

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN D. DOBAK, RAY RADEBAUGH,
MARCIA L. HUBER and ERIC D. MARQUARDT

Appeal No. 1999-2500
Application No. 08/542,123

ON BRIEF

Before FRANKFORT, McQUADE, and NASE, Administrative Patent
Judges.

NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1, 6, 14 and 15. Claims 2, 4 and 10 (the other claims pending in this application) have been allowed.

We REVERSE.

BACKGROUND

The appellants' invention is in the field of apparatus used to cool miniature objects or very small portions of objects to very low temperatures (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellants' brief.

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

Hendricks April 7, 1992	5,101,894	
Longsworth 1994	5,337,572	Aug. 16,
Greenthal 22, 1994	5,365,750	Nov.
Gravil et al. (Gravil)	2,477,406 ¹ (France)	Sep. 11, 1981

Claims 1 and 6 stand rejected under 35 U.S.C. § 103 as being unpatentable over Greenthal in view of Hendricks and Longsworth.

¹ In determining the teachings of Gravil, we will rely on the translation provided by the PTO. A copy of the translation is attached for the appellants' convenience.

Claims 14 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Greenthal in view of Hendricks and Longworth as applied to claims 1 and 6 above, and further in view of Gravil.

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. 16, mailed September 23, 1998) for the examiner's complete reasoning in support of the rejections, and to the brief (Paper No. 15, filed August 31, 1998) 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. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness

with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 1, 6, 14 and 15 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

All the claims under appeal require that the high pressure passageway and the low pressure passageway of a counterflow heat exchanger follow or create a tortuous flow path to create turbulent flow.

The examiner has relied upon Hendricks (answer, pp. 3-6) as teaching and suggesting such a counterflow heat exchanger. The appellant argues (brief, pp. 7-11) that Hendricks does not teach or suggest the claimed counterflow heat exchanger.

After reviewing the teachings of Hendricks, we find ourselves in agreement with the appellants that Hendricks does not teach or suggest the claimed counterflow heat exchanger. In that regard, Hendricks teaches perforated plates having perforations 30 that are tubular and aligned with one another. Hendricks does not teach or suggest that the high pressure passageway and the low pressure passageway of his counterflow heat exchanger follow or create a tortuous flow path to create turbulent flow. Moreover, it is our determination that the full teachings of Hendricks would have suggested that the perforations in one plate are aligned with, not offset with respect to, the perforations of the other plates. We reach this conclusion based upon (1) Hendricks teaching that notch 40 is provided in the plates 26 and spacers 28 for alignment in a fixture during bonding, (2) Hendricks teaching that the

perforated plates and spacers shown in Figures 4 and 5 have notches 40², and

(3) contrary to the examiner's position (answer, p. 6)

Hendricks does not teach that notches 40 are formed after slicing the extruded rod to form the plates 26.³

In our view, the only suggestion for modifying the applied prior art to meet the above-noted limitation stems from hindsight knowledge derived from the appellants' own disclosure.⁴ The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Associates,

² The only apparent reason for notches 40 in the plates and spacers in Figures 4 and 5 of Hendricks is to align the perforations in the plates.

³ While Hendricks does not specifically teach that notches 40 are formed prior to slicing the extruded rod to form the plates 26, it is our opinion that such would have been suggested to an artisan based on the totality of Hendricks teachings.

⁴ On page 6 of the answer, the examiner refers to a number of references that have not been applied in the rejection under appeal. These references will be given no consideration since they were not included in the statement of the rejection. See Ex parte Raske, 28 USPQ2d 1304, 1305 (Bd. Pat. App. & Int. 1993).

Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). It follows that we cannot sustain the examiner's rejections of claims 1, 6, 14 and 15.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1, 6, 14 and 15 under 35 U.S.C. § 103 is reversed.

REVERSED

CHARLES E. FRANKFORT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOHN P. McQUADE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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Appeal No. 1999-2500
Application No. 08/542,123

Page 8

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APPEAL NO. 1999-2500 - JUDGE NASE
APPLICATION NO. 08/542,123

APJ NASE

APJ McQUADE

APJ FRANKFORT

DECISION: **REVERSED**

Prepared By: Gloria Henderson

DRAFT TYPED: Feb 14, 2000

FINAL TYPED: