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. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

_____

Ex parte KLAUS TANK

_____

Appeal No. 1999-2735
Application No. 08/672,440

_____

HEARD: JANUARY 10, 2001

_____

Before FRANKFORT, NASE, and LAZARUS, Administrative Patent Judges.

LAZARUS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 12, which are all of the claims pending in this application.

We reverse.

BACKGROUND

The appellant's invention relates to tool components (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

THE PRIOR ART

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

Olmstead et al. (Olmstead)	5,472,376	Dec. 5, 1995
Adia et al. (Adia)	EP 0 659 510 A1 (European Patent Application)	Jun. 28, 1995

THE REJECTION

Claims 1 through 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Olmstead in view of Adia.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejection, we make reference to the final rejection (Paper No. 6, mailed March 16, 1998) and the answer (Paper No. 11, mailed December 22, 1998) for the examiner's complete reasoning in support of the rejection, and to the brief (Paper No. 10,

filed September 25, 1998) and reply brief (Paper No. 12, filed February 24, 1999) for the appellant's arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by the appellant and the examiner. As a consequence of our review, we make the determinations which follow.

Claim 1 reads as follows:

1. A tool component comprising an abrasive compact having a flat working surface presenting a cutting edge around its periphery and an opposite surface bonded to a cemented carbide substrate along an interface, a recess extending into the cemented carbide substrate from the interface filled with abrasive compact and having a central portion and an outer portion, shallower than the central portion, which defines, in plan, at least one substantially wedge-shaped configuration, the configuration having a narrow end coincident with a side surface of the component and sides extending into the component and diverging from the narrow end.

Olmstead discloses tool components comprising a composite abrasive compact which consist of an abrasive compact layer

bonded to a substrate which is generally a cemented carbide substrate (column 1, lines 4-8). As stated in the SUMMARY OF THE INVENTION "a tool component comprises ... a recess extending into the substrate from the interface, the recess having a side wall and a base located entirely within the carbide substrate" (column 1, lines 41-51). In the subsequent DESCRIPTION OF EMBODIMENTS it is further disclosed that "[t]he material-filled recess has a side wall and a base which are both located entirely within the carbide substrate. This means that the entire side wall and the base will be provided and defined by the carbide substrate" (column 2, lines 7-10). Olmstead's Figs. 1 and 2 show the tool component comprising a cemented carbide substrate (12) having a recess (20) with side walls (22) and a base (24) entirely located within the carbide substrate and filled with an abrasive compact layer (10) (col. 3, lines 13-19, Figs. 1 and 2). In Figs. 5 and 6, the embodiment relied on by the examiner, a recess (40) extends into a substrate (32) from an interface (34). The recess (40) is disc-shaped having side walls (42) and one step (44a).

Adia teaches a tool component having an abrasive compact layer (10) bonded to a cemented carbide substrate (12) having a recess, filled with abrasive compact, which is V-shaped (20) in plan (Fig. 1) or cross-shaped (40) in plan (Fig. 3). Adia's recess (20) extends to the periphery where the intersection of the V-shape, portion (21), "is coincident with the periphery of the carbide substrate (12)" (column 3, lines 41-43).

Based on our analysis and review of Olmstead and claim 1, it is our view that the only difference is that Olmstead's recess does not have, as recited in claim 1, a central portion and an outer shallower portion which defines, in plan, at least one substantially wedge-shaped configuration... having a narrow end coincident with a side surface of the component and sides extending into the component and diverging from the narrow end. With regard to this difference, the examiner determined that it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize an outer portion comprising a wedge-shaped configuration with the abrasive composite tool of Olmstead, as

taught by Adia since such a modification would have reduced the overall processing time and increased machining efficiency (answer, page 4). The appellant argues that the combination proposed by the examiner is based on hindsight (brief, page 13) and that any combination of the two references would not lead to the claimed tool component (brief, page 14).

Although the examiner proposes that the combined teachings of Olmstead and Adia render the claimed structure obvious under 35 U.S.C. § 103, we do not find any teaching or suggestion of how the V-shape (or cross-shape) recess (20, 40) of Adia would be combined with Olmstead to arrive at the subject matter of the appellant's claim 1. The examiner suggests that one of ordinary skill could have modified step (44a) of Olmstead's embodiment of Figs. 5 and 6 with Adia's wedge-shaped configuration. However, it is our view that incorporating Adia's V-shape recess (20), which has a portion (21) coincident with the periphery of the carbide substrate (12), into Olmstead's shallow recess portion is contrary to Olmstead's teaching that "the recess is surrounded by carbide and is located entirely within the carbide substrate" (column

3, lines 14-16). Olmstead repeats this requirement in slightly different ways five times in his patent (the Abstract; column 1, lines 41-51; column 2, lines 7-10; column 3, lines 14-16; and, claim 1). It is our opinion that Olmstead's requirement that "the recess is surrounded by carbide and is located entirely within the carbide substrate" would have precluded an artisan from applying Adia's V-shaped recess which extends so that it is coincident with the periphery of the carbide substrate to Olmstead's tool component, especially since Adia does not teach or suggest any benefit from extending the V-shaped recess to be coincident with the periphery of the carbide substrate.

We also note that Adia teaches the V-shape recess (20) to be in the deepest part of the recess (Fig. 2) whereas claim 1 on appeal recites that the recess portion that is substantially wedge-shaped in configuration and filled with abrasive compact is the "outer portion, shallower than the central portion." For these reasons we do not find any teaching or suggestion to incorporate Aida's V-shape (or

cross-shape) recess which extends to the periphery of the carbide substrate into the shallower recess portion of Olmstead's recess which is surrounded by the carbide substrate and does not extend to the periphery.

Accordingly, we do not see in either Adia or Olmstead any basis for their combination in the manner suggested by the examiner to arrive at the claimed subject matter and we can only conclude that the examiner's finding, in this regard, is based on impermissible hindsight.[1]

It is our opinion that the combined teachings of Olmstead and Adia would not have suggested the subject matter recited in claim 1 to one of ordinary skill in the art and we will not sustain the examiner's rejection of claim 1 or of claims 2 through 12 which include the limitations of claim 1.

---

[1] Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor. See Para-Ordnance Mfg. v. SGS Importers Int'l, 73 F.3d 1085, 1087, 37 USPQ 2d 1237, 1239 (Fed. Cir. 1995) (citing W. L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)).

CONCLUSION

To summarize, the decision of the examiner to reject claims 1 through 12 under 35 U.S.C. § 103(a) is reversed.

REVERSED

CHARLES E. FRANKFORT Administrative Patent Judge	)	
JEFFREY V. NASE Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
RICHARD B. LAZARUS Administrative Patent Judge	)	

rbl/ki

LEOPOLD PRESSER ESQ
SCULLY SCOTT MURPHY PRESSER
400 GARDEN CITY PLAZA
GARDEN CITY, NY 11530