

The opinion in support of the decision being entered today
is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GONZALO SERAFICA,
RICHARD MORMINO, and RUSSELL A. HOON

Appeal 2007-4217
Application 10/345,394
Technology Center 1600

Decided: October 11, 2007

Before DEMETRA J. MILLS, ERIC GRIMES, and LORA M. GREEN,
Administrative Patent Judges.

GREEN, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-27. We have jurisdiction under 35 U.S.C. § 6(b). Claim 1 is representative of the claims on appeal, and reads as follows:

1. A microbial-derived cellulose amorphous gel wound dressing comprising a cellulose content by weight selected from the group consisting of about 1.0% to about 99%, about 2.5% to 65%, about 3.0% to 50%, 3.5% to about 12%, 4% and 7%, wherein the dressing is flowable.

The Examiner relies on the following references:

Yamanaka	US 5,558,861	Sep. 24, 1996
Rhodes	US 5,662,924	Sep. 2, 1997
Hobson	US 6,399,092 B1	Jun. 4, 2002

We affirm.

DISCUSSION

Claims 1, 3, 5-7, 11, and 14-16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yamanaka. As Appellants have not argued the claims separately, claims 3, 5-7, 11, and 14-16 stand or fall with claim 1. 37 C.F.R. § 41.37(c)(1)(vii) (2006).

According to the Examiner, the claims are directed to a gel/wound dressing comprising 4-7% of cellulose (Answer 4). Claim 15 specifies that the cellulose is obtained from *Acetobacter xylinum* (*id.*). Yamanaka is cited for teaching “a cellulose, wound dressing composition comprised of: 5% microbial cellulose, since 95% is water (see col. 3, line 34), obtained from *Acetobacter xylinum* (col. 2, line 55-67).” (*Id.*)

The burden is on the Examiner to set forth a *prima facie* case of unpatentability. *See In re Glaug*, 283 F.3d 1335, 1338, 62 USPQ2d 1151, 1152 (Fed. Cir. 2002). In order for a prior art reference to serve as an anticipatory reference, it must disclose every limitation of the claimed invention, either explicitly or inherently. *See In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). “[W]hen the PTO

shows sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.” *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). We find that the Examiner has set forth a *prima facie* case of anticipation that has not been adequately rebutted by Appellants, and the rejection is affirmed.

Appellants argue that Yamanaka, in both the working examples and the description, “relate[s] to a *non-flowable* cellulose ‘gel film’ produced directly by cellulose-producing bacteria.” (Br. 4.) According to Appellants, the “proof that Yamanaka’s material is non-flowable is found in the working examples, which state, for example, that the ‘cationized gel film was cut into a disc’ (see example 1). A flowable material manifestly could not be ‘cut into a disc’. A material which flows cannot be cut or formed into any stable shape.” (*Id.*)

As noted by the Examiner, however, Appellants’ gel composition comprises 4-7% of a microbial cellulose, and Yamanaka discloses a gel composition comprising 5% of a microbial cellulose (Answer 6). Both Appellants and Yamanaka use the same microbe, *Acetobacter xylinum*, to produce the cellulose (*id.*). In addition, Yamanaka defines “a gel of microbially produced cellulose” as “a solid colloidal solution of microbially-produced cellulose in a physiologically-acceptable carrier such as deionized water, saline or glycerol.” (Yamanaka, col. 2, ll. 56-61). Finally, Yanamaka teaches that the cellulose may be used directly after washing, or after the gel is disintegrated by application of a mechanical shearing force (Yanamaka, col. 3, ll. 59-65). Thus, as the compositions appear to be the same, they would have the same properties of being “amorphous” and “flowable.” (*Id.*)

Moreover, as also noted by the Examiner, the Specification teaches that Appellants' microbial-derived cellulose amorphous gel wound dressing may be cut prior to application in order to conform to the wound to be treated (Answer 6-7 (citing the Specification, ¶ 0035)). Appellants respond that the paragraph cited by the Examiner relates to the preparation of the cellulose starting material, and not preparation of the gel (Reply Br. 2).

The portion of the Specification relied upon by the Examiner teaches:

Suitable bioreactors are selected which minimize evaporation and provide adequate oxygen-limiting conditions. Oxygen-limiting conditions may be varied depending upon the desired water content and thickness of the cellulose film.

Generally, under oxygen-limited conditions, oxygen is present in an amount of 5%- 21% of the total gas present at the air liquid interface. The bioreactor is composed of plastic box fitted with an airtight cover or a limited gas-permeable cover. Dimensions of the bioreactor can vary in configuration (cube or cylinder) depending on the shape and size of the cellulose film being produced. *For example, a six inch diameter cylinder will produce a six inch diameter dressing, which can be used as is or cut to conform to the wound to be treated, prior to application.* By limiting the amount of oxygen in the fermentation medium, it is hypothesized that the *Acetobacter* utilizes the carbon available in the medium to produce more cellulose instead of using it for reproduction, thereby increasing the total yield of cellulose.

(Specification ¶ 0035 (emphasis added).) We also note that at the end of the processing and depyrogenation procedures of Example 1, the Specification states that the cleaning process provided a nonpyrogenic cellulose pad (Specification 8), which again implies some sort of shape and something that may be cut. While Example 2 (Specification 9) is specifically entitled "Production of a Microbial Cellulose Amorphous Gel," requiring processing

by a blender, both Example 4 (Specification 10) and Example 5 (Specification 11) refer to the amorphous gel produced by Example 1.

Thus, the Specification teaches that the amorphous gel dressing produced in Example 1 can be used as is, that is in a six inch diameter dressing, or may be cut to conform to the wound. The Specification also teaches that after cleaning, a nonpyrogenic cellulose pad is produced. Thus, the Specification teaches that the dressing may be cut. Therefore, the fact that the dressing of Yamanaka may be cut does not differentiate it from the dressing of claim 1, as the Specification teaches that the dressing of the invention may be cut to conform to the wound.

The only Example in the Specification that deals with the modification of flow properties is the example entitled “Modification of flow properties.” (Specification 9.) In that Example, propylene glycol is added to the amorphous gel of Example 1. However, dependent claim 3 adds an ingredient for flow modification, and dependent claim 6 specifies that it is a polyol. Thus, based on the doctrine of claim differentiation, *see Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187, 48 USPQ2d 1001, 1005 (Fed. Cir. 1998) (“There is presumed to be a difference in meaning and scope when different words and phrases are used on separate claims. To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states that the difference between claims is significant.”), independent claim 1 would not require the addition of an ingredient for flow modification, such as propylene glycol. Taking out the flow modifier of propylene glycol from Example 2 leads one of ordinary skill in the art once again back to the amorphous gel of Example 1. The process for making an amorphous gel of

Example 1 does not require a flow modifier or milling step and yet the gel product is characterized as an amorphous gel. (*See, e.g.*, Specification 6, 10, 11.) Moreover, we note that the claim does not require any degree of “flowability.” Thus, finding no other difference between the product of Example 1 of the Specification and the product of Yamanaka, we conclude that the dressing of Yanamaka would meet the “flowability” requirement of claim 1.¹

Appellants argue further that “the doctrine of inherency is not appropriate here because the method of making the ‘gel films’ of . . . Yamanaka . . . is not the same as making the flowable gels of the present invention.” (Reply Br. 4-5.)

However, the Examiner notes that Yanamaka teaches that the composition may be used after the gel is disintegrated with a rotary disintegrator, thus it would appear that “a 95% water-containing, gelatin-like

¹ We note that Appellants do not define “amorphous” or “flowable” in the Specification. “Amorphous” may be defined as “with no shape, unorganized; having no determinate form,” with an example of use being : “The amorphous gel seeped through the cracks.” <http://www.english-test.net/gmat/vocabulary/words/093/gmat-definitions.php#amorphous>, (accessed October 9, 2007). *See also* amorphous. Dictionary.com. *The American Heritage® Dictionary of the English Language, Fourth Edition*. Houghton Mifflin Company, 2004. <http://dictionary.reference.com/browse/amorphous> (accessed: October 09, 2007). Thus, as would be understood by the ordinary artisan, an amorphous gel would have some degree of flowability. Note that our mandate is to give claims their broadest reasonable construction. *In re American Academy of Science Tech Center*, 367 F.3d 1359, 1364, 70 U.S.P.Q.2d 1827, 1830 (Fed. Cir. 2004). “An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.” *In re Zletz*, 893 F.2d 319, 322 (Fed. Cir. 1989).

composition processed via a mixing-blender would be ‘flowable.’” (Answer 7). Appellants respond that Yamanaka “teaches only mechanical shearing of the non-flowable gel. It does not contemplate the addition of water or other viscosity modifiers as to render the gel flowable as claimed.” (Reply Br. 4.)

However, the instant application’s Example 2 shows that addition of water (or anything else) is not required to make a microbial cellulose gel flowable. The example states that an amorphous gel was made by (1) combining 500 g of microbial cellulose with 2500 ml of water and processing in a blender, and (2) draining and pressing the mixture “until the weight of the gel again reached 500 g” (Specification ¶0042). Thus, the amorphous gel had the same weight – and therefore the same water content – as the original microbial cellulose. The evidence of record does not support Appellants’ assertion that a microbial cellulose is not flowable unless a viscosity modifier is added.

Thus, Appellants’ gel composition comprises 4-7% of a microbial cellulose, and Yamanaka discloses a gel composition comprising 5% of a microbial cellulose, and both Appellants and Yamanaka use the same microbe, *Acetobacter xylinum*, to produce the cellulose. Thus, the dressings appear to be the same, and the burden is properly shifted to Appellants to demonstrate that they are different. Moreover, arguments of counsel cannot take the place of evidence in the record. *See In re Scarbrough*, 500 F.2d 560, 566, 182 USPQ 298, 302 (CCPA 1974).

Claims 1-27 stand rejected under 35 U.S.C. § 103(a) as being obvious over the combination of Yamanaka, Rhodes, and Hobson.

As Appellants do not argue the claims separately, claims 2-27 stand or fall with claim 1. As Appellants merely argue that the teachings of Rhodes

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and Hobson do not remedy the deficiencies of Yamanaka (Br. 5-6), the rejection is affirmed for the reasons as set forth above. In addition, the rejection is also affirmed on the basis that as we have already found that claim 1 is anticipated by Yamanaka, and anticipation is the epitome of obviousness. *In re McDaniel*, 293 F.3d 1379, 1385, 63 USPQ2d 1462, 1466 (Fed. Cir. 2002).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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