

***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(2) is not binding precedent of the Board.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. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* MICHAEL D. ADAMS,  
DAVID W. AGER and GREGORY K. RHYNE

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Appeal No. 1997-1735  
Application 08/391,668

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HEARD: April 5, 2000

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Before KIMLIN, WARREN and LIEBERMAN, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

*Decision on Appeal and Opinion*

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1, 4, 5 and 11 and refusing to allow claims 1 through 11 as amended subsequent to the final rejection.<sup>1</sup>

We have carefully considered the record before us, and based thereon, find that we cannot sustain the rejection of the appealed claims under 35 U.S.C. § 103 over Harms.<sup>2</sup> It is well settled that

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<sup>1</sup> Amendments of December 11, 1995 (Paper No. 4) and of May 23, 1996 (Paper No. 9).

<sup>2</sup> Harm is cited at page 3 of the answer.

in order to establish a *prima facie* case of obviousness, “[b]oth the suggestion and the expectation of success must be found in the prior art and not in the applicant’s disclosure.” *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531(Fed. Cir. 1988). Thus, a *prima facie* case of obviousness can be established by showing that some objective teaching or suggestion in the applied prior art taken as a whole and/or knowledge generally available to one of ordinary skill in the art would have led that person to the claimed invention as a whole, including each and every limitation of the claims, without recourse to the teachings in appellants’ disclosure. *See generally In re Rouffet*, 149 F.3d 1350, 1358, 47 USPQ2d 1453, 1458 (Fed. Cir. 1998); *Pro-Mold and Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1629-30 (Fed. Cir. 1996); *In re Oetiker*, 977 F.2d 1443, 1447-48, 24 USPQ2d 1443, 1446-47 (Fed. Cir. 1992) (Nies, J., concurring); *In re Fine*, 837 F.2d 1071, 1074-76, 5 USPQ2d 1596, 1598-1600 (Fed. Cir. 1988); *Dow Chemical, supra*.

The examiner has failed to make out a *prima facie* case of obviousness of the claimed invention as a whole as encompassed by the appealed claims as a whole because he has not provided evidence and/or scientific evidence in the record (answer, pages 4 and 5-6) explaining how one of ordinary skill in this art would have modified either the acknowledged prior art filter shown in specification Figures 4 and 7<sup>3</sup> or one or more of the Harms Figures according to the teachings in Harms in order to arrive at the air filter configured as specified in the appealed claims. The appealed claims, as represented by claim 1, require that relative to a central plane, there are alternating high and low peaks on *both* the upstream and downstream sides of the filter element, with claim 3 further specifying the widths of the panels in series which would characterize this arrangement. See, e.g., specification FIG. 6. Harms would have taught one of ordinary skill in this art to “form a plurality of crests and valleys with *successive long folds being spaced by at least one of the short folds, thus maintaining the upstream crests of the long folds in spaced relationship to each other* and increasing the downstream density of the formed filter medium” (col. 1, lines 47-51; emphasis added). We find that Harms further discloses with respect to Figure 3 thereof that while “long folds **27** having crest portions

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<sup>3</sup> See *In re Nomiya*, 509 F.2d 566, 570-71, 184 USPQ 607, 611-12 (CCPA 1975).

**28** are . . . spaced from each other by short folds **29** having crests **31**, the *long and short folds forming valleys 32 at what serves as the downstream face*[.] . . . each of long folds **27** . . . is further provided with a short fold **33** at the upstream crest portion . . . to further increase the surface area exposed . . . upstream . . . during filtering operations . . . and either face can serve as the upstream side of the medium” ( col. 3, lines 24-42; emphasis supplied).

Accordingly, based on this disclosure in Harms, we cannot agree with the examiner that Harms Figure 3 shows that high and low peaks can be employed on *both* the upstream and downstream sides of the filter in a symmetrical configuration (e.g., answer, page 4). Indeed, while it is clear from the disclosure in Harms that “long folds **27** having crest portions **28**” with “short fold **33**” on the *upstream* side are the *same* as “short folds **29** having crests **31**” on the *downstream* side, the concept of alternating long folds and short folds on *only* the upstream side is maintained because “the long and short folds [form] valleys **32** at what serves as the downstream face,” regardless of the orientation of the symmetrical arrangement shown in Harms Figure 3. Thus, even if one of ordinary skill in the art were to make further filters involving “any combination of the depicted embodiments” of Harms (answer, page 4), there is no evidence in Harms that this person would arrive at the claimed invention wherein the air filter has alternating high and low peaks on *both* the upstream and downstream sides relative to a central plane.

The examiner's decision is reversed.

*Reversed*

EDWARD C. KIMLIN  
Administrative Patent Judge

CHARLES F. WARREN  
Administrative Patent Judge

PAUL LIEBERMAN  
Administrative Patent Judge

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