

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte TOSHIFUMI HIBI

Appeal No. 2002-1145
Application No. 09/335,471

HEARD: November 5, 2002

Before FRANKFORT, NASE, and BAHR, Administrative Patent Judges.
NASE, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 12 and 13, which are all of the claims pending in this application.

We REVERSE.

BACKGROUND

The appellant's invention relates to a jig for use in assembling a toroidal continuously variable transmission (specification, p. 1). A copy of the claims under appeal is set forth in the appendix to the appellant's brief.

Claim 12 stands rejected under 35 U.S.C. § 103 as being unpatentable over the appellant's admitted prior art¹ (AAPA) in view of Kellogg².

Claim 13 stands rejected under 35 U.S.C. § 103 as being unpatentable over the AAPA in view of Kellogg as applied to claim 12, in further view of Picot³.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellant regarding the above-noted rejections, we make reference to the final rejection (Paper No. 15, mailed July 11, 2001) and the answer (Paper No. 18, mailed October 31, 2001) for the examiner's complete reasoning in support of the rejections,

¹ The admission of prior art is set forth in the Background of the Invention section found on page 1 of the specification. The examiner incorrectly declared (answer, p. 3) that admitted prior art was found on page 2 of the specification. Page 2 of the specification sets forth the Summary of the Invention, not admitted prior art. However, at the hearing, the appellant acknowledged that the admitted prior art included a stepped shaft with a male screw formed on the small diameter part thereof on which a nut is placed.

² U.S. Patent No. 162,077 issued April 13, 1875.

³ U.S. Design Patent No. 201,401 issued June 15, 1965.

and to the brief (Paper No. 17, filed October 15, 2001) and reply brief (Paper No. 19, filed December 31, 2001) 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, and to the respective positions articulated by the appellant and the examiner. Upon evaluation of all the evidence before us, it is our conclusion that the evidence adduced by the examiner is insufficient to establish a prima facie case of obviousness with respect to the claims under appeal. Accordingly, we will not sustain the examiner's rejection of claims 12 and 13 under 35 U.S.C. § 103. Our reasoning for this determination follows.

In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A prima facie case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988) and In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). However, it is well-settled that patentability under 35 U.S.C. § 103 may be predicated on discovering the

cause of a problem even though, once that cause is known, the solution would have been obvious. See In re Bergy, 596 F.2d 952, 966, 201 USPQ 352, 365 (CCPA 1979), aff'd sub nom. Diamond v. Chakrabarty, 447 U.S. 303, 206 USPQ 193 (1980) and cases cited therein.

Claim 12, the sole independent claim on appeal, reads as follows:

A method of assembling a toroidal continuously variable transmission (CVT), the transmission comprising a transmission case for housing a first toroidal unit and a second toroidal unit, the first toroidal unit having a first inside disk and a first outside disk, the second toroidal unit having a second inside disk and a second outside disk; and an axial member having a step between a large diameter part and a small diameter part, a male screw being formed on the small diameter part, the method comprising:

(a) connecting the first outside disk to the axial member using a first ball spline having first spline balls;

(b) screwing a sheath member, having a female screw which screws on the male screw, onto the small diameter part of the axial member such that the sheath member abuts the step, the sheath member having an outer diameter which gradually decreases from an outer diameter equal to that of the large diameter part;

(c) passing the axial member and the sheath member into the transmission case and through the first inside disk and the second inside disk;

(d) unscrewing the sheath member from the axial member;

(e) inserting second spline balls between the second outside disk and the axial member; and

(f) placing a nut on the axial member.

In the rejection of claim 12 before us in this appeal (final rejection, pp. 2-3), the examiner (1) set forth the teachings of the AAPA and Kellogg; (2) generally ascertained the differences between claim 12 and the AAPA; and (3) determined that it would have

been obvious to one of ordinary skill in the art, at the time of invention, to have assembled the toroidal continuously variable transmission disclosed by the AAPA using a sheath to protect the screw threads of the axial member during assembly in light of the teachings of Kellogg.

The appellant argues that there is no motivation to have combined the applied prior art in the manner set forth in the rejection to arrive at the claimed subject matter since the damage caused by the assembly process of the AAPA (see page 7 of the specification) was not recognized in the prior art. We agree. As set forth above, patentability under 35 U.S.C. § 103 may be predicated on discovering the cause of a problem even though, once that cause is known, the solution would have been obvious. In our view, the only suggestion for modifying the AAPA in the manner proposed by the examiner to arrive at the claimed method of assembling a toroidal continuously variable transmission stems from hindsight knowledge derived from the appellant's own disclosure since the AAPA does not recognize any problem with its assembly process. The use of such hindsight knowledge to support an obviousness rejection under 35 U.S.C. § 103 is, of course, impermissible. See, for example, W. L. Gore and Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

For the reasons set forth above, the decision of the examiner to reject claim 12, and claim 13 dependent thereon, under 35 U.S.C. § 103 is reversed.⁴

CONCLUSION

To summarize, the decision of the examiner to reject claims 12 and 13 under 35 U.S.C. § 103 is reversed.

REVERSED

CHARLES E. FRANKFORT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JEFFREY V. NASE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JENNIFER D. BAHR)	
Administrative Patent Judge)	

⁴ We have also reviewed the reference to Picot additionally applied in the rejection of claim 13 (dependent on claim 12) but find nothing therein which makes up for the deficiencies of the AAPA and Kellogg discussed above regarding claim 12.

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