

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(2) is not binding precedent of the Board.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 KENNETH L. NIEBAUER

Appeal No. 97-0593
Application 08/365,906¹

ON BRIEF

Before CALVERT, FRANKFORT and STAAB, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

¹ Application for patent filed December 29, 1994.

Appeal No. 97-0593
Application 08/365,906

DECISION ON APPEAL

This is a decision on appeal from the examiner's refusal to allow claims 1 through 5, 7, 8 and 10 through 16 as amended subsequent to the final rejection in a paper filed March 25, 1996 (Paper No. 9). Claims 6 and 9 have been canceled.

Appellant's invention relates to a cutting insert for cutting a workpiece by removing chips of material therefrom and, more specifically, involves a cutting insert with a chipbreaker that effectively breaks thin, foil-like chips that result from fine cuts of the workpiece. As indicated on page 2 of the specification, these thin, foil-like chips have a thickness that may vary between .005 and .009 inches and are more difficult to curl and embrittle to the extent necessary to cause them to continuously break into small pieces. The invention is broadly described in the paragraph bridging pages 3 and 4 of the specification as follows:

[T]he cutting insert comprises an insert body having a cutting edge defined by an intersection of top and side relief surfaces, and a chipbreaker configuration including the combination of an elongated groove disposed on the top surface of the insert adjacent

Appeal No. 97-0593
Application 08/365,906

to the cutting edge, and a plurality of discrete recesses axially spaced apart over the groove. Both the groove and the individual

recesses include a back or rear wall opposite to the cutting edge that terminates at a point higher on the top surface of the insert than the edge for curling and work-hardening the chips. Additionally, each of the discrete recesses has a pair of opposing side edges for engaging and corrugating the chips as they flow from the cutting edge toward the back and rear walls of the groove and recesses. The combination of the corrugating and curling forces applied by the recesses and the groove effectively work-hardens the thin foil-like chips generated during a fine-cutting operation, thereby embrittling them and causing them to continuously break into small segments that are easily expelled from the vicinity of the cutting operation.

Claims 1, 11 and 16 are representative of subject matter on appeal and a copy of those claims may be found in Appendix I to appellant's brief.

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

Romagnolo	4,044,439	Aug. 30, 1977
Holma et al. (Holma)	4,215,957	Aug. 5, 1980
Warren	4,447,175	May 8, 1984
Stashko	4,880,338	Nov. 14, 1989

Appeal No. 97-0593
Application 08/365,906

Claims 1 through 5, 7, 10, 11 and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over Stashko in view of Warren.

Claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over Stashko in view of Warren as applied above, and further in view of Holma.

Claims 12 through 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Stashko in view of Warren as applied to claim 11 above, and further in view of Romagnolo.

Rather than reiterate the examiner's full explanation of the above-noted rejections and the conflicting viewpoints advanced by the examiner and appellant regarding those rejections, we make reference to the examiner's answer (Paper No. 13, mailed July 1, 1996) for the examiner's reasoning in support of the rejections, and to appellant's brief (Paper No. 12, filed May 22, 1996) and reply brief (Paper No. 14, filed July 22, 1996) for appellant's arguments thereagainst.

Appeal No. 97-0593
Application 08/365,906

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, to the declaration of Kenneth L. Niebauer filed March 25, 1996 and to the respective positions articulated by appellant and the examiner. As a consequence of this review, we have made the determination that the examiner's rejections under 35 U.S.C. § 103 will not be sustained. Our reasons follow.

After careful review of the basic combination of Stashko and Warren, we must agree with appellant that there is no teaching, suggestion or incentive in the applied references which would have led one of ordinary skill in the art to their combination as posited by the examiner so as to arrive at the particular form of cutting insert as claimed by appellant in independent claims 1, 11 and 16 on appeal. While the examiner is of the view that it would have been obvious to one of ordinary skill in the art to modify the configuration of the spherical recesses or depressions (36) of Stashko so as to have

substantially linear side edges that are aligned orthogonally with respect to the cutting edges (16) of the cutting insert therein merely because Warren shows a cutting insert having recesses (18) with linear side edges that are so oriented, we find such a position to be untenable.²

Like appellant, we find the disclosure of the Stashko patent to be inconsistent and generally ambiguous with regard to the width dimension of recesses or depressions (36) therein relative to the width dimension of the groove defined by surfaces (20, 24) of the cutting insert. All of the top plan views of the inserts in Stashko (i.e., Figures 1A, 6 and 7) show the width dimension of recesses or depressions (36) to be smaller than the width dimension of the groove adjacent the cutting edges of the inserts. However, sectional views seen in Figures 2 and 5 of the patent inexplicably appear to show the width dimension of a recess or depression (36) as being larger than the width dimension of the groove. In light of these inconsistencies, it

² Like the examiner, we note that while the specification in Stashko uses reference characters to refer to the various elements of the cutting inserts described therein, the drawings of Stashko have no reference numerals associated therewith.

Appeal No. 97-0593
Application 08/365,906

would seem to be rather speculative to say that Stashko fairly teaches the width relationship between the recesses and the groove as set forth in appellant's claims on appeal.

In addition, we observe that all of the drawings in Stashko show the recesses (36) as being substantially entirely located in the inclined surface (24) of the groove that is spaced away from the cutting edge and adjacent the raised seating surface of the insert. By contrast, the small recesses (18) in the cutting insert of Warren are shown and expressly described as being formed and spaced along the length of the cutting edge "in the uppermost portion of said planar descending wall" (20) of the cutting insert. See particularly, Figures 1-5, 7 and 8 of Warren and column 1, lines 60-67.

Considering (1) the distinct differences between the cutting inserts of Stashko and Warren, both structurally and operationally, (2) the declaration filed by appellant on March 25, 1996, and (3) the arguments made by appellant in both the brief and the reply brief, it is our opinion that the examiner's combination of Stashko and Warren is based on

Appeal No. 97-0593
Application 08/365,906

impermissible hindsight derived from appellant's own teachings and not from the prior art references themselves as the teachings thereof would have been understood by one of ordinary skill in the art at the time of appellant's invention. Like appellant, we view the examiner's position regarding the combination of Stashko and Warren as being an improper "obvious to try" approach.

Having also reviewed the patents to Holma and Romagnolo applied by the examiner against certain of the dependent claims on appeal, we find nothing therein which would overcome or

provide for the deficiencies noted above in the teachings or suggestions of the basic combination of Stashko and Warren.

Lacking any reasonable teachings in the prior art itself which would appear to have fairly suggested the claimed subject matter as a whole to a person of ordinary skill in the art, or any viable line of reasoning as to why such artisan would have otherwise found the claimed subject matter to have been obvious in light of the teachings of the applied references, we

Appeal No. 97-0593
Application 08/365,906

must refuse to sustain the examiner's rejections of claims 1 through 5, 7, 8 and 10 through 16 under 35 U.S.C. § 103.

We note the examiner's citation in the answer (Pages 7-8) of several prior art patents which purportedly show recesses or depressions in cutting inserts wherein the recesses have linear opposing side edges oriented as in appellant's cutting insert, and the examiner's assertions that such recesses are "extremely well known in the chip breaker art and are used successfully in many different cutting inserts." However, these patents have not been set forth in the statement of any of the § 103 rejections before us on appeal and therefore form no part of the rejections at issue that are before us for review. As pointed out by the Court in In re Hoch, 428 F.2d 1341, 1342 n.3, 166 USPQ 406, 407 n.3 (CCPA 1970), where a reference is relied upon to support a rejection, whether or not in a minor capacity, there would appear to be no excuse for not positively including the reference in the statement of the rejection. However, in passing, we observe that, like the recesses in Warren, the recesses in both Lundgren (e.g., 19 of Fig. 6) and van Barneveld are located in an inclined wall of the cutting insert closely

Appeal No. 97-0593
Application 08/365,906

adjacent the cutting edge of the insert and not in the manner
shown in Stashko.

In light of the foregoing, the decision of the examiner
is reversed.

REVERSED

IAN A. CALVERT)
Administrative Patent Judge)
)
)
)
CHARLES E. FRANKFORT)
Administrative Patent Judge)
)
)
)
LAWRENCE J. STAAB)
Administrative Patent Judge)

BOARD OF PATENT
APPEALS AND
INTERFERENCES

Appeal No. 97-0593
Application 08/365,906

James G. Procelli
Kennametal Inc.
P.O. Box 231
Latrobe, PA 15650