

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte UDO SCHLEGEL and REINHARD VOGELSANG

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Appeal No. 2001-0313  
Application 09/033,874

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HEARD: March 22, 2001

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

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of independent claims 26, 28, 32, 34, 40, 45 and 48, and claims 2, 8, 9, 11, 16, 24, 27, 29 through 31, 33, 36, 39, 41, 42, 44, 46 and 47 as they depend therefrom. Independent claim 1 and claims 2, 8, 9, 11, 16, 19, 21, 24, 25, 35, 36, 39, 42, 44, 46 and 47 as they depend therefrom stand allowed. Claims

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3 through 7, 10, 12 through 15, 17, 18, 20, 22, 23, 37, 38 and 43  
have been canceled.

As noted on page 1 of the specification, appellants' invention relates to a method of producing bearing surfaces in the opening or "eye" of a connecting rod such as used in automobile engines. More specifically, the claims on appeal are directed to various methods associated with applying such a bearing surface to a connecting rod eye by applying a bearing layer directly to the connecting rod eye by thermal spraying of a bearing material thereon. Independent claims 26, 28, 32, 34, 40, 45 and 48 are representative of the subject matter on appeal and a copy of those claims may be found in the Appendix to appellants' brief.

The prior art references of record relied upon by the examiner are:

Arnhold et al. (Arnhold)	5,551,782	Sep. 3, 1996
Kloft et al. (EP '698) (translation attached)	EP 0770698 A1	May 2, 1997

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Independent claims 28, 32, 40, 45 and 48, as well as all of the claims which depend therefrom, stand rejected under 35 U.S.C. § 103 as being unpatentable over Arnhold.

Independent claims 26 and 34, as well as all of the claims which depend therefrom, stand rejected under 35 U.S.C. § 103 as being unpatentable over Arnhold in view of EP '698.

Rather than reiterate the conflicting viewpoints advanced by the examiner and appellants regarding the above-noted rejections, we refer to the final rejection (Paper No. 10, mailed October 28, 1999) and the examiner's answer (Paper No. 15, mailed August 9, 2000) for the reasoning in support of the above-noted rejections and to appellants' brief (Paper No. 14, filed May 22, 2000) for a full exposition of the arguments thereagainst.

#### OPINION

Having carefully reviewed the obviousness issues raised in this appeal in light of the record before us, we have come to the conclusion that the examiner's rejections of the appealed claims under 35 U.S.C. § 103 are not well founded and will not be

sustained. Our reasoning in support of this determination follows.

Each of the independent claims on appeal, except for claim 48, is directed to a method of producing a connecting rod with a connecting eye having a bearing layer, wherein the method includes as its first step, the step of "applying a bearing layer directly to a connecting rod eye by thermal spraying of a bearing material." In each of independent claims 26, 28, 32, 34, 40 and 45, the second step recited in the method is different, e.g., in claim 26 the second step is "reworking flat side surfaces of the connecting rod after the bearing material has been applied;" in claim 28 the second step requires "roughening the connecting rod eye before the bearing material is applied;" in claim 40 the second step is directed to "passing a gas stream through the connecting rod eye at a flow velocity in the range from about 3 m/s to about 15 m/s during thermal spraying;" and in claim 45 the second step requires "applying from 4 to 30 layers of bearing material." Claim 48 addresses a somewhat different method of producing a connecting rod with a connecting rod eye having a bearing layer.

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In rejecting claims 28, 32, 40, 45 and 48, as well as all of the claims which depend therefrom, under 35 U.S.C. § 103 as being unpatentable over Arnhold, the examiner has recognized that the method disclosed in Arnhold is directed to producing a connecting rod with a connecting eye having a bearing layer, wherein the method includes the step of applying the bearing layer directly to the connecting rod eye by thermal spraying of the bearing material. In dealing with the second step in each of independent claims 28, 32, 40 and 45, and the sequence of steps in claim 48, the examiner has indicated in the answer (pages 3-4) that

[t]he thickness of the materials as well as the particular materials used are article considerations absent any showing of criticality. Appellant merely argues that Arnhold et al do not teach these particulars, but has never argued any reason as to why they are critical. Further, to coat multiple eyes at the same time is considered a matter of duplication of the same process and it is not seen how this adds any novelty to the process as claimed. Forming the oil duct by boring is considered old and well known in the art, as the ducts are inherently formed by some method and ducts are well known to be formed by boring. The type of thermal spraying used is considered an obvious matter of design choice absent any showing of a new or unobvious result. Furthermore, regarding the roughening of the surface before the thermal spray is applied, Arnhold et al teach that "pretreatment of the bearing seat surface is generally not necessary, **or only necessary to a small extent.**" Roughening of the surface before the thermal spraying is a pretreatment, and this is clearly taught to be done, , at least to a small extent.

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Like appellants (brief, pages 20-21), we see nothing in the applied Arnhold reference which addresses the particular additional steps as set forth in appellants' claims 28, 32, 40 and 45 on appeal and likewise find the examiner's reliance on the assertion that such steps, and those of claim 48, are merely "old and well known in the art," or "a matter of duplication," or "an obvious matter of design choice," or lacking in criticality, to be entirely untenable, fraught with speculation and conjecture, and completely without evidential support. When the examiner's conclusory assertions and unsupported opinions of obviousness based on what was deemed to be old and well known in the art, or matters of design choice, etc., were challenged by appellants, as they were throughout the prosecution of this application, the examiner was required to cite references in support of her various positions. This the examiner has not done. In this regard, it appears that the examiner has lost sight of the need for establishing a prima facie case of obviousness and the need for the applied reference or references to actually disclose, teach or suggest the recited features of appellants' claimed subject matter, and for the applied prior art to provide some suggestion or motivation for making the combination thereof so as to result in the claimed subject matter in order to support a

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rejection based on obviousness under 35 U.S.C. § 103. In this case, we agree with appellants that the reference to Arnhold fails to teach or suggest the methods as set forth in claims 28, 32, 40 and 45 on appeal and that the examiner has provided no evidence whatsoever that such methods, and that of claim 48 on appeal, would have been obvious to one of ordinary skill in the art at the time of appellants' invention.

It follows from the foregoing that the examiner's rejection of claims 28, 32, 40, 45 and 48, as well as all of the claims which depend therefrom, under 35 U.S.C. § 103 as being unpatentable over Arnhold will not be sustained.

The next rejection for our review is that of independent claims 26 and 34, as well as all of the claims which depend therefrom, under 35 U.S.C. § 103 as being unpatentable over Arnhold in view of EP '698. In this instance, we agree with appellants' assertions on pages 22 and 23 of their brief, and for those reasons will not sustain the examiner's rejection of these appealed claims under 35 U.S.C. § 103 based on Arnhold and EP '698.

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The decision of the examiner to reject independent claims 26, 28, 32, 34, 40, 45 and 48, and claims 2, 8, 9, 11, 16, 24, 27, 29 through 31, 33, 36, 39, 41, 42, 44, 46 and 47 as they depend therefrom, under 35 U.S.C. § 103 is reversed.

In addition to our determinations above, we REMAND this application to the examiner to consider the following issues:

A) Whether the disclosure of Arnhold (at column 6, particularly, col. 6, lines 46-52) anticipates or renders obvious the method as set forth in claim 48 on appeal;

B) For the examiner to provide appropriate reference evidence or other prior art to teach or suggest the missing method steps noted above in claims 26, 28, 32, 34, 40 and 45 on appeal, and to articulate an appropriate motivation or suggestion for modifying the method of Arnhold to include any such steps;  
and

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C) For the examiner to clarify the record with regard to the missing 22 references and German Search Report supplied by appellants in their Supplemental Information Disclosure Statement filed October 19, 1998 (Paper No. 5).

REVERSED AND REMANDED

CHARLES E. FRANKFORT	)	
Administrative Patent Judge	)	
	)	
	)	
	)	BOARD OF PATENT
JENNIFER D. BAHR	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
	)	
RICHARD B. LAZARUS	)	
Administrative Patent Judge	)	

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