

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

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARCOS ANTONIO RODRIGUES MOURO

Appeal 2006-1555
Application 10/101,228
Technology Center 3600

Decided: July 27, 2007

Before WILLIAM F. PATE III, MURRIEL E. CRAWFORD, and HUBERT C. LORIN, Administrative *Patent Judges*.

WILLIAM F. PATE III, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF CASE

This is an appeal from the final rejection of claims 1-9. These are the only claims in the application.

We have jurisdiction over the appeal under 35 U.S.C. §§ 6 and 134.

The claimed invention is directed to an adjustable steering tie-rod for an automobile. The tubular intermediate tie rod adjusting member, threaded

on the inside and the outside, has both inside and outside threads interrupted by longitudinal grooves.

Claim 1 reproduced below, is further illustrative of the claimed subject matter.

I. An adjustable steering tie-rod assembly having a longitudinal locking device, said assembly comprising:

a steering terminal having an external threaded region on a rod portion thereof, the rod portion being in the interior of an intermediate member with internal and external threads, said internal and external threads having pitches opposite to each other which in turn is coupled in a tubular extremity of a steering tie-rod with internal threads, wherein the intermediate member is provided with longitudinal grooves in sectioned lines on its internal and external threads.

The references of record relied upon by the examiner as evidence of obviousness are:

Ricca	US 3,479,675	Nov. 25, 1969
Krawczak	US 6,074,125	Jun. 13, 2000
Fox	US 6,276,399 B1	Aug. 21, 2001

Claims 1-7 and 9 stand rejected under 35 U.S.C. § 103 as being unpatentable over Krawczak in view of Ricca.

Claim 8 stands rejected under 35 U.S.C. §103 as being unpatentable over Krawczak in view of Ricca and Fox.

ISSUE

The sole issue for our consideration is whether the examiner has established the *prima facie* obviousness of the subject matter of claims 1-9.

PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. *See In re Fine*, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), *viz.*, (1) the scope and content of the prior art; (2) the differences between the prior art and the claims at issue; and (3) the level of ordinary skill in the art. “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Furthermore, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006)). Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. *See Oetiker*, 977 F.2d at 1445, 24

USPQ2d at 1444; *Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

FINDINGS OF FACT AND ANALYSIS

We have carefully reviewed the rejections on appeal in light of the arguments of the appellant and the examiner. We find ourselves in agreement with the appellant that none of the applied prior art teaches “longitudinal grooves in sectioned lines” (Claim 1) or a tubular member with internal and external threads “provided with longitudinal grooves” to inhibit spontaneous rotation (Claim 3).

Krawczak discloses a tie rod assembly that admittedly lacks a plurality of grooves. The examiner has cited Ricca as showing a plurality of grooves (7a, 10) on external and internal threads. In reality, the threaded portions of Ricca are roughened. The preferred form of roughening is diamond knurling. Col. 2, ll. 14-16. While we acknowledge the examiner’s argument that the valley between two longitudinally juxtaposed knurling peaks is a groove, we agree with appellant that this is a strained interpretation of the term “groove.” We are confident that one of ordinary skill would not regard such a valley as a “groove” in the ordinary or customary usage of that word.

Furthermore, it is not clear that there remains two longitudinally juxtaposed peaks after the screw threads are cut in the knurling. In such a case, the examiners peak-to-peak groove is merely a slanted valley that extend along some portion of a peak's profile. To the extent the examiner is relying on the peak-to-peak profile as a groove, we note that the undisturbed knurling of Figures 1, 3, 5 and 7 is merely an intermediate stage of manufacture of the Ricca fastener. It would not have been obvious to combine an unfinished fastener profile into the finished automotive product that is Krawczak.

Additionally, we agree with the appellant that there is no suggestion or motivation to combine the teachings of Krawczak and Ricca. The examiner points to Ricca at Col. 2, ll. 63-67 as a suggestion or motivation. In fact, we find that this disclosure teaches away from the combination in that it clearly states that when the knurled portion reaches the screw threads the fastener will jam on the threads of the mating element. It is unclear how a knurled intermediate member could function to provide adjustability if it jammed when the knurled portion reached the threads on the mating element.

The disclosure of Fox in no way ameliorates the problems we have encountered with the Krawczak and Ricca references.

Appeal 2006-1555
Application 10/101,228

In summary, the rejections of claim 1-9 under 35 U.S.C. § 103 are reversed.

REVERSED

vsh

LINIAK BERENATO, LONGACRE & WHITE
STE. 240
6550 ROCK SPRING DRIVE
BETHESDA MD 20817