

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 25

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte HOWARD CERI, MERLE E. OLSON,
DONALD R. READ, and ANDRE G. BURET

Appeal No. 2001-1173
Application No. 08/614,593

ON BRIEF

Before WILLIAM F. SMITH, ADAMS, and GREEN, Administrative Patent Judges.

ADAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-14, and 20-32, which are all the claims pending in the application.

Claim 20 is illustrative of the subject matter on appeal and is reproduced below:

20. A method of growing and analyzing a biofilm, the method comprising the steps of:

incubating biofilm forming organisms on plural biofilm adherent sites arranged in plural rows, with plural biofilm adherent sites in each row, while providing a flow of a liquid growth medium across the plural biofilm adherent sites, in which the plural biofilm adherent sites share the liquid growth medium, to thereby create a uniform biofilm at each of the plural biofilm adherent sites; and

(Claims must “reasonably apprise those skilled in the art” as to their scope and be “as precise as the subject matter permits.”).

At page 8 of the Answer, the examiner sets forth three reasons for finding the claims indefinite. We will consider each in turn.

First, the examiner finds (Answer, page 8), “[c]laims 1 and 20 are directed to growing and analyzing a biofilm, but no such steps are included in the claims.” According to the examiner (Answer, page 10), “the preambles of claims 1 and 20 are inconsistent with the rest of the claims.” In response, appellants argue (Brief, page 13), “[i]n both claims [1 and 20], there are the steps of ‘incubating ... to ... create ... a ... biofilm’, which is the growing step, and ‘assaying the number of organisms ...’, which is the analyzing step. This is clear and there is nothing indefinite about it.” It appears that instead of using the language appellants chose to define their claimed invention, the examiner would prefer appellant to use the exact words appellants used in the preamble of their claim. The examiner, however, provides no precedent to support his preferred word usage. As set forth supra, the claims must reasonably apprise those skilled in the art as to their scope and be as precise as the subject matter permits. On this record, it is our opinion, that claims 1 and 20 meet this requirement.

Second, the examiner finds (Answer, page 8), the term “host material” as it appears in claim 14 is unclear. According to the examiner (Answer, page 10), “one would know what a host may be but not what “host material” may be.” We note with interest that claim 32 also contains the term “host material” in the same context as it is used in claim 14, yet claim 32 is not included in the examiner’s discussion of the rejection, and the examiner offers no explanation for this

inconsistency.¹ Nevertheless, as set forth in In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971), claim language must be analyzed “not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary skill in the pertinent art.” In this regard, we note appellants’ specification discloses (page 19):

The inventors have found that in some instances a biofilm will not form without the inclusion of host components in the biofilm. Host components may therefore be added to the growth medium in the vessel during incubation of the bacteria to form the biofilm. Host components that may be added include serum protein and cells from a host organism.

Therefore, it is our opinion that a person of ordinary skill in the art would understand the term “host material” to be host organism derived components, such as serum protein and cells, which are added to the growth medium in the vessel during incubation of the bacteria to form a biofilm.

Finally, the examiner is unclear as to what the “analysis determines” in claim 14. Answer, page 8. We note again that the examiner fails to refer to claim 32 that contains the same language as claim 14, but depends from claim 20 instead of claim 1. Despite the preamble of claim 14 which states “[t]he method of claim 1 wherein the method is used to analyze biofilm forming organisms that may grow in a host, and the host comprises host material, the method further including ...,” the only limitation set forth in dependent claim 14 is

¹ We recognize the examiner’s reference (Answer, page 8) to “claim 14 and all occurrences.” Apparently, the examiner would like us to guess as to whether he means “all occurrences” in claim 14, or “all occurrences” in any other claim on appeal. We will not guess as to the examiner’s intention. Instead, we recognize the examiner’s error in treating the claims in an inconsistent manner.

the text following the transitional phrase “the method further including.”

Therefore, claim 14 further limits claim 1 by requiring that the biofilm forming organisms be incubated in the presence of host material in the liquid growth medium. Accordingly, since the term “analyze” is not a limitation added in claim 14, the examiner’s issue must be concerned with the term “analyzing” as it appears in claim 1, from which claim 14 depends. We however, have already discussed, see supra, the term “analyzing” as it appears in claim 1. As discussed supra, appellants expressly state (Brief, page 13), “‘assaying the number of organisms ...’, is the analyzing step.” Therefore, despite appellants’ argument (Brief, page 14) that “what the analysis determines does not need to be seen ... applicant [sic] is not required to state all possible environments in which the method may be used,” according to appellants own interpretation of the claims “analyzing” refers to assaying the number of organisms forming the biofilm at the plural biofilm adherent sites, as set forth in claim 1. We agree. We also note that the same reasoning applies to claim 32 as it depends from claim 20.

For the foregoing reasons, we reverse the rejection of claims 1-14 and 20-32 under 35 U.S.C. § 112, second paragraph.

THE REJECTION UNDER 35 U.S.C. § 103:

The examiner relies (Answer, page 5) on Miyake to teach “[c]ells were adhered to the bottom of a 96 well tissue culture plate, incubated in serially

diluted antibiotic solutions [and] ... [cell viability] was judged.” Alternatively, the examiner relies (id.) on Gjaltema to teach “a reactor where twelve removable slides are fitted and rotated to form a continuous flow stirred tank reactor.”

The examiner relies (Answer, page 6) on Darouiche to teach cultures in separate tubes were incubated in shaking water baths. According to the examiner (id.), “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to repeatedly change the flow of fluid as taught by Darouiche in the method of Miyake or Gjaltema....” In addition, the examiner relies (Answer, page 7) on Woodson to teach “standard techniques for quantifying bacteria.”

With regard to Miyake, appellants argue (Brief, page 9) that Miyake does not teach a method wherein the plural biofilm adherent sites share the liquid growth medium as is required by the claimed invention. While the examiner recognizes (Answer, page 9), “the present invention is directed to ... a shared liquid growth medium across an array of biofilm adherent sites...,” the examiner fails to explain how the combination of Miyake in view of Darouiche and Woodson, results in a method wherein “plural biofilm adherent sites share the liquid growth medium.” Therefore, it is our opinion that the examiner failed to meet his burden of providing the evidence necessary to establish a prima facie case of obviousness based on the combination of Miyake in view of Darouiche and Woodson.

With regard to Gjaltema, appellants explain (Brief, page 9), “Gjaltema differs from the claimed invention in claim 1 in that the flow direction is not

repeatedly changed ... [and from] claim 20 since Gjaltema does not provide plural biofilm adherent sites arranged in plural rows....” According to the examiner (Answer, page 9), “Gjaltema was not cited to show change of flow.” In addition, the examiner states (*id.*), “[a]pplicants[’] arguments regarding Darouiche are not understood regarding sharing the medium where the steel nuts are the surface upon which the biofilm forms and each nut may or may not have the same medium as desired.” To clarify the issue with regard to Darouiche, as the examiner explains (Answer, page 6), “stainless steel nuts were added to cultures, placed in a shaking water bath to allow seeding. Then they were transferred to tubes and incubated in a shaking water bath to form an adherent biofilm.” Stated differently, the stainless steel nuts share the same liquid growth medium only during the “seeding” step, not during the “biofilm growth” step. As appellants’ explain (Brief, page 9), Darouiche “differs from the claimed invention in that separate tubes are used, each with one steel nut in it for use as a biofilm adherent site. The steel nuts do not therefore share a flow of liquid growth medium.”

As set forth in In re Kotzab, 217 F.3d 1365, 1369-70, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000):

A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the

field. ... Close adherence to this methodology is especially important in cases where the very ease with which the invention can be understood may prompt one “to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against its teacher.”

...
Most if not all inventions arise from a combination of old elements. ... Thus, every element of a claimed invention may often be found in the prior art. ... However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. ... Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. [citations omitted]

In other words, “there still must be evidence that ‘a skilled artisan, ... with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.’” Ecolochem Inc. v. Southern California Edison, 227 F.3d 1361, 1375, 56 USPQ2d 1065, 1075-76 (Fed. Cir. 2000). On this record, the examiner appears to have found individual parts of the claimed invention. The examiner, however, has failed to identify any suggestion in the prior art that would lead a person of ordinary skill in the art to combine these different prior art references in a manner that would lead to appellants’ claimed invention.

Accordingly we reverse the rejection of claims 1-14 and 20-32 under 35 U.S.C. § 103 as being unpatentable over Miyake or Gjaltema in view of Darouiche and Woodson.

REVERSED

)	
William F. Smith)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
Donald E. Adams)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
Lora M. Green)	
Administrative Patent Judge)	

DA/dym

T. Gene Dillahunty
Burns, Doane, Swecker & Mathis, L.L.P
P.O. Box 1404
Alexandria, VA 22313-1404