

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. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN L. EMMONS and ROBERT HARDESTY

Appeal No. 2001-1306
Application No. 08/939,762

ON BRIEF

Before WALTZ, LIEBERMAN, and DELMENDO, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1, 2 and 4 through 14. Claims 15 and 16 stand withdrawn from further consideration by the examiner as directed to a non-elected invention (Brief, pages 1-2; see 37 CFR § 1.142(b)). The only other claim pending in this application is claim 17, which has been allowed by the examiner (Brief, pages 1-2; Final Rejection dated Aug. 16, 1999, Paper No. 8, pages 4-5). We have jurisdiction pursuant to 35 U.S.C. § 134.

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According to appellants, the invention is directed to a method for brazing beryllium-aluminum alloy members to form a beryllium-aluminum alloy assembly, including use of a specific brazing flux and subsequent coating of the assembly with alumina-titania (Brief, pages 3-4). A copy of illustrative independent claim 1 is attached as an Appendix to this decision.

The examiner has relied upon the following references as evidence of obviousness:

Wallace et al. (Wallace)	3,951,328	Apr. 20, 1976
Daver	3,971,657	July 27, 1976
Kazakos et al. (Kazakos)	5,473,418	Dec. 05, 1995
Osame et al. (Osame)	5,697,045	Dec. 09, 1997

Claims 1, 2 and 4-8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Osame in view of Wallace (Answer, page 3).¹

Claims 9-14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Osame in view of Wallace, Daver and Kazakos (Answer, page 3).

We reverse all of the rejections on appeal essentially for the reasons stated in the Brief, Reply Brief, and as discussed below.

¹Without specifically identifying the rejection(s), the examiner states: "claims 1-2 and 4-14 are rejected under 35 U.S.C. § 103(a). This rejection" The problem with the examiner's statement, however, is that the final office action contains more than one rejection under 35 U.S.C. § 103. Nevertheless, since appellants have had due opportunity to respond to each individual rejection (see the Brief and Reply Brief), we will consider the rejections as set forth in the Final Rejection dated Aug. 16, 1999, Paper No. 8.

OPINION

The examiner finds that Osame discloses the brazing of aluminum alloys using a flux and matrix powder (Paper No. 8, page 2). The examiner applies Wallace to show a similar brazing process with use of minor amounts of LiF in the flux (Paper No. 8, page 3). As correctly argued by appellants (Brief, page 7; Reply Brief, page 2), neither Osame nor Wallace discloses the brazing of beryllium-aluminum alloys, much less the particular beryllium-aluminum alloys required by the claims (at least 45% beryllium by volume; see claim 1 on appeal).

The examiner argues that the references applied show the brazing of aluminum or aluminum alloys "and beryllium may be present in the flux." Paper No. 8, page 6. The examiner finds that "[a]luminum alloys includes aluminum alloys which contain beryllium," citing Osame, col. 3, ll. 1-22. *Id.* This finding by the examiner is incorrect and regardless has no relevance to the beryllium-aluminum alloy assembly since this citation from Osame is only directed to the *matrix powder*, not the assembly being brazed nor the flux (see Osame, col. 3, ll. 12-22). Thus beryllium is not taught by Osame to be a flux component or part of the alloy assembly but is taught to be part of the matrix powder component.

The examiner further argues that "Be is mentioned in the prior art although not the exact same composition." Answer, page 3. The examiner then finds that Osame "does disclose the use of Be" without specifying that this use is as part of the matrix powder (Answer, sentence bridging pages 3-4).

The examiner further concludes that "the method of making a product using different starting materials may be obvious if the method is otherwise the same," citing, *inter alia*, *In re Durden* (Answer, page 4). As correctly argued by appellants, this conclusion of the examiner is incorrect (Brief, page 10; see *In re Ochiai*, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1132 (Fed. Cir. 1996)).

We note that Daver and Kazakos do not remedy the above discussed deficiency in Osame and Wallace, as these secondary references were applied to show removal of an oxide coating by the flux (Daver) and ceramic coatings (Kazakos) (Paper No. 8, page 4). Furthermore, the examiner has failed to present any convincing showing as to why the secondary references to Daver and Kazakos would have been combined with Wallace and Osame (Answer, page 4). See *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The examiner has not presented any convincing evidence or reasoning as to why one of ordinary skill in the art would have used the process of Daver to remove surface oxides in the process

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of Osame. Additionally, the examiner has not shown by convincing evidence or reasoning why one of ordinary skill in the art would have used the alumina-titania ceramic coating of Kazakos on the brazed surface of Osame. The examiner states the reasoning that the ceramic coating would have been used "because it protected the brazed surface and negates corrosion effects." Paper No. 8, page 4. However, the examiner has not shown any basis for this reasoning in the applied references, i.e., where in Osame was there a need for protecting the brazed surface and negating corrosion effects and where was the corresponding teaching in Kazakos.

Finally, we agree with appellants that the examiner has not shown that Kazakos is analogous art (Brief, pages 13-15). The examiner merely states that Kazakos "demonstrates the coating of a metal rod with alumina-titania" (Answer, page 4) but has not shown that Kazakos is within the field of endeavor of appellants or is reasonably pertinent to the particular problem with which appellants are involved. See *In re Paulsen*, 30 F.3d 1475, 1481, 31 USPQ2d 1671, 1675-76 (Fed. Cir. 1994).

For the foregoing reasons and those in the Brief and Reply Brief, we determine that the examiner has not established a *prima facie* case of obviousness based on the reference evidence. Accordingly, we reverse all of the rejections on appeal.

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OTHER ISSUES

We note, as discussed above, that the examiner has not supplied any evidence of brazing beryllium-aluminum alloys. However, we also note Pritchard et al., U.S. Patent No. 5,470,014, issued Nov. 28, 1995, of record, which teaches that "[t]he industry presently uses the same processes for the brazing of aluminum-beryllium alloy parts as it uses for aluminum parts." See col. 1, ll. 25-27. Upon the return of this application to the jurisdiction of the examiner, the examiner and appellants should reconsider the patentability of the claimed subject matter in view of Pritchard and the previously applied prior art.

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The decision of the examiner is reversed.

REVERSED

THOMAS A. WALTZ)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
PAUL LIEBERMAN)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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)	
ROMULO H. DELMENDO)	
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TAW/jrg

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APPENDIX

1. A method for brazing beryllium-aluminum alloy members to form a beryllium-aluminum alloy assembly wherein the beryllium of at least one of said beryllium-aluminum alloy members being at least 45% by volume, said method comprising the steps of:

(A) placing said beryllium-aluminum alloy members to form said beryllium-aluminum alloy assembly;

(B) disposing a braze alloy at a location to form a braze joint between said beryllium-aluminum alloy members;

(C) applying a brazing flux to said braze alloy at said location to form said braze joint, said brazing flux comprising:

- (a) aluminum fluoride, and
- (b) lithium fluoride; and

(D) heating said beryllium-aluminum alloy members and said braze alloy to form said beryllium-aluminum alloy assembly.

