

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LYNN P. WALKER

Appeal No. 1996-3433
Application No. 08/198,955

ON BRIEF

Before WINTERS, PAK, and KRATZ, Administrative Patent Judges.

PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's refusal to allow claims 8 through 10 and 13 through 15 which are all of the claims pending in the application. Claims 11

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and 12 were canceled subsequent to the final Office action dated April 6, 1995, Paper No. 9.

Claim 8 is representative of the subject matter on appeal and reads as follows:

8. An improved processing apparatus, comprising a burner part and a separate processing part extending and interconnected substantially rectilinearly so that said burner part discharges into said processing part, said burner part comprising an elongate gas flow conduit having an open inflow end and an open outflow end which is arranged to discharge gas into said processing part and said processing part comprising a gas flow conduit having an open inflow end; an annular flow manifold for an input gas adjacent to and surrounding the outflow end portion of said gas flow conduit of the burner part, said annular flow manifold and said gas flow conduit of the burner part defining with said open inflow end of the gas flow conduit of the processing part and therebetween a single, continuous, annular slot at said open inflow end of said processing part for the discharge of said input gas into the flow of gas discharging into said processing part from said outflow end of said gas flow conduit of said burner part, said slot being the sole flow communication between said manifold and said gas flow conduit of said processing part and constituting spacing between said outflow end of said gas flow conduit of the burner part and said open inflow end of the gas flow conduit of said processing part; structural means securing said burner part and said processing part together at, but outside of, said slot substantially without inhibiting flow of gas through said slot, whereby a substantially continuous, annular curtain of said inflow gas is directed into said flow of gas passing from said gas flow conduit of said burner part into said gas flow conduit of said processing part; means for flowing gas into the inflow end of said gas flow conduit of the burner part; means for flowing an input gas into said annular flow manifold; means for flowing a fuel gas into said gas flow conduit of the burner part; and means for igniting the flowing gas for burning within said processing part of the apparatus.

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As evidence of obviousness, the examiner relies on the following prior art references:

Aghnides 1953	2,633,343	Mar. 31,
Bond et al. (Bond) 1978	4,123,220	Oct. 31,
Michel 1985	4,492,562	Jan. 8,

As evidence of nonobviousness, appellant relies on the following reference:

Shumaker 1974	3,782,884	Jan. 1,
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Claims 8 through 10 and 13 through 15 stand rejected under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Bond, Michel and Aghnides.

We reverse.

The claimed subject matter is directed to an apparatus comprising an acid gas burner and a processing reactor. See claim 8. It is identical to that described in Bond, except that it employs a single continuous annular slot useful for providing an annular hydrogen sulfide gas flow, rather than concentric circular rows of nozzle apertures for supplying hydrogen sulfide gas jets. See Specification, page 4. It is said to be an improvement over that described in Bond in that (Specification, pages 3 and 4):

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[I]t provides greater versatility in flow rates, while insuring better mixing; that it substantially eliminates or at least minimizes unwanted side reactions of SO₃ with other components, such as ammonia, which produce heat stable salts tending to plug downstream equipment; and that it thereby achieves longer on-stream time, produces a higher ratio of acid gas to oxidant gas, permits better control of the ratio of these two gases over a wide flow range, decreases maintenance expense, makes for higher recovery of sulfur accompanied by fewer emissions, and achieves cost savings in manufacture of the apparatus.

The examiner's § 103 rejection is premised upon the obviousness of replacing concentric circular rows of nozzle apertures (36, 38 and 40) in the apparatus described in Bond with the claimed single, continuous, annular slot. See Answer, pages 3 and 4. According to the examiner (*Id.*), one of ordinary skill in the art would have been led to modify the apparatus of Bond by replacing the nozzle apertures therein with the single, continuous, annular slot supposedly described by both Michel and Aghnides. We do not subscribe to the examiner's position.

As acknowledged by appellant, Bond does disclose an apparatus identical to that claimed, except for the claimed single continuous annular slot. See Figure 1 in conjunction with columns 3 and 4. Rather than incorporating the claimed

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single continuous annular slot, Bond employs in its apparatus concentric circular rows of nozzle apertures (36, 38 and 40). **Id.** These nozzle apertures (36, 38 and 40) are said to play an important role in providing "an extremely efficient mixing of the gaseous components while they are reacted." See column 2, lines 25-35 and lines 49-59.

Although the examiner relies on Michel and Aghnides to demonstrate that it would have been obvious to employ the claimed single continuous annular slot, in lieu of the nozzle apertures, we are convinced that neither Michel nor Aghnides would have suggested the desirability of the examiner's proposed modification. ***In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) ("The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification").

Michel, for example, is directed to providing many slots in a burner distributor tip for projecting burning fuel from a premix-type gaseous fuel burning system. Michel does not employ the claimed single continuous annular slot. Nor does Michel suggest the desirability of using the claimed single

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continuous annular slot in the apparatus of the type described in Bond.

Aghnides is no different from Michel. Although Aghnides is broadly directed to fluid mixing devices, its disclosure regarding slots 27 or apertures 37 is in the context of a conventional water faucet. See Figures 1-5, in conjunction with column 2, line 26, to column 3, line 18. Aghnides does not describe its slots 27 as a single continuous annular slot. Nor does Aghnides suggest the desirability of using its slots 27 in the apparatus of the type described in Bond.

On this record, we simply cannot find any motivation or suggestion to employ the claimed single continuous annular slot in the apparatus of the type described in Bond. **Gordon**, 733 F.2d at 902, 221 USPQ at 1127. To do so would destroy the invention on which Bond is based. **See Ex parte Hartmann**, 186 USPQ 366, 367 (Bd. App. 1974)(prior art references cannot properly be combined if effect would destroy invention on which one of the prior art references is based).

For the above reasons, we conclude that the examiner has not carried the burden of establishing a **prima facie** case of obviousness of the invention recited in any of appellant's

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claims. Since no ***prima facie*** case of obviousness has been established, we need not address the propriety of the evidence of nonobviousness proffered by appellant, including the "expert opinion" affidavit of record. ***See In re Piasecki***, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

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The decision of the examiner rejecting all of the
appealed claims under 35 U.S.C. § 103 is reversed.

REVERSED

Sherman D. Winters)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
Chung K. Pak)	APPEALS AND
Administrative Patent Judge)	INTERFERENCES
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)	
Peter F. Kratz)	
Administrative Patent Judge)	

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