

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HELENE G. BAZIN
and FRANK W. BARRESI

Appeal No. 2005-0191
Application No. 09/971,239

ON BRIEF

Before, ELLIS, ADAMS and GRIMES, Administrative Patent Judges.

ELLIS, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal pursuant to 35 U.S.C. § 134 from the examiner's final rejection of claims 1-8, 15-19 and 27-34, all the claims pending in the application. Claims 9-14, 20-26, and 35-73 have been canceled.

As a preliminary matter, we note the appellants' statement on page 2 of the main brief that the claims do not stand or fall together. The appellants state that there are

three groups of claims: Group I consisting of claims 1-8, Group II consisting of claims 15 and 19, and Group III consisting of claims 27-34. Accordingly, for purposes of this appeal, we have considered the issues as they apply to claims 1, 15 and 27, which are representative of the subject matter on appeal. Claims 1, 15 and 27 read as follows:

1. A method for absorbing oil from the skin, the method comprising applying a fluid-absorbing effective amount of a fluid absorber, said fluid absorber comprising a starch product said starch product having been prepared by a process comprising the steps of:

providing a granular starch;

determining an estimated oil absorption maximum hydrolysis level for said starch;

partially enzymatically hydrolyzing said starch under hydrolysis conditions suitable to provide a porous starch granule; and

terminating said enzymatic hydrolysis when said starch has been hydrolyzed to an optimum oil absorption hydrolysis level ranging from about 30% to about 42%.

15. A method for removing fluid from the skin, the method comprising applying a fluid-absorbing effective amount of fluid absorber, said fluid absorber comprising a starch product, said starch product having been prepared by a process comprising the steps of:

providing a starch in granular form;

selecting an enzyme for hydrolysis of the starch;

determining an estimated oil absorption maximum hydrolysis level for said enzyme and for said starch;

enzymatically hydrolyzing said starch under reaction conditions suitable to result in a porous granular starch; and

terminating said enzymatic hydrolysis when said hydrolysis has proceeded to within a predetermined range surrounding said estimated oil absorption

maximum hydrolysis level.

27. A method for removing fluid from the skin, the method comprising applying a fluid absorbing effective amount of fluid absorber, said fluid absorber comprising a starch product, said starch product having been prepared by a process comprising the step [sic, steps] of:

providing a starch in granular form;

selecting an enzyme for hydrolysis of the starch;

determining an estimated fluid absorption optimum hydrolysis level;

enzymatically hydrolyzing said starch under reaction conditions suitable to result in a porous granular starch; and

terminating said enzymatic hydrolysis when said hydrolysis has proceeded to within a predetermined range surrounding said estimated fluid absorption optimum hydrolysis level.

The examiner relies on the following references:

Kobayashi et al. (Kobayashi)	5,445,950	Aug. 29, 1995
Whistler	4,985,082	Jan. 15, 1991
Kochan et al. (Kochan)	EP 182 296 A2	May 28, 1986

The claims stand rejected as follows:

I. Claims 1-8, 15-19 and 27-34 stand rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103 as unpatentable over Kochan.

II. Claims 1-8, 15-19 and 27-34 stand rejected under 35 U.S.C. § 103 as unpatentable over Kochan in view of Whistler and Kobayashi.

We affirm the rejections with respect to claims 15-19 and 27-34, but reverse with respect to claims 1-8. Our reasons follow.

Background

As indicated by the claims above, the appellants' invention is directed to a method which comprises applying a granular starch product which has been hydrolyzed (i) to an "optimum oil absorption hydrolysis level" ranging from about 30% to about 42%; (ii) within a range surrounding an estimated oil absorption maximum hydrolysis level; and (iii) within a range surrounding an estimated fluid absorption optimum hydrolysis level.

According to the specification, the present invention is based on the discovery that the oil absorbency maximum hydrolysis level of a porous starch product is lower than that of water. Specification, p. 4, lines 21-23. The level is said to plateau after hydrolysis has proceeded from about 30% to about 60%. Id., lines 26-28. The specification discloses that:

. . . The fluid absorption optimum hydrolysis level may in some embodiments be considered to be that in which the oil absorption is maximized. In other embodiments of the invention, the fluid absorption optimum hydrolysis level may be based on the cumulative absorbence [sic, absorbance] of the porous starch granule for various fluids, such as fluids that approximate the fluids found on the skin. One such fluid is a fluid that is composed of a mixture of water, 1% saline (NaCl), and oil. Specification, p. 5, lines 17-23.

The Kochan reference discloses a body dusting powder which comprises a granular starch product which has been hydrolyzed from about 45% to about 90%. Kochan, p. 8, lines 1-4. Kochan further discloses that when this portion of the starch product has been hydrolyzed, it is capable of absorbing from about 1.2 grams to about

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2.5 grams of water per gram of starch. Id., lines 4-6. Kochan still further discloses that when more than 90% of the starch product is hydrolyzed, “it tends to have a gritty feel and be unsuitable as a body dusting starch.” Id., lines 6-9.

The Kobayashi and Whistler patents disclose methods of hydrolyzing granular starch products using the enzymes glucoamylase, α -amylase, and β -amylase.

Kobayashi, col. 2, lines 14-23; Whistler, col. 1, lines 63-67.

Discussion

As discussed above, the claims stand for fall with representative claims 1, 15 and 27. Having limited our consideration of the issues accordingly, we find that the teachings of the Kochan reference alone are dispositive. Thus, because Rejection I and II are based on Kochan, our deliberations set forth below are applicable to both rejections.

Group I

With respect to the issue of anticipation, the examiner argues that Kochan anticipates the invention described in representative claim 1 because the reference describes a composition comprising a granular starch product which is partially hydrolyzed with α -amylase to a hydrolysis level ranging from “about 45% to about 90%.” Answer, p. 4. The examiner points to the phrase “oil absorption maximum hydrolysis level” recited in the claim and argues that the specification discloses that this level “can range from about 30% to 50%, and may be about 40% in certain embodiments.” Id., p. 5. Thus, the examiner contends that “because Kochan’s granular starches are

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hydrolyzed from about 45% to 90%, Kochan's starches are hydrolyzed to the claimed 'oil absorption maximum hydrolysis level' as recited in"

claim 1. Id.

The examiner argues that, alternatively, representative claim 1 would have been obvious to one of ordinary skill in the art in view of the teachings of Kochan. Answer, p. 6. The examiner contends that the starch product disclosed in the applied prior art is "only nominally different" from those recited in the claim and, therefore, such disclosure [of Kochan's product] "clearly provides a reasonable expectation that the claimed products would function as body dusting powders according to the disclosure of Kochan." Id.

We find these arguments unpersuasive.

Turning first to the issue of anticipation, we point out that it is well established that anticipation requires that each and every limitation set forth in a claim be present, either expressly or inherently, in a single prior art reference. In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999); Celeritas Techs. Ltd v. Rockwell Int'l Corp., 150 F.3d 1354, 1360, 47 USPQ2d 1516, 1522 (Fed. Cir. 1998); Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1458, 221 USPQ 481, 485 (Fed. Cir. 1984).

We appreciate the examiner's concern with respect to the teachings of the specification that the optimum oil absorption hydrolysis level may encompass granular starch wherein hydrolysis has been terminated in a range from about 30% to about 60%

(specification, p. 4) to mean that the term “about 42%” recited in representative claim 1 includes granular starch which has been hydrolyzed to “about 45%” as disclosed by Kochan. However, in this case, we find this concern to be misguided.

We point out that claim 1, as originally filed, was directed to granular starch which “has been hydrolyzed to a hydrolysis level ranging from about 30% to 44%.” In response to the examiner’s rejection of the claim under 35 U.S.C. § 102(b) or, in the alternative § 103, in view of Kochan, (i.e., the same rejection as is now before us), the appellants amended the claim to recite a hydrolysis level ranging from about 30% to about 42%.¹

We find that a narrowing of representative claim 1 in this manner constitutes a surrender of that subject matter which overlaps with Kochan by the appellants. Cf.,

¹ In response to the final rejection, the appellants amended claim 1 to include (i) an additional step of “determining an estimated oil absorption maximum hydrolysis level for said starch”; and (ii) the phrase an “optimum oil absorption” hydrolysis level ranging from about 30% to about 42%. We do not find that these additions provide a further limitation to the claims. That is, if we assume, arguendo, that Kochan teaches a method of applying a granular starch product which had been hydrolyzed to a hydrolysis level ranging from about 42% to about 90%, said method would anticipate the claimed invention because the starch products would have been the identical (due to the overlapping hydrolysis level of about 42%) to the claimed starch products regardless of whether Kochan denominated its starch product as having an optimum oil absorption hydrolysis level, a water absorption hydrolysis level, or some other type of hydrolysis level. Thus, we find that the examiner has correctly characterized the starch product as being in a product-by-process format. Answer, pp. 6-7. We point out that it is well established that with respect to product-by-process claims, patentability depends on the product and not on the process by which it is made. In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985)(“[i]f the product in a product-by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process”).

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Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 734-35, 62 USPQ2d 1705, 1711 (2002). That is, since the appellants narrowed the claim to avoid the prior art by eliminating the limitation “to 44%,” we find that in the very least, the subject matter of representative claim 1 no longer includes granular starch products which have been hydrolyzed to 44%. Thus, the subject matter of claim 1 does not overlap with the granular starch products taught by Kochan which have been hydrolyzed to about 45%. Accordingly, we find that the teachings of Kochan do not anticipate the invention described in representative claim 1.

As to the issue of obviousness, it is well established that the examiner has the initial burden under 35 U.S.C. § 103 to establish a prima facie case. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). To that end, it is the examiner’s responsibility to show that some objective teaching or suggestion in the applied prior art, or knowledge generally available in the art, would have led one of ordinary skill in the art to combine the references to arrive at the claimed invention. Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 745 F.3d 1568, 1573, 37 USPQ2d 1626, 1629 (Fed. Cir. 1996).

Here, we find that the examiner has not provided any reason based on the applied prior art as to why the invention set forth in representative claim 1 would have been obvious to one of ordinary skill in the art. Rather, the examiner appears to have reversed the roles of the prior art and the subject matter of the claims in the rejection. That is, the examiner states that the products taught by Kochan provide an expectation

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that the claimed products would function as dusting powders according to the disclosure of Kochan. To establish a prima facie case of obviousness, the examiner must demonstrate that the teachings of Kochan would have suggested the claimed method and that there was a reasonable expectation that the claimed granular starch product would have the claimed characteristics. In re Vaeck, 947 F.2d 488, 495, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991); In re Eli Lilly & Co., 902 F.2d 943, 947, 14 USPQ2d 1741, 1745 (Fed. Cir. 1990); In re O'Farrell, 853 F.2d 894, 903, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). Since the examiner has not done so, we cannot affirm the rejection.

Accordingly, we reverse Rejections I and II with respect to claims 1-8.

Group II

As indicated above, with respect to Group II, we consider the issues as they apply to representative claim 15.

Here, we find that Kochan describes a method of applying a granular starch product which anticipates the subject matter recited in claim 15.

As discussed above (see, footnote 1), we agree with the examiner that the starch product recited in the claims is in a product-by-process format. In re Thorpe, 777 F.2d at 697, 227 USPQ at 966. When claims are presented in this manner, it is the patentability of the product which must be established. Thus, if there are no substantial differences between the claimed granular starch products and those described in the prior art, the prior art products anticipate, or render obvious, the inventions described in claims. Id. at 697, 227 USPQ at 966.

With the foregoing in mind, we find that representative claim 15 is directed to a method which comprises applying a granular starch product which has been hydrolyzed to a “range surrounding” an “estimated oil absorption maximum hydrolysis level”. To that end, we point out that the specification states that oil absorption will “plateau after hydrolysis has proceeded to a certain extent, typically from about 30% to about 60%” (page 4, lines 26-28). It reasonably follows that granular starch which has been hydrolyzed to a “range surrounding” an “estimated oil absorption maximum hydrolysis level,” includes granular starch which has been hydrolyzed from less than about 30% to more than about 60%, and everything in between. Thus, we find no difference between the claimed method and the method disclosed by Kochan.² That is, we agree with the examiner that Kochan’s teachings of applying a granular starch product which has been hydrolyzed from about 45% to about 90%, anticipates the invention described in representative claim 15 which encompasses the use of a granular starch product which has been hydrolyzed from levels of about 45% to more than 60%. See e.g., In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990)(“claiming a

² Since we find that the granular starch product described in the claims is the same, or substantially the same, as the prior art products, it is reasonable to shift the burden to the appellants to establish that the granular starch products made using the claimed method differ from the starch products described in the applied prior art. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433-334 (CCPA 1977) (“Where, as here, the claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes, the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product”).

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new benefit for an old process cannot render the process again patentable”); Verdegaal Bros., Inc. v. Union Oil Co. of Calif., 814 F.2d 628, 632-33, 2 USPQ2d 1051, 1054 (Fed Cir. 1987).

The appellants argue that Kochan does not teach or suggest the claimed step of “determining an estimated oil absorption maximum hydrolysis level for said enzyme and for said starch.” Brief, p. 5. We find this argument unconvincing for the reasons set forth above. That is, the granular starch recited in claim 15 is in a product-by-process format. Thus, the starch product, not the process by which it is made, may be rejected under 35 U.S.C. § 102 and/or § 103. In re Thorpe, 777 F.2d at 697, 227 USPQ at 966. Since the granular starch product in recited representative claim 15 is the same as the granular starch product described by Kochan, we find that the method of applying said product as described in the claim is unpatentable even though the prior art product was made by a different process.

Accordingly, we affirm Rejections I and II with respect to Group II, claims 15-19.

Group III

With respect to Group III, our consideration of the issues is limited to representative claim 27.

We find no error with the examiner’s reasoning that Kochan’s method of applying a granular starch product which has been hydrolyzed to a level of about 45% to about 90% anticipates the method recited in representative claim 27 which is directed to a method of applying a granular starch product which has been hydrolyzed to a “range surrounding” an “estimated fluid absorption optimum hydrolysis level.” As discussed

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above, the starch products recited in the appellants' claims are in a product-by-process format. To that end, we direct attention to the teachings of the specification (p. 10, lines 27-31) that the "estimated fluid absorption optimum hydrolysis level" may range in some cases from about 30% to about 50%. Thus, it reasonably follows that granular starch which has been hydrolyzed to a "range surrounding" an "estimated fluid absorption optimum hydrolysis level," includes granular starch which has been hydrolyzed from less than about 30% to more than about 50%. On this record, we find no difference between the starch granules and level of hydrolysis described by Kochan and the starch granules and level of hydrolysis which are described in representative claim 27.

Accordingly, we find that Kochan's teachings of applying a granular starch which has been hydrolyzed from about 45% to about 95%, anticipates the invention described in representative claim 27 which includes a method of applying starch granules which have been hydrolyzed from levels less than about 30% to more than about 50%. In re Thorpe, 777 F.2d at 697, 227 USPQ at 966; see also, In re Woodruff, 919 F.2d at 1578, 16 USPQ2d at 1936; Verdegaal Bros., Inc. v. Union Oil Co. of Calif., 814 F.2d at 632-33, 2 USPQ2d at 1054.

The appellants argue that representative claim 27 includes the step of "determining an estimated fluid absorption optimum hydrolysis level," which is not taught by Kochan. According to the appellants, the term "fluid" in claim 27 is defined in the specification as a combination of water, 1% saline and oil. Brief, p. 5. Thus, the appellants contend that the teachings of Kochan do not anticipate or render obvious the claimed invention. Id. We find these arguments unpersuasive.

First, we point out that with respect to the step of “determining an estimated fluid absorption optimum hydrolysis level” we have addressed this argument, above in footnote 1. That is, because the starch product recited in the claims is in a product-by-process format, and the specification states the fluid absorption optimum hydrolysis level may range from about 30% to about 50%, there is no difference between the claimed granular starch product and the granular starch product taught by Kochan.

Second, with respect to the meaning of the term “fluid,” we point out that the specification states that the optimum fluid absorption level may be defined as the maximum oil absorption which “may be taken as the minimum hydrolysis level at which oil absorption is maximized (reaches an apparent plateau)” [emphasis added]. Specification, p. 10. Thus, the specification includes oil as an example of a fluid. To that end, it appears that there is more of an overlap between the method described in representative claim 27 and method taught by Kochan than that which was discussed above. That is, since the specification states that oil absorption plateaus at a level of hydrolysis in the range from about 30% to about 60%, our reasoning with respect to representative claim 15 is also applicable to claim 27.

In addition, we do not find that the specification limits the definition of “fluids” to a mixture of water, 1% saline and oil. The specification states that said mixture is an example of a fluid which may be present on the skin. See, specification, p. 5, lines 17-23. That is, the specification discloses that various fluids can be absorbed by the granular starch, “such as fluids that approximate the fluids found on the skin. One such

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fluid is a fluid that is composed of a mixture of water 1% saline (NaCl), and oil”

[emphasis added].

Accordingly, we affirm Rejection I and II with respect to Group III, claims 27-34.

In view of the foregoing, the decision of the examiner is affirmed-in-part.

AFFIRMED-IN-PART

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