

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EYAL BAR-SADEH and GUY BERLINER

Appeal No. 2005-1263
Application No. 10/112,072

ON BRIEF

Before KIMLIN, PAK and OWENS, Administrative Patent Judges.
KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-9.

Claims 1 and 8 are illustrative:

1. A diaphragm comprising:

a sheet of material formed on a substrate having a hole, the sheet of material covering the hole and including one or more corrugations that are substantially free of defects.

8. The diaphragm of claim 1, wherein the sheet of material comprises one surface coated with a reflective material.

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The examiner relies upon the following references in the rejections of the appealed claims:

Di Giovanni	4,241,325	Dec. 23, 1980
de Groot	5,789,844	Aug. 4, 1998
Bernstein et al. (Bernstein)	6,168,906	Jan. 2, 2001

As is readily apparent from illustrative claim 1, appellants' claimed invention is directed to a diaphragm comprising a sheet of corrugated material formed on a substrate having a hole wherein the corrugations are substantially free of defects.

Appealed claims 1-7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Bernstein. Claim 1 also stands rejected under 35 U.S.C. § 102(b) as being anticipated by Di Giovanni. Claims 8 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Di Giovanni in view of de Groot.

In accordance with the grouping of claims set forth at page 2 of appellants' principal brief, claims 2-7 stand or fall together with claim 1, and claims 8 and 9 stand or fall together.

We have thoroughly reviewed each of appellants' arguments for patentability. However, we find that the examiner's rejections are well-founded. Accordingly, we will sustain the examiner's rejections for essentially those reasons expressed in the Answer.

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We consider first the examiner's § 102 rejections of claim 1. It is appellants' position that since Bernstein and Di Giovanni do not disclose that the corrugations of the diaphragm are substantially free of defects, but are silent with respect to defects, the references do not describe every element of claim 1 within the meaning of § 102. We are not persuaded by this line of reasoning.

Appellants' specification, at page 1, third and fourth paragraphs, discloses the following:

Any defect on a surface on which the thin, corrugated diaphragm is formed can cause defects, such as a holes or deformations, in the surface of the diaphragm. . . .

Corrugated diaphragms can be formed by depositing material on the surface of a substrate having etched grooves that define the corrugations in the diaphragm. The sides of the grooves can include stringers, which are thin shards or strands of substrate material that extend out from the sides of the grooves. Stringers are a byproduct of the process of etching grooves in the substrate and are common in grooves etched in silicon substrates. Diaphragms formed on a substrate surface that includes grooves having stringers often have defects, such as holes and deformations, which are caused by the stringers [emphases added].

Hence, it can be seen from appellants' own admission that there can be no presumption that corrugated diaphragms of the prior art have defects, let alone, more significantly, that the diaphragms of Bernstein and Di Giovanni are not substantially free of defects. It must be borne in mind that there is a strong

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presumption that U.S. patents are valid and define operable, not defective, inventions. In re Spence, 261 F.2d 244, 246, 120 USPQ 82, 83 (CCPA 1958); In re Michalek, 162 F.2d 229, 231-32, 74 USPQ 107, 109 (CCPA 1947). In the present case, appellants have not advanced an argument, let alone proper objective evidence, to support the premise that it is reasonable to conclude that the diaphragms of Bernstein and Di Giovanni comprise corrugations that are not substantially free of defects.

Since the legal presumption is that the corrugations of Bernstein and Di Giovanni are not defective, and the USPTO does not have the facilities and wherewithal to test the diaphragms of Bernstein and Di Giovanni, we find that it is eminently fair to place upon appellants the burden of establishing that diaphragms within the scope of the appealed claims are patentably distinct from the diaphragms disclosed by Bernstein and Di Giovanni. Furthermore, we find it significant that appellants' specification fails to provide a definition for the language "substantially free of defects" such that a standard is established for diaphragms that are embraced by the appealed claims and those which are not. Manifestly, without such a standard it is impossible to determine which prior art diaphragms are within the scope of the appealed claims.

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Concerning the § 103 rejection of claims 8 and 9 over Di Giovanni in view of de Groot, we find that the examiner has made out a prima facie case of obviousness for coating the diaphragm of Di Giovanni with the gold disclosed by de Groot for the purpose of preventing corrosion and increasing reliability. Appellants cite the disclosure of de Groot that "[t]ypically, diaphragm 100 is plated with an inert metal, such as gold, to prevent corrosion of the diaphragm, for example, by the sealing material" (column 10, lines 14-16, emphasis added). Appellants maintain that since Di Giovanni does not teach the use of a sealing material, there would have been no motivation for one of ordinary skill in the art to plate the diaphragm of Di Giovanni with gold. However, de Groot cites sealing material only as an example of a cause of corrosion, and we concur with the examiner that one of ordinary skill in the art would have understood that there other sources of corrosion that are preventable by the plating of an inert metal, such as gold. Appellants have not explained why one of ordinary skill in the art would have found it nonobvious to plate the diaphragm of Di Giovanni with gold. Nor have appellants based any argument upon objective evidence of nonobviousness, such as unexpected results, to rebut the prima facie case of obviousness.

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In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (effective Sep. 13, 2004; 69 Fed. Reg. 49960 (Aug. 12, 2004); 1286 Off. Gaz. Pat. Office 21 (Sep. 7, 2004)).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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CHUNG K. PAK)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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BEVERLY PAWLIKOWSKI)	
Administrative Patent Judge)	

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