

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte YOSHIO MIYASAKA

Appeal No. 98-2126
Application No. 08/490,180¹

ON BRIEF

Before CALVERT, MEISTER, and STAAB, ***Administrative Patent Judges***.

MEISTER, ***Administrative Patent Judge***.

DECISION ON APPEAL

¹ Application for patent filed June 14, 1995.

point out and distinctly claim the subject matter which the appellant regards as the invention.

Claims 34 and 45-47 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Keiji.

The rejections are explained on page 5 of the answer. The arguments of the appellant and examiner in support of their respective positions may be found on pages 9-22 of the brief, pages 1-13 of the reply brief and pages 6-10 of the answer.

OPINION

We have carefully reviewed the appellant's invention as described in the specification, the appealed claims, the prior art applied by the examiner and the respective positions advanced by the appellant in the brief and reply brief, and by the examiner in the answer. As a consequence of this review, we will (1) sustain the rejection of claim 42 under 35 U.S.C. § 112, second paragraph, (2) reverse the rejection of claims 34 and 45-47 under 35 U.S.C. § 103(a), and (3) enter a new rejection of claims 45-47 under 35 U.S.C. § 103(a).

Considering first the rejection of claim 42 under 35
U.S.C.

§ 112, second paragraph, the appellant's sole comment regarding this rejection is that "the definiteness of claim 42 should have been overcome by the accompanying amendment" (brief, page 7). We must point out, however, that the examiner denied entry of this amendment (see the advisory action mailed September 29, 1997 (Paper No. 12)). This being the case, we will summarily affirm the rejection of claim 42 under 35 U.S.C. § 112, second paragraph.

Turning to the rejection of claims 34 and 45-47 under 35 U.S.C. § 103(a) as being unpatentable over Keiji, it is the examiner's position that:

Keiji teaches the invention except for expressly teaching accommodating the shot and shot material in first and second containers of a blasting machine.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have accommodated the green compacts and shots of Keiji in containers since it is customary in the art to provide such container for containing the material therein. [Answer, page 5.]

Additionally, the answer states that

whether the non-ferrous metal shot material is
blasted against a metal body or non-ferrous metal

shot material is blasted by metal shot is a matter of design choice
. . . . [Page 9.]

We will not support the examiner's position. In rejecting claims under 35 U.S.C. § 103 the examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993); *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met does the burden of coming forward with evidence or argument shift to the applicant. *Id.* If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Here, despite the repeated requests by the appellant for the examiner to cite a reference and/or references to show that it is "customary" to provide containers as set forth in independent claim 34 so that such reference and/or references can be evaluated in the context of the reference to Keiji and the claimed subject matter, the examiner has steadfastly ignored these requests. Obviousness under § 103 is a legal

conclusion based on **factual evidence** (*see In re Fine, supra,*) and the mere fact that, generally speaking, containers might be known in the art does not provide a sufficient factual basis for concluding that the first and second containers as set forth in the context of the subject matter set forth in claim 34 would have been obvious within the meaning of 35 U.S.C. § 103(a). *See In re GPAC Inc*, 57 F.3d 1573, 1582, 35 USPQ2d 1116, 1123 (Fed. Cir. 1995) and *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967).

As to the examiner's bald assertion that "whether the non-ferrous metal shot material is blasted against a metal body or non-ferrous metal shot material is blasted by metal shot is a matter of design choice," the examiner may not resort to speculation or unfounded assumptions to supply deficiencies in establishing a factual basis. *See In re GPAC, supra,* and *In re Warner, supra*. In short, the subjective opinion of the examiner as to what would or would not have been obvious, without evidence in support thereof, does not provide a factual basis upon which the legal conclusion of obviousness can be reached. Instead, it is well settled that in order to

establish a **prima facie** case of obviousness the prior art teachings must be sufficient to suggest to one of ordinary skill in the art making the modification needed to arrive at the claimed invention. **See, e.g., In re Lulu**, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1984).

In view of the above, we will not sustain the rejection of claims 34 and 45-47 under 35 U.S.C. § 103(a) based on the teachings of Keiji.

Under the provisions of 37 C.F.R. § 1.196(b) we make the following new rejection.

Claims 45-47 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Keiji in view of Straub. Initially we note that while the obviousness of an invention cannot be established by combining the teachings of the prior art absent some teaching, suggestion or incentive supporting the combination (**see, e.g., ACS Hospital Systems, Inc. v. Montefiore Hospital**, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984)), this does not mean that the cited references or prior art must specifically suggest making the combination (**B.F. Goodrich Co. v. Aircraft Braking Systems Corp.**, 72 F.3d 1577,

1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996) and *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988)). Instead, obviousness may be established by what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Young*, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981)⁵. Moreover, in evaluating such references it is proper to take into account not only the specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom (*In re Preda*, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968)), and all of the disclosures in a reference must be evaluated for what they fairly teach one

⁵ More specifically, as stated by the court in *Keller*, 642 F.2d at 425, 208 USPQ at 881:

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art.

having ordinary skill in the art (*In re Boe*, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966)).

Keiji appears to teach all the subject matter set forth in claims 45-47 with the exception that (1) the non-ferrous shot material in Keiji is blasted by metal shot having a hardness greater than the non-ferrous shot material, rather than being blasted against a metal body having a metal hardness at least equal to that of the non-ferrous shot material as set forth in claim 45 and (2) recovering and re-blasting the non-ferrous shot material as set forth in claim 46. Straub, however, teaches that the fatigue strength of shot material may be increased (see the abstract) by accelerating the shot material against a target member 24 which has a hardness equal to or greater than the hardness of the shot material (see col. 5, lines 4-7). Although the illustrated accelerating means of Straub relies on the force of gravity, Straub expressly teaches that the accelerating means may be a compressed air nozzle (see col. 4, line 41). Straub also teaches that the shot material may be recovered and re-blasted (see the paragraph bridging columns 4 and 5). Taken as a whole, Keiji and Straub teach that (a) blasting shot material with metal shot having a

hardness greater than the shot material and (b) blasting shot material against a body having a hardness at least equal to that of the shot material are art-recognized alternatives for improving the properties of shot material. This being the case, we are of the opinion that a combined consideration of Keiji and Straub would have fairly suggested to the artisan to blast the non-ferrous shot material of Keiji against a metal body having a hardness at least equal to that of the shot material in view of the teachings of Straub.

The appellant argues that "Keiji fails to disclose or suggest a non-ferrous metal shot material" (reply brief, page 12). We are at a complete loss to understand such a contention since Keiji expressly teaches that the alloy powder consists of (a) green compacts of high hardness "WC" (i.e., tungsten carbide) and (b) a green compact binder of "Co" (i.e., cobalt), **both** of which are non-ferrous.

It is also the appellant's contention that Keiji teaches a method of utilizing impact forces for smoothing and increasing the density of green compacts rather than making surface-hardened metal shot. While Keiji does mention that the surface of the green compact (i.e., binder of cobalt) is smoothed by

the impact force of the shot and the density of the green compacts (i.e., tungsten carbide) is increased, the powdered alloy of Keiji is impacted in order to increase the temperature above the recrystallization temperature of the binder, just as the appellant's powdered alloy is impacted in order to increase the temperature "at least to the recrystallization temperature of the binding agent" (see, e.g., claim 47). Accordingly, there is a sound basis to conclude that Keiji's method inherently forms surface-hardened metal shot as claimed.

Where, as here, there is a sound basis to believe that the critical function may, in fact, be an inherent characteristic of the relied-on reference, it is incumbent upon an appellant to prove that the relied on reference does not in fact possess the characteristics relied on. *See, e.g., In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) and *In re Best*, 562 F.2d 1252, 1254-55, 195 USPQ 430, 433 (CCPA 1977).

The appellant also notes on page 12 of the reply brief that "Keiji simply references the recrystallization temperature of a binder, and not that of a non-ferrous metal shot material." There is, however, no claim limitation which

requires **all** of the shot material to be heated "to or above" the recrystallization temperature. Note **dependent** claim 47 which sets forth that the powdered alloy comprises a plurality of green compacts, one of which is a binding agent, and that the temperature of the binding agent is increased to at least the recrystallization temperature.

From the recitations in this dependent claim, it is readily apparent that there is no intent upon the part of the appellant that all of shot material in parent claim 45 be heated to or above the recrystallization temperature.

In summary:

The rejection of claim 42 under 35 U.S.C. § 112, second paragraph, is affirmed.

The rejection of claims 34 and 45-47 under 35 U.S.C. § 103(a) as being unpatentable over Keiji is reversed.

A new rejection of claims 45-47 under 35 U.S.C. § 103(a) as being unpatentable over Keiji in view of Straub has been made.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a new ground of rejection pursuant to 37 C.F.R. § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 C.F.R. § 1.196(b) provides, "A new ground of rejection shall not be considered final for purposes of judicial review."

Regarding any affirmed rejection, 37 C.F.R. § 1.197(b) provides:

(b) Appellant may file a single request for rehearing within two months from the date of the original decision

37 C.F.R. § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (37 C.F.R. § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Should the appellant elect to prosecute further before the Primary Examiner pursuant to 37 C.F.R. § 1.196(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the appellant elects prosecution before the examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

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

AFFIRMED-IN-PART
37 C.F.R. § 1.196(b)

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Administrative Patent Judge)	
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)	BOARD OF PATENT
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