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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 12

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte LLOYD E. GODDARD and GEORGE A. KNESEL

Appeal No. 95-1820
Application 08/115,836[1]

ON BRIEF

Before KIMLIN, WEIFFENBACH and PAK, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 and 15, all the claims remaining in the present application. Claims 1 and 15 are reproduced below:

1. A process for preparing crystalline ibuprofen having a crystal habit characterized by having a particle length larger

---

[1] Application for patent filed September 3, 1993. According to appellants, this application is a continuation of Application 07/963,939, filed October 20, 1992; which is a continuation of Application 07/734,910, filed July 24, 1991; which is a continuation-in-part of Application 07/615,348, filed November 19, 1990, all abandoned.

than 150 microns average and a length to width aspect ratio of from about 4 to 1 to about 5 to 1 comprising

(a) forming a saturated solution of ibuprofen in a liquid hydrocarbon solvent at a temperature from about 20EC to about 60EC;

(b) seeding said saturated solution with solid ibuprofen;

(c) cooling said saturated solution to a temperature of about 0EC to about -20EC at a rate to retard primary nucleation and promote secondary nucleation to obtain a slurry; and

(d) separating the crystalline ibuprofen from the liquid phase of the slurry.

15. Crystalline ibuprofen having a crystal habit characterized by having a particle length larger than 150 microns average and a length-to-width aspect ratio of from about 4.1 to 1 to about 5 to 1.

The examiner relies upon the following reference as evidence of obviousness:

Gordon et al. (Gordon) 4,476,248 Oct. 9, 1984

Appellants' claimed invention is directed to crystalline ibuprofen having a specific crystal habit, and a process for preparing the crystalline ibuprofen. The crystalline ibuprofen of the present invention has an average particle length greater than 150 microns and a length to width aspect ratio of from about 4 to 1 to about 5 to 1. The process entails seeding a saturated solution of ibuprofen in a liquid hydrocarbon solvent followed by cooling the saturated solution at a rate which retards primary nucleation and promotes secondary nucleation. According to the

present specification, primary nucleation is defined as spontaneous whereas secondary nucleation is induced by the addition of crystal nuclei. We are told that, compared to crystalline ibuprofen of the prior art, the crystalline ibuprofen of the present invention flows more evenly through high volume processing equipment and compacts more readily into tablets or capsules.

Claims 1 and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gordon.

Upon careful consideration of the opposing arguments presented on appeal, we concur with appellants that the applied Gordon reference fails to establish a prima facie case of obviousness for the claimed subject matter. Accordingly, we will not sustain the examiner's rejections.

We consider first the examiner's rejection of claim 1. Although the examiner recognizes that Gordon does not teach the claimed process steps of crystallization, the examiner reasons that because the claimed "steps of seeding, cooling and separation are inherently known to be a part of a crystallization process, [it] would have been easily obvious to one of most basic skill in the art" to perform the claimed process (page 2 of Answer). However, the flaw in the examiner's reasoning is that the claimed process requires preparing crystalline ibuprofen

having an average particle length larger than 150 microns by cooling a saturated solution of ibuprofen at a particular rate, and the examiner has not cited any prior art which teaches or suggests that crystalline ibuprofen of the claimed particle size can be made by any process. The prior art discussed by Gordon, which is relied upon by the examiner, evidences that it was generally known that crystallization procedures produce particle size of 40 microns. Gordon claims a particle size larger than 18 microns (see claim 17), and EXAMPLE 4 of the reference describes the largest average particle size as 82.6 microns. Hence, although the general crystallization procedure is within the prior art, there is no evidence of record which establishes that the particular crystallization technique detailed in appellants' specification for preparing crystalline ibuprofen having an average particle size larger than 150 microns was obvious to one of ordinary skill in the art.

We now turn to the examiner's rejection of claim 15 under § 103 over Gordon. It is the examiner's position that since Gordon discloses crystalline ibuprofen having a particle size range greater than 18 microns, the disclosure of Gordon "encompasses the particle size range of the claimed invention" (sentence bridging pages 3 and 4 of Answer). However, it is now well settled that a prior art disclosure of a potentially

infinite genus does not necessitate a finding of obviousness for a claimed feature that falls within the genus. In re Baird, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994); In re Jones, 958 F.2d 347, 350, 21 USPQ2d 1941, 1943 (Fed. Cir. 1992). In the present case, we do not find that Gordon's disclosure of a virtually infinite genus of "an average particle size larger than 18 μ," and exemplification of 82.6 as the largest average particle size, support a conclusion of obviousness for the claimed crystalline ibuprofen having an average particle size of larger than 150 microns.

In conclusion, based on the foregoing, the examiner's decision rejecting the appealed claims is reversed.

REVERSED

EDWARD C. KIMLIN Administrative Patent Judge	)	
CAMERON WEIFFENBACH Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
CHUNG K. PAK Administrative Patent Judge	)	

Philip M. Pippenger

Appeal No. 95-1820
Application 08/115,836

Albemarle Corp.
451 Florida St.
Baton Rouge, LA 70801-1780