

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 51

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte VOICHI TOKAI and MASASHI SAHASHI

Appeal No. 96-1367
Application No. 07/804,501¹

HEARD: June 10, 1999

Before KIMLIN, GARRIS and SPIEGEL, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 10-18, 28, 29, 34-36 and 55, all the claims remaining in the present application. Claim 10 is illustrative:

¹ Application for patent filed December 10, 1991. According to appellants, this application is a continuation of Application No. 07/536,083, filed June 11, 1990; which is a continuation of Application No. 07/305,169, filed February 2, 1989; both which are abandoned.

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10. An improved gas cycle refrigerator comprising:
a refrigerant;
a heat regenerative material for performing heat-exchange between said refrigerant and itself, wherein said heat regenerative material has a composition consisting essentially of:

AMz

where A is at least one rare earth element selected from the group consisting of Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm and Yb; M is at least one metal selected from the group consisting of Ni and Co; and z is 0.001 to 9.0; and

an expansion means for expanding said refrigerant.

The examiner relies upon the following references as evidence of obviousness:

Sahashi et al. (European '743) (European patent application)	0,193,743	Sep. 10, 1986
British Patent (British '958)	1,458,958	Dec. 22, 1976

Appealed claims 10, 28 and 29 stand rejected under 35 U.S.C. § 112, first paragraph.² In addition, the appealed claims stand rejected under 35 U.S.C. § 103 as being unpatentable over European '743 in view of British '958.

² The examiner's rejection of claims 10-18 under 35 U.S.C. § 112, second paragraph, has been withdrawn (see Supplemental Examiner's Answer).

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Upon careful consideration of the opposing arguments presented on appeal, we find ourselves in essential agreement with the position advanced by appellants in their principal and reply briefs on appeal. Accordingly, we will not sustain the examiner's rejections.

We consider first the examiner's rejection of claims 10, 28 and 29 under 35 U.S.C. § 112, first paragraph. According to the examiner, the claims are not enabled by the present specification since the specification is limited to helium as the refrigerant, whereas the claims are sufficiently broad to encompass the use of other conventional refrigerants, such as fluorocarbons, hydrocarbons, ammonia or carbon dioxide.

However, it is well settled that to properly impose a rejection under the enablement provision of § 112, first paragraph, the examiner carries the initial burden of establishing, by compelling reasoning or objective evidence, that one of ordinary skill in the art would be unable to practice the claimed invention without undue experimentation.

In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982); In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971). In the present case, it

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is not enough for the examiner to simply question, as by way of a query, whether traditional refrigerants other than helium may be utilized in the claimed invention. Rather, the examiner must make a compelling case that one of ordinary skill in the art would be unable to practice the claimed invention by using refrigerants other than the one specifically disclosed in the specification. Inasmuch as the examiner has not met this burden, we cannot sustain the rejection under § 112, first paragraph.

There is no dispute that British '958 discloses a gas-cycle refrigerator of the type claimed, but does not teach the use of appellants' heat regenerative material. Hence, the examiner relies upon European '743 for a disclosure of the claimed regenerative materials in a refrigerator and concludes that it would have been obvious for one of ordinary skill in the art to substitute the materials of European '743 for the heat regenerative materials of British '958. However, the flaw in the examiner's reasoning is that it is established on this record, via appellants' disclosure and European '743 cited by the examiner, that there are two types of refrigeration systems for cooling superconductor materials:

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(1) gas-cycle refrigerators and (2) magnetic refrigeration of the type disclosed by European '743. Appellants' claims on appeal define a gas-cycle refrigerator of the first type, and the examiner has failed to establish on this record why it would have been obvious for one of ordinary skill in the art to use the refrigerant material employed in the magnetic refrigerator of European '743 as a heat regenerative material in a gas-cycle refrigerator of the type disclosed by British '958. Stated otherwise, the examiner has not established that one of ordinary skill in the art would have had a reasonable expectation that the magnetic refrigerants of European '743 would be suitable for use as a regenerative material in the gas-cycle refrigerator of British '958. In the absence of such reasoning, the examiner has not made out a prima facie case of obviousness for the claimed subject matter.

The examiner states at page 6 of the Answer that "the refrigeration cycles according to the primary and secondary references each refer to the use of magnetic refrigeration and comprise applicant's regenerative material and refrigerant." However, the examiner does not cite any particular passage in

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British '958 that refers to magnetic refrigeration, and we have searched the reference in vain for any such disclosure.

Also, in denying patentable weight to the claim language "gas-cycle refrigerator," the examiner's reliance on Kropa v. Robie, 187 F.2d 150, 88 USPQ 478 (CCPA 1951), is misplaced (see page 7 of Answer). First, the portion of the claim following the preamble is not a self-contained description of structure inasmuch as it recites two materials and an expansion means. Secondly, as discussed in Kropa v. Robie, the preamble of a claim is given weight when it is considered necessary to give life, meaning and vitality to the claims. In our view, such is the case here wherein the claims reasonably define a gas-cycle refrigerator comprising the recited components.

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

REVERSED

EDWARD C. KIMLIN)
Administrative Patent Judge)
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BRADLEY R. GARRIS)	BOARD OF PATENT
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CAROL A. SPIEGEL)	
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