

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. 44

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTIAN OLIVER PASCHEREIT,
WOLFGANG WEISENSTEIN,
EPHRAIM GUTMARK and WOLFGANG POLIFKE

Appeal No. 2004-1023
Application No. 09/393,714

HEARD: July 13, 2004

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

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 18 and 20-26. Claims 3, 5-10, 15-17 and 19 have been withdrawn as being directed to a non-elected invention and the remaining claims have been canceled.

We REVERSE.

BACKGROUND

The appellants' invention relates to a method for minimizing a pressure amplitude of acoustic vibrations in a combustion system. An understanding of the invention can be derived from a reading of exemplary claim 18, which appears in the appendix to the Brief.

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

Williams <u>et al.</u> (Williams)	4,557,106	Dec. 10, 1985
Hermann <u>et al.</u> (Hermann)	6,205,764 B1	Mar. 27, 2001 (filed Aug. 6, 1999)
Siemens (German Patent)	DE 197 04 540 C 1	Jul. 23, 1998

Claim 18 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Williams.

Claims 20-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams in view of "either of Siemens¹ . . . and Hermann."

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. 37) and the final rejection (Paper No. 30) for the examiner's reasoning in

¹This is the foreign equivalent of Hermann. The examiner recited it as an alternative reference to Hermann in the rejection, but made no mention of it in the explanation of the rejection.

support of the rejections, and to the Brief (Paper No. 36) and Reply Brief (Paper No. 38) 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.

The appellants' invention is directed to improvements in methods for minimizing thermoacoustic vibrations in gas turbine combustion chambers. As expressed in independent claim 18, the method comprises measuring a pressure in the combustion system, feeding first and second quantities of fuel through first and second fuel lines in a pulsating process based on the measured pressure in the combustion chamber where such feedings minimize the pressure amplitude of thermoacoustic vibrations, and completing a modulation period, the modulation period including the feeding of the first quantity of fuel and the feeding of the second quantity of fuel wherein a pulse of the pulsating process is limited with respect to both time and subsequent feeding of the second quantity of fuel.

Claim 18 stands rejected as being anticipated² by Williams. In arriving at this conclusion, the examiner has found in the final rejection that Williams' statement that creating boundary conditions in a fuel supply being pulsated to suppress combustion instabilities can be accomplished by "multiple exciters" at "appropriate locations" indicates to one of ordinary skill in the art that multiple fuel lines "necessarily" must be used (Paper No. 30, pages 2 and 3). Conspicuously absent, however, is mention of where the reference teaches the step of "completing a modulation period . . . ," which is the final step of claim 18. Among other arguments, this omission has been challenged by the appellants (Reply Brief, page 3).

Even if one accepts, arguendo, the examiner's assertion that one of ordinary skill in the art would have understood from the specification that the Williams system requires multiple modulated fuel lines in order to accomplish its purposes, the examiner has not indicated to us, and we have not located on our own, any disclosure or teaching in Williams that supports a conclusion that the final step of claim 18 is disclosed or

²Anticipation 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).

taught in the reference. This being the case, the subject matter of claim 18 is not anticipated by Williams, and we will not sustain this rejection.

The Rejection Under Section 103

Claims 20-26, which depend from claim 18, stand rejected as being obvious³ in view of the combined teachings of Williams and either of Hermann and Siemens. In this rejection the examiner takes the position that all of the subject matter recited in these claims is disclosed or taught by Williams except for injecting the modulated fuel in the two fuel lines in an anti-symmetric fashion. However, it is the examiner's view that to modify the Williams system to perform in this manner would have been obvious to one of ordinary skill in the art in view of the teachings of Hermann "in order to actively suppress the combustion oscillations" as taught by both Hermann and Williams (Paper No. 30, sentence bridging pages 3 and 4).

Be that as it may, evaluating Williams in the light of Section 103 does not cause us to alter the position we voiced above that Williams fails to disclose or teach the final step of the method recited in parent claim 18. This shortcoming is not, in our opinion,

³The 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).

overcome by further consideration of Hermann. Moreover, as was the case with this limitation in the claim in the rejection under Section 102, the examiner has failed to point out where Williams, or Hermann, for that matter, render that step obvious. We note here that no separate discussion utilizing Siemens was provided by the examiner.

It therefore is our conclusion that the combined teachings of Williams and either of Hermann or Siemens fail to establish a prima facie case of obviousness with regard to the subject matter recited in claim 18, which by virtue of dependency is incorporated in each of claims 20-26, and therefore this rejection cannot be sustained.

CONCLUSION

Neither rejection is sustained.

The decision of the examiner is reversed.

REVERSED

NEAL E. ABRAMS
Administrative Patent Judge

LAWRENCE J. STAAB
Administrative Patent Judge

JEFFREY V. NASE
Administrative Patent Judge

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Appeal No. 2004-1023
Application No. 09/393,714

Page 8

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