

**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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* TADAYOSHI NAGAOKA

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Appeal No. 96-2354  
Application No. 08/147,086<sup>1</sup>

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ON BRIEF

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Before ABRAMS, STAAB and McQUADE, *Administrative Patent Judges*.

ABRAMS, *Administrative Patent Judge*.

**DECISION ON APPEAL**

This is an appeal from the decision of the examiner finally rejecting claims 15-20. Claims 1 through 11, 13, 14 and 21 have been canceled, and claim 12 has been withdrawn

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<sup>1</sup>Application for patent filed November 3, 1993. According to appellant, this application is a continuation of Application 07/769,061, filed September 30, 1991, now abandoned.

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from consideration as being directed to a non-elected invention (Paper No. 18).

The appellant's invention is directed to a device for holding catalyst in a reactor. The subject matter before us on appeal is illustrated by reference to claim 15, which is reproduced in the Appeal Brief.

**THE REFERENCES**

The references relied upon by the examiner to support the final rejection are:

Anderson 1980	4,225,562	Sep. 30,
Koike 1989	4,879,099	Nov. 7,
Canadian patent (King) 1956	520,907	Jan. 17,
Japanese application 1976 (Yasui) <sup>2</sup>	Sho 51-18273	Feb. 13,

**THE REJECTION**

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<sup>2</sup>A copy of a PTO translation of this reference is enclosed.

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Claims 15-20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Anderson in view of Yasui, Koike and King.

The rejection is explained in the Examiner's Answer and Supplemental Answer.

The opposing viewpoints of the appellant are set forth in the Appeal Brief and the Reply Brief.

#### OPINION

The rejection is on the basis of obviousness, the test for which is what the combined teachings of the prior art would have suggested to one of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In establishing a *prima facie* case of obviousness, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify a prior art reference or to combine reference teachings to arrive at the claimed invention. See *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Int. 1985). To this end, the requisite motivation must stem from some teaching, suggestion

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or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from the appellant's disclosure. See, for example, *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1052 (Fed. Cir.), *cert. denied*, 488 U.S. 825 (1988).

The preamble of claim 15, the sole independent claim, states that the claim is directed to a device for holding catalyst in a vertical type radial flow reactor. The examiner's rejection of claim 15 is predicated upon the teachings of four references. The first of these is Anderson which, in our view, suffers from a number of serious defects in its role as the primary reference. The first of these is that it does not disclose a radial flow reactor, as is required by the appellant's claim 15. In addition, Anderson fails to disclose or teach that the catalyst containers are removable, much less that they are sized to be removable through an opening in the reactor. Also, in the Anderson design, the catalyst containers are rectangular, rather than being shaped as arcs of a cylinder. Finally, the inner and

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outer walls of Anderson are imperforate and the sides are screens, which is the opposite of that required by claim 15.

According to the examiner, Yasui teaches a radial flow reactor having a plurality of removable catalyst containers (Answer, page 4). While we agree that the flow through the catalyst is radial, we do not agree that the catalyst containers are removable. Yasui constructs the large cylindrical "basket" that contains the catalyst of a plurality of units which are "attached and secured to each other" (translation, page 3; Figure 2). There is no explicit teaching that these are removable, once attached together, nor in our view would one of ordinary skill in the art have understood this to be the case. Therefore, the only suggestion to modify the Anderson system by providing removable catalyst containers is found in the hindsight accorded one who first viewed the appellant's disclosure. This, of course, is not a proper basis upon which to construct a rejection under 35 U.S.C. § 103. See *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784 (Fed. Cir. 1992).

While Koike teaches removing containers of catalyst from its operating location in an exhaust gas passage, a feat which

certainly requires that the containers fit through an opening in the passage, the problems set out above with regard to the other two references are not solved by Koike. Nor are they by King, which is cited for its disclosure of spacers between the walls of the reactor vessel and the catalyst containers.

In addition, from our perspective, the examiner failed to point out where the limitations regarding the arcuate shape of the inner and outer walls and the selective use of screens and imperforate material in these walls are taught by the references, or where the suggestion for modifying the Anderson apparatus to add these features is found, even in response to the appellant's arguments raising these points.

It is our conclusion that the teachings of the applied references fail to establish a *prima facie* case of obviousness with regard to the subject matter of claim 15. We thus will not sustain the rejection of independent claim 15 or claims 16-20, which depend therefrom.<sup>3</sup>

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<sup>3</sup>The preamble to claim 15 recites "a vertical type radial flow reactor," and the final two lines of this claim that a plurality of containers are assembled "to form a cylindrical catalyst bed" in the reactor. However, there is no proper antecedent basis for "said cylindrical reactor," which appears in lines 18 and 22. This situation is worthy of correction.

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The decision of the examiner is reversed.

**REVERSED**

NEAL E. ABRAMS	)	
Administrative Patent Judge)	)	
)	)	
)	)	
LAWRENCE J. STAAB	)	BOARD OF PATENT
Administrative Patent Judge)	)	APPEALS AND
)	)	INTERFERENCES
)	)	
JOHN P. McQUADE	)	
Administrative Patent Judge)	)	

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