

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(2) is not binding precedent of the Board.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. 28

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte ALFRED BEIER and DIETRICH DISTLER

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Appeal No. 1998-0616  
Application No. 08/614,347

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HEARD: January 10, 2001

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Before CALVERT, COHEN, and GONZALES, Administrative Patent  
Judges

GONZALES, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 5. Claims 6 through 9, the only other claims in the application, stand withdrawn from consideration under 37 CFR § 1.142(b).

We REVERSE and REMAND the application to the examiner for further consideration.

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The appellants' invention is directed to a control shaft arrangement. A copy of the claims under appeal is set forth in the appendix to the appellants' brief (Paper No. 17).

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

Matt	4,903,543	Feb. 27, 1990
Morishima	61-129291	Jun. 17, 1986
(Published Japanese Appl.)		

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(b) as anticipated by Matt.

Claims 3 through 5 stand rejected under 35 U.S.C. § 103 as unpatentable over Matt in view of Morishima.<sup>1</sup>

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding the above-noted rejections, we make reference to the answer (Paper No. 20) for the examiner's complete reasoning in support of the rejections, and to the brief for the appellants' arguments thereagainst.

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<sup>1</sup> In determining the teachings of Morishima, we will rely on the translation provided by the PTO. A copy of the translation is attached for the appellants' convenience. Any reference in this decision to Morishima by page is to this translation.

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OPINION

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

The § 102(b) rejection

We will not sustain the 35 U.S.C. § 102(b) rejection of claims 1 and 2.

The invention is directed to a control shaft arrangement.

With reference to the embodiment of the invention illustrated in Figures 1-3 of the appellants' drawings, the control shaft arrangement defined by appealed claim 1 comprises a shaft member 1 and at least one control element 2 having an aperture 5 which receives the shaft and at least one burr<sup>2</sup> 15 raised on the shaft by displacement of shaft material so as to affix the

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<sup>2</sup> Webster's Third New International Dictionary, (1971) defines a "burr" as "7: a thin ridge or area of roughness produced in cutting or shaping metal (as in drilling, turning, or blanking)."

control element axially to the shaft member.

Matt discloses a camshaft for controlling valves in internal combustion engines including a shaft 1 and at least one cam 2 affixed to the shaft. The cam has a recess or aperture 4 for receiving the shaft. The recess has at least one radially inwardly directed projection 5 which engages a corresponding groove in the shaft. At least one portion C of the area of the shaft in which the cam is to be provided has a diameter which is greater than the remaining areas of the shaft. The increased diameter portion C of the shaft is a bead-like material displacement which extends circumferentially on the shaft. The cam is forced onto the increased diameter portion of the shaft by means of a tool, not illustrated. As a result, each projection 5 performs a chip-removing procedure in the manner of a planing tool so as to form a groove 9, in the increased diameter portion C as illustrated in Figures 6 and 7. See col. 4, l. 57 through col. 5, l. 11.

The appellants argue (brief, p. 8) that the grooves 9 are formed by Matt in such a manner that no burr is formed. In support, the appellants rely on Matt's teaching that

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[o]nce the cam 2 has reached its intended position, the cam 2 is securely and rigidly seated on the increased diameter portion C. This chip-removing cutting or broaching of the hard cam by means of the sharp cutting edge 6 results in a tight fit of the cam on the shaft. In its effect, this tight fit corresponds to a press fit acting on the existing number of cutting edges. Additionally, since the cutting edges which form the groove 9 in a chip-removing manner when the cam is pressed on are wedged onto the shaft in a positively locking manner, the cams are secured against rotation.

See brief, pp. 9, 10. Appellants point out that no raised burr is mentioned anywhere in the Matt specification nor does Matt provide a raised burr for retaining a cam in the axial direction on the cam shaft. See brief, p. 10.

It is the examiner's position that Matt's projections 5 will produce burrs or rough edges at the grooves 9 and that a "burr" is by definition a rough edge. See answer, p. 5. The examiner is also of the opinion that the language of claim 1 requiring the burr to be "raised on the shaft member by displacement of shaft material" is a method limitation that carries no patentable weight and, at any rate, Matt's Figures 4 and 6 show a "burr" being raised on the shaft. See answer, p. 6.

To begin with, we agree with the appellants' argument

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(brief, p. 14) that the language "raised on the shaft member by displacement of shaft material" defines certain structure of the raised burr, i.e., that the raised burr is formed of shaft material, which may not be ignored.

In addition, the examiner's position that Matt's projections 5 will produce burrs or rough edges at the grooves 9 is unduly speculative. Matt gives no express indication that grooves 9 have rough edges sufficient for retaining the cam in the axial direction on the cam shaft. Under principles of inherency, when a reference is silent about an asserted inherent characteristic, it must be clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). As the court stated in In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981)(quoting Hansgirg v. Kemmer, 102 F.2d 212, 214, 40 USPQ 665, 667 (CCPA 1939)):

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. [Citations omitted.] If, however, the disclosure is sufficient

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to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.

In the present case, the fact that groove 9 is taught by Matt as being formed by cutting edges 6 as the cam is forced over the increased diameter portions does not necessarily mean that groove 9 has rough edges sufficient for retaining the cam in the axial direction on the cam shaft.

While Figures 4 and 6 depict what might be described as a "burr," it is apparent that this "burr" or chip, as it is referred to in Matt, is formed as the cutting edge 6 is forced over the beads or raised portions C and is removed or separated from the raised portion as the cutting edge passes over the raised portion to its final position shown in Figure 5. There is simply no description in Matt of a chip remaining attached to the raised portion C for retaining the cam in the axial direction on the cam shaft.

Accordingly, we shall not sustain the standing 35 U.S.C. § 102(b) rejections of claim 1 or of claim 2, dependent on claim 1.

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The § 103(a) rejection

Since Morishima does not cure the above noted deficiencies of Matt with respect to the subject matter recited in independent claim 1, we also shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 3 through 5.

REMAND TO THE EXAMINER

We remand this application to the examiner to obtain an English language translation of the published European patent application of Lespour<sup>3</sup> and to consider the patentability of the claimed subject matter in view of the teachings contained therein, considered alone and in combination with other prior art.

SUMMARY

The decision of the examiner to reject claims 1 through 5, under 35 U.S.C. §§ 102(b) and 103 is reversed.

Additionally, we have remanded the application to the

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<sup>3</sup> EPO 0 340 128 published November 2, 1989, cited by the appellant in the information disclosure document filed October 24, 1996 (Paper No. 5).

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examiner for consideration of additional issues.

REVERSED AND REMANDED

IAN A. CALVERT	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
IRWIN CHARLES COHEN	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
	)	
	)	
	)	
JOHN F. GONZALES	)	
Administrative Patent Judge	)	

jfg/vsh

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