

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(2) is not binding precedent of the Board.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

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte JOHN COFFIN

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Appeal No. 95-0125  
Application 07/818,162<sup>1</sup>

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ON BRIEF

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Before McCANDLISH, Senior Administrative Patent Judge, and  
COHEN and Meister, Administrative Patent Judges.

COHEN, Administrative Patent Judge.

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<sup>1</sup> Application for patent filed January 8, 1992.

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DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 10 and 23 through 28. Claims 11 through 22 and 29 through 37, the only other claims in the application, stand allowed (Paper No. 11).

Appellant's invention pertains to an interferometer and to a bearing for an interferometer. An understanding of the invention can be derived from a reading of exemplary claims 1 and 23, copies of which appear in the appendix to appellant's brief.

As evidence of obviousness, the examiner has applied the documents listed below:

Auth	3,936,193	Feb. 3,
1976		

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Airpot Catalog, "A brief look at Airpot," pages 2 through 15,  
published prior to 1992<sup>2</sup>

A new reference made of record and applied by this  
panel of the board in a new ground of rejection, *infra*, is:

IBM Technical Disclosure Bulletin (IBM Bulletin),  
"INTERFEROMETER WITH MERCURY BEARINGS," Vol. 31, No. 9, pages  
244 through 246, February 1989.<sup>3</sup>

The following rejection is before us for review.

Claims 1 through 10 and 23 through 28 stand rejected  
under 35 U.S.C. § 103 as being unpatentable over Auth in view  
of the Airpot Catalog.

The full text of the examiner's rejection and  
response to the argument presented by appellant appears in the

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<sup>2</sup> This document was submitted by appellant, listed on the  
"Informational Statement" (FORM PTO-1449) dated January 8,  
1992 (Paper No. 2), and acknowledged to have been published  
prior to 1992.

<sup>3</sup> A copy of this document is attached to this decision.

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answer (Paper No. 13), while the complete statement of appellant's argument can be found in the brief (Paper No. 12).

In the brief (page 3), appellant indicates that, as to all of claims 1 through 10 and 23 through 28 on appeal, they may be grouped together. Accordingly, we select claim 1 for review, and all remaining claims stand or fall therewith. See 37 CFR 1.192(c)(7).<sup>4</sup>

#### OPINION

In reaching our conclusion on the obviousness issue raised in this appeal, this panel of the board has carefully considered appellant's specification and claims, the applied prior art,<sup>5</sup> and the respective viewpoints of appellant and

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<sup>4</sup> We note that claim 1 is drafted in a form consistent with that specified in 37 CFR § 1.75(e), wherein the claim preamble sets forth a general description of all elements which are conventional or known.

<sup>5</sup> In our evaluation of the applied teachings, we have considered all of the disclosure of each teaching for what it would have fairly taught one of ordinary skill in the art. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Additionally, this panel of the board has taken into account not only the specific teachings, but also the

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the examiner. As a consequence of our review, we make the determination which follows.

We reverse the examiner's rejection of appellant's claims under 35 U.S.C. § 103.

We fully appreciate the examiner's assessment of the applied references and the manner in which it is proposed that they be combined, as articulated in the body of the rejection. However, when we consider the Auth and Airpot reference teachings together, setting aside what appellant has informed us of in the

present application, we do not perceive that one of ordinary skill in the art would have derived therefrom a suggestion to selectively alter the air bearing arrangement of Auth, as proposed, based upon the disclosure within the Airpot document.

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inferences which one skilled in the art would reasonably have been expected to draw from the disclosure. See In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

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Therefore, the rejection of claim 1 is reversed, and the rejection of claims 2 through 10 and 23 through 28, which stand or fall therewith, is likewise reversed.

NEW GROUND OF REJECTION

Under the authority of 37 CFR § 1.196(b), this panel of the board introduces the following new ground of rejection.

Claims 1 through 10 and 23 through 28 are rejected under 35 U.S.C. § 103 as being unpatentable over the IBM Bulletin in view of the Airpot document and Auth.

The IBM Bulletin discloses a typical Michelson interferometer including, inter alia, a movable mirror assembly comprising a piston-like slide 1 (Figures 1 and 2) and a cylinder of glass (Figure 1), with the slide including mercury bearings to effect virtually frictionless movement (page 245) of the slide

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within the cylinder. The mercury is forced into annuli 4 on the periphery of the slide by a compression screw 2 (Figure 2).

The Auth patent is simply representative of typical features of known Michelson interferometers.

The Airpot document teaches a glass cylinder and a graphite piston for providing a precision fit therebetween, without lubrication and seals, particularly for a dashpot, snubber, and actuator. We perceive that one having ordinary skill in the art would have understood that the relationship between a piston and cylinder, as in the Airpot reference, may fairly be denoted a bearing relationship.<sup>6</sup>

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<sup>6</sup> Contrary to appellant's point of view (brief, pages 5 through 8), the Airpot document is considered to be appropriately viewed as analogous prior art in the present circumstance since its explicit teaching of slidably interfaced bearing materials for wear-free operation is seen to be reasonably pertinent to the bearing material problem addressed by both appellant and the IBM disclosure.

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In applying the test for obviousness,<sup>7</sup> we reach the conclusion that it would have been obvious to one having ordinary skill in the art, from a combined consideration of the applied references, to replace the glass cylinder and mercury bearing slide arrangement of the Michelson interferometer taught by the IBM Bulletin, with a glass cylinder and graphite slide arrangement; the interferometer of the IBM Bulletin apparently having typical features as represented by the Auth teaching, for example. In our opinion, the incentive on the part of one having ordinary skill in the art for making this modification would have simply been to take advantage of an alternative, known (Airpot reference) bearing arrangement (glass-graphite) for its expected benefits. In light of the above, the content of claims 1 and 23 would have been obvious. Considering each of dependent claims 2 through 10 and 24 through 28, we consider the knowledge and level of skill in the art, as revealed by

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<sup>7</sup> The test for obviousness is what the combined teachings of references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

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the applied teachings considered in their entirety, to provide a reasonable basis for the conclusion that the choice of a particular cylinder mount, piston configuration, and propelling means would have been an obvious matter for one having ordinary skill in the art.

In summary, this panel of the board has reversed the rejection of claims 1 through 10 and 23 through 28 under 35 U.S.C. § 103 as being unpatentable over Auth in view of the Airpot Catalog. Additionally, we have introduced a new ground of rejection under 35 U.S.C. § 103.

The decision of the examiner is reversed.

This decision contains a new ground of rejection pursuant to 37 CFR § 1.196(b) (amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)). 37 CFR § 1.196(b) provides that "[a] new

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ground of rejection shall not be considered final for purposes of judicial review."

37 CFR § 1.196(b) also provides that the appellant, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new

ground of rejection to avoid termination of proceedings (37 CFR § 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

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REVERSED  
37 CFR 1.196(b)

	HARRISON E. McCANDLISH	)	
	Senior Administrative Patent Judge	)	
		)	
		)	
		)	BOARD OF
PATENT		)	
	IRWIN CHARLES COHEN	)	APPEALS
AND		)	
	Administrative Patent Judge	)	
INTERFERENCES		)	
		)	
		)	
	JAMES M. MEISTER	)	
	Administrative Patent Judge	)	

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