

Comment

IN RE DILLON EN BANC

Cary W. Brooks [n.1]

The majority opinion in *In re Dillon*, [n.2] decided en banc, raises a variety of concerns. This author's concern is not with the result reached in *Dillon* but with the approach to decision. The approach evidenced by the majority's prima facie obviousness standard, the characterization of claim limitations as "noncritical differences", and the reliance on the "legal presumption" laid down in the *Hass-Henze* cases, are the focus of the author's concern and of this comment. [n.3]

[n.2]. 16 USPQ2d 1897 (Fed.Cir.1990).

[n.3]. A more palatable basis for the decision might have been that upon consideration of all the evidence in the record, including the problem facing the inventor, advantages not suggested in the prior art, all claim limitations, and all rebuttal arguments and evidence, the invention was obvious to make based on a motivation (i.e., expectancy of a water-scavenging properties based on structural similarity) that was so strong that the totality of the weighted evidence was in favor of obviousness. The appellant having failed to provide additional evidence such as unexpected results, secondary considerations or relative significance was unable to shift the totality of the evidence in favor of nonobviousness.

BACKGROUND

Dillon discovered that the inclusion of certain tetra-orthoester compounds in hydrocarbon fuel compositions will reduce the emission of solid particulate (i.e., soot) during combustion of the fuel. On appeal were claims to hydrocarbon fuel compositions containing these tetraorthoesters, [n.4] and to the method [n.5] of using those compositions to reduce particulate emissions during combustion. [n.6] The Board upheld the rejection of the claims as unpatentable under 35 USC § 103 in view of certain primary [n.7] and secondary [n.8] references. In brief, the primary reference disclosed hydrocarbon fuel compositions having tri-orthoesters therein for the purpose of "dewatering". The secondary reference disclosed tri-orthoester and tetra-orthoesters for use as water scavengers in hydraulic (non-hydrocarbon) fluids. [n.9] The Board

concluded, and the Solicitor argued on appeal, that the claimed composition and method "would have been prima facie obvious from the combined teachings of the references." [n.10] *301 On the issue of prima facie obviousness, the original Dillon panel held:

The weight of precedent is to the effect that when the claimed subject matter is a new chemical compound or composition, a prima facie case of obviousness is not deemed made unless both (1) the new compound or composition is structurally similar to the reference compound or composition and (2) there is some suggestion or expectation in the prior art that the new compound or composition will have the same or similar utility as that discovered by the applicant. [n.11]

Having found that the prior art did not suggest that the claimed composition would have the property and use discovered by Dillon, the original Federal Circuit panel held that the prior art did not constitute a prima facie case of obviousness and reversed on that ground.

On rehearing of the case by the Federal Circuit en banc, the majority reverse the original panel's decision.

The "New" Prima Facie Obviousness Standard

The actual majority holding in Dillon may send the wrong message to the PTO. [n.12] The holding, apparently inflexible, is that structural similarity between claimed and prior art subject matter, proved by combining references or otherwise, where the prior art gives reasons or motivation to make the claimed composition, creates a prima facie case of obviousness. [n.13] Naturally it may be inferred from this holding that examiners may discharge their duty by solely looking for structural similarity and some reason or motivation (despite other factors in the record to the contrary) to make the claimed compositions (or devices). Regardless, the applicant may "rebut" this "prima facie case" with comparison data showing that the claimed composition possesses *302 unexpectedly improved properties or properties that the prior art does not in fact have, [n.14] that the prior art is so deficient that there is no motivation to make what might appear as obvious changes; or any other argument or presentation of evidence that is pertinent. [n.15]

Unfortunately, the majority provides no direction to the examiners that they must consider all of the evidence of the subject matter "as a whole" and of the prior art in making the initial determination of obviousness. [n.16] Rules that suggest that a determination of obviousness *303 in the first instance may be made on less than all the evidence in the record encourages piecemeal prosecution. The applicant may "rebut" the initial determination by pointing out that evidence has not been considered, or that evidence considered has not been assigned sufficient probative value in view of all the evidence, or by other pertinent argument or evidence. However, this does not justify a determination based on limited evidence in view of the mandate of 35 USC § 103.

In this era of compacted prosecution, it is essential that the examiner's evaluation is objective, thorough and complete so that issues of patentability are quickly established. [n.17] Rules that fail to encourage an objective evaluation are likely to result in an

increased work load in the PTO and appeals to the Board and the Federal Circuit. The majority's holding on what constitutes a prima facie case of obviousness may leave some examiners with the improper impression that their role is that of an advocate in the patent application examining process. In proceedings between parties, an advocate may meet his obligation of establishing a prima facie case with as little evidence as is necessary to avoid a directed verdict. However, the ex parte nature of patent prosecution and the mandate under 35 USC § 103 require more. [n.18]

The proper role of the examiner is that of an impartial, objective administrative law judge, which is neither pro-patent nor anti-patent. Such an objective judge fully considers all the evidence, assigns appropriate *304 weight to such evidence and reaches a decision by balancing such weighted evidence. The majority's rule on what constitutes a "prima facie case" may discourage such objectivity.

Noncritical Differences

The majority applied the legal presumption laid down in the Hass and Henze cases despite the fact that the composition claim called for "a sufficient amount of a tetra-orthoester to reduce particulate emissions." The use of functional language in composition claims to set forth utility is authorized by 35 USC § 112. [n.19] The majority dismissed the functional language as failing to distinguish over the prior art because the amount of ester was not different from the prior art and not critical to the use of the claimed composition. [n.20] However, none of the references disclosed a tetra-orthoester in a hydrocarbon fuel and none suggested the property or utility of reducing particular emissions discovered by Dillon. Some other cases addressing the issue of critical limitations appear to be at odds with the majority's approach to decision. In those cases where claim limitations were held to provide a "noncritical difference", the property or utility discovered by the applicant was suggested in the art and the difference lay in the claimed ranges or proportions. [n.21] However, when the prior art fails to suggest the result-effect variable, limitations defining the result-effect variable are distinguishing limitations. [n.22] Likewise, limitations are "critical" when they lead to a new result which would not be expected by those of ordinary skill in the art. [n.23] When the claimed elements or limitations are used for a different purpose or have a different function than in the prior art, the invention at most would have been obvious to try despite any overlap in limitations. [n.24] The majority failed to address these apparent inconsistencies. Perhaps future cases will.

*305 The "Legal Presumption" of the Hass-Henze Cases

The majority's use of a "legal presumption" [n.25] in chemical cases is also worthy of comment. More specifically, the majority reasoned:

The cases of Hass and Henze establish the rule that, unless an applicant showed that the prior art compounds lacked the property or advantage asserted for the claimed compound, the presumption of unpatentability was not overcome. [n.26]

The statutory requirements for patentability are novelty, usefulness, and nonobviousness as provided by 35 USC 101, 102 and 103. There is no requirement that an invention must be better than the prior art. Proof that an invention is better or does possess advantages or properties other than the prior art may be persuasive of patentability under the three statutory requirements. Nevertheless, Congress has not seen fit to make such proof a prerequisite to patentability. [n.27] A legal presumption that requires proof that the claimed compound or composition has properties not in fact possessed by structurally similar prior art, is contrary to the literal mandate of 35 USC § 103 and to Congressional intent. 35 USC § 103 requires that all the evidence bearing on the issue of nonobviousness is to be fully considered and appropriately weighed. If a balancing of the weighted evidence favors obviousness, an applicant may adduce evidence that the invention is better or does possess advantages or properties not actually in fact possessed by the prior art (i.e., unexpected results) to shift the totality of the weighted evidence towards nonobviousness. To require that an applicant prove a claimed *306 compound or composition has properties not in fact possessed by the prior art before all the evidence has been fully considered, weighed and balanced, is simply premature and contrary to 35 USC § 103.

The legal presumption set forth in the *Hass* and *Henze* cases developed at the time ante to enactment of the 1952 Patent Act. Before the enactment of the 1952 Patent Act there was no clear distinction between novelty as provided by 35 USC § 102 and nonobviousness as provided by 35 USC § 103. These concepts, if they existed at all in the law, were blurred. Courts often discussed "anticipation," but in reality the court was addressing what is now the issue of nonobviousness under 35 USC 103. Since the enactment of the 1952 Patent Act the concepts of anticipation as set forth in 35 USC Section 102 and nonobviousness as set forth in 35 USC Section 103 have been more clearly defined. The Federal Circuit and its predecessor the CCPA have repeatedly held that anticipation by inherency, and nonobviousness are completely distinct concepts. [n.28]

For an invention to be anticipated by a single reference under 35 USC § 102(b), the invention must be identically described in that reference. No structural or functional differences between the claimed invention and the prior art may be ignored. Further, there can be no anticipation unless all the same elements of the invention are found in the same situation and united in the same way to perform an identical function. [n.29] However, when a reference does not expressly recite or describe the claimed invention, but by following the disclosure of a reference one necessarily produces the claimed subject matter, the reference inherently anticipates under 35 USC § 102. Evidence or arguments of unexpected properties, the problem facing the inventor, advantages not appreciated by the prior art, secondary considerations and the like, which bear on the invention "as a whole" are irrelevant under 35 USC § 102. However, in order for a reference to anticipate by inherency, the following of the reference must necessarily (or inevitably) produce the claimed subject matter.

If following the reference does not necessarily produce the claimed subject matter, it is simply a matter of mere happenstance if any structure made according to the invention

met the limitations of the claim in issue. [n.30] If the invention is not identically described in the reference, or it does not anticipate by the principle of inherency, the rejection must *307 fall under 35 USC § 103. [n.31] The principle of inherency has no place in the determination of nonobviousness under 35 USC Section 103. As pointed out in *In re Spormann*,

[T]he inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is not known. [n.32]

The problem with the legal presumption laid down in the *Hass* and *Henze* cases is that obviousness is predicated on what is unknown. From an academic standpoint it seems logical that structurally similar chemical compounds and compositions would inherently have similar disclosed and undisclosed properties. From an academic standpoint, this concept of inherent properties due to similar chemical structure is logical. However, the presumption and reasoning behind it fail to answer the critical questions: Which properties? Which utilities? Which advantages? Structural similarity, at most, creates a single inference of fact. [n.33] This single inference of fact should be balanced with all other factors in determining obviousness.

The legal presumption that structurally similar compounds and compositions are expected to have similar disclosed and undisclosed properties improperly injects the principle of inherency into the non-obviousness determination. This hybrid inherency/obviousness legal presumption is unique only to "chemical patent law." [n.34] Notwithstanding, there is but one standard for patentability under 35 USC § 103. Like *308 the ghost of "invention," [n.35] this "legal presumption" should have been laid to rest with the enactment of the 1952 Patent Act. Yet nearly four decades later this ghost from the past still stirs. Hopefully another four decades will not pass before there is an evolution in thinking in "chemical patent law."

[n.1]. Patent Attorney for General Motors Corporation, Detroit Michigan. The views expressed herein are offered by the author for the purpose of provoking debate, scholarly inquiry and the advancement of patent law and do not represent the views of the author's employer.

[n.4]. Claim 2 read:

2. A composition comprising: a hydrocarbon fuel; and a sufficient amount of at least one orthoester so as to reduce the particulate emissions from the combustion of hydrocarbon fuel, wherein the orthoester is of the formula:

TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT
DISPLAYABLE
TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT
DISPLAYABLE

wherein, R sub 5 , R sub 6 , R sub 7 , and R sub 8 are the same or different mono-valent organic radical comprising 1 to about 20 carbon atoms.

[n.5]. Claim 24 read:

24. A method of reducing the particulate emissions from the combustion of a hydrocarbon fuel comprising combusting a mixture of the hydrocarbon fuel and a sufficient amount of at least one orthoester so as to reduce the particulate emissions, wherein the orthoester is of the formula:

TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT DISPLAYABLE

TABULAR OR GRAPHIC MATERIAL SET FORTH AT THIS POINT IS NOT DISPLAYABLE

wherein R sub 5 , R sub 6 , R sub 7 , and R sub 8 are the same or different mono-valent organic radical comprising 1 to 20 carbon atoms.

[n.6]. 13 USPQ2d at 1337-1338.

[n.7]. US patents 4,390,417 and 4,395,267.

[n.8]. US patent 3,903,006.

[n.9]. 13 USPQ2d at 1338.

[n.10]. Id. at 1338.

[n.11]. Id. at 1341; citing *In re Grabiak*, 226 USPQ 870, 871 (Fed.Cir.1985):

When chemical compounds have "very close" structural similarities and similar utilities, without more a prima facie case may be made.

[n.12]. The claims in *In re Dillon* were product and process claims involving chemical compositions. However, it is likely that the PTO will consider the *Dillon* holding on what constitutes a prima facie case, i.e. structural similarity and some motivation for combining or modifying references, to apply to all arts including mechanical cases. The over ruling of *In re Wright*, to the extent that it conflicts with the *Dillon* holding on prima facie case, suggests that the issues in *Dillon* have an application broader than just chemical cases.

[n.13]. 16 USPQ2d at 1901. The majority commented that their intent was to restore the law to its' state before the original panel opinion. The majority also commented that exactly what facts constitute a prima facie case had varied from case to case. 16 USPQ2d at 1904. These comments are not reflected in the apparently inflexible prima facie case standard adopted by the court.

[n.14]. See 16 USPQ2d at 1901, wherein the majority held that once the prima facie case of obviousness has been established the burden (and opportunity) than falls on an applicant to rebut that prima facie case. The majority noted that the appellant had the opportunity to rebut the prima facie case but she did not present any showing of data to the effect that her composition had properties not possessed by the prior art compositions or that they possessed them to an unexpectedly greater degree.

However, an applicant always has the opportunity to show unexpected results whether or not a prima facie case of obviousness has been established. The critical question is: When is proof of unexpected results necessary to establish nonobviousness of a novel product or process?

[n.15]. 16 USPQ2d at 1901.

[n.16]. The dissenting opinion provides the following guidance:

The Graham [v. John Deere Co., 383 US 1, 148 USPQ 459 (1966)] factors can not be ignored in determination of the prima facie case under 35 USC 103. As illustrated in precedent, pertinent consideration in determination of whether a prima facie case is made include the closeness of the prior art subject matter to the field of the invention, the motivation or suggestion in the prior art to combine the reference teachings, the problem that the inventor was trying to solve, the nature of the inventor's improvement as compared with the prior art, and a variety of other criteria as may arise in a particular case; all with respect to the invention as a whole, and decided from the viewpoint of a person of ordinary skill in the field of the invention.

Of course not all these aspects will loom large in every case, but when present they must be considered. They are as pertinent to determination of the prima facie case as they are to the determination that is made after rebuttal evidence is adduced by the applicant. Structure alone, without consideration of the applicant's newly discovered properties, is an incomplete focus for consideration of these factors.

The prima facie case, as used in patent examination, means not only that the evidence of the prior art reasonably allows the examiner's conclusion of unpatentability, but also that the prior art compels such a conclusion as a matter of law, if the applicant produces no evidence to rebut it. Black's Law Dictionary, 1071 (5th Ed.1979); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed.Cir.1984). See the discussion in In re Mills, 281 F.2d 218, 222 & n. 2, 126 USPQ 513, 516 & n. 2 (CCPA 1960), of the "presumption

of unpatentability" based on prior art, a judicial usage before the term "prima facie case" appeared in CCPA and board decisions.

Patentability is determined, in the first instance, by examination of the patent application in the PTO. The prior art is searched by the patent examiner, who determines whether a prima facie case of unpatentability is made based on what was known in the prior art. *Piasecki*, supra. The prima facie rejection may be challenged by the applicant on the grounds such as that the rejection is insufficiently supported, or incorrect, or based on illogical reasoning; or, if a prima facie case is made, evidence may be adduced in rebuttal. *In re Heldt*, 433 F.2d 808, 811, 167 USPQ 676, 678 (CCPA 1970). The prima facie case is not "set in concrete," and upon the submission of rebuttal evidence the determination of obviousness vel non is made on the entire record. *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

The initial determination by the patent examiner is critical to further proceedings, for the presence or absence of a prima facie case of obviousness controls the need for the applicant to adduce evidence of nonobviousness. The procedure serves to clearly allocate the burdens of going forward and of persuasion as between the examiner and the applicant. *In re Johnson*, 747 F.2d 1456, 1460, 223 USPQ 1260, 1263 (Fed.Cir.1984). It determines what the applicant must prove, and the kind of evidence the applicant must provide. Thus it determines what is patentable under the statute. (16 USPQ2d at 1907-1908).

[n.17]. See MPEP 707.07, 707.07(f), 706.02 and 1208 on completeness of the examiner's review of the patent application and presentation of an Office Action.

[n.18]. Under 35 USC § 103, obviousness is to be determined with respect to the subject matter as a whole.

[n.19]. *In re Fuetterer*, 138 USPQ 217, 221 (CCPA 1963).

[n.20]. 16 USPQ2d at 1902.

[n.21]. See *In re Hoeschele*, 160 USPQ 809 (CCPA 1969); *In re Cole*, 140 USPQ 230 (CCPA 1964); *In re Mostovych*, 144 USPQ 38 (CCPA 1964); and *In re Aller*, 105 USPQ 233 (CCPA 1955).

[n.22]. *In re Antonie*, 195 USPQ 6, 9 (CCPA 1977), and *In re Yates*, 211 USPQ 1149, 1151 (CCPA 1981).

[n.23]. *In re Reni*, 164 USPQ 245, 247 (CCPA 1970).

[n.24]. In re Fine, 5 USPQ2d 1596, 1600 (Fed.Cir.1988). See generally American Hospital Supply Corp. v. Travenol Laboratories Inc., 223 USPQ 577, 582 (Fed.Cir.1984), In re Donovan, 184 USPQ 414, 420-421 (CCPA 1975), In re Geiger, 2 USPQ2d 1276, 1278 (Fed.Cir.1987), In re Gordon, 221 USPQ 1125, 1127 (Fed.Cir.1984) and In re Imperato, 179 USPQ 730, 732 (CCPA 1973).

[n.25]. Professor Morgan once wrote:

Every writer of sufficient intelligence to appreciate the difficulties of the subject-matter has approached the topic of presumptions with a sense of hopelessness and has left it with a feeling of despair. (Morgan, Presumptions, 12 Wash.L.Rev. 255, at 255 (1937)). The despair is because courts have used the term "presumption" to mean many different things. One commentator has identified eight different senses in which courts have used the term. (Laughlin, In Support of the Thayer Theory of Presumptions, 52 Mich.L.Rev. 195, 196-209 (1953)). Four generally recognized uses of the term "presumption" include (1) conclusive presumptions, (2) presumptions which shift the risk of nonpersuasion, (3) presumptions which shift the production burden and (4) presumptions which create a permissible inference.

The majority's use of the "legal presumption" laid down in the Hass and Henze cases fails to explain what type of legal presumption is being used and the exact legal consequence associated therewith. The majority makes no attempt to square this legal presumption with the mandate of 35 USC § 103.

[n.26]. 16 USPQ2d at 1904.

[n.27]. In re Ratti, 123 USPQ 349, 353 (CCPA 1959).

[n.28]. See W.L. Gore & Assoc. Inc., v. Garlock Inc., 220 USPPQ 303,314 (Fed.Cir.1983), cert. denied, 469 U.S. 851 (1984).

[n.29]. See Atlas Powder Co., v. E.I. DuPont, 224 USPQ 409, 411 (Fed.Cir.1984); Jamesburg Corp. v. Litton Industries Products, 225 USPQ 253, 256 (Fed.Cir.1985); and Canron Inc. v. Plesser American Corporation, 203 USPQ 641 (4th Circuit 1987).

[n.30]. In re Felton 179 USPQ 295, 298 (CCPA 1973).

[n.31]. However, a single property, function, utility, advantage or result not suggested in the prior art will not necessarily render an invention patentable under 35 USC § 103. In

any legal determination there will be factors which favor and factors which disfavor a particular decision. In such cases, a decision is arrived at by balancing such evidence. A decision under 35 USC 103 is no different. However, it is improper to ignore as inherent, any property, function, utility, advantage or result in a determination of obviousness under 35 USC 103.

[n.32]. 150 USPQ 449, 452 (CCPA 1966).

[n.33]. In re Mills, 126 USPQ 513, 517 (CCPA 1960).

[n.34]. The Federal Circuit's predecessor had previously put in proper perspective the problem of determining patentability of chemical inventions:

The problem of "obviousness" under Section 103 in determining the patentability of new and useful chemical compounds, or as it is sometimes called, the problem of "chemical obviousness," is really not a problem of chemistry or pharmacology or in any other related field of science such as biology, biochemistry, pharmacodynamics, ecology, or other yet to be conceived. It is a problem of patent law. (Emphasis in the original, In re Papesch, 137 USPQ 43, 47 (CCPA 1963).

[n.35]. See Hon. Giles S. Rich, "The Vague Concept of "Invention" as Replaced by Section 103 of the 1952 Patent Act"; "Laying the Ghost of the "Invention" Requirement"; and "Escaping the Tyranny of Words--Is an Evolution in Legal-Thinking Impossible?" in Nonobviousness--The Ultimate Condition of Patentability, BNA Books, 1980, 1:401; 1:501; and 3:301 respectively.