unsupported. In addition, the '332 patent, at Column 5, lines 2 - 4 teach that "the size, spacing, and angle of the angled bristles 26A, are selected to retain an oral care capsule of a predetermined size and shape." Teaching how to obtain contact.

Petitioner's assertion that:

unless Petitioner's means-plus-function interpretation is adopted for "angled capsule retaining elements," the amended claims capture much broader subject matter than what the inventors conceived or originally disclosed.

is logically inconsistent. The claim term is "angled capsule retaining elements." There has been no assertion that the term means anything other than elements that "are elevated above the recess and configured to retain an oral care capsule in the capsule receiving zone." The embodiment in the specification also teaches that "the size, spacing, and angle of the angled bristles 26A, are selected to retain an oral care capsule of a predetermined size and shape." As discussed above, this distinguishes a retaining element from a conventional straight bristle. The amended claims do not capture anything broader.

XI. CONCLUSION

Despite deposing Patent Owner's expert, the Reply fails to rebut any of the numerous persuasive arguments presented by Patent Owner's expert in Patent Owner's Response (Paper No. 21)

Patent Owner respectfully requests that the Board confirm the patentability of the Challenged Claims of the '332 patent.

Dated: August 29, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing PATENT OWNER'S Sur-Reply was served on August 29, 2024 at the following Counsel for Petitioner via e-mail:

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CERTIFICATION OF WORD NUMBER

Counsel for Patent Owner hereby certifies that this PATENT OWNER'S Sur-REPLY contains 5,600 words as calculated using the word count function of Microsoft Word, not including material excluded under 37 C.F.R. 42.24(a)(1).

Dated: August 29, 2024

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