United States Court of Appeals for the Federal Circuit

03-1215
(Serial No. 08/316,297 and Reexamination No. 90/003,885)

IN RE JOHN P. CURTIS, JAMES H. KEMP, and JAN-JOOST PABST

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Appealed from: United States Patent and Trademark Office,
Board of Patent Appeals and Interferences

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DECIDED: January 6, 2004

Before CLEVENGER, DYK and PROST, Circuit Judges.

CLEVENGER, Circuit Judge.

John P. Curtis, James H. Kemp, and Jan-Joost Pabst (collectively "Curtis") seek review of the decision of the United States Patent and Trademark Office ("PTO") Board of Patent Appeals and Interferences ("Board") affirming the final rejections, during merged reissue and reexamination proceedings, of claims 1-4, 7-13, 15-18, 20-27, 29-32, 34-36, 38-46, 51, 52/21, 52/32, 52/34, 52/38, 52/39, 53/21, 53/32, 53/34, 53/38, and 53/39 of U.S. Patent No. 5,209,251 (the "'251 Patent"), entitled "Dental Floss." See In re Curtis, No. 2002-1721, slip op. at 1-2 (Bd. Pat. App. & Int. Sept. 19, 2002). The Board determined that Curtis could not traverse the examiner's rejections by claiming the benefit of an earlier patent application because the disclosure therein failed to adequately describe the subject

matter encompassed by the rejected claims under 35 U.S.C. § 112, ¶ 1. Because the Board's decision is supported by substantial evidence and otherwise is in accordance with law, we affirm.

I

Dental floss should not require a user to apply substantial force in order to get the floss to pass through the spaces between teeth. Otherwise, it may cause the user's gums to bleed during flossing. Dental floss must also be easily grasped by a user so that it can be readily manipulated for flossing. Therefore, the commercial acceptability of a dental floss depends on the coefficient of friction ("COF") of the material from which it is made. A dental floss made from a material with a COF that is too high will stick to teeth and will have to be used with substantial force. Material with too low a COF will yield a dental floss that slips easily through a user's hands and will be difficult to manipulate. Thus, the ideal dental floss is made from a material that has a COF in a particular "sweet spot" such that it is neither too sticky nor too slippery.

On March 29, 1988, Curtis filed U.S. Patent Application No. 07/174,757 (the "'757 Application") claiming an improved dental floss made of expanded polytetrafluoroethylene ("PTFE") filaments coated with microcrystalline wax ("MCW") having a COF between 0.08 and 0.25. The inventors stated:

> [I]t has been unexpectedly discovered that floss made of porous, high strength Expanded PTFE is extremely effective to provide hygienic tooth and gum care. Moreover, excellent effect is also provided when the floss is coated with microcrystalline wax (MCW). The MCW, surprisingly, adheres to the porous, high strength PTFE which without a coating has a very low COF . . . and when coated with MCW generally has a COF intermediate between prior art floss white and uncoated PTFE . . . .

(J.A. at 167.) On December 2, 1988, Curtis filed a continuation-in-part application based on the '757 Application which was assigned serial number 07/282,962 (the "'962 Application"). The passage quoted above was also contained in the '962 Application. On July 23, 1991, the '962 Application issued as U.S. Patent No. 5,033,488 (the "'488 Patent"). Curtis also filed a foreign counterpart application which was published as EP 355,466 on October 4, 1989 ("EP '466"). The claims of the '488 Patent and EP '466 are directed to a dental floss made of expanded PTFE filaments coated with MCW.

On July 11, 1991, Curtis filed a second continuation-in-part application which was assigned application number 07/729,834 (the "'834 Application") and which ultimately issued as the '251 Patent. The written description of the '834 Application contains statements which are not found in the '962 Application. For example, the '834 Application states:

> It has been found that the polytetrafluoroethylene floss can be coated or otherwise treated with a friction coating, such as a wax, to increase the coefficient of friction to a level where the floss is easier to handle and does not slip through the fingers of the user as easily as the untreated floss. It has further been found that the thinner polytetrafluorethylene [sic] flosses of 600 to 800 denier[1] that are coated with a friction enhancing coating are easy to handle and comfortable to use.

(J.A. at 759.) It also discloses that this genus of "friction enhancing coatings" is comprised of materials that adhere well to PTFE and that increase the COF of a PTFE dental floss to about 0.08 or greater. The disclosure in the '834 Application also states that "water soluble coating[s] such as polyvinyl alcohol or polyethyleneoxide" are suitable alternative friction enhancing coatings. (J.A. at 761.) On May 11, 1993, the '251 Patent issued with claims directed to a dental floss made from at least one PTFE strand "having a coating of at least one material capable of increasing the coefficient of friction." (J.A. at 43.) The claims were limited further to a denier of about 500 to 1500 and a COF of about 0.08 to 0.25. Curtis filed a reissue application for the '251 Patent on September 30, 1994, which was assigned application number 08/316,297 (the "'297 Reissue Application"). The '297 Reissue Application added claims directed to a PTFE dental floss having at least one friction enhancing coating that were not limited to a particular denier or COF range. Subsequently, amicus curiae W. L. Gore & Associates, Inc. ("Gore") requested reexamination of the claims of the '251 Patent in application number 90/003,885 (the "'885 Reexamination Request"). Gore challenged the patentability of the claims on the ground that they are not supported by the parent disclosure found in the written description of the '962 Application and that they are anticipated by EP '466, which was not before the PTO during prosecution of the '251 Patent.

On January 25, 1996, the PTO merged the '297 Reissue Application with the '885 Reexamination Request into the application that is the subject of this appeal. In re Curtis, slip op. at 1 n.2. The

examiner rejected several of the pending claims as anticipated by EP '466 under 35 U.S.C. § 102 (b) and as obvious under 35 U.S.C. § 103 in light of U.S. Patent No. 4,776,358 to Lorch. Curtis then attempted to remove EP '466 as prior art by claiming the benefit of the December 2, 1988 filing date of the '962 Application pursuant to 35 U.S.C. § 120. The examiner determined that Curtis was not entitled to the earlier filing date because the disclosure in the '962 Application did not enable a person of ordinary skill in the art to practice the claims of the '251 Patent without undue experimentation and issued a final rejection accordingly.

Curtis appealed this decision to the Board. The Board reversed the examiner's enablement rejection and stated:

> The examiner has only alleged the unpredictability of the art as the reason the disclosure of the parent application would require undue experimentation. This alone is insufficient in this case. In fact, we agree with the appellants that when all the factors are considered the disclosure of the parent application is such that undue experimentation is not required to practice the claimed invention. Accordingly, we find that the examiner has not established a prima facie case of lack of enablement under 35 U.S.C. § 112, first paragraph.

(J.A. at 365 (citation omitted).) However, the Board ruled that Curtis was not entitled to the benefit of the '962 Application filing date in any event because that application did not provide an adequate written description of the later-claimed genus of friction enhancing coatings. The Board determined that MCW was the only friction enhancing coating disclosed expressly or inherently in the '962 Application and, therefore, "it did not provide written description support for the later-claimed, generic subject matter of the claims under appeal." (J.A. at 368.) Since the examiner's rejection was based on lack of enablement and not insufficient written description, the Board denominated its decision a new ground of rejection. It remanded the case back to the examiner to give Curtis an opportunity to amend the claims or to present evidence of written description of a genus of friction enhancing coatings in the '962 Application.

On remand, Curtis submitted several declarations to bolster its claim of priority back to the filing date of the '962 Application. One of these, submitted by appellant John P. Curtis, asserted, inter alia,

that a person of ordinary skill in the art would understand the invention described in the '488 Patent (which issued from the '962 Application) to be a PTFE dental floss coated with at least one material capable of adhering to PTFE and increasing the COF of a PTFE dental floss. In a second declaration, Mr. Curtis stated MCW is the only such material disclosed in the written description of the '488 Patent because it was the most commonly used and cheapest dental floss coating at the time the '962 Application was filed.

The examiner concluded Curtis failed to demonstrate adequate support in the '962 Application for the later-claimed genus of friction enhancing coatings. The examiner was unpersuaded by the proffered evidence of adequate description of a genus of friction enhancing coatings and concluded that the declarations:

> are insufficient to show that applicants' possessed the later-claimed subject matter at the time the parent and grandparent were filed. The prior art disclose [sic] many different types of coatings used on dental floss. Applicants' original application does not support the statements that MCW was chosen only because of its availability, cost etc. In fact, the '488 specification, in columns 7 and 8, different types of floss that were either unwaxed or had waxed coatings were compared to MCW coated PTFE floss. This would indicate that other types of coatings were available to applicant, but applicant did not realize that these other coatings could be used in place of MCW with similar results.

(J.A. at 66.) The appellants appealed this decision to the Board.

The Board affirmed the examiner's decision denying Curtis the benefit of the '962 Application filing date. It stated:

> Specifically, we find that the fact that microcrystalline wax does stick/adhere to the expanded PTFE floss filament to be both surprising and unexpected. As such, it is our belief that this is not a case where there is predictability such that the appellants' description of a dental cleaning floss made from PTFE having a coating of a microcrystalline wax to increase the coefficient of friction of the PTFE would convey to one skilled in the art knowledge that the appellants invented a dental cleaning floss made from PTFE having a coating of a[t] least one material capable of increasing the coefficient of friction of the PTFE.

(J.A. at 18.) The Board relied on the decision of our predecessor court in In re Smythe, 480 F.2d 1376, 1383 (CCPA 1973), to hold that where there is unpredictability "in performance of certain species or subcombinations other than those specially enumerated, one skilled in the art may be found not to have been placed in possession of a genus or combination claimed at a later date in the prosecution of a patent application." (J.A. at 19.) The Board concluded the "preponderance of the evidence" precluded a finding of support in any of the parent documents of the '251 Patent for claims to "the entire class of materials capable of increasing the coefficient of friction of the PTFE" dental floss. (J.A. at 19-20.)

Curtis timely appealed the Board's decision to this court. We have jurisdiction to hear an appeal from a decision of the Board pursuant to 28 U.S.C. § 1295(a)(4)(A).

II

Curtis argues the Board erred by denying the original and reissue claims of the '251 Patent the benefit of the '962 Application's filing date. Claims found in a later-filed application are entitled to the filing date of an earlier application if, inter alia, the disclosure in the earlier application provides an adequate written description of the later-filed claims under 35 U.S.C. § 112, ¶ 1. See Tronzo v. Biomet, Inc., 156 F.3d 1154, 1158 (Fed. Cir. 1998) (discussing requirements of claiming benefit of priority date of earlier application under 35 U.S.C. § 120). This requires the disclosure in the earlier application to reasonably convey to one of ordinary skill in the art that the inventors possessed the later-claimed subject matter when they filed the earlier application. Id.; see also Gentry Gallery, Inc. v. Berkline Corp., 134 F.3d 1473, 1479 (Fed. Cir. 1998) ("To fulfill the written description requirement, the patent specification 'must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.'") (citation omitted); Regents of the Univ. of Cal. v. Eli Lilly & Co., 119 F.3d 1559, 1566 (Fed. Cir. 1997) (same).

The Board's conclusion that a particular disclosure does or does not comply with the written description requirement is a determination of fact. See Tronzo, 156 F.3d at 1158 (stating issue of compliance with written description requirement is question of fact). We review the Board's factual determinations "on the record of an agency hearing provided by statute." In re Gartside, 203 F.3d 1305, 1313 (Fed. Cir. 2000). Therefore, we review the Board's findings of fact for substantial evidence in the

administrative record. See id. at 1315 (adopting substantial evidence standard for review of Board fact-finding).

III

A

The parties agree the only way Curtis can overcome the examiner's rejections under sections 102 (b) and 103 is to remove EP '466 as prior art. Therefore, the sole issue on appeal is whether substantial evidence in the record before us supports the Board's determination that the disclosure in the '962 Application does not provide a written description of Curtis' later-claimed genus of friction enhancing coatings. We think the record before the Board provided more than substantial evidence to support the conclusion that one of ordinary skill in the art would read the disclosure in the '962 Application and conclude that it does not describe the genus of friction enhancing coatings claimed in the '251 Patent and the '267 Reissue Application.

The Board's opinion quotes extensively from the record and points to numerous instances in the disclosure of the '962 Application where Curtis spoke only of MCW as a suitable friction enhancing coating for a PTFE dental floss. For example, the Board noted the '962 Application states that a primary object of the invention was "to provide a floss for dental and gingival cleaning made of porous, high strength PTFE . . . coated with MCW." (J.A. at 7.) The '962 Application discloses as additional objects of the invention the incorporation of various substances into a PTFE dental floss such as actives which promote oral hygiene, coagulants that inhibit gingival bleeding, and other acceptable agents such as coolants, flavorants, colorants, and polishing and abrasive agents. In each instance, the disclosure states these substances are incorporated on or in an MCW coating.

The single example Curtis provided in the '962 Application is further evidence that the appellants conveyed only MCW as a suitable friction enhancing coating for a PTFE dental floss. The example "set [s] forth [the] test results of the COF of the flosses of the present invention compared to leading brands of commercial dental floss now on the U.S. market and to Expanded PTFE floss having no MCW

coating." (J.A. at 648.) In one table entitled "Comparative Samples," the COFs of waxed and unwaxed prior art flosses are compared with those of various expanded PTFE flosses lacking an MCW coating. (J.A. at 648.) A second table entitled "Present Invention" reports the COFs of various expanded PTFE dental flosses with various substances incorporated into MCW. (J.A. at 649.) Nowhere in the examples, or in the remainder of the disclosure of the '962 Application, does Curtis name a suitable friction enhancing coating for a PTFE dental floss other than MCW.

The record before us also indicates that, at the time the '962 Application was filed, the inventors did not convey any other material that could adhere to PTFE in such a way so as to yield a commercially acceptable dental floss. Curtis pointed out in the '962 Application that PTFE was developed commercially by the E.I. du Pont de Nemours and Company under the trademark Teflon®, and is known for its "non-stick" properties. Curtis stated this property "made it very difficult to use the material in combination with other materials." (J.A. at 641.) As we observed above, Curtis stated that he was surprised to learn MCW "adheres to the porous, high strength PTFE which without a coating has a very low COF . . . and when coated with MCW generally has a COF intermediate between prior art floss white and uncoated PTFE." (J.A. at 639.) Curtis stated:

> The present inventors discovered that, to their surprise, from amongst different waxes, microcrystalline wax (MCW) in particular adheres to Expanded PTFE and unexpectly [sic], results in at least two important benefits: First, the MCW provides a COF sufficiently high to permit the user to securely grasp the floss and tapes; but generally not so high as that of the prior art.

(J.A. at 643.) Curtis reiterated the point by stating, "[a] surprising and unexpected aspect of the present invention is that the particular wax, MCW, does in fact, 'stick' (adhere) to the Expanded PTFE floss filament." (J.A. at 647.)

The Director of the PTO directs our attention to a number of statements Curtis made during prosecution of the '962 Application in which the inventors identified MCW as the only coating they knew to adhere to PTFE and yield a resultant dental floss with a COF in the desired "sweet spot." In responding to an obviousness rejection, Curtis stated: "Due to the very low COF of the PTFE floss

surface it is very difficult to have materials bind to PTFE. The only wax that will effectively bind to PTFE is microcrystalline wax." (J.A. at 697.) The appellants explained that "[w]hat can be adhered to PTFE surfaces can be determined only by trial and error, and unsights [sic] gained gradually from trial and error efforts. There are no expectations of what will work. There is no obvious solution." (J.A. at 698.) The appellants concluded: "Out of all the waxes disclosed in [the prior art] only one wax at a particular molecular weight range is known to be effective to adhere to and to coat PTFE." (J.A. at 698 (emphasis in original).)

In sum, the record contains considerable evidence demonstrating that MCW was in fact the only friction enhancing coating conveyed by Curtis at the time the '962 Application was filed and that dental flosses made of PTFE would not be expected to be commercially acceptable when coated with other materials. This evidence was legally sufficient to support the Board's decision to deny Curtis the benefit of the earlier filing date of the '962 Application.

Our decision is not altered by the declaration evidence in the record Curtis filed with the PTO on remand. The declarations, which were submitted more than ten years after Curtis filed the '962 Application, do little more than point out what is readily apparent from the record—the disclosure in the '962 Application identifies the key properties of members of the genus of friction enhancing coatings. On the basis of this fact, the declarants conclude the disclosure supports Curtis' broad claims to that genus. It is evident from the Board's opinion that the Board considered the declarations and found that "the originally filed disclosure in the parent application which was sworn to by all the inventors is more credible as to what was unexcepted [sic] and surprising" regarding the ability of different materials to adhere to different PTFE filaments. (J.A. at 18.) Even if we were to disagree with the way in which the Board weighed the evidence that was before it, which we do not, our substantial evidence standard of review would require us to defer to the Board's credibility determination.

B

At oral argument, counsel for the appellants assigned error to the Board's application of our predecessor court's decision in In re Smythe to the facts of this case and conceded that Curtis' appeal would fail if the Board had not so erred. The disclosure in the '962 Application states that MCW adheres to PTFE filaments and increases its COF so as to create a commercially acceptable PTFE dental floss when it is employed as a coating. Curtis argues that this teaching is sufficient support under In re Smythe for the later-claimed genus of friction enhancing coatings because it conveys how and why individual species of the genus are operable in the invention. We are not persuaded by Curtis' reading of In re Smythe and instead think that the Board did not err.

In re Smythe concerned claims to an apparatus for automatically analyzing liquid samples of blood or other body fluids. In re Smythe, 480 F.2d at 1377. The invention contemplated successive introduction of samples into the machine as a continuous stream separated by a "segmentizing medium." Id. As originally filed, the specification stated the segmentizing medium was "air or other gas which is inert to the liquid" sample. Id. The specification disclosed the properties of the segmentizing medium by stating, "[t]he essential function of separating discrete samples from each other [wa]s performed because the [segmentizing] medium takes the shape of the supply lines and the flow cell through which it passes, while to some extent resisting any force which may tend to change its volume." Id. at 1383.

Like Curtis, the applicants of In re Smythe sought allowance of a broader genus claim in a later application. In the applicants' later-filed application, the applicants claimed the segmentizing medium as "an inert fluid immiscible with said liquid samples." Id. at 1378. Thus, the applicants claimed a genus of "inert fluid" segmentizing media, one that could theoretically include an "inert gas" as disclosed in the parent disclosure, but that could also encompass an "inert liquid," which was not specifically named.

The In re Smythe court reviewed the decision of the Board to affirm the examiner's final rejection of Claim 34 on the ground that it was not adequately supported in the parent disclosure under § 112, ¶ 1. Id. at 1382. On appeal, the PTO argued that even though the applicants' earlier-filed

disclosure enabled practice of the claimed invention with an inert liquid or inert gas segmentizing medium, the disclosure did not adequately describe a genus of all inert fluids because it named only inert gases as suitable segmentizing media for the invention. Id.

The court reversed the Board's decision and held that the "use of an inert fluid broadly in th[e] invention would naturally occur to one skilled in the art reading the description of the use of air or other gas as a segmentizing medium to separate the liquid samples." Id. at 1383 (emphasis in original). The court explained that "[w]hile fluid is a broader term, encompassing liquids . . . the specification clearly conveys to one skilled in the art that in this invention the characteristics of a fluid are what make the segmentizing medium work . . . ." Id. The court, in caution, added:

> This is not a case where there is any unpredictability such that appellants' description of air or other inert gas would not convey to one skilled in the art knowledge that appellants invented an analysis system with a fluid segmentizing medium. In other cases, particularly but not necessarily, chemical cases, where there is unpredictability in performance of certain species or subcombinations other than those specifically enumerated, one skilled in the art may be found not to have been placed in possession of a genus or combination claimed at a later date in the prosecution of a patent application.

Id. (footnote and citation omitted). In the instant case, the Board relied on this passage to find:

> this is not a case where there is predictability such that the appellants' description of a dental cleaning floss made from the PTFE having a coating of a microcrystalline wax to increase the coefficient of friction of the PTFE would convey to one skilled in the art knowledge that the appellants invented a dental cleaning floss made from PTFE having a coating of at least one material capable of increasing the coefficient of friction of the PTFE. (J.A. at 18.)

This was a proper application of In re Smythe to the facts of this case. The Board's finding of unpredictability in the art of dental floss manufacture was supported by substantial evidence in the record showing Curtis was surprised that MCW would adhere to PTFE, and that the inventors did not expect MCW would increase the COF of a PTFE dental floss. Unlike the circumstances In re Smythe presented, the instant facts present a case in which there is "unpredictability in performance of certain species or subcombinations other than those specifically enumerated." In re Smythe, 480 F.2d at 1383. As such, mere recitation of the properties common to all the species of friction enhancing coatings in the

'962 Application did not put persons of ordinary skill in the art in possession of the full range of later-claimed friction enhancing coatings.

Curtis contends that the language from In re Smythe on which the Board relied was dicta and effectively argues that a description of how and why species operate in an invention will always provide an adequate written description of the genus of which the species are members. We disagree. To be sure, a fair reading of In re Smythe does support the proposition that, in some cases, a disclosure naming a species can support later-filed claims to a genus that includes the species if it clearly conveys to one of skill in the art characteristics common to all species that explain how and why they make the invention operable. See id. at 1384 ("[I]t is the descriptions of the properties and functions of the 'air or other gas' segmentizing medium described in appellants' specification which would suggest to a person skilled in the art that appellants' invention includes the use of 'inert fluid' broadly.") (emphasis in original); see also Enzo Biochem, Inc. v. Gen-Probe, Inc., 296 F.3d 1316, 1320, 1327 (Fed. Cir. 2002) (granting petition for rehearing and vacating prior panel decision reported at 285 F.3d 1013 (Fed. Cir. 2002)) (citing In re Smythe for proposition that disclosed representative species which "indicate that the patentee has invented species sufficient to constitute the genera, . . . may be representative of the scope of those claims.") (emphasis added).

However, we have never held that in all such cases, including those in which persons of ordinary skill in the art could not predict the operability of undisclosed species, the decision in In re Smythe compels a finding that the claim to the genus is adequately described under § 112, ¶ 1. To the contrary, we recently stated In re Smythe "discuss[es] circumstances in which a species may be representative of and therefore descriptive of genus claims." Enzo, 296 F.3d at 1327 (emphasis added). Furthermore, it has been clear since we decided Eli Lilly that a disclosure of a species does not always suffice to describe broadly claimed subject matter. See Eli Lilly, 119 F.3d at 1568 (holding "description of rat insulin cDNA is not a description of the broad classes of vertebrate or mammalian insulin cDNA").

Curtis' argument erroneously underplays the significance of the language from In re Smythe on which the Board relied to make its finding of unpredictability in the art. The In re Smythe court

explained that the properties of segmentizing media described in the disclosure at issue were precisely those of a fluid generically and of a liquid in particular. In re Smythe, 480 F.2d at 1383. It indicated there was nothing in the record justifying "a conclusion that one skilled in the art would not find the disclosure to inherently teach that it is the very characteristics of fluids which are needed in a segmentizing medium." Id. (emphasis in original). The court saw no reason to deny the applicants a claim to inert fluids when the "concept of using 'inert fluids' would naturally occur to one skilled in the art from reading" the description of the segmentizing medium's properties in the parent disclosure. Id. at 1384.

The alternative would have been to require the applicants to list species that "are already stored in the minds of those skilled in the arts, ready for instant recall upon reading the descriptions of specific elements or steps." Id. In a hypothetical claim to the scales of justice limited to the use of a one-pound weight as a counterbalance, the court stated that a narrower description of the use and function of scales contemplating only a lead counterbalance would nevertheless "immediately convey" that the invention encompassed a scale with a one-pound counterbalance weight, regardless of its composition. Id. Thus, the question In re Smythe required the Board to answer was whether a person of ordinary skill in the art, reading the disclosure in the '962 Application, would "instantly recall" species of the genus of later-claimed friction enhancing coatings already "stored" in their minds. If the later-claimed genus would not "naturally occur" to a person of ordinary skill upon reading the disclosure, then the facts at bar would present a case in which unpredictability in performance of friction enhancing coatings other than MCW in the invention disclosed in the '962 Application defeated Curtis' claim to priority.

Here, there is no evidence in the record indicating persons of ordinary skill had stored in their minds any friction enhancing coating other than MCW that would naturally occur to a person of ordinary skill in the art after reading the disclosure in the '962 Application as Curtis filed it with the PTO. Almost all the evidence points to the opposite conclusion–that, given the non-stick properties of PTFE, a person of ordinary skill would be hard-pressed to instantly recall any other species of friction enhancing coatings that would adhere to PTFE. In any event, such testimony by those skilled in the art cannot avoid a written description problem where, as here, the patent applicant has explicitly written the

specification to attribute unique properties to a claimed species different from the properties of other members of the genus. Where the specification unequivocally identifies the species as unique and different, it cannot convey the knowledge that the overall genus has the same qualities, regardless of the knowledge of those skilled in the art. In re Smythe does not suggest otherwise. Because we hold the Board properly applied In re Smythe to the facts of this case, Curtis' appeal fails.

C

Curtis contends the Board's decision should be reversed because its finding of unpredictability is in conflict with its first decision in which it concluded the disclosure in the '962 Application enables the claims on appeal. We are not persuaded. Curtis argues "the Board's unexplained and inconsistent characterization of the coated dental floss art as unpredictable compels reversal." (Appellants' Opening Br. at 36.) As an initial matter, we note this statement grossly overstates the Board's holding in its first decision. With regard to the examiner's enablement rejection of the instant claims, the Board stated, "[t]he examiner has only alleged the unpredictability of the art as the reason the disclosure of the parent application would require undue experimentation. This alone is insufficient in this case." (J.A. at 365.) The Board reasoned by arguing in the alternative and concluded simply that if the art were indeed unpredictable, that finding, standing alone, would be legally insufficient to support a prima facie case of non-enablement. This contrasts sharply with the Board's explicit finding of unpredictability in the art in its second decision.

Curtis also suggests the disclosure in the '962 Application must describe a genus of friction enhancing coatings because it permits skilled artisans to practice the claims on appeal through "simple" procedures that require "no elaborate equipment, tests, etc." (Appellants' Opening Br. at 36.) This argument conflates the written description and enablement requirements of the patent law. We interpret 35 U.S.C. § 112, ¶ 1 to require a written description requirement separate and apart from the enablement requirement. See Amgen Inc. v. Hoechst Marion Roussel, Inc., 314 F.3d 1313, 1330 (Fed. Cir. 2003) (citing Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1563 (Fed. Cir. 1991)) (holding construction of § 112, ¶ 1 requires separate written description and enablement requirements). While the Board's first

decision compels the conclusion that it may have been quite easy for Curtis to discover that MCW, or any other material for that matter, was a species of the genus of friction enhancing coatings, there is no evidence in the disclosure of the '962 Application or anywhere else in the record showing Curtis conveyed that any other coating was suitable for a PTFE dental floss. The consequence of our previous construction of § 112, ¶ 1 is that conclusive evidence of a claim's enablement is not equally conclusive of that claim's satisfactory written description.

Under our precedent, a disclosure that names one species encompassed within a genus will adequately describe a claim directed to that genus only if the disclosure "indicates that the patentee has invented species sufficient to constitute the gen[us]." See Enzo, 296 F.3d at 1327 (noting In re Smythe discusses circumstances when single species describes claim to genus). As our reading of In re Smythe demonstrates, a patentee will not be deemed to have invented species sufficient to constitute the genus by virtue of having disclosed a single species when, as is the case here, the evidence indicates ordinary artisans could not predict the operability in the invention of any species other than the one disclosed.

IV

For the reasons stated above, the decision of the Board denying Curtis the benefit of the filing date of the '962 Application and affirming the final rejections of the examiner was supported by substantial evidence in the record. Therefore the decision of the Board is affirmed.

COSTS

No costs.

AFFIRMED

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[1] A denier is a measure of how fine a strand of a particular material is.