

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 39

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERNST STEINHILBER and HEINZ KUTTERER

Appeal No. 2000-0181
Application No. 08/929,287

ON BRIEF

Before CALVERT, NASE, and JENNIFER D. BAHR, Administrative Patent Judges.

CALVERT, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 4 to 17 and 20 to 26,¹ all the claims remaining in the application.

¹ The claim 20 added by the amendment filed on September 8, 1997, has been renumbered claim 26.

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The appealed claims are drawn to a rotating nozzle for spraying jets of fluid, and are reproduced in the substitute appendix filed on February 23, 2000.

Claims 1, 4 to 17 and 20 to 26 stand finally rejected for failure to comply with 35 U.S.C. § 112, first paragraph, in that the claimed invention is not described in the specification in such a manner as to enable one of ordinary skill to make and use it.

After fully considering the record in light of the arguments presented in appellants' brief and reply brief, and in the examiner's answer, we conclude that the rejection is not well taken.

The rotating head 22 of appellants' nozzle is driven by a turbine 13 rotated by the operating fluid, e.g., water. As disclosed at page 2, lines 19 to 31, and page 8, line 30, to page 9, line 22, the nozzle of the invention is so constructed that, as the pressure of the operating fluid increases, the rotational speed of the nozzle head will increase proportionally. However, after the fluid pressure reaches a certain value, such as 0.5 bar, further increases in pressure

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will not cause further increases in the rotational speed until the pressure has increased to a considerably greater value. Thus, as shown in Figure 3, the rotational speed remains substantially constant (or decreases slightly) in the fluid pressure range of 0.5 bar to beyond 10 bar.

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Appellants attribute these operating characteristics to the inclusion of a friction brake, which is formed by thrust bearing 23, constituted by engagement between downwardly facing flange 8 in the housing 2 and washer 25 on turbine shaft 17, both of which are made of a low-friction material such as PTFE. According to page 2, lines 13 to 19 of the specification (as amended):

Although it is not fully known as to how the friction brake automatically limits the rotational speed, it is possible that, at low pressures, a liquid friction exists in the axial gap of the two bearing surfaces of the axial bearing as a result of the liquid flowing through the nozzle. At increasing pressures, the friction is believed to convert into a dry friction by reason of increased pressure forces acting on upstream surfaces of the turbine that act to increase braking action of the axial bearing surfaces of the thrust bearing.

Claim 1, which is typical of the claims on appeal, recites the operation of the claimed nozzle as (lines 25 to 33):

said friction brake formed by said axial bearing surfaces [defined by a shoulder on the shaft coupled to the turbine and by the bearing bore] cooperating to brake rotational movement of said shaft and nozzle as a result of said axial bearing surfaces being moved toward each other to increase frictional resistance therebetween in response to pressure in said chamber

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above said first predetermined value acting to force said shoulder axial bearing surface in an axial direction toward said axial bearing surface defined by said bearing bore for limiting rotation of said shaft to a substantially

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constant speed not exceeding about 35 rpm notwithstanding a substantial increase in pressure from said first predetermined value to a second predetermined value.

The examiner asserts that since appellants are not certain how the claimed invention works, knowledge of other factors, such as viscous friction, cavitation, temperature, etc. may be necessary for an artisan to make and use the invention (answer, page 6).

It is well settled that,

[w]hile it is not a requirement of patentability that an inventor correctly set forth, or even know, how or why the invention works, Diamond Rubber Co. v. Consolidated Rubber Tire Co., 220 U.S. 428, 435-36 (1911); Fromson v. Advance Offset Plate Inc., 720 F.2d 1565, 1570, 219 USPQ 1137, 1140 (Fed. Cir. 1983), neither is the patent applicant relieved of the requirement of teaching how to achieve the claimed result, even if the theory of operation is not correctly explained or even understood. In re Isaacs, 347 F.2d 887, 892, 146 USPQ 193, 197 (CCPA 1965); In re Chilowsky, 229 F.2d 457, 463, 108 USPQ 321, 326 (CCPA 1956).

Newman v. Quigg, 877 F.2d 1575, 1582-83, 11 USPQ2d 1340, 1345 (Fed. Cir. 1989). In order to satisfy the enablement requirement of the first paragraph of § 112, the specification must enable one of ordinary skill in the art to practice the

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claimed invention without undue experimentation. Nat. Recovery Technologies Inc. v. Magnetic Separation Sys. Inc., 166 F.3d 1190, 1196, 49 USPQ2d 1671, 1676 (Fed. Cir. 1999). The examiner bears the initial burden of making out a prima facie case by advancing acceptable reasoning inconsistent with enablement, In re Strahilevitz, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982). Although the specification need not disclose what is well known in the art, the examiner may reject the claims if it is reasonable to conclude that one skilled in the art would be unable to carry out the claimed invention. In re Buchner, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991).

We do not consider that a prima facie case of nonenablement has been established here. Unlike the examiner, we do not view the appellants' disclosure as indicating that they are "uncertain what structure results in limiting rotation of the shaft to a substantially constant speed" (answer, pages 4 to 5). Rather, appellants state on page 2, lines 2 to 12, that the relatively constant speed is achieved in part by providing an axial thrust bearing which acts as a friction brake; their uncertainty is that they admit that they

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do not fully know how the brake operates to automatically limit the rotational speed (page 2, lines 13 to 19, supra). However, although appellants do not know precisely why the brake operates as it does, they have provided in the specification a detailed description of the structure of the brake and its associated apparatus, including the material of the surfaces constituting the brake (PTFE or comparable), the dimensions of the washer 25, angular ranges for the axes of the bores 31 and the turbine grooves 14, etc. The examiner states that experimentation would be required to find the proper angles,

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etc., which may be correct. However, "[i]t is not fatal if some experimentation is needed, for the patent document is not intended to be a production specification." Northern Telecom, Inc. v. Datapoint Corp., 908 F.2d 931, 941, 15 USPQ2d 1321, 1329 (Fed. Cir. 1990). The fact that some experimentation may be necessary does not preclude enablement, as long as the amount of experimentation is not unduly extensive. Atlas Powder Co. v. DuPont DeNemours & Co., 750 F.2d 1569, 1576, 224 USPQ 409, 413 (Fed. Cir. 1984). Given the information which appellants have furnished in the specification concerning the claimed nozzle, and particularly concerning the construction of the friction brake, the reasons advanced by the examiner in support of the rejection do not, in our view, reasonably justify a conclusion that undue experimentation would be required for one of ordinary skill in the art to make and use the claimed invention.

The rejection therefore will not be sustained.

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Conclusion

The examiner's decision to reject claims 1, 4 to 17 and 20 to 26 is reversed.

REVERSED

IAN A. CALVERT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JEFFREY V. NASE)	APPEALS
Administrative Patent Judge)	AND
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REVERSED

Prepared: March 23, 2001