Paper No. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GAN-MOOG CHOW, LYNN K. KURIHARA,
AND PAUL E. SCHOEN

Appeal No. 1999-0808
Application No. 08/645,397

ON BRIEF

Before WARREN, TIMM, and JEFFREY T. SMITH, *Administrative Patent Judges*.

TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-26, which are all of the claims pending in this application.

BACKGROUND

Appellants' invention relates to a method for making finely scaled, i.e. nanoscale, metal/metal composites by a polyol process (specification, page 1, lines 10-11). The metallic composite has a matrix of a first metal, containing nanoscale particles of at least one additional metal (specification, page 5, lines 12-13). Nanoscale particles have dimensions in the approximate range of 1-100 nm (specification, page 1, line 15). Claim 1 is illustrative:

> 1. A method for making a metal powder comprising a nanoscale composite of at least two immiscible metals, comprising the steps:
>
> dissolving or suspending at least two metal compounds in a polyol, thereby forming a solution or suspension, wherein said metal compounds are each soluble or suspendable in polyol solution and wherein said metal compounds each reduce to elemental metal and by products that are soluble in said solution or suspension;
>
> adjusting the temperature of said solution or suspension to a reduction temperature, thereby initiating the reduction of said metal compounds and the precipitation of metal particles from said solution or suspension.

Claims 1-26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 4,539,041 issued to Figlarz et al. on September 3, 1985 (Figlarz). The Examiner presents her reasoning on pages 2-3 of the Final Rejection (Paper no. 5). We reverse.

OPINION

The question at issue here is whether Figlarz anticipates the claimed invention. In order for Figlarz to anticipate, Figlarz must disclose every limitation of the claimed invention, either explicitly or inherently. *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co. Ltd.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir.), *cert. denied*, 493 U.S. 853 (1989). We find that Figlarz does not describe each and every step of the claimed process to the same extent as claimed.

Figlarz describes a polyol process similar to that of the claims. However, Figlarz dissolves or suspends only one metal compound not "at least two metal compounds" as required by all of the claims (See claims 1 and 13). Throughout the disclosure of Figlarz, reference is made to a single starting material (col. 1, line 61, "a solid initial reactant compound"; col. 2, line 15-22, nickel carbide formed from nickel hydroxide; col. 2, lines 22-23, cobalt carbide from cobalt hydroxide). All the examples use single metal compounds to form single metal products (Examples 1-31). Moreover, the process is intended to be used to obtain pure metals (col. 1, lines 24-27) or single metal carbides (col. 2, lines 11-14).

Citing column 1, line 12 of Figlarz, the Examiner makes a finding that "[m]etal powders made by this process maybe [sic, may be] in the form of composites" (Final Rejection, page 3). However, this passage does not describe dissolving or suspending at least two metal compounds in the polyol in a

process of forming a composite. The key passage of Figlarz encompassing col. 1, line 12 reads as follows:

> This invention pertains to a process of reduction in a liquid phase of solid metallic compounds as well as the metallic powders which are obtained by this process.
>
> It is known that metals are commonly used as powders for numerous applications such as the preparation of fritted alloys, porous fritted parts ..., composite parts .., or the preparation of electricity conducting glues ... or the preparation of catalysts. Furthermore, magnetic metals in powder form can be used especially in the manufacturing of magnetic strips, cards, tickets or disks.
>
> It has now been discovered that it possible to obtain some metals in micronic powder form through the reduction of various compounds of those metals with polyols. Indeed, it has been discovered that polyols have sufficient reducing power to reduce the initial reactants to the metal stage (oxidizing degree = 0).
>
> The process of the invention therefore is useful, especially in the area of powder metallurgy, ... for obtaining **pure metals**. (emphasis added)

(col. 1, lines 6-27). What the middle paragraph reproduced above discloses is simply a number of intended uses for the end product single metal powder. Reading the rest of the reference, we find that there is no disclosure of how to make composite parts nor any of the other parts mentioned in column 1, lines 8-12. There is only a description of how to make the powder and that description is limited to making single metal powders. Dissolving or suspending at least two metal compounds in a polyol is nowhere disclosed.

The Examiner made the rejection under § 102(b). We make no judgement with respect to obviousness. We simply find that the Examiner has failed to demonstrate that Figlarz describes, either expressly or inherently, each and every step of the claimed process.

We conclude that the Examiner has not established a *prima facie* case of anticipation with respect to the subject matter of claims 1-26.

CONCLUSION

To summarize, the decision of the Examiner to reject claims 1-26 under 35 U.S.C. § 102(b) is reversed.

REVERSED

CHARLES F. WARREN Administrative Patent Judge	)))))) BOARD OF PATENT
CATHERINE TIMM Administrative Patent Judge	) APPEALS) AND) INTERFERENCES
JEFFREY T. SMITH Administrative Patent Judge	))))

ct/vsh

ASSOCIATE COUNSEL (PATENTS)
CODE 3008.2
NAVAL RESEARCH LABORATORY
WASHINGTON, DC 20375-5325