

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte FENG DONG, ROBERT C. LAM,
and YIH-FANG CHE CHEN

Appeal 2008-2665
Application 10/888,054
Technology Center 1700

Decided: June 19, 2008

Before CHUNG K. PAK, THOMAS A. WALTZ, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

PAK, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's refusal to allow claims 1, 3 through 5, 7 through 10, 16, 17, and 19 through 22, all of the claims pending in the above-identified application. We have jurisdiction pursuant to 35 U.S.C. § 6.

We AFFIRM.

STATEMENT OF THE CASE

The subject matter on appeal is directed to a porous friction material comprising a first porous base layer and a top friction modifying particle layer (Spec. 1, ll. 5-12). Further details of the appealed subject matter are recited in representative claim 1 reproduced below¹:

1. A friction material comprising a first layer comprising a porous base material and at least one type of resin material, and a second layer comprising at least one type of friction modifying particles wherein the friction modifying particles of the second layer have an irregular shape; at least partially covering a top surface of the porous base material, the second layer of the friction modifying particles is formed on individual fibers and/or filler material comprising the porous base material, the second layer having an average thickness of about 30-400 μm wherein the second layer has a fluid permeability lower than the first layer wherein the irregular shaped friction modifying particles of the secondary layer act to hold a desired quantity of lubricant at the surface and in the “body” of the base material due to the capillary action of many invaginations on the surface of the irregularly shaped friction modifying particles;

wherein the friction modifying particles of the second layer have an average size ranging from 0.5 to 20 microns;

wherein the porous base material has an average voids volume from about 65% to about 85%, and

wherein the porous base material has pores ranging in mean average size from about 2.0 to about 25 microns in diameter.

¹ Appellants have not separately argued the claims on appeal (App. Br. 4-8 and Rep. Br. 1-4). Therefore, for purposes of this appeal, we select claim 1 and decide the propriety of the Examiner’s rejection based on this claim alone consistent with 37 C.F.R. § 41.37(c)(1)(vii) (2005).

As evidence of unpatentability of the appealed subject matter, the Examiner has proffered the following sole prior art reference:

Chen EP 1 396 655 A1 Mar. 10, 2004
(Filed Sep. 3, 2003)

The Examiner has rejected the claims on appeal under 35 U.S.C. § 102(d) as anticipated by the disclosure of Chen. The Examiner has also rejected the claims on appeal under 35 U.S.C. § 103(a) as unpatentable over the disclosure of Chen.

Appellants appeal from the Examiner's decision rejecting the claims on appeal under 35 U.S.C. §§ 102(d) and 103(a).

RELEVANT FACTUAL FINDINGS

1. Appellants do not dispute the Examiner's determination that Chen is available as prior art under 35 U.S.C. § 102(d).
2. Chen teaches "a friction material having a first layer comprising a base material and at least one type of resin material, and a second layer comprising at least one type of friction modifying particle[s] on a top surface of the base material..."(col. 4, ll. 33-37).
3. Chen teaches that the base material is a fibrous base material defining "pores ranging in a mean average size from about 2.0 to about 25 microns in diameter" and voids of at least about 60 % or higher up to about 85% (col. 7, ll. 16-47).
4. Chen teaches that the second layer has an average thickness of about 35 to about 200 microns and is less porous than the first layer (has a fluid permeability lower than the first layer)(col. 9, ll. 31-33 and 55-56).

5. Chen teaches that its friction modifying particles have an average size from about 0.5 to about 20 microns, preferable 12 microns (col. 9, ll. 37-43).
6. Chen teaches that the friction modifying particles have an irregular shape so that they “act to hold a desired quantity of lubricant at the surface of the base material due to the capillary action of many invaginations on the surface of the irregularly shaped friction modifying particle[s]” (col. 10, ll. 21-28).
7. Chen does not explicitly state that its irregularly shaped friction modifying particles “act to hold a desired quantity of lubricant ...in the ‘body’” as required by claim 1.
8. Chen teaches that its irregularly shaped friction modifying particles have the claimed particle size and are placed on the claimed porous base layer in the manner claimed to form a friction material as indicated *supra*.

ISSUE

Does Chen provide sufficient facts to show that its irregularly shaped friction modifying particles of its friction material are capable of performing the claimed functional characteristic “act to hold a desired quantity of lubricant...in the ‘body’” as required by claim 1?

PRINCIPLES OF LAW

Appellants are free to recite features of an apparatus or article either structurally or functionally. *See, e.g., In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971)(“[T]here is nothing intrinsically wrong with [defining something by what it does rather than what it is] in drafting patent claims.”) Yet, choosing to define an apparatus or article feature functionally carries

with it a risk. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997). As stated by our reviewing court in *Schreiber*, 128 F.3d at 1477, quoting *Swinehart*, 439 F.2d at 213:

Where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on.

“Where...the claimed and prior art products are identical or substantially identical...the PTO can require an applicant to prove that the prior art products do not necessarily or inherently possess the characteristics of his claimed product...” *In re Best*, 562 F.2d 1252, 1255 (CCPA 1977).

ANALYSIS

As indicated *supra*, Chen teaches or would have suggested a friction material corresponding to that claimed, except that its friction modifying particles are not described as having the claimed functional characteristic “act to hold a desired quantity of lubricant...in the “body”” (FF 1-6). However, Chen’s irregularly shaped friction modifying particles have the claimed particle size and are placed on the claimed porous base layer in the manner claimed to form the friction material (FF 1-5 and 7). In other words, Chen’s friction material, including its irregularly shaped friction modifying particles, is structurally either identical or substantially identical to that claimed. Consequently, the Examiner has sufficient reason to believe that the claimed functional limitation “act to hold a desired quantity of

lubricant...in the ‘body’” may, in fact, be an inherent characteristic of the irregularly shaped friction modifying particles of Chen’s friction material. Nevertheless, Appellants have not demonstrated that the irregularly shaped friction modifying particles of Chen’s friction material do not possess the claimed functional characteristic.

Accordingly, we determine that the Examiner has established a *prima facie* case of unpatentability under 35 U.S.C. § 102 and § 103, which is not rebutted by Appellants.

ORDER

The decision of the Examiner is affirmed.

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

PL Initial:
sld

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