

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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SRINIVAS ADAVIKOLANU
and
KAR HOONG POON

Appeal No. 2003-1970
Application No. 09/586,526

Heard: January 21, 2004

Before WARREN, TIMM, and DELMENDO, *Administrative Patent Judges*.
TIMM, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal involves claims 15-26, 32, and 33 as amended after the final rejection.¹ Claims 15-26, 32, and 33 are all the claims pending in the application. We have jurisdiction over the appeal pursuant to 35 U.S.C. § 134.

¹Amendment filed November 5, 2002 entered as per Advisory Action mailed December 13, 2002.

INTRODUCTION

Claim 15, the broadest independent claim, is illustrative of the subject matter on appeal:

15. An orifice plate for an ink-jet pen comprising:

a plate having a first surface and an opposing second surface;

a plurality of spaced-apart orifices, each of which extends directly through the plate between the first surface and the second surface to define an inlet and an outlet on the first surface and the second surface respectively; and

an exposed coating of a precious metal-polymer alloy over at least portions of the second surface surrounding the outlets.

All the claims are rejected under 35 U.S.C. § 103(a) as obvious. As evidence of obviousness, the Examiner relies upon the following prior art references:

Aylward et al. (Aylward)3,616,286Oct. 26, 1971

Bestel et al. (Bestel) 4,033,833 Jul. 5, 1977

Matson 4,436,595 Mar. 13, 1984

Naoto et al. (Naoto)² 07-052,382 Feb. 28, 1995
(Japanese Published Application)

Claims 15-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Naoto in view of Aylward. Bestel and Matson are added to reject claims 23-26, 32, and 33.

We reverse all the rejections. Our reasons follow.

²The Examiner and Appellants refer to this document as JP '382. We refer to it as Naoto. All citations to this document are to the English translation of record.

OPINION

The rejection is based on the substitution of gold for nickel in composite plating film 21 of Naoto. This substitution is necessary because the claims are directed to an orifice plate for an ink-jet pen having an exposed coating of a precious metal-polymer alloy. As recognized by the Examiner, film 21 of Naoto is a nickel-Teflon coating and not a precious metal-polymer alloy coating.³

The Examiner relies upon Aylward as evidence of the obviousness of the substitution. According the Examiner, “it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have substituted gold for nickel, as taught by Aylward, in the mixture of [Naoto], because Aylward teaches that gold or nickel would be used as alternatives of each other.” (Answer, pp. 3-4). The portion of Aylward relied upon by the Examiner states in part:

Virtually any metal which forms an ion in solution can be electroplated on a conductive substrate. The catalysts can be any material which will favorably influence an electrochemical reaction, such as copper, **gold**, **nickel**, silver, platinum, palladium and the like. ... The screen electrode may be described as a conductive screen as a support for a **catalyst-Teflon mixture**. Teflon or another polymer is utilized for the purpose of providing a hydrophobic layer within the electrode.

³We interpret “precious metals” as meaning gold, silver, ruthenium, osmium, rhodium, iridium, palladium, and platinum. This definition encompasses those metals stated in the specification as being “precious metals” (specification, p. 5, ll. 4-5: gold, rhodium, and palladium) as well as other metals often referred to as precious metals. See George Brady and Henry Clauser, *Materials Handbook* 644 (12th ed. 1986); Hackh’s *Chemical Dictionary* 543 (Julius Grant, ed., 4th ed. 1969); *McGraw-Hill Dictionary of Scientific and Technical Terms* 1526 and 1564 (Sybil Parker ed., 5th ed. 1994). A copy of each of these documents accompanies this decision.

(Aylward, col. 4, l. 74 to col. 5, l. 10 (emphasis added)).

The Examiner bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If the Examiner fails to present a *prima facie* case of unpatentability, then the rejection cannot stand. *Id.* Where, as here, the Examiner bases the rejection on the obviousness of modifying an apparatus taught in the prior art, the Examiner must establish that there was some reason, suggestion, or motivation to make the modification. *In re Rouffet*, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir. 1998). The Examiner must identify specifically the principle, known to one of ordinary skill in the art, that suggests the claimed combination. *Rouffet*, 149 F.3d at 1359, 47 USPQ2d at 1459. While the reason, suggestion, or motivation need not be explicitly stated in the references themselves, the factual inquiry of whether to combine references must be thorough and searching and be based on objective evidence of record. *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

In the present case, the Examiner's factual findings fall short of establishing a *prima facie* case of obviousness. This is because the Examiner has failed to explain how the suggestion in Aylward that gold and nickel are both useful as the catalyst in a catalyst-Teflon mixture would have suggested to one of ordinary skill in the art the substitution of gold for nickel in the coating of Naoto. The Examiner points to no evidence that indicates that gold was understood as an alternative to nickel in the exposed coating of an ink jet recording head. While the references both use Teflon to provide hydrophobicity in a metal-Teflon coating, that is not enough to

establish the obviousness of substituting gold for nickel in the ink jet recording head coating based on the evidence of record. Nor is the fact that Aylward indicates that it is possible to electroplate either gold or nickel together with Teflon enough. The fact that those of ordinary skill in the art understood that a gold-Teflon coating *could* be produced does not establish that those of ordinary skill would have had a reason to produce the coating on the inkjet recording head of Naoto.

We conclude that the Examiner has failed to establish a *prima facie* case of obviousness over Naoto in view of Aylward. Neither Bestel nor Matson cures the defects of the rejection over Naoto in view of Aylward. We conclude that the Examiner has not established a *prima facie* case of obviousness with respect to the subject matter of claims 15-26, 32, and 33.

CONCLUSION

To summarize, the decision of the Examiner to reject claims 15-26, 32, and 33 under 35 U.S.C. § 103(a) is reversed.

REVERSED

CHARLES F. WARREN
Administrative Patent Judge

CATHERINE TIMM
Administrative Patent Judge

ROMULO H. DELMENDO
Administrative Patent Judge

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