

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. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte STEWART W. WILLIAMS and BRIAN J. TURNER

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Appeal No. 2003-0877  
Application No. 09/601,884

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HEARD: October 8, 2003

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Before ABRAMS, STAAB, and BAHR, Administrative Patent Judges.  
ABRAMS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 5-7, 9, 11-15 and 18. Claims 2-4, 16 and 17 have been allowed, and claims 1, 8 and 10 have been canceled.

We REVERSE.

BACKGROUND

The appellants' invention relates to a laminar flow control system. An understanding of the invention can be derived from a reading of exemplary claim 9, which has been reproduced below.

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Lachmann	2,742,247	Apr. 17, 1956
Dannenberg	3,128,973	Apr. 14, 1964
Parikh <u>et al.</u> (Parikh)	5,772,156	Jun. 30, 1998
Healey	5,806,796	Sep. 15, 1998

Claims 7, 9, 12-15 and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Parikh.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Parikh in view of Dannenberg.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Parikh in view of Lachmann.

Claim 11 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Parikh in view of Healey.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the Answer (Paper No. 15) and the final rejection (Paper No. 10) for the examiner's complete

reasoning in support of the rejections, and to the Brief (Paper No. 14) and Reply Brief (Paper No. 16) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the determinations which follow.

*Claim 9*

9. A laminar flow control system which comprises:

a skin, said skin having a plurality of perforations therethrough;

a base member supporting said skin, said base member including at least one plenum chamber supplied with a suitable source of suction;

at least one micro channel formed between said skin and said base member, said micro channel connecting said at least one plenum chamber to said plurality of perforations, said micro channel having a cross-sectional area which varies along said micro channel between said plenum and at least one of said plurality of perforations; and

means for applying suction to the plenum chambers in order to maintain boundary layer suction on a free surface of the perforated skin.

*The Rejection Under Section 102*

It is the examiner's view that the subject matter of claim 9 is anticipated by Parikh. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of the claimed invention. See, for example, RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). A reference anticipates a claim if it discloses the claimed invention such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention. In re Graves, 69 F.3d 1147, 1152, 36 USPQ2d 1697, 1701 (Fed. Cir. 1995), cert. denied, 116 S.Ct. 1362 (1996), quoting from In re LeGrice, 301 F.2d 929, 936, 133 USPQ 365, 372 (CCPA 1962). Applying this guidance of our reviewing court to the situation at hand leads us to conclude that the rejection of claim 9 cannot be sustained. Our reasoning follows.

Parikh is directed to an aircraft boundary layer control system, and the examiner directs attention to Figure 4 in the rejection. Among the requirements of the appellants' claim 9 is that there be a skin and "a base member supporting said skin." Parikh discloses a skin 80, which extends from a leading edge 78 to front spar 82, and is provided with a plurality of perforations 66. The examiner is of the view that this skin is supported by an unnumbered element shown beneath and spaced from the inner surface of the skin which, together with the skin, defines a passage through which air is

caused to flow through perforations 66 under the influence of the inlet suction of a compressor 74. There is no description of this element in the specification; the examiner has simply concluded that it “supports” the skin, apparently because it appears to contact the skin at the leading edge and at the top of spar 82. The appellants do not contest that the element designated by the examiner to be a “base member” does, in fact, define a wall of an air duct. However, the appellants argue that the examiner’s conclusion that it supports the skin is not substantiated by any evidence, and therefore is based upon speculation. We agree, noting in this regard that it also could be argued that the skin is supported entirely by attachment at its rear edges to the upper and lower flanges of spar 82. A rejection cannot be based upon speculation,<sup>1</sup> and the rejection of claim 9 as being anticipated by Parikh fails at this juncture because, in our opinion, one of ordinary skill in the art would not be in possession of the invention recited in claim 9 from the teachings of this reference.

The appellants also argue that even if the element designated by the examiner as the “base member” in Parikh were considered to perform that function, the reference nevertheless falls short of being anticipatory in that it does not disclose or teach “said base member including at least one plenum chamber” and “at least one micro channel formed between said skin and said base member, said micro channel connecting said at least one plenum chamber to said plurality of perforations,” as also is required by

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<sup>1</sup>See In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962).

claim 9. In this regard, they point out that the examiner has not provided evidence that the air duct defined by the skin and the element designated as the “base member” would have been considered by one of ordinary skill in the art to be a “micro channel,” contending that “micro channel” has particular meaning in the art and is defined in such a manner in their specification, and that the channel in the reference does not meet this definition. They also urge that the reference does not describe one portion of this passage as a channel and another as a plenum, and therefore the examiner has no basis upon which to label portions in this manner. Finally, the appellants argue that the so-called “base member” does not “include” a plenum chamber, as is required by the claim. We agree with the appellants that these factors also cause claim 9 not to be anticipated by Parikh.

The rejection of claim 9 is not sustained.

Independent claim 14, which also stands rejected as being anticipated by Parikh, also contains the limitations discussed above. This being the case, on the basis of the same reasoning, the rejection of claim 14, as well as dependent claims 7, 12, 13, 15 and 18, cannot be sustained.

### *The Rejections Under Section 103*

The test for obviousness is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See, for example, In re Keller,

642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a prima facie case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

Claim 5 stands rejected as being unpatentable over the combined teachings of Parikh and Dannenberg, the latter being applied for teaching that perforated skin in a boundary layer control system can be made of metal. Be that as it may, considering Parikh in the light of Section 103 does not alleviate the shortcomings discussed above with regard to the limitations of claim 14, from which claim 5 depends, and the addition of Dannenberg fails also to do so. This being the case, it is our view that Parikh and Dannenberg fail to establish a prima facie case of obviousness with regard to the subject matter recited in claim 5, and we will not sustain this rejection.

Parikh has been combined with Lachmann to reject dependent claim 6. Lachmann does not overcome the aforementioned problems with Parikh, and this rejection also is not sustained.

We reach the same conclusion, for the same reason, with regard to dependent claim 11, where Healey has been combined with Parikh.

CONCLUSION

None of the rejections is sustained.

The decision of the examiner is reversed.

NEAL E. ABRAMS	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
LAWRENCE J. STAAB	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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	)	
JENNIFER D. BAHR	)	
Administrative Patent Judge	)	

NEA/lbg

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