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*A medium of expression for the exchange of thought in the fields of Patents, Trademarks and Copyrights; a forum for the presentation and discussion of legal and technical subjects relating to the useful arts; a periodical for the dissemination of knowledge of the functional attributes of the patent, trademark, and copyright laws, in order to effect a more uniform practice thereof and through which all interested in the development and appreciation thereof may work to a common end.*

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# Principles of Inherency

*Bradford J. Duft\* and Eric P. Mirabel\*\**

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## INTRODUCTION

The word "inherent" is an adjective and is generally defined to mean, "existing in something as a permanent and inseparable element, quality, or attribute." Inherency is also a familiar concern of United States patent law that arises in connection with many seemingly diverse statutes and in virtually all areas of practice, including ex parte prosecution before the United States Patent and Trademark Office ("PTO"), interference proceedings, and, of course, litigation.

For most purposes, the legal specification is that: "Inherency . . . may not be established by probabilities or possibilities. . . . The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient."<sup>1</sup> Nevertheless, when inherency is asserted under varying statutes or in different situations, this definition, and the evidence required to establish that a latent feature is inherent, can change substantially.

The purpose of this article is to discuss inherency with regard to all the various situations in which it emerges. Specific reference is given to the burden of proof and who bears it, with emphasis on that which is requisite to its demonstration and the stated rationales therefor.

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1 In re Oelrich, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (CCPA 1981) (quoting *Hansgirk v. Kemner*, 102 F.2d 212, 214, 40 U.S.P.Q. 665, 667 (CCPA 1939)).

## I. RELIANCE ON INHERENCY BY THE PTO OR ONE CONTESTING VALIDITY

### 1. *Anticipation and Inherency*

Anticipation under 35 U.S.C. § 102 can be established where the anticipatory material is inherently, rather than expressly, disclosed in the prior art.<sup>2</sup> Extrinsic evidence may be relied upon to establish that the prior art does, in fact, inherently disclose the feature in issue.<sup>3</sup>

The PTO often relies on inherency to support anticipation rejections, as may parties challenging the validity of an issued patent. While a party challenging the validity of an issued patent must demonstrate that the inherent subject matter establishes anticipation by clear and convincing evidence,<sup>4</sup> the PTO only needs a reasonable basis to support an assertion of inherency and shift the burden of proof to the patent applicant, thereby forcing him to prove the absence of an allegedly inherent thing. Nevertheless, it has been held that the applicant must be given a fair opportunity to rebut the PTO's assertion of inherency.<sup>5</sup>

#### *A. Inherent Functions, Products, Features, and Results in the Prior Art*

The PTO has been permitted to speculate, at least to a degree, about the function of things disclosed in the prior art, and support rejections based on the supposed functions. For example, in *In re Best*<sup>6</sup>

2 See generally *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 771, 218 U.S.P.Q. 781, 789 (Fed. Cir. 1983) (A party asserting anticipation "must show that each element of the claim at issue is found, either expressly described or under the principles of inherency, in a single prior art reference or that the claimed invention was previously known or embodied in a single prior art device or practice."), *overruled in part on other grounds*, *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 227 U.S.P.Q. 577 (Fed. Cir. 1985).

3 See *Continental Can Co., v. Monsanto Co.*, 948 F.2d 1264, 1268-69, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991) (The court noted, however, that the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.").

4 See *Tyler Refrigeration v. Kysor Ind. Corp.*, 777 F.2d 687, 689, 227 U.S.P.Q. 845, 847 (Fed. Cir. 1985); *Amgen Inc. v. Chugai Pharmaceutical Co.*, 13 U.S.P.Q.2d 1737, 1781 (D. Mass. 1989), *aff'd on other grounds*, 927 F.2d 1200, 18 U.S.P.Q.2d 1016 (Fed. Cir. 1991). See also *Stoller v. Ford Motor Co.*, 18 U.S.P.Q.2d 1545, 1547 (Fed. Cir. 1991) (unpublished opinion) ("[A]n inherent property has to flow naturally from what is taught in a reference."); *Hughes Aircraft Co. v. United States*, 8 U.S.P.Q.2d 1580, 1583 (Cl. Ct. 1988) (The claimed element, expressed in functional terms, "does not flow undeniably and irrefutably from the express disclosures of McCarty whether anyone recognizes it or not.").

5 See *In re Echerd*, 471 F.2d 632, 635, 176 U.S.P.Q. 321, 323 (CCPA 1973) (Holding that new reliance by the Board on one particular reference alone was, in effect, a new grounds of rejection under 35 U.S.C. § 102, different from the Section 103 rejection raised by the Examiner: "Under such circumstances, appellants should have been accorded an opportunity to present rebuttal evidence as to the new assumptions of inherent characteristics made by the board.").

6 562 F.2d 1252, 195 U.S.P.Q. 430 (CCPA 1977).

the court noted that all limitations of the process claim on appeal were "expressly disclosed by [a single prior art reference], except for the functionally expressed rate of cooling. Because any sample of [the prior art] catalyst would necessarily be cooled to facilitate subsequent handling, the conclusion of the Examiner that such cooling is encompassed by the terms of the appealed claims was reasonable."<sup>7</sup> The court also noted that: "[W]here the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter, may, in fact, be an inherent characteristic in the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on."<sup>8</sup>

There are, however, limits to the degree of speculation permitted the PTO regarding functions or features in the prior art.<sup>9</sup> In *In re Oelrich* the function which the PTO asserted was inherent in the prior art was held not to be present, as the prior art performed substantially the opposite function.<sup>10</sup> Although the claimed means for generating a signal in a missile guidance system was identical to a prior device in terms of structure, the court noted that the prior art patent instructed that the device is "adapted to receive a carrier frequency substantially *in excess* of the particular system critical or resonant frequency. . . ."<sup>11</sup> Given this express teaching, the court stated that the claim language at issue, a "means for generating a . . . carrier frequency . . . *less than* the mini-

7 *Id.* at 1254, U.S.P.Q. at 432-33.

8 *Id.* at 1254, U.S.P.Q. at 432-33, *quoting* *In re Swinehart*, 439 F.2d 210, 213, 169 U.S.P.Q. 226, 229 (CCPA 1971). *Accord* *In re Ludtke*, 441 F.2d 660, 664, 169 U.S.P.Q. 563, 566-67 (CCPA 1971) ("It was the examiner's view that the parachute canopy of Menget possessed all the claimed characteristics, including the capability of sequential opening, of appellants canopy. Therefore, he challenged appellants to show that Menget's canopy did not inherently possess these characteristics. . . . [I]t was incumbent upon appellants, when challenged, to show that the canopy disclosed by Menget does not actually possess such characteristics.").

9 *See In re Weiss*, 26 U.S.P.Q.2d 1885 (Fed. Cir. 1993) (unpublished opinion) (Reversing the rejection of claims which required a "means for breaking away cleats at a *preselected* level of force," because such preselection was not expressly or inherently disclosed for the prior art cleats.); *In re Mihalich*, 25 U.S.P.Q.2d 1478, 1479 (Fed. Cir. 1992) (unpublished opinion) (Rejecting the Examiner's assertion that a claimed feature was inherent in the prior art device.); *Stoller v. Ford Motor Co.*, *supra*, n. 4 at 1547 (unpublished opinion) (Holding that the claimed "frictional and pivotal connecting means" did not "naturally flow from what is taught by the Golden patent."); *Cf. Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (PTO Bd App. & Int. 1990) (Involving claims to a device with a feature (biaxial orientation) which the Examiner alleged was possessed by a prior art device: "[T]he examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art.").

10 666 F.2d 578, 212 U.S.P.Q. 323 (CCPA 1981).

11 *Id.* at 581-82, U.S.P.Q. at 326 (emphasis added).



num system resonant frequency” was not inevitably present, and reversed the Section 102 rejection.<sup>12</sup>

As is the case for claims which recite functional terms, inherency can also be used to establish anticipation of claims reciting processes or methods, where a method or process step<sup>13</sup> or result<sup>14</sup> is inherent in the prior art. Further, a claimed product which is inherently produced by a prior art process is anticipated.<sup>15</sup> However, it seems that to support either a rejection by the PTO of claims in an application or an assertion by a party in litigation that patent claims are anticipated, there must be a fairly high degree of certainty that the allegedly inherent product is produced in the prior art.<sup>16</sup> Nevertheless, once the PTO establishes the prior existence of the claimed product, the burden of proving that the

<sup>12</sup> *Id.* at 582, U.S.P.Q. at 326 (emphasis added).

<sup>13</sup> See *Standard Havens Prods., Inc. v. Gencor Indus., Inc.*, 953 F.2d 1360, 1370, 21 U.S.P.Q.2d 1321, 1328 (Fed. Cir. 1991) (Required step of “isolating” not inherent in the prior art process.).

<sup>14</sup> See *Vandergaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 633, 2 U.S.P.Q.2d 1051, 1054 (Fed. Cir. 1987) (Holding: “Even assuming that [the prior art patentee] did not recognize that the heel of his process functioned as a heat sink, that property was inherently possessed by the heel in his disclosed process, and, thus, his process anticipates the claimed invention.”); In re King, 801 F.2d 1324, 231 U.S.P.Q. 136, 138 (Fed. Cir. 1986) (*Prima facie* case of unpatentability established where the prior art device “inherently performs the function disclosed in the method claims on appeal. . . .”); In re Vogel, 427 F.2d 790, 796, 166 U.S.P.Q. 144, 148 (CCPA 1970) (The court stating that the method claims appeared “to state a result inherently obtained by use of the [prior art] apparatus. . . .”); Ex parte Novitski, 26 U.S.P.Q.2d 1389 (PTO Bd. App. & Int. 1993) (Method of inoculating plants against pathogenic nematodes by application of *P. capacia* was anticipated by the prior art, which taught inoculation of plants with a particular species of *P. capacia* for protecting a plant from fungal disease. The prior art method “inherently and necessarily constitutes a method for protecting a plant from plant pathogenic nematodes.” *Id.* at 1391.). See also *Bendix Corp. v. Balax, Inc.*, 421 F.2d 809, 816, 164 U.S.P.Q. 485, 491 (7th Cir. 1970) (Anticipation of plaintiff’s method patent established pursuant to an admission of use before the critical date: “[W]hen plaintiff’s tap is used in the recommended manner, it inherently practices the [claimed] method.”). But see *Alcon Laboratories, Inc. v. Allergon, Inc.* 17 U.S.P.Q.2d 1365 (N.D. Tex. 1990) (The prior art article did not expressly or inherently disinfect contact lenses as required in claimed process.).

<sup>15</sup> See *Nossen v. United States*, 416 F.2d 1362, 1371, 163 U.S.P.Q. 421, 428 (Ct. Cl. 1969) (Holding process claims calling for “liberating” of “unstable N<sub>2</sub>O<sub>5</sub>” anticipated, finding that N<sub>2</sub>O<sub>5</sub> was “inherently obtained” in the prior art process.).

<sup>16</sup> See *W. L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 U.S.P.Q. 303, 314 (Fed. Cir. 1983) (“Given the unique nature of [the claimed product], we are not persuaded that the “effect” of the processes disclosed in Smith and Sumitomo . . . would be always to inherently produce or be seen always to produce products meeting all of the claim limitations. Anticipation . . . cannot be predicated on mere conjecture respecting the characteristics of products that might result from the practice of processes disclosed in references.”); In re Massoubre, 423 F.2d 1405, 1407, 165 U.S.P.Q. 322, 324 (CCPA 1970) (“Appellants arguments concerning the intermediate product are persuasive, at least to a conclusion that there is a lack of certainty as to whether such product is the same as that here claimed.”). See also *Bristol-Meyers Co. v. United States Int’l Trade Comm’n*, 15 U.S.P.Q.2d 1258, 1260 (Fed. Cir. 1989) (No anticipation where the claims were to a certain crystal form of cefadroxil monohydrate which the court found was not produced by the prior art process.).

subject product is not in the prior art shifts to the applicant, and usually cannot be placed on any other party.<sup>17</sup>

There are exceptions to the general rule that a prior use, existence or practice will anticipate. These exceptions generally involve things which were not fully appreciated before their discovery by the applicant/patentee.

### B. *Exceptions to Anticipation By Prior Existence*

#### (i) *Natural Occurrence*

The PTO has relied upon inherency to support rejections of claims to naturally-occurring compounds, which compounds are by definition inherent in nature. One might expect that by virtue of their prior existence, naturally-occurring compounds would be unpatentable. However, claims directed to purified forms of naturally-occurring compounds (which are, by definition, not inherent) are permitted.<sup>18</sup>

The court in *In re Kratz* set forth particular requirements which must be met to uphold rejections to naturally-occurring compounds.<sup>19</sup> Reversing a Section 102 rejection of claims to a compound which occurred naturally in strawberries, although not in a pure state, the court reasoned:

It should be clear that an anticipation rejection in such a case is necessarily based on a dual footing. First, the natural composition [the strawberries] must inherently contain the naturally occurring compound. Secondly, the claim must be of sufficient

<sup>17</sup> See *Ex parte Anderson*, 21 U.S.P.Q.2d 1241, 1253 (PTO Bd. App. & Int. 1991) (Phillips Petroleum Co., which was involved in a long-standing dispute on the subject matter of the patent in question with Applicant's assignee, filed a request for reexamination of the subject patent. The reexamination proceeding which resulted was merged with an ongoing reissue proceeding on that same patent. The Board rejected Appellant's argument that Phillips was in a unique position to demonstrate that the prior art copolymers had the properties required in the claims and that Appellant should not be required to do so, even though the inventors of the prior art copolymers were employees of Phillips.).

<sup>18</sup> See, e.g., *In re Bergstrom*, 427 F.2d 1394, 1401-02, 166 U.S.P.Q. 256, 262 (CCPA 1970) (It was noted that "inherency" was not a proper basis for a rejection of a claim to *pure*, albeit naturally occurring compounds: "by definition, pure materials necessarily differ from *less* pure or impure materials. . . ."); *In re Williams*, 171 F.2d 319, 320, 80 U.S.P.Q. 150, 151 (CCPA 1948) (Where Appellant claimed a laevo rotary compound "substantially free from the dextro rotary form," and it was evident that the compound existed previously only as a racemic mixture, the court held that, "the existence of a compound as an ingredient of another substance does not negative novelty in a claim to the pure compound."); *Ex parte Stern*, 13 U.S.P.Q.2d 1379 (PTO Bd. App. & Int. 1987) (Reversing the rejection under 35 U.S.C. § 102 of a claim to "human interleukin-2 which has been purified to homogeneity.").

<sup>19</sup> 592 F.2d 1169, 201 U.S.P.Q. 71 (CCPA 1979).

breadth to encompass both the known natural composition and the naturally occurring compound.<sup>20</sup>

It was held that because the compound did not occur in a substantially pure state as required by the claims, the first portion of the test had not been met.

(ii) *Accidental, Unappreciated Existence or Results*

The doctrine of inherency is to be contrasted with the established principle that an accidental, unappreciated prior use or existence does not anticipate.<sup>21</sup> This principle seems based on the long-established recognition that such unappreciated events or things are, by definition, not known to the public and thus not anticipatory.<sup>22</sup>

In *re Seaborg* established that a product which previously existed only in minute, undetected amounts will not anticipate.<sup>23</sup> The claims in *Seaborg* were to a new element having atomic number 95, Americium (Am), and its isotopes. The PTO did not counter appellant's statements that the prior art relied upon as anticipatory, could have produced "no more than one-hundred millionth of a gram of americium-24, [which] would have been distributed throughout 40 tons of intensively radioactive uranium reactor fuel," and that, "[t]his amount of an unknown, unconcentrated isotope, if present, would have been undetectable."<sup>24</sup> The court reversed the PTO rejection. It agreed with appellant's statement that "[t]he possibility that although a minute amount of americium may have been produced in the [prior art] reactor, it was not identified (nor could it have been identified)," and held that these facts precluded application of the prior art patent as an anticipatory reference.<sup>25</sup>

20 *Id.* at 1174, U.S.P.Q. at 75-76.

21 See generally D. Chisum, *Patents* § 3.03 (1994); A. W. Deller, *Deller's Walker on Patents*, §§ 59, 67 (2d ed. 1964); Kilyk, *Accidental Prior Use*, 64 J. Pat. Off. Soc'y 392 (1982).

22 See, e.g., *Anthracite Separator Co. v. Pollock*, 175 F.2d 108, 111 (M.D. Penn. 1907) ("A prior use, in order to negate novelty, must be something more than an accidental or casual one. It must, indeed, be so far understood and practiced, or persisted in, as to contribute to the sum of human knowledge and be accessible to the public, becoming an established fact in the art." (emphasis added)).

23 328 F.2d 996, 140 U.S.P.Q. 662 (CCPA 1964). See also *In re Seaborg*, 328 F.2d 993, 140 U.S.P.Q. 659 (CCPA 1964). Cf. *American Cyanamid Co. v. Federal Trade Comm'n*, 363 F.2d 757, 777, 150 U.S.P.Q. 135, 150 (6th Cir. 1966) (In evaluating whether Pfizer should have received the patent on the compound tetracycline, it was noted that a prior art process for producing aureomycin also co-produced tetracycline. In remanding, the court expressed its concern that the patent examiner may have focused too heavily on whether the prior art process produced tetracycline in "appreciable amounts.").

24 *Id.* at 997, U.S.P.Q. at 663.

25 *Id.* at 999, U.S.P.Q. at 665.

Substantial uncertainty regarding whether a product actually did exist previously appears to be enough to preclude anticipation.<sup>26</sup> More broadly, it has also been held that an unexpected, accidental result, occurring along with a known and expected one, cannot anticipate. In *In re Marshall*, the claims were to the use of a drug to inhibit the release of certain hormones in order to control weight gain.<sup>27</sup> Holding that the prior art teaching did not anticipate appellant's process claims, the court noted that "[n]othing in the [reference] even remotely suggests taking oxethazaine to lose weight. If anyone ever lost weight by following the [reference] teaching it was an unrecognized accident. An accidental or unwitting duplication of an invention cannot constitute an anticipation."<sup>28</sup>

In conclusion, although the PTO may support rejections based on speculation, it must be reasonable; prior but unappreciated existence will anticipate only if it is sufficiently certain.<sup>29</sup> Although the thing in question may not have actually been discovered or appreciated, it is inherent only if there is at least a reasonable likelihood that the trained observer could have discovered or recognized it without specific guidance. It would appear that inherent anticipation is established under the principles generally followed in construing 35 U.S.C. § 102, *i.e.*, subject matter relied on as anticipatory must be disclosed in a manner to place it in possession of the public.<sup>30</sup>

## 2. Obviousness and Inherency

### *A. Where Claimed Subject Matter May Be Anticipated By a Single Reference or Practice*

As noted above, the PTO can reject claims including functional limitations under either 35 U.S.C. §§ 102 or 103, where the claimed

<sup>26</sup> See *W. L. Gore v. Garlock, Inc.*, *supra* n. 16 and accompanying text; *In re Massoubre*, *supra* n. 16.

<sup>27</sup> 578 F.2d 301, 198 U.S.P.Q. 344 (CCPA 1978).

<sup>28</sup> *Id.* at 304, U.S.P.Q. at 346.

<sup>29</sup> Note further that the requisite degree of certainty must be met for every claim limitation in question. See *In re Brink*, 419 F.2d 914, 164 U.S.P.Q. 247 (CCPA 1970) (Appellant conceded that the primary reference disclosed all the claimed steps and elements in his process, other than a specified range of "bulk density" of a recited product. The PTO attempted to establish anticipation by relying on an additional reference, which disclosed a product having a bulk density falling within the specified range. The court noted that the additional reference also disclosed another form of that product which had a bulk density outside the claimed range and held that "a reasonable certainty of inherency" of the requisite bulk density in the primary reference had not been shown.).

<sup>30</sup> See, *e.g.*, *Akzo N.V. v. United States Int'l Trade Comm'n*, 808 F.2d 1471, 1479, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986); *In re Samour*, 571 F.2d 559, 562, 197 U.S.P.Q. 1, 3 (CCPA 1978) and cases cited therein.

functions appear to be inherent in the prior art.<sup>31</sup> The PTO has relied upon this reasoning to reject claims to products described in product-by-process terms, "when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim. . . ."<sup>32</sup> Such rejections are deemed "eminently fair and acceptable," because "[a]s a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith."<sup>33</sup>

The same reasoning which allows the PTO to reject product-by-process claims over ostensibly similar prior art products also allows rejection of conventional product claims over such prior art products.<sup>34</sup> In *In re Fitzgerald*, the court deemed "product-by-process principles" applicable in determining the propriety of a Section 103 rejection, and held that the PTO could require applicants to prove that the claimed "crystallization shrinkage" of their claimed fasteners was not present in the fasteners of the prior art.<sup>35</sup> Therefore, it is clear that although alternate grounds of rejection may be used, a rejection under Section 103 alone is also appropriate for claims to a product which is ostensibly identical or similar to a prior art product.<sup>36</sup> Further, it is entirely appro-

31 See *In re Ludtke*, *supra* n. 8; *In re Best*, *supra* n. 6 and accompanying text; *In re Myers*, 401 F.2d 828, 159 U.S.P.Q. 339 (CCPA 1968) (Affirming a rejection of claims reciting quasi-functional terms, which rejection seemed to have been made under either Section 102 or 103). See also *In re Hallman*, 655 F.2d 212, 216, 210 U.S.P.Q. 609, 611 (CCPA 1981) (Affirming a rejection of claims including a functional limitation under Sections 102 and 103); *In re Skoner*, 517 F.2d 947, 950, 186 U.S.P.Q. 80, 82 (CCPA 1975) (Affirming a Section 103 rejection of method claims, but noting that it perhaps should have been made under Section 102.). Note, on the other hand, *In re Mills*, 916 F.2d 680, 683, 16 U.S.P.Q. 1430, 1432 (Fed. Cir. 1990) (Regarding a rejection made under 35 U.S.C. § 103: "It is not pertinent whether the prior art device possesses the functional characteristics of the claimed invention if the reference does not describe or suggest its structure.").

32 *In re Brown*, 459 F.2d 531, 525, 173 U.S.P.Q. 685, 688 (CCPA 1972). See also *Ex parte Gray*, 10 U.S.P.Q. 2d 1922, 1923 (PTO Bd. App. & Int. 1989).

33 *In re Brown*, *Id.* at 525, U.S.P.Q. at 688. Following rejection over a prior art process which the PTO alleges inherently produces the claimed product, the burden shifts to the applicant to establish unobviousness. See, e.g., *In re Thorpe*, 777 F.2d 695, 698, 227 U.S.P.Q. 964, 966 (Fed. Cir. 1985); *In re Marosi*, 710 F.2d 799, 218 U.S.P.Q. 289 (Fed. Cir. 1983); *In re Brown*, *Id.*; *Ex parte Gray*, *Id.* at 1923. See also *Ex parte Jungfer*, 18 U.S.P.Q.2d 1796, 1800 (PTO Bd. App. & Int. 1991) ("We find that the examiner has properly shifted the burden of proof to appellants to establish through objective evidence that the claimed products do, in fact, differ from the [products] of the reference.").

34 See *In re Spada*, 911 F.2d 705, 708, 15 U.S.P.Q.2d 1655, 1658 (Fed. Cir. 1990) (Because of the virtual identity of compounds recited in the claims to those in the prior art, the court held the claims anticipated and refused to consider Applicants' arguments that the properties of its compounds were different from those in the prior art.).

35 619 F.2d 67, 70, 205 U.S.P.Q. 594, 596-97 (CCPA 1980).

36 *Cf. In re Grasselli*, 713 F.2d 731, 739, 218 U.S.P.Q. 769, 775 (Fed. Cir. 1983) (The court found that certain affidavits filed during examination of the subject reissue application did not

priate for the PTO to make rejections under 35 U.S.C. § 103, where the item, in fact, lacks novelty.<sup>37</sup> Accordingly, where products in the prior art are ostensibly similar or identical to those claimed, the PTO can reject the claims and force the applicant to bear the burden of rebutting the rejection.

*B. Where the Claimed Subject Matter Is Clearly Not Anticipated By a Single Reference or Practice*

Where the claimed invention is clearly not anticipated, *i.e.*, if it is not fully disclosed in a single prior art reference or embodied in a single practice or device, arguments of inherency are nearly always immaterial. For example, the court in *In re Naylor* held it immaterial that a particular product, produced by a claimed process, would inherently result from combining the teachings of the prior art.<sup>38</sup> Because the record in *Naylor* established that "one of ordinary skill in the art would not appreciate or recognize that inherent result," the court concluded: "That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown."<sup>39</sup>

Obviousness cannot be based on a finding that the properties of a novel composition are inherent in the combination of its ingredients.<sup>40</sup> Further, where certain advantages of the claimed invention are relied

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support the conclusion that a prior art Japanese Patent produced a composition within the rejected claims, and refused to uphold the Section 103 rejection.).

37 See *In re Fracalossi*, 681 F.2d 792, 215 U.S.P.Q. 569 (CCPA 1982) (The court perceived that the claimed composition lacked novelty, even though a rejection for lack of novelty had not been made or discussed in the PTO, and held that Appellants could not present evidence that the properties of their composition were not inherent in the identical prior art composition); *In re Pearson*, 494 F.2d 1339, 1402, 181 U.S.P.Q. 641, 644 (CCPA 1974), (Affirming the Board, which had treated a Section 103 rejection of composition claims as if it were made under 35 U.S.C. § 102, and noting that anticipation "is the ultimate or epitome of obviousness.").

38 369 F.2d 765, 152 U.S.P.Q. 106 (CCPA 1967). See also *In re Chapman*, 357 F.2d 418, 422, 148 U.S.P.Q. 711, 714 (CCPA 1966) (The court could not agree that "Appellant's compositions are unpatentable because [combining prior art processes] 'would inherently yield' a product substantially the same as that claimed, since that position implies that any and all products of obvious processes are unpatentable by reason of their being 'inherent' results of those processes.").

39 *Id.* at 768, U.S.P.Q. at 108. Quoting *In re Spormann*, 363 F.2d 444, 448, 150 U.S.P.Q. 449, 452 (CCPA 1966)).

40 *In re Henderson*, 348 F.2d 550, 553-54, 146 U.S.P.Q. 372, 375-76 (CCPA 1965) (Obviousness cannot be predicated on the fact that a certain gasoline additive in the claimed composition would inherently function to yield an unexpected property of the composition, *i.e.*, a decrease in sensitivity to engine operating conditions.). See also *In re Gruskin*, 234 F.2d 493, 498, 110 U.S.P.Q. 288, 292 (CCPA 1956) ("We are therefore of the opinion that there is nothing in the references which would have suggested to one skilled in the art that the above teachings could have been combined to give appellant's toothpaste in spite of the fact that the actual substances disclosed in the reference, if combined, inherently gave a toothpaste having the characteristics of appellant's toothpaste.").

on to establish patentability, the essential issue is not whether those advantages are inherent in the claimed invention<sup>41</sup> or in the prior art,<sup>42</sup> but whether they would be expected in the claimed invention. The decision in *Jones v. Hardy* illustrates that obviousness is not established because one element of the invention, which element was in the prior art, inherently possessed the characteristics relied upon to establish the patentability of the claimed invention.<sup>43</sup> The invention in *Jones* related to a design molded into a polystyrene sheet, used to imprint the design directly onto a cast concrete wall. The molded polystyrene sheet was an improvement over the prior art, where the design was cut into a polystyrene sheet and the sheet had to be laid into a form into which concrete was poured. The molded polystyrene sheet could be more readily removed from the cast concrete, by simply air-blowing it off. The Federal Circuit reversed the district court's holding of obviousness and criticized its conclusion that "the discovery of a use of an inherent quality [that the molded polystyrene sheet adhered less thoroughly to concrete and could be air-blown off] of a product well known in the art is not patentable because of obviousness."<sup>44</sup> The court stated that this conclusion "confuses anticipation by inherency . . . with obviousness, which . . . are separate and distinct concepts."<sup>45</sup>

It is also well-settled that novel methods of using old or known products are patentable if they are not suggested in the prior art, irrespective of whether such methods are inherent from the combined teachings of the prior art.<sup>46</sup> The court in *In re Shetty* upheld a Section

41 See *In re Rinehart*, 531 F.2d 1048, 1053-54, 189 U.S.P.Q. 143, 148 (CCPA 1976) (Regarding the patentability of a process in which its asserted advantage over the prior art was that it was operable on a commercial scale, the court stated that there was nothing in the record which would lead one of ordinary skill to anticipate successful production on a commercial scale from a combination of the prior art processes. "The view that success would have been 'inherent' cannot, in this case, substitute for a showing of reasonable expectation of success."); *In re Spormann*, 363 F.2d 444, 448, 150 U.S.P.Q. 449, 452 (CCPA 1966) (The asserted advantage of Appellants' process was not in the prior art, and its existence was not challenged by the PTO.).

42 See *In re Newell*, 891 F.2d 899, 901, 13 U.S.P.Q.2d 1248, 1250 (Fed. Cir. 1989) (Although one of the claim elements was in the prior art and it would inherently achieve the asserted advantage of Applicant's device, "a retrospective view of inherency is not a substitute for some teaching or suggestion which supports the selection and use of the various elements in the particular claimed combination."); *In re Adams*, 356 F.2d 998, 1002-03, 148 U.S.P.Q. 742, 746 (CCPA 1966) ("Finally, the solicitor adds the argument that the superiority of Appellant's heat transfer is inherent in the use of foam. Again we observe that, of course, it is. But the art does not suggest the use of foam in heat transfer of any kind and there is not the slightest suggestion that anyone knew of the existence of this inherent superiority until Adams disclosed it.").

43 727 F.2d 1523, 220 U.S.P.Q. 1021 (Fed. Cir. 1984).

44 *Id.* at 1529, U.S.P.Q. at 1025.

45 *Ibid.*

46 Succinct reasoning for allowing such claims was set forth in *In re Diamond*, 360 F.2d 214,

103 rejection of claims to a new compound which was structurally similar to a prior art compound useful as an antiviral agent.<sup>47</sup> The court then determined whether the method of using the compound for appetite curbing was also unpatentable. The PTO urged that because the combined disclosures of the prior art taught the use of the prior art compound in similar dosages, appetite curbing was taught "inherently." The court held:

We cannot accept this conclusion. The issue here is whether the claimed method of curbing appetite would have been obvious. That appellant's "amount effective to curb appetite" corresponds to or inheres in Narayanan's amount "to combat microbial infestation" does not persuade us of the obviousness of appellant's method. . . . The Patent Office has failed to show a reasonable expectation, or some predictability, that Brake's compound would be an effective appetite suppressant if administered in the dosage disclosed by Narayanan.<sup>48</sup>

In summary, the issue under 35 U.S.C. § 103 is, plainly, and as always, whether the references collectively suggest what is claimed.<sup>49</sup> Even where claim elements which are allegedly inherent in the prior art may be known or appreciated, as opposed to undetected, obviousness may still be negated by the requirement of 35 U.S.C. § 103 that a teaching or suggestion of the claimed combination must be present in the references.<sup>50</sup> To the extent that things inherent in the prior art are unknown and unappreciated, they can suggest nothing. Therefore, subject to the exceptions noted in the previous section, the PTO (or a party challenging validity) cannot solely rely on inherency to support obviousness.

### 3. *Interference Estoppel*

A junior party in an interference, by rule, had a duty to present all claims involving subject matter common to his opponent's specifi-

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216, 149 U.S.P.Q. 562, 564 (CCPA 1966), where, although it affirmed a Section 103 rejection of the product claims, the court said:

The Examiner's position is that the combination of two drugs, each shown to be old by the prior art for use in treating inflammatory diseases, is obvious . . . "and any results obtained therefrom would be inherent." We find [the emphasized] phrase particularly meaningless since the effect of drugs or reactivity of chemical compounds can be nothing else than "inherent." But inherency is not obviousness. [Emphasis added.]

47 566 F.2d 81, 195 U.S.P.Q. 753 (CCPA 1977).

48 *Id.* at 86, U.S.P.Q. at 756.

49 See, e.g., *ACS Hospital System Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984); *In re Ehrreich*, 590 F.2d 902, 909, 200 U.S.P.Q. 504, 510 (CCPA 1979) ("The question in a § 103 case is what the references would collectively suggest to one of ordinary skill in the art.").

50 See, e.g., *Smithkline Diagnostics, Inc. v. Helena Laboratories Corp.*, 859 F.2d 878, 887, 8 U.S.P.Q.2d 1468, 1475 (Fed. Cir. 1988).



cation. Failure to do so would estop him from presenting them at a later time.<sup>51</sup> The PTO can rely on inherency in making so-called "interference estoppel" rejections, which can arise after a determination of priority in an interference where the claims at issue read on subject matter common to the opposing party's specifications.<sup>52</sup> In *In re Wilding* the claim at issue, made by junior party to an earlier interference involving his application, required use of undenatured oil seed protein in a method of making a protein food product.<sup>53</sup> Responding to the PTO's urging that the protein disclosed by the senior party which had won the interference was also undenatured, the court held that, "[a]s proponent of the rejection the PTO has the burden of showing that the use of undenatured soybean meal is inherent in the [winning party's] application."<sup>54</sup> The court referred to the evidence appellant had proffered, and found it indicated that the winning party's disclosure of undenatured soybean meal in his application was not "the necessary and only reasonable construction to be given the . . . disclosure."<sup>55</sup> The court held that the doctrine of inherency would apply only if it was "inevitable" that the winning party used it in his disclosed method.<sup>56</sup>

Thus, the *Wilding* decision indicates that the PTO must carry the burden of proving inherency when rejecting claims under the doctrine of interference estoppel. This is unlike the situation where the PTO makes a rejection under 35 U.S.C. §§ 102 or 103 because a claimed invention appears to be disclosed in the prior art. In the latter case, the burden of proving that the allegedly inherent thing did not previously exist is shifted to the applicant.<sup>57</sup>

51 Note that under the rule now in effect, a *losing* party is estopped from taking further action in the Patent and Trademark Office if it failed present all claims involving common subject matter. 37 C.F.R. § 1.658(c). Therefore, both parties have a duty to present such claims.

52 See *In re Wilding*, 535 F.2d 631, 635, 190 U.S.P.Q. 59, 63 (CCPA 1976) ("[T]he rationale for the doctrine of interference estoppel is that priority with respect to the claimed invention could have been determined in the interference. . .").

53 *Id.* at 632, U.S.P.Q. at 60.

54 *Id.* at 635, U.S.P.Q. at 63.

55 *Id.* at 636, U.S.P.Q. at 63.

56 *Id.* at 636, U.S.P.Q. at 63-64.

57 See Sections I.1.A and I.2.A *supra*.

## II. RELIANCE ON INHERENCY BY THE APPLICANT/PATENTEE

### 1. Establishing Unobviousness

#### *A. Guidelines for Reliance on Properties to Establish Unobviousness*

Applicants and patentees have often relied upon the inherent functions or properties of an invention to rebut assertions of obviousness under 35 U.S.C. § 103. Although a device which is suggested by the prior art is not patentable merely because an advantageous result achieved by it was not expressly disclosed in the prior art,<sup>58</sup> an assertion of obviousness can be rebutted by showing that the inherent properties of a claimed product are unexpected or advantageous.<sup>59</sup>

Applicants frequently attempt to rebut obviousness by establishing that a new compound's properties or utilities proved to be unexpected,<sup>60</sup> where the compound was rejected because of its similarity in structure

58 See *In re Wiseman*, 596 F.2d 1019, 1023, 201 U.S.P.Q. 658, 661 (CCPA 1979) (The invention was a brake assembly with grooves in the friction discs, as suggested in the prior art. Although applicants claimed to have discovered that this brake assembly prevented brake fading, which resulted from moisture causing steam pressure within the assembly, the court concluded: "[Appellants] are, in effect, arguing that a structure suggested by the prior art, and hence, potentially in the possession of the public, is patentable to them because it also possesses an *inherent*, but hitherto unknown, function which they claim to have discovered. This is not the law."); *In re Lawson*, 228 F.2d 249, 253, 108 U.S.P.Q. 132, 134 (CCPA 1956) (Rejection affirmed because the court concluded that in essence, Appellant merely recognized that a substantially similar prior art device had an advantageous function which the prior art patentee failed to detect.).

59 See, e.g., *In re Marosi*, *supra* n. 33; *In re Fitzgerald*, *supra* n. 35 and accompanying text. See also *In re Weymouth*, 499 F.2d 1273, 182 U.S.P.Q. 290 (CCPA 1974) (A reference inherently disclosed a broad range for a ratio of halogen to mercury for use in lighting. Appellants' claimed range of ratios of halogen to mercury fell within this broader range. As appellants' application demonstrated that there was a "marked improvement" using their claimed ratios over the results achieved outside that range, the court reversed the Section 103 rejection.). Cf. *General Electric Co. v. Jewel Incandescent Lamp*, 326 U.S. 242, 249, 67 U.S.P.Q. 155, 158 (1945) (Although the Court noted that the claimed light bulb had the advantage of increased strength, that advantage was discounted. The Court stated, "[I]t is not invention to perceive that the product which others had discovered had qualities they failed to detect." Note, however, that *Jewel* was decided before the enactment of 35 U.S.C. § 103, and that the Court did not appear to consider whether the prior art suggested the claimed invention, as today they must.).

60 See, e.g., *In re Chupp*, 816 F.2d 643, 2 U.S.P.Q.2d 1437 (Fed. Cir. 1987); *In re Gyurik*, 596 F.2d 1012, 201 U.S.P.Q. 552 (CCPA 1979); *In re Lunsford*, 357 F.2d 380, 148 U.S.P.Q. 716 (CCPA 1966); *In re Mills*, 281 F.2d 218, 126 U.S.P.Q. 513 (CCPA 1960). But note, on the other hand, *In re Bell*, 991 F.2d 781, 784, 26 U.S.P.Q.2d 1529, 1531 (1993) (Holding that a *prima facie* case of obviousness of a particular nucleotide sequence was not established merely because the amino acid sequence which it encoded was known. The court reasoned: "[B]ecause of the degeneracy of the genetics code, there are a vast number of nucleotide sequences that might code for a specific protein.").

to a compound in the prior art.<sup>61</sup> In *In re Stemniski*, claims to a new compound were rejected over a combination of several different compounds in the prior art.<sup>62</sup> The court stated that:

The crux of the Patent Office position seems to be . . . that where a *prima facie* case of structural obviousness of claimed compounds has been established by reason of close structural similarity to prior art compounds, and that case has not been rebutted by any evidence of unexpected or unobvious properties inhering in those novel compounds which do not *actually* or *in fact* inhere in the structurally related compounds of the principal prior art references, the rejection is proper under § 103, *even though* those in the art at the time appellant's invention was made may be unaware of *any* significant properties or uses possessed by the prior art compounds.<sup>63</sup>

The court held that it was error not to consider Appellant's discovery of a new use for the claimed compounds, where that use was not disclosed or suggested in the prior art.<sup>64</sup>

More recently, the court in *In re Dillon* held that a *prima facie* case of obviousness cannot be defeated where a new tetra-orthoester compound in a claimed composition, which would have been expected to have the same property (dewatering fuels) as a prior art tri-orthoester compound, also possessed a property (reducing emission of solid particulates during fuel combustion) not disclosed for the prior art compound.<sup>65</sup> The court concluded that to overcome a *prima facie* case of obviousness in this situation, an applicant must show that the claimed composition had properties not possessed by the prior art subject matter, or that it possessed them to an unexpectedly greater degree.<sup>66</sup>

61 Succinct reasoning for allowing patenting of such compounds was set forth in *In re Papesch*, 315 F.2d 381, 391, 137 U.S.P.Q. 43, 51 (CCPA 1963): "From the standpoint of patent law, a compound and all of its properties are inseparable; they are one and the same thing. . . . And the patentability of the thing does not depend on the similarity of its formula to that of another compound but of the similarity of the former compound to the latter. There is no basis in law for ignoring any property in making such a comparison."

62 444 F.2d 581, 170 U.S.P.Q. 343 (CCPA 1971).

63 *Id.* at 583, U.S.P.Q. at 345.

64 The *Stemniski* court overruled *In re Henze*, 181 F.2d 196, 85 U.S.P.Q. 261 (CCPA 1950), where the court recognized that a homologue of a prior art compound could be patentable if "the beneficial properties realized in the new homologue lie clearly outside the expectations which knowledge of his science would inform the trained chemist should be inherent in the product." However, the compound in *Henze* was held unpatentable because Appellant failed to show that when the known compound was used in similar dosages to the claimed compound, it would not, *in fact*, have the same pharmacological activity. The *Stemniski* court rejected the notion that the applicant must compare the *actual* properties of the prior art compound, where those properties are not expressly disclosed in the prior art.

65 919 F.2d 688, 693, 16 U.S.P.Q.2d 1897, 1901 (Fed. Cir. 1990).

66 *Ibid.* See also *In re Chupp*, *supra*. n. 60 at 646, 2 U.S.P.Q.2d at 1439 ("Evidence that

In determining obviousness, properties and utilities are closely related. A statement of the properties which relate to patentability (for example, "it cures cancer") necessarily calls attention to the uses for that subject matter. In *In re Pleuddemann*,<sup>67</sup> the court held that methods of using novel bonding/priming agents to make other articles were patentable, notwithstanding its earlier decision in *In re Durden*,<sup>68</sup> that a method of making a compound was not patentable merely because the starting materials used in the method and the products obtained were novel. The *Pleuddemann* court reasoned that "the compounds and their use are but different aspects of, or ways of looking at, the same invention," and then concluded: "We are not here concerned with a process of making bonding/priming agents but with the agents themselves in which the bonding/priming properties are inherent, for which reason we do not find *Durden* a controlling precedent. . . ."<sup>69</sup>

In a related context, it is noted that it may be possible to overcome a 35 U.S.C. § 103 rejection of claims to a composition of matter by setting forth a novel use for it in the claims.<sup>70</sup> It is emphasized, however, that where a product is rejected under Section 102 rather than Section 103, its uses, or properties, are immaterial.<sup>71</sup>

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a compound is unexpectedly superior in one of a spectrum of common properties, as here, can be enough to rebut a *prima facie* case of obviousness.").

67 910 F.2d 823, 15 U.S.P.Q.2d 1738 (Fed. Cir. 1990).

68 763 F.2d 1406, 226 U.S.P.Q. 359 (Fed. Cir. 1985).

69 *Supra* n. 67 at 827, U.Q.P.Q.2d at 1741.

70 See *In re Pearson*, 494 F.2d 1399, 1403, 181 U.S.P.Q. 641, 644 (CCPA 1974) (The court stated in dictum that: "We do not mean to imply that terms which recite the intended use or a property of a composition can never be used to distinguish a new from an old composition," and noted that if the product had not been in the prior art, the use for that product set forth in the claims might render it patentable). See also *In re Dillon*, *supra* n. 65 at 693, U.S.P.Q.2d at 1902 (The court noting that Appellant's composition claims were not limited to the use she was relying on to attempt to establish nonobviousness). Cf. *In re Ruschig*, *infra* n. 141.

71 See *In re Schoenwald*, 964 F.2d 1122, 1124, 22 U.S.P.Q.2d 1671, 1673 (Fed. Cir. 1992); *In re Spada*, 911 F.2d 705, 708, 15 U.S.P.Q.2d 1655, 1657 (Fed. Cir. 1990) ("The discovery of a new property or use of a previously known composition, even when that property and use are unobvious from the prior art, can not impart patentability to claims to the known composition."); *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 782, 227 U.S.P.Q. 773, 779 (Fed. Cir. 1983) ("[I]t is immaterial, on the issue of novelty, what inherent properties the alloys have or whether these applicants discovered certain inherent properties."); *In re Bergstrom*, 427 F.2d 1394, 1402, 166 U.S.P.Q. 256, 262 (CCPA 1970) (Stating that whether the claimed compounds have "the same usefulness or assortment of properties as the impure materials of the prior art . . . is a question having no bearing on the factual and legal matter whether the [claimed] materials are new vis-a-vis the impure materials . . . although it is but one of the factors to be considered in determining their obviousness under 35 U.S.C. 103."); *General Elec. Co. v. Hoechst Celanese Corp.*, 16 U.S.P.Q.2d 1977, 1985-86 (D. Del 1990); *Friction Division Prod. Inc. v. E.I. DuPont de Nemours & Co.*, 658 F. Supp. 998, 1010, 3

In summary, the patentability of a novel product which is rejected for *prima facie* obviousness over similar prior art products can be established by showing that it has unexpected properties. However, the proof needed to demonstrate that such inherent characteristics are, in fact, unexpected, can vary. Comparative testing against the prior art products may be required.

*B. Properties or Utilities Not Originally Specified*

If an applicant (or patentee) seeks to rely on a newly-added statement of utility as evidence of patentability, it is preferred that some indication of its existence appear in the originally filed specification.<sup>72</sup> However, where the applicant has otherwise satisfied the requirements of 35 U.S.C. § 112, a continuation application under 35 U.S.C. § 120 can be filed with disclosure of an omitted property<sup>73</sup> or use<sup>74</sup> without loss of the benefit of the original filing date.

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U.S.P.Q.2d 1775, 1783 (D. Del. 1987). Note, however, certain cases where such properties were unnecessarily referenced: *In re Donohue*, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 622 (Fed. Cir. 1985) (The rejection was made under 35 U.S.C. § 102. Although the references failed to teach the solubility and melting point ranges set forth in dependent claims, because the prior art compounds were identical to those claimed, the court held that "the properties of Nomura's compounds are inherently the same as those of the claimed invention in the absence of proof to the contrary."); *In re Maeder*, 337 F.2d 875, 879, 143 U.S.P.Q. 248, 251 (CCPA 1964) (Finding that the prior art polymer had the same property set forth in certain product claims, and holding, therefore, that "the recitation of that property does not distinguish the claims. . .").

<sup>72</sup> See, e.g., *In re Davies*, 475 F.2d 667, 671, 177 U.S.P.Q. 381, 385 (CCPA 1973) (Although "there is no specific statutory requirement that compels an applicant to disclose all properties of chemical compounds or compositions in his application," the "public will derive the most benefit from a patent when it discloses on its face those properties or utilitarian advantages which were ultimately persuasive on the question of nonobviousness."). Cf. *Carter Wallace, Inc. v. Otte*, 474 F.2d 529, 548, 176 U.S.P.Q. 2, 10 (2d Cir. 1972) ("[W]e agree . . . that under 35 U.S.C. § 120, the failure of the [parent] application to qualify for patentability would not preclude use of the initial filing date with respect to a new property disclosed in a CIP application provided that the original patent application showed the novelty and utility required by § 101, as was the case here."). See generally Chisum, "Afterthoughts" and Undisclosed Advantages as Evidence of Patentability: From Salt Dredges to Polystyrenes, 57 J. Pat. Off. Soc'y 437 (1975); Choate, *Invention and Unobviousness—'Afterthoughts'*—Reliance on Features and Advantages Undisclosed at Original Filing, 49 J. Pat. Off. Soc'y 619 (1967).

<sup>73</sup> See *In re Davies*, *Id.*; *Carter Wallace v. Otte*, *Id.*; *Illinois Tool Works v. Continental Can Co.*, 273 F. Supp. 94, 103, 154 U.S.P.Q. 401, 409 (N.D.Ill. 1967) ("The inherency argument [that the resiliency of the claimed product was disclosed in an earlier filed application] finds support in the familiar patent law principle that a patentee is entitled to all of the benefits and advantages of his patent, including uses and functions of which he was not aware at the time the patent was granted."), *aff'd*, 397 F.2d 517, 158 U.S.P.Q. 437 (7th Cir. 1968).

<sup>74</sup> See *In re Kirchner*, 305 F.2d 897, 901, 134 U.S.P.Q. 324, 328 (CCPA 1962) (Holding that Appellants' continuation-in-part ("CIP") application was entitled to the parent application filing date even though the CIP set forth a different utility for the claimed compounds than

Notwithstanding decisions which indicate that an applicant or patentee cannot rely upon undisclosed utilities to establish patentability,<sup>75</sup> a number of cases have permitted reliance on advantages or properties that flow inherently from the claimed subject matter when it is used in the disclosed manner.<sup>76</sup> Furthermore, it was emphasized in *In re Slocombe* that: "There is no requirement that superiority over prior art be disclosed in the application; it is enough if the ybasic property or utility in which the advantage resides is disclosed."<sup>77</sup> Indeed, inasmuch as "a compound and all of its properties are inseparable,"<sup>78</sup> it seems proper that the properties of a compound which are not disclosed in the original specification, whether or not newly discovered, may be added by amendment, if necessary, without being treated as "new matter."<sup>79</sup> In *Ex parte Doushness*, for example, the applicant was allowed to add and rely upon solubility as a feature of the originally claimed mixture of normal magnesium carbonate and acetyl salicylic acid.<sup>80</sup>

It seems that adding properties or utilities after an application is filed should be permitted relatively freely. Their addition is of benefit to the public, who can then learn of them from reading the issued patent.

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did the parent: "[W]e are not dealing with *actual* utility, which is an inherent characteristic of every chemical compound, but only what is *disclosed* in the application *about* such utility, and changes in such disclosure, rather than in utility itself, which is immutable.").

75 See *In re Davies*, *supra* n. 72.

76 See, e.g., *In re Khelghatian*, 364 F.2d 870, 150 U.S.P.Q. 661 (CCPA 1966) (Applicant was permitted to rely on the fact set forth in an affidavit that his process was an "improvement," as that "would inherently flow" from what was originally disclosed); *In re Zenitz*, 333 F.2d 924, 927, 142 U.S.P.Q. 158, 161 (CCPA 1964); *Westmoreland Specialty Co. v. Hogan*, 167 F. 327, 328 (3d Cir. 1909); *Weather Engineering Corp. v. United States*, 204 U.S.P.Q. 41, 44 n. 4 (Ct. Cl. 1979) (The advantage of the invention was not an afterthought, and it appeared to be "one which inherently flowed from the method disclosed in the patent."), *aff'd*, 208 U.S.P.Q. 939 (Ct. Cl. 1980).

77 510 F.2d 1398, 1403, 184 U.S.P.Q. 740, 743 (CCPA 1975).

78 *In re Papesch*, *supra* n. 61.

79 See *Eli Lilly Co. v. Premo Pharmaceutical Laboratories*, 630 F.2d 120, 134, 207 U.S.P.Q. 719, 732-33 (3d Cir. 1980).

80 47 U.S.P.Q. 525 (Board 1940). *Accord Ex parte Davisson*, 133 U.S.P.Q. 400 (Board 1958) (A later-added amendment to the parent application was properly entered, because it set forth a statement of the inherent properties of the substance disclosed in the parent application.); *Ex parte Harris*, 43 U.S.P.Q. 125 (Board 1939) (Allowing addition of claims in a divisional application which set forth properties not expressly disclosed in the parent application, but which the cream disclosed in the parent application possessed.). See also *Kennecott Corp. v. Kyocera Int'l, Inc.*, 835 F.2d 1419, 5 U.S.P.Q.2d 1194 (Fed. Cir. 1987) (A continuation-in-part application which required that the claimed sintered ceramic body have an "equiaxed microstructure" (where the parent application did not disclose this property) was nevertheless entitled to the parent application filing date, because that property was deemed inherent.).

## 2. *Overcoming Assertions of Lack of Utility*

Although the degree of utility of a claimed invention is immaterial,<sup>81</sup> a lack of utility can lead to a rejection under either 35 U.S.C. § 101 or 35 U.S.C. § 112, first paragraph.<sup>82</sup> Section 112, first paragraph, requires a sufficient description of how to use the invention, which may be no more than a statement indicating a utility for it in the specification.<sup>83</sup>

If an original application contains no adequate assertion of utility and the utility of the claimed invention is not obvious to one of ordinary skill in the art from reading the disclosure, an amendment adding such matter may be objectionable on "new matter" grounds under 35 U.S.C. § 132.<sup>84</sup> That is, it can be concluded that uses are not inherent in the sense that they can later be specified when nothing is said about them at the time of filing, unless they are obvious to persons of ordinary skill in the art.<sup>85</sup>

81 *In re Ruskin*, 354 F.2d 395, 397, 148 U.S.P.Q. 221, 222 (CCPA 1966); *In re Nelson*, 280 F.2d 172, 178, 126 U.S.P.Q. 242, 248 (CCPA 1960), *overruled in part on other grounds*, *In re Kirk*, 376 F.2d 936, 153 U.S.P.Q. 48 (CCPA 1967). *See also* E.I. duPont de Nemours & Co. v. Berkley Co., 620 F.2d 1247, 1260, n.17, 205 U.S.P.Q. 1, 10, n.17 (8th Cir. 1980).

82 *In re Gardner*, 475 F.2d 1389, 1392, 177 U.S.P.Q. 396, 398 (CCPA 1973); *In re Fouche*, 423 F.2d 1397, 1401, 165 U.S.P.Q. 259, 262 (CCPA 1970). *See also* Raytheon Co. v. Roper Corp., 724 F.2d 951, 956, 220 U.S.P.Q. 592, 596 (Fed. Cir. 1983) ("Because it is for the invention as claimed that enablement must exist, and because the impossible cannot be enabled, a claim containing a limitation impossible to meet may be held invalid under § 112. Moreover, when a claim requires a means for accomplishing an unattainable result, the claimed invention must be considered inoperative as claimed and the claim must be held invalid under either § 101 or § 112 of 35 U.S.C."); *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 762, 221 U.S.P.Q. 473, 480 (Fed. Cir. 1984) ("[T]he fact an invention has only limited utility and is only operable in certain applications is not grounds for finding lack of utility.").

83 *See In re Johnson*, 282 F.2d 370, 372, 127 U.S.P.Q. 216, 219 (CCPA 1960) (Holding the statement of utilities in the parent application was adequate because it informed one skilled in the art of the product's potential uses.); *In re Nelson*, *supra* n. 81 at 185-86, U.S.P.Q. at 253 (CCPA 1960) (Section 112 "requires as a minimum, that the inventor 'indicate' a use for a new composition. . . . [T]he test is what the application as a whole communicates to one skilled in the art. In some cases an applicant may, merely by naming his new instrument or material, have indicated *what* its use is, as, for example, by saying he has invented a 'match,' 'hammer,' 'paint,' 'adhesive,' or 'detergent.'").

84 *See In re Hafner*, 410 F.2d 1403, 1407, 161 U.S.P.Q. 783, 786-87 (CCPA 1969); *Ex parte Ayers*, 108 U.S.P.Q. 444, 445 (Board 1955).

85 Note, however, that *In re Kirchner*, *supra* n. 74 holds that new uses for a claimed product may be freely added in a continuation-in-part application, and the product claims can gain priority to the parent application filing date, provided that the parent application otherwise complies with 35 U.S.C. § 112, first paragraph.

### 3. Regarding Matters of Disclosure

#### A. Supporting a Subsequent Disclosure or Claim

Inherency is often relied on by an applicant or patentee to support an assertion that subject matter in issue is, in fact, disclosed in the original specification. The decisions indicate that the burden of proof which must be carried by the applicant/patentee is generally higher than, for example, that which the PTO must carry to reject an application for anticipation over an inherent disclosure in the prior art.<sup>86</sup>

Inherent disclosure in the original specification can be used to rebut an allegation that later-added subject matter not expressly disclosed in the original specification is "new matter."<sup>87</sup> Many past opinions note that a disclosure may be relied upon whether it is express or inherent.<sup>88</sup>

Inherent disclosure can also be relied upon where corrections are made to the specification because it has mistakes, inaccuracies, or a

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86 To support a rejection over an inherent disclosure, the PTO only needs a reasonable basis to assert that the feature is inherent in the prior art. Section I.1, *supra*.

87 "New matter" is prohibited by both 35 U.S.C. §§ 132 and 251, the former covering amendments to the application and the latter covering reissue applications. The term has the same meaning in both. *See In re Hay*, 534 F.2d 917, 919, 189 U.S.P.Q. 790, 791 (CCPA 1976) (Holding that the matter which applicant sought to introduce through reissue application was "not apparent, whether explicitly, implicitly, or inherently, to those skilled in the pertinent art" in his original disclosures.). *See also* *Schriber-Schroth Co. v. Cleveland Trust Co.*, 305 U.S. 47, 39 U.S.P.Q. 242 (1938) (Statements regarding the properties of an originally disclosed structure were added by amendment, and the new properties required for that structure were fundamentally different from those originally disclosed. Patent held invalid.).

88 *See, e.g.,* *Eli Lilly Co. v. Premo Pharmaceutical Laboratories*, *supra*. n. and accompanying text; *Weller Mfg. Co. v. Wen Products, Inc.*, 231 F.2d 795, 799, 109 U.S.P.Q. 73, 76 (7th Cir. 1956) (Holding that no new matter had been introduced into the reissue: "Obviously, a patentee is not forbidden to add as new material in a reissue patent a description of the inherent function and mode of operation disclosed in the original patent."); *Genentech v. The Wellcome Foundation Ltd.*, 798 F. Supp. 213, 216, 24 U.S.P.Q.2d 1782, 1785 (D. Del. 1992) (Holding that there was evidence to support the jury finding that the 500,000 IU/mg specific activity, which had been added to the application, was an inherent property of the claimed product.); *rev'd*, F.2d , 31 U.S.P.Q.2d 1161 (Fed. Cir. 1994); *Technicon Instruments Corp. v. Coleman Instruments, Inc.*, 255 F. Supp. 630, 635, 150 U.S.P.Q. 227, 232 (N.D. Ill. 1966) (Holding that "introducing an air bubble between successive samples," and "introducing air bubbles into other conduits to separate and segment individual samples and sample constituents" was disclosed by systems in the applications as filed which would "inherently and inevitably include such bubbles," and that amendments to these applications which "explained the theory, function and advantages of these air bubbles" did not constitute new matter.); *aff'd*, 385 F.2d 391, 155 U.S.P.Q. 369 (7th Cir. 1967); *Ex parte Douschke*, *supra*. n. 80 and accompanying text. *Cf. Litton Systems, Inc. v. Whirlpool Corp.*, 728 F.2d 1423, 221 U.S.P.Q. 97 (Fed. Cir. 1984) (Because a subsequent priority application had been designated as a "continuation-in-part" ("CIP"), patentee was estopped from arguing that the claimed microwave oven door inherently possessed certain characteristics, where a description of those characteristics appeared for the first time in the CIP application.).



lack of specificity. Early on, it was held in *Reister v. Kendall* that a disclosure will not be held insufficient as a constructive reduction to practice by reason of a mistake in the specification which is obvious to any person skilled in the art.<sup>89</sup> However, following the *Reister* decision, Applicants were subsequently allowed to further specify the formulae of compounds without regard to the obviousness of the additional description.<sup>90</sup> More recently, the rule of *Reister* was liberally applied by the Board, which allowed correction of a compound's structural formula without discussion of whether the initial mistake was obvious.<sup>91</sup>

Whether the original application has an error is one of the facts in issue when deciding allowability of a reissue application,<sup>92</sup> and inherency has also been relied upon in this setting. It was held that an inventor's failure to appreciate the inherent characteristics of a claimed composition, where that failure lead him to alter the scope of the claims, can be an error of the type justifying the grant of a reissue patent.<sup>93</sup>

89 159 F.2d 732, 72 U.S.P.Q. 481 (CCPA 1947) (The accurate disclosure of a process supported counts to the product of that process, even though the structural formula of the product was incorrect.).

90 See *In re Fisher*, 427 F.2d 833, 836, 166 U.S.P.Q. 18, 21 (CCPA 1970) (The claim at issue was to an adrenocorticotrophic hormone having a particular sequence of 24 amino acids. The claim was held supported by an earlier specification which, although not disclosing this sequence, would "inherently produce the claimed product."); *Spero v. Ringold*, 377 F.2d 652, 658, 153 U.S.P.Q. 726, 730 (CCPA 1967) (The court, on the basis of expert testimony that the product inherently had the claimed configuration, reversed the PTO award of priority, concluding that, "the chemical name of the product claimed was stated in the application as filed, the only deficiency being a specific statement as to the steric configuration of a substituent."); *In re Magerlein*, 346 F.2d 609, 612, 145 U.S.P.Q. 683, 685 (CCPA 1965) (Concluding that a structural formula may be amended to specify that a substituent has an alpha orientation, "if there is sufficient evidence in the record to show the alpha orientation to be an inherent characteristic of the subject matter so identified."); *In re Nathan*, 328 F.2d 1005, 140 U.S.P.Q. 601 (CCPA 1964) (The original application defined a substituent on a steroid derivative as "2-halo." The court allowed an amendment which specified that this "2-halo" substituent was "alpha-oriented," pursuant to affidavit evidence which showed this to be the case.). Cf. *Pentech Int'l, Inc. v. Hayduchok*, 18 U.S.P.Q.2d 1337, 1345 (S.D.N.Y. 1990) ("[I]mmaterial' errors and omissions in the specification, resulting from copying errors or from the ignorance of the patentee's attorney concerning chemical processes, are insufficient to void a patent where 'one skilled in the art would [not] be misled.'").

91 See *Ex parte Marsili*, 214 U.S.P.Q. 904, 906 (Board 1980) (The Board adopted the reasoning that: "No one derives any benefit from an erroneous statement—neither applicants nor the public."). But see *Ex parte Maizel*, 27 U.S.P.Q.2d 1662 (PTO Bd. Pat. App. & Int. 1993) (Determining that corrections of errors in the DNA sequence were new matter, even though Applicant had deposited a plasmid which allegedly had the correct sequence sequence. The Board noted that the claims were not to the plasmid, but to DNA encoding a specific protein or a biological equivalent of that protein.).

92 See 35 U.S.C. § 251: "Whenever any patent is, through error without any deceptive intention, deemed wholly or partly inoperative or invalid . . . the Commissioner shall . . . reissue the patent."

93 See *In re Wadlinger*, 496 F.2d 1200, 181 U.S.P.Q. 826 (CCPA 1974) (Appellants as-

Inherent disclosure in an application has also been relied upon to establish that the "manner and process of making" the invention under 35 U.S.C. § 112, first paragraph,<sup>94</sup> is adequately described.<sup>95</sup> However, inherency is asserted far more often where the issue is whether the "written description" required by 35 U.S.C. § 112, first paragraph, is adequate.

*B. The "Description Requirement" of 35 U.S.C. § 112, First Paragraph*

The courts have established that there is a "written description" requirement which is separate from the remainder of Section 112, first paragraph, and have emphasized that one who has enabled those skilled in the art to make and use the claimed invention has not necessarily provided an adequate description of that invention.<sup>96</sup> A disclosure sufficient to anticipate claims under 35 U.S.C. § 102 does not necessarily provide a written description of those claims.<sup>97</sup>

serted that "error" arose in the original application (prompting them to cancel claims which set forth a method of using their claimed catalyst), due to their failure to "understand all of the inherent characteristics of the claimed compositions." The court reversed the Board's holding that there had been no error, reasoning that as the scope of the cancelled claims was "broader than the scope of the appealed claims which, in more fairly fingerprinting the processes," this resulted in the appealed claims affording a different scope of legal protection, and that this was an error "in form or substance" as required under 35 U.S.C. § 251.).

94 35 U.S.C. § 112. The first paragraph of Section 112 reads, in full, as follows: The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or to which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor for carrying out his invention.

95 In *In re Lange*, 644 F.2d 856, 209 U.S.P.Q. 288 (CCPA 1981) the Board had stated that the required "arc quenching gas having an ultimate dielectric strength of an order of magnitude greater than that of air" was not expressly disclosed in appellant's grandparent application, and therefore that the claims were not entitled to the grandparent filing date. Appellant urged that the grandparent was enabling when considered in light of certain prior art references which indicated the level of skill, and in light of well-known inherent properties of the gases specified in the grandparent. The court held that the above claim limitation did in fact recite the inherent properties of SF<sub>6</sub> gas, which was among those specified in the grandparent, and therefore that the disclosure was enabling.

96 See, e.g., *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1560, 19 U.S.P.Q.2d 1111, 1117 (Fed. Cir. 1991); *In re DiLeone*, 436 F.2d 1404, 168 U.S.P.Q. 592 (CCPA 1971); *In re Ahlbrecht*, 435 F.2d 908, 168 U.S.P.Q. 293 (CCPA 1971). But see *Kennecott Corp. v. Kyocera Int'l, Inc.*, *supra* n. 80 at 1421, U.S.Q.P.2d at 1197 ("The purpose of the description requirement ... is to state what is needed to fulfill the enablement criteria. These requirements may be viewed separately, but they are intertwined.") (criticized in *Vas-Cath, Inc. v. Mahurkar*, F.2d. at 1563, U.S.P.Q.2d at 1117).

97 See, e.g., *Chester v. Miller*, 906 F.2d 1574, 15 U.S.P.Q.2d 1333 (Fed. Cir. 1990) (Parent application's disclosure of chemical species anticipated claims in a continuation-in-part ("CIP") application, but did not provide sufficient written description to support the CIP's claims to the encompassing genus.).

Issues of inherency can arise where it is alleged that claims in an application which asserts priority to an earlier one under 35 U.S.C. §§ 119 or 120,<sup>98</sup> or in a reissue application,<sup>99</sup> lack support; or, where it is alleged that later-added claims lack support in the original specification.<sup>100</sup> In these situations inherency is a question of fact,<sup>101</sup> and the PTO has the initial burden of presenting evidence or reasons why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims.<sup>102</sup>

The courts have emphasized that the function of the description requirement is to ensure that the inventor had possession of, as of the filing date of the application relied upon, the specific subject matter later claimed by him.<sup>103</sup> The description is adequate if "one skilled in the art, familiar with the practice of the art at the time of the filing date, could reasonably have found the 'later' claimed invention in the specification as filed."<sup>104</sup>

98 See, e.g., *Utter v. Hiraga*, 845 F.2d 993, 998, 6 U.S.P.Q.2d 1709, 1713 (Fed. Cir. 1988) (Noting that one who relies on an earlier-filed application under 35 U.S.C. §§ 119 or 120 must show that the earlier application supports the later-added claims under Section 112, first paragraph.).

99 See *In re East*, *infra* n. 106 and accompanying text; *In re DeJarlais*, 233 F.2d 323, 110 U.S.P.Q. 36 (CCPA 1956).

100 See, e.g., *In re Wright*, 866 F.2d 422, 424, 9 U.S.P.Q.2d 1649, 1651 (Fed. Cir. 1989); *In re Smith*, 481 F.2d 910, 914, 178 U.S.P.Q. 620, 624 (CCPA 1973); *In re Smythe*, 480 F.2d 1376, 1384-85, 178 U.S.P.Q. 279, 285-86 (CCPA 1973) (Adequacy of description can arise in several instances, including "in the context of an ex parte rejection under the description requirement of the first paragraph of 112, the right to make a count in an interference . . . the right to rely upon a prior application under 35 U.S.C. 120 which complies with the requirements of the first paragraph of 112 . . .").

101 *In re Grasselli*, 713 F.2d 731, 739, 218 U.S.P.Q. 769, 775 (Fed. Cir. 1983); *In re Fracalossi*, 681 F.2d 792, 794, 215 U.S.P.Q. 569, 571 (CCPA 1982).

102 See *In re Wertheim*, 541 F.2d 257, 263, 191 U.S.P.Q. 90, 97 (CCPA 1976).

103 See, e.g., *Vas-Cath, Inc. v. Mahurkar*, *supra* n. 96 at 1563, U.S.P.Q.2d at 1116; *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 1575, 227 U.S.P.Q. 177, 170 (Fed. Cir. 1985); *In re Herschler*, 591 F.2d 693, 700-01, 200 U.S.P.Q. 711, 717 (CCPA 1979); *In re Edwards*, 568 F.2d 1349, 1351, 196 U.S.P.Q. 465, 467 (CCPA 1978).

104 *Texas Instruments, Inc. v. United States Int'l Trade Comm'n*, 871 F.2d 1054, 1062, 10 U.S.P.Q.2d 1257, 1263 (Fed. Cir. 1989). *Accord Stearn v. Superior Distributing Co.*, 674 F.2d 539, 544, 215 U.S.P.Q. 1089, 1093 (6th Cir. 1981) ("The test for inherency is whether a person skilled in the relevant art, reading a parent application, would have found the CIP disclosures in question to be inherent in the disclosures of the parent . . ."). Cf. *Fiers v. Sugano*, 984 F.2d 1164, 1170, 25 U.S.P.Q.2d 1601, 1606 (Fed. Cir. 1993) ("An adequate written description of a DNA requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it; what is required is a description of the DNA itself."); *Fiddes v. Baird*, 30 U.S.P.Q.2d 1481 (PTO Bd. App. & Int. 1993) (Disclosure of amino acid and theoretical sequence of bovine pituitary FGF, but no other mammalian FGFs, inadequate to support: "A recombinant DNA molecule consisting essentially of a DNA sequence encoding mammalian basic fibroblast growth factor.").

It is undisputable that the specification need not contain a written description corresponding literally to the language of the claims.<sup>105</sup> However, the court in *In re East* held that because there were slight substantive differences between the specification and the claims in the reissue application in regard to a single claim element, the claims were not be supported under the principles of inherency.<sup>106</sup>

Having set out the general principles which apply where inherency is relied on to show a written description in the specification, the following sections illustrate that for different classes of claimed subject matter, different requirements may be applicable.

(i) *Description Required for Inherent Characteristics of a Claimed Product*

The characteristics of a claimed product can be adequately described where there is no indication of them in the original specification and no evidence that the inventor knew of them at the time of filing.<sup>107</sup> This rule is not contrary to the broader principle that the inventor must

<sup>105</sup> See, e.g., *In re Gosteli*, 872 F.2d 1008, 1012, 10 U.S.P.Q.2d 1614, 1618 (Fed. Cir. 1989); *In re Schneider*, 481 F.2d 1350, 1356, 179 U.S.P.Q. 46, 50 (CCPA 1973).

<sup>106</sup> 495 F.2d 1361, 181 U.S.P.Q. 716 (CCPA 1974) (The reissue claims, which were held to contain new matter, required "carrier particles" whereas the original specification disclosed only magnetic carrier particles.).

<sup>107</sup> See *Standard Oil Co. v. Montedison*, 664 F.2d 356, 367, 212 U.S.P.Q. 327, 337 (3d Cir. 1981) (Holding that "if the product was disclosed to be, in fact, crystalline in conformity with the count, the inventor's failure to appreciate the product's crystallinity, as such, does not detract from the adequacy of the disclosure."). See also *Kennecott Corp. v. Kyocera Int'l, Inc.*, *supra* n. 80 at 1421, U.S.P.Q.2d at 1197 (Holding the description in the parent application adequate, where a continuation-in-part application claiming a sintered ceramic body added a new requirement that the body have an "equiaxed microstructure." The court noted that "[i]t was conceded that anyone with a microscope could see the microstructure of the product of the [parent] application." *Id.* at 1423, U.S.P.Q. at 1198.); *In re Voss*, 557 F.2d 812, 819 n. 16, 194 U.S.P.Q. 267, 272 n. 16 (CCPA 1977) (The court noted that X-ray diffraction analysis performed on three samples disclosed in the continuation-in-part ("CIP") application, and common to both the parent and CIP application, showed that these samples had the crystal content required in the claims, and held that the "examples in the parent application, of course, would have inherently possessed the same properties."); *Vogel v. Jones*, 486 F.2d 1068, 179 U.S.P.Q. 425 (CCPA 1973) (Holding that Jones' priority application supported the count, which required a linear polymer, where his disclosed process would inherently produce such a polymer.); *In re Nathan*, *supra* n. 80 (Later-added limitation to the claims that a class of 2-halo steroids had an "alpha-orientation" was not new matter); *Ex parte Davisson*, 133 U.S.P.Q. 400 (Board 1958) (A later-added amendment to the parent application was properly entered, because it set forth a statement of the inherent properties of the substance disclosed in the parent application.); *Ex parte Doushness*, *supra* n. 80 and accompanying text (Later-added feature of solubility of the claimed mixture was an inherent characteristic, and was properly added by amendment to the claims.); *Ex parte Harris*, 43 U.S.P.Q. 125 (Board 1939) (Allowing addition of claims in a divisional application which set forth properties not expressly disclosed in the parent application, but which the claimed claim disclosed in the parent application possessed.).

have "had possession of" the invention later claimed.<sup>108</sup> It is the claimed product which one is required to have possession of. Because a product and its properties are "one and the same thing,"<sup>109</sup> possession of the product necessarily entails possession of all of its properties.

(ii) *Description Required for Methods, Processes, and Products Thereof*

A step in a process claim is not supported where the disclosure relied upon negates the very existence of that step.<sup>110</sup> Further, some decisions indicate that the description is not adequate unless the support for a method step is quite specific.<sup>111</sup> But the courts have refused to set forth broadly applicable rules which can be applied to determine when the description is adequate. For example, the court expressly refused to do so where the issue was whether a later-claimed product was adequately described by a disclosure of the process of producing it.<sup>112</sup> Further, in *In re Wertheim*, involving a process of making freeze-dried instant coffee, the issue was whether a disclosure would support one claim to "at least 35%," or others to "between 35% and 60%," where the disclosure expressly provided that in one step of the process there was "a concentration of 25 to 60% solid matter."<sup>113</sup> The court held that the claims reciting the 35% to 60% range were supported, but that

108 See *Vas-Cath, Inc. v. Mahurkar*; *Ralston Purina Co. v. Far-Mar-Co, Inc.*; *In re Herschler*; *In re Edwards*; *supra* n. 103 and accompanying text.

109 See *In re Papesch*, *supra* n. 61.

110 See *Chemithon Corp. v. Procter & Gamble Co.*, 287 F.Supp. 291, 159 U.S.P.Q. 139 (D. Md. 1968), (Court noted testimony showing that the parent application relied upon taught that in the process of making detergent, a mixture, and not an emulsion was formed. However, formation of an emulsion was required by one step of the process claims at issue.), *aff'd*, 427 F.2d 893, 165 U.S.P.Q. 678 (4th Cir. 1970). See also *Bluestone v. Schmerling*, 265 F.2d 948, 950, 121 U.S.P.Q. 417, 419 (CCPA 1959) (A particular step was required in the process of the count, and the issue was whether this step occurred in following appellee's disclosure. Appellant alleged that although appellee disclosed the reaction, his failure to mention that step rendered the disclosure insufficient. The court held that because appellant's specification failed to teach that the step in question might not occur when performing the reaction, appellee's disclosure was sufficient.).

111 *In re Kaslow*, 707 F.2d 1366, 217 U.S.P.Q. 1089 (Fed. Cir. 1983) (Holding that the specification relied upon, which referred to a "check . . . made on the overall volume of coupon traffic" and to "auditing and redemption procedures," did not support the recitation "to provide an audit" in the claims.); *In re Mott*, 539 F.2d 1291, 190 U.S.P.Q. 536 (CCPA 1976) (A seemingly complete written explanation was inadequate to support a claim relating to a method of operating a hydrocarbon producing well.).

112 See *In re Edwards*, *supra* n. 103 at 1352, U.S.P.Q. at 468 (Although the court held that the description in the parent application was adequate, it emphasized: that its decision "should not be construed as meaning that if an application adequately describes a process which, inherently, will produce a compound, then it necessarily adequately describes the compound: Each case must be decided on its own facts.").

113 *Supra* n. 102 at 263, U.S.P.Q. at 97.

*Dreyfus v. Sternau* illustrates that the standard of proof required to show support for the steps in a process recited in a count is as high as for functional limitations.<sup>123</sup> The issue in *Dreyfus v. Sternau* was whether Sternau's disclosure could support "providing a relatively elastic edge" in the claimed process of forming a cover for a container. The court held that to establish support through inherency, a person following the disclosure must "inevitably" obtain the result set forth in the counts.<sup>124</sup> In subsequent decisions involving processes or methods, as in *Dreyfus*, a similar standard of proof was required.<sup>125</sup> For example, support was held lacking where the disclosure relied upon admittedly set forth an erroneous chemical formula for an emulsifier required in the process of the count,<sup>126</sup> and also where the disclosure relied upon indicated strongly that a particular step did not occur in the required manner.<sup>127</sup>

Applicants have attempted to rely on the disclosure of a process to support a count directed to the product produced by that process. However, support has been held lacking where the processes relied upon did not include all steps and materials necessary to produce the required product each time the process was performed,<sup>128</sup> or because

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"Also, the functional statement at the end of count 4 seems to be inherently satisfied by the structure shown in Woofter Fig. 5 . . .").

123 357 F.2d 411, 149 U.S.P.Q. 63 (CCPA 1966).

124 *Id.* at 415, U.S.P.Q. at 66.

125 See, e.g., *Koof v. DeWitt*, 546 F.2d 403, 192 U.S.P.Q. 268 (CCPA 1976) (Holding that the required penetration of silicon oxide into a silicon body must "inevitably" occur); *Pingree v. Hull*, 518 F.2d 624, 628, 186 U.S.P.Q. 248, 252 (CCPA 1975) (Holding that a required result in a process must be inevitable.); *Tummers v. Kleimack*, 455 F.2d 566, 569, 172 U.S.P.Q. 592, 594 (CCPA 1972) (Holding that "if there is any doubt whatsoever about whether the limitations . . . are inherent . . . it must be resolved against Tummers."); *Reed v. Tornqvist*, 436 F.2d 501, 506, 168 U.S.P.Q. 462, 466 (CCPA 1971) ("[A]ppellants were required to prove that the disclosure of their United States application was so worded that the necessary and only reasonable construction to be given the disclosure by one skilled in the art is one which will lend clear support to each positive limitation in the interference count.").

126 *Sockman v. Switzer*, 379 F.2d 996, 1006, 154 U.S.P.Q. 105, 113 (CCPA 1967).

127 *Stamcarbon N.V. v. Chemical Constr. Corp.*, 544 F.2d 645, 192 U.S.P.Q. 11 (3d Cir. 1976) (The court held that the specification relied upon did not inherently disclose initial separation of off-gas from a process stream before any heating of the process stream, as required in the count.).

128 See *Kropa v. Robie*, 187 F.2d 150, 154, 88 U.S.P.Q. 478, 483 (CCPA 1951) (Holding that an "abrasive article" would not "inevitably or necessarily" be produced by the process in the disclosure at issue.); *Eastman Kodak Co. v. E.I. DuPont de Nemours & Co.*, 298 F. Supp. 718, 730, 161 U.S.P.Q. 150, 159 (E.D. Tenn. 1969) (Holding that the disclosure of a machine and process for making a yarn product was not sufficient to support a count to the yarn product: "[I]t is not enough to show that by manipulating the disclosed process variables it may be possible to make the product of an invention. The product must necessarily or inevitably be created."). See also *Giambalvo v. Detrick*, 168 F.2d 116, 77 U.S.P.Q. 582

products other than that required in the count could also be produced.<sup>129</sup> Nevertheless, the Third Circuit held that the process relied upon need not produce the product required by the count each and every time it is run in order to provide support to establish a constructive reduction to practice.<sup>130</sup> The court reasoned that “many variables may affect the success of any particular experiment,” and that “[i]nvariably’ successful results will be more likely when fewer experiments are conducted.”<sup>131</sup>

One rationale for requiring a higher standard of proof to establish “right to make” than that needed to show adequate description under 35 U.S.C. § 112, first paragraph, is that the former issue arises only once a patent issues and a party seeks to provoke an interference with it. The high standard of proof helps ensure that the provoking party actually was the inventor of the claimed subject matter, and did not merely read the issued patent, which is a public document, and then seek to obtain a patent for the invention disclosed therein, claiming it as his own.

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(CCPA 1948) (Having concluded that a critical step of the process was not inherent in appellant’s application, the court, without further analysis, held that the product, defined in a separate count in product-by-process terms, was also not inherent.).

129 See *Langer v. Kaufman*, 465 F.2d 915, 918–19, 175 U.S.P.Q. 172, 174 (CCPA 1972) (Noting that the disclosed “Run E” process could produce several forms of the required product, only one of which was the correct “gamma” form and concluding that “there is nothing to inevitably tie the Run E product to the gamma form. . .”).

130 *Standard Oil Co. v. Montedison*, 664 F.2d 356, 212 U.S.P.Q. 327 (3d Cir. 1981) (Rejecting the contention that because parties following the disclosure of the party awarded priority by the district court had produced products other than those required by the count, the required product was not inherent as it did not “invariably” result.).

131 *Id.* at 372, U.S.P.Q. at 341. Although the issue in *Standard Oil Co.* was constructive reduction to practice rather than “right to make,” the court’s reasoning seems equally applicable where right to make is at issue. That is, right to make can be established even if the product in the count is not produced each and every time the process relied upon for support is run.

132 See *Knorr v. Pearson*, 671 F.2d 1368, 213 U.S.P.Q. 196 (CCPA 1982) (Holding that, where the counts required an “air passage,” neither conception nor reduction to practice was established by the fact that an air passage was allegedly formed during a fire test, because of Knorr’s failure to appreciate the alleged “air passage” at the time of that test.).

133 See *Heard v. Burton*, 333 F.2d 239, 243, 142 U.S.P.Q. 97, 100 (CCPA 1964) (The Board had found that although Heard may have been first to produce the eta-alumina required by the count, he did not realize until much later that it was necessary to carry out the process of the count. The court agreed, stating that: “Appellant never appreciated what he had, viz., a new form of alumina. . .”).

## 2. Conception and Actual Reduction to Practice

The courts have held that actual production, without appreciation of the item produced,<sup>132</sup> its significance,<sup>133</sup> or its characteristics,<sup>134</sup> cannot establish conception or actual reduction to practice in an interference.<sup>135</sup> Thus, when these are the issues, an assertion that the subject matter of the count was inherently produced may be immaterial unless the existence of that subject matter was also known<sup>136</sup> or it is the only product so produced.<sup>137</sup>

## 3. Proving Common Subject Matter

Inherency can arise in deciding whether “[a] claim [in an application] is the same as, or for the same or substantially the same subject matter as, a claim of an issued patent . . .”<sup>138</sup> The court in *Corbett v. Chisholm* found that the “squeezing” step of Chisholm’s claimed method was not claimed in certain claims of Corbett’s application.<sup>139</sup> The court rejected Corbett’s argument that the squeezing step was inherently claimed, noting that the squeezing step would not necessarily result from all modes of the method as claimed, and adding that: “The inquiry here is not whether such a step is inherently *disclosed*, as it might be in a right-to-make case. Rather, the question is whether the step *necessarily* occurs in the process as *claimed*.”<sup>140</sup>

It appears, therefore, that although the issue in “inherent claiming” is different than in a right to make case, inherency is determined by substantially the same standard. The question in each case is whether

134 See *Langer v. Kaufman*, 465 F.2d 915, 175 U.S.P.Q. 172 (CCPA 1972) (Failure to appreciate that a process which had been performed produced the “gamma” form of the subject product, where that process also produced several other forms of that product.).

135 See also *Fiers v. Sugano*, 784 F.2d 1164, 1169, 25 U.S.P.Q.2d 1601, 1605 (Fed. Cir. 1993); *Amgen, Inc. v. Chugai Pharmaceutical Co.*, 927 F.2d 1200, 1207, 18 U.S.P.Q.2d 1016, 1021 (Fed. Cir. 1991) (“Conception of a generalized approach for screening a DNA library that might be used to identify and clone the EPO gene of then unknown constitution is not conception of a ‘purified and isolated DNA sequence’ encoding human EPO [as required in the claims].”).

136 See *Thomson v. Armitage*, 665 F.2d 1032, 1035, 212, U.S.P.Q. 65, 67 (CCPA 1984) (Holding that Thomson had not shown an actual reduction to practice of the subject copolymers by a preponderance, the court state: “A basic error in the board’s approach stems from its premise that the so-called inherency doctrine is applicable here at all.”).

137 See *Reister v. Kendall*, *supra* n. 89.

138 See 35 U.S.C. § 135(b), which reads, in full, as follows: “A claim which is the same as, or for the same or substantially the same subject matter as, a claim of an issued patent may not be made in any application unless such a claim is made prior to one year from the date on which the patent was granted.”

139 568 F.2d 759, 196 U.S.P.Q. 337 (CCPA 1977).

140 *Id.* at 766, U.S.P.Q. at 343.



the allegedly inherent subject matter necessarily results from practicing the subject method.

#### IV. CLAIM SCOPE AND INFRINGEMENT

In general, implicit limitations, whether "inherent" or otherwise, may not be relied on to establish patentability or to preserve validity.<sup>141</sup> In fact, an applicant who sets forth the inherent properties of a claimed article has probably done nothing to further patentability.<sup>142</sup>

However, where patent validity is not disputed, the courts have seemed more willing to find latent limitations in claims.<sup>143</sup> For example, the issue in *Leesona Corp. v. United States*<sup>144</sup> was the amount of damages to award plaintiff under 28 U.S.C. § 1498(a).<sup>145</sup> Amongst other things plaintiff was given a "reasonable compensation rate" based on a percentage of the market value of the infringing devices which had been sold. In determining the compensation base (to be used in calculating the compensation rate), the court found that the device described in each of plaintiff's claims "inherently" required a casing or receptacle, together with the necessary connecting wires and terminals, in order to provide a complete and operative device.<sup>146</sup> The court held that

141 See *In re Priest*, 582 F.2d 33, 37, 199 U.S.P.Q. 11, 15 (CCPA 1978) (No "applicant shall have limitations . . . read into a claim . . ."); *Maclaren v. B-I-W Inc.*, 535 F.2d 1367, 1374, 190 U.S.P.Q. 513, 518 (2d Cir. 1976); *Robintech, Inc. v. Chemidus Wavin, Ltd.*, 450 F. Supp. 823, 834, 198 U.S.P.Q. 466, 477 (D.D.C. 1978) ("Inherent attributes which are not in the claims may not be relied upon by the patentee to distinguish the claims of the patent in suit over the prior art."), *aff'd in part remanded in part*, 628 F.2d 142, 205 U.S.P.Q. 874 (D.C. App. 1980). Cf. *Amgen, Inc. v. United States Int'l Trade Comm'n*, 902 F.2d 1532, 14 U.S.P.Q.2d 1734 (Fed. Cir. 1990) (The court refused to construe Amgen's product claims as covering a process practised by another party.).

142 See *In re Ruschig*, 343 F.2d 965, 973 n.8, 145 U.S.P.Q. 274, 281 n.4 (CCPA 1965) (Stating as dictum that: "We are aware that attorneys often write compound claims including a statement of some *inherent* property. . . . Where the balance of the claim fully identifies the compound . . . and the property is inherent, we fail to see that such statements add anything to the claim definition of the named compound."). Cf. *In re Pearson*, *supra* n. 70; *In re Dillon*, *supra* n. 65.

143 But see *Clark Equipment Co. v. Keller*, 570 F.2d 778, 797 n. 20, 197 U.S.P.Q. 209, 224 n. 20 (8th Cir. 1978) (Affirming the portion of the district court's opinion which inferred inherent limitations into the claims to distinguish over the prior art.).

144 198 U.S.P.Q. 4 (Ct. Cl. 1978).

145 28 U.S.C. § 1498(a) reads, in pertinent part, as follows:

Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the Court of Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

146 *Supra* n. 143 at 18-19.

the compensation base should include all of the elements of the device which form an operable structure.<sup>147</sup>

Similarly, in *Special Metals Corp. v. Teledyne Industries, Inc.* the court relied on inherency to expand the scope of the claims and find infringement.<sup>148</sup> The claims at issue set forth an alloy composition "consisting of" certain elements. Although boron and carbon were not specified in the claims, and although the transitional expression "consisting of" normally prevents coverage of things having elements other than those specified in the claims, the court held that the claims at issue covered an accused composition which included boron and carbon. The court reasoned that "anyone reading the patent and familiar with the art would expect the [claimed] alloy to contain boron and carbon," and that "anyone skilled in the art knew that boron and carbon were to be necessarily and purposefully added."<sup>149</sup>

In summary, it appears that latent limitations are more likely to be found in a claim where they are not necessary to patentability or validity, and where they can be established with a great degree of certainty.

#### CONCLUSION

The wide variety of situations and statutes under which inherency arises have provided for a diversity of interpretations and proof requirements. Nevertheless, it seems that the dictionary definition of inherency (*i.e.*, existing in something "as a permanent and inseparable element, quality, or attribute") necessarily entails a standard of proof and thus, may be the most useful guide for deciding what is needed to establish it. Inherency will continue to emerge in novel settings, and the application of a more consistent definition and standard of proof will assist in the analysis of such matters.

<sup>147</sup> *Supra*. n. 143 at 19.

<sup>148</sup> 219 U.S.P.Q. 953 (4th Cir. 1983). *Compare* Amgen, Inc. v. United States Int'l Trade Comm'n, *supra* n. 141, where the court refused to find infringement and to expand the claim's scope; *Nationwide Chemical Corp. v. Wright*, 584 F.2d 714, 200 U.S.P.Q. 257 (5th Cir. 1978) (Holding that there was no evidence to support plaintiff's assertion that aerial spray application, as instructed on defendant's label, would "inherently lead" to a treatment within the scope of the claims.).

<sup>149</sup> *Id.* at 956-57.