

The opinion in support of the decision being entered today was not written for publication in a law journal and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WILLIAM WILSON
and
DR. DON L. BARAGAR, Ph.D.

Appeal No. 2003-1156
Application No. 09/745,062

ON BRIEF

Before KIMLIN, KRATZ and POTEATE, Administrative Patent Judges.
KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 and 2, all the claims in the present application. Claim 1 is illustrative:

1. A steel alloy consisting of:
 - 0.51 - 0.55% by weight of carbon
 - 1.15 - 1.25% by weight of manganese
 - 0.15 - 0.30% by weight of silicon
 - 0.90 - 1.10% by weight of chromium
 - 0.15 - 0.25% by weight of molybdenum

Appeal No. 2003-1156
Application No. 09/745,062

0.10 - 0.15% by weight of vanadium
0.015 - 0.060% by weight of aluminum
0.015 - 0.030% by weight of niobium
0.008 - 0.012% by weight of nitrogen

and the balance iron and incidental impurities.

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

Nomoto et al. (Nomoto)	5,186,768	Feb. 16, 1993
Motomura et al. (Motomura)	5,470,528	Nov. 28, 1995

Appellants' claimed invention is directed to a steel alloy consisting of the recited elements. According to appellants, the claimed steel alloy is "especially useful in making vehicle leaf springs which exhibit improvements over known leaf springs in respect to: ride characteristics; durability; weight; cost; strength; robustness; fatigue life and stress level efficiency" (page 2 of principal brief, second paragraph).

Appealed claims 1 and 2 stand rejected under 35 U.S.C. § 103 as being unpatentable over Motomura in view of Nomoto.

Appellants submit at page 1 of the Reply Brief that they "agree that the claims 1 and 2 may stand and fall together in this appeal" (first paragraph). Accordingly, claim 2 stands or falls together with claim 1.

Appeal No. 2003-1156
Application No. 09/745,062

We have thoroughly reviewed each of appellants' arguments for patentability. However, we are in complete agreement with the examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the examiner's rejection for essentially those reasons expressed in the Answer, which we incorporate herein, and we add the following for emphasis only.

There is no dispute that Motomura, like appellants, discloses a steel alloy suitable for springs which comprises the presently claimed carbon, manganese, silicon, chromium, molybdenum, vanadium, aluminum and niobium. There is also agreement that the amounts disclosed by Motomura for these elements either encompass or overlap the claimed ranges. Accordingly, although appellants maintain that the recited ranges for the amounts of elements are not as broad as the ranges disclosed by Motomura, it is by now well settled that prior art ranges which encompass or overlap claimed ranges establish a prima facie case of obviousness for the claimed ranges. In re Malagari, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974).

A distinction between the claimed alloys and those disclosed by Motomura is the claimed alloys contain nitrogen but no

Appeal No. 2003-1156
Application No. 09/745,062

selenium. On the other hand, the alloys of Motomura contain no nitrogen and minor amounts of selenium. These distinctions notwithstanding, however, we concur with the examiner's legal conclusion that alloys within the scope of the appealed claims would have been obvious to one of ordinary skill in the art.

Regarding the claimed nitrogen content, the examiner correctly points out that Nomoto provides the general teaching that "[t]he incorporation of nitrogen is effective for improving the hardness and tensile strength of steel" (column 6, lines 61-62). Consequently, we find that it would have been obvious for one of ordinary skill in the art to include nitrogen in Motomura's formula for steel for the purpose of imparting hardness and tensile strength. While appellants emphasize compositional differences between alloys of Motomura and Nomoto, both references are directed to spring steel and, significantly, Nomoto's disclosure regarding nitrogen is directed to steel, in general, and not the particular steel of Nomoto. Furthermore, as set forth by the examiner, "the major elements present in the alloys of Motomura et al. and Nomoto et al. are substantially the same, particularly with respect to the contents of iron, carbon, manganese, silicon, chromium, and molybdenum" (sentence bridging pages 6 and 7 of Answer).

Appeal No. 2003-1156
Application No. 09/745,062

As for the claimed alloys not containing selenium, the examiner is on sound legal and factual footing in concluding that it would have been obvious for one of ordinary skill in the art to eliminate selenium from a steel alloy of the type disclosed by Motomura along with its advantage, namely, enhanced decarburization properties. In re Thompson, 545 F.2d 1290, 1294, 192 USPQ 275, 277 (CCPA 1976); In re Kuhle, 526 F.2d 553, 555, 188 USPQ 7, 9 (CCPA 1975); In re Marzocchi, 456 F.2d 790, 793, 173 USPQ 228, 229-30 (CCPA 1972). Appellants query "where does the examiner find any basis for the contention that appellants' alloy does not require protection from decarburization?" (page 5 of principal brief, penultimate paragraph). No such conclusion, however, is required for a conclusion of obviousness here. As noted by the examiner, Motomura evidences that it was known in the art that reducing decarburization can be effected by the inclusion of a variety of other elements in the alloy (see column 1, lines 22-29). Appellants have not demonstrated on this record that their exclusion of selenium does not eliminate the advantage taught by Nomoto. Indeed, appellants have proffered no evidence which demonstrates that alloys within the scope of the appealed claims, sans selenium, are even comparable to the alloys fairly taught by Motomura with respect to decarburization.

Appeal No. 2003-1156
Application No. 09/745,062

As a final point, we note that appellants base no argument upon objective evidence of nonobviousness, such as unexpected results. Appellants do, however, offer the explanation that "[i]t is not apparent to appellants what tests they could run" (page 5 of Reply Brief, second paragraph). It is fundamental that the burden of demonstrating unexpected results is on the applicant. In re Klosak, 455 F.2d 1077, 1080, 173 USPQ 14, 16 (CCPA 1972). In any event, although it is not within our province to advise an applicant on specific ways to rebut a prima facie case of obviousness, we do not perceive that appellants have been placed in an impossible position. For example, evidence which demonstrates that the inclusion of nitrogen and the exclusion of selenium produces unexpected results for the claimed alloys would seem to be of probative value.

In conclusion, based on the foregoing and the reasons well-stated by the examiner, the examiner's decision rejecting the appealed claims is affirmed.

Appeal No. 2003-1156
Application No. 09/745,062

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

EDWARD C. KIMLIN)	
Administrative Patent Judge)	
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PETER F. KRATZ)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
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LINDA R. POTEATE)	
Administrative Patent Judge)	

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Appeal No. 2003-1156
Application No. 09/745,062

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