

The opinion in support of the decision being entered today is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SHIGEKI UETA, SHUJI HAMANO,
and TOSHIHARU NODA

Appeal 2007-0873
Application 10/395,236
Technology Center 1700

Decided: July 13, 2007

Before BRADLEY R. GARRIS, THOMAS A. WALTZ, and
CATHERINE Q. TIMM, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's decision rejecting claims 7-11. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

I. BACKGROUND

The invention relates to a heat resistant cast steel. Claim 7 is illustrative of the subject matter on appeal:

7. A heat resistant cast steel having good thermal fatigue resistance, consisting essentially of, in weight percent, C: 0.2-0.42%, Ni: 8.0-45.0%, Cr: 15.0-30.0%, W: up to 10% and Nb: 0.5-3.0%, provided that [%C]-0.13[%Nb] is in the range of 0.05-0.95%, and the balance being Fe and inevitable impurities, contents of carbides in the steel being, in atomic percent, MC carbides 0.5-3.0% and M₂₃M₆ carbides 0.5-10%, the matrix consisting essentially of an austenitic phase mainly comprised of Fe-Ni-Cr, mean coefficient of thermal expansion in the range from room temperature to 1050°C being up to 20.0x10⁻⁴, and tensile strength in the temperature range up to 1050°C being 50 MPa or higher.

The Examiner relies on the following prior art references to show unpatentability:

Yabuki (as translated)¹ JP58-217663 Dec. 17, 1983

Key to steel, Verlag Stahlschlüssel (10th ed., West Germany 1974)

The rejections as presented by the Examiner are as follows:

1. Claims 7, 8, 10, and 11 are rejected under 35 U.S.C. § 103(a) as unpatentable over Yabuki; and
2. Claim 9 is rejected under 35 U.S.C. § 103(a) as unpatentable over Yabuki in view of the Key to Steel.

¹ We cite to the full translation provided by the Examiner.

II. DISCUSSION

A. Issue

The dispositive issue in this appeal arises out of Appellants' contentions with regard to the concentration of carbon required by the claims (*see* claim 7).

According to the Examiner, even though Yabuki describes a range of carbon content (0.55-1.9%) differing from the claimed range (0.2-0.42%), the claimed range "is a judicious selection" from the range 0.2-1.0% Appellants disclose in their Specification at page 5, line 2 and page 6, lines 16-25 (Answer 3). Further, according to the Examiner, "the range of 0.2 to .42 wt% carbon would not define patentably over 0.55 to 1.9 wt%, since the criticality of the more narrow claimed C range has not been established by applicant (i.e. by comparative test data)." (Answer 3).

Appellants contend that the Examiner has improperly relied upon Appellants' Specification in determining obviousness and, in fact, one of ordinary skill in the art would not have found it obvious to modify the carbon concentration of Yabuki because Yabuki discloses that the advantages described in the reference will not be obtained when less than 0.55% carbon is included in the steel (Br. 9-12; Reply Br. 5-7).

The Examiner responds that she is not suggesting that the carbon content be reduced and she again repeats that the claimed range "is a judicious selection" from the broader range disclosed in the Specification and criticality of the claimed range has not been shown (Answer 8 at ¶ 2). The Examiner further contends that Appellants have misunderstood the reason for citing the Appellants' disclosure, stating that the reason is to show

that Appellants do not have support for and had not established criticality of the amended range (Answer 8 at ¶ 3).

The dispositive issue arising from these contentions is: Has the Examiner established that the carbon range of claim 7 would have been obvious based on the knowledge of those of ordinary skill in the art at the time of the invention?

B. Facts

All the claims are directed to a cast steel containing from 0.2-0.42% carbon (Claim 7).

Yabuki describes a cast steel containing 0.55-1.9% carbon (Abstract). The carbon acts to ensure outstanding wear resistance, as well as weldability and castability (Yabuki 10, last para.). Those properties, according to Yabuki, cannot be obtained when the steel contains less than 0.55% carbon (*id.*).

No rejection on the basis of lack of written descriptive support under 35 U.S.C. § 112, ¶ 1 is before us.

C. Principles of Law

The examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). In order to establish a *prima facie* case of obviousness, the examiner must show that each and every limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

D. Analysis

In the case before us, the Examiner has not shown that each and every limitation of the claim is either described or suggested by the prior art or would have been obvious based on the knowledge of the ordinary artisan working in the cast steel art. *See In re Fine*, 837 F.2d at 1074, 5 USPQ2d at 1598.

The Examiner acknowledges that Yabuki does not describe or suggest the carbon concentration required by the claims. In fact, Yabuki specifically teaches that the strength and castability properties that Yabuki desires, and Appellants also focus on, will not be obtained at carbon concentrations of less than 0.55%, a level much above the claimed upper limit of 0.42%. This is a teaching away from Appellants' invention. *See In re Geisler*, 116 F.3d 1465, 1469, 43 USPQ2d 1362, 1365 (Fed. Cir. 1997) (*quoting In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 533 (CCPA 1974)) ("A prima facie case of obviousness can be rebutted if the applicant ... can show 'that the art in any material respect taught away' from the claimed invention.").

The Examiner relies upon Appellants' own disclosure of their invention and seeks to shift the burden to the Appellants to show criticality of their claimed range based on the broader range disclosed in the Specification. It is not proper to rely upon Appellants' own disclosure of their invention in the Specification in this context. A claimed invention is unpatentable if the differences between it and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made *to a person having ordinary skill in the pertinent art*. 35 U.S.C.

§ 103(a) (2000) (emphasis added). Before the burden can be shifted, the Examiner must establish obviousness based on teachings and knowledge *within the prior art*. This the Examiner has not done here.

To the extent that the Examiner is contending that the claimed range lacks support in the Specification, we note that no rejection under 35 U.S.C. § 112, ¶ 1 for lack of written descriptive support is before us.

III. CONCLUSION

The Examiner has not established that the carbon range of the claims would have been obvious to one of ordinary skill in the cast steel art based on the knowledge of those of ordinary skill in the art at the time of the invention.

Because the Key to Steel reference was applied to meet other limitations in claim 9, this reference, as relied upon by the Examiner, does not cure the defect within the primary rejection.

IV. DECISION

With respect to the Examiner's decision to reject claims 7, 8, 10, and 11 as obvious under 35 U.S.C. § 103(a) over Yabuki and claim 9 as obvious under 35 U.S.C. § 103(a) over Yabuki as evidenced by the Key to Steel reference, we REVERSE.

REVERSED

clj

Appeal 2007-0873
Application 10/395,236

Posz Law Group, PLC
12040 South Lakes Dr.
Suite 101
Reston, VA 20191